AI Adoption for Productivity Improvement

in the Public Sector

Asian Productivity Organization

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AI ADOPTION FOR PRODUCTIVITY IMPROVEMENT IN THE PUBLIC SECTOR

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AI Adoption for Productivity Improvement in the Public Sector

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CONTENTS

FOREWORD IX

EXECUTIVE SUMMARY XI

CHAPTER 1: SETTING THE STAGE FOR AI ADOPTION IN THE PUBLIC SECTOR 1
Background and Social Expectations 1
The Structural Conditions for AI-enabled Productivity Improvement 2
First: Computational Resource Concentration 2
Second: Public Sector Data Governance Constraints 2
Third: Institutional Structure of Administrative Systems 2
Purpose and Scope of This Report 2
Research Design 3
Report Structure 4
Summary: From Localized Efficiency Gains to System-wide Productivity Improvements 5

CHAPTER 2: AI TECHNOLOGIES FOR PUBLIC ADMINISTRATION 6
AI Adoption and the Productivity Transformation in the Public Sector 6
Foundation Models and Application Technologies: Task-level Efficiency Gains 7
Integration Architectures: Connecting Applications Across Administrative Systems 9
Infrastructure and Governance: Conditions for Scale and Sustainability 10
A Productivity Improvement Model for AI Adoption in the Public Sector: Technology Scenarios and Technology Classification 12
Public sector AI: Purposes and Uses 13
AI-driven Public Sector Productivity Enhancement: From Foundational Models to Trustworthy AI Adoption 17

CHAPTER 3: INSTITUTIONAL INFRASTRUCTURE, TECHNOLOGICAL CAPACITY, AND HUMAN CAPITAL ACROSS EACH ECONOMY 19
Administrative Infrastructure: The Waseda University – IAC World Digital Government Ranking 2025 20
Technological Capacity: The Patent Landscape 22
Domestic Development Capacity 22
Data 22
Application Domain: What Patent Volume Does Not Capture 23
Import Dependency as a Structural Condition 24
What the Patent Analysis Establishes 25
Human Capital: The Academic Publication Base 25
What Publications Measure that Patents Do Not 25
Data 25
India's Scale and Its Implications 26
The Disconnect between Publications and Patents: Malaysia and Bangladesh 26
The ROK and the ROC: Quality and International Integration 27
Japan: Volume with Lower Integration 27
Thailand and the Philippines: Limited Research Base 27

What the Publication Analysis Establishes 28
Triangulation: Structural Position and Strategic Constraint 28
Patterns of Alignment and Divergence 28

CHAPTER 4: FOUR SCENARIOS: STRATEGIC DIVERGENCE UNDER CONSTRAINT 31
Reading the Eight Economies: AI Deployment Across Layer and Application 31
Opening Context 31
Horizon Scanning: Source Compilation and Classification 32
The Patterns of AI Use Across the Economies: Portfolio Assessment 33
Five Patterns of AI Adoption: Findings from Comparative Analysis of Eight Economies 34
Two Drivers of Strategic Positioning: Technological Potential and Social Participation 36
Four Strategic Positioning Branches: Configurations from the Patterns 36
Policy Challenges of Strategic Positioning: AI Use through Eight-economy Comparative Analysis 37
Strategic Positioning A: Sovereign Scaling for the ROK and the ROC 38
Strategic Positioning B: Asymmetric Specialization for Japan and India 38
Japan: The Incremental Modernization Trap 39
India: Urban-rural Infrastructure Divide 39
Strategic Positioning C: Balanced Transition for Malaysia and Thailand 40
Strategic Positioning D: Constrained Leapfrog for Bangladesh and the Philippines 40
Temporal Horizons: Short-term Efficiency, Medium-term Accountability, and Long-term Resilience 41
The Productivity Paradox: Task-level Gains and Macro-level Transmission 42
Chapter Summary 43

CHAPTER 5: ESTIMATING THE ECONOMIC CONTRIBUTION OF PUBLIC SECTOR AI 44
AI Technologies and the Scope of Public Sector Productivity Improvement 44
Economic Impact Estimates and What They Reveal 47
Beyond Efficiency: Accountability, Resilience, and the Full Scope of Productivity Improvement 48

CHAPTER 6:FROM CONSTRAINT TO UNIVERSAL STANDARD WITH REVERSE INNOVATION 50
The Sovereignty Dilemma as Shared Condition 50
The Solution that Constraint Has Built 51
Reverse Innovation and the Path to Convergence 52
Policy Implications by Strategic Positioning 53
Strategic Positioning A: The ROK and the ROC 53
Strategic Positioning B: Japan and India 53
Strategic Positioning C: Malaysia and Thailand 53
Strategic Positioning D: Bangladesh and the Philippines 54
Mutual Learning across Strategic Positionings 54
The APO as Regional Learning Facilitator 55

CHAPTER 7: SYNTHESIS AND POLICY IMPLICATIONS 56
What the Analysis Established 56

The Central Paradox 59
Policy Implications 60
Limitations of the Study 61

CHAPTER 8: COUNTRY REPORTS—STRATEGIC POSITIONING-BASED ANALYSIS ACROSS EIGHT APO MEMBER ECONOMIES 62
Strategic Positioning A or Sovereign Scaling: The ROK and the ROC 62
The ROK: Comprehensive Public Sector AI Foundation Built on Established E-government Track Record 62
The ROC: Institutional Design Operationalized at Implementation Layer 69
Strategic Positioning B or Asymmetric Specialization: Japan and India 75
Japan: High Technological Potential, Constrained by Institutional Legacy 75
India: Public-purpose-oriented Technology Base, Federal Complexity as Implementation Challenge 81
Strategic Positioning C for Balanced Transition: Malaysia and Thailand 89
Malaysia: Sectoral Concentration with Focused Investments 89
Thailand: Broad Sectoral Deployment under Thailand 4.0 Framework 94
Strategic Positioning D for Constrained Leapfrog: Bangladesh and the Philippines 99
Bangladesh: Creativity Under Constraint, a Source of Reverse Innovation 99
The Philippines: Strong Reform Commitment with Foundation Steadily in Formation 105

REFERENCES 111
Academic Literature 111
International Organizations 112
Data Sources (see Appendices A–C for full data) 113
Government Documents: Bangladesh 113
Government Documents: The ROC 114
Government Documents: India 115
Government Documents: Japan 116
Government Documents: The ROK 117
Government Documents: Malaysia 117
Government Documents: The Philippines 118
Government Documents: Thailand 119

APPENDIX A: AI ACADEMIC PAPER ANALYSIS (WEB OF SCIENCE) 121
A-0. Methodology and Search Parameters 121
Data Source 121
Target Economies 121
Counting Methodology 121
Nomenclature 121
A-1. Country-level Summary (Articles and Proceedings for Eight Economies) 122
A-2. Publication Trends by Year (Articles and Proceedings for 2015–25) 122
A-3. Bangladesh: Top 60 Institutions by AI Paper Output 122
A-4. The ROC: Top 60 Institutions by AI Paper Output 124
A-5. India: Top 60 Institutions by AI Paper Output 126
A-6. Japan: Top 60 Institutions by AI Paper Output 128
A-7. The ROK: Top 60 Institutions by AI Paper Output 130
A-8. Malaysia: Top 60 Institutions by AI Paper Output 132

A-9. The Philippines: Top 60 Institutions by AI Paper Output 134
A-10. Thailand—Top 60 Institutions by AI Paper Output 136
A-11. Comparative Analysis 138
Publication Volume 138
Research Impact (Citations per Paper) 138
International Collaboration 138
Institutional Concentration 139
A-12. Methodological Notes 139

APPENDIX B: AI PATENT ANALYSIS (SENSEDRIVE × CLARIVATE DERWENT INNOVATION) 140
B-0. Methodology and Search Parameters 140
Data Source 140
Search Strategy 140
Keyword Search Terms (Set C) 140
Target Economy Filtering 141
Counting Methodology 141
B-1. Global Trend: Total Patent Families by Priority Year (Earliest) 141
B-2. Patent Applications by Target Economy and Priority Year 142
B-3. Use-case Analysis by Economy: ThemeScape Map Summary 142
The ROC 144
India 144
Japan 145
The ROK 146
Malaysia 147
The Philippines 147
Thailand 148
B-4. Methodological Notes and Limitations 149

APPENDIX C: ECONOMIC IMPACT ESTIMATION—DETAILED CALCULATIONS 150
C-0. Mathematical Derivation 150
C-0.1 Production Function Assumptions 150
C-0.2 Decomposition of Public sector Labor Cost 150
C-0.3 AI Productivity Effect 151
C-0.4 Three Theorems 151
C-0.5 Justification for Cobb–Douglas 152
C-0.6 Limitations of the Derivation 153
C-1. Model Specification 153
Macro-level Model 153
C-2. Input Data 154
C-3. Step-by-Step Calculations 154
Verification 155
C-4. Detailed Country-by-country Derivation 155
Bangladesh 155
The ROC 155
India 155
Japan 156
The ROK 156

Malaysia 156
The Philippines 157
Thailand 157
C-5. Sensitivity Analysis 157
C-6. Ranking Sensitivity 158
C-7. Methodological Limitations 158
C-8. Data Source Documentation 159

APPENDIX D: MACROECONOMIC INPUT DATA FOR EIGHT ECONOMIES 160
D-1. Primary Macroeconomic Indicators 160
D-2. Labor Market Parameters 160
D-3. Technology and Innovation Indicators (from Appendices A and B) 161
D-4. Macro Impact Estimation Results from Appendix C 161
D-5. Data Source Documentation 162

APPENDIX E: TERMINOLOGY FOR AI TECHNOLOGIES, METHODOLOGIES, AND GOVERNANCE 163
E-1. Purpose and Scope 163
E-2. Classification Summary comprising 57 Codes across Eight Categories 163
Category 1: Core AI Models and Techniques (B0–B8, nine codes) 163
Category 2: Architectural Patterns (C2.1–C2.5, five codes) 163
Category 3: Application Technologies (C3.1–C3.6, six codes) 164
Category 4: Infrastructure (C4.1–C4.5, five codes) 164
Category 5: Governance (C5.1–C5.6, six codes) 164
Category 6: Performance Metrics and Evaluation (C6.1–C6.10, 10 codes) 164
Category 7: Enabling Competencies and Workforce Development (C7.1–C7.8, eight codes) 164
Category 8: Policy, Regulation, and International Standards (C8.1–C8.8, eight codes) 165
E-3. Alignment with International Standards 165
Category 1: Foundational AI and Information Communications Technology Infrastructure 165
Category 2: Perception and Natural Language Processing Technologies 167
Category 3: Analytics and Decision Support Systems 169
Category 4: Agentic Systems and Governance Infrastructure 171
Category 5: Sustainability and Future-ready AI Technologies 173
Category 6: Governance, Policy Frameworks, and Institutional Transformation 174
E-4. Cross Reference to Technology × Application Matrix 176
E-5. Performance Metrics and the Sigma-Theta-Lambda Framework 177

APPENDIX F: INCLUSIVE INSTITUTIONAL ORIENTATION 178

APPENDIX G: EVIDENCE MATRIX 179
Bangladesh 179
Proposed Score 179
Rationale by Cell 179
All Sources List 183
The ROC 230
Proposed Score 230

Rationale by Cell 230
All Sources List 234
India 275
Proposed Score 275
Rationale by Cell 275
All Sources List 279
Japan 339
Proposed Score 339
Rationale by Cell 339
All Sources List 343
The ROK 350
Proposed Score 350
Rationale by Cell 350
All Sources List 358
Malaysia 383
Proposed Score 383
Rationale by Cell 383
All Sources List 386
Philippines 405
Proposed Score 405
Rationale by Cell 405
All Sources List 408
Thailand 438
Proposed Score 438
Rationale by Cell 438
All Sources List 441

LIST OF TABLES 461

LIST OF FIGURES 462

LIST OF CONTRIBUTORS 463

ACKNOWLEDGMENTS 463

FOREWORD

Artificial intelligence (AI) is changing how governments work, serve citizens, and make decisions. For the public sector, however, the value of AI should not be measured only by faster processing, lower costs, or automation. Government productivity also depends on accountability, public trust, institutional coordination, and the ability to deliver reliable services under changing conditions.

This publication, *AI Adoption for Productivity Improvement in the Public Sector*, examines these issues through evidence from eight APO member economies: Bangladesh, the Republic of China (ROC), India, Japan, Malaysia, the Philippines, the Republic of Korea (ROK), and Thailand. Written by Dr. Nobuyuki Shirakawa, the study provides a timely analysis of how AI is being adopted in public administration and what conditions are needed for task-level gains to culminate in system-wide productivity improvements.

A key contribution of the report is its clear message that public-sector AI adoption is not simply a technology issue. AI applications such as chatbots, document-processing systems, translation tools, and decision-support systems can improve specific administrative tasks. Yet these gains do not automatically translate into broader productivity improvements. They require sound governance, data-sharing arrangements, cross-agency coordination, accountability mechanisms, and skilled public officials.

The report is also valuable because it does not rely on a single ranking or measure of AI adoption. It brings together digital government indicators, AI patent data, academic publication data, and documented public-sector AI evidence to distinguish among institutional readiness, technological capacity, research strength, and actual deployment. This distinction is important for policymakers, as readiness and capacity do not always mean that AI is being used effectively in government.

The study groups these experiences into four strategic positionings, and its deeper message is that the fruits of AI cannot be reaped through technology alone—they are realized only when institutional reform keeps pace with technological capability. The ROK and the ROC, combining strong technological capacity with institutional readiness, are positioned for sovereign scaling, advancing beyond efficiency toward systems that embed accountability and resilience. Japan and India exemplify asymmetric specialization, where substantial technological capability alone does not translate into system-wide gains, and institutional reform must proceed in parallel with technology adoption. Malaysia and Thailand are in a balanced transition, where solid capacity and institutional flexibility create real room for strategic choices. Bangladesh and the Philippines demonstrate constrained leapfrogging, where strong reform commitment and practical, context-specific solutions deliver genuine public value.

One of the report's most useful insights is that innovation does not always move from the most technologically advanced economies to those with fewer resources. Solutions developed under constraint may offer practical lessons for all governments as concerns over energy use, data protection, transparency, and public trust become more important.

On behalf of the APO, I express sincere appreciation to Dr. Nobuyuki Shirakawa, Vice Director and Associate Professor, Research Centre on Emerging Technology and Governance, Organization for Research Administration Niigata University, Japan, and all those who contributed to this study. I hope this publication will support APO members in designing AI adoption strategies that are not only efficient, but also accountable, trusted, inclusive, and sustainable.

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Secretary-General
Asian Productivity Organization
Tokyo

EXECUTIVE SUMMARY

The adoption of artificial intelligence (AI) by governments is widely expected to improve public sector productivity. The evidence presented in this report, drawn from eight member economies of the Asian Productivity Organization (APO), clarifies the conditions under which this expectation can be realized, with particular attention to the institutional bottlenecks that mediate the relationship between technology adoption and productivity outcomes. AI in the public sector is an emerging technology whose adoption, regardless of the stage of economic development, generates governance coordination challenges that apply universally across all economies.

Across the eight economies, namely, Bangladesh, India, Japan, Malaysia, the Philippines, the Republic of Korea (ROK), the Republic of China (the ROC), and Thailand, AI has been deployed at the task level with measurable results. Proven administrative AI applications have delivered efficiency gains of 40–70% in targeted processes such as document processing, citizen service triage, language translation, and service delivery (Chapter 4, Pattern 1). At the macroeconomic level, however, the impact of these task-level gains is limited. Under transparent assumptions about labor-hour conversion rates and elasticities, and adjusted to the structural labor-market parameters of each economy, baseline estimates of the contribution to gross national income range from 0.52% (Bangladesh) to 1.68% (ROK) (Chapter 5; Appendix C, Tables 2–3). This asymmetry between task-level efficiency and macro-level productivity constitutes the central paradox of AI adoption for productivity in the public sector.

The paradox has a theoretical foundation that not even AI can overcome. Public sector productivity is not a single dimension but comprises three structurally competing dimensions—efficiency, accountability, and resilience—whose simultaneous pursuit necessarily generates tradeoffs intrinsic to public administration. In addition, general-purpose technologies exhibit a J-curve effect, in which a time lag separates adoption from measurable productivity gains because the institutional and organizational adjustments required to unlock their value take time. The 40–70% task-level efficiency gains observed across the eight economies thus correspond to improvements along the efficiency dimension. The 0.52–1.68% macroeconomic impact range, by contrast, reflects the extent to which those efficiency gains are mediated and constrained by institutional bottlenecks in the accountability and resilience layers, and by broader socioeconomic factors beyond the public sector that ultimately feed back into public sector productivity (Chapters 2, 5, and 7). The binding constraint on AI-driven productivity in the public sector is therefore institutional rather than technological. This proposition is the central analytical contribution of the report.

The relevant question, then, is the relative strategic positioning of each economy with respect to where its institutional bottlenecks lie, its technological potential, and the social openness reflected in its disposition toward institutional reform. Mapping each economy's activities across five functional layers is the first step toward identifying its strategic positioning (Chapter 4). These five layers are:

(1) General AI-related technologies and foundation models (computing infrastructure and ICT integration);

(2) Operational deployment (scaling citizen services);

(3) Data and evidence (cross-ministry data integration);

(4) Cross-domain and cross-system automation (multi-ministry coordination); and

(5) Sustainability and trust (energy, accountability, and public legitimacy).

When these layers are assessed along two other dimensions of technological potential and institutional bottlenecks, four distinct strategic positionings emerge as a clear configuration (Figure 4.3).

The first is sovereign scaling, observed in the ROK and the ROC, where institutional and technological readiness for AI-driven public sector productivity gains are both in place. Both economies have moved beyond the efficiency layer toward systems that embed accountability and orient toward resilience (Part II, the ROK and the ROC Country Reports).

The second is asymmetric specialization, observed in Japan and India, where high technological potential is offset by institutional reforms and legacy systems acting as bottlenecks. Both economies possess substantial technological capacity, yet each is constrained by a different kind of institutional bottleneck. In Japan, the bottleneck is institutional rigidity: the fragmentation of legacy IT and the dispersion of authority across ministries make it difficult to translate the country's many AI deployment cases into a qualitative leap. In India, the bottleneck lies in uneven infrastructure at the subnational level: large-scale digital public infrastructure operates at the federal level, but absorptive capacity differs markedly among metropolitan, urban, and rural administrative units (Part II, Japan and India Country Reports).

The third is balanced transition, observed in Malaysia and Thailand, where moderate technological capacity, combined with substantial institutional flexibility, creates room for strategic choice in targeted public sector AI applications. Malaysia, under the coordination of its national AI office, has chosen sectoral concentration, focusing on investments in healthcare, urban surveillance, infrastructure, and finance. Thailand, under the Thailand 4.0 framework, has chosen broad sectoral pilot deployment, distributing operational rollout across many public sector use cases ahead of formal AI legislation (Part II, Malaysia and Thailand Country Reports).

The fourth is constrained leapfrogging in the face of infrastructure limitations, observed in Bangladesh and the Philippines. Constrained technological and infrastructural foundations are combined with strong reform commitment. Bangladesh exemplifies creativity under constraint, achieving—within structural resource limits—performance comparable to that recorded in economies with stronger infrastructure, including a large-scale citizen services platform, NLP-based helpline triage, and high-accuracy disaster prediction. The Philippines, through its digital identity platform, government services platform, AI roadmap, and research and innovation institutions, has built an institutional architecture that is distinguished by its reforms ambition and strong empirical demonstrators (Part II, Bangladesh and the Philippines Country Reports).

The architectures developed under constraint by economies in this fourth positioning, which is domain-specific, low-compute, locally deployed, and sovereignty-preserving, embody the very direction in which structural pressures are pushing all economies. There is a convergence of energy constraints emerging at the frontier of high-performance AI computing, sovereignty pressures

arising from concerns over data jurisdiction, and governance transparency requirements. It has revealed the potential for the constraint-driven architectures of Bangladesh and the Philippines to serve as practical guides to "reverse innovation" for economies with stronger infrastructure foundations as well. That is, solutions developed under constraint become applicable in environments facing the same structural pressures, and ultimately prove superior to alternatives. The architecture of public sector AI deployment in this report does not, therefore, depend on the maturity of economic development. As computing-resource sovereignty concentrates among the USA, PR China, and a few others, and as data sovereignty and privacy protection are demanded, particularly in the public sector, these architectures have become reference models for other economies. What follows in practice is a systematic eight-economy comparison through which each economy identifies the location and nature of its own institutional bottlenecks and draws on the deployment and governance experience of other economies to address them (Chapter 6; Chapter 7).

To make this mutual learning operational, the APO is uniquely positioned. By orchestrating learning networks organized by structural similarity rather than by geography or income level, the APO can accelerate the transfer of institutional knowledge that bilateral relationships cannot systematize. Harmonizing regional standards on data governance, algorithmic auditing, and sovereign AI deployment among member economies is important. It allows civil-service training, governance literacy, and procurement capacity—the prerequisites for sustained adoption—to be built as foundational capabilities across the members. This, combined with the documentation and dissemination of reverse innovations developed under constraint, can facilitate mutual learning in both directions. The productivity gains AI promises will be achieved insofar as the eight economies, regardless of their stages of economic development, treat one another as equal learning partners facing a shared emerging-technology governance challenge.

CHAPTER 1
SETTING THE STAGE FOR AI ADOPTION IN THE PUBLIC SECTOR

Background and Social Expectations

The mission of the APO is to improve productivity across its member economies. In the public sector, this objective has become increasingly central as governments face expanding service demands under constrained resources. Across the Asia-Pacific region, public administrations are required to deliver a broader range of services to growing and changing populations, while operating within fiscal and organizational limits that are relatively stable in real terms. In this context, improving productivity is not only an economic objective but a fundamental condition for sustaining effective governance.

Across the eight target economies examined in this report—Bangladesh, India, Japan, Malaysia, the Philippines, the ROK, the ROC, and Thailand—these pressures manifest in different forms. Japan and the ROK face population aging and a shrinking workforce, requiring the maintenance of service levels with a reduced tax base. India, Bangladesh, and the Philippines face rapid population growth, generating increasing demand for public services such as education, healthcare, infrastructure, and identity systems. Thailand and Malaysia face a combination of these dynamics, managing both demographic transition and service expansion. Despite these differences, all eight economies share a common challenge: improving the productivity of public administration in order to deliver more effective services under constrained conditions.

Artificial intelligence (AI) has emerged in this context as a central instrument for productivity improvement. Governments across the region have established national AI strategies that explicitly position AI as a means for enhancing administrative performance, improving citizen services, and supporting data-informed policymaking. These strategies reflect a shared expectation that AI can contribute to more efficient and effective public sector operations.

At the level of implementation, this expectation is already being partially realized. AI applications are being introduced into administrative processes, including citizen interaction, document processing, and service delivery. These applications are producing observable efficiency improvements within specific tasks and functions. Administrative processes that were previously manual or time-intensive are being accelerated or partially automated.

At the same time, these improvements remain largely localized. Efficiency gains are evident within individual processes, but their extension to system-wide productivity improvement requires additional conditions. The current phase of AI adoption can therefore be understood as a transition: from the realization of localized efficiency gains to the broader challenge of achieving sustained, system-level productivity improvement in public administration.

This report focuses on this transition. It examines how existing gains can be extended, coordinated, and sustained, and what conditions are required for AI to contribute to productivity improvement at the level of the public sector as a whole.

The Structural Conditions for AI-enabled Productivity Improvement

The translation of localized efficiency gains into a system-wide productivity improvement depends on a set of structural conditions that shape how AI can be deployed in the public sector. These conditions are common across the eight target economies, although their specific manifestations vary.

First: Computational Resource Concentration

The development and operation of contemporary AI systems depend on large-scale computational infrastructure. These resources are geographically concentrated, creating asymmetries in access and control. The adoption of AI in the public sector therefore takes place within a global technological environment in which key infrastructure is not uniformly distributed. This affects how governments can scale AI applications and integrate them into administrative systems.

Second: Public Sector Data Governance Constraints

Public administrations manage sensitive data relating to citizens, including administrative, financial, and service-related information. The use of AI systems involves the processing of this data, often through external infrastructure. This creates requirements for data governance, including control, security, and compliance with legal and institutional frameworks. These requirements shape the scope and manner in which AI can be applied.

Third: Institutional Structure of Administrative Systems

Public sector processes are embedded in established institutional arrangements, including legal frameworks, organizational structures, and procedural routines. AI technologies can improve the efficiency of existing processes, but broader productivity improvement depends on how these technologies are integrated into institutional systems. This involves coordination across administrative units and adaptation of existing practices.

These structural conditions do not prevent productivity improvement. Rather, they define the context in which such improvement must occur. They influence how efficiency gains can be extended beyond individual processes and how administrative systems can support coordinated and sustained performance improvement.

From this perspective, the central issue is not whether AI can improve efficiency, but how efficiency gains can be translated into broader productivity outcomes. This requires attention not only to technological capability, but also to institutional arrangements and governance conditions.

Purpose and Scope of This Report

This report was commissioned by the APO as part of Project 25-RC-18-GE-RES-B and contracted to Niigata University to examine AI adoption across eight target economies as well as to identify pathways through which AI can contribute to sustainable productivity improvement in the public sector.

The eight target economies (Bangladesh, India, Japan, Malaysia, Philippines, ROK, ROC, and Thailand) represent a range of institutional capacities and development contexts. This variation

enables comparative analysis of how AI adoption patterns differ under different conditions and how these differences affect productivity outcomes.

The analysis is structured around three complementary approaches:

- **Horizon scanning:** This is examination of technological development and policy activity through academic publications, patent data, and official government documents for establishing the empirical basis of AI adoption.

- **Scenario planning:** This involves analysis of how structural conditions shape different trajectories of AI adoption and helps in identifying alternative pathways for productivity improvement.

- **Lesson-drawing:** This is a comparative analysis of practices across economies in order to identify transferable insights for managing the relationship between technological capability and institutional conditions.

Research Design

This study is grounded in futures studies: its analysis proceeds as a single flow—horizon scanning based on scenario planning—through which lessons are derived for each member economy.

Scenario planning, taking into account the current development of AI technology, derives medium- to long-term scenarios of AI application in the public sector.

Based upon the scenario planning, the study adopts horizon scanning—systematically collecting documented signals of AI activity from academic publications, patent data, and official government documents—and organizes those signals against the study's analytical framework through Portfolio Assessment, using the Technology x Application Matrix (the 5x5 portfolio assessment matrix that structures the empirical analysis of Chapters 3 and 4).

Within this assessment, the evidence mapping of the public-sector-oriented applications observed across the member economies (drawn from 944 documented sources) places and scores those signals in the cells of the matrix. The scan spans three streams of comparative evidence, and one principle is embedded in the reading of every stream: no indicator is a direct count of the thing it names—each reads a latent construct relative to the full population from which it is drawn. Peer-reviewed AI publications indexed in the Web of Science (2015–25) are read as the indicator of human capital and the research base: spanning AI/ML research broadly across universities, government laboratories, and industry, they measure the scale of the research and expert base that enables absorption, adaptation, and indigenous development—not direct public-sector deployment.

AI-related patent families (2015–25), compiled at DWPI family level by application country, are read through ThemeScape as the indicator of technological capacity oriented toward public-sector applications: publicly relevant techniques such as flood forecasting, leak detection, and infrastructure inspection carry no "public-sector" label and surface only as clusters within the whole patent landscape, so the measure is the prominence of public-relevant themes relative to that full population—not patent volume, and not applicant identity, which is not determined in this study; because the measure is relational, an economy with a small absolute number of filings can

still show a strong public-sector orientation (full definitions in Appendix B-0). Benchmark indicators of public-sector AI capability, such as the Waseda University – IAC World Digital Government Ranking 2025 (institutional maturity), gauge the institutional and administrative infrastructure with which a government can operate AI at scale. In addition, a web-based search for signals in documentary sources concerned primarily with public-sector applications—official government documents, policy papers, institutional reports, and documented deployments — yielded the corpus of 944 sources. All data reflect a single November 2025 snapshot. In addition, to complement and test these readings, the study drew on informant interviews and discussions at international workshops.

On the results thus obtained, the Portfolio Assessment was conducted using this framework. Its implementation is the study's own construction of that assessment framework for each economy—the evidence matrices. Within them, evidence mapping, the mapping and scoring of the collected signals, placed 864 public-sector-relevant sources into the cells of the matrix, while 80 primarily private-sector sources were deliberately left unmapped rather than forced into public-sector cells (Table 4.1). Through this assessment the study derives, for each economy, an evaluation of and outlook for the state of public-sector AI utilization, reaching the goal stated at the outset: the derivation of shared lessons for the member economies.

This design was adopted rather than a primary survey, for three reasons. First, no harmonized instrument for measuring public-sector AI adoption exists across the eight target economies, and self-reported survey data would not be comparable given differences in institutional definitions, sampling frames, and reporting conventions. Second, the study's object is documented deployment maturity—AI capabilities that are verifiably in operation—rather than self-reported intent or perception. Third, linking each assessment to an auditable evidence base (the 944 sources compiled in Chapter 4) ensures traceability and replicability while reducing self-report bias, and accommodates the asymmetric survey infrastructure across economies at different stages of development.

The report is organized to connect technological analysis with productivity outcomes. Chapter 2 provides a structured analysis of AI technologies in public administration and introduces a framework linking efficiency, accountability, and resilience. Chapter 3 establishes the empirical foundation across the eight economies. Chapter 4 analyzes patterns of adoption and identifies distinct pathways. Chapter 5 examines how efficiency gains relate to broader productivity outcomes. Chapter 6 develops policy implications. Chapter 7 presents conclusions and future directions.

Part II provides country-specific analysis, applying a consistent analytical framework to each economy.

Report Structure

The report proceeds through a sequence that links technological deployment, institutional conditions, and productivity outcomes:

- Chapter 1 establishes the context and defines the central challenge of translating localized efficiency gains into system-wide productivity improvement.

- Chapter 2 analyzes AI technologies and introduces a framework for understanding productivity in terms of efficiency, accountability, and resilience.

- Chapter 3 presents comparative data on institutional capacity, technological activity, and human capital.
- Chapter 4 examines patterns of AI adoption and identifies alternative development pathways.
- Chapter 5 analyzes the relationship between task-level efficiency and broader productivity outcomes.
- Chapter 6 presents policy implications for achieving sustained productivity improvement.
- Chapter 7 provides conclusions and identifies areas for further research.
- Part II provides country-specific analysis for each of the eight target economies.

Summary: From Localized Efficiency Gains to System-wide Productivity Improvements

This chapter has established the context for analyzing AI adoption in the public sector from the perspective of productivity.

AI technologies are already generating measurable efficiency improvements within specific administrative processes. These improvements demonstrate the potential of AI to enhance public-sector performance.

The next stage is the extension of these gains beyond individual processes. Achieving system-wide productivity improvement requires coordination across technologies, alignment with institutional structures, and appropriate governance conditions.

The central issue addressed in this report is therefore not the presence of AI adoption, but the conditions under which existing gains can be translated into sustained productivity improvement at the level of the public sector as a whole.

Public sector AI is an emerging technology whose deployment generates governance adjustment challenges that apply universally across economies, irrespective of their stage of economic development. The eight APO member economies examined in this report do not stand in a hierarchical relationship of advanced and developing; each faces the institutional reconfiguration anew, and each generates governance experiments that constitute learning resources for the others. Systematic mutual learning across the eight economies is therefore both the analytical orientation of this report and its principal policy recommendation. It involves three related steps: locating the position and nature of one's own institutional bottleneck through cross-economy comparison; drawing on peer economies' deployment and governance experience for concrete approaches to bottleneck removal; and advancing through one's own governance experimentation, which, in turn becomes a learning resource for others.

CHAPTER 2
AI TECHNOLOGIES FOR PUBLIC ADMINISTRATION

AI Adoption and the Productivity Transformation in the Public Sector

The APO exists to improve productivity. That mission, applied to the public sector, raises a question that is less straightforward than it appears: what does productivity mean in public administration?

In the private sector, the answer is relatively tractable. Productivity can be expressed as the ratio between inputs and outputs, and both can be measured in terms that are broadly comparable across firms and industries. In the public sector, the question is harder to answer because of some key factors. Governments do not sell their outputs at market prices. The value of public services is not determined by exchange. And the objectives of public administration extend well beyond cost minimization to include equity, accountability, legality, and the protection of rights. These are not peripheral concerns that can be set aside in the interest of efficiency. They are constitutive of what public administration is for.

This difficulty is not new. It has been recognized in public administration scholarship for decades. Among the most influential contributions to this debate is the framework developed by Hood (1991), which identified not a single conception of public sector productivity but three distinct and structurally competing types. Sigma-type values concern efficiency, which includes minimizing waste, reducing cost, and improving the ratio of inputs to outputs. Theta-type values concern accountability and rectitude, i.e., ensuring that administrative decisions are made fairly, consistently, and in accordance with rules, and that they can be explained and contested. Lambda-type values concern resilience and robustness and are concerned with maintaining the capacity of administrative systems to function under stress, adapt to changing conditions, and sustain performance over time.

Hood's contribution was to show that these are not simply different priorities that administrators can choose between according to taste or circumstance. They are structurally in tension. Resources invested in Sigma may come at the expense of Theta, as faster processing may reduce the time available for careful review. Resources invested in Theta may come at the expense of Lambda, as elaborate accountability procedures may make systems less flexible. Resources invested in Lambda may come at the expense of Sigma, as redundancy and resilience cost money. Productivity improvement in the public sector therefore cannot be understood as movement along a single dimension. It is a problem of managing competing values within a system that must serve all three dimensions simultaneously.

It is into this long-standing and unresolved tension that AI has now entered. Governments across the Asia-Pacific region have positioned AI as an instrument of productivity improvement. The national strategies documented in Chapter 1 assign AI a central role in administrative modernization. The expectation, broadly stated, is that AI can make government faster, more capable, and more responsive to citizen needs.

That expectation is not without foundation. Across the eight target economies, AI applications are already generating observable improvements in the speed and cost of specific administrative tasks. These are real gains, and they matter. But if Hood's analysis is taken seriously, they are also incomplete gains. Efficiency improvements achieved in isolation, e.g., Sigma pursued without corresponding attention to Theta and Lambda, do not constitute productivity improvement in the full public sector sense. They represent one dimension of a three-dimensional problem.

The central question of this chapter is therefore not whether AI can improve administrative efficiency. The evidence that it can is already visible. The question is whether AI adoption can be structured so that efficiency gains are accompanied by the accountability and resilience conditions that public sector productivity actually requires. That question cannot be answered by examining AI technologies in isolation. It requires understanding how different technologies, at different stages of deployment, engage differently with Sigma, Theta, and Lambda (Figure 2.1).

The sections that follow trace that logic. They begin with the technologies that generate task-level efficiency gains, and show how the ambition to extend those gains across administrative systems necessarily surfaces the accountability and resilience dimensions that Hood identified as structurally inseparable from efficiency in public administration.

Foundation Models and Application Technologies: Task-level Efficiency Gains

The entry point for AI in public administration is practical and immediate. Administrators face concrete bottlenecks: citizens waiting for answers, documents accumulating in queues, staff time consumed by repetitive information retrieval. AI technologies address these bottlenecks directly, and in doing so, they produce measurable improvements in the speed and cost of individual administrative tasks.

The technological basis for these improvements is the emergence of large language models as general-purpose systems. Earlier, AI tools were narrow by design. Each system addressed a defined task: character recognition, keyword search, and rule-based classification. Large language models operate differently. Trained on large text corpora through transformer architectures, they can perform a wide range of language-based tasks without being purpose-built for each one. In public administration, where rules, procedures, regulations, and communications are all heavily mediated through language, this generality matters.

Three features of this shift are especially relevant. First, accessibility: foundation models can be accessed through existing interfaces, lowering the threshold for experimentation without requiring custom system development from the outset. Second, language-based functionality: administrative work is deeply embedded in natural language, and foundation models operate directly in that medium. Third, interactive reasoning: these systems can produce and explain outputs in natural language, making them practically usable in settings where human review and judgment remain essential.

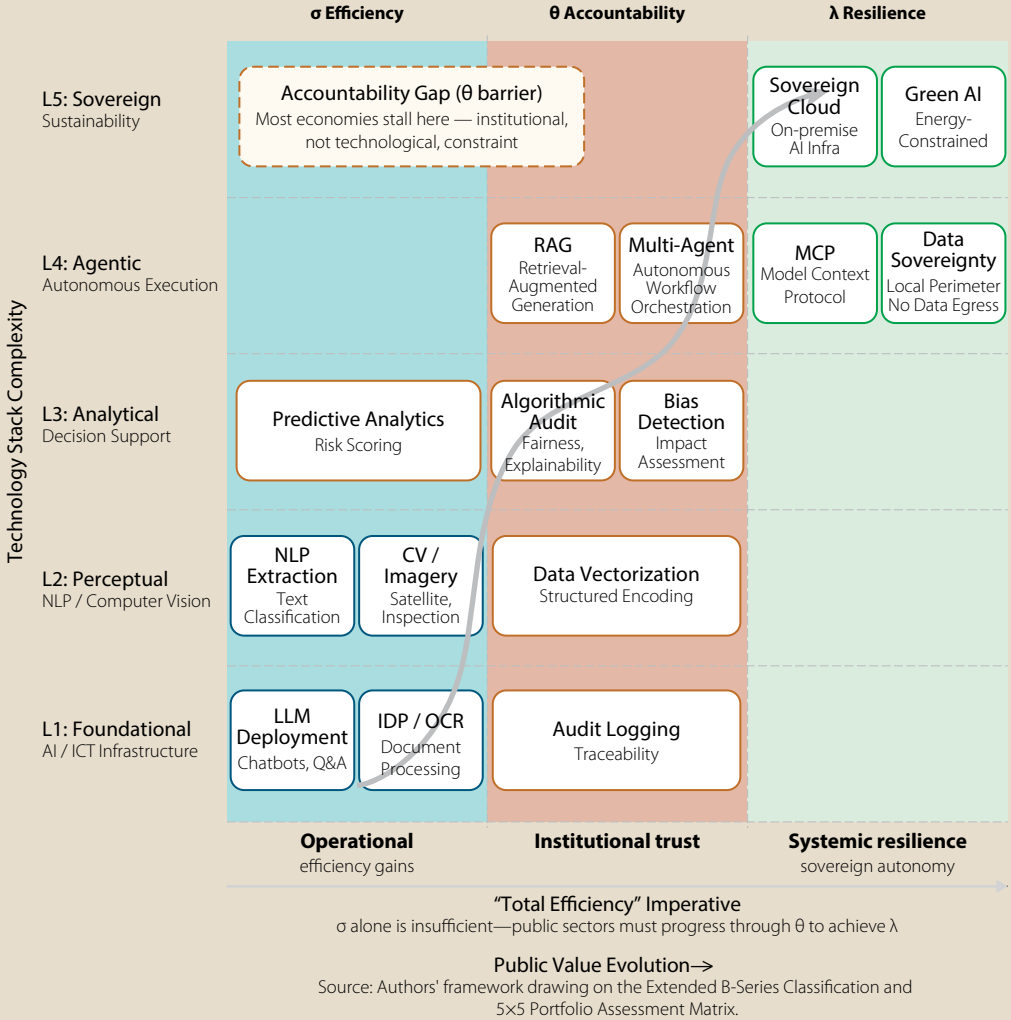
These capabilities are reflected in the application technologies now operating across the eight target economies. The ROK's Government24 portal deploys intelligent search and chatbot functions to help citizens locate relevant services. Japan's municipal governments have introduced document-classification systems for application processing and chatbots for routine inquiries. Thailand's Traffy Fondue platform uses AI classification on LINE messenger to route citizen complaints to

appropriate agencies. Malaysia's digital government initiatives apply text summarization to policy briefing processes. These are not pilot experiments. They are operational systems producing observable efficiency improvements in defined administrative functions.

The productivity contribution at this stage is real. A chatbot reduces staff time per citizen interaction. A classification system shortens the interval between receipt and triage of applications. An intelligent search tool reduces the time required to locate relevant regulations or precedents. Together, these gains represent what this report terms Stage 1 Sigma improvement: measurable reduction in the resource cost of individual administrative tasks.

FIGURE 2.1

A ROADMAP FOR AI-ENABLED PRODUCTIVITY IMPROVEMENT IN THE PUBLIC SECTOR.



Source: Authors' framework drawing on the Extended B-Series Classification and 5×5 Portfolio Assessment Matrix.

Note: The vertical axis represents technology stack complexity from foundational infrastructure (L1) to sovereign capability (L5); the horizontal axis represents the progression of public value from operational efficiency (σ) through institutional accountability (θ) to systemic resilience (λ); technology elements are positioned to show the pathway each government must navigate, from task-level automation through accountability-embedded integration to sovereign-resilient architectures.

Yet, something important is also visible at this stage. Each of these applications improves a defined function in isolation. A chatbot answers questions but does not update the underlying database. A classification system sorts documents but does not coordinate the response across agencies. A

search tool locates rules but does not ensure their consistent application across the organization. The efficiency gains are genuine, but they are bounded. They do not automatically connect with each other, and they do not by themselves alter the broader administrative system within which they operate.

This is not a failure of the technology. It is a structural feature of how AI enters public administration: tool by tool, process by process, generating local improvements that remain, for the moment, local. The question of how those local improvements can be connected and extended is taken up in the next section.

Integration Architectures: Connecting Applications Across Administrative Systems

The efficiency gains described in the previous section are real, but they share a common limitation. Each application operates within its own boundary. The chatbot does not know what the document-classification system has processed. The search tool does not know what the chatbot has promised. The automation system does not know what the search tool has retrieved. In administrative terms, these tools exist in parallel, not in sequence. They improve individual steps without altering the chain.

This is the problem that integration architectures are designed to address. Rather than replacing foundational applications, they provide the connective tissue through which separate tools can share information, coordinate processes, and produce coherent outputs across administrative boundaries.

Several architectural patterns have emerged as particularly relevant to public administration. Retrieval-augmented generation links language models to authoritative repositories of regulations, procedures, and administrative records, so that outputs are grounded in current and citable sources rather than in the model's training data alone. This matters in government settings where the legal basis of a response is not merely preferable but required. Multiagent systems distribute administrative functions across coordinated specialized components, creating the possibility of representing different agencies, verification steps, or decision stages as interacting parts of a single workflow rather than disconnected processes. Digital twins construct computational representations of physical or organizational systems and update them continuously with real-world data, enabling scenario analysis and planning in areas such as infrastructure management or service optimization. Knowledge graphs organize administrative information as structured networks of entities and relationships, allowing systems to reason across domains and maintain contextual consistency that isolated databases cannot provide. Adaptive learning systems incorporate feedback and outcomes into continuing adjustment, enabling AI applications to improve as administrators identify errors or as administrative conditions change.

What unites these patterns is that they transform AI from a collection of parallel tools into a coordinated administrative system. Processes that were previously separated by organizational boundaries, data silos, or procedural gaps become capable of operating in sequence. Information generated in one part of the administrative chain becomes available to another. Decisions made at one stage can inform and constrain decisions at the next level.

This extension of scope is precisely where the productivity story changes character. In isolated applications, performance is relatively straightforward to observe and attribute: time saved, cost reduced, throughput increased within a defined function. Once systems become integrated,

however, the administrative consequences of both success and failure expand. An error in a standalone chatbot may inconvenience a citizen or require staff follow-up. An error in an integrated eligibility system affecting benefit determination, document verification, and agency coordination carries broader institutional consequences. The same integration that makes broader productivity gains possible also makes accountability structurally unavoidable.

This is not an incidental observation. It is a direct implication of the architecture. When AI systems are connected across administrative processes, the question of who is responsible for which output, on what basis a decision was reached, and how a citizen can contest or understand that decision can no longer be deferred. Theta, i.e., accountability, explainability, and consistency, becomes a design requirement, not an afterthought. Governments that have moved furthest in integration have discovered this not as a philosophical concern but as a practical one: integrated systems that cannot explain their outputs generate administrative disputes, legal challenges, and institutional resistance that consume the efficiency gains they were meant to produce.

The productivity implication is therefore this: integration architectures expand the scope of possible Sigma gains by connecting processes that previously improved only in isolation. But they do so on the condition that Theta is addressed in parallel. Efficiency and accountability are not sequential concerns at this stage. They are simultaneous requirements of the same system.

Infrastructure and Governance: Conditions for Scale and Sustainability

Integration solves the problem of connection. However, connection need not amount to sustainability. A system that links administrative processes across agencies may function well in a pilot, in a single ministry, or under favorable conditions. The question of whether it can function reliably at scale, over time, and under the full range of conditions that public administration actually faces is a different question. That is the question this section addresses.

Two categories of condition determine the answer. The first is infrastructure: the computational, data, and interoperability environment in which AI systems actually run. The second is governance: the legal, organizational, and normative arrangements under which their use remains legitimate, accountable, and publicly acceptable. Neither is optional. Without infrastructure, AI systems cannot operate consistently. Without governance, they cannot be scaled responsibly. Together, they constitute what this report terms the institutional foundations of AI-enabled public administration.

Infrastructure in the public sector AI context has several distinct components. Cloud computing provides the scalable computational resources on which modern AI depends. Yet for governments, the choice of cloud environment is not merely technical. As noted in Chapter 1, the USA controls approximately 75% of global AI supercomputing capacity, with PR China controlling an additional 15%. When a government sends administrative data to an external cloud provider for AI processing, it does not simply purchase computing capacity. It transfers physical custody of sensitive citizen information to an infrastructure environment operating under another jurisdiction's legal framework. This creates strategic dependencies that affect not only data security but also the long-term autonomy of administrative decision-making. Data platforms and data lakes organize the administrative records on which AI systems depend, while their quality, accessibility, and governance determine what AI can actually do in practice. Digital public infrastructure, including identity systems, service registries, and interagency data exchange platforms, provides the foundational layer on which broader digital government functions depend. Edge computing enables

local processing in field settings where bandwidth or latency constraints make central cloud reliance impractical. API ecosystems and integration platforms enable different systems to communicate without requiring full custom integration at every connection point.

Governance conditions operate at a different level but with equivalent necessity. Algorithmic auditing and transparency mechanisms allow governments and citizens to verify whether systems operate as intended and to identify failure modes before they produce irreversible administrative consequences. Data governance and privacy frameworks establish the legal basis on which citizen information can be processed, retained, and shared—conditions without which the large-scale use of AI in core administrative functions cannot be lawfully pursued. Fairness and nondiscrimination mechanisms address the risk that AI systems trained on historical administrative data may reproduce or amplify patterns of unequal treatment. Accountability and liability arrangements clarify who bears responsibility when AI-assisted decisions produce harmful outcomes. Data sovereignty and security frameworks address the jurisdictional control and cybersecurity conditions required for public trust. Human rights and administrative justice safeguards ensure that AI-assisted decisions remain subject to explanation, contestation, and appeal—requirements that democratic governance cannot waive regardless of administrative efficiency gains.

The relationship between infrastructure, governance, and productivity is direct. Governments that lack reliable infrastructure face a ceiling on how far AI adoption can scale: applications may function in controlled settings but degrade or fail under the full operational conditions of public administration. Governments that lack governance frameworks face a different ceiling: applications may function technically but generate institutional resistance, legal challenge, or public loss of confidence that constrains further deployment. In both cases, the result is the same. Efficiency gains achieved at earlier stages are not extended. They remain bounded, fragile, or politically contested.

This is the structural basis for Lambda (resilience) as a dimension of public sector productivity. Lambda is not simply robustness in a technical sense. It is the capacity of an administrative system to maintain performance under changing conditions: to absorb disruption, adapt to new requirements, and sustain gains over time rather than lose them to infrastructure failure, governance vacuum, or institutional drift. Without Lambda, Sigma gains are temporary and Theta arrangements are unstable. With Lambda, the improvements achieved through foundation technologies and integration architectures become durable features of public administration rather than transient experiments.

The comparative evidence across the eight target economies illustrates this dynamic clearly. the ROK's investment in governance standards alongside technical deployment has supported more confident scaling by clarifying what safeguards are required. India's strong policy commitment and impressive application-layer deployment have encountered limits at the governance layer, where unresolved questions about data sovereignty and algorithmic accountability have slowed translation from ambition to system-wide adoption. Bangladesh faces infrastructural constraints that define the practical ceiling of current deployment regardless of policy intent. These differences are not simply differences in terms of technological capability. They are differences in the institutional foundations that determine whether AI adoption can become sustained productivity improvement.

The implication for this report's analytical framework is therefore this: foundational technologies generate Sigma; integration architectures make Sigma extensible but require Theta; and

infrastructure and governance determine whether Sigma and Theta gains can be sustained as Lambda. All three dimensions are necessary. None is sufficient alone.

A Productivity Improvement Model for AI Adoption in the Public Sector: Technology Scenarios and Technology Classification

Hood's framework, introduced at the opening of this chapter, identified a structural problem that has resisted resolution in public administration for decades. Sigma, Theta, and Lambda are not simply different priorities. They are competing claims on the same administrative resources: investing in efficiency may compromise accountability; investing in accountability may compromise resilience; and investing in resilience may compromise efficiency. This is not a problem of poor management. It is a structural feature of public administration itself.

AI does not dissolve this tension. But it does something that earlier administrative technologies could not: it creates the conditions under which Sigma, Theta, and Lambda can be pursued sequentially rather than getting simultaneously traded off against one another.

The logic of this claim has been developed across the preceding three sections. Foundation models and application technologies generate task-level efficiency gains (Sigma) in discrete administrative processes. Integration architectures extend those gains across administrative systems, but in doing so make accountability (Theta) a structural requirement rather than an optional enhancement. Infrastructure and governance determine whether those efficiency and accountability gains can be sustained over time (Lambda) under the full range of conditions that public administration actually faces.

Taken together, these three stages do not describe a single predetermined path. They describe a logical sequence in which each stage creates the conditions for the next. Sigma gains, if they remain isolated, do not automatically produce Theta or Lambda. But without Sigma as a foundation, there is no efficiency base from which integration can proceed. Without integration, there is no system-level performance to sustain. The sequence is therefore not arbitrary. It reflects the internal logic of how AI enters and matures within public administration.

This is the theoretical reinterpretation that the evidence of this chapter supports: Hood's structural opposition between Sigma, Theta, and Lambda can be reformulated, under conditions of AI adoption, as a temporal ordering problem. What was understood as an irresolvable trade-off, becomes, through the staged deployment of AI technologies, a sequence of achievable transitions—from localized efficiency, to accountable integration, to resilient and sustained administrative performance.

However, this sequence is not universal. Its speed, trajectory, and ultimate realization depend on the conditions each economy brings to the process. Computational infrastructure, institutional maturity, data governance capacity, and workforce capability do not vary randomly across the eight target economies. They vary systematically, and those systematic differences generate different technology scenarios, i.e., different viable pathways through the Sigma–Theta–Lambda sequence under real administrative constraints.

To support this scenario analysis, and to make the diagnostic logic of the framework operational, the technologies currently available for public sector AI adoption can be understood through the following structure.

Public sector AI: Purposes and Uses

The sequencing of public sector productivity stages, from efficiency to accountability and resilience, must be applied to AI deployment across the eight economies. This can be done by examining the AI technologies actually being used and identifying the stage at which each technology contributes to public sector productivity improvement. The AI technologies actually deployed in public administration group themselves into eight clear functional categories. Five technology categories form the technical and institutional substrate: core AI models on which other applications rely; integration architectures connecting models to administrative data; application technologies delivering services directly to citizens; infrastructure supplying the computational and connectivity foundation; and governance instruments operationalizing accountability. Three cross-cutting categories, namely, performance metrics, workforce capability, and policy and regulatory frameworks, span the technical layers as the societal conditions under which AI can be operated, governed, and sustained. Together, these eight categories comprise a vocabulary of 57 technology classifications, designed to make visible what is being deployed in government as AI, and what is not yet being deployed (Table 2.1).

TABLE 2.1

EIGHT FUNCTIONAL CATEGORIES AND 57 KEYWORDS DENOTING PURPOSES AND USES OF PUBLIC SECTOR AI.

Category	Description	Technologies
Core AI models and techniques	Foundation models on which other applications rely; the technical substrate from which public sector AI capability is built.	Foundation models Domain-specialized models Vision-language models Embeddings and semantic search Fine-tuning methodologies Smaller-scale models Evaluation and safety frameworks Prompt engineering and in-context learning Reasoning and tool-use frameworks
Architectural patterns	Architectures connecting models to administrative data, transforming model outputs into operationally usable forms within agency workflows.	Retrieval-augmented generation Multi-agent systems Digital twins Knowledge graphs and semantic integration Adaptive learning systems
Application technologies	Direct service delivery to citizens through assistants, document handling, search, and decision support.	Chatbots and virtual assistants Document processing and classification Text summarization and report generation Intelligent search and information retrieval Regulatory interpretation assistance Process automation with robotic process automation integration

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Category	Description	Technologies
Infrastructure	Computational, data-platform, and connectivity foundations on which AI systems operate at scale.	Cloud computing infrastructure Data platforms and lakes Digital public infrastructure Computational edge infrastructure API ecosystems and integration platforms
Governance	Operationalization of accountability through audit, fairness, privacy, sovereignty, and human-rights mechanisms.	Algorithmic auditing and transparency Data governance and privacy Fairness and non-discrimination Accountability and liability Data sovereignty and security Human rights and administrative justice
Performance metrics and evaluation	Cross-cutting measurement capabilities that make AI deployment evaluable across efficiency, accountability, and resilience dimensions.	Operational efficiency metrics Decision-making cost reduction Process throughput and latency Fairness metrics Disparity detection and monitoring Accountability and transparency metrics Resilience metrics System availability and recovery time Organizational adaptability metrics Citizen satisfaction and trust metrics
Enabling competencies and workforce development	Cross-cutting human-resource conditions for sustained deployment, including civil-service AI literacy, technical training, and change management.	AI literacy and awareness programs Technical AI training Prompt engineering and basic AI application Change management and organizational readiness Governance and ethics training Data literacy and data governance AI auditing and fairness assessment Leadership and strategic AI planning

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Category	Description	Technologies
Policy, regulation, and international standards	Cross-cutting institutional and legal conditions for governance, including legislation, regulatory frameworks, and international standards.	AI governance legislation Data protection and privacy regulation Algorithmic transparency and explainability standards Fairness and non-discrimination standards Sector-Specific Regulatory Frameworks International AI standards Cross-border data and ai ethics guidelines Liability and insurance frameworks

The relationship between the various elements is now clear. Core AI models and techniques, together with infrastructure, form the foundational layer (L1) that supplies the technical substrate. Application technologies form the operational layer (L2) at which efficiency gains first become visible. Further, architectural patterns split structurally: Retrieval-augmented generation and knowledge graphs supply the data and evidence layer (L3) at which accountability becomes structurally unavoidable; while multiagent systems, digital twins, and adaptive learning systems supply the cross-system automation layer (L4) at which intersystem coordination becomes possible. Governance supplies the sustainability and trust layer (L5) at which resilience is institutionally embedded. Performance metrics and evaluation, enabling competencies and workforce development, and policy, regulation, and international standards cut across, providing measurement, capability, and regulatory conditions that make the entire sequence governable and evaluable. The 57 keywords distributed across these eight categories map to five functional layers plus three cross-cutting categories (Figure 2.2).

The split of architectural patterns across two functional layers reflects two distinct technology currents in public sector AI. The first current is data infrastructure, a long-standing foundational area of administrative work that encompasses data warehouses, data lakes, and integration platforms developed over decades, well predating the current generation of AI. Within this established space, Retrieval-augmented Generation (RAG) is currently the most active focus: a technique by which large language models are grounded on specific data sources, enabling AI to operate with reference to actual administrative records rather than general statistical patterns. For public administration, RAG matters because evidence-based operation and accountability-embedded analytics require AI that is answerable to traceable data sources. Knowledge graphs are a companion architecture supporting structured semantic integration.

The second current is cross-silo coordination. This is a particularly acute challenge in public administration, where vertical organizational silos across ministries and agencies have long made integrated operation difficult and have been a persistent constraint on public sector productivity. The emerging key technology here is Model Context Protocol (MCP), an open standard for how AI systems are given context from, and can act on, multiple data sources and tools within a coherent agent framework. MCP allows AI agents to coordinate across administrative systems that previously could not interoperate, directly addressing the cross-silo bottleneck that has constrained public

sector productivity improvement. Multiagent systems, digital twins, and adaptive learning systems are companion architectures that operationalize this cross-system coordination.

Together, the data-grounding current (anchored by RAG) and the cross-silo coordination current (anchored by MCP) provide the rationale for distinguishing two functional layers within architectural patterns: L3 (data and evidence), where RAG and knowledge graphs operate; and L4 (cross-system automation), where MCP-enabled agent architectures operate.

The purposes-and-uses inventory for public sector AI comprises eight functional categories that span the full range of conditions on which public sector AI deployment depends. When the analytical lens shifts, from the functional perspective of what AI does across all dimensions of public administration, to the perspective of contemporary technological evolution as it engages the public sector domain, the inventory resolves into a focused two-dimensional structure. Along the technology axis, five functional layers reflect the architectural hierarchy of contemporary AI deployment, comprising foundational technology, operational applications, data and evidence integration, cross-system automation, and sustainability and trust.

Along the application axis, the five categories capture where AI is deployed in government, i.e., policy and governance, internal administration, citizen services, administrative sectors, and industry interfaces. The intersection of these two dimensions—five functional technology layers and five application categories—yields the 5x5 portfolio assessment matrix that organizes the empirical analysis of Chapters 3 and 4. This framework precedes the evidence: it is what makes the Portfolio Assessment of the horizon-scanned signals possible. The research design governing that assessment — the data sources behind each evidence stream and the reading rules applied to each indicator — is set out in the Research Design note in Chapter 1. The three cross-cutting categories of the inventory, i.e., performance metrics, workforce capability, and policy and regulatory frameworks, are not technology categories but the societal and institutional conditions under which the technology layers operate, and are addressed separately in the analysis of each economy.

This analysis reflects the technology landscape at the time of writing this report. Specific architectures named here, particularly RAG and MCP, represent the currently active focus within the broader technology currents identified, and may be succeeded by analogous successor standards as the field matures. The structural argument of this report, that the data-grounding and cross-silo coordination currents are central to public sector AI productivity, is independent of these specific terms, and remains applicable as the underlying technologies evolve.

Together, these two instruments—the classification and the productivity model—establish the analytical foundation for the chapters that follow. They make it possible to ask not only what technologies governments have deployed, but where each economy stands in the Sigma–Theta–Lambda sequence, what conditions it has established, and what pathways toward sustained productivity improvement remain open under its particular institutional constraints.

That comparative question is taken up in Chapter 3, which establishes the empirical baseline across the eight target economies, and in Chapter 4, which applies the 5×5 portfolio assessment matrix to derive the technology scenarios through which different development trajectories can be understood and evaluated.

AI-driven Public Sector Productivity Enhancement: From Foundational Models to Trustworthy AI Adoption

When government sets out to improve the productivity of existing work through AI, it first needs the basics. AI does not start without foundational models such as GPT-4, the cloud servers and computing resources that run them, and the digital infrastructure that handles citizen data securely (Layer 1). Once the foundation is in place, AI can be put to work on actual tasks: chatbots that answer citizen inquiries, systems that classify incoming applications, tools that summarize long reports. AI at this stage serves as a tool to make existing administrative work faster and cheaper (Layer 2).

The picture changes once AI starts reading documents and the past decisions to construct its own answers. Imagine a citizen asking about welfare eligibility: AI looks up the relevant laws and prior cases and responds, "Based on these references, you may qualify." The citizen will naturally ask back, "How can you say that? What is your basis?" On the technical side, RAG and knowledge graphs are the tools that let AI cite its sources. On the institutional side, a basic principle of public administration becomes a design requirement, i.e., a government cannot use a decision it cannot explain. Productivity can no longer be measured by speed and cost alone; it expands to include the dimension of accountability (Layer 3).

Up to this point, the government has been making existing work more efficient through AI. With accountability raised as a new dimension at Layer 3, the effort to improve productivity widens further.

Technology continues to advance. AI moves beyond handling one task at a time to coordinating multiple AIs that share the work, read changing conditions, and adjust their own judgments. Multiagent systems (where several AIs cooperate by dividing roles); digital twins (computer replicas of real cities or rivers used for prediction); and adaptive learning (systems that improve as they operate) are emerging from the frontier of AI research. At the same time, a new effort arises on the government side: how does an organization govern systems that staff do not directly operate, one button at a time? Who is responsible when AI handles the work? The advancement of AI technology and the capacity of the workforce and organization to govern it pair deeply here. Productivity improvement becomes a matter of how government keeps adapting under changing conditions (Layer 4).

The questions of responsibility and trust raised at Layer 4 do not close by themselves. Autonomous systems must be continuously audited, their performance checked over time, and aligned with standards that cross jurisdictions. Algorithmic auditing and performance metrics on the technical side, together with governance rules and laws on the institutional side sustain Layer 4's AI in a form that society can keep trusting. Productivity becomes something that endures across political cycles and technological change (Layer 5).

The eight technical categories of the purposes-and-uses inventory for public sector AI thus organize themselves into five functional layers, according to the depth at which they serve the government's effort to improve the productivity of existing work through AI. Because the way technical and institutional requirements combine shifts at the boundary between layers, the five layers are not designed by anyone; they emerge naturally as we trace the order in which government applies AI to existing work and deepens that application.

Tracing this order brings Hood's three dimensions of public sector productivity—σ (efficiency), θ (accountability), λ (resilience), formulated in 1991—into view as a natural consequence. σ appears at Layers 1 and 2 because these are the stages where work is made faster and cheaper; θ appears at Layer 3 because accountability becomes technically unavoidable; an λ appears at Layers 4 and 5 because the mechanisms for sustaining AI over time take shape there. Hood once argued that these three dimensions are in tension, i.e., gain on one comes at the cost of another. Tracing the stages of AI adoption lets us reread these three as a scenario for productivity improvement that unfolds in temporal order.

To this we add another axis: where in government AI is being used? Is it used for policymaking and legislative support; for internal administration such as personnel and finance; for citizen-facing services; for sectoral domains such as transport, health, and disaster management; or for industry policy? Application areas thus also divide into five. The two structural axes—how deeply AI has matured (the five technology layers, from foundational AI/ICT to trustworthy AI adoption) and where in government it is being used (the five application domains, from policy formation to industry interfaces)—together provide a structural map of how AI-driven productivity enhancement unfolds across the public sector. Chapter 4 applies this structural articulation to evaluate the current state of public sector AI deployment across the eight target economies.

FIGURE 2.2

AI-DRIVEN PUBLIC SECTOR PRODUCTIVITY ENHANCEMENT (FROM FOUNDATIONAL MODELS TO TRUSTWORTHY AI ADOPTION).

Productivity Dimensions (Hood, 1991)	Depth of AI maturity Functional Layers	Policy & Governance	Internal Administration	Citizen Services	Sectoral Domains	Industry / Other
λ Resilience (Lambda)	L5 Sustainability and Trust Algorithmic Auditing, Governance Frameworks, Standards					
	L4 Cross-System Automation Multi-Agent Systems, Digital Twins, Adaptive Learning					
θ Accountability (Theta)	L3 Data and Evidence RAG, Knowledge Graphs, Data Platforms					
σ Efficiency (Sigma)	L2 Operational Applications Chatbots, Document Processing, Summarization					
	L1 Basic AI/ICT Foundation Foundation Models, Cloud, DPI					
	Application Domains → where AI is applied in government	policymaking, legislative support	HR, finance, document handling	inquiries, applications, benefit eligibility	transport, health, disaster management	industrial policy, economic promotion

CHAPTER 3

INSTITUTIONAL INFRASTRUCTURE, TECHNOLOGICAL CAPACITY, AND HUMAN CAPITAL ACROSS EACH ECONOMY

Chapter 2 established a theoretical proposition: AI adoption in the public sector does not dissolve the structural tensions among efficiency, accountability, and resilience that Hood identified. It creates the conditions under which those tensions can be addressed sequentially. Individual tools generate efficiency gains in bounded administrative tasks. Integration architectures extend those gains across systems, but in doing so make accountability a design requirement rather than an afterthought. Infrastructure and governance determine whether the gains from both stages can be sustained over time.

That proposition, however, leaves a question unanswered. The sequence is logical, not automatic. Whether any particular government can move from localized efficiency gains to accountable integration to durable administrative performance depends on what that government brings to the process. Computational infrastructure, institutional capacity, research communities, and engineering expertise do not vary randomly across the eight target economies. They vary systematically, and those systematic differences determine which transitions are available, which require sustained investment, and which remain out of reach under current conditions.

This chapter makes those differences empirically visible. Three independent data sources are examined in turn, each illuminating a distinct dimension of structural position. The first is the "Waseda University – IAC World Digital Government Ranking 2025," which measures whether governments possess the administrative systems and governance infrastructure through which AI technologies can actually operate at scale. The second is a patent landscape analysis covering AI-related patent families filed by the eight target economies between 2015 and 2025, which measures whether an economy can develop and adapt AI technologies for its own conditions or must rely on solutions designed elsewhere. The third is a publication analysis drawn from the Web of Science Core Collection, which measures whether an economy possesses the research communities and human capital capable of supporting AI deployment today and building indigenous capability over time.

No single source is sufficient. A government may possess world-class digital infrastructure and yet depend entirely on external technology. A country may produce substantial AI research and yet lack the institutional mechanisms to deploy it in government operations. The analytical power of the chapter emerges from examining all three data sources simultaneously—understanding not just where each economy is strong, but where the gaps between dimensions create strategic constraints.

Administrative Infrastructure: The Waseda University – IAC World Digital Government Ranking 2025

The starting point for any government considering AI adoption is not technology. It is the administrative environment in which a technology must operate. A chatbot answering citizen inquiries requires identity authentication systems, connected databases, and operational service registries to function reliably. A document classification system requires structured data pipelines and interagency connectivity. An integrated eligibility assessment platform requires shared data standards, legal authorization for data exchange, and accountability mechanisms governing automated decisions. These are not supplementary conditions; they are the institutional prerequisites on which AI performance depends.

The Waseda University – IAC World Digital Government Ranking 2025 measures how far governments have already traveled in building this institutional environment. Across ten indicators spanning digital infrastructure readiness, administrative systems modernization, online service delivery, citizen engagement mechanisms, and cybersecurity governance, it captures institutional maturity, i.e., the depth and integration of the administrative systems on which AI deployment depends. A government that scores well on the Waseda ranking has already built much of the institutional foundation that AI requires; a government that scores poorly faces the additional challenge of constructing that foundation while simultaneously attempting to deploy new technologies.

The eight target economies show substantial variation, as evidence from their scores in Table 3.1.

TABLE 3.1

WASEDA UNIVERSITY – IAC WORLD DIGITAL GOVERNMENT RANKING 2025 OF EIGHT TARGET ECONOMIES.

Economy	Overall rank	Overall score
ROK	5	93.23
Japan	9	87.45
Thailand	17	81.62
ROC	21	78.55
India	24	76.27
Philippines	29	75.09
Malaysia	30	74.63
Bangladesh	64	54.73

Source: Waseda University – IAC World Digital Government Ranking 2025.

The 38.5-point spread between the ROK and Bangladesh is not merely numerical. It reflects a qualitative difference in the scope and integration of administrative systems. The ROK's fifth global position reflects comprehensive digital government architecture operating across multiple functions simultaneously: ranking fourth globally on network infrastructure, seventh on management optimization, third on online services, ninth on open government data, sixth on citizen participation, and second on national portal. These are not isolated achievements. They reflect an administrative environment in which AI systems can be connected to authoritative data sources, integrated into operational workflows, and made accountable to citizens through established digital channels.

Japan's ninth ranking shows a different profile. Its highest-performing indicators are concentrated in citizen-facing systems: its national portal ranked third globally, open data governance third, and citizen participation seventh. Japan has built world-class public interfaces and data transparency

infrastructure, but the breadth of the ROK's administrative modernization—across management systems, interagency integration, and promotion policy—is not matched. The implication is directional: Japan's institutional strength is concentrated in the layer where citizens interact with the government. Administrative efficiency applications operating deeper within government workflows face a more constrained institutional environment.

Thailand's 17th ranking, at first glance, appears to reflect simply a less developed digital government. But its indicator profile tells a different story. Thailand ranks 10th globally in online services and ninth in e-government promotion, with both indicators oriented toward a forward momentum rather than the current deployment. This is the institutional signature of a government in the process of deliberate digital transformation: policy commitment and service digitalization advancing ahead of full administrative integration. The gains are real but recent; the institutional foundations supporting sustained AI deployment are less consolidated than the headline ranking suggests.

India's 24th ranking contains a similar internal tension, but at a greater scale. India ranks fourth globally in e-government promotion, which is a measure of policy commitment, national strategy coordination, and digital governance framework development. This places India among the global leaders in policy intent. Yet overall institutional maturity ranks 24th. The gap between policy ambition and deployed institutional capacity is analytically significant: India has constructed the strategic and legal architecture for digital government transformation without having fully translated that architecture yet into the integrated administrative systems through which AI must operate. At India's scale—a federal structure spanning 28 states and managing administrative processes for 1.4 billion citizens—this translation is not a matter of political will but of institutional complexity that takes years to resolve.

The Philippines and Malaysia, ranking 29th and 30th with scores of 75.09 and 74.63, are closely positioned overall but show distinct internal profiles that matter for AI deployment. Both are building digital government capacity, but neither has consolidated the integrated administrative infrastructure that distinguishes the most institutionally consolidated economies in this study. Bangladesh, ranked 64th with a score of 54.73, reflects a government in early-stage digital transformation. Localized digital systems exist but have not yet been integrated into comprehensive, cross-agency architecture. The institutional prerequisites for many AI applications, e.g., data exchange standards, identity systems, and connected service registries, are partially in place but not uniformly so.

What the Waseda ranking establishes, across all eight economies, there is a structural constraint on the pace of AI adoption. The ROK can contemplate AI integration across multiple government functions simultaneously because the institutional infrastructure to support that integration already exists. Bangladesh must sequence adoption carefully, building institutional capability incrementally alongside any AI deployment, because the foundational systems are not yet in place. The other six economies occupy intermediate positions along this spectrum, each having specific institutional strengths that enable some AI applications and specific institutional gaps that constrain others.

This is the first dimension of structural position. It answers the question of whether a government can receive and operate AI technologies at scale. It does not answer whether that government can develop those technologies domestically or whether it possesses the human capital to sustain them over time. Those questions require different evidences.

Technological Capacity: The Patent Landscape

Domestic Development Capacity

Governments that deploy AI technologies face a strategic choice that is not always made explicit in national policy documents: whether to develop these technologies domestically or to acquire them from external providers. Both approaches are available, but they have different implications.

Technologies acquired from external providers are designed for the conditions in which they were developed. The structure of administrative data, the legal basis for automated decision-making, and the procedural logic of public service delivery vary across economies. As a result, an AI system developed for one administrative context may require adaptation before it can operate effectively in another. The extent of that adaptation, and whether the deploying government can undertake it independently, depends in part on the availability of domestic technical expertise.

Patent filings provide one indicator of such expertise. When companies and research institutions within an economy file AI-related patents, they are documenting technological innovations that have been developed domestically. An economy with substantial AI patent output therefore possesses organizations capable of creating AI technologies, not only deploying them. In principle, such organizations may also support the adaptation, extension, and maintenance of deployed systems, thereby reducing long-term dependence on external vendors.

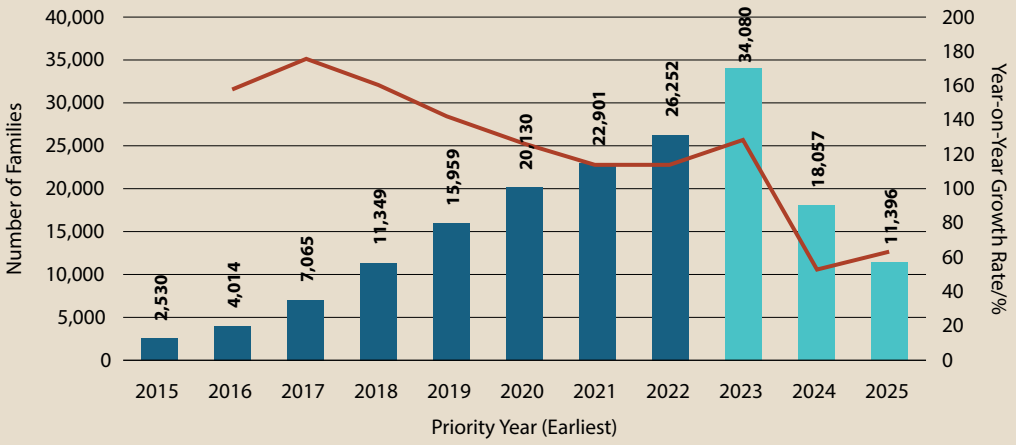
Patent data thus provides evidence on the presence or absence of domestic AI development capacity. It does not, however, measure deployment readiness or the institutional capacity to absorb technology; those dimensions are addressed in the institutional capacity sections.

Data

The overall volume shows an upward trend. While the growth rate slowed from 2019, it increased again in 2023 (based on tentative data). This coincides with the widespread adoption of generative AI in 2022, suggesting a potential increase in data volume, 2023 onward.

FIGURE 3.1

GLOBAL TREND OF PATENT FAMILIES BY PRIORITY YEAR (EARLIEST).



Note: This project analyzes data by priority year. There is a grace period of up to 1 year from priority claim to application, and a time lag of up to 1.5 years from application to publication. Therefore, data for the last 2.5 years from the survey date is considered tentative (unfixed).

The analysis covers seven of the eight target economies. Bangladesh is excluded because its total annual patent filings across all technology domains number approximately 300, placing it below the coverage threshold of the Derwent Innovation (DWPI) database used for this analysis. For the seven economies included, the analysis draws on 173,735 unique AI-related patent families recorded in DWPI between 2015 and 2025, yielding 194,396 entries in total when disaggregated by target economy (Table 3.2). Patent families are counted at the invention level, so that multiple filings for the same invention across different patent offices are treated as a single entry. The recent filing ratio measures the proportion of each economy's total patent portfolio filed between 2020 and 2025, indicating whether innovation activity has sustained or slowed in recent years.

TABLE 3.2

AI PATENT FAMILIES BY TARGET ECONOMY.

Economy	Patent families	Recent filing ratio (2020–25)
ROK	73,515	60.9%
Japan	56,611	46.3%
India	52,706	82.5%
ROC	10,664	52.8%
Philippines	383	37.3%
Malaysia	266	4.5%
Thailand	251	25.1%

Source: Derwent Innovation (DWPI) patent family analysis, 2015–25.

Application Domain: What Patent Volume Does Not Capture

Patent volume indicates which economies possess domestic AI development capacity. It does not indicate whether that capacity is directed toward problems relevant to public administration. These are separate questions, and data across the target economies shows them moving in opposite directions: the economies with the largest patent portfolios have developed that capacity primarily in response to industrial manufacturing demands, while the economies with the smallest portfolios show patent activity concentrated in domains that public agencies directly manage.

The ROK's patent portfolio is concentrated in smart city infrastructure, prediction systems for industrial processes, and transportation network optimization. These applications appear to have been developed largely in response to the demands of manufacturing, automotive, and semiconductor industries. Japan's portfolio is similarly oriented toward image processing, vehicle systems, and industrial robotics, reflecting the technological requirements of its manufacturing and transportation sectors.

Both the economies have developed substantial AI capability. However, much of that capability has been built in response to private-sector industrial demand. Applying it to public administration therefore requires a process of translation from the problem environments for which the technology was originally developed to those faced by government agencies. This does not preclude the use by the public sector, but it does imply additional adaptation costs.

The Philippines, Malaysia, and Thailand exhibit a different pattern. Their combined patent volume is very small in aggregate terms. However, the application domains represented in those filings include wastewater treatment, urban infrastructure management, and agricultural environmental monitoring—areas in which public agencies are often the primary operators. The technologies represented are fewer in number and likely narrower in scope than those found in the ROK's or Japan's portfolios, but they are more closely associated with domains directly relevant to public administration.

India occupies a distinct position on both dimensions. Its 52,706 patent families place it alongside the ROK and Japan in terms of scale. At the same time, its application profile more closely resembles the pattern observed in the smaller economies, with the dominant themes including weather prediction, soil analysis, traffic management, urban planning, educational technology, and energy optimization. These domains reflect structural features of India's economy, where large-scale public challenges such as agricultural productivity, urban infrastructure, and service delivery across a federal system, have shaped both public and private investment in AI development. As a result, India's innovation system has generated substantial technological output in areas that are structurally close to use cases in the public sector.

The ROC's 10,664 patent families represent significant specialized capability. Its portfolio is concentrated in semiconductor technology and sensor systems, consistent with the ROC's role in global electronics manufacturing supply chains. This reflects the ROC's considerable strength in hardware and embedded systems. However, many of the software-based administrative AI applications examined in this report draw only indirectly on that expertise.

Import Dependency as a Structural Condition

For the Philippines, Malaysia, and Thailand, the patent data indicates that domestic AI development capacity is not available at a scale sufficient to support independent AI development for public sector deployment. Malaysia's recent filing ratio of 4.5%, which is the lowest in the dataset, suggests that even limited patenting activity has weakened substantially in recent years. Thailand and the Philippines show higher recent ratios, but from a very small base, and absolute volumes remain limited.

In these economies, public sector AI deployment is therefore likely to rely primarily on technologies acquired from external providers. This should be understood as a structural condition of current innovation systems rather than as a short-term policy variable. Building domestic AI development capacity requires the sustained presence of technology firms with dedicated research functions, applied research institutions with product development mandates, and engineering workforces oriented toward technology creation. These are long-term features of innovation systems and cannot be established rapidly through policy commitment alone.

The practical implication is that technology selection and vendor management become central components of technological strategy. In this context, the application-domain finding has operational relevance. Technologies developed for problem environments structurally similar to those faced by public administration are likely to require less adaptation than technologies optimized for industrial manufacturing contexts. This consideration should form one input, among others, into technology acquisition decisions.

What the Patent Analysis Establishes

The patent analysis positions the target economies along two dimensions: the scale of domestic AI development capacity and the proximity of that capacity to public sector application domains. The ROK, Japan, and India possess substantial development capacity; the ROC possesses specialized capability in a specific hardware domain; and the Philippines, Malaysia, and Thailand do not possess capacity at a scale sufficient to support independent development. On the second dimension, India's portfolio shows the strongest alignment with public administration problem domains; the portfolios of the ROK and Japan are primarily oriented toward industrial applications; and the smaller portfolios of the Philippines, Malaysia, and Thailand show closer thematic relevance to public administration than volume alone would suggest.

Taken together, these two dimensions describe the technological starting point from which each economy approaches public sector AI adoption. They do not indicate whether economies with limited domestic development capacity possess the human capital needed to absorb imported technologies effectively, adapt them to local conditions, and develop indigenous capability over time. That question is addressed in the following section.

Human Capital: The Academic Publication Base

What Publications Measure that Patents Do Not

The patent analysis identifies which economies possess domestic AI development capacity. It does not address whether economies that currently lack such capacity possess the foundational resources from which it could develop. Nor does it address whether economies that do possess development capacity have the research communities necessary to sustain and extend it over time. These questions require different evidences.

Academic publications in peer-reviewed venues measure the existence and activity of knowledge-producing communities: university researchers, doctoral students, government laboratory scientists, and industry researchers engaged in generating new knowledge about AI methods and applications. This community is distinct from the commercial development organizations whose output is captured in patent data. A patent requires an organization with the mandate, resources, and legal infrastructure to file for intellectual property protection. A publication requires a researcher with access to data, analytical tools, and a venue for dissemination. The two activities can coexist within the same economy, but they need not. An economy may possess active research communities without those communities producing commercialized or patented technology, and vice versa.

For public sector AI adoption, the research community matters in two respects. First, it represents human capital available to support current deployment: researchers who understand AI methods can advise on system selection, evaluate vendor claims, assess system performance, and identify failure modes. Second, it represents potential future capacity: a country with an active AI research community possesses the institutional and human infrastructure from which applied development capacity could grow, if institutional and commercial conditions support it.

Data

The analysis draws on peer-reviewed articles, conference papers, and reviews indexed in the Web of Science Core Collection and classified as AI or machine learning research, covering publications from 2015 to 2025 across all eight target economies (Table 3.3).

TABLE 3.3

AI PUBLICATION DATA BY TARGET ECONOMY, 2015–25.

Economy	AI publications (2015–25)	Citations per paper	International co-authorship (%)
India	19,990	11.86	22.7
ROC	4,521	15.29	42.5
ROK	4,456	12.50	41.8
Japan	4,097	9.62	35.7
Malaysia	3,408	13.43	56.2
Thailand	1,410	8.58	34.4
Bangladesh	841	13.50	51.6
Philippines	314	7.97	30.3

Source: Web of Science Core Collection analysis, 2015–25.

Citations per paper measure average citation impact within the global research community, indicating the degree to which published work is referenced and built upon by other researchers. International co-authorship percentage measures the proportion of publications involving researchers from more than one country.

India's Scale and Its Implications

India's publication volume of 19,990 papers over the decade is more than four times that of the next highest economy in this dataset. This volume implies a research community of substantial scale: faculty, doctoral students, and research staff distributed across universities and research institutions engaged in AI-related work. The breadth of this community across institutions and geographic regions means that AI research expertise is not concentrated in a small number of elite institutions but distributed across India's higher education and research system.

India's citation rate of 11.86 per paper ranks fourth among the eight economies. Its international co-authorship rate of 22.7% is the lowest in the dataset. Taken together, these figures indicate a research community that produces work at high volume, achieves moderate international impact, and conducts the majority of its research through domestic rather than international collaboration. The scale of India's domestic research infrastructure is sufficient to sustain substantial publication output without depending primarily on international partnerships.

The connection to the patent analysis is direct. India's patent portfolio was found to be concentrated in domains with direct public sector relevance. Its publication base is the largest among target economies. These two findings together indicate an innovation system in which both, applied development capacity and fundamental research capacity, are oriented, at least in part, toward problems that public administration needs to address.

The Disconnect between Publications and Patents: Malaysia and Bangladesh

Two economies in this dataset show a pattern that requires careful interpretation: substantial publication output accompanied by minimal patent output.

Malaysia has produced 3,408 publications over the decade, approaching Japan's volume, with a citation rate of 13.43 per paper and an international co-authorship rate of 56.2%, the second highest in

the dataset. Its patent portfolio, however, numbers only 266 families, with a recent filing ratio of 4.5%. Bangladesh produces 841 publications with a citation rate of 13.50 per paper (among the highest in the dataset) and an international co-authorship rate of 51.6%. It holds no measurable patent portfolio.

These patterns indicate research communities that produce internationally recognized work but have not developed the organizational or institutional infrastructure to convert that research into commercialized or patented technology. The high international co-authorship rates for both the economies suggest research activity conducted largely through partnerships with institutions in other countries. Publication is the output; the research may not be directed toward problems that domestic organizations are positioned to develop further into deployable technology.

For public sector AI adoption, this pattern has a specific implication. Malaysia and Bangladesh possess researchers with documented expertise in AI methods. That expertise is available to inform government decisions about technology selection, system evaluation, and deployment assessment. It does not, under current conditions, translate into the ability to develop AI systems domestically. The research community is an asset for absorption and evaluation of imported technology; it is not currently an asset for independent development.

The ROK and the ROC: Quality and International Integration

The ROK and the ROC show similar publication volumes of 4,456 and 4,521 papers, respectively, with the highest citation rates among the three leading technological economies: the ROK at 12.50 and the ROC at 15.29 per paper. The ROC's citation rate is the highest in the dataset. Both economies show international co-authorship rates above 40%.

The high citation rates indicate research output that is influential within the global AI research community. The high international co-authorship rates indicate research communities that are actively integrated into global research networks, maintaining ongoing collaborative relationships with institutions in North America, Europe, and elsewhere. For economies whose patent portfolios are concentrated in industrial manufacturing applications, this international research integration is relevant: it suggests that domestic researchers have ongoing access to methods and findings from the global frontier of AI development, including in areas beyond their economies' current patent concentrations.

Japan: Volume with Lower Integration

Japan's 4,097 publications place it within the range of the ROK and the ROC in volume, but its citation rate of 9.62 per paper is the lowest among the four leading technological economies, and its international co-authorship rate of 35.7% is below both the ROK and the ROC. This pattern is consistent with a research community that conducts substantial work oriented toward domestic applications and Japanese-language publication venues, with somewhat lower integration into international research networks relative to its technological peers.

Thailand and the Philippines: Limited Research Base

Thailand's 1,410 publications and the Philippines' 314 represent the smallest research bases among the eight economies. Thailand's citation rate of 8.58 and the Philippines' 7.97 are also the two lowest in the dataset, indicating research output that achieves limited international impact. These figures reflect research communities that are small in scale and have not yet established consistent international visibility. For both economies, the human capital available to support AI technology absorption and adaptation is limited not only in quantity but also in demonstrated connection to internationally recognized AI research practices.

What the Publication Analysis Establishes

The publication data reveals a research community capacity that is partially independent of the patent-based technological capacity assessed in the earlier section. While India leads on both the dimensions, the ROK and the ROC show strong research communities with high international integration, consistent with their patent-based development capacity. Japan shows substantial but somewhat less internationally integrated research activity. Malaysia and Bangladesh show research communities whose output is recognized internationally but has not been converted into applied development capacity. Thailand and the Philippines show limited research bases on both volume and impact measures.

For economies that must rely on imported AI technology—the Philippines, Malaysia, Thailand, and Bangladesh—the publication data indicates the human capital available to support technology absorption. Malaysia and Bangladesh possess research communities capable of evaluating and advising on imported systems, but Thailand and the Philippines possess more limited capacity in this respect. For economies with domestic development capacity, i.e., the ROK, Japan, India, and the ROC, the publication data indicates the research base sustaining that capacity and the degree to which it is connected to global research networks.

The three data sources examined in this chapter, i.e., institutional maturity, patent-based technological capacity, and publication-based human capital, now establish the empirical foundation from which the next section derives the structural positioning of each economy within the strategic landscape for public sector AI adoption.

Triangulation: Structural Position and Strategic Constraint

The three preceding sections examined institutional maturity, technological capacity, and human capital as distinct dimensions of readiness for public sector AI adoption. Each captured something that others did not. Institutional maturity indicates whether government systems are able to receive, operate, and scale AI applications. Technological capacity indicates whether an economy can develop and adapt such technologies domestically or must acquire them from external providers. Human capital indicates whether research communities exist to support current deployment and contribute to capability formation over time. No single dimension is sufficient to define an economy's strategic position. What matters is how the three dimensions combine.

This section brings the three dimensions together. The objective is not to produce a composite ranking, but to identify where the dimensions reinforce one another, where they diverge, and what those patterns imply for the strategic options and constraints facing each economy.

Patterns of Alignment and Divergence

For the ROK, the three dimensions are strongly aligned. Institutional maturity is the highest in the dataset at 93.23. Patent volume is also the largest, at 73,515 families, with a recent filing ratio of 60.9%. Publication output is substantial at 4,456 papers, with a citation rate of 12.50 and international co-authorship of 41.8%. This combination indicates an economy with the institutional foundations to deploy AI across multiple administrative functions, domestic development capacity to adapt and extend deployed systems, and a research community connected to global AI networks. The principal constraint is therefore not the availability of capacity, but the governance and accountability conditions that integration at scale requires, i.e., the need to ensure that efficiency gains achieved through connected systems remain explainable, contestable, and consistent across administrative domains.

Japan also performs strongly across all three dimensions, but with greater internal divergence. Institutional maturity ranks second at 87.45, with strength concentrated in citizen-facing services and open data governance rather than in broader administrative modernization. Patent volume is second at 56,611 families, but the portfolio is oriented primarily toward industrial manufacturing applications rather than public administration. Publication output is comparable in scale to that of the ROK and the ROC, but citation impact and international co-authorship are lower. Japan therefore possesses both domestic development capacity and institutional foundations for deployment, but the main challenge lies in translating industrial technological strength into administrative applications and extending institutional maturity beyond citizen interfaces into deeper administrative systems.

India presents a different configuration. Patent volume is comparable to that of the ROK and Japan, and, among the high-volume economies, its patent portfolio is the most directly aligned with public sector application domains. Its publication volume is by far the largest in the dataset. Yet its institutional maturity ranks 24th, with a documented gap between policy framework development and deployed administrative systems. India therefore possesses strong technological and human capital foundations for public sector AI adoption, but faces an institutional constraint. Individual AI applications may generate meaningful efficiency gains under current conditions, but the transition to integrated and accountable deployment across administrative systems depends on institutional development that technological capacity alone cannot substitute for.

The ROC shows a profile of strong research quality, specialized technological strength, and moderately advanced institutional readiness. It records the highest citation rate in the dataset at 15.29, alongside a publication volume of 4,521 papers and international co-authorship of 42.5%. Its patent portfolio reflects genuine technological capability, but one concentrated in semiconductors and hardware-related domains. Institutional maturity, ranked 21st, provides a reasonable foundation for deployment. The main strategic issue is therefore one of alignment: the ROC's technological depth is substantial, but much of it is oriented toward hardware and embedded systems, whereas many public sector AI use cases are software- and administration-intensive.

Malaysia displays one of the clearest divergences among the three dimensions. Publication output is substantial at 3,408 papers, with a citation rate of 13.43 and an international co-authorship rate of 56.2%, indicating an internationally connected and visible research community. Patent output, however, is limited to 266 families, with a recent filing ratio of 4.5%, suggesting that this research activity has not translated into domestic AI development capacity. Institutional maturity at 74.63 indicates digital government infrastructure that is advancing but not yet consolidated. Malaysia therefore appears to possess human capital for technology absorption and evaluation that is stronger than its domestic development base. This suggests a strategy centered on informed technology acquisition, vendor assessment, and institutional strengthening, rather than independent development.

Bangladesh presents a different but equally distinctive profile. It has no measurable patent portfolio in the dataset. Institutional maturity, at 54.73, indicates digital government systems at an early stage of development. At the same time, its publication base of 841 papers 'records one of the highest citation rates in the dataset at 13.50, with international co-authorship of 51.6%. This points to a small but internationally connected research community whose activity is conducted largely through cross-border collaboration. That community represents a source of human capital that may help inform technology choices and evaluation, but it is too limited in scale to offset the

absence of domestic development capacity or weak institutional foundations. Bangladesh's strategic position is therefore defined by constraints on both deployment infrastructure and technological autonomy.

Thailand and the Philippines occupy the most constrained positions overall, though in somewhat different ways. Thailand's strongest dimension is institutional maturity, at 81.62, supported by recent progress in online services and promotion policy. However, its patent volume of 251 families and publication output of 1,410 papers, with a citation rate of 8.58, indicate limited depth in both technological and research capacity. The Philippines shows institutional maturity at 75.09, reflecting digital government systems that are developing but not yet fully established. Its patent volume of 383 families and publication output of 314 papers, the smallest in the dataset, indicate the narrowest technological and research base among the eight economies. In both cases, the main strategic implication is a continued reliance on imported technologies, combined with constrained domestic capacity for adaptation, evaluation, and further development.

CHAPTER 4
FOUR SCENARIOS: STRATEGIC DIVERGENCE UNDER CONSTRAINT

Reading the Eight Economies: AI Deployment Across Layer and Application

Opening Context

Chapter 3 established three empirical foundations through triangulation of independent data sources: institutional maturity (Waseda University – IAC World Digital Government Ranking 2025); technological capacity (AI patent families, 2015–25); and human capital pipeline (peer-reviewed AI publications, 2015–25). These three dimensions positioned the eight target economies within a structural landscape that constrains and shapes strategic choices. This chapter turns to a fourth view: what the eight economies are actually deploying as public-sector AI. By reading 944 policy documents and institutional records (scanning the horizon across government ministries, policy strategies, and documented deployments) and placing each within the structural map developed in Chapter 2 (five technology layers across five application domains), the evidence reveals where productivity enhancement is taking shape, where it remains aspirational, and where structural gaps are most pronounced.

The horizon-scanning process examined government ministry publications, policy strategy documents, institutional reports, and program documentation across eight economies. Unlike the aggregate measures of Chapter 3, which captured institutional capacity, technological potential, and research base, this section provides direct evidence of how public sectors are actually deploying AI technologies, which specific applications they are prioritizing, and where structural gaps in deployment are emerging. The outcome is a disaggregated view of public sector AI adoption patterns organized through the structural map developed in Chapter 2, that of five technology layers across five application domains. The eight-economy reading reveals both the breadth of AI deployment and critical asymmetries in what technologies are being deployed in which domains across the eight economies.

The five application domains along which the matrix is organized emerge from the recurrent clustering of public sector AI deployment in the 944 policy documents and the institutional evidence assembled across the eight economies. Internal administration encompasses the day-to-day management functions that support government operation, including document handling, human-resource processes, financial systems, and internal coordination. Citizen services capture the front-office functions such as service delivery, identity authentication, and complaint handling, through which governments interact with residents. Policy and governance cover the advanced functions of policy formation, regulatory drafting, and strategic decision support, where AI capability is increasingly applied to high-complexity analytical tasks. Administrative sectors cover domains with deep public engagement, including health, education, transportation, agriculture, and urban management, where AI is deployed within sector-specific institutional contexts. The fifth domain, industry interfaces, captures the boundary where public sector AI deployment intersects with private sector AI adoption,

including industrial regulatory contexts and public–private partnership platforms. These five domains emerge from the deployment evidence rather than being imposed as an external taxonomy.

Horizon Scanning: Source Compilation and Classification

A comprehensive audit of public-sector AI evidence across the eight target economies produced 944 sources (policy documents, institutional reports, and documented deployments), systematically distributed as given in Table 4.1. The 944 sources reflect documented policy developments and deployments captured as of November 2025; the bibliometric and patent indicators (2015–2025) are drawn from the same November 2025 snapshot. Consistent with the research design set out in Chapter 1, deployment maturity is assessed through the Portfolio Assessment — documented sources mapped onto the Technology x Application Matrix — rather than from self-reported survey responses.

TABLE 4.1

DISTRIBUTION OF 944 SOURCES ACROSS EIGHT TARGET ECONOMIES.

Economy	Total Sources	Mapped to Target Cells	Unmapped (Primarily Private Sector)
India	148	145	3
ROC	135	95	40
Bangladesh	127	127	0
Japan	125	120	5
Thailand	106	106	0
ROK	111	82	29
Malaysia	98	97	1
Philippines	94	92	2
Total	944	864	80

The 864 mapped sources form the evidentiary foundation for this section. They include 87 target documents identified through systematic sampling of government AI strategies, ministerial guidance frameworks, and digital government action plans across the eight economies. These represent the high-level policy intentionality of each government regarding AI adoption. Twenty-two core policy strategy documents serve as government reference materials for institutional AI implementation guidance. The remaining 755 sources comprise institutional reports, documented deployments, case studies, and program documentation that provide granular evidence of actual AI systems in operation within government functions.

Sources were classified according to the technology–application matrix developed in Chapter 2, organizing technology capabilities along five functional layers (Foundational AI/ICT, Operational Applications, Data and Evidence, Cross-system Automation, and Sustainability and Trust) and application domains along five categories (Policy & Governance, Internal Administration, Citizen Services, Sectoral Domains, Industry/Other.). Each source was scored on a scale of 0.00 (absent) to 1.00 (mature/sovereign integration). Scoring was conducted by a panel of three researchers at the November 2025 international workshop organized by Niigata University for the APO. Each source was assessed using a five-point scale (0–4) and subsequently normalized by dividing by four, yielding five discrete values: 0.00 (absent); 0.25 (limited/early-stage evidence); 0.50 (moderate/multiple documented deployments); 0.75 (strong/institutionally embedded); and 1.00 (mature sovereign integration). The primary scoring criterion was the volume and specificity of evidentiary support: sources reflecting solely policy-level intention without documented operational deployment were scored at 0.25 or below unless corroborated by independent implementation records. Borderline cases were resolved through a

structured panel discussion requiring consensus, and where ambiguity persisted, the conservative lower bound was applied. The resulting scores were subsequently validated at the March 2026 International Expert Workshop, attended by nine researchers from Slovenia, Bangladesh, Italy, and Japan with backgrounds in information engineering, public policy, and digital government, where scores were reviewed against updated country evidence and confirmed without substantive revision.

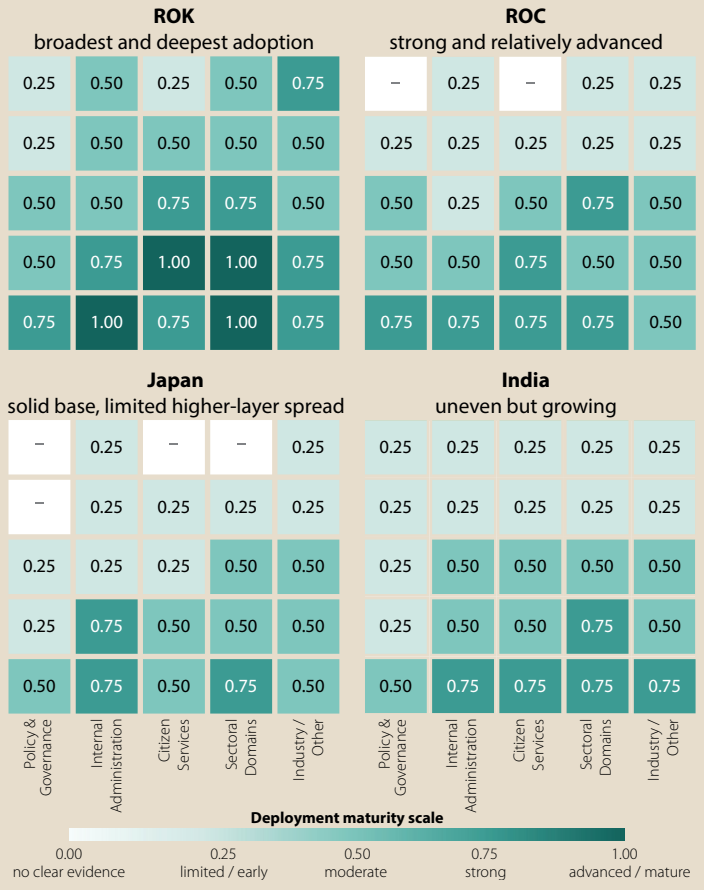
The Patterns of AI Use Across the Economies: Portfolio Assessment

The evidence matrices for the eight economies, organized through the technology–application matrix, are visualized as individual 5×5 heatmaps shown in Figure 4.1. Each cell records deployment maturity on a scale from 0.00 (absent) to 1.00 (mature sovereign integration). The pattern across all eight matrices reveals a consistent structural asymmetry: deployment is concentrated in the foundational and perceptual layers across most application domains, while the upper layers—analytical decision-support, agentic systems, and sustainability-oriented resilience—show sharp divergence, with the ROK and the ROC sustaining meaningful activity at those levels.

Both the ROK and the ROC demonstrate AI deployment extending to analytical decision-support, agentic, and sustainability layers. While the ROK exhibits the broadest cross-layer integration and the ROC demonstrates particular strength at the accountability and emerging resilience layers, all other economies show deployment concentrated in foundational and perceptual functions.

FIGURE 4.1

HOW THE EIGHT SELECTED ECONOMIES ARE POSITIONED IN PUBLIC SECTOR AI ADOPTION.



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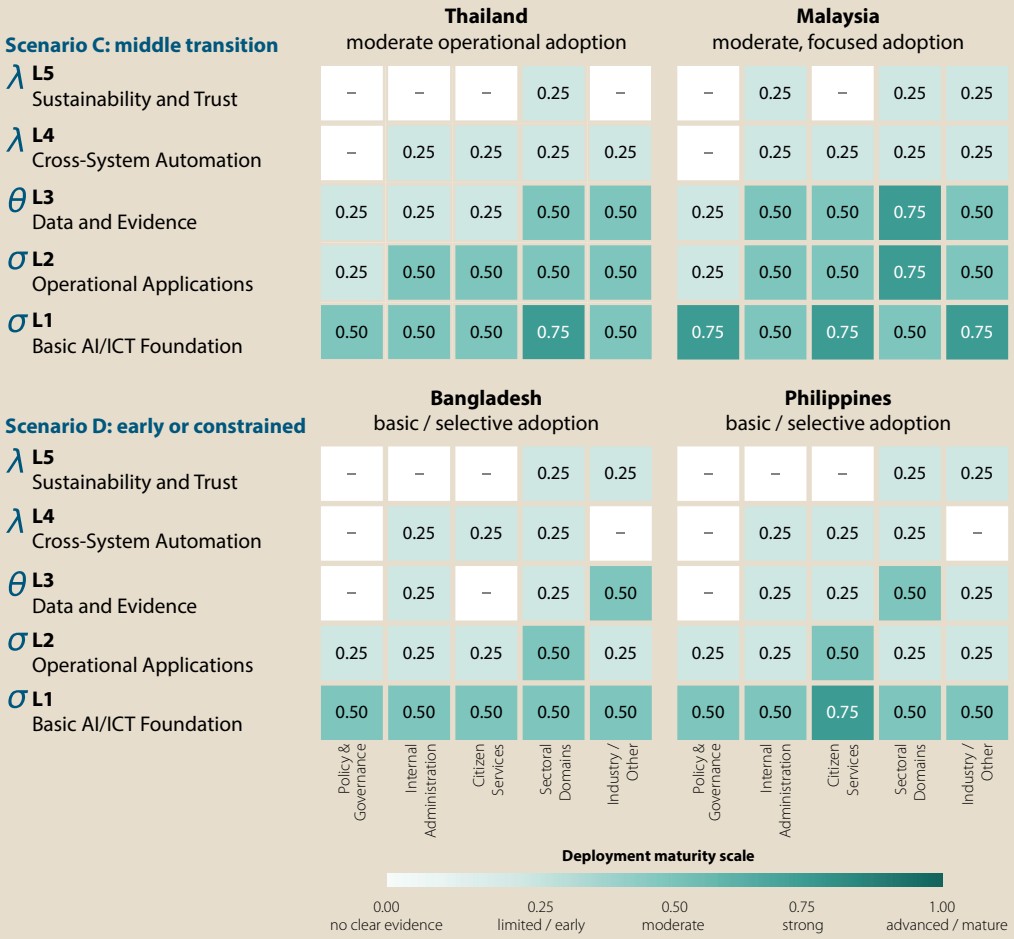


Functional layers: Illustrative technologies

L1 Basic AI/ICT Foundation	Foundation Models, Cloud, DPI
L2 Operational Applications	Chatbots, Document Processing, Summarization
L3 Data and Evidence	RAG, Knowledge Graphs, Data Platforms
L4 Cross-System Automation	Multi-Agent Systems, Digital Twins, Adaptive Learning
L5 Sustainability and Trust	Algorithmic Auditing, Governance Frameworks, Standards

Application domains: Illustrative examples

Policy & Governance	policymaking, legislative support
Internal Administration	HR, finance, document handling
Citizen Services	inquiries, applications, benefit eligibility
Sectoral Domains	transport, health, disaster management
Industry / Other	industrial policy, economic promotion

Scenario clusters:
A = most advanced **B** = strong but uneven **C** = middle transition **D** = early or constrained

Five Patterns of AI Adoption: Findings from Comparative Analysis of Eight Economies

Pattern 1: Foundational Layer Activity Is Universal

The foundational and perceptual layers show non-negligible scores in all eight economies. Even Bangladesh documents Helpline 333, FloodHub, and chatbot systems. The Philippines

documents the Philippine Identification System (PhilSys), the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) weather forecasting, and automated eligibility systems. Thailand documents Traffy Fondue and sectoral AI applications. The efficiency horizon is democratic, universally accessible, and achievable without substantial indigenous technological development. Efficiency gains of 15–20% per process are documented across all eight economies, yet gains remain confined to specific administrative functions without broader system-level transformation.

Pattern 2: Accountability Layer Gap

The analytical/decision-support layer requires institutional maturity beyond what most governments possess: coordinated data governance frameworks, algorithmic fairness evaluation procedures, cross-agency data sharing agreements, and feedback mechanisms that enable citizens to contest or appeal algorithmic decisions. The ROK's evidence reveals a qualitatively different institutional architecture. The Pan-Government AI Common Infrastructure, HomeTax GPT, AI-based Fiscal Risk prediction, and AI-based Public Audit systems represent documented instances where AI analytics inform policy decisions with documented accountability mechanisms. Japan, despite documenting over 2,000 efficiency-layer systems, shows near-zero accountability-layer activity, reflecting the incremental modernization trap. The accountability-layer gap is structural and reflects genuine governance constraints, not technology limitations.

Pattern 3: Resilience Layer Isolation

The agentic layer and the sustainability layer represent the frontier of public-sector AI. Only the A economies (ROK and ROC) document consistent deployment: smart water systems combining digital twin modeling with AI-driven leak detection, forest pest prediction systems, crowd density and disaster monitoring, and water quality prediction. These systems are explicitly designed to ensure long-term resilience rather than merely optimizing current efficiency. All other economies show minimal resilience-layer activity. The resilience-layer isolation reflects a temporal reality: agentic and resilience-oriented systems represent the long-term frontier, achievable only after sustained investment in efficiency and accountability layers.

Pattern 4: Sectoral Concentration

Internal administration and sectoral/administrative applications dominate across all economies, while the policy/governance domain shows minimal activity. No economy documents systematic use of AI for policy analysis or governance improvement. Governments are investing in AI for immediate operational cost reduction and domain-specific efficiency, while investing minimally in using AI to improve policymaking itself. This represents a structural gap: governments are automating routine decisions while neglecting to improve the quality of non-routine, high-consequence policy decisions that shape long-term public value.

Pattern 5: Industrial vs. Public Sector Disconnect

The evidence matrices document rich activity in the industry/other domain, yet the sectors in which patents are filed are not the sectors in which governments have systematically deployed AI-informed public services. The ROK's and Japan's manufacturing-focused patent portfolios have not systematically translated into government innovation in public administration. Governments are not systematically scanning their domestic innovation ecosystems, identifying applicable innovations, and acquiring or adapting those innovations for public sector deployment. This is an innovation–policy problem, not a technology problem.

Two Drivers of Strategic Positioning: Technological Potential and Social Participation

From the patterns identified in the heatmap analysis, two structural axes emerge that organize the eight economies into a two-dimensional strategic space.

Vertical Axis: Technological Potential

The vertical axis measures the upper bound of what an economy could theoretically develop or adapt domestically. This composite concept integrates three evidence-based components: (1) AI-specific innovation output measured by patent families (Derwent Innovation, 2015–25) and research publications (Web of Science Core Collection, 2015–25); (2) research quality measured by citations per paper and international co-authorship share; and (3) foundational infrastructure sovereignty, most consequentially semiconductor manufacturing capacity as a prerequisite for sovereign AI infrastructure. Each economy's specific positioning on this composite axis is analyzed in the country reports.

Horizontal Axis: Inclusive Institutional Orientation

The horizontal axis measures inclusive institutional orientation, i.e., the capacity of an economy's administrative and civic institutions to reconfigure themselves in response to demographic, social, and technological changes.

This concept cannot be captured by any single direct indicator. We therefore adopt women's participation indicators, namely, the WEF Global Gender Gap Index (GGI) score and the share of women in national legislatures, as proxies. The premise is that gender inclusion in institutional leadership is an established indicator of broader participatory-governance capacity (Inglehart & Norris, 2003). Both indicators produce a broadly consistent ordering across the eight economies (data and methodology in Appendix F).

We use the underlying GGI score (the continuous value on which the ranking is based) rather than the rank, so positioning on the horizontal axis reflects a continuous gradient. The ROC, which is not included in the official WEF GGI ranking, is represented by the 2024 score published by the Taiwan Executive Yuan Department of Gender Equality.

Cluster placement reflects the combination of each economy's technological potential (vertical) and inclusive institutional orientation (horizontal). Economies with similar horizontal-axis positions may occupy different clusters when their technological potential differs. For example, the Philippines and the ROC both score at the upper end of the horizontal axis, yet differ markedly in technological potential and therefore fall in different clusters. Detailed analysis of each economy's institutional pattern appears in the respective country reports.

Four Strategic Positioning Branches: Configurations from the Patterns

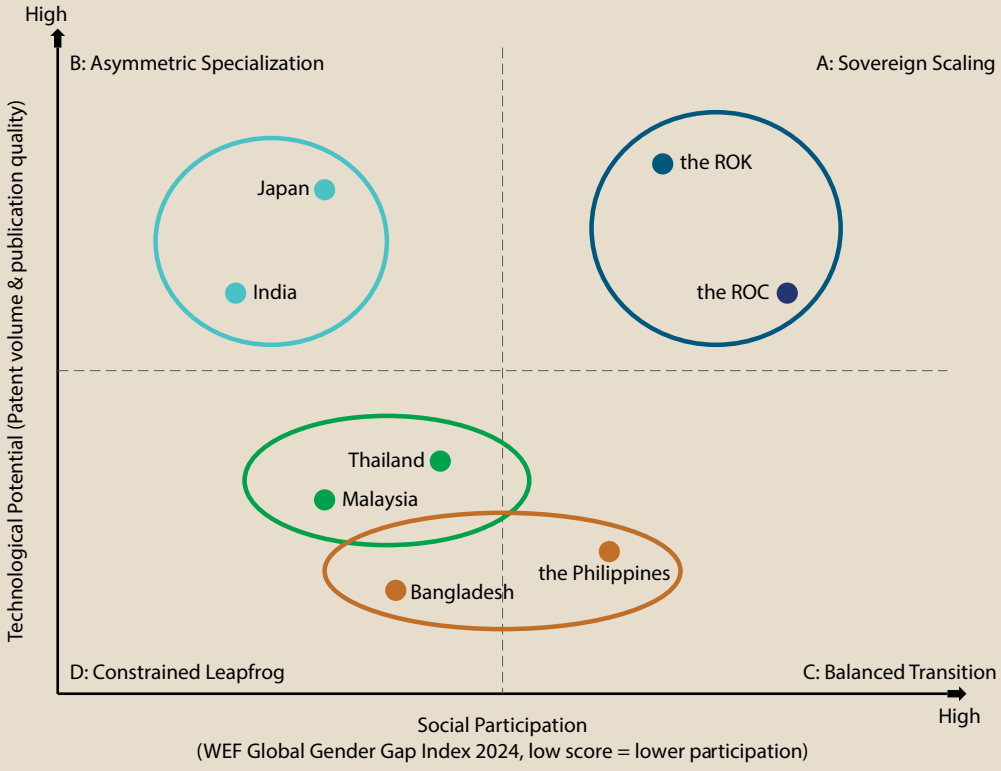
TABLE 4.2

CLUSTER CONFIGURATION: FOUR STRATEGIC POSITIONING BRANCHES BY TWO DRIVERS.

	High Technological Potential	Low/Moderate Technological Potential
High Social Participation	A (sovereign scaling): ROK, ROC	C (balanced transition): Malaysia, Thailand
Lower Social Participation	B (asymmetric specialization): Japan, India	D (constrained leapfrog): Bangladesh, Philippines

FIGURE 4.2

STRATEGIC POSITIONING MAP OF PUBLIC SECTOR AI TRAJECTORIES BASED ON TECHNOLOGICAL POTENTIAL AND SOCIAL PARTICIPATION.



A: Sovereign Scaling

the ROK, the ROC

Full-stack AI integration reaches accountability and resilience layers — system-wide productivity transformation in progress.

B: Asymmetric Specialization

Japan, India

Strong technological base, yet AI deployment remains at task-level efficiency; whole-of-government productivity gain not yet realized.

C: Balanced Transition

Malaysia, Thailand

Mid-layer transition underway — foundational deployment in place, deeper integration progressing sequentially.

D: Constrained Leapfrog

Bangladesh, the Philippines

Structurally constrained, yet leapfrog-style innovation is emerging — pivot toward distinct innovation pathways under constraint.

Policy Challenges of Strategic Positioning: AI Use through Eight-economy Comparative Analysis

The horizon scanning and portfolio assessment has revealed three findings. First, the efficiency horizon is universal: all eight economies can deploy foundational and perceptual-layer AI systems, achieving efficiency gains of 15–70% in affected administrative processes. The bottleneck is not technology availability but institutional readiness to absorb and operate deployed systems. Second, the accountability and resilience horizons require institutional investment beyond technology acquisition. Only the A economies having strategic positioning (ROK and ROC) have achieved systematic accountability-layer advancement. Advancing to accountability and resilience layers requires coordinated data governance reform, algorithmic fairness frameworks, citizen engagement mechanisms, and long-term political commitment. In other words, they require governance innovations, not technology innovations. Third, constrained-leapfrog strategies may become universal best practices as all economies face future energy and computational resource constraints.

Strategic Positioning A: Sovereign Scaling for the ROK and the ROC

The ROK and the ROC occupy the privileged position of possessing both substantial autonomous technological capacity and mature institutional frameworks for citizen engagement. This combination enables sovereign scaling, i.e., the capacity to develop, deploy, and iterate AI systems that enhance both efficiency and public trust without compromising strategic control over critical infrastructure or data assets.

The ROK's technological position is unambiguous. With 73,515 AI patent families filed between 2015 and 2025 and a recent filing velocity of 60.9%, the ROK ranks first among the eight economies in raw patent output. Its publication base of 4,456 articles with a citations-per-paper metric of 12.50 indicates sustained research impact. The ROK's OECD Digital Government Index ranking, combined with the December 2024 AI Basic Act and the Ministry of Science and ICT's Public Sector Hyper-scale AI Introduction and Utilization Guideline 2.0 (2024), demonstrates that technological advantage has been explicitly yoked to institutional governance frameworks.

The ROC presents a distinct but complementary profile. With 10,664 patent families and a 52.8% recent filing ratio, the ROC's patent volume is substantially lower than the ROK's. However, the ROC's strategic advantage lies not in volume but in concentration: Taiwan Semiconductor Manufacturing Company (TSMC)'s foundational dominance in semiconductor manufacturing creates an asymmetric advantage in the physical infrastructure underlying AI deployment. The ROC's Civil IoT Taiwan program and the vTaiwan deliberative platform exemplify the embedding of participatory mechanisms directly into digital government infrastructure. The ROC's 4,521 publications with 15.29 citations per paper—the highest in the sample—indicate that the ROC's research base, while smaller in absolute terms, has achieved a disproportionate influence in global research networks.

Both the ROK and the ROC achieve what the portfolio assessment matrix reveals: consistently elevated scores at the resilience layer. Both these Strategic Positioning A economies exhibit sustained, high-score activity at both the agentic layer and the sustainability layer, through complementary institutional configurations. This requires institutional maturity that goes beyond technical capacity and amounts to frameworks that simultaneously optimize for efficiency, maintain public trust through accountability mechanisms, and ensure adaptability to future constraints and crises.

However, sovereign scaling carries its own structural burden. The ROK's public sector information and communication technology (ICT) infrastructure, accumulated over three decades of continuous digitalization, carries significant technical debt. The Ministry of Interior and Safety estimates this legacy ICT maintenance burden at KRW1.63 trillion annually that must be sustained even as new AI systems are deployed. The ROC's technological advantage is narrowly concentrated in semiconductor manufacturing, while other sectors of the public administration remain digitally immature. The strategic question for both the ROK and the ROC is therefore not whether they can reach the resilience layer, but how they sustain that elevation given the institutional costs.

Strategic Positioning B: Asymmetric Specialization for Japan and India

Japan and India jointly occupy a position defined by a paradoxical configuration: possessing substantial autonomous technological capacity yet demonstrating adoption patterns severely constrained by institutional, infrastructural, and organizational obstacles that prevent the full transformation of technological potential into operational institutional change.

Japan: The Incremental Modernization Trap

Japan possesses the second-highest patent volume globally, with 56,611 patent families accumulated between 2015 and 2025, and substantial AI research output (4,097 publications with 9.62 citations per paper). Japan's AI Basic Plan (December 2025) explicitly positions AI as central to national productivity objectives. The portfolio assessment data reveals a fundamental paradox: Japan exhibits the highest concentration of activity in efficiency-layer applications, with documented instances numbering over 2,000 across local and national government. These include speech recognition systems deployed in municipal administrative functions (864 documented instances); AI-powered optical character recognition for document processing (604 instances); and workflow automation in tax administration. These deployments generate measurable micro-level productivity gains: 15–20% time reductions in document-intensive administrative functions.

However, Japan shows near-zero activity at the accountability and resilience layers. Accountability mechanisms are underdeveloped, with few Japanese government AI systems incorporating transparent decision-making frameworks or citizen feedback loops. This reflects the incremental modernization trap: the burden of maintaining, updating, and operating early-stage digital systems (deployed throughout the 1990s and 2000s) consumes institutional bandwidth such that fundamental re-architecture becomes infeasible. Deploying AI atop these systems yields efficiency gains but does not solve the underlying fragmentation. Advancing to accountability-embedded analytics would require wholesale reorganization of administrative data infrastructure—a reorganization that cannot be achieved incrementally.

India: Urban-rural Infrastructure Divide

India presents an equally challenging but structurally distinct case. With 52,706 patent families and the highest publication volume globally (19,990 articles), India's technological base places it firmly in the high-potential tier. The IndiaAI framework (October 2023) and the Ministry of Housing and Urban Affairs' AI Use Case Compendium demonstrate institutional recognition of AI's relevance to public sector productivity.

Yet India's placement in the asymmetric specialization scenario reflects a crucial structural reality in that the urban-rural infrastructure divide creates within-country strategic heterogeneity. India's metropolitan centers like Delhi, Mumbai, and Bangalore, possess digital infrastructure and institutional capacity that rival those of advanced economies. Rural and semiurban areas lack basic broadband connectivity, reliable electricity, and institutional capacity for digital administration. This within-nation divide means that no single national AI strategy can be uniformly implemented across 1.4 billion people. Metropolitan governments can pursue accountability-embedded analytics, but rural administrations must focus on targeted, narrow-scope AI deployments amenable to low-bandwidth environments. States with digital maturity (e.g., Kerala, Telangana, and Gujarat) can pursue frontier-layer strategies; others must build foundational capacity first.

Japan and India together illuminate a critical insight: the presence of high technological potential does not guarantee institutional capacity for systematic AI deployment. Both nations rank in the global top tier for technological metrics. Yet both confront structural constraints that prevent the translation of this technological excellence into broad, scaled public sector AI adoption. For Japan, the constraint is legacy technical debt and organizational fragmentation. For India, the constraint is subnational infrastructure heterogeneity and institutional bandwidth limits.

Strategic Positioning C: Balanced Transition for Malaysia and Thailand

Malaysia and Thailand occupy a distinct structural position, which is neither burdened by deep legacy administrative debt nor constrained by severe infrastructure scarcity. This configuration creates a balanced transition, with maximum institutional flexibility to selectively adopt elements from both frontier and constrained-leapfrog playbooks, coupled with the freedom to design governance structures suited to national contexts.

Both economies demonstrate institutional flexibility that neither Japan (constrained by legacy systems) nor the ROK (constrained by the burden of sovereignty maintenance) possesses. Thailand's TPMAP and Traffy Fondue platform exemplify this flexibility: governance innovation that is neither imported wholesale from advanced economies nor constrained by entrenched administrative legacy. Similarly, Malaysia's National AI Roadmap (2021–25) shows deliberate institution-building rather than cargo-cult adoption of external models. Both economies show capacity for targeted, sectoral AI deployment without the organizational constraints that limit Japan or the infrastructure constraints that limit Bangladesh and the Philippines.

Yet this flexibility carries a strategic risk. Absence of binding constraints may produce diffused adoption patterns that fail to generate coherent sovereign capacity at any technological layer. Malaysia and Thailand could drift toward scattered efficiency-layer automation without developing the governance frameworks required for accountability-layer advancement. Malaysia's higher estimated economic impact reflects greater institutional maturity in specific sectors (finance, health) and more concentrated deployment. Thailand's more diffused approach across a wider range of government agencies produces more modest aggregate outcomes. The key question for balanced-transition economies is how to convert institutional flexibility into coherent strategic focus.

Strategic Positioning D: Constrained Leapfrog for Bangladesh and the Philippines

Bangladesh and the Philippines appear to occupy the most precarious position within the strategic matrix: extreme infrastructure constraints, minimal autonomous technological capacity, and administrative systems that remain at the nascent stages of digital transformation. In the DWPI dataset, Bangladesh holds no measurable patent portfolio. Similarly, the Philippines possesses a very limited number of patents and academic publications, with correspondingly marginal citation impact. Furthermore, both the economies confront severe fiscal constraints.

Yet, precisely this apparent disadvantage creates a strategic opportunity. Unburdened by legacy administrative systems that require costly maintenance, and lacking the fiscal capacity to pursue compute-intensive AI architectures, both Bangladesh and the Philippines face a structural imperative that concentrates innovation. They must identify narrow, high-impact AI applications where minimal computational infrastructure generates maximum administrative value. This constraint-driven focus has yielded remarkable outcomes.

Bangladesh's a2i program has deployed AI-driven systems across public service centers nationwide. The National Helpline 333, which handles citizen inquiries regarding social services, exemplifies this constraint-driven innovation model. Operating as a voice-based system requiring minimal connectivity, it automatically processes the vast majority of routine queries without human intervention. This has enabled the handling of massive monthly call volumes while drastically reducing the previously required extensive operator workforce.

Additionally, FloodHub combines satellite imagery analysis, community reporting systems, and AI-driven flood forecasting to provide advance warnings to rural communities lacking conventional early-warning infrastructure.

The Philippines exhibits parallel innovation under constraint. The national identification system, PhilSys, has achieved the registration of a vast majority of the population through AI-driven biometric verification adapted to high-volume, high-variance demographic processing. Crucially, it accomplishes this by embedding AI inference locally on mobile devices rather than relying on cloud connectivity. Furthermore, the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) has integrated machine learning into weather forecasting, successfully and significantly extending the predictable timeframe for typhoon trajectories—a development with profound implications for disaster preparedness.

What initially appears as a technological vulnerability thus transforms into strategic agility. Economies lacking the fiscal capacity to maintain legacy systems or deploy resource-intensive, general-purpose AI must identify specific institutional bottlenecks and implement narrowly focused solutions. This process generates a portfolio of high-impact, low-infrastructure-cost deployments.

For both the economies, the underlying sustainability question is institutional: whether the organizational learning derived from these specific deployments can be systematized into governance frameworks that facilitate subsequent waves of adoption. To this end, Bangladesh's a2i program has explicitly invested in cultivating cadres of civil servants trained in AI procurement, system design, and governance. Similarly, the Philippines' National Artificial Intelligence Strategy Roadmap 2.0 (February 2025) signifies an institutional commitment to a systematic national AI strategy.

Temporal Horizons: Short-term Efficiency, Medium-term Accountability, and Long-term Resilience

The four scenarios outlined above are not static categories but structural configurations that unfold across time. The evidence from horizon scanning and portfolio assessment reveals a temporal pattern: the three-layer public value framework defines not merely distinct technology domains but a temporal sequence through which public sectors must progress.

In the short term (the efficiency horizon, spanning 1–3 years from initial deployment), all eight economies demonstrate non-negligible foundational and perceptual AI activity. Individual applications generate real efficiency improvements in bounded administrative tasks. The efficiency horizon is thereby universal: no institutional maturity prerequisite prevents governments from accessing efficiency gains from foundational tools and applications. This is why more than 2,000 efficiency-layer deployments in Japan, substantial chatbot and workflow automation in India, and targeted systems in Bangladesh have all emerged within similar timeframes regardless of national institutional maturity.

In the medium term (the accountability horizon, spanning 3–7 years), sharp divergence emerges. Advancing to accountability-embedded analytics and decision-support systems requires mature institutional frameworks including data governance policies, algorithmic fairness evaluation procedures, cross-agency coordination mechanisms, and citizen feedback systems. The ROK and the ROC (Strategic Positioning A) show institutionalized activity at this layer through complementary institutional paths. Japan's massive efficiency-layer deployment has not

translated into accountability-layer activity, precisely because the institutional frameworks required for accountability mechanisms are not in place. India shows emerging activity in specific states but lacks government-wide integration. Malaysia and Thailand show incipient activity in specific sectors.

In the long term (the resilience horizon, spanning more than seven years), the Strategic Positioning A economies, i.e., the ROK and the ROC, show consistently elevated scores at both the agentic and sustainability layers, through complementary institutional configurations (the ROK's sovereign cross-ministry integration and the ROC's deliberative governance). These achievements have emerged only after years of sustained investment and institutional experimentation. For seven of the eight economies studied, accountability and resilience layer activity remains aspirational rather than operational.

This temporal reading carries structural logic. Accountability-layer systems presuppose that efficiency-layer gains have been achieved and operationalized; meaningful evaluation of policy consequences requires an administrative baseline that is no longer in chaos. Resilience-layer systems presuppose that accountability mechanisms exist to ensure that resilience innovations do not compromise public trust. The sequence is not arbitrary but reflects the hierarchical logic of public value creation.

The Productivity Paradox: Task-level Gains and Macro-level Transmission

The scenario framework makes visible a persistent empirical puzzle: the gap between task-level and macro-level productivity impacts. At the task level, AI automation routinely generates substantial efficiency gains. Helpline 333 has drastically reduced call-handling time per completed query. Japanese chatbots have significantly shortened citizen-service transaction times. India's land-registration AI systems markedly decrease documentation time. These are not marginal gains; they represent fundamental efficiency improvements in core administrative processes.

Yet these task-level gains do not translate proportionally into macro-level productivity outcomes. A dramatic time reduction in a helpline task corresponds to a minuscule economic impact when that task represents only a marginal fraction of public sector employment. Helpline agents, while important for citizen experience, constitute a tiny fraction of public workforce allocation. The gap between task-level and macro-level impacts reflects not measurement error but structural reality: AI affects only a subset of labor processes, and even within automated tasks, effective scaled deployment requires institutional alignment beyond technology availability.

This transmission failure operates at two levels. First, at the scope level, efficiency gains are confined to specific administrative functions and do not automatically propagate across systems. Second, at the institutional level, efficiency gains achieved in isolation do not become system-level productivity improvement without the accountability conditions and resilience infrastructure that enable coordination, sustained performance, and adaptation. The efficiency gains that all the eight economies are achieving now are real. Whether they aggregate into macro-level productivity improvement depends on whether the institutional conditions for accountability and resilience can be built in time.

The detailed analysis of this transmission mechanism, including quantitative estimates of macro-level productivity impact across the eight economies, is the subject of Chapter 5.

Chapter Summary

Horizon scanning of 944 policy documents and institutional evidence across eight target economies, organized through a 5×5 technology–application matrix, reveals systematic patterns: universal efficiency-layer activity; accountability-layer concentration in only the Strategic Positioning A economies (ROK and ROC); resilience-layer isolation also in only the Strategic Positioning A economies; sectoral concentration in internal administration rather than policy governance; and persistent disconnect between industrial innovation and government deployment.

These patterns derive from two fundamental axes: technological potential (measured by patent families, publication volume, and research quality) and social participation (measured by the WEF Global Gender Gap Index 2024 as a proxy for institutional openness, with the ROC assessed using the Executive Yuan Department of Gender Equality's equivalent calculation). The intersection of these axes produces four clusters of economies, each facing distinct constraints and possessing distinct strategic opportunities.

The ROK and the ROC (Cluster A) possess both technological autonomy and participatory institutional frameworks, enabling sovereign scaling. Japan and India (Cluster B) possess high technological potential but face institutional constraints—legacy debt and organizational fragmentation in Japan, subnational heterogeneity in India—that prevent comprehensive deployment. Malaysia and Thailand (Cluster C) possess moderate technological potential and maximum institutional flexibility, enabling sectoral concentration. Bangladesh and the Philippines (Cluster D) face the most severe constraints but have developed strategic innovation within those constraints, demonstrating high-impact interventions that may signal future evolution for all economies as resource constraints intensify.

Across all four scenarios, efficiency gains from individual applications are achievable for all economies. The transition to accountability-embedded integration requires institutional investment that the Strategic Positioning A economies (ROK and ROC) have systematically made. The long-term resilience horizon remains the privilege of only the most institutionally sophisticated economy in this dataset. The productivity paradox, i.e., the persistent gap between task-level efficiency and macro-level outcomes, reflects not technology failure but transmission failure at the institutional dimensions. Chapter 5 analyzes the quantitative dimensions of this transmission gap.

CHAPTER 5

ESTIMATING THE ECONOMIC CONTRIBUTION OF PUBLIC SECTOR AI

AI Technologies and the Scope of Public Sector Productivity Improvement

Artificial intelligence (AI) does not act on public administration as a single technology with a single effect. Its productivity contribution operates across multiple dimensions simultaneously, each targeting a different category of administrative cost and a different layer of government work. At the most immediate level, AI reduces the labor cost of routine transactions such as citizen queries answered, documents processed, information retrieved. Moving deeper into administrative operations, AI reduces the cost of reading and interpreting unstructured information, including documents, images, sensor data, and voice. Further still, it reduces the cost of judgment, i.e., predicting outcomes, assessing risks, and supporting decisions that previously required experienced human review. At a higher level of integration, it reduces the cost of coordination across organizational boundaries, enabling workflows that span multiple agencies and systems to proceed without sequential human handoffs. And at the longest time horizon, it reduces the cost of sustaining AI deployment itself by maintaining systems, ensuring their legitimacy, and adapting them to changing conditions.

These five dimensions of productivity improvement correspond to five functional levels of AI technology deployment in public administration. Understanding what each level does, and where in government operations it acts, is a prerequisite for estimating the aggregate economic contribution of public sector AI adoption.

The foundational level encompasses large language models, domain-specialized models, and the application technologies built upon them, i.e., chatbots and virtual assistants, document processing and classification systems, text summarization and report generation tools, intelligent search and information retrieval, regulatory interpretation assistance, and process automation integrated with robotic process automation. These technologies act on the most visible and labor-intensive surface of public administration. In policy and governance functions, they automate the summarization of legislative and policy documents, retrieve and interpret regulatory provisions, and generate draft briefing materials for parliamentary and executive use. In internal administration, they receive and classify incoming documents, generate standard-form correspondence and meeting records, accelerate staff retrieval of procedural guidance, process personnel and payroll documentation, and build searchable internal knowledge bases. In citizen-facing services, they provide continuous automated responses to routine inquiries, enable end-to-end online completion of administrative procedures, deliver personalized service guidance, and automate the intake of complaints and service requests. Across the sectoral domains of agriculture, health, education, and transportation, they deliver automated advisory and information services. In tax administration, they support filing guidance and respond to taxpayer queries without staff intervention.

The perceptual dimension of AI deployment encompasses vision-language models and semantic embedding technologies that act on the cost of reading, classifying, and extracting meaning from unstructured information. Where the foundational technologies address what governments say and write, these technologies address what governments see, hear, and receive. In policy and governance functions, they automatically classify and structure legal and regulatory texts, analyze public sentiment from citizen communications, and monitor policy outcomes through image and video data. In internal administration, they digitize handwritten and paper-based documents, automatically review contracts and legal instruments, verify the authenticity of certificates and credentials, extract action items from meeting records, and transcribe spoken proceedings into structured text. In citizen-facing services, they automate identity document verification, detect errors and omissions in submitted applications before they enter processing queues, provide voice-based service pathways for citizens who cannot engage through text, and receive image-based reports of infrastructure conditions from the public. Across administrative domains, satellite imagery enables crop condition monitoring in agriculture; image analysis supports diagnostic assistance and medical record structuring in health; camera networks enable automated traffic measurement in transportation; sensor arrays enable continuous environmental pollution monitoring; drone- and image-based inspections replace manual infrastructure surveys in construction and public works; and aerial imagery supports land use analysis and urban planning.

The analytical dimension of AI deployment encompasses predictive analytics, risk scoring, and decision-support systems that act on the cost of administrative judgment. Where the preceding technologies reduce the cost of processing information, these technologies reduce the cost of acting on it. In policy and governance functions, they simulate the consequences of policy options before implementation, quantify the impact of proposed legislation, evaluate regulatory compliance automatically, improve the accuracy of revenue and expenditure forecasting, and support long-term administrative planning based on demographic and economic projections. In internal administration, they optimize workforce allocation based on workload prediction, monitor budget execution continuously, detect internal irregularities and fraud, assess procurement risk, and optimize the management of IT assets across agencies. In citizen-facing services, they automate eligibility determination for benefits and entitlements, detect fraudulent claims before disbursement, predict service demand to reduce waiting times, and model citizen satisfaction to guide service improvement. Across administrative domains, they support the following: crop yield forecasting and insurance risk assessment in agricultural; early warning for disease outbreak and hospital demand forecasting in healthcare; traffic flow prediction and signal optimization in transportation; tax risk scoring and arrears prediction in revenue administration; welfare demand forecasting and resource allocation in social services; infrastructure deterioration prediction and maintenance scheduling in public works; crime risk analysis in public safety; weather and disaster risk forecasting in emergency management; educational outcome prediction and early intervention in schools; and energy demand forecasting and grid management in utilities.

The agentic dimension of AI deployment encompasses retrieval-augmented generation, multi-agent systems, and adaptive learning technologies that act on the cost of coordinating work across organizational boundaries. Where the analytical technologies reduce the cost of individual judgment, these technologies reduce the cost of executing sequences of judgments across multiple systems and institutions without continuous human intervention. In policy and governance functions, they automatically collect and synthesize evidence for policy development, coordinate policy implementation across multiple ministries, adapt administrative procedures automatically to regulatory change, and continuously monitor compliance with international treaties and standards.

In internal administration, they execute multisystem workflows autonomously, automate procurement and contracting processes end to end, conduct audit and inspection sequences without manual handoffs, continuously optimize personnel deployment, monitor budget execution and generate automatic alerts, and coordinate inter-agency data exchange without bilateral negotiation for each transaction. In citizen-facing services, they process complex applications requiring coordination across multiple agencies as unified workflows, resolve citizen complaints autonomously with follow-ups, escalate emergency cases automatically to the appropriate authority, coordinate cross-agency benefit payments, and route cases to the appropriate administrative unit without human triage. Across administrative domains, they automate agricultural subsidy review and disbursement, assess medical insurance claims, coordinate traffic incident response across agencies, prioritize tax audit targets, schedule infrastructure maintenance autonomously, and coordinate multiagency disaster response in real time.

The sustainability dimension of AI deployment encompasses cloud infrastructure, data platforms, digital public infrastructure, edge computing, API ecosystems, and governance frameworks that act on the long-term cost of sustaining AI deployment and ensuring its legitimacy. Where the preceding dimensions address what AI systems do, this dimension addresses whether those systems can continue to do it reliably, accountably, and under changing conditions. In policy and governance functions, these technologies support the development of AI governance legislation, institutionalize algorithmic auditing, establish data sovereignty frameworks, align national AI deployment with international standards, and create institutional structures for AI risk management. In internal administration, they enable autonomous maintenance and updating of AI systems, automate data governance processes, continuously detect and respond to security threats, support phased migration of legacy systems, and optimize cloud operational costs over time. In citizen-facing services, they automate personal data protection, continuously monitor service delivery for fairness and nondiscrimination, maintain accountability mechanisms through which citizens can contest automated decisions, and support ongoing improvement of accessibility across service channels. Across administrative domains, they optimize energy consumption in AI operations, automate carbon footprint measurement and reporting, ensure administrative continuity under crisis conditions, manage cross-border data flows within sovereign frameworks, enable continuous model updating and retraining as administrative conditions change, and support ongoing fairness evaluation across all service domains. At the national ecosystem level, they underpin the construction of sovereign AI infrastructure, sustain the long-term viability of the national AI ecosystem, and support the development of green AI operational standards.

Taken together, these five dimensions define the full range of productivity improvement opportunities available to public administrations that deploy AI. They span the entirety of government work: from the most routine citizen-facing transactions to the most complex cross-agency coordination; and from the most immediate labor cost reductions to the longest-horizon investments in institutional resilience and legitimacy. No prior administrative technology has acted simultaneously across all five dimensions at this scale.

The question this chapter addresses is how large these improvements are when expressed in macroeconomic terms. Task-level evidences in term of reduced processing times, freed staff hours, and queries resolved without human intervention establish that the improvements are real. But the aggregate economic contribution of public sector AI adoption depends not only on the magnitude of task-level gains but on the structural parameters that determine how large a share of national output passes through public sector labor in the first place. It is to that estimation that the chapter now turns.

Economic Impact Estimates and What They Reveal

The OECD estimates that AI-driven automation can reduce public sector labor costs by between 25% and 60% of the affected functions. Applying a deliberately conservative coefficient below the midpoint of this range to the structural parameters of each economy—the share of national output accruing to labor, and the share of the labor force employed in public administration—yields a direct estimate of AI's macroeconomic contribution to public sector productivity. The full derivation is provided in Appendix C. The results are given in Table 5.1:

TABLE 5.1

MACROECONOMIC IMPACT ESTIMATES BY ECONOMY.

Economy	Macro Impact (% of GNI)	Strategic Positioning
ROK	1.68%	A: Sovereign Scaling
India	1.43%	B: Asymmetric Specialization
Malaysia	1.19%	C: Balanced Transition
Philippines	1.15%	D: Constrained Leapfrog
Japan	0.91%	B: Asymmetric Specialization
ROC	0.66%	A: Sovereign Scaling
Thailand	0.61%	C: Balanced Transition
Bangladesh	0.52%	D: Constrained Leapfrog

Note: Baseline $\alpha = 0.30$; sensitivity range.

Table 5.1 invites an immediate and important question: why does the ROK rank highest and Bangladesh lowest? The answer has nothing to do with the sophistication of AI systems deployed, the scale of technology investment, or the ambition of national AI strategies. It has everything to do with two structural parameters that are entirely independent of technology: the labor income share and the public servant ratio.

The ROK's labor income share stands at 59.3% of its GDP, while 9.6% of its labor force is employed in public administration. Bangladesh's corresponding figures are 47.6% and 3.8%. Under identical AI systems generating identical task-level efficiency gains, the ROK's structural parameters would still produce a higher macroeconomic impact than Bangladesh's. This is not because the ROK government is more capable, but because a larger share of its national output passes through public sector labor in the first place.

This finding holds regardless of the productivity coefficient applied. Whether the OECD estimate is set at its lower bound, its midpoint, or its upper bound, the ranking of economies does not change. The coefficient multiplies all economy equally and therefore cancels out any cross-economy comparison. The structural parameters alone determine the ordering.

The policy implication for APO member economies is direct. Increasing AI investment does not change an economy's position in this ranking. What changes the ranking is the structural composition of the public sector itself, i.e., the parameters shaped by decades of fiscal policy, labor market development, and administrative tradition. For economies where the public servant ratio is low, the macroeconomic transmission of AI-driven efficiency gains is structurally constrained, not technologically constrained. The opportunity does not lie in deploying more technology. It lies elsewhere.

That is precisely what this estimate reveals through what it does not measure. The figures captures only the efficiency dimension of public sector productivity, i.e., the direct labor cost savings from automating administrative tasks. They do not capture the economic value of improved accountability, such as reductions in administrative error, fraud, and corruption; improvements in the consistency and fairness of public decisions; and gains in citizen trust that reduce avoidance behavior and improve compliance. They do not capture the economic value of improved resilience, i.e., the reduction in expected losses from crises, the adaptive capacity that enables institutions to respond to changing conditions, and the long-term sustainability of public service delivery.

These dimensions—accountability and resilience—are not peripheral to productivity. They are, as Chapter 2 established, constitutive of what productivity means in the public sector. Their economic value is real and, in principle, substantial. A government that becomes more accountable may recover losses from fraud and noncompliance that dwarf any labor cost saving. A government that becomes more resilient may avoid productivity collapses during crises worth orders of magnitude more than routine efficiency gains.

The estimates in this chapter are therefore lower bounds. They represent the visible, measurable, labor-cost-savings component of AI's true contribution to public sector productivity. The full contribution, incorporating accountability and resilience alongside efficiency, is larger. For economies where the structural parameters constrain the efficiency dimension, this is not a counsel of limitation. It is precisely the opposite. The largest productivity gains available to APO member economies do not lie in the dimension that this chapter has measured. They lie in the dimensions that technology alone cannot deliver—and that the framework developed in this report is designed to support.

Beyond Efficiency: Accountability, Resilience, and the Full Scope of Productivity Improvement

The estimates presented in this chapter measure one dimension of a three-dimensional phenomenon. They capture what happens when AI reduces the labor cost of administrative tasks. They do not capture what happens when AI improves the quality of administrative decisions, strengthens the accountability of government to citizens, or builds the resilience of public institutions to absorb disruption and sustain performance over time. These omissions are not incidental. They reflect a fundamental characteristic of conventional national accounting frameworks, which are designed to measure the flow of goods and services at market prices and are poorly suited to capturing the value of institutional quality.

Yet institutional quality is precisely where the largest productivity gains available to public administrations reside. A government that automates a helpline reduces labor costs. A government that uses AI to detect and eliminate fraud in benefit programs recovers losses that may be an order of magnitude larger than any labor-cost saving. A government that deploys AI to improve the consistency and fairness of administrative decisions reduces the economic cost of citizen distrust—the avoidance behavior, noncompliance, and institutional disengagement that impose real costs on economic activity. A government that builds AI-enabled resilience into its administrative systems avoids the productivity collapses that crises inflict on institutions lacking adaptive capacity.

These gains are not speculative. They follow directly from the framework established in Chapter 2. Hood's three-dimensional conception of public sector productivity—efficiency, accountability, and resilience—was not a theoretical abstraction. It was a diagnosis of where public administrations

actually lose and gain value. Efficiency losses are visible and measurable, e.g., staff hours wasted, processing times extended, and costs incurred. Accountability losses are less visible but no less real, such as decisions made inconsistently, fraud undetected, citizens alienated from institutions they do not trust. Resilience losses are the least visible of all until a crisis makes them catastrophic: institutions that cannot adapt, systems that fail under stress, administrative capacity that collapses precisely when it is most needed.

The portfolio assessment conducted in Chapter 4 established where the eight target economies currently stand across all three dimensions. At the efficiency level, all eight economies show meaningful activity. The foundational and perceptual levels of AI deployment are generating real gains for each economy in the study, regardless of its technological potential or institutional maturity. This is the dimension the estimates capture in an earlier section.

At the accountability level, the picture is starkly different. Only the Strategic Positioning A economies (ROK and ROC) shows institutionalized deployment of analytical and decision-support systems that embed accountability mechanisms into administrative operations. For the remaining seven economies, accountability-enhancing AI remains nascent or absent. The economic values left unrealized in this dimension, e.g., fraud undetected, decisions made inconsistently, citizen trust eroded, are not captured in any estimate this chapter presents.

At the resilience level, the gap is more pronounced. Only the Strategic Positioning A economies (ROK and ROC) shows sustained activity at the agentic and sustainability levels of deployment, where AI systems operate autonomously within accountability frameworks and are designed to maintain performance under changing conditions. For all other economies, this frontier remains aspirational. The economic value of avoided crises, sustained administrative performance, and institutional adaptability, i.e., the value that resilience represents, is entirely absent from the estimates made earlier.

This is what the framework developed in this report makes visible. The 0.52% to 1.68% range is not a ceiling. It is a floor. Every economy in this study has access to productivity gains that exceed what the efficiency dimension alone can deliver. The path to those gains does not run through technology investment alone. It runs through the institutional investments that make accountability and resilience possible: data governance reform, algorithmic fairness frameworks, citizen engagement mechanisms, cross-agency coordination, and the sustained political commitment to treat AI not as a collection of efficiency tools but as the foundation of a more capable, more trustworthy, and more resilient public administration.

For the economies where structural parameters constrain the efficiency dimension most severely—Bangladesh, Thailand, and the ROC—this reframing is not consolation. It is a strategic direction. The productivity gains most accessible to these economies are not in the dimension where their structural position is weakest. They are in the dimensions where institutional investment, rather than technological capacity, is the binding constraint. And institutional investment is a form of capacity that all economies can build, regardless of their GDP, patent portfolios, or public-servant ratios.

The policy frameworks through which these institutional investments can be made—differentiated by scenario, sequenced by institutional readiness, and grounded in the empirical realities established in Chapters 3 and 4—will be the subject of Chapter 6.

CHAPTER 6
FROM CONSTRAINT TO UNIVERSAL STANDARD WITH REVERSE INNOVATION

Chapter 1 established a structural reality that frames everything that follows: roughly 75% of global AI supercomputing capacity is concentrated in the USA, followed by approximately 15% in PR China. The eight economies examined in this report—regardless of their technological sophistication, institutional maturity, or economic scale—share a common condition. None of them possesses sovereign capacity in the foundational models that underpin frontier AI deployment. The ROK and the ROC have built extraordinary digital government infrastructure. Japan has deployed AI systems across more than 2,000 administrative functions. India commands the largest AI publication output in the sample. Yet none of these economies controls the computational substrate on which the most capable AI systems depend.

This is not a temporary gap that investment will close. It is a structural condition that shapes the strategic choices available to every government in this study—and to most governments in the world.

The Sovereignty Dilemma as Shared Condition

Governments that lack sovereign compute face a dilemma that no national AI strategy has fully resolved. Deploying advanced AI through foreign cloud platforms offers immediate capability: access to frontier models, scalable infrastructure, and rapid deployment without domestic investment in computational hardware. The efficiency gains are real, but the cost is structural. Every inference cycle transmits citizen data, such as, benefit records, tax filings, health information, and identity credentials to servers operating under foreign legal jurisdiction. The data thus leaves the sovereign perimeter, and what returns is an output, not the data itself. But, the transmission has already occurred.

This is not a theoretical concern. It is the operational reality of cloud-dependent AI deployment. Governments that have built citizen-facing services on external foundation models have accepted, whether explicitly or implicitly, that sensitive administrative data will be processed outside national borders. The sovereignty dilemma, i.e., the friction between capturing technological benefits and maintaining strategic autonomy over data assets, is therefore not a problem confined to resource-constrained economies. It is shared by every government that has chosen cloud dependency for efficiency reasons.

The ROK's "Pan-government AI Common Infrastructure" addresses this dilemma through deliberate sovereign architecture: government-specific cloud infrastructure maintained within national borders, with explicit data governance frameworks preventing egress of sensitive citizen data. The ROC's Civil IoT program similarly maintains data sovereignty through domestic infrastructure. Both represent significant institutional investment that most governments cannot immediately replicate.

Japan's 2,000-plus AI deployments, by contrast, reflect a pattern common across the sample: agency-by-agency adoption of available technologies, many of which are cloud-dependent, without a government-wide data sovereignty architecture. The efficiency gains are documented. The sovereignty exposure is structural and largely unaddressed.

The sovereignty dilemma is therefore not solved by technological advancement alone. The ROK's exceptional institutional capacity provides one pathway. But it is a pathway that requires sustained political commitment, substantial infrastructure investment, and institutional coordination that most governments, including technologically advanced ones, have not yet achieved.

The Solution that Constraint Has Built

Bangladesh and the Philippines did not choose localized, low-compute AI architectures as a strategic preference. They arrived at them through necessity. Without access to large-scale cloud infrastructure, without the fiscal resources to license frontier foundation models at scale, and without the institutional bandwidth to manage complex vendor relationships across government agencies, both economies deployed AI selectively. They deployed it in bounded, specific, high-impact administrative functions using technologies that could operate within existing infrastructure constraints.

The results are documented in Chapter 4. Bangladesh's Helpline 333 resolves citizen queries through automated voice response systems operating on domestic infrastructure. FloodHub processes satellite imagery through locally deployed inference systems, generating flood forecasts without transmitting sensitive geographic and population data to external servers. The a2i program has built institutional capacity comprising procurement frameworks, system design standards, and civil servant training that governs AI deployment as a national capability rather than a series of vendor relationships.

The Philippines' PhilSys enrolled more than 90 million individuals through AI-driven biometric verification managed entirely within its domestic infrastructure. Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA)'s weather forecasting improvements extended prediction range from two to fourteen days through locally deployed analytical systems. The National AI Strategy and Roadmap 2.0, published in February 2025, explicitly positions data sovereignty as a foundational principle rather than a secondary consideration.

What these deployments share is architecturally significant: citizen data does not leave the sovereign perimeter; inference cycles process information within national infrastructure; and system maintenance and governance remain within institutional control. The governments of Bangladesh and the Philippines did not design these characteristics into their systems as sovereignty protections. They are structural consequences of operating under resource constraints that precluded cloud dependency.

The consequence is striking. Examined through the lens of data sovereignty and security—the dimensions that the sovereignty dilemma identifies as most strategically consequential—Bangladesh and the Philippines have arrived at architectures that economies at higher infrastructural baselines are still working to achieve. The constraint that appeared to be a disadvantage turns out to encode the solution.

Reverse Innovation and the Path to Convergence

The concept of reverse innovation describes a pattern in which solutions developed under severe resource constraints in emerging markets prove applicable (and ultimately superior) in advanced markets facing analogous constraints. The canonical examples come from healthcare and manufacturing: products designed for resource-scarce environments that later displaced incumbents in advanced economies as those economies confronted similar pressures.

Public-sector AI is following the same pattern, driven by three structural pressures that are intensifying across all economies regardless of the development level.

The first is energy. Training and operating frontier foundation models requires computational infrastructure whose energy demands are growing faster than efficiency improvements can offset. The International Energy Agency (IEA) had projected that data center energy consumption would double by 2026. Governments with climate commitments, which now includes virtually all APO member economies, face direct tension between frontier AI deployment and sustainability obligations. Low-compute, locally deployed architectures that achieve equivalent utility for bounded administrative domains represent not a compromise but an increasingly preferable alternative as energy costs rise.

The second is sovereignty and security. The sovereignty dilemma identified in an earlier section is not static. As AI systems become more deeply embedded in administrative operations, such as processing benefit eligibility, informing enforcement decisions, and managing critical infrastructure, the stakes of cloud dependency increase. A government whose citizen welfare systems depend on foreign cloud infrastructure has accepted a structural vulnerability in its most sensitive administrative functions. The regulatory and political pressure to address this vulnerability is intensifying across the sample, even in economies that have not yet acted on it. Locally deployed systems that keep citizen data within sovereign perimeters are not merely technically preferable; they are becoming politically necessary.

The third is governance transparency. Citizens and oversight bodies are demanding increasing accountability for automated administrative decisions. Systems that operate through external foundation models present inherent challenges for explainability, as the reasoning process occurs within proprietary architectures that governments neither own nor fully understand. Locally deployed systems, operating on vectorized administrative data through architectures that governments control, enable the audit trails, explainability mechanisms, and appeal processes that accountability frameworks require. Governance transparency is not achievable through cloud-dependent architectures at the level that democratic accountability demands.

These three pressures, i.e., energy, sovereignty, and governance transparency, are converging toward the same architectural response: localized, low-compute, data-sovereign systems that process administrative information within institutional boundaries, maintain full audit trails, and achieve high accuracy through domain specificity rather than general-purpose scale. This is the architecture that Bangladesh and the Philippines arrived at through constraint. It is the architecture that all governments are being pushed toward by structural necessity.

This is reverse innovation in the precise sense of the term. The solutions developed under the most severe constraints are not second-best accommodations waiting to be superseded by more sophisticated approaches. They are the direction toward which all governments are converging as the constraints that forced their development become universal.

Policy Implications by Strategic Positioning

The convergence thesis generates differentiated policy implications for each scenario. The direction is common; the starting point and immediate priorities differ.

Strategic Positioning A: The ROK and the ROC

Both economies have invested heavily in sovereign AI infrastructure and possess the institutional capacity to sustain accountability and resilience systems at the frontier. Their immediate challenge is not adoption but sustainability: maintaining frontier-layer capability while managing the energy, cost, and governance demands that large-scale AI deployment imposes.

The strategic priority is transition toward low-compute sovereign architectures without sacrificing the accountability and resilience gains that distinguish their current deployments. The ROK's Pan-Government AI Common Infrastructure and the ROC's domestic digital platforms provide the institutional foundation. The task is rationalizing compute intensity, i.e., identifying where frontier foundation models are genuinely necessary and where localized, domain-specific systems operating on vectorized administrative data deliver equivalent utility at substantially lower energy and cost. Both economies are positioned not only to make this transition but to document and share the governance frameworks through which it is achieved, thereby contributing to the regional learning that the scenario analysis in Chapter 4 identified as a distinctive strategic asset.

Strategic Positioning B: Japan and India

Japan's challenge is institutional rather than technological. Its 2,000-plus deployments remain isolated within agency silos because legacy IT infrastructure prevents integration. The path forward does not require wholesale infrastructure modernization. Japan has accumulated decades of structured administrative data such as benefit records, tax filings, permit applications, and infrastructure inspection logs that represent high-density knowledge bases ideal for locally deployed, retrieval-based systems. Vectorizing this accumulated data and deploying domain-specific systems within existing agency infrastructure, coordinated through standardized interagency protocols, transforms legacy data from a constraint into an asset without requiring the infrastructure investment that a government-wide modernization would demand.

India's challenge is subnational heterogeneity. Metropolitan administrations in the states of Kerala, Telangana, and Gujarat have demonstrated institutional capacity for accountability-embedded analytics. Rural and semiurban administrations remain at earlier adoption stages. A federated approach—establishing federation-wide data governance and accountability standards while enabling subnationally calibrated deployment—allows advanced states to pursue frontier-layer systems while building foundational capacity in earlier-stage regions without requiring uniform national implementation.

Strategic Positioning C: Malaysia and Thailand

Both economies possess the institutional flexibility that Japan and India lack and the infrastructure capacity that Bangladesh and the Philippines are building. The risk is diffused adoption: distributed investment across too many sectors generating insufficient critical mass in any domain to achieve the accountability and resilience advances that distinguish the ROK's trajectory from Japan's.

The strategic priority is deliberate concentration. Malaysia's sectoral focus in finance and health, where institutional maturity is highest and data governance frameworks are most developed, should be deepened rather than broadened. Thailand's broader but shallower approach benefits from

explicit prioritization: selecting two or three sectors where institutional readiness and impact potential are highest, concentrating data standardization and governance investment in those sectors, and establishing clear criteria for subsequent expansion. Institutional flexibility is an asset only when channeled; without deliberate prioritization it produces the diffuse adoption pattern that Chapter 4 identified as the central strategic risk for this cluster.

Strategic Positioning D: Bangladesh and the Philippines

Both economies have demonstrated the core capability that the convergence thesis identifies as strategically essential: deploying high-impact AI systems within sovereign infrastructure constraints. The challenge is systematization. Individual project successes, e.g., Helpline 333, FloodHub, PhilSys, and PAGASA, represent institutional learning that exists at the project level. Translating this learning into permanent institutional capacity requires embedding it in procurement frameworks, system design standards, civil servant training programs, and governance structures that persist beyond individual projects and individual project teams.

Bangladesh's a2i program provides the institutional vehicle for this translation. The Philippines' National AI Strategy Roadmap (NAISR) 2.0 provides the strategic framework. The task is converting project-based innovation into institutional architecture, i.e., ensuring that the next wave of AI deployment in both the economies follows established patterns rather than reinventing governance structures from scratch for each deployment.

Mutual Learning across Strategic Positionings

Public sector AI is an emerging technology whose disruptive potential generates governance adjustment challenges that apply across all economies, irrespective of their stage of economic development. The four strategic positionings identified in this report are not a ranking exercise but a typology of institutional bottleneck patterns, with each cluster containing pathways and instruments that constitute learning resources for others.

Cross-positioning learning vectors are observable in the eight-economy evidence. Strategic Positioning A economies (ROK and ROC) have developed accountability-layer institutional designs—the AI Evaluation Center gateway model in the ROC, the Pan-Government AI Common Infrastructure cross-ministerial backbone in the ROK, and sovereign LLM development in both. These constitute governance experience accessible to other clusters as they advance toward accountability-embedded analytics. Strategic Positioning B economies (Japan and India) have demonstrated approaches to institutional fragmentation: India's federated coordination across subnational heterogeneity and Japan's accumulated administrative data as vectorization-ready knowledge base. Strategic Positioning C economies (Malaysia and Thailand) have demonstrated focused-investment discipline (Malaysia's NAIO-coordinated sectoral concentration) and broad sectoral pilot accumulation under digital-society frameworks (Thailand 4.0). Strategic Positioning D economies (Bangladesh and Philippines) have demonstrated constraint-driven domain-focused architectures—FloodHub disaster prediction, Helpline 333 NLP triage, a2i-scale citizen services—that operate without cloud dependency, achieve high accuracy through domain specificity, and constitute reverse-innovation reference configurations toward which all economies are being pushed by structural pressures.

Mutual learning operates bidirectionally. Strategic Positioning A economies have governance instruments to share with B, C, and D, but they also have learning to draw from D, particularly

low-compute architectural models relevant to the energy constraints emerging at the frontier of high-performance AI computing. Strategic Positioning B economies have institutional reform challenges in common with each other and learning vectors to draw from D for advancement beyond efficiency-layer deployment. Strategic Positioning C economies have institutional flexibility to translate into focused or broad sectoral pathways and can draw from both A (institutional depth instruments) and D (constraint-aware design). Strategic Positioning D economies have constraint-driven innovations to share with all clusters and learning to draw from A for institutionalizing those innovations beyond the project level.

The APO as Regional Learning Facilitator

The APO is positioned to operationalize the convergence thesis as regional strategy. Its mandate—productivity improvement across member economies—aligns directly with the policy task that this chapter identifies, i.e., ensuring that the institutional learning generated under constraint in Bangladesh and the Philippines becomes accessible to all economies, and that the governance frameworks developed at the frontier in the ROK and the ROC inform implementation across the region.

Four mechanisms are available. First, the APO can establish cross-scenario learning networks organized by structural position rather than by economy. Economies facing similar constraints, e.g., legacy IT burden, subnational heterogeneity, and infrastructure scarcity, share institutional learning more effectively than economies grouped by geography or income level. Peer networks organized around structural similarity accelerate the knowledge transfer that individual bilateral relationships cannot systematize.

Second, the APO can facilitate the development of regional standards for data governance, algorithmic auditing, and sovereign AI deployment. Rather than each economy constructing governance frameworks independently, regionally harmonized standards can reduce redundant institutional work, create interoperability, and establish shared accountability norms that support citizen trust across the region.

Third, the APO can invest in civil servant training and capacity building that addresses the workforce dimension of AI adoption. Technical capability, governance literacy, and procurement competence are prerequisites for sustained deployment, and building these capabilities across member economies is foundational to the productivity improvement that AI adoption promises.

Fourth, and most consequentially, the APO can document and disseminate the reverse innovation that constraint has generated. The solutions developed in Bangladesh and the Philippines are not case studies in managing limitations. They are demonstrations of the direction toward which all governments are converging. Making this visible—through case documentation, peer learning facilitation, and direct engagement with economies at higher infrastructural baselines confronting the same structural pressures—is the contribution that the APO is uniquely positioned to make.

CHAPTER 7
SYNTHESIS AND POLICY IMPLICATIONS

The six preceding chapters have built a cumulative argument. This chapter draws the threads together, summarizing what each chapter has established, identifying the findings that cut across the analysis, and deriving the policy implications that follow.

What the Analysis Established

TABLE 7.1

SUMMARY OF PUBLIC SECTOR AI ADOPTION STATUS ACROSS EIGHT ECONOMIES.

Economy	Adoption Status	Institutional Readiness	Main Use Cases	Current Maturity	Key Constraints	Governance Gaps	Near-term Priorities	Expected Economic Gain
ROK (Strategic Positioning A)	Comprehensive deployment established across multiple domains. Pan-Government AI Common Infrastructure and Government Cloud operate as the cross-ministerial foundation.	Clear national strategy supported by established e-government architecture. Ranked 5th on Waseda Digital Government Index. Regulated by AI Basic Act and Cabinet-level AI Committee.	Guppi AI chatbot (MOIS); HomeTax GPT (NTS); AI Traffic Forecasting (Seoul); Crowd Density Monitoring (NDMI); Public Audit AI (BAI).	Strong patent base aligned with industrial applications; robust academic research base; full-stack maturity reaching L4 and L5 layers.	Energy consumption and cooling capacity for high-performance AI computing.	Architecture for migrating legacy systems into AI-era integrated infrastructure.	USD11.56 billion AI infrastructure investment; scaling Pan-Government AI Common Infrastructure.	1.68% GDP (baseline); 0.84%–3.36% (sensitivity).
ROC (Strategic Positioning A)	Distinctive participatory-governance orientation; sectoral applications operational across health, disaster prevention, and transport.	Civic-tech-anchored national strategy. Ranked 21st on Waseda Digital Government Index. Evaluated via AI Evaluation Center (AIEC) gateway and Taiwan AI Action Plan.	vTaiwan consensus-building AI; Join.gov.tw citizen-petition platform; Civil IoT Taiwan; NHI database NLP; Smart City AI (Kaohsiung, Taipei).	Semiconductor manufacturing strength complements public sector AI; deployment concentrated in L1 and L2 layers with emerging L3 capabilities.	Smaller public sector employment ratio limits absorptive capacity for government-wide AI scaling.	Government AI audit system not yet fully operational; cross-sectoral algorithmic accountability under development.	AI Basic Act enactment; AIEC scope expansion; TAIDE LLM expansion; Civil IoT Taiwan expansion.	0.66% GDP (baseline); 0.33%–1.31% (sensitivity).

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Economy	Adoption Status	Institutional Readiness	Main Use Cases	Current Maturity	Key Constraints	Governance Gaps	Near-term Priorities	Expected Economic Gain
Japan (Strategic Positioning B)	Broad efficiency-layer deployment. More than 2,000 systems deployed across national and local governments, demonstrating task-level productivity.	Legal framework enacted alongside long-standing organizational fragmentation. Ranked 9th on Waseda Digital Government Index. AI Promotion Act effective from September 2025.	Tax Assessment AI (NTA); Nursery Matching AI; municipal speech recognition; government OCR systems.	Substantial patent base; strong academic research; institutional absorption remains uneven across ministries.	Legacy IT system heterogeneity and fragmented ministerial authority.	Absence of a government-wide algorithmic accountability framework and cross-agency data governance for integrated decision support.	AI Basic Plan operationalization; Digital Agency cross-ministry data integration; health and welfare sectoral pilots.	0.91% GDP (baseline); 0.45%–1.82% (sensitivity).
India (Strategic Positioning B)	Large-scale Digital Public Infrastructure (DPI) in operation, acting as a cross-cutting foundation.	Cabinet-approved national AI mission. Ranked 24th on Waseda Digital Government Index. Guided by National Strategy for AI and Responsible AI Principles.	Aadhaar AI biometric deduplication (UIDAI); UPI AI fraud monitoring (NPCI); UMANG; Ayushman Bharat AI-CDSS (NHA); Bharat-VISTAAR.	Patent portfolio oriented toward public sector application domains; abundant research output and human-resource depth.	Federal administrative complexity across 28 states and eight Union Territories; uneven subnational infrastructure.	Operational algorithmic accountability instruments across sectors remain undocumented at scale.	India AI Mission operationalization; BHASHINI language platform expansion; Ayushman Bharat AI-CDSS scaling.	1.43% GDP (baseline); 0.72%–2.86% (sensitivity).
Malaysia (Strategic Positioning C)	Sectoral concentration with focused investments; operational across healthcare, surveillance, and infrastructure.	Recently established AI office. Ranked 30th on Waseda Digital Government Index. Managed by National AI Office (NAIO) under the National AI Roadmap.	DR.MATA (MoH); KL Face Recognition CCTV (DBKL); Flood Prediction (DID); Putrajaya Integrated Command Center; MyGDX data exchange.	Patent base aligned with selected industrial sectors; L1 deployment is broad, but higher layers remain limited.	Citizen-services AI integration remains at an early stage.	Internal management AI integration remains limited.	NAIO operationalization; AI For MY Future training scale-up; MyDIGITAL Ecosystem deepening.	1.19% GDP (baseline); 0.60%–2.38% (sensitivity).
Thailand (Strategic Positioning C)	Broad sectoral deployment with operational pilots active in healthcare, transport, agriculture, and urban management.	National strategy operational; formal AI law in draft. Ranked 17th on Waseda Digital Government Index. Coordinated by National AI Committee and NSTDA Ethics Guidelines.	Traffy Fondue (multi-agency); EEC Smart City; AI Chest 4 All; Civil IoT; Pathumma LLM; Thang Rath Super App; HandySense agricultural AI.	Research base spans multiple institutions; patent base remains modest relative to deployment scale.	Internal management AI integration remains at an early stage.	Formal AI Law remains in draft stage; cross-ministerial integration is limited.	AI Law enactment; National AI Committee operationalization; EEC Smart City scaling.	0.61% GDP (baseline); 0.30%–1.21% (sensitivity).

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Economy	Adoption Status	Institutional Readiness	Main Use Cases	Current Maturity	Key Constraints	Governance Gaps	Near-term Priorities	Expected Economic Gain
Bangladesh (Strategic Positioning D)	Foundational scale achieved despite resource constraints. The a2i digital service platform serves as the administrative backbone.	Vision-led AI policy under finalization. Ranked 64th on Waseda Digital Government Index. Guided by Smart Bangladesh 2041 and National AI Centre of Excellence (NAICE).	a2i (ICT Division); Helpline 333 NLP triage; Krishi Batayon (agriculture); e-Mutation (land registry); ABIS; FloodHub disaster prediction.	Modest patent base; emerging research community; advanced public sector deployment under strict constraints.	Resource constraints; electricity and network infrastructure act as primary bottlenecks.	National AI Policy remains in draft stage; operational accountability frameworks are limited.	National AI Policy finalization; NAICE operationalization; Smart Bangladesh 2041 computing infrastructure procurement.	0.52% GDP (baseline); 0.26%–1.03% (sensitivity).
Philippines (Strategic Positioning D)	Active policy formulation with operational citizen-services foundation in place.	Multiagency coordination driven by newly established research institute. Ranked 29th on Waseda Digital Government Index. Guided by NEDA AI Roadmap 2.0 and NAICRI.	PhilSys (PSA); eGovPH (DICT); Dagyaw citizen engagement; 4Ps welfare authentication; PAGASA Weather AI 4-RP; FASSSTER spatiotemporal AI.	Strong commitment to administrative reform; modest patent base combined with BPO/IT industry AI presence.	Electricity and telecommuni-cations networks act as computing-resource infrastructure constraints.	NAICRI newly established; operational frameworks for cross-sectoral AI governance remain in formation.	NAICRI operationalization; NEDA AI Roadmap 2.0 implementation; AI talent development and education rollout.	1.15% GDP (baseline); 0.58%–2.31% (sensitivity).

Chapter 1 established the structural condition that frames everything that follows. Approximately 75% of global AI supercomputing capacity is concentrated in the USA, with roughly 15% in PR China. The eight economies examined in this report share a common condition regardless of their technological capability.

Chapter 2 established the theoretical framework within which that question must be answered. Hood's analysis of public administration reveals that productivity in the public sector is not a single dimension but three structurally competing ones: efficiency, accountability, and resilience. AI technologies enter this classical tension not by resolving it but by creating new conditions under which sequential progression across all three dimensions becomes institutionally achievable. The framework also established the "Public Sector AI: Purposes and Uses" inventory—a vocabulary of 57 technology classifications organized across eight functional categories that provides the analytical foundation for the empirical chapters that follow.

Chapter 3 established the structural landscape within which the eight economies operate. Three independent data sources were used to triangulate each economy's structural position. These were: the Waseda University – IAC World Digital Government Ranking 2025 for institutional maturity; AI patent families from DWPI for technological capacity; and peer-reviewed AI publications from Web of Science for human capital pipeline. The ROK and the ROC occupy positions of high institutional maturity, combined with substantial technological capacity. Japan and India possess high technological potential, constrained by institutional fragmentation and infrastructural heterogeneity, respectively. Malaysia and Thailand occupy moderate positions with maximum

institutional flexibility. Bangladesh and the Philippines face the most severe structural constraints across all three dimensions.

Chapter 4 applied horizon scanning across 944 policy documents and institutional evidence sources to establish what is actually happening in public sector AI deployment across the eight economies. The portfolio assessment revealed a systematic asymmetry: activity at the efficiency level is universal across all eight economies, but advancement to the accountability level is confined to the ROK and activity at the resilience level is also sustained only by the ROK. From this evidence, two structural axes emerged (technological potential and social participation), thereby producing four empirically grounded scenarios: sovereign scaling, asymmetric specialization, balanced transition, and constrained leapfrog.

Chapter 5 quantified the macroeconomic contribution of public sector AI adoption. Applying OECD productivity coefficients to each economy's structural parameters, namely, labor-income share and public-servant ratio, yielded estimates ranging from 0.52% of GNI in Bangladesh to 1.68% in the ROK. The analysis revealed that these rankings are determined entirely by structural parameters, not by AI deployment sophistication. Whether the productivity coefficient is set at its lower bound or the upper bound, the economy's ordering does not change. The estimates capture only the efficiency dimension of productivity. The accountability and resilience dimensions—whose economic value is real but resists conventional quantification—are not included. The estimates are therefore lower bounds. The largest productivity gains available to APO member economies lie not in the dimension this chapter measured but in the dimensions that institutional investment enables.

Chapter 6 identified the direction toward which all four scenarios converge. Three structural pressures—rising energy costs, sovereignty and security imperatives, and governance transparency requirements—are pushing all governments toward localized, low-compute, data-sovereign AI architectures regardless of their starting position. Bangladesh and the Philippines, operating under the most severe resource constraints, arrived at this architecture first. Their solutions—Helpline 333, FloodHub, PhilSys, PAGASA—keep citizen data within sovereign perimeters, operate without cloud dependency, and achieve high accuracy through domain specificity rather than general-purpose scale. Examined through the lens of data sovereignty and security, these are not second-best accommodations. They are the architectures toward which all governments are being pushed by structural necessity. This is reverse innovation, i.e., solutions developed under constraint becoming universal best practices as the constraints that forced their development become universal.

The Central Paradox

Running through the analysis is a paradox that cuts against conventional assumptions about AI adoption and national competitiveness.

Japan possesses the third-largest AI patent portfolio in the sample, has deployed AI systems across more than 2,000 administrative functions, and commands substantial institutional resources. Yet its estimated macroeconomic contribution of 0.91% ranks fifth among the eight economies—below the Philippines at 1.15% and Malaysia at 1.19%, both of which possess substantially smaller technological footprints. Japan's technological investment has not translated into proportional productivity gain because institutional fragmentation prevents cross-agency coordination, accountability embedding, and systematic learning transfer that productivity transmission requires.

The Philippines presents the mirror image. It ranks last in AI patent families in the sample, possesses limited computational infrastructure, and confronts severe fiscal constraints. Yet it ranks highest in social participation among the eight economies, which means that citizen engagement, participatory governance mechanisms, and institutional openness are more deeply embedded in its administrative culture than in any other economy studied. This institutional openness, not technological capacity, is what enabled PhilSys to enroll more than 90 million individuals through locally deployed biometric verification, PAGASA to extend weather forecasting range through domestically managed analytical systems, and NAISR 2.0 to position data sovereignty as a foundational national commitment rather than a secondary consideration.

The paradox is not incidental. It is the central finding of this report.

Technological capacity is a necessary but insufficient condition for public sector AI productivity. What determines whether technological capacity translates into productivity gain is institutional openness, i.e., the degree to which citizen engagement is embedded in governance, cross-agency coordination is structurally enabled, and administrative systems are designed to be accountable and adaptable rather than efficient and closed.

Japan's trajectory illustrates the ceiling that institutional closedness imposes on technological capacity. The Philippines' trajectory illustrates the floor that institutional openness establishes even under severe technological constraints. Between these two cases, the report's argument becomes visible in its sharpest form: the productivity gains most accessible to APO member economies do not lie in acquiring more technology. They lie in building more open, more accountable, and more resilient institutions.

Policy Implications

The convergence thesis of Chapter 6 generates differentiated policy implications by scenario. The direction is common, but the starting point and immediate priorities differ.

The ROK and the ROC have invested heavily in sovereign AI infrastructure and possess the institutional capacity to sustain accountability and resilience systems at the frontier. Their strategic priority is transition toward energy-efficient sovereign architectures without sacrificing the accountability and resilience gains that distinguish their current deployments. Both these economies are positioned not only to make this transition but also to document and share the governance frameworks through which it is achieved, thereby contributing institutional learning to the regional ecosystem that APO is positioned to facilitate.

Japan's challenge is institutional rather than technological. Its accumulated administrative data—benefit records, tax filings, permit applications, and infrastructure inspection logs representing decades of structured digitalization—constitutes a high-density knowledge base that locally deployed, domain-specific systems can exploit without requiring wholesale infrastructure modernization. Vectorizing this accumulated data and deploying retrieval-based systems within existing agency infrastructure, coordinated through standardized interagency protocols, transforms legacy data from a constraint into a strategic asset.

India's challenge is subnational heterogeneity. A federated approach—establishing federation-wide data governance and accountability standards while enabling subnationally calibrated

deployment—allows advanced states to pursue frontier systems while building foundational capacity in earlier-stage regions without requiring uniform national implementation. Advanced states serve as regional learning hubs whose institutional experience is systematically transferred rather than remaining confined within state boundaries.

Malaysia and Thailand possess the institutional flexibility that Japan and India lack. The risk is diffuse adoption generating insufficient critical mass in any domain. The strategic priority is deliberate sectoral concentration: selecting the domains where institutional readiness and impact potential are highest, deepening investment in those domains, and establishing clear criteria for subsequent expansion rather than distributing resources across too wide a range of applications.

Bangladesh and the Philippines have demonstrated the core capability that the convergence thesis identifies as strategically essential: deploying high-impact AI systems within sovereign infrastructure constraints. The challenge is systematization—translating project-level institutional learning into permanent governance frameworks, procurement standards, and civil servant training programs that persist beyond individual projects and ensure that subsequent deployment waves follow established patterns rather than reinventing governance structures from scratch.

The APO is positioned to operationalize these differentiated implications as regional strategies through four mechanisms: cross-scenario learning networks organized by structural similarity rather than geography; regional standards development for data governance and algorithmic accountability; civil servant training and capacity building across member economies; and systematic documentation and dissemination of the reverse innovation that constraints have generated in Bangladesh and the Philippines.

Limitations of the Study

The following three limitations bound the conclusions of this study and define the agenda for future research:

(1) The scenario construction relied on expert panel consensus to position each economy along the social participation axis. While the panel was structurally representative across all eight economies, the placement reflects interpretive judgment rather than statistical measurement. Different panels applying different criteria might position economies differently. The scenarios are analytically coherent and evidentially supported, but readers should interpret them as plausible structural narratives rather than definitive causal maps.

(2) The study examined public sector AI adoption in contexts amenable to open academic inquiry. Security-critical and intelligence contexts, such as defense applications, cybersecurity systems, and counter-intelligence operations, fall outside the scope of this analysis. Recommendations derived from this study apply to general public administration; governments implementing classified AI systems should commission security-specific analysis complementing the findings herein.

(3) The empirical foundation rests on 2024–25 data within a rapidly evolving technological and geopolitical context. The scenario framework is designed to endure despite technological evolution, as structural constraints change more slowly than technologies. However, specific architectural recommendations may require updating as AI capabilities and energy economics develop. Periodic reassessment every two to three years is warranted.

CHAPTER 8
COUNTRY REPORTS—STRATEGIC POSITIONING-BASED ANALYSIS ACROSS EIGHT APO MEMBER ECONOMIES

This part presents country-specific analyzes for each of the eight target economies, organized by scenario. Each report follows a common structure: country profile and scenario position, technology supply landscape, AI adoption evidence, productivity assessment, and scenario-specific outlook. The scenario organization reflects the structural logic established in Chapter 4: economies within each scenario share common constraints, opportunities, and strategic pathways, making cross-country comparison within scenarios analytically productive.

Strategic Positioning A or Sovereign Scaling: The ROK and the ROC

Substantial technological capacity combined with high social participation enables sovereign scaling, which is the capacity to develop, deploy, and iterate AI systems that enhance both efficiency and public trust while maintaining strategic autonomy. Within this configuration, the binding bottlenecks shift from foundational deployment to accountability-layer institutional design and resilience-layer architectural transition.

The ROK: Comprehensive Public Sector AI Foundation Built on Established E-government Track Record

Country Profile and Strategic Positioning

The ROK occupies Strategic Positioning A (Sovereign Scaling) within the Asia-Pacific AI landscape, sharing the cluster classification with the ROC. Within Strategic Positioning A, the two economies exhibit two distinct pathways. The ROK demonstrates a scale-and-coverage pathway comprising a large public sector workforce, top-tier digital government ranking, and comprehensive cross-ministerial AI infrastructure, with accumulated legacy as the binding next-stage transition cost. The ROC demonstrates an institutional-depth pathway in which governance design is operationalized through specific implementation instruments, such as AI Basic Act in draft, AI Evaluation Center, sector-specific guidelines, sovereign large language model (LLM) without requiring scale.

The ROK's institutional infrastructure is anchored by a clear national strategy backed by an established e-government track record. The Ministry of Science and Information and Communications Technology (MSIT) operates the National AI Strategy. The AI Basic Act provides the legal foundation. The Cabinet-level AI Committee provides cross-ministerial coordination. The AI Safety Institute (AISI) operates as the national safety-evaluation body. The Pan-government AI Common Infrastructure, jointly operated by the Ministry of the Interior and Safety (MOIS) and MSIT, functions as a cross-ministerial backbone, supplemented by Government Cloud, which is operated by the National Information Society Agency (NIA) as the shared compute and data foundation.

The Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025) places the ROK at 5th globally (score 93.23). The AI patent base of 73,515 families filed between 2015 and 2025 (see Chapter 3) is oriented toward industrial application, and the academic research base is robust. Public sector employment is approximately 9.6% of the labor force, reflecting a public sector workforce scale that supports comprehensive government-wide AI deployment relative to economies with smaller public sectors. The macroeconomic AI impact estimate is 1.68% of GDP under baseline assumption, while sensitivity analysis yields a range from 0.84% to 3.36% (see Appendix C-5, Table 3).

The ROK's placement in Strategic Positioning A reflects the pattern observed in its deployment evidence (111 sources; expert assessment by Sangwoo Lee, Inha University, estimating more than 145 cases). An integrated AI deployment spans document processing, citizen services, health, urban management, education, and emergency response, supported by the cross-ministerial Pan-government AI Common Infrastructure backbone. The Expert Matrix shows non-zero deployment activity across all 25 cells of the 5×5 matrix formed by the functional layer and the application domain. Its peak scores at L1 (Foundational AI/ICT × Internal Management); L2 (Operational Applications × Citizen Services); L2 (Operational Applications × Administrative Domain); and L3 (Data and Evidence × Administrative Domain) indicate deployment spanning foundational through analytical layers across multiple administrative domains.

TABLE 8.1

COUNTRY SNAPSHOT OF THE ROK.

Attribute	Content
Adoption Status	Foundation are in place, including Pan-government AI Common Infrastructure (MOIS and MSIT) and Government Cloud as cross-ministerial foundation.
Institutional Readiness	Clear national strategy backed by an established e-government track record; Waseda ranking of 5 (93.23); National AI Strategy (MSIT); AI Basic Act; Cabinet-level AI Committee; and AI Safety Institute (AISI).
Main Use Cases	Guppi government-wide AI chatbot (MOIS); HomeTax GPT (NTS); Pan-government AI Common Infrastructure (MOIS and MSIT); AI Traffic Forecasting (Seoul Metropolitan Government); Crowd Density and Disaster Monitoring (NDMI); Fiscal Risk Prediction (MOEF); Public Audit AI (BAI).
Current Maturity	Strong patent base oriented to industrial application; robust academic research.
Key Constraints	Energy consumption for high-performance AI computing as next-stage constraint.
Governance Gaps	Architecture for legacy-system replacement with AI-era integrated infrastructure.
Near-Term Priorities	USD11.56 billion five-year AI infrastructure investment; Pan-government AI Common Infrastructure scaling; AI talent development.
Expected Economic Gain	1.68% of GDP under baseline assumption (α = 0.30; Chapter 5); sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.84% (conservative, α = 0.15) to 3.36% (optimistic, α = 0.60).

Abbreviations used in the table: AISI=AI Safety Institute; BAI=Board of Audit and Inspection; MOEF=Ministry of Economy and Finance; MOIS=Ministry of the Interior and Safety; MSIT=Ministry of Science and Information and Communications Technology; NDMI=National Disaster Management Research Institute; NTS=National Tax Service.

TABLE 8.2

REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES FOR THE ROK.

Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Governance	Policy	National AI Strategy	MSIT	National AI strategy framework	MSIT
Governance	Policy	AI Basic Act	National Assembly	Legal foundation for AI development and use	National Assembly
Governance	Policy	Cabinet-level AI Committee	Cabinet	Cross-ministerial AI coordination body	Cabinet
Governance	Policy	AISI	Government of the ROK	National AI safety-evaluation body	AISI
Governance	L1 Foundational AI/ICT	Pan-Government AI Common Infrastructure	MOIS and MSIT	Shared secure infrastructure for central and local government AI adoption	MOIS Digital Government Innovation; OECD (2024)
Governance	L1 Foundational AI/ICT	Legislative Document OCR and Classification	National Assembly Secretariat	Document digitization and classification for legislative records	National Assembly Secretariat
Governance	L3 Data and Evidence	Fiscal Risk Prediction Model	MOEF	Public budget formulation through AI-based risk prediction	MOEF
Governance	L4 Cross-System Automation	AI-based Public Audit and Irregularity Detection	BAI	AI integration in public audit for trustworthiness governance	BAI
Internal Administration	L1 Foundational AI/ICT + L4 Cross-system Automation	Government-wide Administrative RPA	MOIS	RPA across central and local government administration	MOIS Digital Government Innovation
Internal Administration	L2 Operational Applications	Internal Consultation LLM Assistant	Ministry of Personnel Management	Internal consultation support via LLM	Ministry of Personnel Management

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Internal Administration	L3 Data and Evidence	Public Construction Efficiency Prediction	MOLIT	AI-based efficiency prediction for public construction	MOLIT
Internal Administration	L4 Cross-System Automation	Automated RFP Drafting LLM	MSS	Automated drafting of RFP documents	MSS
Citizen Services	L1 Foundational AI/ICT	Automated Civil Complaint OCR System	Seoul Metropolitan Government	OCR-based civil-complaint processing	Seoul Metropolitan Government
Citizen Services	L2 Operational Applications	Guppi: Government-wide AI Chatbot	MOIS	Nationwide central and local government chatbot serving hundreds of agencies	MOIS Digital Government Innovation; OECD (2024)
Citizen Services	L3 Data and Evidence	AI-based Urban Traffic Congestion Forecasting	Seoul Metropolitan Government	Urban traffic prediction and mobility plan optimization	Seoul TOPIS; Seoul Metropolitan Government
Citizen Services	L5 Sustainability and Trust	Smart Water Meter and Leakage Detection	Daejeon City	Digital twin + AI for water leakage detection	Daejeon City
Sectoral (Tax)	L1 Foundational AI/ICT	OCR-based Tax Filing Verification	NTS	Document verification for tax filing	NTS
Sectoral (Tax)	L2 Operational Applications	HomeTax GPT (Tax Q&A LLM)	NTS	LLM-based tax consultation support	NTS; ETnews (2025)
Sectoral (IP)	L2 Operational Applications	AI Patent Examination Assistant	KIPO	LLM support for patent examination	KIPO
Sectoral (Disaster)	L3 Data and Evidence	Crowd Density Prediction and Disaster Monitoring	NDMI	AI-based crowd-density prediction and disaster surveillance	NDMI; OECD (2024)

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Sectoral (Forest)	L3 Data and Evidence	Forest Pest Prediction AI	Korea Forest Service	Machine-learning prediction of forest-pest occurrence	Korea Forest Service
Sectoral (Justice)	L4 Cross-System Automation	AI Legal Document Assessment	Ministry of Justice	Legal-document assessment via AI	Ministry of Justice
Sectoral (Transport)	L5 Sustainability and Trust	Railway Safety Digital Twin	KORAIL	Digital twin for railway safety	KORAIL
Sectoral (Land)	L5 Sustainability and Trust	National Land Change Detection	MOLIT	AI-based detection of national land-use change	MOLIT
Industry/Other	L2 Operational Applications	Trade Investment GPT	KOTRA	Trade and investment advisory LLM	KOTRA
Industry/Other	L2 Operational Applications	Customs Text Analysis	KCS	AI text analysis for customs processing	KCS
Industry/Other	L3 Data and Evidence	SME Sales Forecasting AI	MSS	AI forecasting for small and medium enterprises' sales	MSS
Industry/Other	L4 Cross-System Automation	Financial Regulatory Monitoring AI	FSS	AI-based financial-regulatory monitoring	FSS
Industry/Other	L5 Sustainability and Trust	Water Quality Prediction AI	K-water	AI water-quality prediction model	K-water; OECD (2024)
Industry/Other	L5 Sustainability and Trust	Smart Water Grid Digital Twin	K-water	Smart water grid digital twin	K-water

Abbreviations used in the table: AISI=AI Safety Institute; BAI=Board of Audit and Inspection; FSS=Financial Supervisory Service; KCS=Korea Customs Service; KIPO=Korea Intellectual Property Office; KORAIL=Korea Railroad Corporation; KOTRA=Korea Trade-Investment Promotion Agency; K-water=Korea Water Resources Corporation; LLM=Large Language Model; MOEF=Ministry of Economy and Finance; MOIS=Ministry of the Interior and Safety; MOLIT=Ministry of Land Infrastructure and Transport; MSIT=Ministry of Science and Information and Communications Technology; MSS= Ministry of SMEs and Startups; NDMI=National Disaster Management Research Institute; NTS=National Tax Service; OCR=Optical Character Recognition; RFP=Request for Proposal; RPA=Robotic Process Automation.

Primary Sources: Operating agency official documentation (cited inline in the Source column for each entry); OECD (2024) Digital Government Review of the ROK for cross-agency comparative documentation; expert assessment by Sangwoo Lee, Inha University, providing the cell-by-cell case inventory presented in Appendix G.

Current Documented AI Adoption

The ROK's documented public sector AI deployment is anchored by a comprehensive scale-and-coverage architecture built on an established e-government track record. The Pan-government AI Common Infrastructure, jointly operated by the MOIS and the MSIT, functions as a cross-ministerial backbone for AI deployment, supplemented by Government Cloud (operated by the NIA) as the shared compute and data foundation. The Government24 portal integrates intelligent search and chatbot functions across hundreds of digital services. The institutional architecture spans the National AI Strategy (MSIT), the AI Basic Act as legal foundation, the Cabinet-level AI Committee for cross-ministerial coordination, and the AISI as the national safety-evaluation body.

Citizen-services AI is operational at scale through Guppi, the government-wide AI chatbot operated by MOIS, which serves hundreds of central and local government agencies. The Seoul Metropolitan Government operates the Automated Civil Complaint Optical Character Recognition (OCR) System and the AI-based Urban Traffic Congestion Forecasting system. Daejeon City operates the Smart Water Meter and Leakage Detection system using digital twin and AI integration.

Sectoral AI deployment spans tax administration, intellectual property, disaster response, forestry, justice, and transport. The National Tax Service (NTS) operates HomeTax GPT, a Large Language Model (LLM) based tax-consultation support tool and OCR-based tax-filing verification. The Korea Intellectual Property Office (KIPO) operates an AI Patent Examination Assistant. The National Disaster Management Research Institute (NDMI) operates the Crowd Density Prediction and Disaster Monitoring system. The Korea Forest Service operates the Forest Pest Prediction AI. The Ministry of Justice operates AI Legal Document Assessment. The Korea Railroad Corporation (KORAIL) operates the Railway Safety Digital Twin, and the Ministry of Land, Infrastructure and Transport (MOLIT) operates the National Land Change Detection system.

Internal-administration AI is operational through Government-wide Administrative Robotic Process Automation (RPA) under MOIS, while the Internal Consultation LLM Assistant is operational under the Ministry of Personnel Management. The Public Construction Efficiency Prediction falls under MOLIT, and the Automated Request-for-Proposal (RFP) Drafting LLM is under the Ministry of SMEs and Startups (MSS).

Policy and oversight AI is operational through the Fiscal Risk Prediction Model under the Ministry of Economy and Finance (MOEF) and the AI-based Public Audit and Irregularity Detection under the Board of Audit and Inspection (BAI). Industry-supporting AI includes Trade Investment GPT by Korea Trade-Investment Promotion Agency (KOTRA); Customs Text Analysis by Korea Customs Service (KCS); SME Sales Forecasting AI by the MSS; Financial Regulatory Monitoring AI by Financial Supervisory Service (FSS); and Water Quality Prediction AI / Smart Water Grid Digital Twin by Korea Water Resources Corporation (K-water).

The 5×5 portfolio assessment (see Chapter 4, Figure 4.1) records the ROK's deployment maturity at peak scores across L1 (Foundational AI/ICT × Internal Management); L2 (Operational Applications × Citizen Services and × Administrative Domain); and L3 (Data and Evidence × Administrative Domain). All 25 cells of the matrix show non-zero deployment activity under expert assessment, with L4 Cross-System Automation and L5 Sustainability and Trust layers also active across multiple domains. These indicate full-stack deployment maturity across all five functional layers.

Emerging Developments and Direction

Three developments warrant attention as the ROK operationalizes its AI governance framework.

The USD11.56 billion five-year AI infrastructure investment program is in active deployment phase. The investment is allocated to the national AI computing center, advanced AI semiconductors, and supporting infrastructure, providing the compute and hardware foundation for the next-stage scaling of public sector AI deployment.

The Pan-government AI Common Infrastructure scaling extends the cross-ministerial backbone to additional ministries and agencies, building on the existing MOIS-MSIT operational foundation. This scaling addresses the institutional integration of AI deployment across the public sector and supports the architectural transition toward AI-era integrated systems.

AI talent development is in active scaleup, supporting the workforce capability foundation for operational deployment across additional sectors and for the architectural transition from legacy systems to AI-era infrastructure.

The binding constraint emerging within this trajectory is energy consumption for high-performance AI computing. As compute provisioning expands under the USD11.56 billion investment program, the energy demand for AI infrastructure becomes a next-stage operational consideration alongside compute scaling itself.

Forward-looking Recommendations and Speculative Points

Within Strategic Positioning A (Sovereign Scaling), the ROK and the ROC exhibit two distinct pathways. The ROK demonstrates a scale-and-coverage pathway formed by a large public sector workforce, top-tier digital government ranking, and a comprehensive Pan-government AI Common Infrastructure, with the legacy-system transition cost as the binding next-stage task. The ROC demonstrates an institutional-depth pathway with a smaller public sector base and a governance design operationalized through specific implementation instruments (AI Basic Act in draft, AI Evaluation Center, sector-specific guidelines, sovereign LLM), with implementation-layer institutional design as the distinctive feature. Each pathway represents a viable Sovereign Scaling configuration, and the two together demonstrate that the cluster admits internal differentiation by structural condition (public sector employment ratio, technological-base composition, civic-tech accumulation).

The ROK's distinctive contribution to the eight-economy comparison is the demonstration of comprehensive cross-ministerial AI deployment built on an established e-government track record. The Pan-government AI Common Infrastructure backbone, Government Cloud foundation, and Top 10 flagship deployments, i.e., Guppi (MOIS); HomeTax GPT (NTS); Pan-government AI Common Infrastructure (MOIS and MSIT); AI Traffic Forecasting (Seoul); Crowd Density and Disaster Monitoring (NDMI); Fiscal Risk Prediction (MOEF); Public Audit AI (BAI); Smart Water Meter and Leakage Detection (Daejeon); Water Quality Prediction (K-water); and Forest Pest Prediction (Korea Forest Service) together demonstrate that scale-driven AI deployment can advance to non-zero activity across all 25 cells of the 5×5 matrix. The ROK's pathway shows that comprehensive e-government foundation translates into AI deployment scale when matched with institutional commitment to cross-ministerial coordination.

The advancement question for the ROK's public sector productivity, on the evidence assembled in this report, is the architectural transition from legacy systems to AI-era integrated infrastructure.

The accumulated digital administration infrastructure that supported the ROK's e-government leadership now constitutes a transition cost: legacy systems and AI-era systems operate in parallel, and the architectural replacement of legacy systems with AI-era integrated infrastructure is the binding next-stage task. Three pathways are available within the current institutional configuration. USD11.56 billion five-year AI infrastructure investment provides the compute and hardware foundation for the architectural transition. Pan-government AI Common Infrastructure scaling extends the cross-ministerial backbone to additional ministries and agencies, providing the integration mechanism for AI-era systems. AI talent development supports the workforce capability foundation for the transition.

Under the current institutional configuration, the ROK's macro-level AI productivity impact is estimated at 1.68% of GDP (baseline; see Chapter 5 and Appendix C). Under the sensitivity analysis in Appendix C-5 (Table 3), the macro-impact estimate ranges from 0.84% (conservative, $\alpha = 0.15$) to 3.36% (optimistic, $\alpha = 0.60$) depending on the AI productivity coefficient. Whether the ROK's realized trajectory moves toward the higher end of this range depends on the rate of legacy-system replacement and on the resolution of the energy-consumption constraint on high-performance AI computing.

The ROC: Institutional Design Operationalized at Implementation Layer

Country Profile and Strategic Positioning

The ROC occupies Strategic Positioning A (Sovereign Scaling) within the Asia-Pacific AI landscape, sharing the cluster classification with the ROK. Within Strategic Positioning A, the ROC and the ROK exhibit two distinct pathways: the ROK demonstrates a scale-and-coverage pathway (large public sector workforce, top-tier digital government ranking, and comprehensive cross-ministerial AI infrastructure, with accumulated legacy as the binding next-stage transition cost), while the ROC demonstrates an institutional-depth pathway in which governance design is operationalized through specific implementation instruments, such as AI Basic Act (Draft), AI Evaluation Center, sector-specific guidelines, and sovereign LLM, without requiring scale.

The ROC's institutional infrastructure spans the policy, evaluation, and operational layers. The Ministry of Digital Affairs (MODA) is preparing the AI Basic Act (Draft), establishing the legal foundation for AI development covering human-rights protection, digital equity, and industry promotion. The National Science and Technology Council (NSTC) provides AI oversight under the Taiwan AI Action Plan and operates the Trustworthy AI Dialogue Engine (TAIDE) Traditional Chinese large language model (LLM) project to ensure cultural and linguistic sovereignty. The AI Evaluation Center (AIEC) functions as an operational gateway for public sector AI, evaluating safety, explainability, and bias. Sector-specific institutional design includes the Financial Supervisory Commission (FSC) Guidelines for AI Utilization in the financial sector. Citizen-facing infrastructure, comprising vTaiwan, Join.gov.tw, and data.gov.tw with more than 27,000 datasets, supports the ROC's first-place ranking in the World Open Data Benchmark (2024).

The Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025) places the ROC at 21st globally (score 78.55). The research output of 4,521 publications with 15.29 citations per paper (see Chapter 3) records the highest citation impact among the eight economies in this study, indicating that despite a smaller research workforce than the ROK, Japan, or India, the ROC's AI research achieves disproportionate global influence. Public sector employment is approximately 5% of the labor force, smaller than those of the ROK (9.6%), Japan (6.0%), and India (7.8%). This structural condition limits the absolute addressable workforce for

AI-driven public sector productivity scaling but reshapes the development pathway toward institutional depth at the implementation layer rather than having a scale-driven coverage. The macroeconomic AI impact estimate is 0.66% of GDP under baseline assumption, while sensitivity analysis yields a range from 0.33% to 1.31% (see Appendix C-5, Table 3).

TABLE 8.3

COUNTRY SNAPSHOT OF THE ROC.

Attribute	Content
Adoption Status	Institutional design operationalized at implementation layer. AIEC as public sector AI gateway; civic-tech foundation (vTaiwan, Join.gov.tw); sectoral applications operational in health (NHI medical AI), justice (Judicial AI), finance (FSC guidelines).
Institutional Readiness	Comprehensive institutional design from policy to implementation gateway. Waseda 21st ranking (score 78.55); AI Basic Act (Draft, MODA); NSTC AI oversight; Taiwan AI Action Plan; AI Advisory Committee; AIEC; Financial AI Guidelines (FSC); TAIDE Traditional Chinese LLM (NSTC); Open Data Index World 1st. data.gov.tw with 27,000+ datasets.
Main Use Cases	AI Basic Act (Draft, MODA); AIEC; TAIDE Traditional Chinese LLM (NSTC); vTaiwan + Polis consensus-building (Executive Yuan); Join.gov.tw (NDC); Civil IoT Taiwan (multiagency); NHI Big Data AI Medical Diagnostic (NHIA + NTU Hospital); Judicial AI Assistant (Judicial Yuan); Financial AI Guidelines (FSC); AI Sandbox (FinTechSpace + MODA); Smart City AI (Kaohsiung, Taipei).
Current Maturity	Institutional design embedded at implementation layer (governance gateway, sector-specific guidelines, sovereign LLM); semiconductor manufacturing at world-leading scale; technology and democratic governance in balance.
Key Constraints	Energy supply, electricity constraints, and geopolitical context as next-stage considerations.
Governance Gaps	Cross sectoral algorithmic accountability framework still in formation; AIEC operational as public sector AI gateway, scope expansion across all government AI being defined.
Near-Term Priorities	AI Basic Act enactment. AIEC scope expansion across government AI deployments. TAIDE LLM expansion. Civil IoT Taiwan expansion.
Expected Economic Gain	0.66% of GDP under baseline assumption (α = 0.30; Chapter 5). Sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.33% (conservative, α = 0.15) to 1.31% (optimistic, α = 0.60).

Abbreviations used in the table: AIEC=AI Evaluation Center; FSC=Financial Supervisory Commission; MODA=Ministry of Digital Affairs; NCDR=National Center for Disaster Reduction; NDC=National Development Council; NHIA=National Health Insurance Administration; NSTC=National Science and Technology Council; NTU=National Taiwan University.

TABLE 8.4

REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES IN THE ROC.

Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Governance	Policy	Taiwan AI Action Plan	NSTC / Executive Yuan	National AI strategy framework	Executive Yuan

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Governance	Policy	AI Basic Act (Draft)	Ministry of Digital Affairs (MODA)	Legal foundation for AI; human-rights protection, digital equity, industry promotion	MODA
Governance	Policy	AI Evaluation Center (AIEC)	AIEC	Public sector AI gateway; safety, explainability, bias evaluation	aitestinglab.org.tw
Governance	L1 Foundational AI/ICT	data.gov.tw: Open Government Data	Executive Yuan	27,000+ datasets; Open Data Index World 1st (2024)	data.gov.tw
Governance	L2 Operational Applications	TAIDE Traditional Chinese LLM	National Science and Technology Council (NSTC)	Sovereign Traditional Chinese LLM for cultural and linguistic sovereignty	taide.tw
Governance	L2 Operational Applications	vTaiwan Civic-tech Deliberation Platform	Executive Yuan + g0v	Polis-based consensus-building integrated into Executive Yuan policy responses	FNF; People Powered
Governance	L2 Operational Applications	Join.gov.tw National Policy Proposal Platform	NDC	13,853 citizen proposals; 289 reaching the 5,000-signature threshold	Join.gov.tw
Internal Administration	L1 Foundational AI/ICT	PDIS	Executive Yuan	Internal digital infrastructure framework	data.gov.tw
Sectoral (Health)	L2 Operational Applications + L3 Data and Evidence	NHI Big Data AI Medical Diagnostic	NHIA + NTU Hospital	Deidentified NHI population-scale data for medical-diagnostic AI training	nhi.gov.tw

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Sectoral (Health)	L1 Foundational AI/ICT	Three National AI Research Centers (Health AI focus)	NTU + NYCU + NTHU	Established 2024 for health-AI research using NHI data	Health Ministry; Center for Responsible AI in Healthcare
Sectoral (Environment/ Disaster)	L1 Foundational AI/ICT + L3 Data and Evidence	Civil IoT Taiwan	Multiagency MOEA Water Resources Agency, environmental and disaster authorities)	Sensor-network and AI analytics for environmental monitoring and disaster response	MOEA Water Resources Agency
Sectoral (Disaster)	L3 Data and Evidence	Disaster Prediction AI (typhoon, flood, landslide)	National Center for Disaster Reduction (NCDR)	Operational forecasting integrated into civil-protection response	NCDR, MOEA
Sectoral (Justice)	L2 Operational Applications	Judicial AI Assistant judgment drafting	Judicial Yuan	AI-assisted judgment drafting; efficiency and legal-logic consistency	judicial.gov.tw
Sectoral (Transport/ Urban)	L1 Foundational AI/ICT + L3 Data and Evidence	Smart City AI	Kaohsiung City Government; Taipei City Government	Operational deployments: traffic management, environmental monitoring, emergency response	Smart City Summit and Expo 2025
Industry/Other	Policy	Financial AI Guidelines for the Financial Sector	FSC	Sector-specific AI ethics and safety standards (customer service, risk management, fraud detection)	fsc.gov.tw
Industry/Other	Policy	AI Sandbox (FinTech PoC)	FinTechSpace + MODA	Public-private PoC environment for AI applications	fintechspace.com.tw

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Industry/Other	L1 Foundational AI/ICT	Semiconductor Industry AI	Taiwan Semiconductor Manufacturing Company (TSMC); MediaTek; ecosystem manufacturers	AI in chip design optimization, manufacturing quality control	Taiwan AI Action Plan
Industry/Other	L4 Cross-system Automation	Retail Autonomous Systems	Private sector (7-Eleven and ecosystem)	Unmanned vending and autonomous checkout (private-sector reference)	Company History (7-Eleven)

Abbreviations used in the table: AIEC=AI Evaluation Center; FSC=Financial Supervisory Commission; MODA=Ministry of Digital Affairs; MOEA=Ministry of Economic Affairs; NCDR=National Center for Disaster Reduction; NDC=National Development Council; NHIA=National Health Insurance Administration; NSTC=National Science and Technology Council; NTHU=National Tsing Hua University; NTU=National Taiwan University; NYCU=National Yang Ming Chiao Tung University; PDIS=Personnel Data Infrastructure.

Primary Source: Evidence compiled from 135 documented sources within the ROC Evidence Matrix and supplementary government primary sources in Traditional Chinese (MODA, NSTC, AIEC, FSC, NHIA, Judicial Yuan). Full source inventory in Appendix G.

Current Documented AI Adoption

The ROC's documented public sector AI deployment is anchored by an institutional design that has been operationalized through specific implementation instruments rather than by scale-driven coverage. The MODA and the AIEC provide the policy-and-evaluation infrastructure for public sector AI introduction. AIEC operates as a gateway entity that evaluates safety, explainability, and bias of AI models prior to public sector deployment. The NSTC operates the TAIDE Traditional Chinese LLM project to ensure cultural and linguistic sovereignty of AI infrastructure used in government services.

Civic-tech infrastructure operates as institutionalized administrative mechanism. The ROC's vTaiwan, its national digital deliberation platform operated by the Executive Yuan with civic-tech community contribution (g0v), employs Polis-based natural-language processing (NLP) clustering to analyze citizen contributions on policy proposals, and the Executive Yuan provides formal policy responses. Join.gov.tw, under the National Development Council (NDC), has aggregated 13,853 citizen proposals, of which 289 have reached the 5,000-signature threshold for mandatory government response. Further, data.gov.tw provides more than 27,000 datasets as the open-data backbone, supporting the ROC's first-place ranking in the World Open Data Benchmark (2024).

Sectoral deployments are operational across health, disaster response, transport, justice, and finance (see Table 8.4). The National Health Insurance Administration (NHIA) and the National Taiwan University (NTU) Hospital have implemented AI medical-diagnostic models trained on deidentified NHI population-scale data, and the three national AI research centers established in 2024 at the NTU, the National Yang Ming Chiao Tung University (NYCU), and the National Tsing

Hua University (NTHU) focus on healthcare AI. Civil IoT Taiwan integrates IoT sensor data, citizen reporting mechanisms, and AI analysis for environmental monitoring and disaster forecasting. The National Center for Disaster Reduction (NCDR) operates AI-based typhoon, flood, and landslide forecasting. The Judicial Yuan has deployed AI for judgment drafting, with the design priorities of efficiency improvement and legal-logic consistency. The Financial Supervisory Commission (FSC) has issued the Guidelines for AI Utilization in the Financial Sector, regulating customer service, risk management, and fraud-detection AI applications. Smart city deployments in Kaohsiung and Taipei integrate traffic, environmental, and emergency-response AI.

The 5×5 portfolio assessment (see Chapter 4, Figure 4.1) records the ROC's deployment maturity with L1 (Foundational AI/ICT) and L2 (Operational Applications) consolidated across multiple application domains (policy/governance, citizen services, and sectoral); L3 (Data and Evidence) and L5 (Sustainability and Trust) at sectoral cells; and L4 (Cross-system Automation) being limited. The institutional gateway (AIEC) provides a mechanism for staged advancement.

Emerging Developments and Direction

Three developments warrant attention as the ROC operationalizes its AI governance framework.

The AI Basic Act (Draft), prepared by the MODA, is currently in a pre-enactment stage. The Draft establishes the legal foundation for AI development and use, regulating human-rights protection, digital equity, and industry promotion. Enactment will codify the institutional architecture that is currently operating through agency-level guidelines and the AI Evaluation Center (AIEC).

The AIEC is in early operational phase as the public sector AI gateway. The AIEC's mandate to evaluate safety, explainability, and bias of AI models prior to government deployment creates a structural mechanism for cross sectoral algorithmic accountability that is not present in most other economies. Scope expansion across all government AI deployments, including back-office and internal-administration applications, is being defined.

The three national AI research centers established in 2024 (NTU, NYCU, and NTHU) are in early operational phase, with research focus on health AI drawing on the NHI's population-scale database. International collaboration partnerships (NYCU–Indian Institute of Technology Delhi AI partnership documented as an example) support knowledge exchange, while additional cross sectoral research outputs are anticipated.

The binding constraints emerging within this trajectory are energy supply and electricity capacity, which limit the scaling of compute-intensive AI infrastructure, and the geopolitical context, which conditions strategic investment and international partnership decisions. The TAIDE Traditional Chinese LLM project addresses linguistic sovereignty under these constraints by ensuring that AI infrastructure used in Chinese-language public services is domestically developed and culturally aligned.

Forward-looking Recommendations and Speculative Points

Within Strategic Positioning A (Sovereign Scaling), the ROC and the ROK exhibit two distinct pathways. The ROK's pathway is scale-and-coverage leveraging a large public sector workforce and comprehensive cross-ministerial AI infrastructure, with the legacy-system transition as the binding next-stage cost. The ROC's pathway is to have an institutional depth at the implementation layer through AI Basic Act (Draft), AI Evaluation Center, sector-specific guidelines, sovereign LLM, deidentification protocols, and judicial AI integration operationalized through specific

mechanisms rather than scale. Each pathway represents a viable Sovereign Scaling configuration, and the two together demonstrate that the cluster definition admits internal differentiation by structural condition (public sector employment ratio, semiconductor manufacturing capacity, and civic-tech accumulation).

The ROC's distinctive contribution to the eight-economy comparison is the demonstration that institutional design can reach implementation layer without requiring scale. The AIEC gateway model, the AI Basic Act framework (once enacted), the FSC sector-specific guidelines, the TAIDE sovereign LLM model, and the NHI deidentification-protocol-driven medical AI together constitute a reference configuration for economies that face similar structural conditions, such as smaller public sectors, sovereignty considerations in AI infrastructure, and the requirement to operationalize AI governance without large-scale rollout.

The advancement question for the ROC's public sector productivity, on the evidence assembled in this report, is the architectural integration of these institutional design elements into a coherent operational system. AI Basic Act enactment will provide the legal coherence; AIEC scope expansion across all government AI deployments will provide the cross sectoral accountability mechanism; TAIDE LLM expansion into operational deployment will provide the sovereign foundation for Chinese-language AI services; and integration of the civic-tech foundation (vTaiwan, Join.gov.tw) into operational policy implementation rather than consultation only will extend democratic-governance principles into deployment outcomes.

Under the current institutional configuration, the ROC's macro-level AI productivity impact is estimated at 0.66% of GDP (baseline; see Chapter 5 and Appendix C). Under the sensitivity analysis in Appendix C-5 (Table 3), the macro-impact estimate ranges from 0.33% (conservative, $\alpha = 0.15$) to 1.31% (optimistic, $\alpha = 0.60$) depending on the AI productivity coefficient. The institutional-depth pathway produces a smaller macro-impact figure than scale-driven pathways at comparable institutional maturity (the ROK's 1.68% baseline). The difference reflects structural labor-market parameters, particularly the smaller public sector employment ratio, and the bounded efficiency-layer scope of the macro-impact methodology rather than a difference in institutional sophistication or AI deployment maturity.

Strategic Positioning B or Asymmetric Specialization: Japan and India

Substantial technological capacity constrained by structural institutional bottlenecks, e.g., legacy IT fragmentation in Japan and subnational infrastructure heterogeneity in India, prevent comprehensive translation of technological capacity into systemic AI deployment. The binding bottleneck is institutional rather than technological.

Japan: High Technological Potential, Constrained by Institutional Legacy

Country Profile and Strategic Positioning

Japan occupies a distinctive position in the Asia-Pacific AI landscape: world-class technological capacity combined with acute institutional constraints that have structured a particular pattern of AI deployment. Japan ranks 9th globally on the Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025), with a score of 87.45, reflecting sophisticated digital infrastructure and mature online services. Japan's AI research base is among the global leaders, with 56,611 AI patent families filed between 2015 and 2025 and 4,097 research publications (9.62 citations per paper). The Digital Agency, established in 2022, provides operational cross-ministry

coordination; the AI Promotion Act (Cabinet Office, 2025; enacted 28 May 2025, effective 1 September 2025) establishes the legal foundation, with the AI Strategy Headquarters under the Prime Minister's Office as the central coordinating body.

Japan's placement in Strategic Positioning B (Asymmetric Specialization) reflects the pattern that emerges from its deployment data: extensive activity at the efficiency layer, with over 2,000 AI systems documented in the 2024 Ministry of Internal Affairs and Communications (MIC) Survey on AI Utilization by Local Governments, deployed across national and local governments, alongside near-absent activity at higher-order layers of accountability, resilience, and adaptive governance. The macroeconomic impact estimate is 0.91% of GDP under current institutional configuration—a conservative lower bound reflecting institutional transmission failure between task-level efficiency gains and macro-level productivity outcomes.

TABLE 8.5

COUNTRY SNAPSHOT OF JAPAN.

Attribute	Content
Adoption Status	Over 2,000 AI systems deployed across national and local governments, predominantly in efficiency-layer applications (document processing, speech recognition, tax administration, and welfare matching); high density of task-level deployment with measurable productivity gains (15–20% time reduction per affected process).
Institutional Readiness	Waseda 9th ranking globally (score 87.45); Legal foundation: AI Promotion Act (enacted 28 May 2025, effective 1 September 2025) with innovation-first, non-penal enforcement approach; AI Strategy Headquarters (under the Prime Minister's Office) as central coordinating body; AI Basic Plan as strategic framework; Digital Agency (2022) as operational cross-ministry coordinator; 82 million MyNumber Card holders.
Main Use Cases	Tax Assessment AI (–57.4% processing time); Nursery Matching AI (90% automation); municipal speech recognition (864 systems); government OCR (604 systems); workflow automation across tax/welfare/land registration.
Current Maturity	High at efficiency layer; near-absent at accountability and resilience layers; patent base 56,611 families (2015–25); research output 4,097 publications (9.62 citations/paper).
Key Constraints	Legacy system heterogeneity from 1990s to 2000s digital infrastructure; fragmented ministerial authority with deep organizational silos; seniority-based promotion and legacy employment arrangements constraining workforce restructuring.
Governance Gaps	No government-wide algorithmic accountability framework; no cross-agency data governance enabling integrated decision-support; limited citizen feedback loops in deployed AI systems.
Near-Term Priorities	AI Strategy Headquarters operationalization of the AI Basic Plan; Digital Agency cross-ministry data integration; sectoral pilots in health/welfare analytics; regional pilots in Tokyo/Osaka/Kyoto.
Expected Economic Gain	0.91% of GDP under baseline assumption ($\alpha = 0.30$; Chapter 5); sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.45% (conservative, $\alpha = 0.15$) to 1.82% (optimistic, $\alpha = 0.60$).

Abbreviations used in the table: MIC=Ministry of Internal Affairs and Communications; OCR=Optical Character Recognition.

TABLE 8.6

REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES IN JAPAN.

Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Governance	Policy	AI Promotion Act	National Diet	Enacted 28 May 2025, effective 1 September 2025; innovation-first (no direct penalties)	Act on Promotion of R&D and Utilization of AI-related Technologies
Governance	Policy	AI Strategy Headquarters	Prime Minister's Office	Central AI policy coordination body under AI Promotion Act	Cabinet Office
Governance	Policy	AI Basic Plan	AI Strategy Headquarters	Strategic framework (four principles: R&D, comprehensive promotion, transparency, international cooperation)	Cabinet Office
Governance	Policy	AISI	Government of Japan	Developing (2024) under AI Promotion Act framework	AISI
Governance	L1 Foundational AI/ICT	APPI Privacy Compliance Framework	Personal Information Protection Commission	Regulatory framework for personal data in AI systems	PIPC
Internal Admin	L1 Foundational AI/ICT	MyNumber Card Platform	Digital Agency / MIC	82 million holders nationwide	Digital Agency
Internal Admin	L2 Operational Applications	Government OCR (Document Processing)	National / Local Gov (604 instances)	Tokyo: 50,000 docs/month, 4h→12min per batch	MIC Survey (2024)
Internal Admin	L2 Operational Applications	Tokyo OCR (Property Registration)	Tokyo Metropolitan Government	50,000 docs/ month	MIC Survey (2024)

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Internal Admin	L3 Data and Evidence	Tax Assessment AI	National Tax Agency	−57.4% processing time	MIC Survey (2024)
Internal Admin	L3 Data and Evidence	Tax/Welfare Workflow Automation	Municipal Tax and Welfare Departments (multiple)	Aggregate around 450,000 labor-hours/ year saved (sampled)	MIC Survey (2024)
Citizen Services	L2 Operational Applications	Municipal Speech Recognition	Local Governments (864 instances)	15–20% time reduction per interaction	MIC Survey (2024)
Citizen Services	L2 Operational Applications	Nagoya City Customer Service Chatbot	Nagoya City	8→5.5 min call handling, 1,000+ daily	MIC Survey (2024)
Citizen Services	L3 Data and Evidence	Nursery Matching AI	Local Governments	90% automation	MIC Survey (2024)
Sectoral (Health)	L3 Data and Evidence	Long-term Care Planning AI	MHLW	Prefectural deployment	MHLW
Industry/ Sectoral	L1 Foundational AI/ICT	AI Quest Industry Program	METI	SME + AI specialist collaboration	METI

Abbreviations used in the table: AISI=AI Safety Institute; APPI=Act on the Protection of Personal Information; MHLW=Ministry of Health, Labour and Welfare; MIC=Ministry of Internal Affairs and Communications; METI=Ministry of Economy, Trade and Industry; NTA=National Tax Agency; PIPC=Personal Information Protection Commission.

Primary Source: Ministry of Internal Affairs and Communications (MIC / 総務省). (2024). AI Utilization and Introduction Guidebook for Local Governments (自治体におけるAI活用・導入ガイドブック). https://www.soumu.go.jp/main_content/000956981.pdf

Note: Full inventory of 2,000+ systems is provided in Appendix G and the accompanying Japan Evidence Matrix.

Current Documented AI Adoption

Japan's public sector AI adoption is documented primarily through the Ministry of Internal Affairs and Communications (MIC) survey on AI utilization by local governments (Ministry of Internal Affairs and Communications, 2024a, 2024b). The survey documents over 2,000 deployed systems, concentrated predominantly at the efficiency layer. The aggregate annual labor-hour savings across sampled jurisdictions reach approximately 450,000 hours, equivalent to 2,500 full-time-equivalent positions' worth of automation.

Speech recognition represents the largest deployment category, with 864 documented instances across municipal administrative functions (Tokyo Metropolitan Government, Osaka Prefecture, Kyoto City, and numerous smaller jurisdictions). These systems handle routine citizen services (tax procedure inquiries, welfare eligibility, permit status) and consistently generate 15–20% time

reduction per citizen interaction. The Nagoya City customer service AI exemplifies this pattern, reducing average call handling time from 8 minutes to 5.5 minutes while processing over 1,000 daily interactions.

OCR constitutes the second-largest category at 604 documented instances, concentrated in document processing across tax administration, land registration, and welfare eligibility verification. Tokyo Metropolitan Government processes approximately 50,000 property registration documents monthly through OCR, reducing data entry time from 4 hours to 12 minutes per batch. Prefectural governments collectively process millions of documents annually through similar implementations.

High-profile analytical systems include the National Tax Agency's Tax Assessment AI, which achieves a 57.4% reduction in processing time, and local government Nursery Matching AI systems reaching 90% automation of the traditionally labor-intensive annual daycare placement process. The MyNumber Card platform, coordinating between the Digital Agency and MIC, has enrolled 82 million holders as foundational infrastructure.

Japan's legislative framework for AI governance advanced in 2025 with the passage of the AI Promotion Act (Act on Promotion of Research, Development, and Utilization of AI-Related Technologies, enacted 28 May 2025, effective 1 September 2025). The Act adopts an innovation-first approach distinct from the EU AI Act's risk-based regulatory framework, establishing basic principles for AI R&D and utilization without direct penal provisions. Its enforcement relies on government advice, information requests, and public disclosure of non-compliance. The Act establishes the AI Strategy Headquarters under the Prime Minister's Office as the central coordinating body.

Emerging Developments and Direction

Three emerging developments warrant attention as Japan operationalizes its AI governance framework.

The AI Strategy Headquarters, established under the AI Promotion Act effective September 2025, is drafting and updating the AI Basic Plan under four principles: R&D capability retention, comprehensive promotion, transparency, and international cooperation. The Headquarters' statutory authority to coordinate cross-ministry AI policy is stronger than the Digital Agency's limited coordinating mandate, though practical implementation through existing ministerial structures remains in early stages.

The Digital Agency (established 2022) continues as the operational cross-ministry catalyst for digital policy. Its 2025 guidelines on generative AI procurement and utilization for administrative evolution signal movement toward cross-ministry AI standards. However, the Digital Agency's coordination authority does not extend to mandating system integration across ministries operating under their own legal frameworks.

The AI Safety Institute (AISI), announced as part of Japan's AI governance architecture, is in developmental stages. Its scope, authorities, and operational model are being defined within the AI Promotion Act framework. Cross-ministry data integration pilots are nascent and early initiatives attempt limited data sharing between health, welfare, and taxation systems for specific use cases (fraud detection, eligibility verification), remaining narrow in scope rather than constituting general government-wide integration.

Forward-Looking Recommendations and Speculative Points

Japan's documented deployment pattern comprising a widespread efficiency-layer activity combined with vacuum at accountability and resilience layers, reflects an institutional condition that Japan's own policy documents now diagnose explicitly.

The Ministry of Economy, Trade and Industry (METI) published its DX Report (METI, 2018; DX Report 2.0, 2020) warned of the "2025 digital cliff" arising from legacy system rigidity and acknowledged that Japanese digital transformation (DX) has stayed at digitization of operations rather than transformation of operations and organizations. The OECD Going Digital Review of Japan (OECD, 2021) reaches the same diagnosis: institutional rigidities, such as seniority-based labor practices and fragmented public administration, constrain digital transformation.

Three institutional factors constitute this rigidity. First, seniority-based promotion systems embedded across the national and local government services: these structures constrain the introduction of algorithmic decision-support because they reward tenure-based judgment over data-driven analysis. Second, fragmented ministerial authority with deep organizational boundaries established by law and organizational tradition: each ministry operates independently managed digital systems, and cross-ministry data integration requires governance agreements rather than technical integration alone. Third, legacy employment arrangements, such as long-term tenure, restricted mobility, and internal promotion make workforce restructuring around AI-enabled workflows difficult even when technical implementation is feasible.

These institutional structures are also the structures behind Japan's gap in gender representation at the leadership layer: women hold approximately 10% of lower-house seats—the lowest among the eight economies in this study. The gap between Japan's general democratic maturity and its position on the horizontal axis of inclusive institutional orientation is a specific observable signature of the institutional reform-capacity deficit. Economies that cannot reconfigure institutions to accommodate demographic changes face the same constraint when reconfiguring institutions for technological changes.

Advancing from widespread efficiency-layer deployment to accountability-embedded analytics and resilience-oriented architecture will require institutional reform beyond individual ministry initiatives. Three pathways are available under the AI Promotion Act framework. First, sectoral advancement in health and welfare, coordinated through the Ministry of Health, Labour and Welfare (MHLW), could enable theta-layer analytics within existing organizational structure. This would be politically lighter but yield sector-specific rather than government-wide advancement. Second, regional pilots involving Tokyo, Osaka, and Kyoto prefectural governments voluntarily undertaking cross-agency data integration could establish governance frameworks replicable at national level. Tokyo Metropolitan Government's demonstrated AI deployment sophistication positions it as a candidate testing ground. Third, government-wide data consolidation under cabinet-level authority—the most transformative pathway—would require legislative foundation, cabinet-level political commitment operating through the AI Strategy Headquarters, and multi-year budgetary investment.

Under the current institutional configuration, Japan's macro-level AI productivity impact is estimated at 0.91% of GDP (conservative lower bound; see Chapter 5 and Appendix C). If institutional reform proceeds, particularly cross-ministry data integration and sectoral or regional reconfiguration pilots, the institutional transmission coefficient between task-level gains and macro-level productivity could improve. Under the sensitivity analysis in Appendix C-5 (Table 3), Japan's macro-impact estimate ranges from 0.45% (conservative, $\alpha = 0.15$) to 1.82% (optimistic, α

= 0.60), depending on the AI productivity coefficient. Whether Japan's actual trajectory moves toward the higher end of this range depends on institutional reform proceeding in parallel with technological deployment. The technological foundation for this advancement exists; the institutional will remains the binding constraint.

India: Public-purpose-oriented Technology Base, Federal Complexity as Implementation Challenge

Country Profile and Strategic Positioning

India occupies Strategic Positioning B (Asymmetric Specialization) within the Asia-Pacific AI landscape, sharing the cluster classification with Japan. Within Strategic Positioning B, the two economies exhibit distinct emphasis: Japan demonstrates a broad-efficiency-layer pathway with task-level deployment across more than 1,700 local governments and major national ministries, with limited higher-layer integration constrained by institutional fragmentation; India demonstrates a public-purpose-oriented technology pathway in which a national patent portfolio aligned with public sector demand domains (e.g., agriculture, urban infrastructure, healthcare, and education) operates alongside large-scale Digital Public Infrastructure (DPI), with federal complexity across 28 states and 8 union territories constituting the binding implementation challenge.

India's institutional infrastructure is anchored by the Ministry of Electronics and Information Technology (MeitY)'s AI Division and the National Institution for Transforming India (NITI) Aayog. The National Strategy for Artificial Intelligence (NITI Aayog, 2018) establishes the strategic horizon with the #AIforAll theme, supplemented by the Responsible AI Principles (NITI Aayog, 2021). There are seven principles covering safety and reliability, equality, inclusivity and non-discrimination, privacy and security, transparency, accountability, and positive use. The India AI Mission (Ministry of Electronics and Information Technology, 2024; Cabinet approved in 2024) provides the implementation framework with an outlay of INR103,720 million over the period 2024–29. The National e-Governance Division (NeGD) operates the INDIAai national AI portal and the AI in Governance Training Program at the Indian Institute of Technology (IIT) Delhi.

The Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025) places India at 24th globally (score 76.27). The AI patent base of 52,706 families filed between 2015 and 2025 is oriented toward public-purpose application domains (agriculture, urban infrastructure, healthcare, and education). This national AI patent portfolio orientation is a notable feature of the Indian case and is not a general pattern observed among the economies surveyed in this report. The research output of 19,990 publications with 11.86 citations per paper (see Chapter 3) indicates substantial research-based depth and human-resource capacity. The macroeconomic AI impact estimate is 1.43% of GDP under baseline assumption, and sensitivity analysis yields a range from 0.72% to 2.86% (see Appendix C-5, Table 3).

India's placement in Strategic Positioning B reflects the pattern observed in its deployment evidence (148 sources; 113 mapped to portfolio cells; 35 unmapped; 14 web-search supplemented). Foundational AI/ICT activity is broad across policy, citizen services, sectoral, and industry application domains, with operational deployments at national scale through Digital Public Infrastructure including Aadhaar, Unified Payments Interface (UPI), DigiLocker, the Ayushman Bharat Digital Mission (ABDM), and Account Aggregator, along with citizen-facing platforms such as UMANG and MyGov). Higher-layer applications, such as Cross-System Automation, Sustainability and Trust, remain at earlier stages, and the operational instruments for cross-ministerial decision-support governance are limited.

TABLE 8.7

COUNTRY SNAPSHOT OF INDIA.

Attribute	Content
Adoption Status	Large-scale Digital Public Infrastructure in operation. India stack (Aadhaar, UPI, DigiLocker, ABDM, Account Aggregator); UMANG, MyGov as citizen-facing platforms.
Institutional Readiness	Clear national strategy. Waseda 24th ranking (score of 76.27); National Strategy for AI (NITI Aayog, 2018); Responsible AI Principles (NITI Aayog, 2021); India AI Mission (Ministry of Electronics and Information Technology, 2024; INR103,720 million, 2024–29); MeitY AI Division.
Main Use Cases	Aadhaar AI biometric deduplication (UIDAI/NVIDIA DGX, 1.4 billion residents); UPI AI fraud monitoring (NPCI, 50% global RTP); UMANG (55.8 million users); Bharat-VISTA-AR (76.3 million farmer IDs); Ayushman Bharat AI-CDSS (670 million health IDs); Smart City Mission (100 cities); BHASHINI (22 languages); GeM AI procurement.
Current Maturity	Patent applications oriented to public-purpose use cases (agriculture, urban, health, education); abundant research output and substantial human-resource depth.
Key Constraints	Federal complexity across 28 states and 8 Union Territories. Uneven sub-national infrastructure.
Governance Gaps	Operational algorithmic accountability instruments across sectors not documented at scale; cross-ministerial decision-support governance limited.
Near-Term Priorities	India AI Mission operationalization (38,000 GPUs; AIKosh of more than 3,000 datasets); BHASHINI expansion; Ayushman Bharat AI-CDSS scaling.
Expected Economic Gain	1.43% of GDP under baseline assumption (α = 0.30; Chapter 5); sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.72% (conservative, α = 0.15) to 2.86% (optimistic, α = 0.60).

Abbreviations used in the table: ABDM=Ayushman Bharat Digital Mission; AI-CDSS=AI Clinical Decision Support System; DGX=NVIDIA DGX computing platform; GeM=Government e-Marketplace; MeitY=Ministry of Electronics and Information Technology; NITI Aayog=National Institution for Transforming India; NPCI=National Payments Corporation of India; RTP=Real-time payments; UIDAI=Unique Identification Authority of India; UPI=Unified Payments Interface.

TABLE 8.8

REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES IN INDIA.

Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Governance	Policy	National Strategy for Artificial Intelligence (#AIforAll)	NITI Aayog	Discussion paper (2018); priority domains: health, agriculture, education	NITI Aayog (2018)
Governance	Policy	Responsible AI Principles	NITI Aayog	Seven principles document (2021)	NITI Aayog (2021)

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Governance	Policy	India AI Mission	MeitY (Cabinet approved 2024)	INR103,720 million outlay, 2024–29; 38,000 GPUs target; AIKosh of 3,000+ datasets; 30+ approved applications	MeitY (2024)
Governance	L1 Foundational AI/ICT	INDIAai National AI Portal	NeGD/MeitY	National AI initiative repository	NeGD / MeitY
Governance	L1 Foundational AI/ICT	AI in Governance Training Program	NeGD with IIT Delhi	Training program for government officials	PIB (2023-09)
Governance	L2 Operational Applications	BHASHINI National Language AI Platform	Digital India Bhashini Division (MeitY)	22 scheduled languages; 300+ reusable AI models; more than 100 million monthly inference calls	BHASHINI
Internal Administration	L2 Operational Applications + L4 Cross-System Automation	GeM AI Procurement Platform (GeMAI Generative AI chatbot)	GeM Special Purpose Vehicle (SPV) (Ministry of Commerce and Industry)	INR5+ lakh crore Gross Merchandise Value (GMV); 1.64 lakh buyers; 4.2 lakh sellers; Gold Award AI/ ML in Public Services 2025	IndiaAI portal
Citizen Services	L1 Foundational AI/ICT	India stack: Integrated DPI	MeitY/NPCI/ UIDAI	Aadhaar (1.4 billion); UPI (10B+ transactions/ month); DigiLocker; ABDM; 80% banking penetration (from 17% in 2009)	India Stack

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Citizen Services	L1 Foundational AI/ICT + L3 Data and Evidence	Aadhaar AI Biometric Deduplication and Fraud Detection	UIDAI with NVIDIA DGX	1.4 billion residents; FMR-FIR modality in AePS	IndiaAI
Citizen Services	L1 Foundational AI/ICT + L2 Operational Applications	UMANG Unified Mobile Application	NeGD/MeitY	1,745+ services; 80+ departments; 5.58 crore users; BHASHINI integrated (23 languages)	Digital India
Citizen Services	L1 Foundational AI/ICT + L2 Operational Applications	MyGov Citizen Engagement AI Chatbot	MyGov (MeitY)	47M+ users across government departments	Digital India
Citizen Services	L1 Foundational AI/ICT	DigiLocker AI-based eKYC	MeitY	QR code authentication; API for document verification	Government of India
Sectoral (Urban)	L1 Foundational AI/ICT + L3 Data and Evidence	Smart City Mission—AI in 100 Cities	MoHUA	100 Smart Cities; Surat 27% crime reduction via AI safety; Pune e-governance; Bhopal Integrated Command Centers	Smart Cities Mission
Sectoral (Health)	L3 Data and Evidence + L2 Operational Applications	Ayushman Bharat Digital Mission AI-CDSS	NHA	67 crore ABHA health IDs; AI Clinical Decision Support System; eSanjeevani 282M consultations; 12M AI-assisted diagnoses	ABDM

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Sectoral (Agriculture)	L2 Operational Applications + L3 Data and Evidence	Bharat-VISTAAR/ Kisan e-Mitra Agricultural AI	Ministry of Agriculture and Farmers Welfare	7.63 crore farmer IDs; 11 languages; weather, market, pest alerts, crop advice	PIB (PRID 2228842)
Sectoral (Justice/ Security)	L3 Data and Evidence + L2 Operational Applications	Predictive Policing AI	Delhi Police (CMAPS, since 2015); UP Police (Trinetra; FRS)	UP Trinetra 5 lakh criminal records; FRS 1 million records in 200 milliseconds	IndiaAI case study
Sectoral (Energy)	L3 Data and Evidence	NTPC Advanced Computing Center	NTPC Limited	AI/ML for power plant operations and predictive maintenance	NTPC
Sectoral (Tax/ Land)	L1 Foundational AI/ICT	Property Tax Collection AI (Satellite/GIS)	Municipalities (NITI for States best practice)	Identifies unassessed or under-assessed properties using satellite imagery and GIS	NITI for States
Sectoral (Water)	L3 Data and Evidence + L1 Foundational AI/ICT	AI-Enabled Water Management	IndiaAI article	Flood and drought forecasting, irrigation optimization, urban leak detection	IndiaAI
Industry/Other	L3 Data and Evidence	UPI AI/ML Fraud Risk Monitoring	NPCI	INR24+ lakh crore monthly; 18.39 billion transactions (June 2025); 50% of global real-time payments	IndiaAI

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Industry/Other	L3 Data and Evidence	RBI Study—Indian Banks AI Adoption	Reserve Bank of India (RBI)	Credit scoring, fraud detection, risk management, customer chatbots	IndiaAI
Industry/Other	L5 Sustainability and Trust	CIL–IIT Hyderabad Clean Coal R&D	CIL with IIT Hyderabad	Coal gasification, carbon capture, clean chemical products R&D	PIB (PRID 2109226, 2025-03-07)
Industry/Other	L5 Sustainability and Trust + L1 Foundational AI/ICT	India AI Mission GPU and Application Portfolio	MeitY	38,000 GPUs target; applications in health, agriculture, cybersecurity	MeitY

Abbreviations used in the table: ABDM=Ayushman Bharat Digital Mission; ABHA=Ayushman Bharat Health Account; AePS=Aadhaar-enabled Payment System; AI-CDSS=AI Clinical Decision Support System; CIL=Coal India Limited; CMAPS=Crime Mapping Analytics and Predictive System; DGX=NVIDIA DGX; DPI=Digital Public Infrastructure; FMR-FIR=Fingerprint Minutiae Record-Fingerprint Image Record; FRS=Facial Recognition System; GeM=Government e-Marketplace; GIS=Geographic Information System; GMV=Gross Merchandise Value; IIT=Indian Institute of Technology; MeitY=Ministry of Electronics and Information Technology; MoHUA=Ministry of Housing and Urban Affairs; NeGD=National e-Governance Division; NHA=National Health Authority; NITI Aayog=National Institution for Transforming India; NPCI=National Payments Corporation of India; NTPC=NTPC Limited (formerly National Thermal Power Corporation); PIB=Press Information Bureau; RBI=Reserve Bank of India; RTP=Real-Time Payments; SPV=Special Purpose Vehicle; UIDAI=Unique Identification Authority of India; UPI=Unified Payments Interface.

Primary Source: Evidence compiled from 148 documented sources within the India Evidence Matrix with 113 mapped to portfolio cells. Full source inventory in Appendix G.

Current Documented AI Adoption

India's documented public sector AI deployment is anchored by its DPI operating at national scale. The India Stack, combining Aadhaar (1.4 billion enrolled), the Unified Payments Interface (UPI), accounting for approximately 50% of global real-time payments), DigiLocker, the Ayushman Bharat Digital Mission (ABDM), and the Account Aggregator framework, provides cross-cutting foundational infrastructure. AI components within DPI include Aadhaar AI biometric deduplication operated by the Unique Identification Authority of India (UIDAI) using the NVIDIA DGX platform, and UPI AI/ML fraud risk monitoring operated by the National Payments Corporation of India (NPCI). UMANG, the unified citizen-services mobile platform under the National e-Governance Division (NeGD) and the Ministry of Electronics and Information Technology (MeitY), provides more than 1,745 services from over 80 departments to 55.8 million users with BHASHINI integration across 23 languages. MyGov operates AI chatbot services across government departments with over 47 million registered users.

Sectoral AI deployments concentrate in the Administrative Domain. The ABDM, operated by the National Health Authority (NHA), has issued 67 crore Ayushman Bharat Health Account (ABHA) identifiers and deployed the AI Clinical Decision Support System (AI-CDSS). The eSanjeevani telemedicine platform has supported 282 million consultations including 12 million AI-assisted

diagnoses. The Smart City Mission, coordinated by the Ministry of Housing and Urban Affairs (MoHUA), deploys AI across 100 cities with documented outcomes including 27% crime reduction in Surat through AI safety systems and integrated command centers in Bhopal. Bharat-VISTAAR (with the Kisan e-Mitra chatbot), under the Ministry of Agriculture and Farmers Welfare, serves 76.3 million farmer identifiers in 11 languages with weather, market, pest, and crop advisory services. Predictive policing systems operate in Delhi (CMAPS, since 2015) and Uttar Pradesh (Trinetra, with 500,000 criminal records, and an associated facial recognition system matching against 1 million records in 200 milliseconds). The NTPC Advanced Computing Center applies AI and machine learning to power plant operations and predictive maintenance.

The Government e-Marketplace (GeM) AI procurement platform records over INR5,000 billion in gross merchandise value (GMV) with 164,000 buyers and 420,000 sellers operating the GeMAI generative AI chatbot, which received the 2025 Gold Award for AI/ML in Public Services. A Reserve Bank of India (RBI) study documents Indian banks' adoption of AI for credit scoring, fraud detection, risk management, and chatbot-based customer interaction. BHASHINI, the National Language AI Platform under the Digital India Bhashini Division, operates across 22 scheduled languages with more than 300 reusable AI models and over 100 million monthly inference calls.

Policy and capacity infrastructure has accumulated through the National Strategy for Artificial Intelligence (NITI Aayog, 2018), the Responsible AI Principles (NITI Aayog, 2021; seven principles), and the India AI Mission (Cabinet approved 2024, INR103,720 million outlay, 2024–29).

The 5×5 portfolio assessment (see Chapter 4, Figure 4.1) records India's deployment maturity at 0.75 in L1 (Foundational AI/ICT) cells covering policy/governance, citizen services, sectoral, and industry domains. Concentrated L3 (Data and Evidence) activity at the sectoral cell (3x3 = 0.75) reflects the Smart City, Ayushman Bharat, and predictive-policing deployments. L4 (Cross-system Automation) and L5 (Sustainability and Trust) layers across most application domains remain at 0.25 or below.

Emerging Developments and Direction

Three developments warrant attention as India operationalizes its AI Mission framework.

The India AI Mission is in its initial deployment phase for the 2024–29 horizon. The 38,000 GPU compute provisioning target, the AIKosh dataset platform with over 3,000 datasets, and the portfolio of more than 30 approved applications in health, agriculture, and cybersecurity are under execution. The scale of compute provisioning and the breadth of approved applications are documented; the realized deployment outcomes across these applications remain to accumulate.

The BHASHINI integration is being extended across multiple delivery channels. Integration with UMANG (23 languages), application in healthcare delivery, and use in Prime Ministerial communications are documented, while expansion across additional scheduled languages and downstream applications is ongoing.

AI integration within DPI is scaling. The Ayushman Bharat AI-CDSS is in operational expansion under the National Health Authority. DigiLocker is moving toward AI-based electronic know your customer (eKYC) and application programming interface (API)-based credential verification. The GeMAI generative AI chatbot is operational and award-recognized. Whether these integrations achieve broad operational footprint within the 2024–29 mission horizon depends on the pace of cross-ministerial coordination and on the resolution of subnational infrastructure variation.

The binding constraints emerging within this trajectory are the federal institutional complexity across 28 states and eight union territories, and the uneven distribution of supporting infrastructure (power, telecommunications) required for broad deployment beyond advanced cities and nationally operated DPI.

Forward-looking Recommendations and Speculative Points

Within Strategic Positioning B (Asymmetric Specialization), Japan and India exhibit distinct emphasis. Japan's pathway is broad efficiency-layer deployment (more than 1,700 local governments and major national ministries with over 2,000 AI systems documented) constrained by institutional fragmentation, with the institutional reform-capacity gap as the binding next-stage task. India's pathway is public-purpose-oriented technology base combined with large-scale DPI, with federal complexity across 28 states and eight union territories as the binding implementation challenge. Both pathways represent viable Asymmetric Specialization configurations; the two together demonstrate that the cluster admits internal differentiation by structural condition (institutional legacy vs federal heterogeneity).

India's distinctive contribution to the eight-economy comparison is the demonstration of a national AI patent portfolio aligned with public sector demand domains. The patent base of 52,706 families (2015–25) is oriented toward agriculture, urban infrastructure, healthcare, and education—application domains that correspond directly to India's public sector demand priorities. The corresponding public sector deployments are present in the evidence base: Bharat-VISTAAR for agriculture (76.3 million farmer IDs); Smart City Mission for urban infrastructure (100 cities); Ayushman Bharat AI-CDSS for health (67 crore ABHA health IDs); and BHASHINI, UMANG, and MyGov for citizen services. A national AI patent portfolio orientation toward public sector application domains at this scale is a notable feature of the India case and is not a general pattern observed among the economies surveyed in this report. The combination of supply-side orientation (patents in public-purpose domains) and demand-side scale (DPI operational at national level) provides a configuration in which technology supply and public sector application demand are oriented in the same direction.

The advancement question for India's public sector productivity, on the evidence assembled in this report, is not the presence of technological capacity. The 148 documented deployments show that technological capacity for public sector AI operates in advanced-state deployments and in the nationally operated DPI. Productivity improvement at national scale depends on cross-ministerial governance integration. This involves the integration of the Responsible AI Principles into sectoral algorithmic accountability instruments, of India AI Mission compute and dataset infrastructure into sector-applied deployments, and of advanced-state operational experience into low-capacity administrative units across the federal institutional structure. Three pathways are available within the current institutional configuration. India AI Mission operationalization provides the central-government framework for compute, datasets, and approved applications. BHASHINI expansion combined with sectoral AI-CDSS scaling extends operational deployment depth in language-services and healthcare domains. State-level cooperation mechanisms, between central-government Mission resources and state-government implementation capacity, provide the cross-federal coordination structure for translating supply-demand alignment into nationally distributed deployment.

Under the current institutional configuration, India's macro-level AI productivity impact is estimated at 1.43% of GDP (baseline; see Chapter 5 and Appendix C). Under the sensitivity analysis

in Appendix C-5 (Table 3), the macro-impact estimate ranges from 0.72% (conservative, $\alpha = 0.15$) to 2.86% (optimistic, $\alpha = 0.60$), depending on the AI productivity coefficient. Whether India's realized trajectory moves toward the higher end of this range depends on the India AI Mission's operational outcomes and on the advance of cross-ministerial governance integration across the federal institutional structure.

Strategic Positioning C for Balanced Transition: Malaysia and Thailand

Mid-range technological capacity is combined with substantial institutional flexibility. Neither is burdened by deep legacy debt nor constrained by severe infrastructure scarcity, enabling deliberate sectoral concentration as the binding strategic choice.

Malaysia: Sectoral Concentration with Focused Investments

Country Profile and Strategic Positioning

Malaysia occupies Strategic Positioning C (Balanced Transition) within the Asia-Pacific AI landscape, sharing the cluster classification with Thailand. Within Strategic Positioning C, the two economies exhibit distinct emphasis: Malaysia demonstrates a sectoral-concentration pathway in which investment is focused on selected high-priority domains (healthcare, urban surveillance, infrastructure, and finance) under a recently established central AI office, while Thailand demonstrates a broad sectoral pathway under the Thailand 4.0 digital-society framework.

Malaysia's institutional infrastructure is centered on the Malaysia National Artificial Intelligence Roadmap 2021–25 and the National AI Office (NAIO), established in December 2024 under the Ministry of Science, Technology and Innovation (MOSTI). The Public Sector AI Guidelines provide operational guidance for AI deployment across government, supplemented by GovTech Malaysia and the MyDIGITAL Ecosystem program. The Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025) places Malaysia at 30th globally (score 74.63). The macroeconomic AI impact estimate is 1.19% of GDP under baseline assumption, and sensitivity analysis yields a range from 0.60% to 2.38% (see Appendix C-5, Table 3).

Malaysia's placement in Strategic Positioning C reflects the pattern observed in its deployment evidence (98 sources; 78 mapped to portfolio cells): foundational AI activity is broad across policy, sectoral, and industry application domains, with concentrated operational deployments in healthcare (medical imaging), urban surveillance (face-recognition CCTV), infrastructure management (flood prediction, integrated command centers), and finance (central bank fraud detection). Higher-layer applications (analytical, agentic, sustainability) remain at earlier stages, and citizen-services AI integration is at an early stage.

TABLE 8.9

COUNTRY SNAPSHOT OF MALAYSIA.

Attribute	Content
Adoption Status	Comprehensive policy foundation with concentrated investment in healthcare, surveillance, and infrastructure AI.
Institutional Readiness	Recently established AI office under National AI Roadmap; Waseda 30th rank (score 74.63); Malaysia National AI Roadmap 2021–2025; NAIO, established December 2024; GovTech Malaysia; Public Sector AI Guidelines.

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Attribute	Content
Main Use Cases	DR.MATA diabetic-retinopathy AI by MoH; KL Face Recognition CCTV by Dewan Bandaraya Kuala Lumpur (DBKL); Flood Prediction by DID, 25 watersheds; Putrajaya Integrated Command Center; PADU National Database; MyGDX 2.0 (81 agencies); Bahasa Melayu NLP foundation (Mesolitica).
Current Maturity	Patent base aligned with selected industrial sectors; academic research presence in language and healthcare AI.
Key Constraints	Citizen-services AI integration at early stage.
Governance Gaps	Internal management AI integration limited.
Near-Term Priorities	NAIO operationalization; AI For MY Future training scale-up; MyDIGITAL Ecosystem deepening.
Expected Economic Gain	1.19% of GDP under baseline assumption (α = 0.30; Chapter 5); sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.60% (conservative, α = 0.15) to 2.38% (optimistic, α = 0.60).

Abbreviations used in the table: DBKL=Dewan Bandaraya Kuala Lumpur (Kuala Lumpur City Hall); DID=Department of Irrigation and Drainage; MoH=Ministry of Health; NAIO=National AI Office; NLP=Natural Language Processing.

TABLE 8.10

REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES IN MALAYSIA.

Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Governance	Policy	Malaysia National AI Roadmap 2021–2025	MOSTI	National AI strategy framework	MOSTI
Governance	Policy	NAIO	NAIO under MOSTI	Established December 2024 as central coordination body	NAIO
Governance	Policy	Public Sector AI Guidelines	Government of Malaysia	Operational guidance for AI deployment across government	Government of Malaysia
Governance	L1 Foundational AI/ICT	PADU National Database	Government of Malaysia	Policy-analysis data foundation; pilot-stage AI applications	Government of Malaysia
Governance	L1 Foundational AI/ICT	MyDIGITAL Ecosystem	Government of Malaysia	Digital-economy program integrating AI development	MyDIGITAL

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Internal Administration	L1 Foundational AI/ICT	MyGDX 2.0 Government Digital Exchange	Government of Malaysia	Cross-agency data exchange covering 81 agencies	Government of Malaysia
Internal Administration	L2 Operational Applications	Google Gemini Government Deployment	Government of Malaysia	Document-processing pilot (rollout in progress)	Government of Malaysia
Citizen Services	L1 Foundational AI/ICT	MyGOV App	Government of Malaysia	Citizen-services platform (Beta stage)	Government of Malaysia
Citizen Services	Policy	AI For MY Future Training Program	Government of Malaysia	National AI literacy and workforce development	AI For MY Future
Sectoral (Health)	L2 Operational Applications + L3 Data and Evidence	DR.MATA Diabetic Retinopathy AI	Ministry of Health (MoH)	AI-assisted retinopathy screening	MoH
Sectoral (Urban Surveillance)	L2 Operational Applications	KL Face Recognition CCTV	DBKL	5,000 CCTV units integrated with face-recognition AI	DBKL
Sectoral (Disaster)	L3 Data and Evidence	Flood Prediction AI	DID	AI-based flood prediction across 25 watersheds nationwide	DID
Sectoral (Urban Management)	L1 Foundational AI/ICT + L3 Data and Evidence	Putrajaya Integrated Command Center	Government of Malaysia	Multiagency operational command center	Government of Malaysia
Sectoral (Transport)	L3 Data and Evidence	SASCOO Traffic Optimization	Government of Malaysia	AI-based traffic-signal optimization across 20+ intersections	Government of Malaysia
Sectoral (Sustainability)	L5 Sustainability and Trust	Putrajaya Smart Water	Government of Malaysia	AI-integrated water management	Government of Malaysia

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Industry/Other	Policy	Financial Fraud Detection Portal	BNM	Limited operational deployment for fraud detection	BNM
Industry/Other	L2 Operational Applications	Bahasa Melayu NLP Foundation	Mesolitica	Malay-language model and NLP infrastructure	Mesolitica
Industry/Other	L1 Foundational AI/ICT	Industry AI (Palm Oil, Fintech, Semiconductor)	Private sector (Multiple)	Multiple industrial AI deployments	Investinasia / Industry Reports

Abbreviations used in the table: BNM=Bank Negara Malaysia (Central Bank of Malaysia); DBKL=Dewan Bandaraya Kuala Lumpur; DID=Department of Irrigation and Drainage; MoH=Ministry of Health; MOSTI=Ministry of Science=Technology and Innovation; NAIO=National AI Office; NLP=Natural Language Processing; SASCOO=traffic-signal optimization system reference.

Primary Source: Evidence compiled from 98 documented sources within the Malaysia Evidence Matrix with 78 mapped to portfolio cells. Full source inventory in Appendix G.

Current Documented AI Adoption

Malaysia's documented public sector AI deployment is organized around a sectoral-concentration approach: institutional resources are concentrated on selected high-priority application domains rather than distributed broadly across all government functions. The Malaysia National Artificial Intelligence Roadmap 2021–2025 (MOSTI) provides the strategic framework, supplemented by the establishment of the National AI Office (NAIO) in December 2024 as a central coordination body and the Public Sector AI Guidelines as operational standards for AI deployment across government.

Healthcare AI is operational through DR.MATA, an AI-assisted diabetic-retinopathy screening system deployed by the Ministry of Health (MoH). Urban-surveillance AI is operational through the Kuala Lumpur face-recognition CCTV program, with 5,000 units integrated with AI by Dewan Bandaraya Kuala Lumpur (DBKL). Disaster-prediction AI is operational through the Department of Irrigation and Drainage (DID) flood-prediction system covering 25 watersheds nationwide. Urban-management AI is operational through the Putrajaya Integrated Command Center, which coordinates across multiple agencies. Transport AI is operational through SASCOO traffic-signal optimization across more than 20 intersections.

Internal-administration infrastructure is provided through MyGDX 2.0, a cross-agency data exchange covering 81 agencies, supplemented by Google Gemini deployment for document-processing pilots. PADU functions as the national database foundation for policy-analysis AI applications at pilot stage. The MyDIGITAL Ecosystem program integrates AI development with broader digital-economy initiatives. The Bank Negara Malaysia (BNM) operates a financial fraud-detection portal at limited operational scale.

Language and citizen-services foundations are at earlier stages. Bahasa Melayu NLP foundation infrastructure is provided by Mesolitica, but operational citizen-services applications using this NLP layer are at early stage. The MyGOV App, the citizen-services platform, remains in beta deployment. The AI For MY Future training program operates as a national AI-literacy and workforce-development initiative.

The 5×5 portfolio assessment (see Chapter 4, Figure 4.1) records Malaysia's deployment maturity at 0.75 in L1 (Foundational AI/ICT) cells covering policy/governance, sectoral, and industry domains; L2 (Operational Applications) and L3 (Data and Evidence) at sectoral cells; L4 (Cross-system Automation) and L5 (Sustainability and Trust) across most application domains remain at 0.25 or below, with operational concentration in sectoral applications rather than internal-administration or citizen-services applications.

Emerging Developments and Direction

Three developments warrant attention as Malaysia operationalizes its AI governance framework.

The National AI Office (NAIO), established in December 2024, is in early operational phase. NAIO's mandate to coordinate AI policy across government ministries and provide oversight for the implementation of the Malaysia National AI Roadmap is being defined. As the central institutional mechanism for cross-ministerial AI coordination, NAIO's operationalization will determine the extent to which sectoral-concentration deployments can be scaled into broader government-wide integration.

The AI For MY Future training program is in active scale-up phase, providing AI literacy and workforce development across multiple sectors. Continued expansion of this program aims to address the AI talent and capability gap that limits operational deployment beyond currently concentrated domains.

The MyDIGITAL Ecosystem program is in continued deepening phase, integrating AI development with broader digital-economy initiatives. MyDIGITAL coordinates Malaysia's digital transformation across public sector and industry domains and provides the policy framework for AI ecosystem development.

The binding constraints emerging within this trajectory are the early-stage status of citizen-services AI integration (operational citizen-facing applications using Malaysia's NLP and citizen-platform infrastructure remain limited) and the limited internal-management AI integration (cross-ministerial AI deployment for internal administration remains at early stage despite the MyGDX 2.0 data-exchange foundation).

Forward-looking Recommendations and Speculative Points

Within Strategic Positioning C (Balanced Transition), Malaysia and Thailand exhibit distinct emphasis. Thailand operates a broad sectoral pathway under the Thailand 4.0 digital-society framework, with deployment distributed across many sectoral applications. Malaysia operates a sectoral-concentration pathway with focused investments in selected high-priority domains under a recently established central AI office. Both pathways represent viable Balanced Transition configurations; the two together demonstrate that the cluster admits internal differentiation by deployment-distribution strategy.

Malaysia's distinctive contribution to the eight-economy comparison is the demonstration of focused-investment policy execution: institutional resources concentrated on selected sectoral domains (healthcare, urban surveillance, infrastructure, finance) under central coordination (NAIO), with verified operational deployments at scale (5,000 CCTV units; 25 watersheds; 81 agencies). This pathway shows that AI governance can advance through sectoral depth before extending to comprehensive cross-government deployment.

The advancement question for Malaysia's public sector productivity, on the evidence assembled in this report, is the extension of focused-investment depth into citizen-services and internal-administration applications. Three pathways are available within the current institutional configuration. NAIO operationalization across additional sectoral applications builds on the established central-coordination mechanism. Citizen-services AI integration leveraging the Bahasa Melayu NLP foundation (Mesolitica) and the MyGOV platform extends sectoral concentration into citizen-facing domains. Internal-management AI integration leveraging the MyGDX 2.0 data-exchange foundation extends the focused-investment approach into cross-agency operations.

Under the current institutional configuration, Malaysia's macro-level AI productivity impact is estimated at 1.19% of GDP (baseline; see Chapter 5 and Appendix C). Under the sensitivity analysis in Appendix C-5 (Table 3), the macro-impact estimate ranges from 0.60% (conservative, $\alpha = 0.15$) to 2.38% (optimistic, $\alpha = 0.60$) depending on the AI productivity coefficient. Whether Malaysia's realized trajectory moves toward the higher end of this range depends on NAIO operationalization across additional sectors and on the extension of focused-investment depth into citizen-services and internal-administration domains.

Thailand: Broad Sectoral Deployment under Thailand 4.0 Framework

Country Profile and Strategic Positioning

Thailand occupies Strategic Positioning C (Balanced Transition) within the Asia-Pacific AI landscape, sharing the cluster classification with Malaysia. Within Strategic Positioning C, the two economies exhibit distinct emphasis: Thailand demonstrates a broad sectoral pathway with operational pilots distributed across many application domains under the Thailand 4.0 digital-society framework, while Malaysia demonstrates a sectoral-concentration pathway with focused investments in selected high-priority domains under a recently established central AI office.

Thailand's institutional infrastructure is anchored by the Thailand 4.0 national development framework and the National AI Strategy 2022–2027. The National AI Committee, established in May 2025, provides cross-ministerial coordination, supplemented by the National Electronics and Computer Technology Center (NECTEC) and the National Science and Technology Development Agency (NSTDA). The NSTDA AI Ethics Guidelines and the Draft AI Law (in legislative pipeline) provide the regulatory framework. The Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025) places Thailand at 17th globally (score 81.62), the highest among the Cluster C and D economies in this study. The macroeconomic AI impact estimate is 0.61% of GDP under baseline assumption; sensitivity analysis yields a range from 0.30% to 1.21% (see Appendix C-5, Table 3).

Thailand's placement in Strategic Positioning C reflects the pattern observed in its deployment evidence (106 sources; 84 mapped to portfolio cells): foundational and analytical AI activity is broad across policy, citizen services, and sectoral domains, with operational deployments documented in healthcare (AI-assisted chest imaging), urban management (LINE-based citizen-

engagement platforms, integrated command centers), agriculture (sensor-based agricultural prediction), disaster response (flood prediction), and transport (smart-city traffic management). Internal-management AI integration is at early stage, and agentic-layer applications across the public sector are limited.

TABLE 8.11

THAILAND: COUNTRY SNAPSHOT.

Attribute	Content
Adoption Status	Broad sectoral deployment with operational pilots. Healthcare, transport, agriculture, urban management active.
Institutional Readiness	National AI strategy embedded in Thailand 4.0 digital-society framework. Waseda 17th (81.62). Thailand 4.0. National AI Strategy 2022–2027. National AI Committee (established May 2025). NSTDA Ethics Guidelines. Draft AI Law.
Main Use Cases	Traffy Fondue (10,400 agencies, 1,300 LINE-based AI classification); Eastern Economic Corridor (EEC) Smart City (THB1.35 trillion); AI Chest 4 All (300+ public hospitals); Civil IoT; Pathumma Large Language Model (LLM) (Thai); Thang Rath Super App (173 services, 500,000 daily users); Citizen Portal (face recognition + digital ID); HandySense agricultural AI.
Current Maturity	Research base across NSTDA, NECTEC, and university networks; patent base modest relative to deployment scale.
Key Constraints	Internal management AI integration at early stage.
Governance Gaps	Cross-ministerial integration limited; AI Law in draft stage.
Near-Term Priorities	AI Law enactment. National AI Committee operationalization. EEC Smart City scaling.
Expected Economic Gain	0.61% of GDP under baseline assumption (α = 0.30; Chapter 5). Sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.30% (conservative, α = 0.15) to 1.21% (optimistic, α = 0.60).

Abbreviations used in the table: EEC, Eastern Economic Corridor; LLM, Large Language Model; NECTEC, National Electronics and Computer Technology Center; NSTDA, National Science and Technology Development Agency.

TABLE 8.12

THAILAND: REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES.

Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Governance	Policy	Thailand 4.0 Framework	Government of Thailand	National digital-society development framework	Government of Thailand
Governance	Policy	National AI Strategy 2022–2027	Government of Thailand	National AI strategy	Government of Thailand
Governance	Policy	National AI Committee	Government of Thailand	Cross-ministerial AI coordination body (established May 2025)	Government of Thailand

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Governance	Policy	NSTDA AI Ethics Guidelines	National Science and Technology Development Agency (NSTDA)	National AI ethics framework	NSTDA
Governance	Policy	Draft AI Law	Government of Thailand	AI legislation in legislative pipeline	Government of Thailand
Governance	L2 Operational Applications	Pathumma Large Language Model (LLM)	NECTEC / NSTDA	Thai-language sovereign LLM (pilot stage)	NECTEC
Internal Administration	L2 Operational Applications	AI-Din—Land Ministry Documents AI	Department of Lands	Document-processing AI for land administration	Department of Lands
Internal Administration	Policy	DGA–Microsoft AI Training	Digital Government Development Agency (DGA)	2,000 government personnel trained	DGA
Citizen Services	L1 Foundational AI/ICT + L2 Operational Applications	Traffy Fondue	Multiagency	10,400 agencies, 1,300 LINE-based AI classification for citizen complaints	Traffy Fondue
Citizen Services	L1 Foundational AI/ICT	Thang Rath Super App	Government of Thailand	173 services; 500,000 daily users	Government of Thailand
Citizen Services	L2 Operational Applications	Citizen Portal	Government of Thailand	Face recognition + digital ID for citizen services	Government of Thailand
Sectoral (Health)	L2 Operational Applications + L3 Data and Evidence	AI Chest 4 All	Public Hospitals	AI-assisted chest imaging across 300+ public hospitals	AI Chest 4 All
Sectoral (Health)	L3 Data and Evidence	COVID-19 Prediction; HIV Automated Reporting	NSTDA / Health agencies	Multi-domain health analytics	NSTDA

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Domain	Technology / Institutional Function	Use Case / System	Operating Agency	Metric	Source
Sectoral (Disaster)	L3 Data and Evidence	Flood Hazard Map ML (Chi River)	NSTDA / NECTEC	AI-based flood prediction	NSTDA
Sectoral (Agriculture)	L3 Data and Evidence	HandySense	NECTEC	Sensor-based agricultural prediction system	NECTEC
Sectoral (Agriculture)	L3 Data and Evidence	NECTEC Agricultural Prediction Platform	NECTEC	Agricultural-domain analytics platform	NECTEC
Sectoral (Urban/Smart City)	L1 Foundational AI/ICT + L3 Data and Evidence	Eastern Economic Corridor (EEC) Smart City	EEC Office	THB1.35 trillion investment; integrated Civil IoT, agricultural, healthcare, industrial AI	EEC Office
Sectoral (Environment/ Disaster)	L1 Foundational AI/ICT + L3 Data and Evidence	Civil IoT	Government of Thailand	National sensor network and AI analytics	Government of Thailand
Sectoral (Sustainability)	L5 Sustainability and Trust	5G Smart Pole	Government of Thailand	Environmental monitoring infrastructure	Government of Thailand
Industry/Other	L1 Foundational AI/ICT	Industry AI (Banking, Smart City Industry)	Private sector	Multiple industrial AI deployments	Industry Reports

Abbreviations used in the table: DGA, Digital Government Development Agency; EEC, Eastern Economic Corridor; LLM, Large Language Model; NECTEC, National Electronics and Computer Technology Center; NSTDA, National Science and Technology Development Agency.

Primary Source: Evidence compiled from 106 documented sources within the Thailand Evidence Matrix with 84 mapped to portfolio cells. Full source inventory in Appendix G.

Current Documented AI Adoption

Thailand's documented public sector AI deployment is characterized by broad sectoral distribution under the Thailand 4.0 national framework. The National AI Strategy 2022–2027 provides the strategic horizon, supplemented by the National AI Committee (established May 2025) for cross-ministerial coordination, and by the NSTDA AI Ethics Guidelines for operational standards. The Pathumma Large Language Model (LLM), developed by NECTEC and NSTDA, addresses Thai-language sovereignty in AI infrastructure (pilot stage).

Citizen-services AI is operational at scale through Traffy Fondue, a multiagency LINE-based citizen-complaint platform that uses AI classification across 10,400 agencies (with 1,300 LINE-based AI

classification interactions). Thang Rath Super App provides 173 government services to 500,000 daily users. The Citizen Portal integrates face recognition and digital ID for citizen-facing services.

Sectoral AI is operational across multiple domains. Healthcare AI is operational through AI Chest 4 All, deployed across 300+ public hospitals for chest imaging analysis, supplemented by COVID-19 prediction and HIV automated reporting systems. Agricultural AI is operational through HandySense and the NECTEC Agricultural Prediction Platform, both providing sensor-based and analytical agricultural forecasting. Disaster-prediction AI is operational through the Flood Hazard Map ML system (NSTDA, Chi River). Urban-management AI is anchored by the Eastern Economic Corridor (EEC) Smart City program, a THB1.35 trillion initiative integrating Civil IoT, agricultural AI, healthcare AI, and industrial AI within a unified regional development framework. National Civil IoT infrastructure provides the sensor-network backbone, supplemented by 5G Smart Pole environmental-monitoring infrastructure.

Internal-administration AI is at earlier stage. AI-Din provides document-processing AI within the Department of Lands. The Digital Government Development Agency (DGA) operates AI training programs (DGA–Microsoft training, with 2,000 government personnel trained). Cross-ministerial AI integration for internal administration remains limited.

The 5×5 portfolio assessment (see Figure 4.2) records Thailand's deployment maturity at 0.75 in L1 Foundational AI/ICT and L3 Data and Evidence cells at sectoral domains; L5 Sustainability and Trust at sectoral cell (0.50, Civil IoT and 5G Smart Pole environmental monitoring); L4 Cross-System Automation limited. The internal-administration cells and the L4 cells across most domains remain at 0.25 or below, reflecting the broad sectoral concentration of operational AI activity.

Emerging Developments and Direction

Three developments warrant attention as Thailand operationalizes its AI governance framework.

The National AI Committee, established in May 2025, is in early operational phase. Its mandate to coordinate AI policy across ministries within the Thailand 4.0 and National AI Strategy 2022–2027 frameworks is being defined, alongside the NSTDA Ethics Guidelines as operational standards. Operationalization will determine the extent to which broad sectoral pilot deployments can be coordinated into integrated cross-ministerial systems.

The Draft AI Law is currently in legislative pipeline. Enactment will codify the regulatory framework that is presently operating through agency-level guidelines and ethics frameworks, providing legal foundations for AI accountability across sectors.

The Pathumma Large Language Model (LLM), developed by NECTEC and NSTDA for Thai-language AI infrastructure, is in pilot stage. Sovereign Thai-language LLM development addresses linguistic-sovereignty considerations parallel to those motivating other economies' sovereign-LLM initiatives, and provides the foundation for Thai-language AI applications across government.

The binding constraints emerging within this trajectory are the early-stage status of internal-administration AI integration (cross-ministerial AI deployment for internal operations remains limited despite broad sectoral deployment elsewhere) and the cross-ministerial integration gap that requires the AI Law and the National AI Committee to mature into operational mechanisms before sectoral pilots can be coordinated into unified deployment.

Forward-Looking Recommendations and Speculative Points

Within Strategic Positioning C (Balanced Transition), Thailand and Malaysia exhibit distinct emphasis. Malaysia operates a sectoral-concentration pathway with focused investments in selected high-priority domains under a recently established central AI office. Thailand operates a broad sectoral pathway with operational pilots distributed across many application domains under the Thailand 4.0 digital-society framework. Both pathways represent viable Balanced Transition configurations; the two together demonstrate that the cluster admits internal differentiation by deployment-distribution strategy.

Thailand's distinctive contribution to the eight-economy comparison is the demonstration of broad sectoral pilot deployment within an established digital-society framework. Operational deployments are documented across healthcare (AI Chest 4 All, 300+ hospitals), urban management (EEC Smart City, THB1.35 trillion), citizen services (Traffy Fondue, 10,400 agencies; Thang Rath Super App, 500,000 daily users), agriculture (HandySense, NECTEC platform), disaster response (Flood Hazard Map ML), and language infrastructure (Pathumma LLM). This pathway shows that broad sectoral pilot accumulation can advance prior to formal AI legislation enactment, providing a deployment foundation against which legal-framework completion can build cross-ministerial integration.

The advancement question for Thailand's public sector productivity, on the evidence assembled in this report, is the consolidation of broad sectoral pilot deployments into integrated cross-ministerial systems. Three pathways are available within the current institutional configuration. AI Law enactment provides the legal foundation for cross-ministerial integration of currently distributed sectoral pilots. National AI Committee operationalization establishes the coordination mechanism for translating the Thailand 4.0 framework into operational integration across ministries. EEC Smart City scaling demonstrates the integrated-deployment model that combines Civil IoT, agricultural, healthcare, and industrial AI within a unified regional development framework, with potential extension to other economic corridors.

Under the current institutional configuration, Thailand's macro-level AI productivity impact is estimated at 0.61% of GDP (baseline; see Chapter 5 and Appendix C). Under the sensitivity analysis in Appendix C-5 (Table 3), the macro-impact estimate ranges from 0.30% (conservative, $\alpha = 0.15$) to 1.21% (optimistic, $\alpha = 0.60$), depending on the AI productivity coefficient. Whether Thailand's realized trajectory moves toward the higher end of this range depends on AI Law enactment, National AI Committee operationalization, and the consolidation of broad sectoral pilots into integrated cross-ministerial deployment.

Strategic Positioning D for Constrained Leapfrog: Bangladesh and the Philippines

Constrained technological and infrastructural baseline are combined with strong reform commitment. The binding bottlenecks are infrastructural and institutional, but these same constraints have driven constraint-driven innovation, generating architectures that constitute reverse-innovation reference configurations for economies at different baselines.

Bangladesh: Creativity Under Constraint, a Source of Reverse Innovation

Country Profile and Strategic Positioning

Bangladesh occupies Strategic Positioning D (Constrained Leapfrog) within the Asia-Pacific AI landscape, sharing the cluster classification with the Philippines. Within Strategic Positioning D,

the two economies exhibit distinct emphasis: Bangladesh demonstrates a creativity-under-constraint pathway in which substantive AI deployment is achieved despite resource constraints, with the deployment patterns themselves becoming a source of reverse innovation for other constrained economies. The Philippines demonstrates a reform-willing, infrastructure-conditional pathway in which institutional commitment is observable but operational frameworks await infrastructure buildout.

Bangladesh's institutional infrastructure is anchored by the Smart Bangladesh 2041 vision and the Aspire to Innovate (a2i) digital service platform under the Prime Minister's Office. The National AI Policy 2024 (Draft) is in the legislative pipeline, supplemented by the National AI Centre of Excellence (NAICE). The Bangladesh National Digital Architecture (BNDA) provides the foundation for over 800 digital services. The Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025) places Bangladesh at 64th globally (score 54.73). The macroeconomic AI impact estimate is 0.52% of GDP under baseline assumption; sensitivity analysis yields a range from 0.26% to 1.03% (see Appendix C-5, Table 3). The baseline figure reflects the resource-constrained context, combined with a relatively small public sector share in the national economy.

Bangladesh's placement in Strategic Positioning D reflects the pattern observed in its deployment evidence (127 sources; 104 mapped to portfolio cells): foundational AI activity is broad despite resource constraints, with operational deployments documented in citizen services (a2i platform with 8,858 services and more than 863 million usage and Helpline 333 with over 100 million usage); agriculture (Krishi Batayon); land registry (e-Mutation); biometric identification through Automated Biometric Identification System (ABIS); healthcare (RadAssist AI); and disaster response (FloodHub via Google AI partnership, achieving AUC 0.99 over seven-day flood forecasts). The deployment pattern shows that substantive public sector AI can be achieved under structural constraints, and the resulting use-case configuration constitutes potential reference architecture for other economies facing similar conditions.

TABLE 8.13

COUNTRY SNAPSHOT OF BANGLADESH.

Attribute	Content
Adoption Status	L1 (Foundational AI/ICT) scale despite resource constraints: a2i digital service platform as backbone; sectoral AI in disaster prediction (FloodHub, Google AI partnership), agriculture, and RMG industry.
Institutional Readiness	Vision-led, AI policy under finalization; Waseda rank of 64 (score 54.73); Smart Bangladesh 2041 vision; National AI Policy 2024 (Draft); NAICE; BNDA.
Main Use Cases	a2i having 8,858 services, over 863 million usage; Helpline 333 with 100 million usage, AI NLP triage; Krishi Batayon (agricultural AI); e-Mutation (land registry); ABIS; Bangla NLP Corpus of 10 million; RadAssist AI; FloodHub (Google AI partnership, AUC 0.99, seven-day forecast); RMG AI (BGMEA-DBP).
Current Maturity	Patent base limited; research institutions and human resources present; advanced public sector AI deployment under constraints.
Key Constraints	Resource constraints; electricity and network infrastructure as bottlenecks; small public sector share in national economy.

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Attribute	Content
Governance Gaps	Public sector itself is small in national economy; AI-led expansion of administrative demand is an essential need.
Near-term Priorities	Build reverse-innovation cases that serve as models for other constrained economies; partnerships and reliable data-accumulation use cases; continued a2i expansion.
Expected Economic Gain	0.52% of GDP under baseline assumption (α = 0.30; Chapter 5); sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.26% (conservative, α = 0.15) to 1.03% (optimistic, α = 0.60).

Abbreviations used in the table: a2i=Aspire to Innovate; ABIS=Automated Biometric Identification System; BGMEA=Bangladesh Garment Manufacturers and Exporters Association; BNDA=Bangladesh National Digital Architecture; DBP=Digital Bangladesh Project; NAICE=National AI Centre of Excellence; NLP=Natural Language Processing; RMG=Ready-made Garments.

TABLE 8.14

REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES FOR BANGLADESH.

Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Governance	Policy	Smart Bangladesh 2041 Vision	Government of Bangladesh	National digital-development framework	Government of Bangladesh
Governance	Policy	National AI Policy 2024 (Draft)	Government of Bangladesh	AI legislation in legislative pipeline	Government of Bangladesh
Governance	Policy	NAICE	Government of Bangladesh	National AI research and capability center	NAICE
Governance	L1 Foundational AI/ICT	BNDA	ICT Division, PMO	800+ digital-service foundation	ICT Division
Internal Administration	L1 Foundational AI/ICT	a2i	ICT Division, PMO	8,858 services; 863M+ uses	a2i
Citizen Services	L2 Operational Applications	Helpline 333	a2i (PMO)	100M+ uses; AI Natural Language Processing (NLP) triage	a2i
Citizen Services	L1 Foundational AI/ICT	Bangla NLP Corpus	Government of Bangladesh	10M+ Bangla-language NLP corpus and infrastructure	Government of Bangladesh

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Sectoral (Agriculture)	L1 Foundational AI/ICT + L2 Operational Applications	Krishi Batayon	DAE, Ministry of Agriculture	Agricultural information AI for farmers	DAE
Sectoral (Land)	L1 Foundational AI/ICT	e-Mutation	Ministry of Land	Land registry digital service with AI integration	Ministry of Land
Sectoral (Identity)	L1 Foundational AI/ICT	Automated Biometric Identification System (ABIS)	Bangladesh Election Commission	National biometric identification	Election Commission
Sectoral (Health)	L2 Operational Applications	RadAssist AI	Health-sector providers	Radiology authentication AI	Government of Bangladesh
Sectoral (Disaster)	L3 Data and Evidence	FloodHub	BWDB + Google AI partnership	AUC 0.99; 7-day flood forecast	BWDB; Google AI
Sectoral (Sustainability)	L5 Sustainability and Trust	Smart Bangladesh 2041 GPU procurement	Government of Bangladesh	Future computing infrastructure investment	Government of Bangladesh
Industry/Other	L1 Foundational AI/ICT + L3 Data and Evidence	RMG AI	BGMEA + DBP	Industrial AI for ready-made garments sector	BGMEA-DBP

Abbreviations used in the table: a2i=Aspire to Innovate; ABIS=Automated Biometric Identification System; BGMEA=Bangladesh Garment Manufacturers and Exporters Association; BNDA=Bangladesh National Digital Architecture; BWDB=Bangladesh Water Development Board; DAE=Department of Agricultural Extension; DBP=Digital Bangladesh Project; ICT=Information and Communication Technology; NAICE=National AI Centre of Excellence; NLP=Natural Language Processing; PMO=Prime Minister's Office; RMG=Ready-Made Garments.

Primary Source: Evidence compiled from 127 documented sources within the Bangladesh Evidence Matrix with 104 mapped to portfolio cells. Full source inventory in Appendix G.

Current Documented AI Adoption

Bangladesh's documented public sector AI deployment achieves substantive scale despite the resource-constrained operating context. The Aspire to Innovate (a2i) digital service platform, operating under the Information and Communication Technology (ICT) Division of the Prime Minister's Office (PMO), provides 8,858 government services with cumulative usage exceeding 863 million. Helpline 333, also operated under a2i, has accumulated more than 100 million usage with AI Natural Language Processing (NLP) for triage of citizen queries. The Bangladesh National Digital Architecture (BNDA) provides the foundational layer for over 800 digital services across government.

Sectoral AI deployment is operational across multiple high-priority domains. Krishi Batayon, operated by the Department of Agricultural Extension (DAE) under the Ministry of Agriculture, provides agricultural information AI for farmers. The Ministry of Land operates the e-Mutation system for land-registry digital services with AI integration. The Bangladesh Election Commission operates the Automated Biometric Identification System (ABIS) for national biometric identification, while RadAssist AI provides radiology authentication in the health sector. The Bangla NLP Corpus, with more than 10 million Bangla-language data records, provides the language infrastructure for citizen-services NLP applications.

Disaster-prediction AI represents a notable deployment configuration. FloodHub, operated by the Bangladesh Water Development Board (BWDB) under a partnership with Google AI, achieves an Area Under the Curve (AUC) of 0.99 for seven-day flood forecasts—performance levels comparable to those documented in economies at higher infrastructural baselines, achieved within the Bangladesh resource-constrained operating context. This deployment demonstrates that resource constraints do not preclude high-quality AI performance when matched with appropriate domain focus and external partnership structures.

Industrial AI is operational through the ready-made garments (RMG) sector. The Bangladesh Garment Manufacturers and Exporters Association (BGMEA), in partnership with the Digital Bangladesh Project (DBP), operates RMG AI applications across this critical export sector.

The 5×5 portfolio assessment (see Chapter 4, Figure 4.1) records Bangladesh's deployment maturity at 0.75 in L1 (Foundational AI/ICT) cells covering policy/governance and sectoral domains. The L5 (Sustainability and Trust) cell at 5x3 records 0.50, reflecting the FloodHub Google AI partnership as a substantive sustainability-related AI application. Higher-layer cells—L2 (Operational Applications), L3 (Data and Evidence), L4 (Cross-system Automation) across most domains—generally remain at 0.25 or below, reflecting the resource-constrained operating context.

Emerging Developments and Direction

Three developments warrant attention as Bangladesh operationalizes its AI governance framework.

The National AI Policy 2024 is in draft stage, currently in the legislative pipeline. Enactment will codify the regulatory framework that is presently operating through agency-level guidelines and the Smart Bangladesh 2041 vision, providing the legal foundation for AI accountability across sectors.

The National AI Centre of Excellence (NAICE) is being operationalized as the national AI research and capability center. NAICE's mandate is being defined to coordinate AI research and capability development, with potential to support sectoral applications and provide expertise for the broader public sector AI ecosystem.

The Smart Bangladesh 2041 GPU procurement program represents a planned investment in future AI computing infrastructure, addressing the resource-constrained computing capacity that currently limits higher-layer AI development.

The binding constraints emerging within this trajectory are resource constraints across institutional, financial, and infrastructure dimensions; electricity and network infrastructure bottlenecks that limit compute-intensive AI deployment; and the small public sector share in the national economy, which limits the absolute addressable workforce for AI-driven public sector productivity scaling.

The latter constraint reframes the role of AI in Bangladesh: AI-led expansion of administrative service capacity is essential rather than merely productivity-enhancing, as the public sector itself is structurally small relative to administrative-demand requirements of a large population.

Forward-looking Recommendations and Speculative Points

Within Strategic Positioning D (Constrained Leapfrog), Bangladesh and the Philippines exhibit distinct emphasis. The Philippines operates a reform-willing, infrastructure-conditional pathway in which institutional commitment is observable but operational frameworks await infrastructure buildout. Bangladesh operates a creativity-under-constraint pathway in which substantive AI deployment is achieved despite resource constraints, and the resulting use-case configuration provides potential reference architecture for other constrained economies.

Bangladesh's distinctive contribution to the eight-economy comparison is the demonstration that substantive public sector AI deployment can be achieved under structural constraints. The a2i platform (8,858 services, over 863 million usage) demonstrates citizen-service deployment at scale under resource constraints. Helpline 333 (over 100 million usage) demonstrates NLP-based triage at scale. FloodHub (AUC 0.99, seven-day forecast through Google AI partnership) demonstrates that high-performance disaster-prediction AI is achievable in constrained contexts when matched with domain focus and external partnership structures. The Bangla NLP Corpus (over 10 million records) demonstrates language-infrastructure development for non-major-language economies. Krishi Batayon, e-Mutation, ABIS, and RadAssist AI demonstrate sectoral applications across agriculture, land, identity, and health domains. This deployment configuration constitutes potential reference architecture for reverse innovation: solutions developed under constraint, with structural conditions that select for efficiency and operational viability, may provide implementation pathways usable by other economies facing similar conditions.

The advancement question for Bangladesh's public sector productivity, on the evidence assembled in this report, is the consolidation of constraint-driven creative deployments into a documented reference architecture. Three pathways are available within the current institutional configuration. National AI Policy 2024 enactment provides the legal foundation for cross sectoral AI accountability and for codifying the deployment principles already operationalized through a2i and FloodHub. NAICE operationalization establishes the national capability center for accumulating, documenting, and exporting reverse-innovation use cases. Continued a2i expansion combined with reliable data-accumulation in priority sectors (agriculture, health, disaster, identity) provides the use-case foundation against which reverse-innovation export models can be developed.

Under the current institutional configuration, Bangladesh's macro-level AI productivity impact is estimated at 0.52% of GDP (baseline; see Chapter 5 and Appendix C). Under the sensitivity analysis in Appendix C-5 (Table 3), the macro-impact estimate ranges from 0.26% (conservative, $\alpha = 0.15$) to 1.03% (optimistic, $\alpha = 0.60$) depending on the AI productivity coefficient. The baseline figure reflects the small public sector share in the national economy combined with the resource-constrained operating context. However, the macro-impact estimate, calculated within the bounded methodology of this report, does not capture the value generated through reverse-innovation export potential, i.e., the use of Bangladesh-developed AI deployment configurations as reference architectures for other constrained economies. Whether Bangladesh's contribution to the broader regional AI deployment pathway moves toward the higher end of its potential depends not only on domestic deployment scaling but also on the institutional capacity to document and export the deployment configurations that constraint-driven creativity has produced.

The Philippines: Strong Reform Commitment with Foundation Steadily in Formation

Country Profile and Strategic Positioning

The Philippines occupies Strategic Positioning D (Constrained Leapfrog) within the Asia-Pacific AI landscape, sharing the cluster classification with Bangladesh. Within Strategic Positioning D, the two economies exhibit distinct emphasis: the Philippines demonstrates a reform-willing, infrastructure-conditional pathway in which institutional commitment to administrative reform is observable and operational frameworks are steadily being put in place; Bangladesh demonstrates a creativity-under-constraint pathway in which substantive AI deployment is achieved despite resource constraints, and the resulting use-case configuration constitutes a source of reverse innovation for other constrained economies.

The Philippines' institutional infrastructure spans multiple coordinating bodies. The National Economic and Development Authority (NEDA) operates the AI Roadmap 2.0 as the national strategy. The Bangko Sentral ng Pilipinas (BSP, the Central Bank) has issued AI Ethics Regulation for the financial sector. The National AI Centre for Research and Innovation (NAICRI) was established in February 2026 as the national AI research and innovation hub. The Department of Information and Communications Technology (DICT) provides the digital-strategy foundation. The Waseda University – IAC World Digital Government Ranking 2025 (Waseda University, 2025) places the Philippines at 29th globally (score 75.09). The macroeconomic AI impact estimate is 1.15% of GDP under baseline assumption; and sensitivity analysis yields a range from 0.58% to 2.31% (see Appendix C-5, Table 3).

The Philippines' placement in Strategic Positioning D reflects the pattern observed in its deployment evidence (94 sources; 72 mapped to portfolio cells): foundational AI activity is broad across policy, citizen services, sectoral, and industry application domains, with operational deployments documented in citizen services through Philippine Identification System (PhilSys) with 90.29 million registrations, eGovPH platform with 21+ services, Dagyaw citizen-engagement, and 4Ps welfare authentication; health through FASSSTER spatiotemporal epidemic AI, COVID-KAYA, and PhilHealth AI insurance logic; weather forecasting through Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) AI 4-RP; education with AGAP; and language infrastructure with iTANONG Filipino Natural Language Processing (NLP). Higher-layer applications (analytical, agentic, sustainability) remain at earlier stages, and the operational governance frameworks for cross sectoral AI accountability are still in formation following NAICRI's February 2026 establishment.

TABLE 8.15

COUNTRY SNAPSHOT OF THE PHILIPPINES.

Attribute	Content
Adoption Status	Active policy formulation; citizen-services foundation operational. PhilSys, eGovPH, Dagyaw, 4Ps welfare authentication as foundation; sectoral AI in health, weather, social protection.
Institutional Readiness	Multiagency coordination with newly established research institute; Waseda rank of 29 (score 75.09); NEDA AI Roadmap 2.0; BSP AI Ethics Regulation; NAICRI, established February 2026; DICT Strategy.

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Attribute	Content
Main Use Cases	PhilSys, 90.29M registrations; eGovPH with 21+ platforms, GovMedia 2025; Dagyaw citizen engagement; 4Ps welfare authentication (2.8 million); E-CAIR nutrition/CV; PNP CCTV authentication; PAGASA weather AI 4-RP (from 2 to 14 days forecast); FASSSTER spatiotemporal epidemic AI; PhilHealth AI insurance logic (80%); iTANONG Filipino NLP.
Current Maturity	Strong commitment to administrative reform; institutional barriers to AI adoption relatively low; strategic orientation high.
Key Constraints	Electricity and telecommunications networks as computing-resource infrastructure constraint.
Governance Gaps	Foundation is being steadily put in place; operational frameworks for cross sectoral AI governance still in formation.
Near-Term Priorities	NAICRI operationalization; NEDA AI Roadmap 2.0 implementation; AI talent development and education rollout.
Expected Economic Gain	1.15% of GDP under baseline assumption (α = 0.30; Chapter 5); sensitivity analysis (Appendix C-5, Table 3) yields a range from 0.58% (conservative, α = 0.15) to 2.31% (optimistic, α = 0.60).

Abbreviations used in the table: 4Ps=Pantawid Pamilyang Pilipino Program; BSP=Bangko Sentral ng Pilipinas; CV=Computer Vision; DICT=Department of Information and Communications Technology; NAICRI=National AI Centre for Research and Innovation; NEDA=National Economic and Development Authority; NLP=Natural Language Processing; PAGASA=Philippine Atmospheric, Geophysical and Astronomical Services Administration; PhilSys=Philippine Identification System; PNP=Philippine National Police.

TABLE 8.16

REPRESENTATIVE PUBLIC SECTOR AI SYSTEMS AND USE CASES IN THE PHILIPPINES.

Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Governance	Policy	NEDA AI Roadmap 2.0	NEDA	National AI strategy	NEDA
Governance	Policy	DICT Strategy Foundation	DICT	National digital-strategy foundation	DICT
Governance	Policy	NAICRI	Government of the Philippines	Established February 2026 as national AI research and innovation hub	NAICRI
Governance	Policy	BSP AI Ethics Regulation	BSP	Financial-sector AI ethics framework	BSP
Internal Administration	L2 Operational Applications	iTANONG Filipino NLP	Government of the Philippines	Filipino-language NLP for internal management AI	Government of the Philippines

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Citizen Services	L1 Foundational AI/ICT	PhilSys	PSA	90.29 million registrations	PSA
Citizen Services	L1 Foundational AI/ICT	eGovPH	DICT	21+ digital-service platforms (GovMedia 2025)	DICT
Citizen Services	L1 Foundational AI/ICT	Dagyaw Citizen Engagement	DILG	Large-scale citizen-engagement foundation	DILG
Citizen Services	L1 Foundational AI/ICT	4Ps Welfare Authentication	DSWD	2.8 million authentications	DSWD
Citizen Services	L2 Operational Applications	E-CAIR Nutrition/ Disability CV	Government of the Philippines	Computer-vision applications for nutrition and disability assessment	Government of the Philippines
Sectoral (Health)	L3 Data and Evidence	FASSSTER Spatiotemporal Epidemic AI	DOH	Epidemic prediction and surveillance AI	DOH
Sectoral (Health)	L3 Data and Evidence	COVID-KAYA	DOH	Pandemic-management AI	DOH
Sectoral (Health)	L4 Cross-System Automation	PhilHealth AI Insurance Logic	PhilHealth	80% claims-processing automation	PhilHealth
Sectoral (Health)	L3 Data and Evidence	vBantai AI	Health-sector providers	Disease-monitoring AI	Government of the Philippines
Sectoral (Weather/ Disaster)	L3 Data and Evidence + L5 Sustainability and Trust	PAGASA Weather AI 4-RP	PAGASA	From 2→ days to14 days weather-forecast extension	PAGASA
Sectoral (Identity/ Security)	L2 Operational Applications	PNP CCTV Authentication	PNP	CCTV authentication AI	PNP
Sectoral (Education)	L1 Foundational AI/ICT	AGAP AI in Education	DepEd + DOST	1.5 million educational AI applications	DepEd; DOST

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Domain	Technology/ Institutional Function	Use Case/ System	Operating Agency	Metric	Source
Sectoral (Research)	L1 Foundational AI/ICT	DOST-ASTI Research	DOST-ASTI	300+ research projects in AI	DOST-ASTI
Sectoral (Social Protection)	L3 Data and Evidence	DSWD OpenG2P/ OpenSPP	DSWD	Social-protection AI	DSWD
Industry/Other	L1 Foundational AI/ICT	BPO/IT-BPM AI	Private sector	Industry-AI deployment in BPO/IT-BPM sector	Industry Reports

Abbreviations used in the table: BPO=Business Process Outsourcing; BSP=Bangko Sentral ng Pilipinas; CCTV=Closed-Circuit Television; CV=Computer Vision; DepEd=Department of Education; DICT=Department of Information and Communications Technology; DILG=Department of the Interior and Local Government; DOH=Department of Health; DOST=Department of Science and Technology; DOST-ASTI=DOST – Advanced Science and Technology Institute; DSWD=Department of Social Welfare and Development; IT-BPM=Information Technology and Business Process Management; NAICRI=National AI Centre for Research and Innovation; NEDA=National Economic and Development Authority; NLP=Natural Language Processing; PAGASA=Philippine Atmospheric, Geophysical and Astronomical Services Administration; PhilSys=Philippine Identification System; PNP=Philippine National Police; PSA=Philippine Statistics Authority; 4Ps=Pantawid Pamilyang Pilipino Program.

Primary Source: Evidence compiled from 94 documented sources within the Philippines Evidence Matrix with 72 mapped to portfolio cells. Full source inventory in Appendix G.

Current Documented AI Adoption

The Philippines' documented public sector AI deployment is organized around a multiagency coordination model with active policy formulation across the 2025–26 period. The NEDA operates the AI Roadmap 2.0 as the strategic framework. The BSP has issued AI Ethics Regulation for the financial sector. The NAICRI was established in February 2026 as the national AI research and innovation hub. The DICT provides the broader digital-strategy foundation under which the eGovPH platform operates.

Citizen-services AI is operational at scale through the PhilSys, with 90.29 million registrations under the Philippine Statistics Authority (PSA). The eGovPH platform under DICT provides 21+ digital-service platforms (GovMedia 2025). Dagyaw, under the Department of the Interior and Local Government (DILG), provides large-scale citizen-engagement infrastructure. The Pantawid Pamilyang Pilipino Program (4Ps), under the Department of Social Welfare and Development (DSWD), operates AI-based welfare authentication with 2.8 million authentications.

Sectoral AI is operational across multiple domains. Health-sector AI is deployed through FASSSTER spatiotemporal epidemic AI under the Department of Health (DOH), supplemented by COVID-KAYA pandemic management, vBantai AI disease monitoring, and PhilHealth AI insurance logic (80% claims processing automation). Weather and disaster AI is operational through the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) AI 4-RP system, which extends weather forecasts from 2 days to 14 days. Identity and security AI is operational through Philippine National Police (PNP) Closed-Circuit Television (CCTV) authentication. Education AI is operational through AGAP, jointly under the Department of Education (DepEd) and the Department of Science and Technology (DOST), supplemented by the DOST – Advanced Science and Technology Institute (DOST-ASTI) research with more than 300

AI research projects. Social-protection AI is operational through the DSWD OpenG2P and OpenSPP systems. The E-CAIR program provides Computer Vision (CV) applications for nutrition and disability assessment.

Language and internal-administration foundations are at earlier stages. iTANONG Filipino NLP provides the Filipino-language NLP infrastructure for internal-management AI applications. Industry AI is anchored by the Business Process Outsourcing / Information Technology and Business Process Management (BPO/IT-BPM) sector, where private sector AI deployment is well established and provides industry capacity that complements public sector AI development.

The 5×5 portfolio assessment (see Chapter 4, Figure 4.1) records the Philippines' deployment maturity at 0.75 in L1 (Foundational AI/ICT) cells covering policy/governance, citizen services, and sectoral domains; L3 (Data and Evidence) at sectoral cell (0.50); L4 (Cross-system Automation) cells across most domains remain uniformly at ≤0.25; and L5 (Sustainability and Trust) is limited; reflecting the early-stage status of cross sectoral AI integration.

Emerging Developments and Direction

Three developments warrant attention as the Philippines operationalizes its AI governance framework.

The NAICRI, established in February 2026, is in early operational phase. NAICRI's mandate to coordinate national AI research and innovation, drawing on multiagency partnerships, is being defined. As the central institutional mechanism for cross sectoral AI capability building, NAICRI's operationalization will determine the scope and pace at which the multiagency coordination model can deliver integrated outcomes.

The NEDA AI Roadmap 2.0 implementation is in active progression. As the national strategic framework, the Roadmap provides direction for cross-ministerial AI deployment, and its implementation cadence will determine the trajectory of public sector AI development across the 2025–30 horizon.

AI talent development and education rollout is in active scale-up phase, building on the AGAP educational AI infrastructure (DepEd and DOST), DOST-ASTI research capacity, and the BPO/IT-BPM industry workforce as foundation. Continued expansion addresses the AI talent and capability development that supports operational deployment across additional sectors.

The binding constraints emerging within this trajectory are electricity and telecommunications networks as computing-resource infrastructure constraints, which limit the scaling of compute-intensive AI deployment. The operational governance frameworks for cross sectoral AI accountability are still in formation following the NAICRI's February 2026 establishment, with the BSP regulation covering the financial sector but cross-government scope still developing.

Forward-looking Recommendations and Speculative Points

Within Strategic Positioning D (Constrained Leapfrog), the Philippines and Bangladesh exhibit distinct emphasis. Bangladesh operates a creativity-under-constraint pathway in which substantive AI deployment is achieved despite resource constraints, with the resulting use-case configuration constituting a source of reverse innovation. The Philippines operates a reform-willing, infrastructure-conditional pathway in which institutional commitment to administrative reform is observable,

foundational citizen-services AI is operational, and operational frameworks are steadily being put in place. Both pathways represent viable Constrained Leapfrog configurations, and the two together demonstrate that the cluster admits internal differentiation by structural condition (institutional reform appetite vs deployment-under-constraint creativity).

The Philippines' distinctive contribution to the eight-economy comparison is the demonstration of strong administrative-reform commitment combined with citizen-services foundation operational at scale. PhilSys, with 90.29 million registrations, demonstrates national-identity infrastructure deployment; eGovPH, with 21+ platforms, demonstrates digital-services aggregation under DICT; and the 4Ps welfare authentication (2.8 million authentications) demonstrates welfare-system AI integration. PAGASA AI 4-RP demonstrates weather-forecast horizon extension from 2 days to 14 days, providing climate-resilience infrastructure. FASSSTER and PhilHealth deployments demonstrate health-sector AI integration. The combination of these operational deployments with strong institutional commitment (NEDA Roadmap 2.0, BSP Regulation, NAICRI establishment) shows that policy formulation and citizen-services foundation can be advanced simultaneously, with operational frameworks for cross sectoral integration following.

The advancement question for the Philippines' public sector productivity, on the evidence assembled in this report, is the operationalization of multiagency coordination through NAICRI and the resolution of infrastructure constraints that condition the scaling of compute-intensive AI deployment. Three pathways are available within the current institutional configuration. NAICRI's operationalization establishes the central mechanism for cross sectoral AI accountability and capability development, complementing the BSP financial-sector regulation by extending governance scope across all government AI deployments. NEDA AI Roadmap 2.0 implementation provides the strategic foundation for translating commitment into operational deployment across additional sectors. AI talent development and education rollout, building on AGAP, DOST-ASTI, and the BPO/IT-BPM industry capacity, addresses the workforce and capability foundation for operational scaling.

Under the current institutional configuration, the Philippines' macro-level AI productivity impact is estimated at 1.15% of GDP (baseline; see Chapter 5 and Appendix C). Under the sensitivity analysis in Appendix C-5 (Table 3), the macro-impact estimate ranges from 0.58% (conservative, $\alpha = 0.15$) to 2.31% (optimistic, $\alpha = 0.60$) depending on the AI productivity coefficient. Whether the Philippines' realized trajectory moves toward the higher end of this range depends on NAICRI operationalization, NEDA AI Roadmap 2.0 implementation, and the resolution of infrastructure constraints (electricity, telecommunications networks) that condition the scaling of compute-intensive AI deployment. The reform-willing institutional position, combined with operational citizen-services foundation, provides the readiness substrate against which infrastructure investment can deliver implementation.

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APPENDIX A
AI ACADEMIC PAPER ANALYSIS (WEB OF SCIENCE)

A-0. Methodology and Search Parameters

Data Source

- **Database:** Web of Science Core Collection (WoS)
- **Publication Year:** 2015–25 (as indexed in WoS at the time of data collection)
- **Document Type:** Article and proceedings paper
- **Subject Classification:** Citation topics (Meso): 4.61 Artificial intelligence and machine learning
- **Data Collection Date:** 25 November 2025
- **Commissioned by:** Niigata University for APO Project No. 25-RC-18-GE-RES-B

Target Economies

Bangladesh, the Republic of China (ROC), India, Japan, the Republic of Korea (ROK), Malaysia, the Philippines, and Thailand.

Counting Methodology

- Papers are attributed to an economy when at least one author lists an institutional affiliation in that economy.
- A single paper coauthored by researchers from multiple target economies is counted once for each economy (nonexclusive counting).
- Institution names are normalized using WoS unified institution name matching.
- International collaboration papers are considered with authors affiliated with institutions in two or more countries.

Nomenclature

- "The ROC" in the WoS database corresponds to "the Republic of China (ROC)" in this report
- "The ROK" in the WoS database corresponds to "the Republic of Korea (ROK)" in this report

A-1. Country-level Summary (Articles and Proceedings for Eight Economies)

Economy	Total Papers	Total Citations	Citations/ Paper	International Collaboration Papers	International Collaboration Rate (%)
Bangladesh	841	11,357	13.50	434	51.6%
ROC	4,521	69,137	15.29	1,920	42.5%
India	19,990	237,163	11.86	4,543	22.7%
Japan	4,097	39,421	9.62	1,464	35.7%
ROK	4,456	55,697	12.50	1,863	41.8%
Malaysia	3,408	45,783	13.43	1,914	56.2%
Philippines	314	2,504	7.97	95	30.3%
Thailand	1,410	12,097	8.58	485	34.4%
Total	39,037	473,159	12.12	12,718	32.6%
Bangladesh	841	11,357	13.50	434	51.6%

Source: Clarivate Analytics, Web of Science Core Collection, November 2025. Commissioned by Niigata University for APO.

A-2. Publication Trends by Year (Articles and Proceedings for 2015–25)

Economy	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
Bangladesh	37	41	57	75	79	89	98	117	88	94	66	841
ROC	523	460	350	387	397	417	463	410	373	467	274	4,521
India	1,503	1,738	1,690	1,700	1,843	1,740	1,818	2,247	1,989	2,240	1,482	19,990
Japan	398	422	448	468	425	410	419	379	269	297	162	4,097
ROK	287	305	366	383	394	408	466	474	472	542	359	4,456
Malaysia	328	286	360	350	326	283	308	320	283	346	218	3,408
Philippines	11	17	17	37	46	23	37	43	26	39	18	314
Thailand	114	125	133	133	128	117	122	205	102	125	106	1,410

Note: 2025 data are partial (January–November). Year-over-year comparisons for 2025 should account for incomplete coverage.

A-3. Bangladesh: Top 60 Institutions by AI Paper Output

Total papers (articles and proceedings): 841

Number of institutions listed: 60

Rank	Institution	Papers
1	University of Dhaka	88
2	Daffodil International University	77
3	Bangladesh University of Engineering & Technology (BUET)	70
4	University of Chittagong	47

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Rank	Institution	Papers
5	Rajshahi University of Engineering & Technology (RUET)	46
6	Khulna University of Engineering & Technology (KUET)	45
7	Jahangirnagar University	41
8	North South University (NSU)	40
9	Bangladesh Rural Advancement Committee BRAC; BRAC University	39
10	United International University (UIU)	34
11	Khulna University	28
12	East West University Bangladesh	25
13	Mawlana Bhashani Science & Technology University	24
13	Hajee Mohammad Danesh Sci & Technol Univ	24
15	Chittagong University of Engineering & Technology (CUET)	21
15	Independent University Bangladesh (IUB)	21
17	Ahsanullah University of Science & Technology (AUST)	20
17	American International University Bangladesh (AIUB)	20
19	University of Rajshahi	19
20	Islamic Univ Technol	18
21	Jagannath Univ	17
21	International Islamic University Chittagong (IIUC)	17
23	Noakhali Science & Technology University (NSTU)	16
23	Bangladesh University of Business & Technology (BUBT)	16
25	International University of Business Agriculture & Technology (IUBAT)	15
25	Mil Inst Sci & Technol	15
25	Southeast Univ	15
28	Bangladesh Univ	12
28	Shahjalal University of Science & Technology (SUST)	12
30	Dhaka University of Engineering & Technology (DUET)	11
31	University of Barishal	10
31	Green Univ Bangladesh	10
33	North Western Univ	9
34	East Delta Univ	8
35	University of Asia Pacific (UAP)	6
35	Pabna Univ Sci & Technol	6
35	University of Science & Technology Chittagong (USTC)	6
35	Jashore Univ Sci & Technol	6

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Rank	Institution	Papers
35	Gopalganj Science & Technology University (GSTU)	6
40	Bangladesh Atomic Energy Commission	5
40	Univ Liberal Arts Bangladesh	5
40	Comilla University	5
40	Dhaka International University (DIU)	5
40	Gono Bishwabidyalay	5
40	City Univ	5
40	Metropolitan University	5
40	Uttara University	5
40	State Univ Bangladesh	5
40	Port City Int Univ	5
40	Patuakhali Sci & Technol Univ	5
40	Univ Informat Technol & Sci	5
52	Bangladesh Agricultural University (BAU)	4
52	Bangabandhu Sheikh Mujibur Rahman Digital Univ	4
52	Begum Rokeya Univ	4
52	Leading Univ	4
52	Islamic University	4
52	Bangladesh Army Univ Sci & Technol	4
58	Asian University for Women	3
58	Metropolitan Univ	3
58	Stamford University Bangladesh	3

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-4. The ROC: Top 60 Institutions by AI Paper Output

Total papers (articles and proceedings): 4,521

Number of institutions listed: 60

Rank	Institution	Papers
1	National Taiwan University of Science & Technology	367
2	National Yang Ming Chiao Tung University	338
3	Yuan Ze University	319
4	National Cheng Kung University	256
5	National Kaohsiung University of Science & Technology	249

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Rank	Institution	Papers
6	Chung Yuan Christian University	223
7	National Taipei University of Technology	212
8	National Yunlin University Science & Technology	198
9	National Sun Yat Sen University	196
10	Asia University Taiwan	175
10	National Taiwan University	175
12	National Central University	163
13	National University Kaohsiung	143
14	Chaoyang University of Technology	136
15	Chang Gung University	134
16	China Medical University Taiwan	101
17	National Taipei University	99
17	National Chung Hsing University	99
19	National Tsing Hua University	98
20	Ming Chuan University	94
20	Tamkang University	94
22	Feng Chia University	89
23	Chang Gung Memorial Hospital	88
24	National Chin-Yi University of Technology	86
25	China Medical University Taiwan; China Medical University Hospital - the ROC	84
26	National Chung Cheng University	80
26	Academia Sinica - Taiwan	80
28	National Dong Hwa University	73
29	Chung Hua University	59
30	National United University	58
31	National Chengchi University	56
32	Chinese Culture University	51
33	National Changhua University of Education	50
34	Soochow University	48
35	Kaohsiung Medical University	47
36	National Taiwan Ocean University	46
36	Aletheia University	46
38	ROC Mil Acad	45
39	National Kaohsiung Normal University	42

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Rank	Institution	Papers
39	National Chi Nan University	42
39	National Penghu University of Science & Technology	42
39	I Shou University	42
43	Tunghai University	41
43	Providence University - Taiwan	41
43	National Formosa University	41
46	Ming Chi University of Technology	39
47	National Ilan University	37
48	National Taichung University of Science & Technology	34
49	Chienkuo Technology University	33
50	Kaohsiung Medical University; Kaohsiung Medical University Hospital	32
51	Industrial Technology Research Institute - Taiwan	30
51	Inst Informat Ind	30
51	Kainan University	30
54	Cent Police Univ	29
54	Fu Jen Catholic University	29
54	National Taiwan Normal University	29
57	Chunghwa Telecom	28
57	National University Tainan	28
59	Hwa Hsia Univ Technol	27
60	Taipei Medical University	26

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-5. India: Top 60 Institutions by AI Paper Output

Total papers (articles and proceedings): 19,990

Number of institutions listed: 60

Rank	Institution	Papers
1	Vellore Institute of Technology (VIT); VIT Vellore	729
2	Thapar Institute of Engineering & Technology	628
3	Vidyasagar University	377
4	SRM Institute of Science & Technology Chennai	368
5	Koneru Lakshmaiah Education Foundation (K L Deemed to be University)	321
6	Amity University Noida	303
7	Jadavpur University	284

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Rank	Institution	Papers
8	Saveetha Institute of Medical & Technical Science; Saveetha School of Engineering	257
9	Vellore Institute of Technology (VIT); VIT Chennai	218
10	Indian Statistical Institute; Indian Statistical Institute Kolkata	214
11	Indian Institute of Technology System (IIT System); Indian Institute of Technology (IIT) Roorkee	205
12	Birla Institute of Technology & Science Pilani (BITS Pilani)	198
13	Indian Institute of Technology System (IIT System); Indian Institute of Technology (IIT) Kharagpur	192
14	Indian Institute of Technology System (IIT System); Indian Institute of Technology (IIT) Indore	183
15	Delhi Technological University	179
16	Indian Institute of Technology System (IIT System); Indian Institute of Technology (Indian School of Mines) Dhanbad	178
17	National Institute of Technology (NIT System); National Institute of Technology Tiruchirappalli	175
18	Anna University; Anna University Chennai	173
19	Lovely Professional University	172
20	National Institute of Technology (NIT System); National Institute of Technology Durgapur	167
21	Graphic Era University	166
22	National Institute of Technology (NIT System); National Institute of Technology Kurukshetra	163
23	Sathyabama Institute of Science & Technology	160
24	Indian Institute of Technology System (IIT System); Indian Institute of Technology (IIT) Delhi	158
25	Bharathiar University	153
26	University of Delhi	152
27	GGS Indraprastha University	151
28	Gandhi Institute of Technology & Management (GITAM)	147
29	Jaypee Institute of Information Technology (JIIT)	146
30	Vel Tech Rangarajan Dr Sagunthala R&D Institute of Science & Technology	144
31	Shanmugha Arts, Science, Technology & Research Academy (SASTRA)	143
32	Manipal Academy of Higher Education (MAHE)	142
33	National Institute of Technology (NIT System); National Institute of Technology Raipur	141
33	Kalinga Institute of Industrial Technology (KIIT)	141
35	Aligarh Muslim University	135
35	University of Petroleum & Energy Studies (UPES)	135
37	Amrita Vishwa Vidyapeetham; Amrita Vishwa Vidyapeetham Coimbatore	134
37	Siksha 'O' Anusandhan University	134
39	Annamalai University	133

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Rank	Institution	Papers
39	Chitkara University, Punjab	133
41	Birla Institute of Technology Mesra	131
42	South Asian University (SAU)	129
43	VIT-AP University	128
44	Indian Institute of Engineering Science Technology Shibpur (IIEST)	126
45	National Institute of Technology (NIT System); National Institute of Technology Calicut	124
46	Vallurupalli Nageswara Rao Vignana Jyothi Institute of Engineering &Technology (VNR VJIET)	123
47	National Institute of Technology (NIT System); National Institute of Technology Warangal	117
48	National Institute of Technology (NIT System); Maulana Azad National Institute of Technology Bhopal	114
49	University of Hyderabad	113
50	Manipal University Jaipur	106
50	International Institute of Information Technology Hyderabad	106
52	National Institute of Technology (NIT System); National Institute of Technology Agartala	105
52	Indian Institute of Science (IISC), Bangalore	105
54	Veer Surendra Sai University of Technology	103
55	Indian Institute of Technology System (IIT System); Indian Institute of Technology (IIT) Kanpur	101
56	Jamia Millia Islamia	100
56	National Institute of Technology (NIT System); National Institute of Technology Silchar	100
58	Jawaharlal Nehru Technological University Hyderabad	99
58	Chandigarh University	99
60	Indian Institute of Technology System (IIT System); Indian Institute of Technology (IIT) Madras	98

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-6. Japan: Top 60 Institutions by AI Paper Output

Total papers (articles and proceedings): 4,097

Number of institutions listed: 60

Rank	Institution	Papers
1	University of Tokyo	310
2	Iwate Prefectural University	178
3	Waseda University	174
4	University of Osaka	164
5	Osaka Metropolitan University	162

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Rank	Institution	Papers
6	RIKEN	152
7	University of Tsukuba	150
8	Japan Advanced Institute of Science & Technology (JAIST)	142
9	Kyushu Institute of Technology	128
10	National Institute of Information & Communications Technology (NICT) - Japan	126
11	University of Aizu	114
12	Institute of Science Tokyo; Tokyo Institute of Technology	99
13	Kyushu University	98
14	Keio University	91
15	Kyoto University	87
16	Hokkaido University	76
17	Research Organization of Information & Systems (ROIS); National Institute of Informatics (NII) - Japan	74
18	Yamaguchi University	70
19	Tokai University	69
20	Hosei University	66
20	NTT, Inc	66
22	Shimane University	62
22	Nagoya University	62
24	Kobe University	60
25	Hiroshima University	59
25	Shibaura Institute of Technology	59
27	Tohoku University	54
28	Tokyo Metropolitan University	52
29	National Institute of Advanced Industrial Science & Technology (AIST)	50
30	University of Electro-Communications - Japan	49
31	Nara Institute of Science & Technology	47
31	University of Hyogo	47
33	Meiji University	44
34	Kindai University (Kinki University)	39
35	Shiga University	36
35	Yokohama National University	36
35	University of Fukui	36
38	NEC Corporation	35

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Rank	Institution	Papers
39	Kansai University	34
39	Nagoya Institute of Technology	34
41	Kanazawa University	31
42	Chiba University	30
43	Tokushima University	29
44	Research Organization of Information & Systems (ROIS); Institute of Statistical Mathematics (ISM) - Japan	28
45	Osaka Institute of Technology	27
45	Tokyo University of Agriculture & Technology	27
45	Hitachi Limited	27
48	Tokyo University of Science	26
48	Josai Int Univ	26
48	Ritsumeikan University	26
51	Nihon University	25
51	Okayama University	25
53	Graduate University for Advanced Studies - Japan	24
53	Japan Science & Technology Agency (JST)	24
53	Shimonoseki City University	24
56	Doshisha University	22
56	KDDI Corporation; KDDI Research, Inc.	22
58	Tokyo Denki University	21
59	University of Kitakyushu	20
60	Chuo University	19

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-7. The ROK: Top 60 Institutions by AI Paper Output

Total papers (articles and proceedings): 4,456

Number of institutions listed: 60

Rank	Institution	Papers
1	Korea University	390
2	Yonsei University	279
3	Sejong University	275
4	Gyeongsang National University	199
5	Sungkyunkwan University (SKKU)	189

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Rank	Institution	Papers
6	Seoul National University (SNU)	183
7	Hanyang University	174
8	Korea Advanced Institute of Science & Technology (KAIST)	173
9	Gachon University	146
10	Dongguk University	131
11	Electronics & Telecommunications Research Institute - Korea (ETRI)	122
12	Kyung Hee University	105
13	Chung Ang University	103
14	Yeungnam University	100
15	Seoul National University of Science & Technology	92
16	Chungbuk National University	90
17	Konkuk University	84
18	Ajou University	83
19	Inha University	81
20	Suwon University	75
21	Jeju National University	74
22	Soongsil University	73
22	Pusan National University	73
24	Kyungpook National University (KNU)	72
25	Pohang University of Science & Technology (POSTECH)	63
26	Ewha Womans University	60
27	Chonnam National University	58
27	Kangwon National University	58
29	Inje University	57
30	Soonchunhyang University	54
30	Pukyong National University	54
32	Chosun University	52
33	Myongji University	49
34	Jeonbuk National University	48
35	Chungnam National University	47
36	Incheon National University	45
37	Wonkwang University	42
37	Kyonggi University	42
39	Gangneung-Wonju National University	41

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Rank	Institution	Papers
39	University of Seoul	41
41	Korea National University of Transportation	37
42	Agency of Defense Development (ADD), Republic of Korea	36
43	Korea Institute of Science & Technology Information (KISTI)	35
43	Kookmin University	35
45	Hankuk University Foreign Studies	34
45	Kumoh National University Technology	34
47	Dankook University	32
48	Hongik University	31
48	Gwangju Institute of Science & Technology (GIST)	31
48	Kongju National University	31
51	Dong A University	28
52	Ulsan National Institute of Science & Technology (UNIST)	27
53	Seokyeong University	25
53	Korea Maritime & Ocean University	25
55	Sangmyung University	23
55	Korea Aerospace University	23
55	Kwangwoon University	23
58	Sookmyung Women's University	21
58	University of Ulsan	21
60	Sungshin Women's University	20

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-8. Malaysia: Top 60 Institutions by AI Paper Output

Total papers (article and proceedings): 3,408

Number of institutions listed: 60

Rank	Institution	Papers
1	Universiti Teknologi Malaysia	447
2	Universiti Kebangsaan Malaysia	398
3	Universiti Sains Malaysia	390
4	Universiti Malaya	327
5	Universiti Teknologi MARA	259
6	University of Tun Hussein Onn Malaysia	211

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Rank	Institution	Papers
7	Universiti Putra Malaysia	188
8	Universiti Teknologi Petronas	169
9	Universiti Utara Malaysia	151
10	Universiti Malaysia Terengganu	150
11	Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA)	141
12	Multimedia University	83
13	International Islamic University Malaysia	82
14	Universiti Pendidikan Sultan Idris	72
15	UCSI University	69
16	Universiti Malaysia Perlis	61
17	Universiti Malaysia Sabah	57
18	Universiti Tunku Abdul Rahman (UTAR)	56
19	Universiti Sultan Zainal Abidin	53
20	University Teknikal Malaysia Melaka	50
21	University of Malaysia Sarawak	49
22	Universiti Tenaga Nasional	48
23	Sunway University	41
24	Taylor's University	39
25	INTI International University	38
26	Monash University; Monash University Malaysia	35
27	Univ Teknol MARA	34
28	Asia Pacific University of Technology & Innovation	31
28	University of Nottingham Malaysia	31
30	University of Kuala Lumpur	30
30	Institute Penyelidikan Perhutanan Malaysia	30
32	Universiti Pertahanan Nasional Malaysia	25
33	Universiti Malaysia Kelantan	24
34	Xiamen University Malaysia Campus	22
35	Universiti Teknologi Malaysia; University Teknikal Malaysia Melaka	21
35	University Teknikal Malaysia Melaka; Universiti Teknologi Malaysia	21
35	Univ Teknol MARA UiTM	21
38	Universiti Sains Islam Malaysia	19
39	Universiti Kebangsaan Malaysia; Universiti Malaysia Sabah	15
39	Univ Tun Hussein Onn Malaysia	15

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Rank	Institution	Papers
41	Management Science University	14
42	Universiti Malaysia Sabah; Universiti Kebangsaan Malaysia	13
43	Univ Malaysia Sabah	12
44	Swinburne University of Technology; Swinburne University of Technology Sarawak	10
44	Univ Tun Hussein Onn Malaysia UTHM	10
46	UNITAR International University	8
47	Lincoln University College	7
47	Saito Univ Coll	7
47	Tunku Abdul Rahman University College (TAR UC)	7
47	Univ Pendidikan Sultan Idris UPSI	7
51	Univ Tenaga Nasl UNITEN	6
51	Quest International University Perak	6
51	Wawasan Open Univ	6
54	SEGi University	5
54	MIMOS Berhad	5
54	Al Madinah Int Univ	5
54	Swinburne University of Technology Sarawak; Swinburne University of Technology	5
54	City University Malaysia	5
59	Intel Corporation; INTEL MALAYSIA	4
59	Univ Teknol MARA Negeri Sembilan	4

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-9. The Philippines: Top 60 Institutions by AI Paper Output

Total papers (article and proceedings): 314

Number of institutions listed: 60

Rank	Institution	Papers
1	De La Salle University	55
2	Technological Institute of the Philippines	29
3	Cebu Technological University	28
4	University of the Philippines System; University of the Philippines Diliman	20
5	Mindanao State University System; Mindanao State University-IIT	19
6	University of San Carlos	18
7	Mapua University	13

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Rank	Institution	Papers
8	Ateneo de Manila University	12
9	University of the Philippines System; University of the Philippines Los Banos	10
10	Emilio Aguinaldo Coll	9
11	Technological University of the Philippines	8
11	University of Santo Tomas	8
13	University of the Philippines System; University of the Philippines Open University	7
13	Univ Cordilleras	7
13	National University Philippines	7
16	Mindanao State University System; Mindanao State University-Main	6
16	Lyceum of the Philippines University	6
18	Philippine Christian Univ	5
18	University of the Philippines System; University of the Philippines Cebu	5
18	Western Mindanao State Univ	5
18	Far Eastern University	5
22	West Visayas State Univ	4
22	University of the Philippines System; University of the Philippines Manila	4
22	University of Science & Technology of Southern Philippines (USTP)	4
25	MSU Tawi Tawi Coll Technol & Oceanog	3
25	Bukidnon State Univ	3
25	Univ Perpetual Help Syst DALTA	3
25	Univ Mindanao	3
25	Nueva Ecija University of Science & Technology	3
25	Polytechnic University of the Philippines	3
31	Bulacan State University	2
31	Caraga State Univ	2
31	Southern Luzon State University	2
31	Romblon State Univ	2
31	Quirino State Univ	2
31	Technological Institute of the Philippines; Far Eastern University	2
31	Asian Institute of Management	2
31	Cagayan State University	2
31	La Consolac Coll Manila	2
31	University of San Jose - Recoletos	2
31	Angeles University Foundation	2

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Rank	Institution	Papers
31	Adamson University	2
31	Catanduanes State University	2
31	Central Mindanao University	2
31	Abra State Inst Sci & Technol	2
31	Batangas State University	2
31	Jose Rizal University	2
31	Int Sch Asia & Pacific	2
31	La Salle Univ	2
31	Bohol Isl State Univ	2
51	Carlson Wagonlit Travel	1
51	Bulacan Agr State Coll	1
51	CGIAR; International Rice Research Institute (IRRI)	1
51	Asiatech Sta Rosa	1
51	Caraga State Univ Cabadbaran Campus	1
51	Adv Sci & Technol Inst	1
51	Adamson Univ	1
51	Makati Sci High Sch	1
51	MSU Gen Santos	1
51	Lyceum Philippines Univ Manila	1

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-10. Thailand—Top 60 Institutions by AI Paper Output

Total papers (Article & Proceedings): 1,410

Number of institutions listed: 60

Rank	Institution	Papers
1	University of Phayao	168
2	Chiang Mai University	150
3	Chulalongkorn University	117
4	Prince of Songkla University	110
5	Khon Kaen University	100
6	Thammasat University	97
7	King Mongkuts Institute of Technology Ladkrabang	91
8	King Mongkuts University of Technology Thonburi	77

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Rank	Institution	Papers
9	Mahidol University	68
10	King Mongkuts University of Technology North Bangkok	62
11	Pibulsongkram Rajabhat University	58
12	Kasetsart University	55
13	Mae Fah Luang University	46
14	Rajamangala University of Technology Thanyaburi	38
15	Naresuan University	37
16	Mahasarakham University	30
17	Dhurakij Pundit University	24
17	National Science & Technology Development Agency - Thailand; National Electronics & Computer Technology Center (NECTEC)	24
19	Rajamangala University of Technology Isan	23
20	Krirk University	21
21	Nakhon Sawan Rajabhat University	18
21	Assumption University Thailand	18
23	Burapha University	16
24	Maejo University	15
24	Ramkhamhaeng University	15
26	Panyapiwat Inst Management	14
27	National Institute of Development Administration - Thailand	13
28	Rajamangala Univ Technol Lanna Phitsanulok	12
29	Rangsit University	11
29	Walailak University	11
31	Chiang Mai Rajabhat University	10
31	Asian Institute of Technology	10
31	Phuket Rajabhat University	10
34	Suranaree University of Technology	9
34	Ctr Excellence Math	9
36	Songkhla Rajabhat University	8
36	Thai Nichi Inst Technol	8
38	Srinakharinwirot University	7
39	Silpakorn University	6
39	Mahanakorn University of Technology	6
39	CHE	6

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Rank	Institution	Papers
39	Rajamangala University of Technology Suvarnabhumi	6
39	Valaya Alongkorn Rajabhat University	6
39	Ubon Ratchathani University	6
45	Suratthani Rajabhat University	5
45	Royal Soc Thailand	5
45	Chiang Rai Rajabhat University	5
48	Geoinformat & Space Technol Dev Agcy GISTDA	4
48	Nakhon Pathom Rajabhat University	4
48	Bansomdejchaopraya Rajabhat University	4
48	Suan Sunandha Rajabhat University	4
48	University Thai Chamber Commerce	4
48	Navaminda Kasatriyadhiraj Royal Air Force Acad	4
48	Webster Univ	4
48	King Mongkuts University of Technology North Bangkok; King Mongkuts University of Technology Thonburi	4
48	Ministry of Public Health - Thailand	4
57	Buriram Rajabhat University	3
57	King Mongkuts University of Technology Thonburi; King Mongkuts University of Technology North Bangkok	3
57	Natl Astron Res Inst Thailand	3
57	Royal Thai Air Force Acad	3

Source: Web of Science Core Collection, November 2025. Full institution data from WoS unified organization-enhanced names.

A-11. Comparative Analysis

Publication Volume

India dominates the sample with 19,990 papers or 51.2% of the combined eight-economy total. The ROC, the ROK, and Japan form a second tier at approximately 4,000–4,500 papers each. Malaysia (3,408 papers) sustains a substantial output despite limited patent activity. Thailand (1,410 papers), Bangladesh (841 papers), and the Philippines (314 papers) represent smaller but growing research bases.

Research Impact (Citations per Paper)

The ROC leads in research impact with 15.29 citations per paper, indicating that the ROC's research, while smaller in volume than India's, generates disproportionate global influence. Bangladesh (13.50 citations) and Malaysia (13.43 citations) also demonstrate strong per-paper impact. Japan (9.62 citations) shows the lowest citations per paper among the eight economies, potentially reflecting a higher proportion of domestically oriented or Japanese-language publications.

International Collaboration

Malaysia exhibits the highest international collaboration rate (56.2%), suggesting a research ecosystem deeply integrated with global partners. Bangladesh (51.6%) similarly shows high

international engagement, reflecting reliance on international partnerships for research capacity. India's collaboration rate (22.7%) is the lowest, consistent with the scale of India's domestic research base, as a large research ecosystem can sustain substantial internal collaboration without proportionate international co-authorship.

Institutional Concentration

The institutional distribution reveals structural differences in research ecosystems. In India, the top 60 institutions account for a relatively modest share of total output, reflecting a highly distributed research landscape across thousands of institutions. In Bangladesh and the Philippines, by contrast, the top institutions account for a larger share, reflecting concentrated research capacity in a smaller number of universities.

A-12. Methodological Notes

1. **WoS Coverage:** The Web of Science Core Collection indexes peer-reviewed journals and conference proceedings. Coverage varies by field and region; some domestically published journals, particularly those in local languages, may not be fully represented.

2. **Citation Topics Classification:** The Citation Topics (Meso) 4.61 classification uses citation network analysis to group publications by research theme. This approach captures AI-relevant publications more comprehensively than keyword-based searches but may include some tangentially related papers.

3. **International Collaboration Definition:** A paper is classified as internationally collaborative if it includes authors with institutional affiliations in two or more countries. This does not distinguish between substantial intellectual collaboration and nominal affiliations.

4. **Institution Name Normalization:** WoS applies automated institution name matching (Unified Organization-Enhanced). While generally accurate, some institutions may be represented under variant names, potentially affecting institution-level rankings.

5. **Temporal Coverage:** Data for 2025 covers publications indexed in WoS as of 25 November 2025. The 2025 counts are therefore incomplete and should not be interpreted as full-year figures. Year-over-year growth rates calculated for 2025 will underestimate actual annual output.

6. **Citation Aging:** Older publications have had more time to accumulate citations. Cross-year citation comparisons should account for this effect; the citations-per-paper metric reported here does not adjust for publication year.

Source: Web of Science Core Collection (WoS); document type: article and proceedings paper; period: 2015–25; topic: citation topics (Meso) 4.61 artificial intelligence and machine learning.

APPENDIX B
AI PATENT ANALYSIS (SENSEDRIVE × CLARIVATE DERWENT INNOVATION)

B-0. Methodology and Search Parameters

Data Source

- **Database:** Derwent Innovation (DWPI) via SenseDrive Corp.
- **Record Type:** Derwent World Patents Index (DWPI) family-level records (patent publications and laid-open applications)
- **Target Economies:** The ROC, India, Japan, the ROK, Malaysia, the Philippines, and Thailand (seven economies); Bangladesh excluded due to insufficient patent activity
- **Analysis Period:** Priority year (earliest): 2015 to latest records as of analysis date (10 years)
- **Analysis Date:** 11 November 2025
- **Commissioned for:** The APO, Project No. 25-RC-18-GE-RES-B

Search Strategy

The patent population was constructed from three complementary search sets to ensure comprehensive coverage of AI-related technologies:

Search Set	Description	IPC/CPC Codes	Records
Set A: AI Core Technologies	Core AI classifications	G06N3/, G06N5/, G06N7/, G06N20/	111,843
Set B: AI-Related Technologies	Extended AI classifications (IPC/CPC/FI)	A61B1/000096, B60T8/174*, F02D41/14310, etc.	60,337
Set C: AI Keywords × ICT Classifications	Keyword-based AI terms intersected with ICT technology classifications	Machine learning, deep learning, neural network, etc. × ICT IPC/CPC	105,415
Total (A ∪ B ∪ C)	Union of all three sets	—	194,396

Keyword Search Terms (Set C)

The keyword search terms are: machine learning, learning algorithm, supervised learning/training, unsupervised learning/training, semi-supervised learning, reinforcement learning, deep learning, neural network (convolutional, recurrent, generative adversarial, transformer, attention mechanism, BERT, GPT, etc.), natural language processing, computer vision, speech recognition, image recognition, object detection, semantic segmentation, anomaly detection, recommendation system, knowledge graph, transfer learning, federated learning, explainable AI, autonomous agent, and multiagent system.

Target Economy Filtering

Patent families were filtered by target application country codes: TW (ROC), IN (India), JP (Japan), KR (ROK), MY (Malaysia), PH (Philippines), and TH (Thailand).

Counting Methodology

- Analysis unit: Patent family (DWPI family-level), not individual patent documents;
- Priority year: Earliest priority date within each family;
- Recent filing ratio: Proportion of families with priority year 2020–25 relative to total 2015–25;

Note: 2023–25 data are preliminary due to patent application lag (up to 2.5 years from priority filing to publication in international databases).

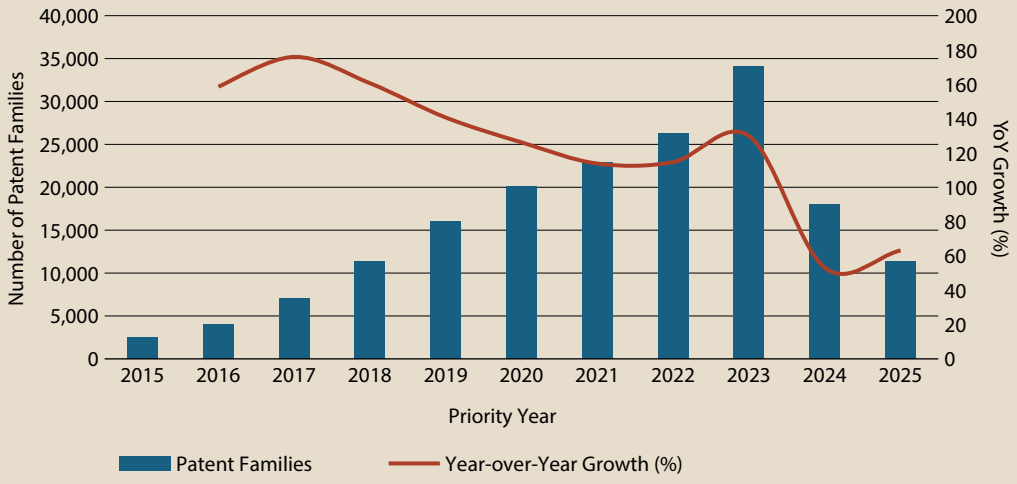
B-1. Global Trend: Total Patent Families by Priority Year (Earliest)

Priority Year	Patent Families
2015	2,530
2016	4,014
2017	7,065
2018	11,349
2019	15,959
2020	20,130
2021	22,901
2022	26,252
2023	34,080
2024	18,057
2025	11,396
Total	**194,396**

Note: Patent families were counted at the family level (DWPI); 2023–25 data are preliminary due to patent application lag; analysis is based on priority year (earliest).
Source: Derwent Innovation via SenseDrive Corp., November 2025.

FIGURE B-1

GLOBAL AI PATENT FAMILIES BY PRIORITY YEAR.



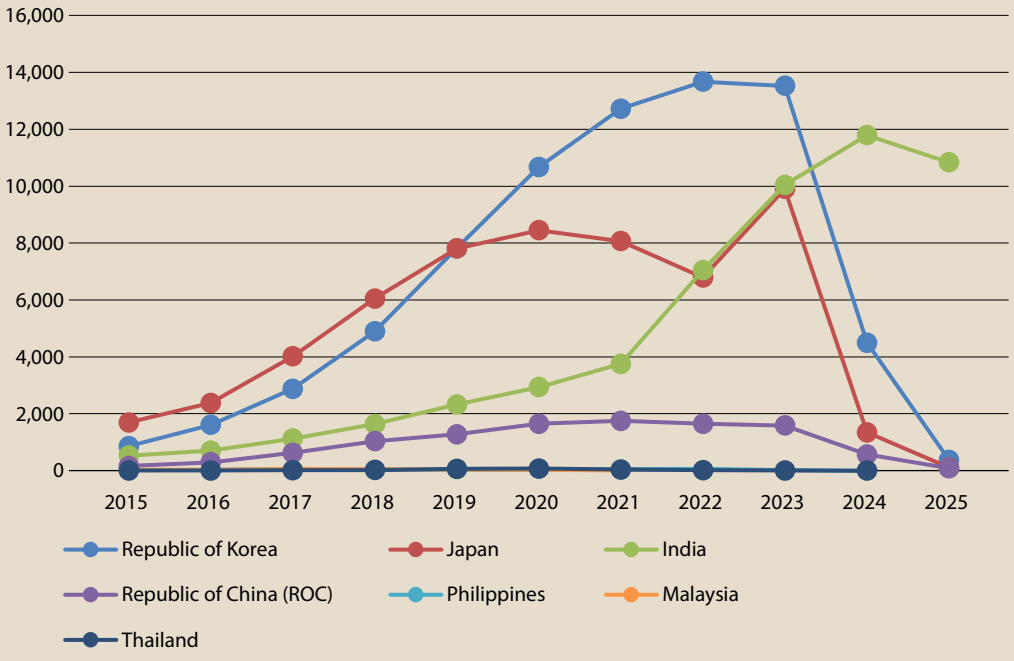
B-2. Patent Applications by Target Economy and Priority Year

Target Economy	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total	Recent Ratio
ROC	162	292	624	1,033	1,274	1,646	1,750	1,647	1,586	569	81	10,664	52.8%
India	526	701	1,124	1,637	2,321	2,937	3,751	7,041	10,040	11,793	10,835	52,706	82.5%
Japan	1,691	2,380	4,016	6,050	7,809	8,453	8,069	6,790	9,902	1,343	108	56,611	46.3%
ROK	859	1,608	2,876	4,893	7,815	10,673	12,721	13,672	13,528	4,496	374	73,515	60.9%
Malaysia	29	31	65	51	47	31	12	–	–	–	–	266	4.5%
Philippines	23	30	69	46	44	28	52	65	24	2	–	383	37.3%
Thailand	6	7	18	21	62	74	41	17	4	1	–	251	25.1%

Note: Values represent the number of patent families (DWPI) where the indicated economy is listed as a target application country; figures reflect applications designating each economy, not applicant nationality; recent application ratio=families with priority year 2020–25 as a proportion of total 2015–25.
Source: Derwent Innovation via SenseDrive Corp., November 2025.

FIGURE B-2

AI PATENT APPLICATIONS BY TARGET ECONOMY × PRIORITY YEAR.



B-3. Use-case Analysis by Economy: ThemeScape Map Summary

ThemeScape is a visual text-mining tool by Clarivate that clusters patent documents by technological theme. The tool analyzes patent specifications using statistical algorithms, displaying word frequencies as topographic "elevations" and word co-occurrence proximity as geographic "distance." Each "peak" or "mountain range" on the resulting map represents a cluster of patents sharing common technological themes. The analysis below summarizes the dominant and distinctive application areas for each economy.

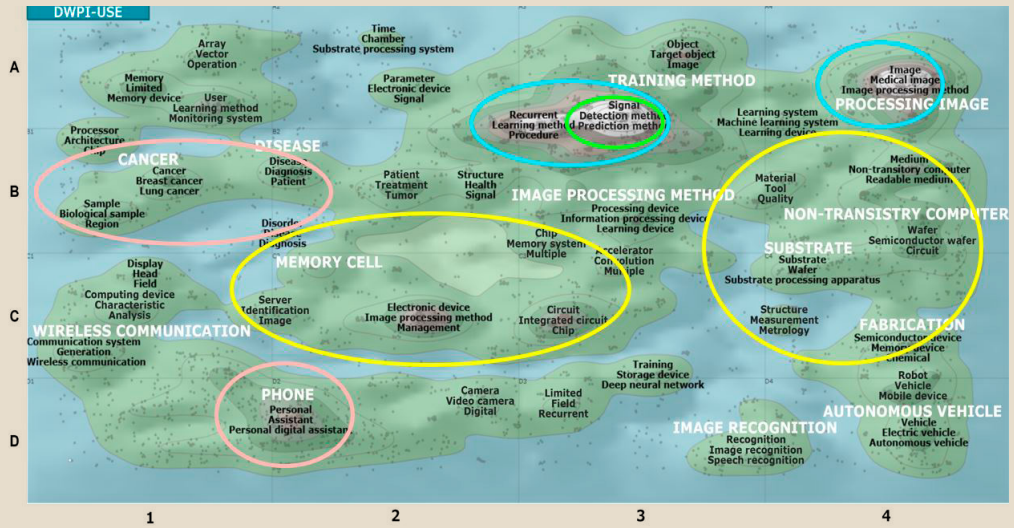
Economy	ThemeScape Analysis Summary
ROC	• Dominant clusters: image processing, detection and prediction technologies (blue borders) • Distinctive areas: semiconductors and circuit design, wireless communication technologies—closely tied to TSMC's foundational business and the ROC's semiconductor industry leadership (yellow borders) • Common areas shared with other economies: medical imaging, autonomous driving
India	• Dominant clusters: IoT-based sensing and prediction technologies (blue borders) • Distinctive areas: power generation, crop agriculture, educational institution applications (yellow borders) • Common areas shared with other economies: medical imaging, natural language processing, autonomous driving
Japan	• Dominant clusters: image processing, pattern data construction for decision-making and automation, vehicle-related applications (blue borders) • Distinctive areas: speech recognition—Japanese language processing has unique characteristics compared to Western languages, requiring specialized NLP approaches (yellow borders) • Common areas shared with other economies: medical imaging, quality inspection
ROK	• Dominant clusters: image processing, detection technologies for quality management (blue borders) • Distinctive areas: smart city applications (a national policy priority), memory, mobile phones, vehicles—reflecting Samsung, Hyundai, and other major conglomerates' business domains (yellow borders) • Common areas: medical imaging, natural language processing
Malaysia	• Dominant clusters: supply-demand forecasting, image detection, medical support technologies (blue borders) • Distinctive areas: oil and natural gas plant operations, casino applications (yellow borders) • Common areas shared with other economies: medical imaging, autonomous driving
Philippines	• Dominant clusters: authentication and control frameworks, image recognition (blue borders) • Distinctive areas: detection of fruits and plants in agricultural plantations, casino management systems (yellow borders) • Notable: ThemeScape text mining identified zero public sector-relevant AI use cases—the only economy among seven where this pattern emerges
Thailand	• Dominant clusters: data processing in electronics and automotive sectors (blue borders) • Distinctive areas: sewage and waste treatment applications, poultry health monitoring (yellow borders) • Common areas shared with other economies: medical imaging, quality inspection

Source: SenseDrive Corp. × Clarivate ThemeScape Analysis (December 2025); blue borders=high-density clusters; yellow borders=distinctive/unique regional characteristics.

The ROC

FIGURE B-3.1

THE ROC: THEMESCAPE AI PATENT USE-CASE LANDSCAPE.



Dominant clusters (blue): Image processing, detection and prediction technologies.

Distinctive areas (yellow): Semiconductor and circuit design, and wireless communication technologies—closely tied to TSMC's foundational business and the ROC's semiconductor industry leadership. These clusters are prominent and distinctive, reflecting the economy's core technological specialization.

Common areas (red): Medical imaging, personal assistants, smartphone device operations.

Public sector relevance: No keywords directly indicating public sector applications are visible. However, within the "Detection Method / Prediction Method" cluster, patent specifications covering underground pipe leakage detection using acoustic data analysis were identified—a technique applicable to water infrastructure maintenance and public utility management.

India

Dominant clusters (blue): IoT-based sensing and prediction technologies.

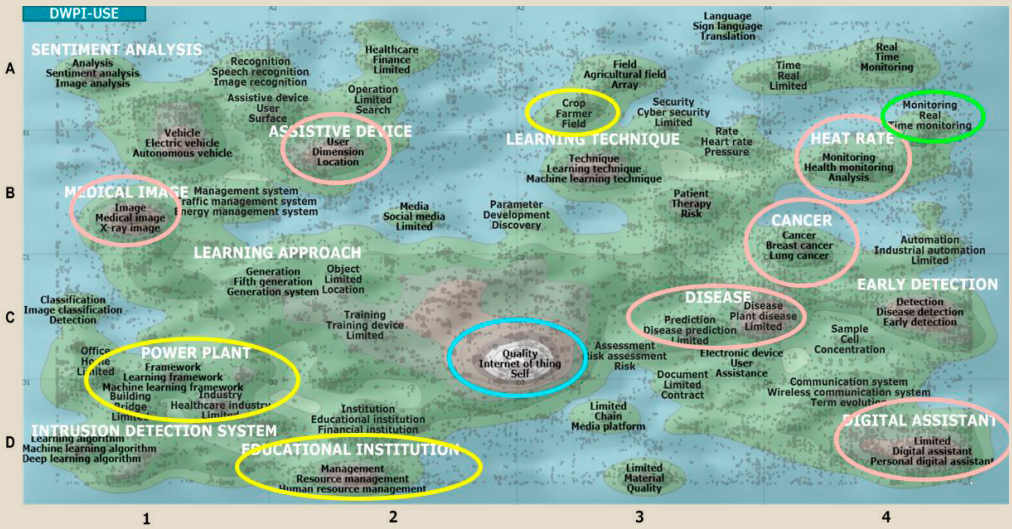
Distinctive areas (yellow): Power generation, crop agriculture, educational institution applications—reflecting India's economic priorities in energy, agriculture, and human capital development.

Common areas (red): Medical imaging, personal assistants, smartphone device operations.

Public sector relevance: No keywords directly indicating public sector applications are visible. However, within the "Monitoring" cluster, patent specifications covering machine-learning-based weather prediction, soil analysis, and environmental monitoring for disaster prevention, traffic management, and urban planning were confirmed—indicating substantial relevance to public administration and governance.

FIGURE B-3.2

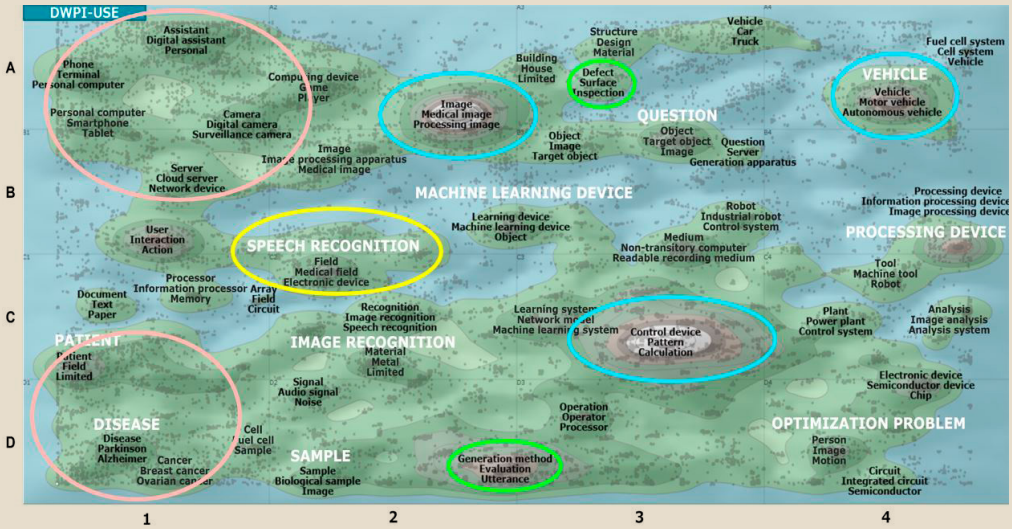
INDIA: THEMESCAPE AI PATENT USE-CASE LANDSCAPE.



Japan

FIGURE B-3.3

JAPAN: THEMESCAPE AI PATENT USE-CASE LANDSCAPE.



Dominant clusters (blue): Image processing, pattern data construction for decision-making and automation, vehicle-related applications.

Distinctive areas (yellow): Speech recognition—Japanese language processing has unique characteristics compared with Western languages, and domestic firms (alongside global corporations) have invested substantially in Japanese-specific NLP research and development.

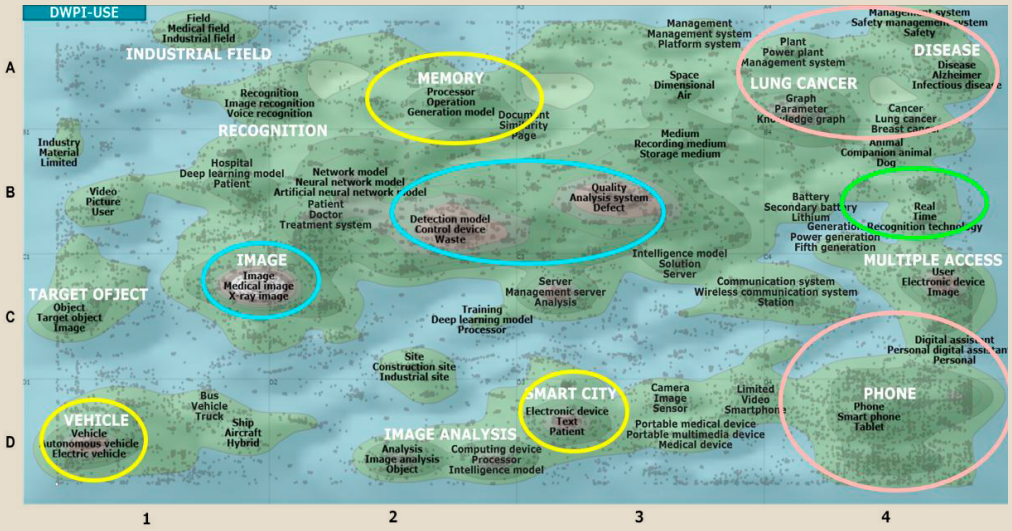
Common areas (red): Medical imaging, personal assistants, and smartphone device operations.

Public sector relevance: No keywords directly indicating public sector applications are visible. However, within the "Surface Inspection" cluster, patent specifications covering damage assessment of public infrastructure (roads, tunnels, dams) using image similarity comparison techniques were identified. Within the "Evaluation" cluster, machine-learning-based people-flow prediction for transport infrastructure optimization was confirmed—indicating applicability to infrastructure maintenance and urban planning.

The ROK

FIGURE B-3.4

THE ROK: THEMESCAPE AI PATENT USE-CASE LANDSCAPE.



Note: Due to ThemeScape functional constraints above 60,000 records, the analysis for the ROK covers 2020–25 patents only (55,464 families).

Dominant clusters (blue): Image processing and detection technologies for quality management.

Distinctive areas (yellow): Smart city applications (a national policy priority), memory semiconductors, mobile phones, and vehicle-related AI—reflecting the business domains of Samsung, SK Hynix, and Hyundai Motor, the ROK's leading conglomerates. These industrial clusters dominate the patent landscape.

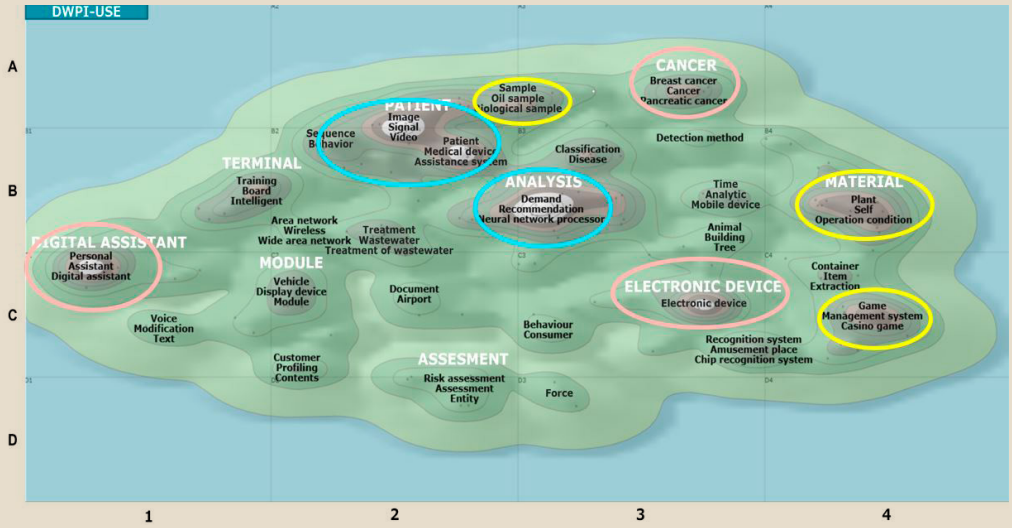
Common areas (red): Medical imaging, personal assistants, and smartphone device operations.

Public sector relevance: No keywords directly indicating public sector applications are visible. However, within the "Real-Time Recognition Technology" cluster, patent specifications referencing precipitation prediction data and historical water level data for learning-model-based flood forecasting were identified—indicating potential applicability to disaster management and public safety infrastructure.

Malaysia

FIGURE B-3.5

MALAYSIA: THEMESCAPE AI PATENT USE-CASE LANDSCAPE.



Dominant clusters (blue): Supply-demand forecasting, image detection, and medical support technologies.

Distinctive areas (yellow): Oil and natural gas plant operations, casino applications—reflecting Malaysia's petroleum industry (Petronas) and entertainment sector.

Common areas (red): Medical imaging, personal assistants, and smartphone device operations.

Public sector relevance: No keywords indicating public sector AI applications were identified in the patent landscape. Malaysia's AI patent base (266 families) is small relative to regional peers, and the patent landscape is dominated by private sector industrial applications rather than public administration technologies.

The Philippines

Dominant clusters (blue): Authentication and control frameworks, and image recognition.

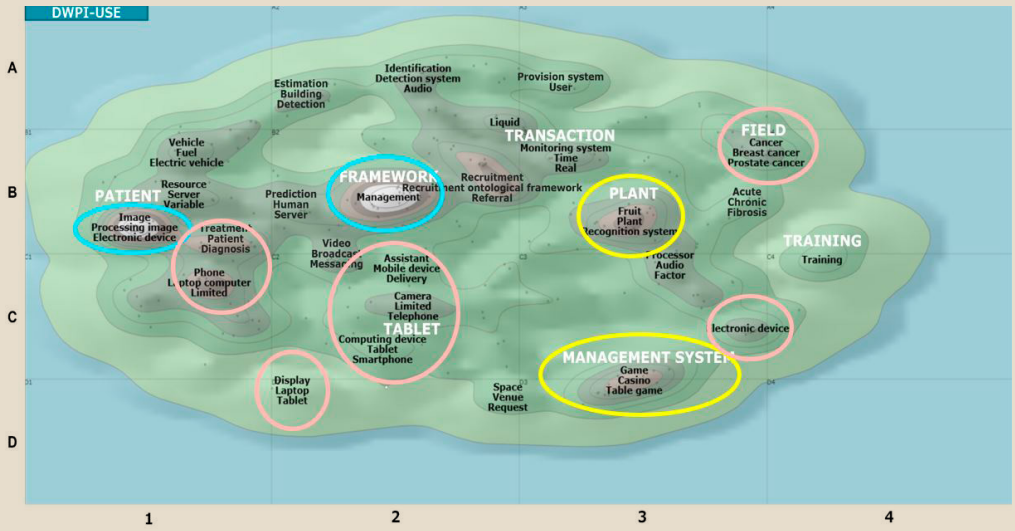
Distinctive areas (yellow): Detection of fruits and plants in agricultural plantations, casino management systems—reflecting the Philippines' agricultural sector and entertainment industry.

Common areas (red): Medical imaging, personal assistants, and smartphone device operations.

Public sector relevance: No keywords indicating public sector AI applications were identified in the patent landscape. This is the only economy among the seven analyzed where ThemeScape text mining detected zero public sector-relevant patent clusters—a finding consistent with the Philippines' constrained-leapfrog scenario, where public sector AI innovation occurs through operational deployment rather than patented technology development.

FIGURE B-3.6

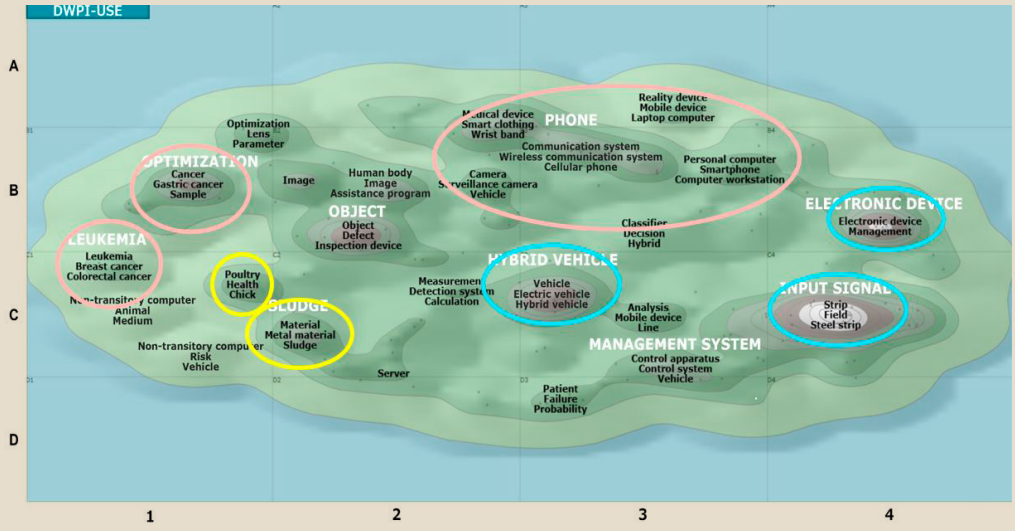
THE PHILIPPINES: THEMESCAPE AI PATENT USE-CASE LANDSCAPE.



Thailand

FIGURE B-3.7

THAILAND: THEMESCAPE AI PATENT USE-CASE LANDSCAPE.



Dominant clusters (blue): Data processing in electronics and automotive sectors.

Distinctive areas (yellow): Sewage and waste treatment applications, poultry health monitoring—reflecting Thailand's environmental management priorities and agricultural sector (particularly poultry farming, a major export industry).

Common areas (red): Medical imaging, personal assistants, and smartphone device operations.

Public sector relevance: No keywords indicating public sector AI applications were identified in the patent landscape. Thailand's AI patent base (251 families) is the smallest among the seven economies analyzed. Like the Philippines and Malaysia, Thailand's public sector AI innovation occurs through deployment of imported or adapted technologies rather than domestic patented inventions.

B-4. Methodological Notes and Limitations

1. **Family-level counting:** All analyzes use patent family-level data (DWPI), not individual patent document counts. A patent family groups all related applications across jurisdictions into a single record, avoiding double counting of the same invention filed in multiple countries.

2. **Priority year basis:** Analysis uses the earliest priority date within each family. This reflects the date of initial invention disclosure rather than the publication date, providing a more accurate temporal signal of innovation activity.

3. **ThemeScape limitations:** ThemeScape text mining analyzes patent specification text (titles, abstracts, claims) in English. Patents originally filed in non-English languages are analyzed through DWPI's English-language abstracts, which may introduce translation-related clustering artifacts. For the ROK, the ThemeScape analysis covers 2020–2025 only (55,464 families) due to the tool's processing constraint above 60,000 records.

4. **Bangladesh exclusion:** Bangladesh is excluded from all patent-based analyzes because the annual number of patent filings is approximately 300 and is not covered in the DWPI database.

5. **Public sector identification:** ThemeScape identifies technology clusters through unsupervised text mining of patent specifications. Public sector relevance was assessed by manual review of cluster keywords and representative patent specifications. The absence of explicit public sector keywords does not necessarily indicate the absence of technologies to the public sector; rather, it reflects the patent system's orientation toward commercial and industrial application.

APPENDIX C
ECONOMIC IMPACT ESTIMATION—DETAILED CALCULATIONS

C-0. Mathematical Derivation

This section establishes the theoretical foundation for the economic impact formula used throughout this report. The derivation proceeds from the standard Cobb–Douglas production function and demonstrates that the formula in Section C-1 is not an ad hoc construction but a first-order approximation grounded in neoclassical production theory.

C-0.1 Production Function Assumptions

We begin with a standard Cobb–Douglas production function for the aggregate economy:

$$Y = A \cdot K^{\beta} \cdot L^{1-\beta}$$

where Y = aggregate output (GDP); A = total factor productivity (TFP); K = capital stock; L = aggregate labor input; β = capital income share; 1-β = labor income share.

Under competitive factor markets, the wage equals the marginal product of labor:

$$w = \frac{\partial Y}{\partial L} = (1-\beta) \cdot \frac{Y}{L}$$

Total labor compensation in the economy is therefore:

$$w \cdot L = (1-\beta) \cdot Y$$

Defining the labor income share as LS=(1-β), we obtain:

$$w \cdot L = LS \cdot GDP \quad \cdots (1)$$

This is the identity that connects the ILO ILOSTAT labor income share statistic to the Cobb–Douglas structural parameter. The labor share is not merely a descriptive ratio; it is the output elasticity of labor under Cobb–Douglas.

C-0.2 Decomposition of Public sector Labor Cost

Let r_{gov} denote the fraction of the total labor force employed in public administration (ILO ILOSTAT, ISIC Rev.4, Section O). Under the simplifying assumption that public sector wages approximate the economy-wide average, the total public sector labor cost is:

$$W_{gov} = w \cdot L_{gov} = w \cdot r_{gov} \cdot L = LS \cdot GDP \cdot r_{gov} \quad \cdots (2)$$

This represents the share of national output allocated to compensating public sector labor.

C-0.3 AI Productivity Effect

Let α denote the AI productivity coefficient—the fraction of public sector labor costs that can be eliminated through AI-driven automation. This coefficient is drawn from the OECD's estimated range of 0.25–0.6% of GDP for AI-driven public sector productivity gains (OECD, 2024). The baseline value α=0.3 represents a deliberately conservative coefficient below the midpoint of this range.

The economic value of AI-driven labor cost savings in the public sector is:

$$\Delta W = \alpha \cdot W_{gov} = \alpha \cdot LS \cdot GDP \cdot r_{gov} \quad \cdots (3)$$

Expressed as a percentage of gross national income (GNI), the macro-level impact is:

$$Impact(\%) = \frac{GDP \times LS \times r_{gov} \times \alpha}{GNI} \times 100 \quad \cdots (4)$$

This is the formula applied uniformly across all eight economies in the subsequent sections. Every term has a precise theoretical interpretation:

Term	Theoretical Meaning	Empirical Source
GDP×LS	Total labor compensation (Eq. 1)	World Bank GDP × ILO labor share
× r_gov	Public sector share of labor (Eq. 2)	ILO public employment ratio
× α	AI-substitutable fraction (Eq. 3)	OECD productivity estimate
÷ GNI	Normalization to national income	World Bank GNI

C-0.4 Three Theorems

Theorem 1 (Ranking Invariance): The ranking of economies by Impact is invariant to the choice of α.

Proof. For any two economies i and j:

$$\frac{Impact_i}{Impact_j} = \frac{GDP_i \cdot LS_i \cdot r_{gov,i}/GNI_i}{GDP_j \cdot LS_j \cdot r_{gov,j}/GNI_j}$$

The coefficient α cancels from numerator and denominator, as it is a common multiplicative constant applied to all economies. Therefore, the ratio—and hence the ranking—is independent of α.

Implication: Whether the OECD estimate is 0.15 or 0.60, the finding that the ROK ranks highest and Bangladesh lowest is mathematically guaranteed. The sensitivity analysis in Section C-5 confirms this empirically, and this theorem establishes it analytically.

Theorem 2 (Σ-only Lower Bound). The estimate in Equation (4) represents a strict lower bound on the total economic value of public sector AI.

Proof. Decompose the total value of public sector AI into three dimensions aligned with the Σ-Θ-Λ framework:

$$V_{total} = V_\Sigma + V_\Theta + V_\Lambda$$

Where, $V_\Sigma = \Delta W$ (direct labor cost savings from efficiency gains); $V_\Theta \geq 0$ (economic value of improved accountability—reduction in fraud, corruption costs, compliance failures, and citizen

distrust that generates avoidance behavior); $V_\Lambda \geq 0$ (economic value of improved resilience—reduction in expected losses from crises, system failures, and institutional fragility).

Since $V_\Theta \geq 0$ and $V_\Lambda \geq 0$ by definition (improved accountability and resilience cannot reduce economic value):

$$V_{total} \geq V_\Sigma = \Delta W$$

Therefore *Impact*(%) as defined in Equation (4) is a lower bound on total AI value.

Implication: The estimates in this report (0.52%–1.68% GDP) can be cited as conservative lower bounds. The full economic value, incorporating accountability and resilience dimensions, is strictly larger. This provides a rigorous response to the objection that the estimates appear small relative to task-level efficiency gains.

Theorem 3 (Structural Determinism). Cross-country variation in Impact is determined entirely by three structural parameters: *LS*, r_{gov}, and *GDP/GNI*.

Proof. Define the structural index:

$$S_i = \frac{GDP_i \cdot LS_i \cdot r_{gov,i}}{GNI_i}$$

Then $Impact_i = \alpha \cdot S_i \times 100$. Since α is constant across economies, all cross-country variation is captured by S_i. The three components of S_i —labor share, public servant ratio, and the GDP-to-GNI ratio—are determined by labor market structure, fiscal policy, and international capital flows, none of which depend on AI technology deployment levels.

Implication: the ROK's highest ranking reflects its combination of high labor share (59.3%) and high public servant ratio (9.6%), not superior AI technology. Bangladesh's lowest ranking reflects its low public servant ratio (3.8%), not technological incapacity. This theorem formalizes the report's central interpretive claim: that structural conditions, not technological advancement, determine the macro-level impact trajectory.

C-0.5 Justification for Cobb–Douglas

The choice of Cobb–Douglas over alternative production functions (CES, translog) rests on three considerations:

1. **Consistency with ILO data.** The ILO ILOSTAT labor income share is defined as total labor compensation divided by GDP—precisely the Cobb–Douglas parameter (1-β). Under CES with elasticity of substitution $\sigma \neq 1$, the labor share varies with the capital-labor ratio, introducing endogeneity that would require country-specific estimation of σ. Cobb–Douglas treats labor share as a structural parameter, consistent with how it is measured and reported.

2. **Consistency with OECD methodology.** The OECD's AI productivity estimates are derived from Solow-type growth accounting, which assumes Cobb–Douglas or equivalent constant-share specifications. Applying a different production function to reinterpret the OECD coefficient would introduce methodological inconsistency.

3. **Parsimony for policy communication.** This report targets policymakers in APO member economies, not specialist econometricians. The Cobb–Douglas derivation is transparent and can be verified with publicly available data (World Bank, ILO, IMF). More complex functional forms would not alter the qualitative findings (Theorem 1 guarantees ranking invariance regardless of functional form) but would reduce accessibility.

C-0.6 Limitations of the Derivation

1. **Wage homogeneity assumption.** Equation (2) assumes public sector wages approximate the economy-wide average. In practice, public sector wage premiums or discounts exist and vary across economies. This is partially addressed by the micro-level validation model (Section C-1), which uses actual public sector wage data.

2. **Static framework.** The Cobb-Douglas derivation treats all parameters as contemporaneous. Dynamic effects—capital deepening in response to labor displacement, induced technological change, and general equilibrium feedback—are excluded.

3. **Homogeneous labor assumption.** The derivation treats all public sector labor as equally susceptible to AI automation (α is uniform). In practice, susceptibility varies by task type, skill level, and institutional context.

These limitations are acknowledged but do not invalidate the core result: Equation (4) provides a transparent, theoretically grounded, and empirically verifiable first-order approximation of AI's macro-level economic impact on public sector productivity.

C-1. Model Specification

Macro-level Model

The primary economic impact estimation applies a uniform framework across all eight economies:

Formula:

Impact (% of GDP) = (GDP × LS × r_gov × α) / GNI × 100

Where:

Variable	Definition	Source
GDP	Gross domestic product (USD billion, 2024)	World Bank Open Data
LS	Labor income share (fraction of GDP accruing to labor compensation)	ILO ILOSTAT, 2025
r_gov	Public servant ratio (fraction of total labor force employed in public administration)	ILO ILOSTAT, 2024
α	OECD AI productivity coefficient (0.3, representing labor cost savings from a conservative 0.25–0.6% GDP productivity range)	OECD, 2019–2024
GNI	Gross national income (USD billion, 2024)	World Bank Open Data

Interpretation: The formula estimates the proportion of national income that would be freed if AI automation reduced public sector labor costs by the OECD-estimated productivity coefficient (α =

0.3). The result represents Σ-dimension (task-level) effects only—direct labor cost savings from AI automation in public administration. It does not include multiplier effects, sectoral reallocation gains, service quality improvements, or private sector spillovers.

Coefficient Justification: The $\alpha = 0.3$ coefficient is a deliberately conservative value below the midpoint of the OECD's estimated range (0.25–0.6%) for AI-driven public sector productivity gains; the conservative choice reflects the transmission losses documented in this report's analysis (Chapter 4, Section 4.7). This coefficient was applied uniformly to avoid introducing country-specific assumptions about institutional transmission efficiency.

C-2. Input Data

TABLE 1

MACROECONOMIC PARAMETERS FOR ALL EIGHT ECONOMIES.

Economy	GDP (In Billion USD)	Labor Share (%)	r_gov (%)	GNI (In Billion USD)	Strategic Positioning
Bangladesh	450.1	47.6	3.8	469.5	D: Constrained Leapfrog
ROC	781.3	43.0	5.0	768.8	A: Sovereign Scaling
India	3,912.7	60.4	7.8	3,856.2	B: Asymmetric Specialization
Japan	4,026.2	53.7	6.0	4,293.5	B: Asymmetric Specialization
ROK	1,712.8	59.3	9.6	1,744.7	A: Sovereign Scaling
Malaysia	422.0	42.1	9.1	408.5	C: Balanced Transition
Philippines	461.6	43.9	9.9	521.8	D: Constrained Leapfrog
Thailand	526.4	46.8	4.2	511.7	C: Balanced Transition

Data Sources: GDP, GNI: World Bank Open Data (2025 estimates, accessed March 2026) - Labor Share: ILO ILOSTAT Labour Income Share database (2025), cross-verified against Chapter 4 reference appendix - Public Servant Ratio (r_gov): ILO ILOSTAT public sector employment data (2024) - All macroeconomic parameters cross-verified against IMF DataMapper (2023–24)

C-3. Step-by-Step Calculations

TABLE 2

MACRO IMPACT CALCULATION WITH FULL DERIVATION.

Economy	GDP × LS	× r_gov	× α (0.3)	÷ GNI	× 100 = Impact (%)
Bangladesh	214.2	8.14	2.44	469.5	0.52%
ROC	336.0	16.80	5.04	768.8	0.66%
India	2,363.3	184.33	55.30	3,856.2	1.43%
Japan	2,162.1	129.72	38.92	4,293.5	0.91%
ROK	1,015.7	97.51	29.25	1,744.7	1.68%
Malaysia	177.7	16.17	4.85	408.5	1.19%
Philippines	202.6	20.06	6.02	521.8	1.15%
Thailand	246.4	10.35	3.10	511.7	0.61%

Verification

- Mean: 1.02%
- Range: 0.52–1.68%
- Standard deviation: ±0.42%
- OECD reference range: 0.25–0.6% GDP

C-4. Detailed Country-by-country Derivation

Bangladesh

- GDP: USD450.1 billion
- Labor share: 47.6%
- r_gov: 3.8%
- GNI: USD469.5 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 450.1 × 0.476 × 0.038 = USD8.14 billion; 2. AI-driven savings = 8.14 × 0.3 = USD2.44 billion 3. Impact as % of GNI = (2.44 / 469.5) × 100 = 0.52%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD2.4 billion in annual productivity gains, equivalent to 0.52% of Bangladesh's GNI.

The ROC

- GDP: USD781.3 billion
- Labor share: 43.0%
- r_gov: 5.0%
- GNI: USD768.8 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 781.3 × 0.430 × 0.050 = USD16.80 billion; 2. AI-driven savings = 16.80 × 0.3 = USD5.04 billion 3. Impact as % of GNI = (5.04 / 768.8) × 100 = 0.66%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD5.0 billion in annual productivity gains, equivalent to 0.66% of ROC's GNI.

India

- GDP: USD3,912.7 billion
- Labor share: 60.4%
- r_gov: 7.8%
- GNI: USD3,856.2 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 3,912.7 × 0.604 × 0.078 = USD184.33 billion; 2. AI-driven savings = 184.33 × 0.3 = USD55.30 billion 3. Impact as % of GNI = (55.30 / 3,856.2) × 100 = 1.43%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD55.3 billion in annual productivity gains, equivalent to 1.43% of India's GNI.

Japan

- GDP: USD4,026.2 billion
- Labor share: 53.7%
- r_gov: 6.0%
- GNI: USD4,293.5 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 4,026.2 × 0.537 × 0.060 = USD129.72 billion; 2. AI-driven savings = 129.72 × 0.3 = USD38.92 billion 3. Impact as % of GNI = (38.92 / 4,293.5) × 100 = 0.91%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD38.9 billion in annual productivity gains, equivalent to 0.91% of Japan's GNI.

The ROK

- GDP: USD1,712.8 billion
- Labor share: 59.3%
- r_gov: 9.6%
- GNI: USD1,744.7 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 1,712.8 × 0.593 × 0.096 = USD97.51 billion; 2. AI-driven savings = 97.51 × 0.3 = USD29.25 billion 3. Impact as % of GNI = (29.25 / 1,744.7) × 100 = 1.68%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD29.3 billion in annual productivity gains, equivalent to 1.68% of the ROK's GNI.

Malaysia

- GDP: USD422.0 billion
- Labor share: 42.1%
- r_gov: 9.1%
- GNI: USD408.5 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 422.0 × 0.421 × 0.091 = USD16.17 billion; 2. AI-driven savings = 16.17 × 0.3 = USD4.85 billion 3. Impact as % of GNI = (4.85 / 408.5) × 100 = 1.19%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD4.9 billion in annual productivity gains, equivalent to 1.19% of Malaysia's GNI.

The Philippines

- GDP: USD461.6 billion
- Labor share: 43.9%
- r_gov: 9.9%
- GNI: USD521.8 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 461.6 × 0.439 × 0.099 = USD20.06 billion; 2. AI-driven savings = 20.06 × 0.3 = USD6.02 billion 3. Impact as % of GNI = (6.02 / 521.8) × 100 = 1.15%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD6.0 billion in annual productivity gains, equivalent to 1.15% of Philippines's GNI.

Thailand

- GDP: USD526.4 billion
- Labor share: 46.8%
- r_gov: 4.2%
- GNI: USD511.7 billion

Calculation: 1. Public sector labor cost base = GDP × LS × r_gov = 526.4 × 0.468 × 0.042 = USD10.35 billion; 2. AI-driven savings = 10.35 × 0.3 = USD3.10 billion 3. Impact as % of GNI = (3.10 / 511.7) × 100 = 0.61%

Interpretation: AI automation targeting public sector labor processes could generate approximately USD3.1 billion in annual productivity gains, equivalent to 0.61% of Thailand's GNI.

C-5. Sensitivity Analysis

The α coefficient of 0.3 represents a conservative estimate. This section examines how results change under alternative coefficient assumptions.

TABLE 3

SENSITIVITY TO AI PRODUCTIVITY COEFFICIENT (A).

Economy	α = 0.15 (Conservative)	α = 0.30 (Baseline)	α = 0.45 (Moderate)	α = 0.60 (Optimistic)
Bangladesh	0.26%	0.52%	0.78%	1.03%
ROC	0.33%	0.66%	0.98%	1.31%
India	0.72%	1.43%	2.15%	2.86%
Japan	0.45%	0.91%	1.36%	1.82%

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Economy	α = 0.15 (Conservative)	α = 0.30 (Baseline)	α = 0.45 (Moderate)	α = 0.60 (Optimistic)
ROK	0.84%	1.68%	2.52%	3.36%
Malaysia	0.60%	1.19%	1.78%	2.38%
Philippines	0.58%	1.15%	1.73%	2.31%
Thailand	0.30%	0.61%	0.91%	1.21%

Key observations: The ROK maintains the highest impact across all coefficient scenarios, reflecting its high public servant ratio (9.6%) and substantial labor share (59.3%). India's impact is highly sensitive to the coefficient: ranging from 0.72% (conservative) to 2.87% (optimistic), reflecting India's large absolute GDP and high labor share (60.4%). Bangladesh shows the lowest impact across all scenarios, reflecting its low public servant ratio (3.8%), not low technological capacity. The baseline α = 0.3 results cluster within the OECD reference range (0.25–0.6%) for most economies, suggesting methodological consistency.

C-6. Ranking Sensitivity

TABLE 4

DO RANKINGS CHANGE WITH DIFFERENT COEFFICIENTS?

Rank	α = 0.15	α = 0.30 (Baseline)	α = 0.60
1	ROK (0.84%)	ROK (1.68%)	ROK (3.36%)
2	India (0.72%)	India (1.43%)	India (2.87%)
3	Malaysia (0.60%)	Malaysia (1.19%)	Malaysia (2.38%)
4	Philippines (0.58%)	Philippines (1.15%)	Philippines (2.31%)
5	Japan (0.45%)	Japan (0.91%)	Japan (1.81%)
6	ROC (0.33%)	ROC (0.66%)	ROC (1.32%)
7	Thailand (0.30%)	Thailand (0.61%)	Thailand (1.21%)
8	Bangladesh (0.26%)	Bangladesh (0.52%)	Bangladesh (1.04%)

Critical finding: Rankings are invariant to coefficient choice because the formula is a linear function of α. The coefficient affects magnitudes but not relative positioning. This means the structural interpretation—that the ROK has the highest macro impact potential and Bangladesh the lowest—holds regardless of the specific OECD estimate applied. The drivers of cross-country variation are entirely structural: labor share, public servant ratio, and the GDP-to-GNI ratio.

C-7. Methodological Limitations

1. **Σ-only estimate:** Results capture only direct task-level labor cost savings. They exclude macro-level multiplier effects, quality improvements in public services, and private sector spillovers.

2. **Uniform coefficient:** The α = 0.3 coefficient is applied identically across all economies, abstracting from country-specific institutional transmission efficiency. In reality, the

ROK's institutional maturity likely produces higher effective α than Bangladesh's nascent governance frameworks.

3. **Static parameters:** GDP, labor share, and public servant ratios are treated as fixed (2025 values). In practice, these parameters evolve, particularly for rapidly growing economies like India and Bangladesh.

4. **Labor share measurement:** Labor income shares from ILO ILOSTAT may systematically undercount or overcount informal sector contributions, particularly in India, Bangladesh, and the Philippines.

5. **Public servant ratio scope:** The r_gov variable captures only formally classified public administration employees. It excludes state-owned enterprise workers, contracted consultants, and informal government affiliates, which in some economies (India, Bangladesh) represent substantial additional public sector labor.

C-8. Data Source Documentation

Parameter	Source	Access Date	URL
GNI (current USD)	World Bank Open Data	November 2025	data.worldbank.org
Labor Force	World Bank / ILO estimates	March 2026	data.worldbank.org
Labor Income Share	ILO ILOSTAT	March 2026	ilostat.ilo.org
Public Servant Ratio	ILO ILOSTAT / National statistics	November 2025	ilostat.ilo.org
Average Monthly Wage	ILO ILOSTAT / National statistics	November 2025	ilostat.ilo.org
OECD AI Productivity Range	OECD Digital Economy Outlook	2024	oecd.org
IMF Public Expenditure	IMF DataMapper	2023–2024	imf.org

APPENDIX D
MACROECONOMIC INPUT DATA FOR EIGHT ECONOMIES

This appendix provides the complete macroeconomic dataset used for the economic impact estimation (Appendix C) and the cross-country comparative analysis throughout this report. All parameters are sourced from international statistical databases as specified below.

D-1. Primary Macroeconomic Indicators

Economy	GDP (B USD)	GNI (B USD)	Labor Force (M)	Population (M)	Public Expenditure (% GDP)
Bangladesh	450.1	469.5	74.7	172.9	11.8
ROC	781.3	768.8	11.9	23.4	17.2
India	3,912.7	3,856.2	617.6	1,441.7	28.4
Japan	4,026.2	4,293.5	69.4	124.5	42.3
ROK	1,712.8	1,744.7	29.8	51.7	24.8
Malaysia	422.0	408.5	18.7	34.3	24.7
Philippines	461.6	521.8	52.2	117.3	24.5
Thailand	526.4	511.7	40.9	71.8	24.0

Sources: World Bank Open Data (2025 estimates, accessed March 2026); IMF DataMapper (public expenditure, 2023–24).

D-2. Labor Market Parameters

Economy	Labor Share (%)	r_gov (%)	Public Employees (est., M)	Avg. Monthly Wage, Public Sector (USD, est.)
Bangladesh	47.6	3.8	2.84	250
ROC	43.0	5.0	0.60	2,100
India	60.4	7.8	48.2	450
Japan	53.7	6.0	4.16	3,400
ROK	59.3	9.6	2.86	2,800
Malaysia	42.1	9.1	1.70	1,100
Philippines	43.9	9.9	5.17	380
Thailand	46.8	4.2	1.72	650

Sources: ILO ILOSTAT (labor income shares, public servant ratios, average wages, 2025); national statistical offices for country-specific adjustments.

Notes: Labor Share represents the fraction of GDP accruing to labor compensation (ILO definition); r_gov represents the fraction of the total labor force employed in public administration (ISIC Rev.4, Section O); public employees (estimated) = labor force × r_gov; figures are approximate and may not match national administrative headcounts, which use different classification boundaries; average monthly wage figures for the public sector are approximate estimates drawn from ILO wage data and national statistical office reports. They are used in the micro-level validation model (Appendix C) and should be interpreted as order-of-magnitude indicators, not precise figures.

D-3. Technology and Innovation Indicators (from Appendices A and B)

Economy	AI Patent Families (2015–25)	Recent Filing Ratio (2020–25)	AI Publications (WoS, 2015–25)	Citations per Paper	International Co-authorship (%)
Bangladesh	–	–	841	13.50	51.6%
ROC	10,664	52.8%	4,521	15.29	42.5%
India	52,706	82.5%	19,990	11.86	22.7%
Japan	56,611	46.3%	4,097	9.62	35.7%
ROK	73,515	60.9%	4,456	12.50	41.8%
Malaysia	266	4.5%	3,408	13.43	56.2%
Philippines	383	37.3%	314	7.97	30.3%
Thailand	251	25.1%	1,410	8.58	34.4%

Sources: Patent data: Derwent Innovation (DWPI) via SenseDrive Corp., December 2025 (see Appendix B for full analysis); publication data: Web of Science Core Collection, November 2025, commissioned by Niigata University for APO (see Appendix A for institutional breakdowns).
Note: Bangladesh is excluded from patent analysis due to insufficient volume for robust statistical analysis.

D-4. Macro Impact Estimation Results from Appendix C

Economy	Macro Impact (% GDP)	Strategic Positioning	Ranking
ROK	1.68	A: Sovereign Scaling	1
India	1.43	B: Asymmetric Specialization	2
Malaysia	1.19	C: Balanced Transition	3
Philippines	1.15	D: Constrained Leapfrog	4
Japan	0.91	B: Asymmetric Specialization	5
ROC	0.66	A: Sovereign Scaling	6
Thailand	0.61	C: Balanced Transition	7
Bangladesh	0.52	D: Constrained Leapfrog	8

Formula: Impact (%) = (GDP × LS × r_gov × 0.3) / GNI × 100. See Appendix C for full derivation, step-by-step calculations, and sensitivity analysis.

Interpretation: Rankings are invariant to the choice of productivity coefficient (α); they reflect structural parameters (labor share, public servant ratio, GDP-to-GNI ratio) rather than technology deployment levels. The ROK's highest ranking reflects its combination of high labor share (59.3%)

and high public servant ratio (9.6%). Bangladesh's lowest ranking reflects its low public servant ratio (3.8%), not low technological capacity.

D-5. Data Source Documentation

Parameter	Primary Source	Secondary Verification	Access Date
GDP (current USD, 2025)	World Bank Open Data	IMF World Economic Outlook	November 2025
GNI (current USD, 2025)	World Bank Open Data	–	November 2025
Labor Force (2025)	World Bank / ILO estimates	National statistical offices	March 2026
Population (2024)	UN World Population Prospects, 2024 Revision	World Bank	November 2025
Labor Income Share	ILO ILOSTAT	Chapter 4 reference appendix	March 2026
Public Servant Ratio (r_gov)	ILO ILOSTAT (ISIC Rev.4, Section O)	National civil service commissions	November 2025
Average Monthly Wage	ILO ILOSTAT / National statistics	–	November 2025
Public Expenditure (% GDP)	IMF DataMapper	World Bank	2023–2024
Patent Families	Derwent Innovation (DWPI) via SenseDrive Corp.	–	December 2025
AI Publications	Web of Science Core Collection	–	November 2025
OECD AI Productivity Range	OECD Digital Economy Outlook	–	2024

Sources: World Bank Open Data: https://data.worldbank.org; ILO ILOSTAT: https://ilostat.ilo.org; IMF DataMapper: https://www.imf.org/external/datamapper; UN Population: https://population.un.org/wpp; OECD: https://www.oecd.org/digital/

APPENDIX E
TERMINOLOGY FOR AI TECHNOLOGIES, METHODOLOGIES, AND GOVERNANCE

E-1. Purpose and Scope

This glossary serves multiple purposes:

Standardization: Alignment with internationally recognized standards, particularly International Organization for Standardization (ISO) / International Electrotechnical Commission (IEC) standard 22989 (Artificial Intelligence Concepts and Terminology) and OECD frameworks for digital government assessment.

Context Specificity: Definitions tailored to public sector applications and institutional transformation rather than purely technical contexts, enabling policymakers to navigate AI implementation discussions with shared vocabulary.

The classification serves three purposes: (1) Standardization aligned with ISO/IEC 22989 and OECD frameworks; (2) Context specificity tailored to public sector applications; (3) Cross-sector integration accommodating terminology from information technology, public administration, economics, and institutional governance.

E-2. Classification Summary comprising 57 Codes across Eight Categories

The eight-category structure reflects the logical progression from foundational technical infrastructure through operational AI systems to governance frameworks and institutional capacity assessment.

Category 1: Core AI Models and Techniques (B0–B8, nine codes)

B0: Foundation Models (generic LLMs)
B1: Domain-Specialized Models
B2: Vision-Language Models
B3: Embeddings and Semantic Search
B4: Fine-Tuning Methodologies
B5: Smaller-Scale Models
B6: Evaluation and Safety Frameworks
B7: Prompt Engineering and In-Context Learning
B8: Reasoning and Tool-Use Frameworks

Category 2: Architectural Patterns (C2.1–C2.5, five codes)

C2.1: Retrieval-Augmented Generation (RAG)
C2.2: Multiagent Systems
C2.3: Digital Twins

C2.4: Knowledge Graphs and Semantic Integration
C2.5: Adaptive Learning Systems

Category 3: Application Technologies (C3.1–C3.6, six codes)

C3.1: Chatbots and Virtual Assistants
C3.2: Document Processing and Classification
C3.3: Text Summarization and Report Generation
C3.4: Intelligent Search and Information Retrieval
C3.5: Regulatory Interpretation Assistance
C3.6: Process Automation (RPA Integration)

Category 4: Infrastructure (C4.1–C4.5, five codes)

C4.1: Cloud Computing Infrastructure
C4.2: Data Platforms and Lakes
C4.3: Digital Public Infrastructure (DPI)
C4.4: Computational Edge Infrastructure
C4.5: API Ecosystems and Integration Platforms (including Model Context Protocol)

Category 5: Governance (C5.1–C5.6, six codes)

C5.1: Algorithmic Auditing and Transparency
C5.2: Data Governance and Privacy
C5.3: Fairness and Nondiscrimination
C5.4: Accountability and Liability
C5.5: Data Sovereignty and Security
C5.6: Human Rights and Administrative Justice

Category 6: Performance Metrics and Evaluation (C6.1–C6.10, 10 codes)

C6.1: Operational Efficiency Metrics (Sigma)
C6.2: Decision-making Cost Reduction
C6.3: Process Throughput and Latency
C6.4: Fairness Metrics (Theta)
C6.5: Disparity Detection and Monitoring
C6.6: Accountability and Transparency Metrics
C6.7: Resilience Metrics (Lambda)
C6.8: System Availability and Recovery Time
C6.9: Organizational Adaptability Metrics
C6.10: Citizen Satisfaction and Trust Metrics

Category 7: Enabling Competencies and Workforce Development (C7.1–C7.8, eight codes)

C7.1: AI Literacy and Awareness Programs
C7.2: Technical AI Training (Data Science, ML Engineering)
C7.3: Prompt Engineering and Basic AI Application
C7.4: Change Management and Organizational Readiness
C7.5: Governance and Ethics Training
C7.6: Data Literacy and Data Governance
C7.7: AI Auditing and Fairness Assessment
C7.8: Leadership and Strategic AI Planning

Category 8: Policy, Regulation, and International Standards (C8.1–C8.8, eight codes)

C8.1: AI Governance Legislation
C8.2: Data Protection and Privacy Regulation
C8.3: Algorithmic Transparency and Explainability Standards
C8.4: Fairness and Nondiscrimination Standards
C8.5: Sector-specific Regulatory Frameworks
C8.6: International AI Standards (ISO 22989, National Institute of Standards and Technology [NIST] frameworks, etc.)
C8.7: Cross-border Data and AI Ethics Guidelines
C8.8: Liability and Insurance Frameworks

E-3. Alignment with International Standards

The classification aligns with ISO/IEC 22989:2022 (Artificial Intelligence - Concepts and Terminology) exclusively for terms that fall directly within its scope, primarily core AI concepts and methodologies (Category 1). For supporting technologies, infrastructure, and governance frameworks that fall outside the scope of ISO/IEC 22989, the taxonomy integrates relevant domain-specific international standards, such as ISO/IEC 17788 for cloud computing, ISO/IEC/IEEE 26514 for system interoperability, and ISO/TC 211 for geographic information, as well as established industry practices.

This multi-standard alignment ensures comprehensive compatibility with the European Union AI Act, NIST AI Risk Management Framework, and OECD digital government assessment methodologies, while maintaining technical accuracy across both AI systems and their underlying public sector infrastructure.

Category 1: Foundational AI and Information Communications Technology Infrastructure

1.1 Robotic Process Automation (RPA)

- Reference: Industry practice (no formal ISO classification; RPA predates AI taxonomies).

- Definition: RPA refers to software automation that mimics human worker actions on digital systems, executing repetitive rule-based tasks without intelligent decision-making. In public sector contexts, RPA automates document handling, data entry, application processing, and routine administrative workflows, delivering rapid process efficiency gains with minimal integration complexity. Common public sector applications include benefit application processing, tax calculation, license renewal workflows, and interagency data reconciliation.

- Report relevance: Foundational technology for first-generation digital government transformation, particularly in Chapters 3-4 discussing institutional readiness and early-stage public sector automation initiatives.

1.2 Optical Character Recognition (OCR)

- Reference: ISO/IEC 22989 (Visual pattern recognition, AI taxonomy).

- Definition: OCR technologies convert printed or handwritten text within images and scanned documents into machine-readable digital text format. Modern OCR systems

achieve over 95% accuracy for standardized documents and integrate with downstream processing systems for automated data extraction. Public sector OCR applications include government form processing, property deed digitization, historical record archiving, and identity document validation.

- Report relevance: Technology cluster identified in Japan's infrastructure inspection capabilities (Chapter 4); widely deployed in digital government workflows across all eight economies.

1.3 Document AI (Document Intelligence)

- Reference: Extends ISO/IEC 22989 to multimodal document processing; industry Document AI literature.

- Definition: Document AI combines OCR, natural language processing, and layout analysis to automatically extract, classify, and structure information from unstructured documents at scale. Unlike basic OCR, Document AI understands document semantics, automatically populates structured databases, and learns from human corrections. Applications include intelligent permit processing, regulatory filing management, and government correspondence routing.

- Report relevance: Evolution of OCR for advanced digital government platforms; demonstrated in the ROK's Government24 portal and emerging in India's government modernization initiatives (Chapters 3–4).

1.4 Cloud Computing and Infrastructure

- Reference: ISO/IEC 17788:2014 (Cloud Computing—Overview and Vocabulary); distinct from ISO/IEC 22989 (AI concepts).

- Definition: Cloud computing provides on-demand access to computing resources (servers, storage, databases, and networking) delivered as services over networks, typically with pay-as-used pricing models and elastic scalability. Public sector deployments increasingly utilize hybrid cloud (combination of on-premises and public cloud) or sovereign cloud solutions (domestically hosted servers subject to national data residency requirements). Cloud infrastructure enables rapid AI application deployment without massive upfront capital investment.

- Report relevance: Critical enabling infrastructure discussed in Chapters 3-5; the ROK's multi-cloud resilience strategy and emerging sovereign cloud requirements in India and Southeast Asia reflect regional priorities.

1.5 Application Programming Interface (API) Integration

- Reference: ISO/IEC/IEEE 26514 for system interoperability documentation; ISO/IEC 22989 does not cover APIs.

- Definition: APIs define standardized communication protocols enabling different software systems to exchange data and invoke functionality across organizational boundaries. RESTful APIs, GraphQL, and event-driven architectures facilitate government data

ecosystem integration. API-first architecture enables government service modernization through microservices composition without monolithic system replacement.

- Report relevance: Foundational to government digital ecosystems; essential for MyData frameworks (the ROK), Aadhaar-linked systems (India), and cross-agency data sharing initiatives discussed in Chapters 3–4.

1.6 Edge Computing

- Reference: Emerging classification in ISO/IEC standards development.

- Definition: Edge computing processes data on localized devices or near-network endpoints rather than centralized data centers, reducing latency and bandwidth requirements. For public sector applications, edge computing enables real-time decision-making in field operations, IoT sensor networks, and distributed government service delivery. Edge deployments often operate in conjunction with cloud systems (fog computing architectures).

- Report relevance: Emerging priority for resource-constrained Southeast Asian economies; relevant to infrastructure inspection systems (Japan) and distributed government service delivery in rural regions.

1.7 Digital Twin

- Reference: ISO/IEC 30173 (Digital twin concepts and terminology).

- Definition: A digital twin is a virtual computational model that replicates a physical system's structure and behavior, updated continuously with real-world data to enable simulation, analysis, and optimization without physical system disruption. Public sector applications include infrastructure asset lifecycle management, urban planning simulations, and disaster response scenario planning. Digital twins enable evidence-based policy experimentation at scale.

- Report relevance: Advanced infrastructure management technology identified in Japan's public asset monitoring strategy and potential smart city applications in the ROK (Chapter 4).

Category 2: Perception and Natural Language Processing Technologies

2.1 Automatic Speech Recognition (ASR)

- Reference: ISO/IEC 22989 (Language and Speech Processing, AI taxonomy).

- Definition: Speech recognition converts spoken audio into machine-readable text using acoustic models and language models trained on diverse speaker populations and acoustic environments. Modern systems achieve more than 95% accuracy for broadcast-quality audio and handle multiple languages. Public sector applications include citizen service call center automation, voice-commanded accessibility services, and meeting transcription for government proceedings.

- Report relevance: Japan-distinctive technology area addressing Japanese language complexity and aging population accessibility needs (Chapter 4); emerging capability in India's contact center automation.

2.2 Computer Vision

- Reference: ISO/IEC 22989 (Visual perception systems, AI taxonomy).

- Definition: Computer vision encompasses technologies enabling machines to extract, interpret, and act upon visual information from images and video streams. Applications range from object detection and semantic segmentation to scene understanding and anomaly detection. Public sector use cases include automated infrastructure inspection (bridges, roads, dams, etc.), document verification, and public safety monitoring.

- Report relevance: Core technology cluster in Japan's infrastructure maintenance strategy, the ROC's wafer inspection systems, and emerging capabilities in India's environmental monitoring (Chapter 4).

2.3 Natural Language Processing (NLP): Nongenerative

- Reference: ISO/IEC 22989 (Natural language understanding, AI taxonomy).

- Definition: Nongenerative NLP focuses on analyzing and understanding existing text to extract information, classify documents, identify sentiment, or extract named entities. Unlike generative models, these systems do not create new text. Applications include automated policy text analysis, citizen complaint classification, legislative tracking, and government document organization.

- Report relevance: Established technology across all economies; foundational for government information management systems discussed in Chapters 3–4.

2.4 Generative AI and Large Language Models (LLMs)

- Reference: ISO/IEC 22989 (Generative systems classification, AI taxonomy).

- Definition: Large language models are transformer-based neural networks trained on massive text datasets to predict and generate coherent, contextually relevant text sequences. These foundation models demonstrate remarkable few-shot learning and task transfer capabilities across diverse domains including summarization, translation, and question-answering. Public sector applications include drafting assistance for policy documents, intelligent citizen service chatbots, and accessibility features for individuals with disabilities.

- Report relevance: Post-2022 generative AI boom visible in patent acceleration data (Chapter 5); critical capability for government service modernization and citizen engagement discussed in Chapters 3–4.

2.5 Multimodal AI

- Reference: Emerging in ISO/IEC standards development

- Definition: Multimodal AI systems process and integrate information from multiple input modalities (text, images, audio, and video) simultaneously to achieve more robust understanding and reasoning. Unlike single-modality systems, multimodal models can ground language understanding in visual context and generate outputs across modalities. Public sector applications include document understanding from scanned forms, video evidence analysis, and integrated citizen information systems.

- Report relevance: Emerging capability for integrated government service platforms; particularly relevant to the ROK's smart city initiatives and India's digital government integration (Chapter 4).

2.6 Machine Translation

- Reference: ISO/IEC 22989 (Language processing and translation, AI taxonomy).

- Definition: Machine translation automatically converts text or speech from source languages into target languages using neural machine translation models. Modern neural approaches achieve near-human quality for high-resource language pairs. Public sector relevance includes government website multilingualization, cross-border administrative communication, and accessibility services for minority language speakers.

- Report relevance: Particularly relevant for multilingual societies (India with 22+ official languages, Philippines, and Thailand); foundational for inclusive digital government services discussed in Chapter 3.

Category 3: Analytics and Decision Support Systems

3.1 Predictive Analytics

- Reference: ISO/IEC 22989 (Predictive modelling systems, AI taxonomy).

- Definition: Predictive analytics applies statistical and machine learning models to historical data to forecast future events, behaviors, or conditions with quantified uncertainty ranges. Public sector applications include predicting citizen service demand (benefit applications, license renewals), identifying high-risk infrastructure requiring maintenance, forecasting budget requirements, and anticipating public health emergencies. Decision support relies on interpretable models that explain predictions to stakeholders.

- Report relevance: Key capability for evidence-based policy formulation; applications identified in India's agricultural forecasting, the ROK's disaster prediction, and government demand planning across all economies (Chapter 4).

3.2 Optimization Algorithms

- Reference: Industry practice (optimization algorithms); operations research literature.

- Definition: Optimization algorithms find best-feasible solutions within constrained problem spaces, improving resource allocation efficiency across public sector operations. Applications range from linear programming for budget allocation to metaheuristic approaches (genetic algorithms, simulated annealing) for complex combinatorial problems. Public sector use cases include government fleet routing optimization, classroom scheduling, job assignment systems, and resource allocation across competing needs.

- Report relevance: Mature technology widely deployed across manufacturing (ROK and ROC) and emerging in government operations; critical for operational efficiency improvements discussed in Chapter 3.

3.3 Geographic Information Systems (GIS) and Spatial Analytics

- Reference: ISO/TC 211 series (Geographic information / Geomatics); distinct from ISO/IEC 22989 (AI concepts).

- Definition: GIS integrates spatial data (maps, satellite imagery, sensor networks) with analytics to understand geographic patterns and support location-based decision-making. Spatial analytics extends GIS capabilities with advanced statistical analysis and machine learning on geographic data. Public sector applications include urban planning, infrastructure asset management, disaster vulnerability mapping, and environmental monitoring.

- Report relevance: Foundational for smart city implementations (ROK and ROC); critical for disaster risk management across all economies; infrastructure management in Japan's aging society context (Chapter 4).

3.4 Recommendation Systems

- Reference: Industry practice (recommendation systems literature).

- Definition: Recommendation systems predict citizen preferences or needs to suggest relevant services, documents, or interventions, improving accessibility to government resources. Collaborative filtering, content-based approaches, and hybrid methods personalize citizen experiences. Applications include personalized government service recommendations (Government24 portal), optimal intervention identification for social welfare programs, and knowledge discovery in large government databases.

- Report relevance: Emerging in advanced digital government platforms; examples in the ROK's Government24 and potential applications for India's citizen-facing services (Chapter 4).

3.5 Anomaly Detection

- Reference: Industry practice (anomaly detection literature).

- Definition: Anomaly detection identifies unexpected, unusual, or potentially problematic instances in operational data streams, signaling system failures, fraud, or policy violations requiring human investigation. Unsupervised learning approaches discover anomalies without labelled training data. Public sector applications include infrastructure failure prediction (detecting bridge stress anomalies), fraud detection in benefit disbursements, cybersecurity intrusion detection, and unusual permit application patterns indicating regulatory violations.

- Report relevance: Critical for government integrity and operational reliability; applications in financial systems monitoring and infrastructure safety discussed in Chapters 3–4.

3.6 Simulation Modelling and Agent-based Simulation

- Reference: Industry practice (simulation modelling and agent-based modelling).

- Definition: Simulation models replicate complex system dynamics by coding stakeholder behaviors and interactions, enabling scenario testing and policy impact forecasting before real-world implementation. Agent-based models represent individual citizens or organizations as autonomous agents following behavioral rules. Public sector applications include pandemic response planning, traffic management strategy evaluation, welfare system impact analysis, and climate adaptation scenario development.

- Report relevance: Advanced modelling capability for evidence-based policy; relevant to disaster management (ROK, Japan), agricultural planning (India), and climate adaptation across all economies (Chapter 5).

Category 4: Agentic Systems and Governance Infrastructure

4.1 Multiagent Systems (MAS)

- Reference: ISO/IEC 22989 (Autonomous systems interaction); FIPA agent communication standards.

- Definition: Multiagent systems consist of multiple autonomous computational agents that perceive environments, make decisions independently, and coordinate actions through communication protocols to achieve collective objectives. Unlike centralized systems, MAS distribute intelligence and decision-making across agents. Public sector applications include distributed government service delivery networks, inter-agency coordination systems, and community engagement platforms where citizens and officials participate as agents.

- Report relevance: Emerging architectural paradigm for distributed government service delivery; relevant to federalized systems (India, Philippines) and smart city coordination discussed in Chapter 4.

4.2 Retrieval-augmented Generation (RAG)

- Reference: Emerging classification in ISO/IEC standards (RAG / agentic AI).

- Definition: RAG combines large language models with external knowledge retrieval systems, enabling LLMs to cite authoritative sources and reduce hallucination (generating false information). RAG systems retrieve relevant documents, policies, or precedents before generating responses. Critical for government applications requiring legal/policy compliance, accurate benefit calculations, and transparency in decision-making. RAG enables citizen-facing AI systems that cite applicable regulations.

- Report relevance: Critical for trustworthy government AI systems discussed in governance frameworks (Chapter 5); emerging in citizen service chatbots across the ROK, India, and advanced economies.

4.3 Vector Databases and Semantic Search

- Reference: Emerging in data infrastructure standards (vector databases).

- Definition: Vector databases store and retrieve data based on semantic similarity rather than exact keyword matching, enabling intelligent search across unstructured document repositories. Documents are converted to numerical vector representations (embeddings) capturing semantic meaning. Applications include government knowledge base search, policy discovery, legal precedent identification, and citizen question answering systems leveraging historical documents.

- Report relevance: Enabling infrastructure for intelligent government information systems and knowledge management discussed in Chapter 4; increasingly important for regulatory compliance and policy consistency.

4.4 Data Governance Frameworks

- Reference: ISO/IEC 27001 (Information Security); ISO/IEC 38505 (Data Governance).

- Definition: Data governance establishes policies, processes, and accountability structures for managing data assets across organizations, ensuring data quality, privacy compliance, and appropriate usage. Governance frameworks define data ownership, access controls, retention policies, and inter-agency data sharing protocols. Effective governance balances accessibility (enabling data-driven decision-making) with protection (privacy, security, citizen trust).

- Report relevance: Foundational institutional capability discussed throughout; MyData governance frameworks (ROK), Aadhaar governance (India), and GDPR alignment in advanced economies reflect regional regulatory contexts (Chapters 3–5).

4.5 Security and Identity and Access Management (IAM)

- Reference: ISO/IEC 27001:2022 (Information Security).

- Definition: IAM systems establish, verify, and manage digital identities and determine appropriate access permissions for users, systems, and data. Multifactor authentication, role-based access control, and zero-trust architectures provide security depth. Critical for government systems handling sensitive citizen data and managing internal system access. Increasingly integrated with citizen digital identity systems (Aadhaar, MyData platforms).

- Report relevance: Essential infrastructure for secure digital government discussed in Chapters 3–5; particular emphasis on identity systems integration in India and emerging digital identity frameworks in Southeast Asia.

4.6 MLOps and LLMOps (Model Operations)

- Reference: ISO/IEC/IEEE 42010 (Systems and software engineering—Architecture description).

- Definition: MLOps and LLMOps establish operational processes for continuously training, testing, deploying, and monitoring machine learning and language models in production environments. These disciplines ensure model performance maintenance, version control, retraining pipelines, and A/B testing capabilities. Government applications require transparent model performance monitoring and documented decision trails.

- Report relevance: Institutional capability requirement for sustained AI implementation discussed in Chapter 5; reflects shift from experimental pilots to operational AI systems in government.

4.7 Model Context Protocol (MCP)

- Reference: Industry specification (Anthropic, 2024); not an ISO standard.

- Definition: MCP is an open standardized protocol enabling language models to reliably access external tools, data sources, and APIs through standardized interfaces. MCP decouples tool implementation from model systems, enabling flexible composition of AI capabilities. Government applications include integrating language models with existing government IT

systems, legacy database access, and inter-agency data service orchestration without custom integration code.

- Report relevance: Technical enabler for composable government AI systems discussed in Chapter 5; reflects emerging architectural patterns in advanced government systems (ROK, Japan) and potential for accelerated implementation in developing economies.

Category 5: Sustainability and Future-ready AI Technologies

5.1 Energy-aware AI Operations

- Reference: Industry practice (energy-efficient AI architectures); ISO/IEC TR 5469 (AI safety considerations).

- Definition: Energy-aware AI operations measure and optimize computational resource consumption, recognizing that large-scale AI systems consume substantial electricity and produce carbon emissions. Optimization strategies include model compression, efficient inference architectures, and renewable energy sourcing. Government AI systems have particular environmental responsibility; energy-efficient implementations reduce operational costs and climate impact.

- Report relevance: Emerging priority as AI systems scale across government operations; discussed in sustainability-conscious governance frameworks (Chapter 5) and relevant to all economies' climate commitments.

5.2 Sovereign AI Infrastructure

- Reference: National cybersecurity standards and data residency regulations.

- Definition: Sovereign AI infrastructure refers to domestically controlled AI systems where training data, model weights, and inference computations remain within national borders, subject to national regulatory oversight. Motivations include cybersecurity, data sovereignty, technological autonomy, and avoiding dependency on foreign technology providers. Developing economies increasingly prioritize sovereign AI to avoid vendor lock-in and protect strategic data.

- Report relevance: Emerging strategic priority across report (Chapters 3-5); particularly important for India, Southeast Asia, and the ROC given geopolitical considerations and technology independence objectives.

5.3 Federated Learning

- Reference: Emerging research methodology (federated learning); ISO/IEC TR 27563 (Privacy-enhancing technologies).

- Definition: Federated learning trains machine learning models across decentralized data sources (government agencies, citizen devices) without centralizing raw data, preserving privacy while enabling collaborative model development. Participants retain local data control while contributing to shared model improvement. Applications include training healthcare models across hospitals, developing policy impact models across jurisdictions, and citizen-contributed training data for public systems without privacy exposure.

- Report relevance: Privacy-preserving technology relevant to multi-jurisdiction government systems (India with state governments, federal systems) and citizen-centric data sharing models discussed in Chapter 5.

5.4 Differential Privacy

- Reference: ISO/IEC 27701 (Privacy Information Management); ISO/IEC TR 27563 (Privacy-enhancing technologies).

- Definition: Differential privacy is a mathematical framework ensuring that machine learning systems cannot reveal individual citizen records even to attackers with external knowledge, by adding controlled statistical noise to training processes or outputs. Differentially private systems achieve privacy guarantees while maintaining aggregate statistical accuracy. Applications include publishing government statistics (census, survey results) and training models on sensitive citizen data without enabling re-identification attacks.

- Report relevance: Critical for citizen-centric AI systems respecting privacy-first principles discussed in governance frameworks (Chapter 5); particularly important given GDPR-alignment efforts and privacy concerns in developing economies.

5.5 Quantum-ready AI Architectures

- Reference: Emerging in NIST post-quantum cryptography standards (NIST SP 800-208).

- Definition: Quantum-ready architectures anticipate future quantum computing capabilities that could break current encryption methods while enabling certain optimization and simulation problems. Quantum-ready systems prepare for cryptographic algorithm transitions and identify quantum advantage opportunities for specific government problems (materials science, optimization, climate modelling). This is a forward-planning capability rather than near-term implementation priority.

- Report relevance: Future-oriented capability mentioned in advanced government technology roadmaps (Japan, ROK, ROC); relevant to long-term strategic planning discussed in Chapter 5.

Category 6: Governance, Policy Frameworks, and Institutional Transformation

6.1 Algorithmic Impact Assessment (AIA)

- Reference: ISO/IEC 23894 (AI Risk Management); ISO/IEC 42001 (AI Management Systems)

- Definition: AIA is a structured process evaluating potential consequences of deploying algorithmic systems in government before implementation, identifying risks to fairness, transparency, and citizen rights. AIAs assess training data bias, identify vulnerable populations, forecast disparate impacts, and propose mitigation strategies. Internationally, AIAs are becoming mandatory for significant government algorithms (EU AI Act, Canada's Directive on Automated Decision-Making).

- Report relevance: Critical governance framework discussed extensively in Chapter 5; reflects evolving regulatory landscape and ethical standards for government AI implementation across all eight economies.

6.2 AI Ethics Frameworks

- Reference: ISO/IEC 42001 (AI Management Systems); OECD AI Principles (2019; 2024 update).

- Definition: AI ethics frameworks establish principles and processes guiding government AI development: transparency (explainability of automated decisions), accountability (identifying responsible parties), fairness (avoiding discrimination), privacy (citizen data protection), and human agency (preserving meaningful human control). Frameworks translate ethical principles into concrete requirements, implementation guidelines, and monitoring mechanisms for government AI projects.

- Report relevance: Foundational governance framework discussed in Chapter 5; present across all government AI strategies (ROK, Japan, and India) and increasingly mandatory in regulatory frameworks.

6.3 Sigma-Theta-Lambda (Σ-Θ-Λ) Performance Framework

- Reference: Hood, C. (1991), 'A public management for all seasons?' Public Administration 69(1): 3–19.

- Definition: The Σ-Θ-Λ framework measures government effectiveness across three dimensions: (Sigma) efficiency of resource utilization and cost-minimization, (Theta) responsiveness to citizen needs and service quality, and (Lambda) resilience, adaptability, and long-term institutional sustainability. This framework enables comprehensive assessment of AI adoption impacts beyond cost-cutting to include citizen experience and institutional capacity development.

- Report relevance: Central analytical framework for assessing AI impacts on government performance discussed in Chapters 2–5; enables multidimensional evaluation beyond simple productivity metrics.

6.4 Productivity J-Curve

- Reference: Brynjolfsson, E., Rock, D., & Syverson, C. (2021). The Productivity J-Curve: How Intangibles Complement General Purpose Technologies. American Economic Journal: Macroeconomics, 13(1), 333–372. https://doi.org/10.1257/mac.20180386

- Definition: The productivity J-curve describes the common pattern where new technologies (including AI) initially reduce measured productivity as organizations invest in implementation, retraining, and system integration, before productivity gains emerge over 3–5-year periods. The curve illustrates why government AI initiatives may show short-term cost increases before long-term benefits realize. Understanding the J-curve prevents premature termination of AI projects during implementation phases.

- Report relevance: Critical for realistic government AI project evaluation discussed in Chapter 5; explains apparent productivity paradoxes and informs multi-year implementation planning across economies.

6.5 Learning State Concept

- Reference: Ansell & Bartenberger (2016) on adaptive governance.

- Definition: A "learning state" is a government institution capable of systematic experimentation, evidence evaluation, and policy adjustment based on outcomes, embedded in institutional cultures and processes. Learning states implement AI projects with rigorous evaluation, share learnings across agencies, and continuously refine approaches. This contrasts with "testing state" (one-off pilots) or "resistant state" (institutional barriers to adaptation).

- Report relevance: Institutional capacity concept central to Chapter 3 assessment of government readiness; distinguishes sustainable AI adoption from temporary projects; relevant to understanding development trajectories across eight economies.

6.6 Institutional Conversion Capacity

- Reference: Mahoney & Thelen (2010) institutional change theory.

- Definition: Institutional conversion capacity measures governments' ability to repurpose existing institutions and processes toward new objectives (AI adoption) without wholesale replacement. High conversion capacity enables incremental AI integration into existing structures. Low conversion capacity requires institutional redesign, creating adoption friction. Assessment includes evaluating existing IT infrastructure, workforce skills, governance structures, and cultural readiness.

- Report relevance: Framework for understanding diverse AI adoption trajectories across economies (Chapter 3); explains why similar technologies generate different outcomes in different institutional contexts; distinguishes the ROK's rapid institutional transformation from Bangladesh's early-stage institutional building.

6.7 Technology × Application Matrix

- Reference: Report methodology (Chapters 2–4).

- Definition: The Technology × Application Matrix organizes AI implementation opportunities into 25 cells (5 technologies × 5 application domains), enabling systematic assessment of each economy's progress across dimensions. Technologies include: Foundational ICT, Perception/NLP, Analytics, Agentic Systems, and Sustainability. Applications span: Infrastructure, Service Delivery, Citizen Engagement, Internal Operations, and Strategic Policy. This matrix structures country-specific analysis and enables cross-country comparison.

- Report relevance: Core analytical structure for Part II country reports (Chapters 6–13); enables readers to locate specific technologies and applications across chapters and compare country capabilities.

E-4. Cross Reference to Technology × Application Matrix

Column 1 (Foundational AI/ICT): Maps to Categories 1 and 3. Includes RPA, OCR, Document AI, cloud computing, API integration, edge computing, and digital twin.

Column 2 (Perception/NLP): Maps to Category 1 (B0-B8) and Category 3 (C3.1-C3.5). Includes speech recognition, computer vision, NLP, Generative AI/LLMs, multimodal AI, and machine translation.

Column 3 (Analytics/decision support): Maps to analytical technologies. Includes predictive analytics, optimization algorithms, GIS/spatial analytics, recommendation systems, anomaly detection, and simulation modelling.

Column 4 (Agentic/governance): Maps to Categories 2 (C2.1, C2.2), 4, and 5. Includes multiagent systems, RAG, data governance, security/IAM, MLOps, and MCP.

Column 5 (Sustainability): Maps to long-term resilience technologies. Includes energy-aware AI, sovereign AI infrastructure, federated learning, differential privacy, and quantum-ready architectures.

E-5. Performance Metrics and the Sigma-Theta-Lambda Framework

Category 6 provides the measurement framework that operationalizes Hood's (1991) three public management values:

Sigma (efficiency): C6.1–C6.3. Direct productivity gains from AI automation.

Theta (accountability): C6.4–C6.6. Fairness, transparency, and institutional legitimacy.

Lambda (resilience): C6.7–C6.10. Adaptive capacity, system robustness, and citizen trust.

This mapping ensures that the economic impact estimation (Appendix C) captures only Sigma-dimension effects, establishing it as a strict lower bound on total AI value (Theorem 2, Appendix C-0).

APPENDIX F

INCLUSIVE INSTITUTIONAL ORIENTATION

Two gender-participation indicators are used as proxy variables for inclusive institutional orientation: (1) the WEF Global Gender Gap Index score; and (2) the share of women in national legislatures.

TABLE 1

GENDER GAP INDEX SCORE 2024.

Economy	GGI Score	Rank
Philippines	0.779	25
ROC	0.774	—
Thailand	0.720	65
ROK	0.696	94
Bangladesh	0.689	99
Malaysia	0.670	114
Japan	0.663	118
India	0.641	129

Sources: World Economic Forum. (2024); Global Gender Gap Report 2024; Geneva: WEF. https://www3.weforum.org/docs/WEF_GGGR_2024.pdf (primary source for seven economies); Gender Equality Bureau, Cabinet Office of Japan. (2024), Current Status and Challenges of Gender Equality in Japan (WEF 2024 data cross-reference). https://www.gender.go.jp/english_contents/pr_act/pub/status_challenges/pdf/202205.pdf; Department of Gender Equality, Executive Yuan, ROC (2024), GGI score calculated using WEF 2024 methodology, https://gec.ey.gov.tw/ (for ROC; ROC is not included in the official WEF GGI ranking due to political status).

TABLE 2

SHARE OF WOMEN IN NATIONAL LEGISLATURES AS OF 2024.

Economy	%	Chamber	Note
ROC	41.59%	Legislative Yuan	47/113 (2024)
Philippines	27.33%	House of Representatives	(2024)
Bangladesh	~21%	Jatiya Sangsad	50 reserved + directly elected / 350 total (post Jan 2024 election)
ROK	20.0%	National Assembly	60/300 (post April 2024 election)
Thailand	19.2%	House of Representatives	96/500 (post May 2023 election)
India	13.63%	Lok Sabha	74/543 (post 2024 election)
Malaysia	13.51%	Dewan Rakyat	(2024)
Japan	10.0%	House of Representatives	(2024)

Source: Inter-Parliamentary Union (2024), Parline: Monthly Ranking of Women in National Parliaments, Geneva: IPU, https://data.ipu.org/women-ranking/ (accessed April 2026).

APPENDIX G: EVIDENCE MATRIX

BANGLADESH

Proposed Score

Technology/Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.75	0.25	0.50	0.75	0.50
2. Perceptual/NLP	0.25	0.25	0.25	0.25	0.00
3. Analysis/Decision Support	0.25	0.00	0.00	0.50	0.25
4. Agent	0.00	0.00	0.25	0.25	0.25
5. Sustainability/Unmapped	0.00	0.00	0.00	0.50	0.25

Rationale by Cell

Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ ICT	0. Policy & Governance	29	National AI Policy must address vulnerabilities of artificial intelligence; Artificial intelligence in Bangladesh, its applications in different sectors and relevant challenges for the government: an analysis; How Bangladesh can keep up with AI; National Strategy for Artificial Intelligence Bangladesh; National Strategy for Artificial Intelligence – Bangladesh (and 24 other sources)	0.75	Smart Bangladesh 2041; National AI Policy 2024 Draft; NAICE Count
1x1	1. Foundation, Infra AI/ ICT	1. Internal Management	8	Meta launches 'AI Live Skilling Program' in Bangladesh; Bangladesh's digital transformation roadmap draft: Key takeaways; Artificial Intelligence in Bangladesh: Assessing the Public Sector Readiness in Bangladesh; AI Chatbot - Aspire to Innovate (a2i); THE A2I JOURNEY : How UNDP is Making Digital Innovation Work for the Poor (and 3 other sources)	0.25	BNDA National Digital Architecture; 800+ Service; Foundation AI

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x2	1. Foundation, Infra AI/ ICT	2. Citizen & Citizen services	16	AI in public service delivery: What Bangladesh needs to consider; SuSastho.AI: An AI-Enabled Solution for Adolescents in Bangladesh; National Strategy for Artificial Intelligence – Bangladesh; An Overview of Bangladesh National Artificial Intelligence Policy 2024; National Strategy for Artificial Intelligence of Bangladesh (and 11 other sources)	0.5	a2i 8,858 863M+; 333 100M+; Large-scale Foundation
1x3	1. Foundation, Infra AI/ ICT	3. Administrative Domain	66	Harnessing AI for National Security: Bangladesh's Technological Transformation; Role of Artificial Intelligence in Bangladesh: Current Insights and Future Prospects; AI Technology Adaptation for Efficient Aquaculture; AI in Bangladesh: The Future of Innovation and Challenges; AI in Healthcare: Transforming Bangladesh's Urban and Rural Landscapes (and 61 other sources)	0.75	AI; AI (Krishi Batayon); (e-Mutation); ABIS; Large Number; Administrative Domain
1x4	1. Foundation, Infra AI/ ICT	4. Industry & Others	26	AI Technology Adaptation for Efficient Aquaculture; AI in Bangladesh: The Future of Innovation and Challenges; National Strategy for Artificial Intelligence – Bangladesh; National Strategy for Artificial Intelligence of Bangladesh; AI and IoT in Apparel Quality Assurance: A Study on Innovation and Efficiency in Bangladesh's Ready-Made Garments Industry (and 21 other sources)	0.5	RMG AI (BGMEA-DBP); AI
2x0	2. Perceptual/NLP	0. Policy & Governance	1	Bangla NLP Corpus: 10M+ Words, BERT/GPT-2/T5 Models	0.25	Bangla NLP Corpus 10M+; NLP Foundation
2x1	2. Perceptual/NLP	1. Internal Management	1	Elevating Healthcare Excellence with Voice AI: A Comprehensive Look at the Apollo Hospitals Success Story	0.25	Administrative; NLP

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	2	SuSastho.AI: An AI-Enabled Solution for Adolescents in Bangladesh; 333 National Helpline: AI Voice Bot (100M+ Calls)	0.25	333 AI; NLP
2x3	2. Perceptual/NLP	3. Administrative Domain	6	Unleashing Artificial Intelligence for Crop Disease Detection and Control; AI set to revolutionize agriculture in Bangladesh; AI in Healthcare: Transforming Bangladesh's Urban and Rural Landscapes; AI-powered app helps farmers in Bangladesh detect and manage pests; AI Teleradiology (RadAssist) & Sasthyo Batayan Health Hotline (and 1 other source)	0.25	RadAssist AI; Authentication
2x4	2. Perceptual/NLP	4. Industry & Others	0	—	0	Not Applicable / Not Appropriate
3x0	3. Analysis/Decision Support	0. Policy & Governance	1	BANGLADESH - Artificial Intelligence Readiness Assessment Report	0.25	–
3x1	3. Analysis/Decision Support	1. Internal Management	0	—	0	Not Applicable / Not Appropriate
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	0	—	0	Not Applicable / Not Appropriate
3x3	3. Analysis/Decision Support	3. Administrative Domain	9	Harnessing AI for National Security: Bangladesh's Technological Transformation; AI Technology Adaptation for Efficient Aquaculture; Enhancing Public Service Delivery Efficiency through AI: Current Initiatives and Future Prospects in Bangladesh; Exploring the Role of AI and Machine Learning in Enhancing Internet Banking Adoption in Bangladesh; Can AI solve the insanity of Dhaka's traffic? (and 4 other sources)	0.5	Google AI (40M+); AI (Create); Epidemic; Multiple
3x4	3. Analysis/Decision Support	4. Industry & Others	4	Harnessing AI for National Security: Bangladesh's Technological Transformation; AI revolutionizes financial services in Bangladesh;	0.25	RMG; Part

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
				Artificial Intelligence in financial service delivery in Bangladesh; AI in the Financial Industry of Bangladesh: Unlocking Potential and Future Prospects		
4x0	4. Agent	0. Policy & Governance	0	—	0	Not Applicable / Not Appropriate
4x1	4. Agent	1. Internal Management	0	—	0	Not Applicable / Not Appropriate
4x2	4. Agent	2. Citizen & Citizen services	2	a2i: 8,858 Digital Centers, AI Chatbot, 863M+ Transactions; 333 National Helpline: AI Voice Bot (100M+ Calls)	0.25	a2i / 333
4x3	4. Agent	3. Administrative Domain	1	How Cooperative Intelligence is Transforming Collaboration in AI and Robotics	0.25	Limited Cases Only
4x4	4. Agent	4. Industry & Others	2	How Cooperative Intelligence is Transforming Collaboration in AI and Robotics; Use of artificial intelligence for precision agriculture in Bangladesh	0.25	IoT / ML
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	—	0	Not Applicable / Not Appropriate
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	—	0	Not Applicable / Not Appropriate
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	—	0	Not Applicable / Not Appropriate
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	5	National Strategy for Artificial Intelligence – Bangladesh; National Artificial Intelligence Policy 2024 - DRAFT; Artificial Intelligence and Gen AI in Smart Cities; EcoSmart AI: Enhancing Dhaka's Air Quality through Sustainable Transport Planning; Flood Forecasting: Google AI Partnership (40M+ People Covered)	0.5	AI (Google Cooperation, AUC 0.99, 7-Day Forecast); Disaster; Substantive
5x4	5. Sustainability/ Unmapped	4. Industry & Others	2	National Strategy for Artificial Intelligence – Bangladesh; Smart Bangladesh 2041: National AI Centre (NAICE), GPU Cluster	0.25	Smart Bangladesh 2041; GPU Count; Future Investment

All Sources List

No	URL	Day	Title	Type	Case Details	Mapping Cell
1	https://www.thedailystar.net/opinion/views/news/national-ai-policy-must-address-vulnerabilities-artificial-intelligence-3841756	20253	National AI Policy must address vulnerabilities of artificial intelligence	Private Enterprise	The article emphasizes the need for a comprehensive National AI Policy in Bangladesh to ensure AI systems are safe, secure, reliable, and free from biases. It highlights the transformative potential of AI while also pointing out its susceptibility to errors. The author argues for diverse and representative datasets for training machine learning models to avoid biases and ensure fairness. The piece also touches on the ethical implications of AI, such as its use in the justice system, and calls for such safeguards to be made legally binding rather than merely aspirational. It concludes that while the draft policy is a useful first step, it falls short of more detailed frameworks such as the EU's AI Act and China's regulations, and that gaps in data diversity, algorithmic oversight, and ethical considerations need to be addressed more comprehensively in future revisions.	1x0
2	https://www.researchgate.net/publication/353541957_Artificial_intelligence_in_Bangladesh_its_applications_in_different_sectors_and_relevant_challenges_for_the_government_an_analysis	44197	Artificial intelligence in Bangladesh, its applications in different sectors and relevant challenges for the government: an analysis	Academic Paper	This paper discusses the current technological situation in Bangladesh and the applications of AI in various sectors. It highlights the challenges the government faces in adopting AI and suggests steps to be taken regarding policy, information privacy, security, and regulations. The study notes that while AI has become popular and is being applied in various industries, there is a shortage of experts to develop AI models and address emerging issues. The paper concludes that the Bangladesh government needs to undertake substantial preparation, including infrastructural development and capacity building, before AI can be adopted without significant disruption, noting that these challenges are not unique to Bangladesh but common to developing countries introducing the technology.	1x0

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No	URL	Day	Title	Type	Case Details	Mapping Cell
3	https://www.ijsrp.org/research-paper-0524.php?rp=P14913374	45413	Harnessing AI for National Security: Bangladesh's Technological Transformation	Academic Paper	This paper explores how Bangladesh is using AI to enhance its national security. It details the application of AI in crime prevention, counterterrorism, and counterintelligence. The paper notes that AI algorithms are used to analyze large datasets from social media, communication channels, and financial transactions to identify and intervene in potential radicalization cases. The study highlights that AI-powered surveillance and predictive analytics enable security agencies to detect threats and respond more quickly than traditional methods allow. Citing Bangladesh's fast-growing AI startup ecosystem, including firms like Invegrow and Data Canopy, and government-backed funding such as the Bangladesh AI Innovation Fund, the paper concludes that continued investment, ethical safeguards, and international collaboration will be key to Bangladesh becoming a regional leader in AI-driven national security.	1x3, 3x3, 3x4
4	https://www.researchgate.net/publication/361589902_Role_of_Artificial_Intelligence_in_Bangladesh_Current_Insights_and_Future_Prospects	44713	Role of Artificial Intelligence in Bangladesh: Current Insights and Future Prospects	Academic Paper	The paper examines the role of AI in Bangladesh's development, identifying opportunities for its adoption to foster future prosperity. It highlights that AI has been applied across various sectors, including agriculture, transportation, education, finance, and health, contributing to economic growth. The research points out that while Bangladesh has made outstanding achievements, it still faces challenges in adopting AI. The paper suggests that the proper implementation of AI could significantly improve productivity and help Bangladesh become one of South Asia's fastest-developing economies. Drawing on key informant interviews with AI experts and a literature review, the study finds that social media influence and technological awareness significantly strengthen readiness for AI adoption, while perceived risk has a comparatively weaker effect.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
5	https://www.aci-bd.com/research-development/ai-technology-adaptation-for-efficient-aquaculture.html	2025	AI Technology Adaptation for Efficient Aquaculture	Private Enterprise	ACI Limited is adapting AI technology to make aquaculture more efficient. Their focus is on using AI to reduce the cost of fish feed, which is a major expense for farmers, by up to 21%. This is achieved by using sensors and cameras to monitor fish hunger levels and optimize feeding schedules. Additionally, AI is being used to prevent diseases in fish, which cause significant financial losses in the industry. The technology can predict disease outbreaks and monitor water quality parameters like pH, salinity, oxygen levels, and pollutants, allowing early preventive action. The article notes that while such AI-powered tools remain immature and costly to localize, they can meaningfully strengthen farmers' ability to monitor, control, and document the key factors affecting fish production.	1x3, 3x3, 1x4
6	https://southasiajournal.net/ai-in-bangladesh-the-future-of-innovation-and-challenges/	45613	AI in Bangladesh: The Future of Innovation and Challenges	Academic Paper	The article discusses the transformative potential of AI in Bangladesh across various sectors, including agriculture, healthcare, manufacturing, finance, and traffic management. It highlights how AI can drive efficiency, innovation, and economic growth, citing examples of startups and companies already implementing AI solutions. However, the article also emphasizes the significant challenges that Bangladesh faces in adopting AI, such as a shortage of skilled workers, the lack of robust digital infrastructure, and gaps in data privacy and regulation. It points to homegrown innovations such as Aleh-MD, which uses gut microbiome data to predict diabetes, and telemedicine platforms like Praava Health, as examples of how AI can help bridge urban-rural gaps, particularly in healthcare. The article concludes that realizing AI's full potential in Bangladesh will require sustained investment in skills, infrastructure, and supportive policy.	1x3, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
7	https://cdipbd.org/Final%20Research%20Paper_AI%20and%20Health.pdf	Unknown	AI in Healthcare: Transforming Bangladesh's Urban and Rural Landscapes	Non-profit Organization	This paper explores the role of AI in transforming healthcare in Bangladesh, focusing on bridging the urban-rural divide. It highlights how AI can enhance diagnostic accuracy, optimize patient management, and address disparities in healthcare accessibility. While urban areas show promising outcomes with AI adoption, rural areas face challenges due to inadequate infrastructure and digital literacy. The paper suggests that AI's ability to facilitate remote consultations and automate tasks makes it a promising equalizer for a health system where the doctor-to-patient ratio remains far below WHO recommendations. It recommends investment in digital infrastructure, subsidized AI tools, and stronger training and ethical governance so that the benefits of AI-enabled care reach underserved rural communities rather than being confined to cities.	1x3
8	https://rsisinternational.org/journals/ijriss/articles/ai-and-educational-technology-in-k-12-curriculum-reform-a-pathway-toward-smart-education-in-bangladesh/ai-and-educational-technology/	Unknown	AI and Educational Technology in K–12 Curriculum Reform: A Pathway Toward Smart Education in Bangladesh	Academic Paper	Specific details and a summary for this article are unavailable as the content could not be accessed. The title suggests a focus on integrating AI and educational technology into the K-12 curriculum in Bangladesh to advance towards a "Smart Education" system.	1x3
9	https://today.thefinancialexpress.com.bd/special-issues/international-day-of-education/empowering-bangladeshs-digital-future-through-ai-efforts-1737645610	20251	Empowering Bangladesh's digital future through AI efforts	Private Enterprise	The article discusses how AI can drive economic growth and improve education in Bangladesh, aligning with SDG 4. To prepare for the Fourth Industrial Revolution (4IR), Bangladesh aims to increase ICT employment and exports, which requires reskilling the population. The University Grants Commission (UGC) has recommended integrating AI into higher education to keep pace with global technological advancements. The article stresses the importance of equipping youth with digital and AI skills to enhance their employability, citing initiatives	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					such as the Huawei-BUET ICT Academy and Grameenphone Academy, which offer AI and cloud-computing certification programs. It notes that while Bangladesh's literacy rate has risen sharply over the past decade, graduate unemployment has also grown, and calls on institutions such as the Bangladesh Computer Council to expand AI, IoT, and cybersecurity training to close this gap.	
10	https://userhub.com.bd/articles/ai-student-engagement-bangladesh-higher-education	2025	AI and Student Engagement in Bangladesh's Higher Education	Private Enterprise	This article examines the mixed impact of AI on student engagement in Bangladesh's higher education. While AI has the potential to enhance learning, its effectiveness is sometimes limited by privacy and security concerns, as well as issues with accuracy and usability. The research found that a significant portion of students reported decreased engagement, citing that AI-generated responses can be too generalized. The study, published in the Userhub Journal, suggests that while AI can be a useful supplementary tool for improving efficiency and academic performance, over-reliance risks weakening students' critical thinking and analytical skills. Based on a mixed-methods survey of 97 university students alongside interviews with educators and IT professionals, it recommends refining AI tools for accuracy and personalization, strengthening data-security safeguards, and using AI to complement rather than replace independent learning.	1x3
11	https://bangladesh.techsoup.global/how-nonprofits-are-using-ai	45142	How Nonprofits are Using AI	Non-profit Organization	This article explores how nonprofits can utilize artificial intelligence (AI) to enhance their operations and outreach. It highlights that AI technologies, such as ChatGPT, can help organizations streamline tasks, analyze data for better decision-making, and personalize	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					communication. The article provides examples of AI in fundraising, noting how St. Jude Children's Research Hospital used AI to identify effective storytelling methods and target new donors, significantly increasing their online donations, with new donors now accounting for roughly a quarter of the organization's total YouTube donation revenue. It also cites the Hebrew Immigrant Aid Society's use of machine learning to identify optimal refugee resettlement locations, found to raise refugee employment rates by as much as 40%, as an example of AI supporting nonprofits' core missions and not just their marketing.	
12	https://tbsgraduates.net/pursuit/how-bangladesh-can-keep-up-with-ai/	45840	How Bangladesh can keep up with AI	Private Enterprise	This article discusses the importance of upskilling the workforce in Bangladesh to keep pace with the advancements in AI and Generative AI. It emphasizes that ethical training and public awareness are crucial components of any successful upskilling program. The author argues that while AI is transforming the job market, human skills remain essential. The key message is that with a coordinated, multi-sector strategy for upskilling, Bangladesh can not only adapt to the changes brought by AI but also position itself to compete globally. It points to early steps such as the government's Learning and Earning Development Project (LEDP) and growing efforts by universities and private training platforms, while cautioning that Bangladesh's predominantly Bengali-speaking workforce faces a significant language barrier in accessing English-centric AI tools and content.	1x0

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No	URL	Day	Title	Type	Case Details	Mapping Cell
13	https://www.tbsnews.net/thoughts/four-industries-bangladesh-can-transform-ai-1029861	45663	The four industries Bangladesh can transform with AI	Private Enterprise	This article suggests that by strategically embracing AI, Bangladesh can become a competitive force in the global digital economy. The snippet mentions that agriculture is one of the key industries that can be transformed by AI, citing the start-up iPage's AI-based instant soil-testing device as an example of homegrown innovation in a sector that contributes about 13.47% of GDP and employs roughly 40% of the workforce. The other three industries identified are healthcare, manufacturing, and finance. On manufacturing, the article highlights the garment sector, which accounts for 84% of export earnings but remains heavily labor-intensive, and points to Vietnam's AI- and automation-driven productivity gains and China's 'Made in China 2025' smart-factory push as models Bangladesh could adapt to stay competitive against regional rivals like India and Vietnam.	1x3
14	https://file-rangpur.portal.gov.bd/files/pbs2.dinajpur.gov.bd/files/1885c0a0_28a4_4fcc_8d4d_dcd7ce23fd8b/7b684f19a15dfcd0f542382764572486.pdf	43891	National Strategy for Artificial Intelligence Bangladesh	Government	This document outlines Bangladesh's national strategy for AI. It highlights the country's commitment to digitalization and views AI as an accelerator for this process. The strategy aims to transform Bangladesh into a technologically advanced nation and leverage ICT for sustainable development. It emphasizes the economic benefits of AI, such as increased GDP and improved labor productivity through automation. The strategy is built on six pillars: research and development, skilling and reskilling of the AI workforce, data and digital infrastructure, ethics/data privacy/security and regulations, funding and accelerating AI start-ups, and industrialization of AI technologies. For each pillar the document sets out a strategic brief, roadmap, action plan, and the responsible stakeholders and lead ministries, culminating in a five-year summary roadmap for building a sustainable national AI ecosystem.	1x0

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No	URL	Day	Title	Type	Case Details	Mapping Cell
15	https://www.tbsnews.net/thoughts/ai-public-service-delivery-what-bangladesh-needs-consider-953221	45564	AI in public service delivery: What Bangladesh needs to consider	Private Enterprise	This article examines Bangladesh's current and potential use of AI in public service delivery, citing Rwanda's AI-powered digital health service 'Babyl' as an example of how AI can extend access to citizens in remote areas. It argues that more sophisticated AI models, alongside emerging technologies like the Internet of Things and blockchain, could further improve the efficiency and personalization of public services. However, it cautions that adopting AI in a developing-country context carries significant risks, chief among them the digital divide: large parts of the population, particularly in rural areas, among the elderly, and in low-income groups, still cannot fully benefit from AI-driven services, a pattern also seen in Ethiopia and Nepal. The article also flags the absence of robust data protection regulation as a major vulnerability and warns that AI-driven automation could contribute to job losses in the public sector.	1x2
16	https://gcgh.grandchallenges.org/grant/susasthoai-ai-enabled-solution-adolescents-bangladesh	45117	SuSastho.AI: An AI-Enabled Solution for Adolescents in Bangladesh	Non-profit Organization	Moinul Haque Chowdhury of CMED Health Limited in Bangladesh is leading a project to address the high rates of adolescent pregnancy and mental health issues in the country. They will integrate a multilingual AI engine into their existing digital healthcare platform, SuSastho, to create a chatbot. This chatbot will provide adolescents with secure access to information on sexual, reproductive, and mental health. The project will use an open-source language model, compile common queries, and collect training data on topics such as education, early marriage, contraceptive use, and adolescent pregnancy, with the chatbot also designed to assess health risks and make referrals to care. Funded by a Grand Challenges grant from the Bill & Melinda Gates Foundation, the resulting tool, SuSastho.AI, has since	1x3, 1x2, 2x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					been evaluated as a clinically validated medical copilot, reducing incorrect responses by 26.9% and achieving over 87% user-rated relevance in pilot testing.	
17	https://dig.watch/resource/national-strategy-for-artificial-intelligence-bangladesh/	43891	National Strategy for Artificial Intelligence – Bangladesh	Non-profit Organization	The "National Strategy for Artificial Intelligence – Bangladesh," formulated in March 2020, outlines the government's vision to leverage AI for economic growth and improved public services. The strategy aims to create a sustainable AI ecosystem aligned with national development goals. It provides a roadmap for integrating AI into key sectors like governance, industry, and healthcare. The plan emphasizes institutional capacity, research and innovation, human capital development, and ethical governance as core pillars, alongside data and digital infrastructure and the acceleration of AI start-ups. It positions AI as central to Bangladesh's transition into the fourth industrial revolution, with the goal of embedding AI across governance, industry, agriculture, education, healthcare, transportation, and finance, and establishing the country as a regional hub for AI-driven solutions.	1x0, 1x3, 1x4, 1x2, 5x3, 5x4
18	https://www.thedailystar.net/law-our-rights/law-vision/news/overview-bangladesh-national-artificial-intelligence-policy-2024-3590351	45401	An Overview of Bangladesh National Artificial Intelligence Policy 2024	Private Enterprise	This article provides an overview of the Bangladesh National Artificial Intelligence Policy 2024. The policy aims to address the social, legal, and ethical issues associated with AI. It provides guidelines for the governance, adoption, and development of AI applications, prioritizing sectors like education, healthcare, and public service. The policy suggests establishing a National Artificial Intelligence Center for Excellence (NAICE) and a monitoring committee to oversee ethical concerns. The article notes that the draft also proposes an advisory council and sector-specific adoption pathways under a risk-based governance model, and recommends new legislation to operationalize enforcement and liability mechanisms once the policy is finalized.	1x0, 1x3, 1x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
19	https://books.google.com/books/about/National_Strategy_for_Artificial_Intelli.html?id=i1wIEQAAQBAJ	2024	National Strategy for Artificial Intelligence of Bangladesh	Academic Paper	This book by Md Shofiul Alam outlines Bangladesh's national strategy for AI. It aims to position the country as a technologically advanced nation by leveraging AI across various sectors, including public service, manufacturing, agriculture, and healthcare. The strategy is built on six pillars: research and development, skilling the AI workforce, data and digital infrastructure, ethics and regulations, funding AI startups, and industrialization of AI technologies. The author, a national AI strategist who led the initiative with support from the government's Aspire to Innovate (a2i) program, sets out sector-specific roadmaps across seven priority areas, with the stated aim of boosting labor productivity and advancing Bangladesh's Sustainable Development Goals.	1x0, 1x3, 1x4, 1x2
20	https://lightcastlepartners.com/insights/2024/11/ai-finance-bangladesh/	2024	AI in Bangladesh's Financial Sector: Opportunities and Challenges	Private Enterprise	This LightCastle Partners article examines how Bangladesh's financial sector is beginning to adopt AI, from automating processes to enhancing customer service, though it argues greater adoption is still needed to unlock value in areas like financial inclusion, credit risk management, and fraud detection. It notes that banks such as BRAC Bank and City Bank use AI-driven chatbots to handle routine queries like balance checks and loan applications, reducing pressure on call centers, while machine-learning models are increasingly used to detect anomalous transactions and flag potential fraud in real time. It also highlights alternative, AI-based credit-scoring approaches from fintechs such as bKash and ShopUp, which use data like phone usage and transaction behavior instead of formal credit history to extend micro-loans to previously underserved customers, citing bKash's reported 76% productivity boost from such AI-driven tools.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
21	https://journal-isi.org/index.php/isi/article/view/969	45627	Enhancing Public Service Delivery Efficiency through AI: Current Initiatives and Future Prospects in Bangladesh	Academic Paper	This paper explores how AI can improve public service delivery in Bangladesh. It highlights the use of AI in various sectors, including healthcare and agriculture, to enhance efficiency and accessibility. The study notes that AI initiatives have already impacted over 40 million people through flood prediction and enabled 2.7 million students with AI-powered education, saving up to 87.5% of costs in helpline servicing. The research discusses both the opportunities and challenges facing further AI adoption, including infrastructure limitations, data security, ethical concerns, and the digital divide, and recommends stronger capacity building and governance frameworks to ensure these gains extend beyond initial pilot programs.	1x3, 3x3, 1x2
22	https://www.thedailystar.net/business/economy/news/ais-role-bangladeshs-economic-growth-3908201	45809	AI's role in Bangladesh's economic growth	Private Enterprise	This article discusses the significant role of AI in driving Bangladesh's economic growth. It emphasizes that AI is not just a technological advancement but a crucial catalyst for business innovation and value generation. The piece, based on remarks from a conference, suggests that AI can help accelerate the adoption of advanced technologies and facilitate agile development in new, high-impact business areas. It points to the potential of AI to transform various sectors through models such as "Firm to Factory," which applies AI to precision farming and manufacturing to boost crop yields and streamline the transition from cultivation to finished goods, noting that as AI models mature, their improving accuracy and reliability will further cut operational costs and errors across Bangladeshi businesses.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
23	https://preprints.org preprints202505.0396.v1.pdf	45778	AI and IoT in Apparel Quality Assurance: A Study on Innovation and Efficiency in Bangladesh's Ready-Made Garments Industry	Academic Paper	This study investigates the application of AI and the Internet of Things (IoT) in the quality assurance processes of Bangladesh's Ready-Made Garments (RMG) industry. It highlights how these technologies can enhance operational efficiency, reduce production errors, and promote sustainability. By using AI for analytics and IoT for real-time monitoring, manufacturers can improve product quality and meet international standards. The research uses literature reviews and case studies of existing implementations, applying a multi-criteria decision-making framework — combining fuzzy analytical hierarchy process (FAHP) weighting with PROMETHEE II ranking — to assess IoT components for the sector. It finds that sensors are the most significant component for QA implementation while network interconnection ranks least significant, offering strategic recommendations to help RMG stakeholders, whose sector employs more than 4 million workers, address quality-control inconsistencies, supply chain inefficiencies, and high defect rates.	1x3, 1x4
24	https://zenodo.org/records/15691376	45826	Artificial Intelligence in Bangladeshi Higher Education: Future and Challenges	Non-profit Organization	This paper examines the role and potential of AI in Bangladesh's higher education sector. It addresses how AI can help overcome challenges like outdated curricula and limited resources. The study notes that while some private universities have started using AI-driven learning tools, public institutions face significant hurdles such as inadequate infrastructure and lack of trained faculty. Despite these obstacles, the paper argues that AI has the potential to revolutionize teaching, learning, and administrative processes, drawing on a mixed-methods approach of surveys, interviews, and document analysis to assess its current and future impact. It calls for targeted investment in infrastructure and faculty training so that AI-driven gains are not confined to a handful of well-resourced private institutions.	1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
25	https://pmc.ncbi.nlm.nih.gov/articles/PMC11555453/	45593	Implications of Big Data Analytics, AI, Machine Learning, and Deep Learning in the Health Care System of Bangladesh: Scoping Review	Government	This scoping review examines the impact of big data analytics, AI, machine learning, and deep learning on the healthcare system in Bangladesh. It discusses how these technologies are reshaping healthcare and epidemiology, offering potential for more efficient and effective health interventions. The paper notes the generation of vast amounts of health-related data from various sources like electronic health records and telemedicine. These technologies can support clinicians and policymakers in decision-making, though the review finds that most of the 77 studies analyzed (84%) focused specifically on machine learning models, pointing to significant untapped opportunities in predictive modeling and deep learning. It recommends that Bangladesh prioritize funding for high-return investments such as predictive analytics and AI-assisted diagnostic tools, backed by rigorous cost-benefit analysis, to sustainably scale these technologies across the health system.	1x0, 1x3
26	https://industryinsiderbd.com/ai-in-bangladeshs-road-transport-pragmatic-or-utopian/	45607	AI in Bangladesh's road transport: Pragmatic or utopian?	Private Enterprise	This article explores the feasibility of using AI to manage road transport in Bangladesh, particularly in Dhaka. It discusses the potential of AI to optimize traffic systems, improve road safety, and enable real-time monitoring. However, it also highlights significant challenges, such as the failure of a pilot AI-based traffic management system in Dhaka North City Corporation (DNCC). Experts point out that the lack of clean and accurate data, as well as the heterogeneity of Dhaka's traffic — a mix of rickshaws, motorized vehicles, and non-lane-based driving — makes it far harder for AI systems trained on cleaner, more orderly traffic data elsewhere to perform reliably. It cites the DNCC's 2023 Gulshan-2 pilot, meant to cut violations by 99% but which resulted in zero cases filed over eight months because the AI-camera footage was never shared with traffic police, as a cautionary example of technology deployed without the institutional coordination needed to make it work.	1x3

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
27	https://www.tbsnews.net/features/panorama/ai-might-meet-its-match-dhaka-souths-traffic-633774	45064	AI might meet its match in Dhaka South's traffic	Private Enterprise	This article critically examines the plan to install AI-based traffic signals in Dhaka South. It argues that the city's chaotic and non-lane-based traffic system presents a major obstacle for any AI to manage effectively. The author points out the existing dysfunction of traffic signals and the analogue nature of traffic management, which lacks the necessary digital data for an AI system to work. Experts suggest that fundamental problems, such as the lack of road hierarchy and disciplined traffic behavior, must be addressed before signal technology of any kind, AI-based or manual, can meaningfully ease congestion, with one BUET transport-planning expert arguing that signalling itself is not the core issue behind Dhaka's traffic management woes.	1x3
28	https://edurank.org/cs/ai/dhaka/	45718	Best Artificial Intelligence (AI) universities in Dhaka [Rankings]	Private Enterprise	This page provides a ranking of universities in Dhaka, Bangladesh, for AI. It lists several universities, including the Bangladesh University of Engineering and Technology, Daffodil International University, and the University of Dhaka, with their respective ranks in Bangladesh and Asia. The ranking is based on research output, non-academic reputation, and the impact of notable alumni. The page also provides some statistics for the universities, such as acceptance rates, enrollment figures, and founding dates, drawing on a dataset of roughly 198,000 citations across 18,600 academic papers from 23 Dhaka-based universities to compile the rankings. It notes that the rankings measure research output and reputation rather than undergraduate teaching quality specifically, and recommends prospective students verify actual degree offerings directly with each university.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
29	thefinancialexpress.com.bd	45836	Meta launches 'AI Live Skilling Program' in Bangladesh	Private Enterprise	This article announces the launch of Meta's 'AI Live Skilling Program' in Bangladesh, aimed at empowering individuals and businesses with AI skills. In collaboration with local partners, the program is designed to provide training and resources to help accelerate digital transformation and innovation. The initiative is expected to create employment opportunities, particularly for the youth, and help local businesses expand. The program focuses on the strategic application of AI to penetrate global markets, offering entrepreneurs and professionals hands-on training in Meta's AI tools through a partnership with Light-Castle Partners. Launched at a June 2025 event in Dhaka attended by government officials, a2i representatives, and edtech leaders such as Shikho, the accompanying panel discussion also recommended strengthening AI policy, infrastructure, and institutional coordination to help small and medium enterprises adopt AI responsibly.	1x1
30	https://www.apollohospitals.com/health-library/this-medical-ai-program-is-saving-lives-heres-why-you-need-to-read-this-right-now	45706	This Medical AI Program is Saving lives! Here's why you need to read this right now	Private Enterprise	This article highlights how Apollo Hospitals is using an AI program to save lives, particularly in the context of cardiovascular care. The program, combined with the expertise of their specialists, is designed to help prevent heart diseases. The AI-powered tool provides valuable insights that aid in early detection and proactive management of cardiac conditions. By leveraging artificial intelligence, the hospital aims to enhance the accuracy of diagnoses and personalize treatment plans, ultimately shifting the focus from reactive treatment to proactive prevention. The article highlights the hospital's AICVD risk-prediction tool specifically, which it says can identify a patient's risk of coronary artery disease up to ten years in advance with roughly 90% predictive accuracy, giving patients and doctors a longer window to intervene before a cardiac event occurs.	1x3

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
31	https://augnito.ai/resources/apollo-hospitals-case-study/	Not Applicable	Elevating Healthcare Excellence with Voice AI: A Comprehensive Look at the Apollo Hospitals Success Story	Private Enterprise	This case study details how Apollo Hospitals successfully implemented Augnito's Voice AI technology to improve clinical documentation. The primary challenge was the time-consuming process of manual data entry into Electronic Medical Records (EMRs). By adopting Augnito's AI-powered speech recognition solution, doctors were able to dictate clinical notes directly into the EMR with 99% accuracy, saving a significant amount of time. This increased efficiency allowed for more patient consultations and reduced physician burnout, with doctors reportedly saving an average of 44 hours of administrative work per month and productivity rising by 46%. Deployed across 37 Apollo sites and 25 medical specialties, the case study notes that the next phase of the partnership will extend Voice AI more deeply into nursing operations.	1x3, 2x1
32	united.com.bd	Not Applicable	United Hospital ltd.	Private Enterprise	United Hospital Limited, located in Dhaka, Bangladesh, is a private hospital that provides a wide range of medical services. The hospital is committed to delivering high-quality healthcare and has a team of experienced doctors and medical professionals. It is equipped with modern medical technology to ensure accurate diagnosis and effective treatment. While the website itself provides general information about the hospital's services and facilities, it doesn't offer a specific case study on AI in its operations, so this entry serves as background context on the hospital rather than a distinct source of AI-related evidence.	1x3

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
33	https://en.wikipedia.org/wiki/United_Hospital_Limited	45782	United Hospital Limited - Wikipedia	Non-profit Organization	This Wikipedia page provides an overview of United Hospital Limited in Dhaka, Bangladesh. It states that the hospital is a non-profit organization and is accredited by the Joint Commission International. The page details the hospital's history, including its former name, Continental Hospital, and its opening date. It also mentions significant medical achievements, such as the first transcatheter aortic valve replacement performed at the hospital. The page serves as a factual resource, providing background on the hospital's history and accreditation rather than any information specific to its use of AI technologies.	1x3
34	https://www.youtube.com/watch?v=btQs2dP4Gpo	45548	CMED Health is a health-tech startup in Bangladesh transforming healthcare with SUSASTHO	Private Enterprise	This YouTube video introduces CMED Health, a health-tech startup in Bangladesh, and its smart health platform, "Susastho." The platform is designed to reduce health risks, costs, and time, contributing to universal health coverage. CMED utilizes 4IR technologies like AI to provide health education, screening, diagnosis, and intervention. A key initiative, "SuSastho.AI," is an AI tool addressing sexual, reproductive, and mental health by overcoming societal taboos and improving access to information on these sensitive topics. The video positions Susastho as part of CMED Health's broader mission to expand universal health coverage in Bangladesh through Fourth Industrial Revolution technologies, with SuSastho.AI presented as a flagship example of that strategy.	1x3, 1x4
35	https://www.tbsnews.net/economy/corporates/brac-institute-languages-hosts-workshop-ai-classrooms-1152116	45803	BRAC Institute of Languages hosts workshop on AI in classrooms	Private Enterprise	This article reports on a workshop hosted by the BRAC Institute of Languages at BRAC University, focusing on the use of AI in foreign language teaching. The workshop aimed to show how AI can be a powerful ally in education rather than a threat. It brought together language teachers and digital learning practitioners to explore how AI tools can address challenges such as student motivation, pronunciation, and grammar. The discussion also covered concerns	1x3

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					about academic integrity, with the session's speaker, education specialist Dr Noura El Sayed Rodríguez, emphasizing that responsible use of AI tools requires clear ethical guidelines aligned with the evolving dynamics of modern classrooms.	
36	thedailystar.net	45800	Education in a world of AI	Private Enterprise	This Daily Star opinion piece reflects on what education means in a world being reshaped by AI and digital classrooms, arguing that the anxieties once directed at Google and the internet have now shifted to tools like ChatGPT. The author argues that clear guidelines are needed to decide how much reliance on AI is appropriate, particularly for children, so that technology supports rather than controls learning. It stresses that the digital divide remains a real barrier in Bangladesh, meaning any AI-driven shift in education must account for children in remote villages and slums, not just those with access to devices in cities. The piece concludes that the goal should not be to resist AI but to shape its use thoughtfully, keeping sight of education's deeper purpose rather than treating technology adoption as an end in itself.	1x3
37	https://www.hubbis.com/news/nagad-gears-up-to-unveil-new-digital-bank	45168	Nagad Gears Up to Unveil New Digital Bank	Private Enterprise	This article reports on Nagad, a leading mobile financial service provider in Bangladesh, and its preparations to launch a digital bank. The new digital bank aims to offer a comprehensive range of financial services on a single platform, from account opening to loans and investments. A key innovation highlighted is the development of an AI-based credit rating system to assess the creditworthiness of customers, particularly for small, informal businesses that lack access to traditional banking. The system analyzes public-domain transaction data linked to a customer's National	1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					ID and mobile number to instantly assess risk and disburse single-digit, collateral-free loans, with the stated aim of bringing informal-sector borrowers, who often pay moneylenders interest rates as high as 40% per day, into the formal financial system.	
38	https://thefinancialexpress.com.bd/sci-tech/is-using-ai-a-smart-move-or-a-shortcut	45837	Is using AI a smart move or a shortcut?	Private Enterprise	This article delves into the debate surrounding the use of AI in research and knowledge acquisition. It draws a parallel between the invention of writing and the rise of AI, questioning whether AI enhances human intellect or merely provides an illusion of knowledge. The author acknowledges AI's potential to speed up data processing and analysis but warns of the risk of dependency and reinforcing existing biases if used without critical thinking. The piece advocates for a more deliberate, critical use of AI in research, invoking Kate Crawford's argument in Atlas of AI that AI systems are shaped by the material, political, and economic structures in which they are built, and cautioning that AI should be treated as a tool that helps capture and organize thought rather than one that replaces it.	unmapped
39	https://www.tbsnews.net/bangladesh/dhaka-south-successful-controlling-dengue-outbreaks-last-3-years-mayor-taposh-632762	45062	Dhaka South to set up AI-based automatic traffic signals: Mayor	Private Enterprise	This article reports on the announcement by the Mayor of Dhaka South City Corporation (DSCC) to install AI-based automatic traffic signals at 53 intersections. The project aims to modernize the city's traffic management system and reduce congestion. The mayor stated that consulting firms have been appointed to develop the necessary physical infrastructure for this initiative. This move is part of a broader effort to improve the city's infrastructure, which also includes shifting inter-district bus terminals out of the city center to new locations such as Kanchpur and Baghair in Keraniganj. The mayor also cited other progress during his three years in office, including a 20% reduction in roadside waste and strengthened mosquito-control operations that have helped curb dengue outbreaks.	1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
40	https://www.unesco.org/en/articles/ai-all-shaping-bangladeshs-future-ethical-ai	45831	AI for All: Shaping Bangladesh's Future with Ethical AI	Non-profit Organization	This UNESCO article discusses the importance of shaping Bangladesh's future with ethical AI. It highlights the need for a human-centric approach to AI development and deployment, ensuring that the benefits of AI are accessible to all segments of society. The article emphasizes the importance of addressing ethical considerations, such as fairness, transparency, and accountability, to prevent AI from exacerbating existing inequalities. It calls for multi-stakeholder collaboration across government, academia, civil society, and industry, describing a 2025 validation workshop for Bangladesh's AI Readiness Assessment Methodology (RAM) — a UNESCO diagnostic tool used in more than 72 countries — led jointly with UNDP Bangladesh, the ICT Division, and a2i, whose findings will feed into a national AI policy report identifying what is working, what is missing, and how AI can be made to serve people rather than the reverse.	unmapped
41	https://gulfnews.com/business/corporate-news/nagad-becomes-bangladeshs-fastest-fintech-unicorn-1.500146335	45138	Nagad becomes Bangladesh's fastest fintech unicorn	Private Enterprise	This article reports that Nagad, a mobile financial service (MFS) provider in Bangladesh, has become the country's fastest company to achieve unicorn status, meaning a valuation of over $1 billion. This was achieved within four years of its launch. The article highlights Nagad's disruptive innovations and its role in expanding financial inclusion in Bangladesh. A key factor in its success is its plan to launch a digital bank, which will include an AI-based credit rating system to offer collateral-free, single-digit-interest loans to small and informal businesses that lack access to traditional banking, part of a broader strategy that has helped Nagad onboard more than 95 million registered customers within five years of launch.	1x4

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
42	https://www.cloudera.com/customers/robi-axiata-limited.html#	Not Applicable	Robi Axiata Limited	Private Enterprise	This Cloudera case study describes how Robi Axiata Limited, Bangladesh's second-largest mobile network operator, has used AI and machine learning as part of a broader digital transformation to become a data-driven enterprise. Robi's data science teams use the platform to develop and tune machine learning models on nearly 20 terabytes of data daily, aiming to improve customer experience, reduce operational challenges, and inform decisions with data rather than intuition. Based on early use-case deployments, the company expects roughly a 4% improvement in customer churn, an 8% rise in upsell recommendations, and more than 5% improvement in customer-acquisition quality, as part of its stated goal of becoming Bangladesh's most preferred telecom service provider.	unmapped
43	chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.adb.org/sites/default/files/publication/1017476/sdwp-101-artificial-intelligence-education-bangladesh.pdf	Not Applicable	Artificial Intelligence for Education in Bangladesh	Government	This report by the Asian Development Bank (ADB) explores the potential of AI in transforming primary education in Bangladesh. It is based on surveys and training with teachers and education officials. The report highlights that teachers are open to using AI for tasks like creating assessments and lesson plans. It provides guidelines and a roadmap for integrating AI into the education system to enhance learning outcomes and prepare students for an AI-driven world. The report also documents opportunities teachers identified for AI in personalized learning, content development, and support for students with special needs, while cautioning that poorly localized tools can backfire — citing an incident in which an AI-translated mathematics textbook produced inaccurate and culturally inappropriate results — and it recommends expanded teacher training, greater infrastructure investment, and AI tools tailored to Bangladesh's linguistic and cultural context.	1x3, 1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
44	https://www.thedailystar.net/tech-startup/news/bangladeshs-digital-transformation-roadmap-draft-key-takeaways-3827356	45837	Bangladesh's digital transformation roadmap draft: Key takeaways	Private Enterprise	This article outlines the key aspects of Bangladesh's draft digital transformation roadmap, which aims to leverage technology for societal progress. A significant component of this roadmap is the focus on AI. The draft emphasizes building a domestic AI industry, developing skilled human resources, and creating a robust innovation ecosystem. It also addresses the importance of data protection and privacy by proposing a new Data Protection Act. The roadmap highlights the need for a National Data Exchange (NDX) to integrate currently siloed databases such as the National Identity system, Bangladesh Bank's records, and the Health Management Information System, and calls for AI-driven automation to be rolled out across public services as part of a three-phase, six-year plan running from 2025 to 2030.	1x4, 1x1
45	https://cse.buet.ac.bd/home/ra_ai	Not Applicable	Artificial Intelligence and Machine Learning - Dhaka - Department of Computer Science and Engineering, BUET	Government	The Department of Computer Science and Engineering (CSE) at Bangladesh University of Engineering and Technology (BUET) is actively involved in the fields of AI and Machine Learning (ML). The department's research in this area is broad, covering foundational aspects of AI and ML as well as their applications in various domains. Faculty and students engage in projects that contribute to the advancement of AI in Bangladesh. While the page indicates a strong focus on these areas, its listed research emphasizes topics such as pattern recognition, neural networks, digital image processing, computer vision, character recognition, robotics, and disease diagnosis, and the department also offers dedicated postgraduate degrees in AI and Machine Learning to train specialists in these fields.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
46	https://www.du.ac.bd/webPost/28/24087	45722	DU IIT Student had won the AI Hackathon 2025.	Government	This article celebrates the achievement of a student team from the Institute of Information Technology (IIT) at the University of Dhaka (DU) who won the AI Hackathon 2025. This success highlights the university's growing talent and focus on AI. The team, named "Runtime Terrors," won in the "Fintech" category — covering financial inclusion, fraud detection, AI-driven credit scoring, and secure transactions — in a hackathon powered by Akij Resource and Mutual Trust Bank PLC as part of the Bangladesh Innovation Conclave, showcasing the quality of education and practical AI skills being nurtured at the institution.	1x3
47	https://www.apollohospitals.com/corporate/apollo-in-the-news/apollo-hospitals-has-launched-an-automated-ai-based-real-time-rapid-response-patient-monitoring-system-enhanced-connected-care/	Not Applicable	Apollo Hospitals has launched an automated AI based real-time cardiac monitoring and alert system	Private Enterprise	Apollo Hospitals has implemented an advanced, AI-based real-time cardiac monitoring system to enhance patient safety. This automated system continuously tracks the heartbeats of patients outside the ICU and alerts a dedicated rapid response team if any abnormalities or risks are detected. This proactive approach allows for immediate medical intervention, significantly reducing the chances of cardiac arrest. The AI tool acts as a vigilant monitor, ensuring that no critical signs are missed. This system, called Enhanced Connected Care, was developed in-house by Apollo's technology enabler Health Net Global and combines wearables, patient monitors, and an AI-driven early warning score to alert nurses, doctors, and a regional command center at three separate levels of oversight; field trials across Hyderabad and Chennai showed improved nursing efficiency and fewer unexpected complications within two months, prompting Apollo to expand the system across its hospital network with a planned investment of more than USD12 million over three years.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
48	https://www.dataguidance.com/news/bangladesh-ict-department-publishes-draft-ai-policy	45386	Bangladesh: ICT Department publishes draft AI policy	Private Enterprise	The ICT Department of Bangladesh published the National Artificial Intelligence Policy 2024. The policy outlines objectives, principles, and implementation strategies for AI development, emphasizing social equity, transparency, safety, sustainability, and human-centered AI.	1x0
49	https://dig.watch/resource/national-strategy-for-artificial-intelligence-bangladesh#:~:text=The%20primary%20purpose%20of%20this,healthcare%2C%20transportation%2C%20and%20finance.	45848	GIP Digital Watch Observatory	Non-profit Organization	The GIP Digital Watch Observatory provides news, updates, analysis, and reports on digital policy discussions. While no specific AI article was found, it is a source for general digital policy information.	1x0
50	https://ictd.portal.gov.bd/sites/default/files/files/ictd.portal.gov.bd/page/6c9773a2_7556_4395_bbec_f132b9d819f0/Draft%20National_AI_Policy_2024.pdf	45379	National Artificial Intelligence Policy 2024 - DRAFT	Government	This is the draft of the National Artificial Intelligence Policy for Bangladesh. It focuses on the adoption and implementation of AI across 10 sectors, including telecommunication, data governance, environment, energy, and climate change.	1x0, 1x3, 5x3
51	https://www.dhakatribune.com/opinion/op-ed/383624/who-gets-to-author-the-future-of-ai-in	45820	Dhaka Tribune	Private Enterprise	A major English-language newspaper in Bangladesh. Although a specific article on AI was not found, it is an important source for related news.	unmapped
52	lightcastlepartners.com	45552	Artificial Intelligence: Transforming Bangladesh's Economy	Private Enterprise	This article discusses the potential of AI to transform Bangladesh's economy, highlighting how it can improve efficiency and productivity in sectors like agriculture, manufacturing, and finance.	1x3, 1x4
53	https://www.designrush.com/agency/ai-companies/bd	2025	Top AI Development Companies in Bangladesh in 2025	Private Enterprise	This page lists and ranks AI development companies in Bangladesh, providing information on their size, hourly rates, and project budgets, serving as a resource for businesses seeking AI talent.	unmapped
54	https://ictd.portal.gov.bd/sites/default/files/files/ictd.portal.gov.bd/page/6c9773a2_7556_4395_bbec_f132b9d819f0/Artificial%20Intelligence%20Readiness%20Assessment%20Report_Draft.pdf	2025	DRAFT - National Strategy for Artificial Intelligence, Bangladesh	Government	This is an earlier draft of a national AI strategy for Bangladesh from 2019, outlining the country's initial vision and strategic direction for adopting artificial intelligence.	1x0

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No	URL	Day	Title	Type	Case Details	Mapping Cell
55	https://asianews.network/edtech-platform-shikho-partners-with-meta-to-launch-ai-literacy-course-in-bangladesh/	45835	Edtech platform Shikho partners with Meta to launch AI literacy course in Bangladesh	Private Enterprise	Edtech platform Shikho has partnered with Meta to offer a free course in Bengali to improve AI literacy in Bangladesh.	unmapped
56	https://factly.in/this-video-of-an-alleged-tiger-market-in-bangladesh-is-a-deepfake-created-using-ai/	45839	This video of an alleged tiger market in Bangladesh is a deepfake created using AI	Private Enterprise	This article debunks a viral video claiming to show a "tiger market" in Bangladesh, demonstrating that it is an AI-generated deepfake.	unmapped
57	https://www.dhakatribune.com/opinion/longform/372730/bangladesh-s-ai-moment	45692	Bangladesh's AI moment	Private Enterprise	The article argues that the time for action on AI in Bangladesh is now. It highlights the potential for AI-powered precision farming to significantly increase agricultural yields. The author urges that Bangladesh should not just be a consumer of AI but also a creator and leader in the AI age, leveraging its existing infrastructure and youth population to seize the vast opportunities presented by artificial intelligence.	unmapped
58	https://www.adb.org/publications/artificial-intelligence-education-bangladesh	45627	Artificial Intelligence for Education in Bangladesh: Insights from the First Small-Scale Artificial Intelligence Needs Assessment and Training for Primary Education Teachers	Non-profit Organization	This paper presents findings from an AI needs assessment among primary education teachers in Bangladesh. It shows a strong interest from teachers in using AI for lesson planning, creating assessments, and personalizing education. However, fully realizing AI's potential requires robust infrastructure, locally relevant content, practical training, and community support. The report recommends investing in digital infrastructure and developing tools in the Bangla language to build trust and empower teachers, drawing on a survey of 1,253 teachers that found participation in AI training programs boosted confidence and willingness to adopt AI tools. It notes teachers felt most comfortable using AI for lesson planning and assessment while remaining more cautious about applying it to tasks that require direct human interaction.	1x3, 1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
59	https://www.tbsnews.net/features/pursuit/how-bangladesh-can-keep-ai-1167571	2025	How Bangladesh can keep up with AI	Private Enterprise	The title suggests the article discusses strategies for Bangladesh to remain competitive in the age of AI, likely covering areas like policy, education, and industry adoption to avoid falling behind in the global technological race. A full summary is not possible from the provided search snippets, which were limited and did not contain relevant text.	1x0, 1x3, 1x4
60	https://www.researchgate.net/publication/382561907_Artificial_Intelligence_in_Bangladesh_Assessing_the_Public_Sector_Readiness_in_Bangladesh	45474	Artificial Intelligence in Bangladesh: Assessing the Public Sector Readiness in Bangladesh	Academic Paper	This research assesses the readiness of Bangladesh's public sector to adopt AI. It uses a comprehensive review of literature and policy papers to analyze key factors like technological infrastructure, policy frameworks, institutional capacity, and public awareness. The study aims to provide guidance to policymakers and government agencies on areas that require investment to facilitate the seamless integration of AI, ensuring the digital transformation is inclusive and equitable.	1x0, 1x1
61	https://a2i.portal.gov.bd/site/page/d3f4c3fa-e392-4eb4-b5df-0239388a423b/-	17th June 2025	AI Chatbot - Aspire to Innovate (a2i)	Government	Aspire to Innovate (a2i) is the flagship digital transformation program of the Bangladesh government. While a specific page for an 'AI Chatbot' was not found, such an initiative would align with a2i's mission. It would involve developing an AI-powered conversational agent to improve public service delivery, provide instant information to citizens, and enhance overall government-citizen engagement through an automated, intelligent, and accessible platform.	1x2, 1x1
62	https://ictd.portal.gov.bd/sites/default/files/files/ictd.portal.gov.bd/notices/7093abbf_7ade_4e10_b129_dab2ecd0652f/National_AI_Policy_2024_DRAFT.pdf	45352	National Artificial Intelligence Policy 2024 – DRAFT	Government	This document is the draft of the National AI Policy for Bangladesh, issued by the Ministry of Posts, Telecommunications and Information Technology. It outlines the strategic framework for the development and adoption of AI in the country. The policy aims to guide ethical, responsible, and effective AI implementation across various sectors to foster innovation, economic growth, and social development while addressing potential risks and challenges.	1x0

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No	URL	Day	Title	Type	Case Details	Mapping Cell
63	https://mrdibd.org/wp-content/uploads/2024/11/AI_Adoption_in_Bangladeshi_Newsrooms-2024.pdf	45623	AI Adoption in Bangladeshi Newsrooms 2024	Non-profit Organization	This study by the Media Resources Development Initiative (MRDI) explores the adoption of AI in Bangladeshi newsrooms. Using surveys and interviews, it investigates current practices and policies for ethical AI use. The report identifies a gap between the potential of AI and its actual implementation in journalism. It offers recommendations to enhance AI literacy, promote ethical standards, and support the sustainable integration of AI technologies within the country's media outlets.	unmapped
64	https://www.unesco.org/en/articles/advancing-ai-ethics-bangladesh	45488	Advancing AI Ethics in Bangladesh	Non-profit Organization	UNESCO is collaborating with Bangladesh's ICT Ministry and a2i to advance AI ethics. They are using UNESCO's Readiness Assessment Methodology (RAM) to evaluate the country's preparedness for ethical AI implementation. The assessment covers infrastructure, legislation, and economic factors. The goal is to produce a comprehensive report with data-driven recommendations that will help Bangladeshi policymakers create an ethical AI ecosystem aligned with global standards, ensuring AI benefits society as a whole rather than deepening existing inequalities. The RAM assessment draws on input from government, academia, civil society, and industry stakeholders, and its findings are expected to feed directly into Bangladesh's evolving national AI policy framework.	1x0, 1x3, 1x4
65	https://udspace.udel.edu/server/api/core/bitstreams/89389970-0f1c-47e3-b609-f47d78c8dcd2/content	45548	The Impact of Artificial Intelligence (AI) on Business Operations in Bangladesh	Academic Paper	This research article explores the growing adoption of AI in the Bangladeshi business sector. It identifies challenges such as the need for skilled personnel, infrastructure support, and managing job displacement. The paper suggests that by educating employees, collaborating with the government, and addressing change management, businesses in Bangladesh can leverage AI to enhance operational efficiency, improve competitiveness, and achieve better outcomes.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
66	https://www.ungm.org/Public/Notice/238423	2024	National Consultant for AI Policy Development	Non-profit Organization	This appears to be a notice for a consultancy position related to the development of national AI policy, likely posted on the United Nations Global Marketplace (UNGM). The role would involve providing expert advice and assisting a national body in formulating its AI strategy and policy documents to align with international best practices and national development goals.	1x0
67	https://techglobalinstitute.com/research/reforming-ai-laws-and-regulation-in-bangladesh-current-harms-and-possible-futures/	45802	Reforming AI Laws and Regulation in Bangladesh: Current Harms and Possible Future(s)	Non-profit Organization	This paper examines the current state of AI regulation in Bangladesh. It identifies potential harms from unregulated AI, such as biases and privacy violations, and analyzes the existing legal framework's gaps. The authors propose several future paths for reform, suggesting a balanced approach that encourages innovation while implementing robust safeguards. The paper calls for a multi-stakeholder dialogue to create a regulatory environment that is adaptive, ethical, and aligned with the nation's democratic transition, noting that the fall of the previous government in August 2024 created a rare window to reform digital laws that had previously been used to intimidate journalists, minority-rights activists, and human-rights defenders, rather than simply carrying the same authoritarian-era frameworks forward into new AI legislation.	1x0, 1x3
68	https://ictd.portal.gov.bd/sites/default/files/files/ictd.portal.gov.bd/page/6c9773a2_7556_4395_bbec_f132b9d819f0/Draft%20-%20Mastering%20National%20Strategy%20for%20Artificial%20Intelligence%20-%20Bangladesh.pdf	44039	DRAFT VERSION 3:0 NATIONAL STRATEGY FOR ARTIFICIAL INTELLIGENCE OF BANGLADESH	Government	This document is an earlier draft (Version 3.0) of the National Strategy for Artificial Intelligence of Bangladesh, from 2020. It lays out a foundational plan for making Bangladesh "AI-ready." The strategy focuses on developing human capital, fostering industry growth, promoting research and development, and establishing ethical guidelines for AI. It identifies key sectors for AI intervention and proposes initiatives to build a vibrant AI ecosystem to drive economic and social progress.	1x0, 1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
69	https://ictd.portal.gov.bd/sites/default/files/files/ictd.portal.gov.bd/page/6c9773a2_7556_4395_bbec_f132b9d819f0/Artificial%20Intelligence%20Readiness%20Assessment%20Report%C2%A0Draft.pdf	45748	BANGLADESH - Artificial Intelligence Readiness Assessment Report	Government	This is the final report of the AI Readiness Assessment for Bangladesh, conducted in partnership with UNESCO using their Readiness Assessment Methodology (RAM). The report provides a comprehensive analysis of the country's position across various dimensions, including legal, social, economic, scientific, and educational aspects. It offers evidence-based recommendations for policymakers to build a robust and ethical AI ecosystem, ensuring that Bangladesh can effectively harness AI for sustainable economic growth and social development. It stresses that meaningful progress will depend on cross-sector collaboration and continued investment in digital infrastructure, data governance, and AI literacy across government, industry, and civil society.	1x0, 1x3, 1x4, 3x0
70	https://a2i.portal.gov.bd/the-a2i-journey-how-undp-is-making-digital-innovation-work-for-the-poor/	Unknown	THE A2I JOURNEY : How UNDP is Making Digital Innovation Work for the Poor	Government	This describes the mission of the Aspire to Innovate (a2i) program, a partnership of the ICT Division, Cabinet Division, and UNDP. It details a2i's role in catalyzing Bangladesh's digital transformation by creating accessible digital services. The focus is on leveraging technology, including AI, to simplify public services, empower citizens, and create opportunities for the underprivileged, thereby accelerating the achievement of the Sustainable Development Goals.	1x2, 1x1
71	https://coingeek.com/unesco-wants-to-assist-bangladesh-in-ethical-ai-development/	45497	UNESCO wants to assist Bangladesh in ethical AI development	Private Enterprise	This article reports on the partnership between UNESCO and Bangladesh to foster ethical AI development. It highlights the launch of the AI Readiness Assessment Report for Bangladesh. The collaboration aims to help the country align its national AI strategy with global ethical standards and human rights principles. UNESCO's assistance focuses on providing tools and guidance to ensure that as Bangladesh adopts AI technologies,	1x0, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					it does so in a way that is responsible, inclusive, and beneficial for all citizens, not just those in urban centers. The article notes that this collaboration builds on Bangladesh's existing digital governance efforts, positioning the UNESCO partnership as a step toward integrating global ethical AI standards into the country's own national policy development process.	
72	en.prothomalo.com	45335	a2i project: 3 companies got majority of work with dominance of 1 person	Private Enterprise	This investigative report from Prothom Alo alleges that a significant portion of the development work for the government's a2i project was awarded to a small number of companies, with one individual holding a dominant position across them. The article raises concerns about a lack of transparency and competition in the procurement process for these critical digital transformation projects. It questions the selection criteria and the concentration of contracts, suggesting potential conflicts of interest, and calls for greater transparency and stronger competitive-bidding safeguards in future government digital-transformation procurement.	1x1
73	https://www.samenacouncil.org/samena_daily_news?news=103240	45562	AI revolutionizes financial services in Bangladesh	Non-profit Organization	This article highlights the transformative impact of AI on Bangladesh's financial services sector. It discusses how AI-driven solutions are enhancing customer service through chatbots, improving risk management with advanced credit scoring models, and increasing security via sophisticated fraud detection systems. The adoption of these technologies is making financial services more accessible, efficient, and personalized for a broader segment of the population, thereby promoting greater financial inclusion for underserved and unbanked populations across Bangladesh. It suggests that continued adoption of these technologies could meaningfully close the gap between traditional banking services and the country's large informal economy.	3x4, 1x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
74	https://thefinancialexpress.com.bd/views/views/artificial-intelligence-in-financial-service-delivery-in-bangladesh	45559	Artificial Intelligence in financial service delivery in Bangladesh	Private Enterprise	This opinion piece analyzes the role of AI in the delivery of financial services in Bangladesh. It notes the increasing adoption of AI for tasks like credit scoring, customer support, and fraud detection. While acknowledging the benefits of efficiency and personalization, the article also points to challenges, including the high cost of implementation, a shortage of skilled professionals, and data security concerns. The author calls for strategic planning and investment to overcome these hurdles and fully unlock AI's benefits for financial inclusion and service delivery across the sector.	3x4, 1x2
75	https://www.exitstack.co/posts/ai-in-the-financial-industry-of-bangladesh-unlocking-potential-and-future-prospects	45597	AI in the Financial Industry of Bangladesh: Unlocking Potential and Future Prospects	Private Enterprise	This blog post explores the potential of AI within Bangladesh's financial industry. It outlines how AI can unlock new opportunities by improving operational efficiency, enhancing customer experience through personalization, and strengthening risk management. The article discusses future prospects, envisioning a financial landscape where AI-powered analytics and automated processes become standard. It emphasizes that embracing AI is crucial for financial institutions to stay competitive and meet evolving customer expectations, and urges banks and fintechs to invest early in AI capabilities rather than risk falling behind more agile regional competitors.	1x3, 3x4, 1x4
76	https://www.goodfirms.co/artificial-intelligence/bangladesh	45809	Top Artificial Intelligence Companies in Bangladesh - June 2025 Reviews	Private Enterprise	This webpage is a directory listing the top AI development companies in Bangladesh, curated by GoodFirms. It serves as a resource for businesses seeking to hire AI service providers. The list is based on reviews, client feedback, and market research. Each listed company profile includes details about their services, expertise, and ratings, helping potential clients make informed decisions when selecting a partner for their AI development projects in the region.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
77	https://www.tbsnews.net/economy/banking/bangladesh-bank-instructs-banks-use-ai-against-online-gambling-1154086	45805	Bangladesh Bank instructs banks to use AI against online gambling	Private Enterprise	Bangladesh Bank has directed all banks and financial institutions to increase surveillance on transactions related to online gambling. The directive suggests leveraging AI to monitor and identify merchants or customers involved in these illicit activities. If any suspicious activity is found, institutions are required to take immediate action and notify law enforcement agencies. The central bank also urged banks to raise customer awareness about the harmful effects of online gambling and directed compliance with the recently enacted Cyber Security Ordinance 2025, mandating immediate implementation with strict enforcement expected across all relevant financial institutions.	1x3
78	https://medium.com/@noman-nayeem/gen-ai-5g-and-sustainability-a-bold-vision-for-global-and-bangladesh-telecom-9936eb969adb	45303	Gen AI, 5G, and Sustainability: A Bold Vision for Global and Bangladesh Telecom	Private Enterprise	This article discusses the transformative impact of Generative AI and 5G on the telecommunications industry in Bangladesh and globally. It highlights how Gen AI is revolutionizing customer engagement through personalized experiences and AI-powered support like chatbots. The integration of these technologies is crucial for optimizing network performance, enhancing operational efficiency, and maintaining a competitive edge. The piece envisions a future where AI and 5G drive both technological advancement and sustainable development, arguing that Bangladesh's telecom sector can leapfrog by pairing generative AI applications with 5G rollout, provided operators invest early in the infrastructure and talent needed to capture these gains.	1x4, 1x2
79	https://developingtelecoms.com/telecom-technology/oss-service-management/18647-bangladesh-operator-to-use-new-gen-ai-lab-from-ericsson-and-aws.html	45826	Bangladesh operator to use new Gen-AI Lab from Ericsson and AWS	Private Enterprise	Grameenphone, a leading mobile operator in Bangladesh, is the first to utilize the new Ericsson and AWS Gen-AI Lab. This collaboration aims to create an agentic AI-powered solution to automate and improve its Operations and Business Support	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					Systems (OSS/BSS). The lab will use generative AI to streamline complex processes like migrating product catalogues, which is traditionally a highly manual task. This initiative is expected to significantly improve operational efficiency, enhance service experience, and drive business growth, using a series of Gen-AI-powered agents that interpret Grameenphone's existing product catalog, translate it into business requirements, configure it within the Ericsson Catalog Manager platform, and test each product to ensure accurate migration.	
80	https://jai.aspur.rs/archive/v2/n3/6.pdf	45685	Artificial Intelligence (AI) Integration in the Garment Industry: Navigate the Changes and Assess the Impact of the Future - a Case Study Based on the Bangladesh Garments Sector	Academic Paper	This case study focuses on the integration of AI into the Bangladesh garments sector. It explores how AI algorithms can analyze data to create accurate patterns and how AI vision systems can identify and grade textile fabrics. The paper discusses AI's application in enabling precise performance during cutting, spreading, and sewing, as well as predicting dye recipes and controlling the dyeing process. The study assesses the impact of these changes on the industry's future.	1x4
81	https://www.ijfmr.com/papers/2024/5/27073.pdf	45537	Artificial Intelligence in Ready-Made Garments Industry of Bangladesh: Practices and Challenges	Academic Paper	This research paper examines the use of AI in Bangladesh's Ready-Made Garments (RMG) industry. It highlights how AI enhances efficiency, productivity, and customization while predicting trends and improving sustainability. The study identifies challenges in AI adoption and recommends that the RMG sector should improve employee understanding of AI, collaborate with the government for infrastructure support, and address concerns about job displacement through training. The paper provides insights into how AI-driven demand forecasting, automated quality inspection, and supply chain analytics could help Bangladesh's garment sector maintain its competitiveness against faster-adopting rivals such as Vietnam and China, while cautioning that these gains will only be realized with sustained investment in workforce training and digital infrastructure.	1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
82	https://www.aci-bd.com/research-development/unleashing-artificial-intelligence-for-crop-disease-detection-and-control.html	Unknown	Unleashing Artificial Intelligence for Crop Disease Detection and Control	Private Enterprise	This article discusses the urgent need for novel solutions like AI to ensure food security. It explains how low-cost AI tools can transform agriculture through early identification and management of crop diseases and pests. For instance, a smartphone app could analyze a photo of a plant to diagnose diseases and suggest treatments. The piece emphasizes that a collaborative approach between government and the private sector is essential to pilot and scale these technologies nationwide, so that smallholder farmers, who form the backbone of Bangladesh's agricultural economy, can access low-cost AI diagnostic tools despite limited digital literacy and rural connectivity.	1x3, 1x4, 2x3
83	https://www.researchgate.net/publication/390128833_Exploring_the_Role_of_AI_and_Machine_Learning_in_Enhancing_Internet_Banking_Adoption_in_Bangladesh	45742	Exploring the Role of AI and Machine Learning in Enhancing Internet Banking Adoption in Bangladesh	Academic Paper	This study explores how AI and Machine Learning can promote the adoption of internet banking in Bangladesh. It analyzes key factors like cybersecurity, fraud detection, and customer service automation. The research highlights that AI-powered solutions such as chatbots, personalized recommendations, and automated risk assessment can improve user engagement and satisfaction. By addressing concerns about security and user experience, AI/ML offers innovative ways to enhance customer trust, streamline onboarding, and encourage broader adoption of digital banking channels across Bangladesh, with the study recommending that banks invest in more explainable AI models to build the transparency needed to win over cautious customers.	3x3, 1x4, 1x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
84	https://www.tbsnews.net/economy/corporates/telecom-industrys-first-ai-powered-chat-engine-introduced-banglalink-1036646	45664	Telecom industry's first AI-Powered chat engine introduced by Banglalink	Private Enterprise	Banglalink has introduced the telecom industry's first AI-powered chat engine. Inspired by its parent company VEON's "AI1440" strategy, this initiative integrates Augmented Intelligence across all operations. The new chat engine, available on the MyBL and RYZE apps, provides customers with quick and accurate responses to their queries. This move aims to enhance customer service and decision-making by leveraging AI, marking a significant step in the digital transformation of Bangladesh's telecom sector, as the operator positions itself to compete with rivals also racing to deploy AI-driven customer service tools.	1x0, 1x4, 1x1
85	https://thelegalwire.ai/why-bangladesh-needs-an-ai-law/	45803	Why Bangladesh Needs an AI Law	Private Enterprise	This article argues for the necessity of a specific AI law in Bangladesh. While acknowledging the government's National AI Strategy, it points out that a formal legal framework is crucial for addressing issues like data privacy, algorithmic bias, and accountability. The author suggests that a dedicated law would provide legal certainty, foster public trust, and create a stable environment for investment in AI technologies. It emphasizes the need for regulations that can adapt to the rapid pace of technological change, drawing comparisons with frameworks like the EU's AI Act, and warns that without clear rules, risks such as algorithmic bias, unauthorized surveillance, and AI-generated misinformation — including deepfakes — could spread largely unchecked in Bangladesh.	1x0, 1x3
86	https://arxiv.org/abs/2304.11703	45040	An Artificial Intelligence-based Framework to Achieve the Sustainable Development Goals in the Context of Bangladesh	Academic Paper	This paper proposes a framework using AI to help achieve the Sustainable Development Goals (SDGs) in Bangladesh. It identifies how AI can be applied across various goals, such as improving healthcare outcomes (SDG 3), enhancing agricultural productivity (SDG 2), and	1x0, 1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					promoting sustainable industrialization (SDG 9). The framework provides a structured approach for policymakers and organizations to leverage AI technologies effectively, addressing specific national challenges and accelerating progress toward the 2030 Agenda. It illustrates its approach with case studies, including an AI-based decision-support system that analyzes drone-captured crop imagery to help smallholder farmers make better planting and resource decisions in support of SDG 2 (Zero Hunger).	
87	https://www.researchgate.net/post/Artificial_Intelligence_and_the_Future_of_Work_in_Bangladesh	45474	Artificial Intelligence and the Future of Work in Bangladesh	Academic Paper	This research explores the transformative effects of AI on the labor market in Bangladesh. It analyzes both the opportunities for increased productivity and economic growth, and the significant challenges related to job displacement, particularly in labor-intensive sectors like garments and agriculture. The paper advocates for proactive policy interventions, focusing on comprehensive education reform, vocational training, and the development of a social safety net to manage the transition, arguing that without such measures the disruption could disproportionately harm low-skilled workers who have limited access to retraining opportunities.	1x0, 1x3
88	https://www.thedailystar.net/opinion/views/no-strings-attached/news/can-ai-solve-the-insanity-dhakas-traffic-3219656	2023	Can AI solve the insanity of Dhaka's traffic?	Private Enterprise	This article explores the potential of using AI to manage Dhaka's severe traffic congestion. It discusses how AI-powered traffic management systems could optimize signal timings, analyze traffic flow in real-time, and predict congestion hotspots. While the technology offers a promising solution, the article also notes significant hurdles, including the need for massive infrastructure investment, accurate data collection, and integration with existing systems. The author questions whether a purely	1x3, 3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					technological fix can succeed without first addressing deeper structural problems, such as weak lane discipline, inconsistent enforcement, and the sheer diversity of vehicle types sharing the road, concluding that AI can support but not substitute for fundamental reforms in traffic governance.	
89	https://fundsforindividuals.fundsforngos.org/grants/cooperative-ai-foundation-research-grants-2025/	45744	Cooperative AI Foundation Research Grants 2025	Non-profit Organization	This webpage announces the 2025 research grants from the Cooperative AI Foundation. The grants are available to researchers globally, including those in Bangladesh, who are working on advancing the science of cooperative AI. The foundation supports projects that explore how to create AI systems that can effectively cooperate with each other and with humans to solve complex problems. The goal is to ensure that AI development leads to beneficial outcomes for society by focusing on collaboration rather than competition among AI systems and between AI and humans, and the page notes that applicants from Bangladesh and other developing countries are welcome to apply as the foundation looks to broaden the geographic diversity of the research it funds.	unmapped
90	https://www.aa.com.tr/en/asia-pacific/dhakas-gambit-can-ai-traffic-signals-tame-the-bangladeshi-capitals-notorious-congestion/3240035	45406	Dhaka's gambit: Can AI traffic signals tame the Bangladeshi capital's notorious congestion?	Private Enterprise	This article reports on Dhaka's plan to implement AI-powered traffic signals to combat its severe traffic problems. The system, developed by a local university, aims to use real-time data to dynamically adjust signal timings, replacing the current manual system. Officials hope this will reduce waiting times and improve traffic flow. However, experts express caution, pointing out that previous automated systems have failed and that success depends on integrating the technology with robust enforcement and institutional coordination. The pilot began at a single intersection, Gulshan-2, and even proponents caution that expanding it to the roughly 100 intersections the city corporation eventually wants to cover will depend on sustained funding and cooperation between traffic police and city authorities that has been lacking in past attempts.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
91	https://uniathena.com/how-cooperative-intelligence-transforming-collaboration-ai-robotics	Unknown	How Cooperative Intelligence is Transforming Collaboration in AI and Robotics	Private Enterprise	This UniAthena blog explains how Cooperative Intelligence — the combination of AI and Robotics into interconnected, collaborating systems rather than isolated tools — is reshaping industries from manufacturing and healthcare to space exploration. It describes how AI and Robotics have evolved over recent decades from isolated systems into interconnected entities capable of working together toward common objectives, leveraging each other's strengths and resources to achieve higher adaptability, efficiency, and capability than either could reach alone. The piece frames Cooperative Intelligence as an emerging ecosystem of machines rather than a single technology, with applications spanning industrial robotics, business process automation, and beyond, and argues its impact will keep expanding across the industries it touches.	1x3, 4x3, 4x4
92	https://www.researchgate.net/publication/383653431_Investigating_the_Pros_and_Cons_of_Artificial_Intelligence_AI-Based_Systems_A_Case_Study_on_the_Use_of_ChatGPT_in_Higher_Education_in_the_Northern_Region_of_Bangladesh	45292	Investigating the Pros and Cons of Artificial Intelligence (AI)-Based Systems: A Case Study on the Use of ChatGPT in Higher Education in the Northern Region of Bangladesh	Academic Paper	This case study investigates the use of ChatGPT among students in higher education in northern Bangladesh. It identifies the benefits, such as quick access to information and assistance with writing, which students find helpful for their studies. However, it also highlights significant drawbacks, including the potential for plagiarism, over-reliance on the tool leading to reduced critical thinking, and the risk of generating inaccurate information. The study calls for educational institutions to develop clear policies on acceptable AI use, integrate AI literacy into curricula, and redesign assessment methods so that critical thinking skills are not eroded by unrestricted access to generative AI tools.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
93	https://www.delltechnologies.com/asset/en-us/solutions/industry-solutions/industry-market/ai-for-digital-cities-whitepaper.pdf	Unknown	Artificial Intelligence and Gen AI in Smart Cities	Private Enterprise	This article outlines how AI and Generative AI are foundational to the development of smart cities. It describes how AI can optimize urban services like traffic management, public safety, and energy consumption by analyzing vast amounts of data from IoT sensors. Generative AI, specifically, can assist in urban planning and design by creating simulations and models. The piece emphasizes that these technologies can make cities more efficient, sustainable, and livable, but require robust data infrastructure, interoperable systems, and strong governance to manage privacy and security risks, cautioning that without these foundations, smart city investments risk falling short of their promised benefits.	1x3, 5x3
94	https://tds-images.thedailystar.net/opinion/views/news/how-ai-can-help-build-fairer-bangladesh-3869376	45483	How AI can help build a fairer Bangladesh	Private Enterprise	This opinion piece argues that AI can be a powerful tool for promoting fairness and social justice in Bangladesh. It suggests AI applications in delivering targeted social safety net programs, improving access to quality healthcare and education, and making the justice system more efficient. The author contends that by leveraging AI to reduce corruption and ensure equitable distribution of resources, Bangladesh can address systemic inequalities and build a more just society for all its citizens.	1x3, 1x2
95	https://www.observerbd.com/news/423119#google_vignette	45474	AI opportunities and challenges for Bangladesh	Private Enterprise	This article provides an overview of the potential benefits and risks of AI for Bangladesh. On the opportunities side, AI can boost economic growth in sectors like agriculture, healthcare, and finance. It can enhance productivity and create new services. However, the challenges are significant, including the high cost of implementation, a severe shortage of skilled AI professionals, and the potential for massive job displacement. The piece concludes that a strategic, well-planned approach is necessary to ensure AI's benefits are broadly shared rather than concentrated among a small, already-advantaged segment of the population.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
96	https://borgenproject.org/role-of-ai-in-reducing-poverty/	45201	The Role of AI in Reducing Poverty	Non-profit Organization	This article from The Borgen Project discusses how AI can be a tool in the fight against global poverty. It explains that AI can analyze satellite imagery to map poverty with high accuracy, helping governments and NGOs target aid more effectively. In agriculture, AI can provide small-holder farmers with crucial data on crop health and weather patterns. In healthcare, it can help diagnose diseases in underserved communities. The article stresses that AI, when applied thoughtfully, can optimize resource allocation and extend the reach of limited government and NGO budgets, but cautions that success depends on ensuring underserved communities have the connectivity and digital literacy needed to benefit from these tools rather than being left further behind.	1x3
97	https://thefinancialexpress.com.bd/education/bau-researchers-make-first-ever-use-of-ai-to-combat-brucellosis	45659	BAU researchers make first-ever use of AI to combat Brucellosis	Private Enterprise	Researchers at Bangladesh Agricultural University (BAU) have pioneered the use of AI to fight Brucellosis, a bacterial disease affecting livestock and humans. They developed AI models that can rapidly and accurately identify the bacteria, a significant improvement over time-consuming traditional methods. This innovation is expected to help control the spread of the disease, reducing economic losses in the livestock sector and protecting public health. The project showcases a practical application of AI in veterinary and public health, illustrating how homegrown research can address diseases with direct economic and health consequences for Bangladesh's large livestock-dependent population.	1x3
98	https://meatechwatch.com/2025/07/03/givedirectly-and-bangladesh-government-pilot-ai-powered-mobile-targeting-to-improve-poverty-relief/	45253	GiveDirectly and Bangladesh Government Pilot AI-Powered Mobile Targeting to Improve Poverty Relief	Private Enterprise	The Bangladesh government and NGO GiveDirectly are piloting an AI-powered system to target poverty relief. Using mobile phone data, the AI model identifies households living in poverty without the need for traditional, time-consuming surveys. This approach aims to deliver cash transfers more quickly and efficiently to those who need	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					them most, particularly in response to crises like floods. The pilot demonstrates a novel use of technology to enhance the effectiveness of social safety net programs, though it also raises questions about data privacy and algorithmic fairness that will need to be addressed as such targeting approaches are scaled up nationally.	
99	https://www.thedailystar.net/business/news/ai-set-revolutionise-agriculture-bangladesh-3646046	45542	AI set to revolutionise agriculture in Bangladesh	Private Enterprise	This article highlights the transformative potential of AI in Bangladesh's agriculture sector. AI-powered tools can provide farmers with precise advice on irrigation, fertilizer use, and pest control, helping to increase crop yields and reduce waste. Companies are developing apps that use image recognition to diagnose crop diseases. While adoption is still in its early stages, experts believe that leveraging AI is essential for ensuring the sustainability and profitability of farming in the face of a sector that contributes roughly 13.6% of GDP and employs nearly half the workforce. The article points to homegrown agritech start-ups such as iFarmer, Khamar-e, iPAGE, and Fashol as early leaders, and argues that agricultural universities must update their curricula so graduates are equipped to drive continued adoption of these technologies.	1x3, 2x3
100	https://www.thedailystar.net/opinion/views/news/how-ai-can-help-build-fairer-bangladesh-3869376	45483	How AI can help build a fairer Bangladesh	Private Enterprise	This opinion piece argues that AI can be a powerful tool for promoting fairness and social justice in Bangladesh. It suggests AI applications in delivering targeted social safety net programs, improving access to quality healthcare and education, and making the justice system more efficient. The author contends that by leveraging AI to reduce corruption and ensure equitable distribution of resources, Bangladesh can address systemic inequalities and build a more just society for all its citizens.	1x3, 1x2

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No	URL	Day	Title	Type	Case Details	Mapping Cell
101	https://iid.dev/youth-powering-change-with-ai-for-a-sustainable-and-inclusive-future/	45778	Youth Powering Change with AI for a Sustainable and Inclusive Future	Non-profit Organization	This Institute of Informatics and Development (IID) article covers a policy panel exploring how Bangladeshi youth can move from passive consumers of AI to its active co-creators, developers, and policymakers. Held as part of the Brac Presents 1st S.N. Bose National Science Festival 2025, which drew more than 800 young participants from over 20 institutions, the panel featured government advisors, Dhaka University computer science faculty, and startup and civil-society leaders. Panelists emphasized the importance of critical thinking, adaptability, and human-centric innovation in preparing youth for an AI-driven future, and IID framed the event as part of a broader effort to involve young people in policy discourse and social accountability around AI, not just science competitions.	1x3
102	https://www.researchgate.net/publication/385828419_Generative_AI_and_Economic_Growth_in_Developing_Nations_The_Bangladesh_Case_Study	45474	Generative AI and Economic Growth in Developing Nations: The Bangladesh Case Study	Academic Paper	This case study examines the potential impact of Generative AI on economic growth in Bangladesh. It explores opportunities for productivity gains in key sectors like software development, content creation, and customer service. The paper also analyzes the challenges, including the need for significant investment in digital infrastructure and skills development, as well as the risk of job displacement. The study concludes with policy recommendations aimed at helping Bangladesh harness the power of generative AI to boost productivity while managing the transition risks for workers in more easily automatable roles.	1x0
103	nsulawblog.com	45555	Bangladesh's Faceoff with AI and the Human Rights Predicament	Private Enterprise	This blog post from North South University's Law department discusses the human rights implications of AI adoption in Bangladesh. It raises concerns about the use of AI in surveillance, the potential for algorithmic bias to reinforce existing discrimination, and the impact on privacy rights. The author argues that	1x0, 1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					without a strong legal and ethical framework, the rapid deployment of AI could pose significant risks to fundamental human rights. The post calls for a public debate and regulatory action to establish clear accountability mechanisms before AI systems become further embedded in law enforcement, government services, and other high-stakes public functions.	
104	https://www.omdena.com/chapter-challenges/eco-smart-ai-enhancing-dhaka-air-quality-through-sustainable-and-strategic-urban-greening	Unknown	EcoSmart AI: Enhancing Dhaka's Air Quality through Sustainable Transport Planning	Private Enterprise	This project on the Omdena platform aims to address Dhaka's severe air pollution by using AI. A global team of collaborators is developing machine learning models to analyze traffic patterns, public transportation routes, and environmental data. The goal is to provide data-driven recommendations for sustainable transport planning. These insights will help policymakers optimize traffic flow, promote cleaner transportation options, and ultimately reduce emissions to improve air quality and public health outcomes in one of the world's most polluted cities.	1x0, 1x3, 5x3
105	https://aiipub.com/journals/jarr-11-05-22-1003/	45598	Use of artificial intelligence for precision agriculture in Bangladesh	Academic Paper	This article discusses the application of AI in transforming Bangladesh's agriculture sector into a more precise and data-driven industry. It highlights how AI can analyze data from drones and sensors to monitor crop health, predict yields, and optimize the use of water and fertilizers. The adoption of these precision agriculture techniques can lead to increased productivity, reduced environmental impact, and improved livelihoods for farmers, contributing significantly to the nation's food security and its farmers' long-term resilience to climate variability.	1x3, 1x4, 4x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
106	https://zenodo.org/records/15691376#:~:text=Artificial%20Intelligence%20(AI)%20holds%20transformative,and%20limited%20access%20to%20resources.	45791	Assessing the Impact of Artificial Intelligence on Primary Education in Bangladesh	Academic Paper	This research, uploaded to Zenodo, assesses the impact of AI on primary education in Bangladesh. It investigates how AI-powered tools can be used for personalized learning, automated grading, and providing access to quality educational resources. The study likely analyzes both the potential benefits, such as improved student engagement and learning outcomes, and the challenges, including the digital divide and the need for teacher training. The goal is to provide insights for effectively integrating AI into Bangladesh's primary education system in ways that improve learning outcomes without widening existing inequalities.	1x3
107	https://pmac-2025.com/uploads/poster/A255-MAHBUBUR%20RASHIDORIES-e3a9.pdf	2025	AI in Healthcare: Transforming Bangladesh's Urban and Rural Landscapes	Non-profit Organization	This title refers to a session or theme at the Prince Mahidol Award Conference (PMAC) 2025. The session will likely focus on how AI is revolutionizing healthcare delivery across both urban and rural areas of Bangladesh. Discussions would cover AI's role in diagnostics (e.g., medical imaging analysis), personalized treatment plans, disease outbreak prediction, and improving the efficiency of healthcare operations. It aims to explore strategies for leveraging AI to bridge the healthcare gap and improve outcomes for underserved populations, drawing on international experience and local case studies presented at the conference.	1x3, 3x3, 2x3
108	https://www.simbo.ai/blog/identifying-barriers-to-ai-adoption-in-bangladesh-s-healthcare-sector-a-focus-on-awareness-gaps-and-perceived-risks-1196936/	45776	Identifying Barriers to AI Adoption in Bangladesh's Healthcare Sector	Private Enterprise	This article identifies key challenges hindering the adoption of AI in Bangladesh's healthcare sector. The primary barriers include a lack of digital infrastructure, a shortage of healthcare professionals with AI skills, and concerns about data privacy and security. Furthermore, the high cost of implementing AI systems and a general lack of awareness about their benefits among stakeholders are significant hurdles. The piece suggests that overcoming these	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					barriers will require concerted efforts involving government investment in digital infrastructure, targeted AI training for healthcare workers, and clearer data-privacy regulations to build stakeholder trust.	
109	https://www.khoury.northeastern.edu/the-fight-to-get-ai-right-in-bangladesh-the-worlds-eighth-most-populous-country/	45454	The fight to get AI right in Bangladesh, the world's eighth-most populous country	University	This article from Northeastern University's Khoury College highlights the critical need for an ethical and inclusive approach to AI in Bangladesh. It discusses the work of researchers who are focusing on developing AI systems that are fair, transparent, and accountable. The 'fight' refers to the challenge of ensuring that AI deployment does not worsen existing inequalities but instead empowers communities. It stresses the importance of local context and stakeholder engagement in creating AI governance frameworks that reflect Bangladesh's specific social and economic realities, rather than simply importing regulatory models designed for wealthier countries.	unmapped
110	https://www.businesswire.com/news/home/20240325834650/en/APRUs-latest-AI-For-Social-Good-Report-spotlights-the-need-for-transforming-social-policies-and-services-in-Bangladesh-and-Thailand	45377	APRU's latest AI For Social Good Report spotlights the need for transforming social policies and services in Bangladesh and Thailand	Private Enterprise	This press release announces a report from the Association of Pacific Rim Universities (APRU) on AI for Social Good. The report, a collaboration with Google and UN ESCAP, highlights the potential of AI to transform social services in Bangladesh and Thailand. It calls for the development of comprehensive AI strategies and policies to ensure that technology is used to create more inclusive and effective social protection systems, addressing the needs of vulnerable populations in both countries.	1x3
111	https://www.givedirectly.org/ai-targeting-bangladesh/	45840	In Bangladesh, AI targeted aid faster, cheaper, and often more accurately than manual methods	Non-profit Organization	This article details a program in Bangladesh where the NGO GiveDirectly used an AI model to target aid recipients. By analyzing mobile phone data, the AI could identify people in poverty more quickly and cheaply than traditional methods. The approach proved to be more accurate than community-based targeting, which often relies on outdated registries. This pilot demonstrates AI's potential to revolutionize disaster response and	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					social protection by delivering financial assistance to those in crisis more quickly than traditional needs assessments allow, though it also raises questions about data privacy and consent that will need to be addressed as such approaches are scaled up.	
112	https://news.vt.edu/articles/2024/06/outreach-cired-ipma-bangladesh.html	45469	AI-powered app helps farmers in Bangladesh detect and manage pests	University	This article from Virginia Tech News describes an AI-powered mobile application developed to assist farmers in Bangladesh. The app, part of a project by the university's Center for International Research, Education, and Development, likely uses image recognition technology. Farmers can take photos of their crops, and the AI analyzes them to detect pests or diseases, providing instant management advice. This tool aims to empower farmers with timely information, helping to protect crop yields and reduce reliance on costly agrochemicals, with the project team noting plans to expand the tool's plant-disease library and make it available in additional local languages.	1x3, 1x2, 2x3
113	Bangladesh					unmapped
114	Government					unmapped
115	RMGSector					unmapped
116	AI traffic signals					unmapped
117	https://a2i.portal.gov.bd/	2025	a2i: 8,858 Digital Centers, AI Chatbot, 863M+ Transactions	Government	Government innovation platform. 8,858 digital centers. AI chatbot for citizen support. 863M+ public service transactions.	1x2, 4x2
118	https://333.gov.bd/	2025	333 National Helpline: AI Voice Bot (100M+ Calls)	Government	AI-powered voice bots, omnichannel communication, multilingual chatbot support. 100M+ calls handled since 2018.	2x2, 4x2
119	https://corpus.bangla.gov.bd/	2025	Bangla NLP Corpus: 10M+ Words, BERT/GPT-2/T5 Models	Government	Government Bangla language corpus. 2M+ word syntactic treebank. Bangla BERT/GPT-2/T5 models for NLP applications.	2x0
120	https://bnda.gov.bd/	2025	BNDA: National Digital Architecture (NDX, 800+ Digitized Services)	Government	National Data Exchange. API-based service bus. AI-driven automation. 800+ digitized government services.	1x1

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No	URL	Day	Title	Type	Case Details	Mapping Cell
121	https://ictd.portal.gov.bd/sites/default/files/files/ictd.portal.gov.bd/page/6c9773a2_7556_4395_bbec_f132b9d819f0/National_AI_Policy_2024_DRAFT.pdf	2024	Smart Bangladesh 2041: National AI Centre (NAICE), GPU Cluster	Government	National AI Center of Excellence. GPU cluster infrastructure. 7 priority sectors. 20-year smart government vision.	1x0, 5x4
122	https://www.ffwc.gov.bd/	2025	Flood Forecasting: Google AI Partnership (40M+ People Covered)	Government	Google AI flood forecasting covering 40M+ people. ML models with AUC 0.99. 7-day riverine flood forecasts.	3x3, 5x3
123	https://publichealth.jhu.edu/events/2025/03/25/biomedical-engineering-innovation-in-bangladesh	2025	AI Teleradiology (RadAssist) & Sasthyo Batayan Health Hotline	Academic Paper	Cloud-based health records, AI teleradiology RadAssist, Sasthyo Batayan 24/7 hotline, AI diagnostic imaging.	3x3, 2x3
124	https://mutation.land.gov.bd/	2025	e-Mutation: Land Record Digitization (39 Days –Digital)	Government	Digital land mutation reducing processing from 39 days. Proposed ML fraud detection for anomaly/corruption prevention.	1x3
125	https://www.fibre2fashion.com/news/apparel-news/bgmea-dbp-partner-on-ai-esg-tool-for-bangladeshs-rmg-factories-305699-newsdetails.htm	2025	RMG AI: Digital Factory Passport ESG (BGMEA-DBP)	Private Enterprise	AI-driven ESG compliance for garment factories. Quality assurance AI. IoT+ML production monitoring.	1x4
126	https://www.g-fras.org/en/world-wide-extension-study/92-world-wide-extension-study/asia/southern-asia/284-bangladesh.html	2025	Agricultural AI: Krishi Batayon Mobile Advisory, Crop Monitoring	Government	AI crop monitoring, disease/pest detection, yield prediction. Krishi Batayon mobile advisory.	3x3
127	https://www.nidw.gov.bd/enroll_obtaining.php	2025	Election Commission: ABIS Biometric Voter Registration	Government	Automatic Biometric Identification System. Fingerprint+facial recognition. Liveness detection for voter verification.	2x3
127	https://www.nidw.gov.bd/enroll_obtaining.php	2025	Election Commission: ABIS Biometric Voter Registration	Government	Automatic Biometric Identification System. Fingerprint+facial recognition. Liveness detection for voter verification.	2x3

THE ROC

Proposed Score

Technology vs Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.25	0.25	0.50	0.50	0.25
2. Perceptual/NLP	0.00	0.25	0.50	0.50	0.00
3. Analysis/Decision Support	0.25	0.00	0.00	0.50	0.25
4. Agent	0.00	0.00	0.00	0.00	0.25
5. Sustainability/Unmapped	0.00	0.00	0.00	0.25	0.00

Rationale by Cell

Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ICT	0. Policy & Governance	32	Taiwan AI Action Plan—Seizing Opportunities and Fully Launching Industrial AI Transformation; AI - National Science and Technology Council (NSTC); AI Talent Cultivation and Smart Government in the Public Sector; Taiwan's National Science And Technology Council Has Published The Draft Bill Of The Basic Act On Artificial Intelligence For Public Consultation; AI - National Science and Technology Council (NSTC) (and 27 other sources)	0.25	vTaiwan (80%+ policy reflected); Join.gov.tw (13,853 proposals); Open Data Index World #1 Rank; Civic Tech. Foundation/ Infrastructure AI technology; policy/Governance direct application is early stage
1x1	1. Foundation, Infra AI/ICT	1. Internal Management	10	AI Talent Cultivation and Smart Government in the Public Sector; Ministry of Digital Affairs Unveils Major Initiatives to Boost Taiwan's AI Industry and Global Competitiveness; AI-Driven Future Taipei; Taiwan's approach towards AI; Government Deepens Open	0.25	Policy Bureau digital Foundation/Infrastructure; PDIS Framework; data.gov.tw 27,000+ datasets. Internal Department Management systematic-oriented AI adoption/introduction is limited

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
				Data Applications — The Ministry of Digital Affairs Plans to Develop Taiwan's Sovereign AI Training Large Language Model (LLM) (and 5 other sources)		
1x2	1. Foundation, Infra AI/ ICT	2. Citizen & Citizen services	2	Taiwan: FSC releases survey results on AI use in financial industry; Transforming the Workplace: Real-World Examples of Generative AI	0.5	Join.gov.tw citizen/ citizen-participation (289 cases, 5,000-person threshold reached); vTaiwan Polis integration. citizen/ citizen-Dialogue Platform operational stage
1x3	1. Foundation, Infra AI/ ICT	3. Administrative Domain	9	MOEA's Water Resources Agency reports fruitful results from AI training; Taiwan steps up promotion of AI applications; Taiwan's Retailers Deploy Smart Vending Machines in Bid for Competitive Edge; 7-11's Future AI Technology Unmanned Supermarket; Taiwan steps up promotion of AI applications (and 4 other sources)	0.5	Civil IoT Taiwan (Environment/Disaster Prevention); Health Insurance IC; traffic AI. Operational across multiple Administrative Domains
1x4	1. Foundation, Infra AI/ ICT	4. Industry & Others	11	Taiwan AI Action Plan— Seizing Opportunities and Fully Launching Industrial AI Transformation; AI - National Science and Technology Council (NSTC); AI - National Science and Technology Council (NSTC); Taiwan Leans Into Artificial Intelligence Chips; Taiwan Global Frontrunner In Manufacturing AI Adoption (and 6 other sources)	0.25	Semiconductor AI; Finance AI cases existing. Industry policy and AI integration is early stage
2x0	2. Perceptual/NLP	0. Policy & Governance	0	—	0	No relevant cases
2x1	2. Perceptual/NLP	1. Internal Management	6	Smart City Summit & Expo 2025: Chunghwa Telecom's Ace AI Technologies Make Cities Smarter!; Taiwan: FSC releases survey results on AI use in financial industry; Taiwan's digital ministry uses AI to combat online fraud and deep fakes; APCSS: Taiwan Anti-Fraud Initiative Results; Lexology: Judicial Yuan AI Judgment System (and 1 other source)	0.25	NLP administrative documents processing cases found. Systematic-oriented adoption/introduction is insufficient

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	6	People Powered: vTaiwan hybrid digital deliberation with AI; European Democracy Hub: Digital Democracy in Taiwan; Join.gov.tw: Public Policy Online Participation Platform; Bertelsmann: Trailblazers of Digital Participation - Join & vTaiwan; Wikipedia: g0v movement (and 1 other source)	0.5	vTaiwan + Pol.is Consensus Building AI; Join.gov.tw text analysis. citizen/citizen-Opinion NLP processing operational stage
2x3	2. Perceptual/NLP	3. Administrative Domain	22	Welcome to Taiwan's Three National AI Centers for Smart Healthcare; Kaohsiung's AI City Vision: AI, 5G, Smart Healthcare, and Global Collaborations Take Center Stage; Center for Responsible AI in Healthcare; Health ministry establishes three AI research centers; National Taiwan University (and 17 other sources)	0.5	Healthcare NLP (NHI database utilization); law/ Regulation documents AI. Multiple domain real-world application realization
2x4	2. Perceptual/NLP	4. Industry & Others	0	—	0	No relevant cases
3x0	3. Analysis/Decision Support	0. Policy & Governance	4	People Powered: vTaiwan hybrid digital deliberation with AI; FNF: vTaiwan AI Governance Public Participation; Join.gov.tw: Public Policy Online Participation Platform; data.gov.tw: Pol.is Executive Yuan version	0.25	Pol.is (data.gov.tw version); vTaiwan Deliberation analysis. Policy Formation analysis-tool application is beginning; yet pilot stage
3x1	3. Analysis/Decision Support	1. Internal Management	0	—	0	No relevant cases
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	0	—	0	No relevant cases
3x3	3. Analysis/Decision Support	3. Administrative Domain	12	Smart City Summit & Expo 2025: Chunghwa Telecom's Ace AI Technologies Make Cities Smarter!; Kaohsiung's AI City Vision: AI, 5G, Smart Healthcare, and Global Collaborations Take Center Stage; AI-Driven Future Taipei; Kaohsiung City Government - Smart City Online; 2025 Smart City Summit and Expo "AI-driven Future Taipei" Establishes New Benchmark for Smart Cities (and 7 other sources)	0.5	Disaster Prevention prediction AI; traffic analysis; Environment Monitoring. Analysis/Decision Support, multiple domain, operational

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
3x4	3. Analysis/Decision Support	4. Industry & Others	3	Taiwan: FSC releases survey results on AI use in financial industry; Taiwan: Taiwan Financial Supervisory Commission has published the "Guidelines for the Application of AI in the Financial Industry"; Financial Supervisory Commission releases the Core Principles and Policies for the Use of Artificial Intelligence (AI) in the Financial Industry	0.25	Industry-for-analysis AI cases existing; limited
4x0	4. Agent	0. Policy & Governance	0	—	0	No relevant cases
4x1	4. Agent	1. Internal Management	0	—	0	No relevant cases
4x2	4. Agent	2. Citizen & Citizen services	0	—	0	No relevant cases
4x3	4. Agent	3. Administrative Domain	1	NCKU: Taiwan CAR Lab	0	Agent System policy application cases
4x4	4. Agent	4. Industry & Others	8	Company History - 7-ELEVEN; Taiwan's Retailers Deploy Smart Vending Machines in Bid for Competitive Edge; Taiwan's Next Convenience Store Battlefield?; Automated Mini 7-Elevens sprout all over Taiwan; 7-11's Future AI Technology Unmanned Supermarket (and 3 other sources)	0.25	Private agent AI cases found. Public Sector application is unmapped / not started
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	—	0	No relevant cases
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	—	0	No relevant cases
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	—	0	No relevant cases
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	10	Smart City Summit & Expo 2025: Chunghwa Telecom's Ace AI Technologies Make Cities Smarter!; Taiwan's National Science And Technology Council Has Published The Draft Bill Of The Basic Act On Artificial Intelligence For Public Consultation; Taiwan: Science and Technology Council requests comments on draft law on AI; AI-Driven Future Taipei; Kaohsiung City Government - Smart City Online (and 5 other sources)	0.25	Smart City and IoT cases existing; Sustainability Frame and integration is early stage

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
5x4	5. Sustainability/ Unmapped	4. Industry & Others	1	Government Deepens Open Data Applications — The Ministry of Digital Affairs Plans to Develop Taiwan's Sovereign AI Training Large Language Model (LLM)	0	No relevant cases

All Sources List

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
1	https://www.businessweekly.com.tw/business/indep/1005483	2025-03-31	Smart City Summit & Expo 2025: Chunghwa Telecom's Ace AI Technologies Make Cities Smarter!	Private sector	At the Smart City Summit & Expo 2025, Chunghwa Telecom showcased a range of AI applications demonstrating its key role in the ROC's smart city development. These included an "AI Green Energy IDC" service, AI-powered traffic detection and signal control to ease congestion, and an AI-based automatic license plate recognition system to improve tax auditing efficiency. The company is positioning itself as an "enabler" and "co-creator" of AI development, integrating its core technologies to accelerate the real-world application of AI across various sectors, from infrastructure to city governance and public safety.	5x3, 3x3, 2x1
2	https://www.ey.gov.tw/Page/5A8A0CB5B41DA11E/a8ec407c-6154-4c14-8f1e-d494ec2dbf23	2019-08-07	Taiwan AI Action Plan—Seizing Opportunities and Fully Launching Industrial AI Transformation	Government	The Taiwan AI Action Plan is a government initiative to drive the comprehensive adoption of AI across industries. Key pillars include talent development, where the government has established AI innovation research centers at major universities and collaborated with the private sector to train thousands of AI professionals. It also focuses on promoting "AI on Chip" technology by forming industry alliances with leading companies like TSMC and MediaTek. The plan further aims to create an international AI innovation hub by attracting global tech giants like Microsoft and Google to establish R&D centers in the ROC.	1x0, 1x4

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
3	https://ostp.nstc.gov.tw/PolicyContent.aspx?id=12	N/A	AI - National Science and Technology Council	Government	The ROC's AI policy, guided by the "AI Taiwan Action Plan 2.0," emphasizes a "Human-Centered AI" approach. The National Science and Technology Council (NSTC) focuses on leveraging the ROC's strengths in ICT and semiconductors to promote industrial transformation and social well-being. The strategy's main goals include expanding the AI talent pool, deepening core AI software and chip technology, improving data governance and legal frameworks, and actively participating in international AI organizations. The ultimate objective is to make the ROC a global AI hub by driving industrial upgrades and enhancing public welfare through AI.	1x0, 1x4
4	https://static.googleusercontent.com/media/publicpolicy.google/ja//resources/taiwan_ai_opportunity_agenda_tw.pdf	2024-07-01	Taiwan's AI Development and Governance	Private sector	In this white paper, Google outlines recommendations for the ROC's AI development, emphasizing the need for government, industry, and civil society to collaborate. Google suggests three main pillars for success: investing in AI infrastructure and an innovation-friendly environment, developing a talent pipeline for the AI era, and promoting the popularization of AI technology. The paper highlights the importance of digital transformation for the ROC's vast number of small and medium-sized enterprises (SMEs) and traditional industries. Google positions itself as a partner in this journey to build a complete and responsible AI ecosystem in the ROC.	unmapped
5	https://www.ey.gov.tw/Page/5A8A0CB5B41DA11E/0a421b36-2e94-4392-8d69-c798b8669d4f	N/A	AI Talent Cultivation and Smart Government in the Public Sector	Government	The Executive Yuan is promoting a program to cultivate AI talent within the public sector to build a "smart government." The strategy involves a three-tiered approach: foundational AI literacy training for all civil servants, "AI empowerment" certification courses for mid-level managers to devise innovative AI services, and "AI governance" workshops for senior leadership.	1x0, 1x1

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					Starting in 2025, AI courses will be mandatory for civil servants. This systematic approach aims to enhance administrative efficiency and public service quality by integrating AI knowledge and application skills across all levels of government.	
6	https://www.president.gov.tw/News/28747	2024-09-27	Vice President at the opening of the Taiwan AI Annual Conference: Use the power of AI to allow all industries to develop in a balanced way and share the fruits of economic growth with the people	Government	At the 2024 Taiwan AI Annual Conference, Vice President Hsiao Bi-khim emphasized the goal of using AI to ensure balanced development across all of the ROC's industries, not just the prominent ICT sector. She highlighted the need to solve issues like labor shortages in various industries through AI and new technologies. The Vice President stressed the importance of collaboration between government, industry, academia, and research institutions to advance the ROC's AI industry clusters and ensure that the benefits of economic growth are shared by every citizen.	unmapped
7	https://aicenter.mohw.gov.tw/AC/cp-7292-82424-208.html	N/A	Welcome to Taiwan's Three National AI Centers for Smart Healthcare	Government	The Ministry of Health and Welfare has established three national centers for smart healthcare to advance the use of AI in medicine. These centers focus on overcoming the key challenges of implementing, certifying, and reimbursing AI-based medical solutions. The initiative includes a "Responsible AI Execution Center," a "Clinical AI Certification and Validation Center," and an "AI Impact Research Center." By creating this dedicated infrastructure, the government aims to bridge the final gap in bringing smart medical technology to patients, fostering a robust and responsible ecosystem for AI in healthcare in the ROC.	2x3

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
8	https://www.klgates.com/Taiwans-National-Science-and-Technology-Council-Has-Published-The-Draft-Bill-Of-The-Basic-Act-On-Artificial-Intelligence-For-Public-Consultation-8-1-2024	2024-08-01	Taiwan's National Science And Technology Council Has Published The Draft Bill Of The Basic Act On Artificial Intelligence For Public Consultation	Private sector	In July 2024, the ROC's National Science and Technology Council (NSTC) released a draft "Basic Act on AI" for public consultation. This proposed law aims to provide a foundational legal framework for AI development and application. It is built on seven core principles, including sustainable development, human autonomy, privacy protection, safety, transparency, and fairness. The act emphasizes the government's role in promoting AI while mitigating risks. It also includes provisions for public-private cooperation and establishing a regulatory sandbox to encourage innovation in a controlled environment.	5x3, 1x0
9	https://www.dataguidance.com/news/taiwan-science-and-technology-council-requests	2024-07-16	Taiwan: Science and Technology Council requests comments on draft law on AI	Private sector	The National Science and Technology Council of the ROC initiated a public consultation on its draft Basic Law on Artificial Intelligence. The draft law defines AI and sets out key principles for its development, including sustainable development, human autonomy, privacy protection, and accountability. It stresses the prevention of harm and bias from AI applications and recommends assessment tools. The law calls for robust information security, risk classification frameworks, and "data protection by design" principles, promoting a responsible approach to AI innovation through public-private and international collaboration.	5x3
10	https://moda.gov.tw/en/press/press-releases/15428	2025-03-24	Ministry of Digital Affairs Unveils Major Initiatives to Boost Taiwan's AI Industry and Global Competitiveness	Government	The ROC's Ministry of Digital Affairs (MODA) has announced five key strategies to boost the nation's AI industry: computing power, data, talent, marketing, and funding. Initiatives include providing free GPU resources to AI startups to lower development costs. MODA is also building an AI training data repository with government data to strengthen models. For talent, AI literacy has become part of civil servant training. A NT$10 billion	1x1

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					fund from the National Development Fund will be invested in AI startups over the next 10 years to help them scale and enhance the ROC's global competitiveness.	
11	https://ai.taiwan.gov.tw/news/minister-pledges-measures-to-cultivate-ai-talent/	2025-03-26	Minister pledges measures to cultivate AI talent	Government	At the AI EXPO Taiwan 2025, the Minister of Economic Affairs announced plans to cultivate 200,000 people with AI skills to support the ROC's industrial transformation. The strategy includes offering tax incentives, encouraging industry-academia cooperation, and organizing competitions to attract young talent. The government's role is seen as creating a supportive environment with computing power, data access, and funding, rather than direct control. A NT$10 billion fund will be invested in the AI industry over the next decade to help startups grow and solidify the ROC's position in the global AI market.	unmapped
12	https://www.biospectrumasia.com/news/55/25351/kaohsiungs-ai-city-vision-ai-5g-smart-healthcare-and-global-collaborations-take-center-stage.html	2024-03-22	Kaohsiung's AI City Vision: AI, 5G, Smart Healthcare, and Global Collaborations Take Center Stage	Private sector	Kaohsiung is transforming into a smart city by integrating AI, 5G, and IoT into its core services, with a strong focus on smart healthcare. The city is fostering collaborations between local hospitals, tech companies, and international partners like Microsoft and NVIDIA to develop AI-driven healthcare solutions. Initiatives include using AI for medical imaging analysis, developing smart emergency medical response systems, and creating a digital health platform. This vision aims to leverage technology to improve the quality of medical care, enhance public health, and position Kaohsiung as a leading center for healthcare innovation in Asia.	3x3, 2x3
13	https://smartcityonline.org.tw/scheme.php?id=1251	N/A	AI-Driven Future Taipei	Government	The "AI-Driven Future Taipei" initiative showcases Taipei's commitment to becoming a smart city powered by Artificial Intelligence. The city's Department of Information Technology (DOIT) is leading this effort, focusing on	5x3, 3x3, 1x1

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					three main pillars: AI talent cultivation, an AI-powered innovation ecosystem, and "AI+" applications across various city services. Projects include using AI for intelligent traffic management, public safety surveillance, and optimizing government administrative processes. The goal is to leverage AI to create a more efficient, sustainable, and livable urban environment for all citizens, making Taipei a benchmark for smart city development.	
14	https://taiwantoday.tw/Economics/Top-News/269072/MOEA%25E2%2580%2599s-Water-Resources-Agency-reports-fruitful-results-from-AI-training	2023-12-01	MOEA's Water Resources Agency reports fruitful results from AI training	Government	The ROC's Water Resources Agency (WRA), under the Ministry of Economic Affairs, has successfully implemented an AI training program that has yielded significant results. The agency is using AI to improve water management by developing more accurate models for predicting rainfall and reservoir levels. This data-driven approach allows for better decision-making in water allocation, flood prevention, and drought management. By upskilling its staff in AI, the WRA is enhancing its ability to ensure a stable water supply and build resilience against the impacts of climate change, demonstrating a practical application of AI in public resource management.	1x3
15	https://smartcityonline.org.tw/pavilion.php?vip=kaohsiung	N/A	Kaohsiung City Government - Smart City Online	Government	The Kaohsiung City Government is actively developing a smart city by focusing on digital transformation and citizen-centric services. A key part of this is the "Kaohsiung Smart Platform," which integrates data from various city departments to improve governance. AI applications are being introduced in areas like transportation, where smart systems manage traffic flow, and in environmental protection, with AI monitoring air and water quality. The city is also promoting the use of technology in traditional industries to drive economic growth, aiming to create a sustainable and innovative urban environment through strategic technology adoption.	5x3, 3x3

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
16	https://english.gov.taipei/News_Content.aspx?n=A11F01CFC9F58C83&s=484084C1DF72229B	2025-03-27	2025 Smart City Summit and Expo "AI-driven Future Taipei" Establishes New Benchmark for Smart Cities	Government	The 2025 Smart City Summit and Expo in Taipei, themed "AI-driven Future Taipei," highlights the city's ambition to set a new global benchmark for smart cities. The event will showcase Taipei's achievements in integrating AI into urban governance and services. This includes successful projects in intelligent transportation, public safety, and efficient city administration. The summit emphasizes the importance of public-private partnerships in driving innovation and demonstrates how Taipei is leveraging AI not just as a technology, but as a core strategy to create a more sustainable, resilient, and citizen-focused urban future.	5x3, 3x3
17	https://english.doit.gov.taipei/	N/A	Department of Information Technology, Taipei City Government	Government	The Department of Information Technology (DOIT) of Taipei City Government is the driving force behind the city's transformation into a smart city. DOIT's mission is to leverage technology, including AI, to enhance public services and improve the quality of life for citizens. Key initiatives include developing a city-wide data platform, promoting digital literacy, and implementing AI-powered solutions in areas like transportation and public safety. By fostering innovation and collaboration, DOIT aims to create an "AI-Driven Future Taipei," making the city more efficient, sustainable, and responsive to the needs of its residents.	5x3, 3x3
18	https://ostp.nstc.gov.tw/zhTW/PolicyContent.aspx?id=11	N/A	AI - National Science and Technology Council (NSTC)	Government	The National Science and Technology Council (NSTC) leads the ROC's national AI strategy, emphasizing a "Human-Centered AI" approach. The policy aims to harness the ROC's strengths in semiconductors and ICT to drive industrial upgrades and societal well-being. The NSTC's focus is on building a robust AI ecosystem by cultivating talent, advancing core technologies in AI chips and software, strengthening data governance, and promoting international collaboration. The ultimate goal is to establish the ROC as a key player in the global AI landscape, ensuring that AI development is both innovative and beneficial to all of society.	1x0, 1x4

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
19	https://smartcity.taipei/en/cp.aspx?n=51AE427F8B9BB644	N/A	SMARTCITY TAIPEI-Proposal Decision	Government	The Smart Taipei Project Management Office (TPMO) is responsible for driving Taipei's smart city initiatives through a "Proposal Decision" framework. This mechanism facilitates collaboration between the city government and private sector innovators. The city presents challenges in areas like transportation, healthcare, or public safety, and invites companies to propose technological solutions, often involving AI and IoT. This public-private partnership model allows Taipei to test and implement cutting-edge technologies efficiently, fostering a vibrant innovation ecosystem and ensuring that smart city projects are practical and address the real needs of citizens.	3x3
20	https://smartcity.kcg.gov.tw/en/cp.aspx?n=126F8ED97D6C1620&s=54B4591FB11E2CC1	N/A	Smart City Kaohsiung-Smart Governance	Government	Kaohsiung City is advancing smart governance by leveraging data and technology to improve public services. A key initiative is the "Kaohsiung Smart Platform," a central data hub that integrates information from various city departments. This platform enables data-driven decision-making and the development of intelligent applications. For example, AI is used to analyze data for traffic management and environmental monitoring. By breaking down data silos and using advanced analytics, the city government aims to create more efficient, transparent, and responsive services, ultimately building a smarter and more sustainable urban environment for its residents.	5x3, 3x3
21	https://aicenter.mohw.gov.tw/AC/cp-7293-82666-208.html	N/A	Center for Responsible AI in Healthcare	Government	The ROC's Ministry of Health and Welfare has established the Center for Responsible AI in Healthcare to ensure the ethical and trustworthy development of AI in medicine. The center focuses on creating governance frameworks and standards for medical AI. Its responsibilities	5x3, 2x3

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					include addressing issues like data privacy, algorithmic bias, transparency, and accountability. By providing clear guidelines and promoting best practices, the center aims to build trust among patients and clinicians. This proactive approach to governance is crucial for fostering a sustainable ecosystem where innovative AI solutions can be safely and effectively integrated into clinical practice.	
22	https://english.ftvnews.com.tw/news/2024A07W08EA	2024-09-27	Health ministry establishes three AI research centers	Private sector	The ROC's Ministry of Health and Welfare has established three national AI centers to accelerate the application of artificial intelligence in healthcare. These centers are tasked with overcoming the final hurdles in bringing smart medical technologies to patients. They will focus on creating robust frameworks for the validation, clinical application, and regulatory approval of AI medical devices. This initiative aims to bridge the gap between AI research and real-world clinical use, fostering a complete ecosystem that supports the development and deployment of safe and effective AI-powered healthcare solutions for the public.	2x3
23	https://topics.amcham.com.tw/2025/05/taiwan-leans-into-artificial-intelligence-chips/	2024-05-29	Taiwan Leans Into Artificial Intelligence Chips	Private sector	The ROC is leveraging its world-leading semiconductor industry to become a powerhouse in AI chips. The government's "AI on Chip" initiative aims to integrate the country's strengths in IC design, manufacturing, and packaging to develop cutting-edge AI hardware. This strategy involves fostering collaboration between research institutions and industry giants like TSMC and MediaTek. By focusing on developing energy-efficient and powerful AI chips, the ROC seeks to move up the value chain and supply the critical hardware needed to power the global AI revolution, solidifying its indispensable role in the tech ecosystem.	1x4

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
24	https://stli.iii.org.tw/en/article-detail.aspx?no=55&tp=2&i=168&d=9199	2024-02-15	Taiwan's Approach to AI Governance	Non-profit Organization	The ROC is adopting a human-centric and risk-based approach to AI governance. Rather than enacting a single, rigid AI law, the government is establishing a foundational "Basic AI Act" and promoting industry self-regulation. This strategy, guided by the National Science and Technology Council (NSTC), aims to balance innovation with public trust. The framework emphasizes transparency, accountability, and the protection of individual rights. By creating a flexible governance model that can adapt to rapid technological change, the ROC seeks to foster a safe and reliable environment for AI development and application.	1x0
25	https://ai.nycu.edu.tw/en/entrance/	N/A	Admissions – College of Artificial Intelligence	Academic Paper	The establishment of a dedicated College of Artificial Intelligence at National Yang Ming Chiao Tung University (NYCU) highlights the ROC's commitment to cultivating top-tier AI talent. The college offers specialized programs that provide students with a deep understanding of AI theory and practical skills. The curriculum is designed to meet the high demand from the rapidly growing AI industry. By creating focused academic institutions like this, the ROC is building a strong educational foundation to ensure a steady pipeline of well-trained engineers and researchers who can drive future innovation.	1x0
26	https://manufacturingdigital.com/articles/taiwan-global-frontrunner-in-manufacturing-ai-adoption	2024-01-19	Taiwan Global Frontrunner In Manufacturing AI Adoption	Private sector	The ROC has emerged as a global frontrunner in the adoption of AI within its manufacturing sector. With a strong foundation in electronics and precision machinery, ROC manufacturers are integrating AI to enhance productivity and efficiency. Key applications include AI-powered predictive maintenance to reduce equipment downtime, computer vision for automated quality control, and smart robotics to optimize assembly lines. This rapid adoption of "Smart Manufacturing" or Industry 4.0 practices is helping ROC companies to maintain their competitive edge, improve product quality, and solidify their critical position in global supply chains.	1x4

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
27	https://en.aiacademy.tw/about/	N/A	About Us - Taiwan Artificial Intelligence Academy Foundation	Non-profit Organization	The Taiwan AI Academy is a non-profit organization dedicated to cultivating AI talent and promoting industrial AI transformation in the ROC. Founded by prominent figures from academia and industry, the academy offers intensive, hands-on training programs for both technical and managerial professionals. Its curriculum is designed to bridge the gap between academic theory and real-world industry needs. By equipping thousands of individuals with practical AI skills, the academy plays a crucial role in building the human capital required to support the ROC's ambition of becoming a leading force in the global AI landscape.	unmapped
28	https://www.taiwannews.com.tw/news/6155039	2024-03-14	Taiwan launches program to boost AI use in southern industries	Private sector	The ROC government has launched a program to boost the adoption of AI among industries in the southern part of the island. This initiative aims to ensure that the benefits of AI are not limited to the tech hubs in the north. The program will provide subsidies and expert consultation to help traditional manufacturing and other sectors in the southern part of the ROC integrate AI into their operations. The goal is to enhance their competitiveness, improve productivity, and drive a more balanced regional economic development by facilitating a broader industrial AI transformation across the country.	unmapped
29	https://www.ntu.edu.tw/english/	N/A	National Taiwan University	Academic Paper	National Taiwan University (NTU), as the ROC's leading academic institution, is at the forefront of AI research and education. The university hosts several AI-focused research centers and offers comprehensive programs in computer science and engineering with specializations in AI and machine learning. NTU collaborates extensively with industry partners to work on cutting-edge AI applications, from smart healthcare to financial technology. By producing top-tier research and cultivating a new generation of AI experts, NTU plays a pivotal role in driving the ROC's technological innovation and maintaining its competitiveness in the global AI arena.	1x0, 2x3

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
30	https://taiwantoday.tw/Economics/Top-News/271843/Taiwan-steps-up-promotion-of-AI-applications	2023-12-01	Taiwan steps up promotion of AI applications	Government	The ROC government is intensifying its efforts to promote the application of AI across various sectors to enhance national competitiveness. The strategy involves providing resources and support for both public and private entities to adopt AI technologies. For example, the Water Resources Agency is using AI for more accurate rainfall and reservoir level predictions. The government is also fostering industry-academia collaboration and providing training programs to build a skilled AI workforce. This comprehensive push aims to accelerate the integration of AI into the economy, leading to smarter governance and more efficient industries.	1x3
31	https://aicenter.mohw.gov.tw/AC/fp-7292-82424-208.html	N/A	Welcome to Taiwan's Three National AI Centers	Government	To accelerate the adoption of AI in healthcare, the ROC's Ministry of Health and Welfare has established three national AI centers. These centers are designed to create a comprehensive ecosystem for medical AI. They focus on key areas such as establishing frameworks for responsible AI development, validating the clinical effectiveness and safety of AI medical devices, and researching the real-world impact of AI on healthcare. This strategic initiative aims to bridge the gap between research and clinical application, ensuring that safe and effective AI technologies can be integrated into the healthcare system to benefit patients.	2x3
32	https://www.dataguidance.com/news/taiwan-fsc-releases-survey-results-ai-use-financial	2024-02-26	Taiwan: FSC releases survey results on AI use in financial industry	Private sector	The ROC's Financial Supervisory Commission (FSC) released a survey showing widespread adoption of AI in the financial industry. The survey found that 116 financial institutions are using or plan to use AI. Common applications include chatbots for customer service, AI-driven marketing, intelligent risk assessment for lending, and fraud detection. While embracing the technology, firms also identified challenges, including high implementation costs and a shortage of skilled talent. The FSC is now using these findings to develop a core set of principles for AI governance in the financial sector to ensure responsible innovation.	2x1, 1x0, 1x2, 3x4

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
33	https://ceias.eu/taiwans-approach-towards-ai/	2024-02-26	Taiwan's approach towards AI	Non-profit Organization	The ROC's approach to AI is multifaceted, aiming to leverage its technological strengths while addressing potential societal impacts. The government's "AI Taiwan" action plan focuses on five key areas: cultivating talent, developing core technologies (especially "AI on Chip"), creating an open data environment, establishing a testing ground for innovation (a regulatory sandbox), and ensuring AI applications are human-centric and ethical. This strategy is designed to build a complete AI ecosystem, from hardware to application, positioning the ROC as a global leader in both AI innovation and responsible governance.	1x4, 1x1
34	https://aif.tw/event/ai-research/file/AI%20Adoption%20in%20Taiwan's%20Industries%202025%20Survey%20Findings%20and%20Implementation%20Guide.pdf	2025	AI Adoption in Taiwan's Industries - 2025 Survey Findings and Implementation Guide	Private sector	This 2025 survey by the AI Foundation of the ROC reveals accelerating AI adoption across various industries, with a significant focus on manufacturing and finance. The findings show that companies are primarily using AI for process optimization, quality control, and customer service automation. The accompanying implementation guide provides a framework for businesses, especially SMEs, to begin their AI journey. It offers practical advice on identifying high-impact use cases, building data infrastructure, and developing talent. The report highlights a maturing ecosystem where AI is moving from a niche technology to a core component of business strategy.	unmapped
35	https://aws.amazon.com/jp/solutions/case-studies/case-study-cht/	N/A	Chunghwa Telecom Builds Multiple Generative AI Solutions with Amazon Bedrock	Private sector	Chunghwa Telecom, the ROC's largest telecommunications provider, is using Amazon Bedrock to develop and deploy multiple generative AI solutions. By leveraging a variety of foundation models on AWS, the company has created applications such as a corporate knowledge base assistant and an intelligent customer service system. This approach allows	unmapped

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					Chunghwa Telecom to innovate rapidly while maintaining data privacy and security. The collaboration with AWS enables them to scale their AI services efficiently, enhancing both internal productivity and customer engagement, and positioning them at the forefront of AI application in the ROC's telecom industry.	
36	https://iapp.org/news/a/taiwan-s-ai-governance-framework-unveiled	2024-08-13	Taiwan's AI governance framework unveiled	Non-profit Organization	The ROC has unveiled its AI governance framework through a draft "Basic Act on AI." The framework adopts a risk-based approach, focusing on ensuring that AI development is human-centric and trustworthy. It establishes principles such as transparency, fairness, and accountability. A key feature is the establishment of a dedicated AI council to oversee policy and promote industry self-regulation. Instead of a single, rigid law, this framework provides a flexible foundation that aims to balance innovation with the protection of individual rights, fostering a safe and reliable environment for AI growth in the ROC.	1x0
37	https://moda.gov.tw/en/press/press-releases/15550	2024-08-29	Government Deepens Open Data Applications — The Ministry of Digital Affairs Plans to Develop Taiwan's Sovereign AI Training Large Language Model (LLM)	Government	The ROC's Ministry of Digital Affairs (MODA) is deepening its open data applications by planning to develop a sovereign Large Language Model (LLM). This initiative aims to create a trustworthy, high-quality generative AI model trained on reliable data from the government and local industries. The goal is to provide a secure AI foundation that can support various applications across different sectors while preventing the risks associated with unverifiable data from external models. This project is a strategic move to enhance the ROC's AI autonomy and build a robust, localized AI ecosystem.	1x1, 5x4

(Continued on next page)

(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
38	https://insightplus.bakermckenzie.com/bm/banking-finance_1/taiwan-taiwan-financial-supervisory-commission-has-published-the-guidelines-for-the-application-of-ai-in-the-financial-industry_1	2024-07-08	Taiwan: Taiwan Financial Supervisory Commission has published the "Guidelines for the Application of AI in the Financial Industry"	Private sector	The ROC's Financial Supervisory Commission (FSC) has published guidelines for the use of AI in the financial industry. These guidelines, based on a risk-based approach, aim to ensure responsible AI adoption. They cover key areas such as data governance and privacy protection, fairness and non-discrimination, and transparency and accountability. The principles also emphasize the importance of human oversight in AI-driven decision-making processes. By providing a clear framework, the FSC seeks to foster innovation in fintech while maintaining financial stability and protecting consumers in an increasingly AI-driven market.	1x0, 3x4
39	https://ai.nycu.edu.tw/en/aboutus/	N/A	About us – College of Artificial Intelligence	University	The College of Artificial Intelligence at National Yang Ming Chiao Tung University (NYCU) was established to cultivate high-level talent and become a world-class center for AI research. The college focuses on integrating AI with various domains, particularly leveraging the ROC's strengths in the semiconductor and ICT industries. It emphasizes both theoretical foundations and practical applications, fostering close collaboration with industry partners. By offering specialized degree programs and conducting cutting-edge research, the college plays a vital role in building the human capital needed to support the ROC's AI ambitions.	1x0, 1x4
40	https://ai.site.nthu.edu.tw/index.php?Lang=en	N/A	Artificial Intelligence Center (NTHU)	University	The Artificial Intelligence Center at National Tsing Hua University (NTHU) is a hub for AI research and industry-academia collaboration in the ROC. The center focuses on developing core AI technologies and applying them to various fields, including smart manufacturing, healthcare, and finance. It brings together researchers from different disciplines to work on	1x0

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					interdisciplinary projects. By fostering a collaborative environment and partnering with industry, the center aims to translate cutting-edge research into practical applications, contributing to both scientific advancement and the technological competitiveness of the ROC's industries.	
41	https://nycu.iitd.ac.in/public/uploads/1722685360_NYCU%20AI-College%20brochure_compressed.pdf	N/A	AI College - NYCU & IITD	University	This page highlights a collaboration between National Yang Ming Chiao Tung University (NYCU) in the ROC and the Indian Institute of Technology Delhi (IITD). This partnership involves their respective AI colleges and aims to foster joint research and academic exchange. By connecting two leading technical universities in Asia, the collaboration seeks to leverage the complementary strengths of the ROC's hardware-focused tech industry and India's software prowess. This international academic alliance is designed to accelerate AI innovation and cultivate globally-minded talent in the rapidly advancing field of Artificial Intelligence.	1x0
42	https://www.njii.com/2025/03/transforming-the-workplace-real-world-examples-of-generative-ai-integration/	N/A	Transforming the Workplace: Real-World Examples of Generative AI	Private sector	Generative AI is transforming workplaces by automating tasks and augmenting human creativity. Real-world examples include using generative AI to draft emails, reports, and marketing copy, significantly speeding up content creation. In software development, it assists coders by generating and debugging code. Customer service departments use it to power intelligent chatbots that provide more nuanced and helpful responses. These applications free up employees from repetitive work, allowing them to focus on more strategic, creative, and complex problem-solving, thereby boosting overall productivity and innovation within the organization.	1x2

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
43	https://ai.nycu.edu.tw/en/department/	N/A	Department – College of Artificial Intelligence	University	The College of Artificial Intelligence at National Yang Ming Chiao Tung University (NYCU) is structured into departments that reflect a comprehensive approach to AI education. It offers programs that provide a solid foundation in core AI principles while also allowing for specialization. This structure is designed to produce well-rounded AI professionals who possess both deep theoretical knowledge and practical skills. By having a dedicated college with specialized departments, NYCU can effectively train the next generation of engineers, researchers, and leaders needed to drive the ROC's AI industry forward.	1x0
44	https://ai.site.nthu.edu.tw/p/412-1206-15448.php?Lang=en	N/A	Introduction	University	The Artificial Intelligence Center at National Tsing Hua University (NTHU) was established to integrate AI research across various disciplines and collaborate with industry. The center focuses on developing core AI technologies and applying them to solve real-world problems. Its mission includes cultivating top-tier AI talent through its educational programs and fostering a dynamic ecosystem for AI innovation in the ROC. By bridging the gap between academic research and industrial application, the center aims to be a leading force in driving the ROC's technological advancement and competitiveness in the global AI landscape.	1x0
45	https://investtaiwan.nat.gov.tw/intelNewsPage202503250001eng?lang=eng&search=202503250001	2023-09-21	Generative AI Creates New Opportunities for All Industries	Government	This article from Invest Taiwan highlights the transformative potential of generative AI for all industries in the ROC. The government is actively promoting the adoption of this technology to create new business models and enhance competitiveness. It notes that the ROC's strong foundation in semiconductors and manufacturing provides a unique advantage in developing AI hardware. The government is fostering a supportive ecosystem by investing in talent, infrastructure, and R&D, aiming to leverage generative AI to drive innovation, boost economic growth, and solidify the ROC's position in the global technology value chain.	1x4

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
46	https://inform.tmforum.org/research-and-analysis/case-studies/taiwan-mobile-transforms-its-oss-with-an-ai-ecosystem	2024-02-12	Taiwan Mobile transforms its OSS with an AI ecosystem	Private sector	Taiwan Mobile is transforming its Operations Support Systems (OSS) by creating an AI-driven ecosystem. The company is using AI and machine learning to automate network monitoring and fault management, enabling proactive identification and resolution of issues. This "zero-touch" approach improves network reliability and reduces operational costs. By analyzing network data, AI also helps in optimizing performance and planning capacity more effectively. This strategic shift towards an AI-centric OSS allows Taiwan Mobile to build a more resilient, efficient, and intelligent network, ultimately enhancing the service quality for its customers.	unmapped
47	http://daai.tv/news/583026	2024-05-30	Tzu Chi Humanities x Taiwan AI Labs to Create Exclusive GPT	Non-profit Organization	The Tzu Chi Foundation's humanities division has partnered with Taiwan AI Labs to create a specialized Generative Pre-trained Transformer (GPT) model. This AI tool is being developed to assist with the foundation's vast archive of media and texts. The custom GPT will be able to quickly search, summarize, and analyze decades of Tzu Chi's humanistic content, including video and audio recordings. The goal is to make this wealth of information more accessible and to use technology to more effectively spread the foundation's messages of compassion and humanistic culture.	unmapped
48	https://tw.news.yahoo.com/taiwan-ai-labs%E6%94%9C%E6%89%8B%E6%85%88%E6%BF%9F%E4%BA%BA%E6%96%87%E5%BF%97%E6%A5%AD%E6%89%93%E9%80%A0%E5%B0%88%E5%B1%AC%E5%BD%B1%E9%9F%B3gpt-%E7%A7%91%E6%8A%80%E5%82%B3%E6%B3%95%E6%B7%A8%E5%8C%96%E4%BA%BA%E5%BF%83-110000874.html?guccounter=1&guce_referrer=aHR0cHM6Ly9nZW1pbmkuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAADjtD2L7kwXW_D6ps5-WSkLv9sunphKHpvkqf-U20Dl3TCVM-d5hWk4kV4cFsbxBeL6p0shvUzlC8-aXifTEU7HiKK_KtmwjHs0eJZpRqGwhM09u99YWxz0yI_0GR6hC7zhXHWX9-cJnJ3n-bnMRN51kqNE7ZkZ6Ob04r7tCK2tQ4Q	2024-05-30	Taiwan AI Labs Joins Hands with Tzu Chi Humanities to Create an Exclusive Audio-Visual GPT, Spreading Dharma with Technology to Purify Hearts	Private sector	Taiwan AI Labs has collaborated with the Tzu Chi Foundation to develop a unique generative AI model tailored for its extensive audio-visual archives. This specialized GPT is designed to process and understand the foundation's humanistic content, enabling efficient search and summarization of videos and audio lectures. This partnership represents a novel application of AI, using advanced technology not for commercial purposes but to preserve and propagate cultural and spiritual teachings. The aim is to leverage AI to "purify hearts" by making the foundation's profound teachings more accessible to a modern audience.	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
49	https://ir.7-11.com.tw/en/companyhistory.php	N/A	Company History - 7-ELEVEN	Private sector	While the company history page of 7-Eleven Taiwan does not detail specific AI projects, the company is known for its technological innovation in retail. In recent years, 7-Eleven has introduced unmanned "X-STORE" concept stores that utilize AI and IoT technology. These stores feature facial recognition for entry and payment, smart shelves that monitor inventory, and data analytics to understand customer behavior. These initiatives demonstrate how 7-Eleven is leveraging AI to explore new retail formats, enhance customer convenience, and improve operational efficiency in the ROC's highly competitive convenience store market.	4x4
50	https://www.tzuchi.com.tw/events/2024tima/index.php?option=com_k2&view=item&id=597:ailove&Itemid=182	2024-05-31	Turning Knowledge into Wisdom: Generative AI Generates Love - CEO Yen Po-wen Discusses Tzu Chi's AI Applications	Non-profit Organization	Yen Po-wen, CEO of Tzu Chi's humanistic culture division, discussed the foundation's application of AI. He detailed the collaboration with Taiwan AI Labs to create a specialized GPT model trained on Tzu Chi's extensive archives. This "Dharma GPT" is designed to understand and process the teachings of Master Cheng Yen. The goal is to use AI to "turn knowledge into wisdom," making the foundation's profound teachings on compassion and relief work more accessible. This innovative use of generative AI aims to preserve and spread humanistic values in the digital age.	unmapped
51	https://research.hktdc.com/en/article/NzM3MDg3Mjk1	2019-09-23	Taiwan's Retailers Deploy Smart Vending Machines in Bid for Competitive Edge	Private sector	Retailers in the ROC are deploying smart vending machines to gain a competitive edge. These machines are often equipped with technologies like touch screens, mobile payments, and sometimes AI. For instance, some smart vending machines use cameras and sensors to track inventory in real-time and analyze purchasing patterns. This data helps operators optimize product selection and restocking schedules. This trend, including by major players like 7-Eleven, represents a move towards automated and data-driven retail, offering customers greater convenience and providing operators with valuable insights to improve their business.	1x3, 4x4

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
52	https://medium.com/common-wealth-magazine/taiwans-next-convenience-store-battlefield-a745605d-b1bb	2018-04-11	Taiwan's Next Convenience Store Battlefield?	Private sector	This article from 2018 discusses the emerging battlefield of unmanned stores in the ROC's convenience store market. It highlights the launch of 7-Eleven's first "X-STORE," an experimental, unstaffed outlet. The store utilizes various technologies, including facial recognition for access and payment, smart refrigerators, and data analytics. This move represents the industry's exploration of AI and automation to address labor shortages and enhance customer experience. The X-STORE serves as a real-world laboratory for testing AI-driven retail concepts that could redefine the future of convenience shopping in the ROC.	4x4
53	https://taiwannews.com.tw/news/3821712	2020-11-24	Automated Mini 7-Elevens sprout all over Taiwan	Private sector	7-Eleven Taiwan has been rolling out automated, smaller-format stores known as "X-STOREs." These outlets are unstaffed and leverage a suite of technologies, including AI, to operate. Customers use facial recognition or a mobile app to enter and make purchases. The stores use smart shelves and cameras to monitor inventory and customer behavior. This data is analyzed to optimize stock and layout. This initiative represents a significant push into AI-driven retail, allowing 7-Eleven to expand its footprint with lower operational costs while testing the future of automated convenience shopping.	4x4
54	https://cloud.google.com/customers/carrefourtaiwan	N/A	Carrefour Taiwan Case Study	Private sector	Carrefour Taiwan migrated its IT infrastructure to Google Cloud to enhance its data analytics capabilities and improve business efficiency. By building a centralized data lake, the company can analyze sales data from its various channels—hypermarkets, supermarkets, and e-commerce—in real-time. This data-driven approach, which is a foundation for AI, allows for better inventory management, personalized marketing campaigns, and a deeper understanding of customer behavior. The move to the cloud has enabled Carrefour to become more agile and has provided the scalable infrastructure needed to support future AI-driven innovations in its retail operations.	unmapped

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55	https://ai.taiwan.gov.tw/news/	N/A	NEWS - AI Taiwan	Government	This news portal, part of the official AI Taiwan website, serves as a central source of information on the latest developments in the ROC's AI landscape. It features announcements from government agencies, highlights of industry-academia collaborations, and stories about successful AI applications across various sectors. The content reflects the key pillars of the ROC's national AI strategy, including talent cultivation, technological innovation, and the promotion of AI for social good. The portal is a key tool for keeping stakeholders informed and showcasing the progress of the ROC's mission to become a global AI hub.	unmapped
56	https://www.yonglin.org.tw/en/project/education/detail/13	N/A	Promoting AI Popularization	Non-profit Organization	The Yonglin Foundation is actively involved in promoting the popularization of Artificial Intelligence education in the ROC. The foundation supports initiatives aimed at making AI knowledge more accessible to the general public, especially younger generations. This includes funding AI-related educational programs, workshops, and competitions for students from elementary to high school. By fostering an early interest and foundational understanding of AI, the foundation aims to build a strong talent pipeline from the ground up, ensuring that the ROC has the human capital necessary to sustain its long-term growth and leadership in the field of AI.	unmapped
57	https://english.taiwanmobile.com/about/news/pressReleases_20210524_090423.html	2024-04-10	Taiwan Mobile's 9th "i-Infinity Digital Welfare" exhibition	Private sector	Taiwan Mobile's "i-Infinity Digital Welfare" initiative showcases how the company uses its technological capabilities for social good. The program supports social welfare organizations by providing them with digital tools and solutions, which increasingly include AI. For example, the company helps non-profits use data analytics to improve their outreach and service delivery. It also develops tech solutions for specific needs, such as platforms to support the elderly or people with disabilities. This initiative demonstrates a corporate commitment to leveraging technology, including AI, to address social issues and bridge the digital divide in the ROC.	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
58	https://www.taiwan-healthcare.org/en/news-detail?id=0sl0jht9q78wwps2	2024-09-27	Rapid Advancements in Smart Healthcare: Ministry of Health and Welfare Establishes Three AI Centers	Private sector	To accelerate the adoption of smart healthcare, the ROC's Ministry of Health and Welfare has established three national AI centers. These centers are designed to create a complete ecosystem for medical AI innovation. Their roles include developing frameworks for responsible AI, validating the clinical safety and efficacy of AI medical devices, and researching the real-world impact of these technologies. This strategic initiative aims to bridge the gap between AI research and clinical practice, ensuring that safe and effective AI-powered health solutions can be deployed to benefit patients across the ROC.	2x3
59	https://www.taiwan-healthcare.org/zh/news-detail?id=0swow4u7vk6ornzi	2025-05-22	MacKay Hospital Introduces NVIDIA AI Technology; Robots Stationed in the Emergency Room to Reduce the Burden on Medical Staff	Private sector	MacKay Memorial Hospital is introducing AI-powered robots, built on NVIDIA's platform, into its emergency room to alleviate the workload of medical staff. These robots are designed to handle routine tasks, such as patient guidance, registration, and providing information, which frees up nurses and doctors to focus on more critical patient care. The use of these AI robots aims to improve efficiency in the high-pressure environment of the emergency room, reduce wait times, and enhance the overall patient experience, showcasing a practical application of AI and robotics in a clinical setting.	unmapped
60	https://www.mmh.org.tw/news_view.php?id=9562	2025-03-21	GTC Taipei 2025: MacKay Memorial Hospital Showcases Impressive Results of Multi-type AI Robots in Clinical Scenario Presentations	Hospital	At GTC Taipei 2025, MacKay Memorial Hospital presented the successful results of its multi-type AI robot deployment in clinical settings. The hospital demonstrated how different robots, powered by NVIDIA's AI platform, are used in various scenarios, including the emergency room and long-term care facilities. These robots assist with tasks ranging from patient interaction to logistical support, effectively reducing the burden on healthcare staff. The showcase highlighted the hospital's leadership in integrating advanced robotics and AI into real-world healthcare workflows to improve efficiency and the quality of patient care.	2x3

(Continued on next page)

(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
61	https://www.mmh.org.tw/news_view.php?id=9199	2024-12-05	MacKay Memorial Hospital Participates in the 2024 Healthcare+ Expo, Showcasing New Smart Medical Technologies	Hospital	At the 2024 Healthcare+ Expo, MacKay Memorial Hospital showcased its latest advancements in smart medical technology. A key highlight was the integration of AI and virtual reality (VR) into medical education and surgical training. The hospital presented how these technologies can create realistic simulation environments for doctors to practice complex procedures. Additionally, they displayed AI-powered diagnostic tools and intelligent systems for hospital management. This participation demonstrates the hospital's commitment to adopting cutting-edge technology to improve patient care, enhance medical training, and increase operational efficiency.	unmapped
62	https://tw.news.yahoo.com/%E9%86%AB%E9%99%A2ai%E9%9D%A9%E5%91%BD-%E9%A6%AC%E5%81%95%E6%80%A5%E8%A8%BA-%E4%BA%BA%E5%9E%8B%E6%A9%9F%E5%99%A8%E4%BA%BA-%E7%A9%BF%E6%A2%AD%E9%80%81%E6%AA%A2%E9%AB%94-%E7%99%BB%E4%B8%8A%E8%BC%9D%E9%81%94-085620124.html	2025-05-22	Hospital AI Revolution! MacKay's ER "Humanoid Robots" Shuttle Samples, Featured by NVIDIA	Private sector	MacKay Memorial Hospital is revolutionizing its emergency room with humanoid robots, a development featured by NVIDIA. These AI-powered robots are used to transport lab samples, freeing up medical staff from logistical tasks to focus on critical patient care. The implementation of these robots in the high-pressure ER environment aims to improve efficiency, reduce turnaround times for test results, and alleviate the burden on healthcare workers. This case demonstrates a practical and impactful application of AI and robotics to solve real-world challenges in a clinical setting in the ROC.	unmapped
63	https://csrone.com/topics/8885	2023-06-27	"Let AI Give Doctors More Time for Patients!" Linkou Chang Gung Hospital Director: Smart healthcare is not done for the sake of doing it	Private sector	The director of Linkou Chang Gung Memorial Hospital emphasizes that the goal of smart healthcare is to use AI to give doctors more time for patient care, not just to adopt technology for its own sake. The hospital utilizes AI for tasks like analyzing medical images and assisting in diagnoses, which helps to streamline workflows. This allows clinicians to dedicate more time to complex cases and direct patient interaction. The hospital's philosophy underscores a human-centric approach to AI in medicine, focusing on how technology can augment and support healthcare professionals to improve the quality of care.	2x3

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
64	https://vocus.cc/article/672080f1fd89780001f14779	2024-05-09	7-11's Future AI Technology Unmanned Supermarket	Private sector	7-Eleven Taiwan is pioneering the future of retail with its AI-powered unmanned "X-STOREs." These stores use a suite of technologies to create a seamless shopping experience. Customers use facial recognition or a mobile app to enter, and a combination of smart shelves, sensors, and cameras tracks their selections. The payment is processed automatically upon exiting. This AI-driven concept allows for 24/7 operation with minimal staffing, enhances customer convenience, and gathers valuable data on shopping behavior to optimize inventory and layout, representing a significant innovation in the ROC's retail landscape.	1x3, 4x4
65	https://www.cw.com.tw/aging/article/5132361	2023-06-27	Let AI Give Doctors More Time for Patients! Linkou Chang Gung Hospital Director: Smart healthcare is not done for the sake of doing it	Private sector	Linkou Chang Gung Memorial Hospital's director advocates for a purposeful adoption of AI in healthcare, with the primary goal of allowing doctors to spend more time with patients. The hospital has implemented AI systems to handle time-consuming tasks like reading medical images and processing data, thereby increasing diagnostic efficiency. This strategic use of AI streamlines clinical workflows and reduces the administrative burden on medical staff. The core principle is that smart healthcare should serve a practical purpose: empowering clinicians and enhancing the quality of patient-centered care.	2x3
66	https://aif.tw/	N/A	Artificial Intelligence Technology Foundation	Non-profit Organization	The Artificial Intelligence Foundation (AIF) in the ROC is a non-profit organization dedicated to promoting the healthy development of the AI industry. It aims to facilitate the widespread adoption of AI by providing businesses, especially small and medium-sized enterprises, with knowledge, resources, and expert guidance. The foundation offers training programs, publishes research and industry analysis, and fosters a community for AI professionals. By bridging the gap between technology and industry application, AIF plays a crucial role in building a robust and competitive AI ecosystem in the ROC.	unmapped

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
67	https://tw.stock.yahoo.com/news/%E5%AE%B6%E6%A8%82%E7%A6%8F-%E6%8E%A8%E5%87%BAai%E4%BE%8D%E9%85%92%E5%B8%AB-201000487.html	2024-02-26	Carrefour Launches AI Sommelier	Private sector	Carrefour Taiwan has launched an "AI Sommelier" service to enhance the wine shopping experience for its customers. This innovative feature, likely a kiosk or mobile application, helps shoppers select wine by asking them simple questions about their preferences, such as taste profile, food pairings, or budget. The AI then analyzes these inputs and provides personalized recommendations from the store's selection. This practical application of AI demystifies the process of choosing wine, provides valuable assistance to customers, and demonstrates how retailers can use technology to create a more engaging and helpful in-store environment.	4x4
68	https://money.udn.com/money/story/5637/8170832	2024-02-26	Tipsy Task: Carrefour's "AI Sommelier Service" Officially Launched	Private sector	Carrefour has officially launched its "AI Sommelier Service" in the ROC, aiming to solve the challenge many customers face when selecting wine. This service uses AI to provide personalized recommendations. By interacting with the system, customers can receive suggestions based on their specific needs, such as what food they are planning to eat or their personal taste preferences. This smart service makes the wine selection process more accessible and less intimidating for non-experts. It is a prime example of how retailers are using AI to provide value-added services and improve the overall customer experience.	4x4
69	https://www.fsc.gov.tw/websitedowndoc?fileNoChangechfsc/202408231741530.pdf&filedisplayNoChangecases_FinanceoperationalAIpoint.pdf	2024-07-08	Financial Supervisory Commission releases the Core Principles and Policies for the Use of Artificial Intelligence (AI) in the Financial Industry	Government	The ROC's Financial Supervisory Commission (FSC) has released a set of core principles and policies for the use of AI in the financial industry. These guidelines are designed to promote responsible AI innovation while ensuring consumer protection and financial stability. The principles emphasize key areas such as establishing strong data governance, ensuring fairness and preventing bias, maintaining transparency and accountability, and ensuring human oversight of AI systems. This framework provides financial institutions with clear guidance on how to develop and deploy AI technologies in a safe, ethical, and trustworthy manner.	3x4

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
70	https://tws.twcc.ai/news_tw_241219/	2023-07-10	ASUS AI Cloud Platform Leads Smart Healthcare! Assists Chang Gung Memorial Hospital in High-Efficiency Diagnosis and Treatment	Private sector	ASUS's AI cloud platform, Taiwan Web Service Corporation (TWCC), is collaborating with Chang Gung Memorial Hospital to advance smart healthcare. By leveraging the high-performance computing power of the AI platform, the hospital can accelerate the development and deployment of its medical AI models. This partnership enables faster analysis of medical images, supports complex genomic research, and improves the efficiency of diagnostic processes. The collaboration is a key example of how public-private partnerships are driving innovation in the ROC's healthcare sector, using powerful AI infrastructure to improve clinical outcomes.	2x3
71	https://digi.taiwan.gov.tw/	N/A	DIGI+ Taiwan	Government	DIGI+ Taiwan is a comprehensive government program aimed at accelerating the ROC's digital transformation. The initiative focuses on developing digital infrastructure, fostering a vibrant digital economy, and promoting e-government services. A key component of the DIGI+ plan is the promotion of emerging technologies like AI. It supports AI research and development, talent cultivation, and the application of AI across various sectors to enhance national competitiveness. This program creates the foundational policy and infrastructure necessary for the ROC to thrive in the global digital era and become a leading smart nation.	1x1
72	https://ailabs.tw/	N/A	Healthcare - Taiwan AI Labs	Private sector	Taiwan AI Labs & Foundation (Taiwan AI Labs) is a privately funded organization based in the ROC with offices in Taipei and Kaohsiung. Taiwan AI Labs was established in 2017 and is the first open AI research institute in Asia. We focus on trustworthy and responsible AI research, leverage the ROC's AI talents and industry strengths to establish the responsible methodologies and standards for healthcare, finance and news media innovations in the ROC.	unmapped

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
73	https://nspp.mofa.gov.tw/nsppe/news.php?post=271887&unit=379&unitname=economiccooperation&postname=taiwanstepsuppromotionofaiapplications	2025-07-07	Taiwan steps up promotion of AI applications	Government	The government of the ROC is increasing its efforts to promote the application of AI across various sectors. This initiative is part of a broader strategy to enhance the nation's industrial competitiveness and improve public services. The promotion includes providing resources and support for both public agencies and private companies to adopt AI. For example, the Water Resources Agency is using AI to improve rainfall prediction. By fostering a supportive ecosystem for AI adoption, the ROC aims to leverage this transformative technology for economic growth and to address key societal challenges.	1x3
74	https://www.taipeitimes.com/News/front/archives/2025/06/08/2003838233	2025-02-10	Cabinet to announce major AI scheme	Private sector	The ROC cabinet is set to announce a major AI initiative aimed at making the ROC a global leader in the field. This scheme will likely involve significant investment in developing domestic AI technologies, particularly in areas where the ROC has existing strengths, such as semiconductors ("AI on Chip"). The plan is expected to include measures to cultivate top-tier AI talent, support AI startups, and create a favorable regulatory environment for innovation. This ambitious program signals a strong government commitment to making AI a central pillar of the ROC's future economic development.	1x4
75	https://www.myeverydaytech.com/kaohsiung-city-embraces-digital-transformation-and-healthcare-innovation/	N/A	Kaohsiung City Embraces Digital Transformation and Healthcare Innovation	Private sector	This article reports on Kaohsiung City's digital transformation and healthcare innovation efforts, showcased at the Smart City Summit & Expo (SCSE) 2025. Under Deputy Mayor Charles Lin, the city is pursuing the Kaohsiung Intelligent Lighthouse Program, a smart-city initiative centered on sustainability, AI governance, and digital innovation, including the Kaohsiung AI Upgrade 2.0 master project for AI-driven infrastructure and energy	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					efficiency. On the healthcare side, the city has developed smart-healthcare solutions such as remote care and AI-assisted medical image analysis, which are also being exported internationally, reinforcing Kaohsiung's position as a hub for medical innovation alongside its established semiconductor ecosystem anchored by TSMC.	
76	https://www.moea.gov.tw/Mns/english/home/English.aspx	N/A	Ministry of Economic Affairs, R.O.C.	Government	The Ministry of Economic Affairs (MOEA) in the ROC plays a crucial role in promoting the country's industrial development, which now heavily involves AI. The MOEA supports businesses in adopting AI technologies to upgrade their operations, a process known as industrial AI transformation. It provides subsidies, facilitates industry-academia collaborations, and promotes the development of AI solutions for sectors like manufacturing, retail, and energy. Through these initiatives, the ministry aims to enhance the competitiveness of ROC industries, foster innovation, and ensure that the economy benefits from the AI revolution.	unmapped
77	https://www.twaicoe.org/about-us#	N/A	About Us - Taiwan AICoE	Non-profit Organization	The Taiwan AI Center of Excellence (AICoE) is an initiative aimed at establishing the ROC as a global leader in AI. The center focuses on four main goals: cultivating top-tier AI talent, developing cutting-edge AI technologies, fostering a vibrant AI innovation ecosystem, and promoting the ethical development of AI. It serves as a hub for collaboration between academia, industry, and government, driving research and its application in key areas. AICoE is a cornerstone of the ROC's national strategy to build a comprehensive and competitive AI industry.	2x3

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(Continued from the previous page)

No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
78	https://english.ey.gov.tw/News3/9E5540D592A5FECD/7afed842-0d86-4d59-9144-0269b120ece6	2025-06-25	Cultivating public sector AI talent for smart government	Government	The ROC government's "Smart Taiwan" initiative includes a significant focus on cultivating AI talent within the public sector. The plan involves comprehensive training programs for civil servants at all levels to enhance their understanding and application of AI. The goal is to upskill the workforce to leverage AI for improving administrative efficiency and the quality of public services. By building AI capacity from within, the government aims to accelerate its digital transformation, foster data-driven decision-making, and create a more innovative and responsive "smart government" for its citizens.	1x1
79	https://www.pna.gov.ph/articles/1246306	2024-03-21	Taiwan takes lead in AI-driven, sustainable smart cities	Government	The ROC is establishing itself as a leader in creating AI-driven, sustainable smart cities. Through events like the Smart City Summit & Expo, the country showcases its innovations in urban technology. ROC cities are implementing AI for intelligent traffic management, energy-efficient building control, and enhanced public safety systems. The government strongly supports public-private partnerships to develop these solutions. By integrating AI and IoT into urban infrastructure, the ROC aims to create more efficient, livable, and environmentally friendly cities, setting a benchmark for the rest of the world.	5x3, 3x3
80	https://eng.vghks.gov.tw/cp.aspx?n=E6E0D6C968F4A4F9&sms=FA30105EA5865879&s=12D775ECB1F7A330	N/A	Artificial Intelligence - Kaohsiung Veterans General Hospital	University	Kaohsiung Veterans General Hospital (KVGH) is actively integrating Artificial Intelligence into its medical services to enhance patient care. The hospital utilizes AI for various applications, including the analysis of medical images for faster and more accurate diagnoses, and developing predictive models to identify patients at high risk for certain diseases. By adopting these advanced technologies, KVGH aims to improve diagnostic precision, personalize treatment plans, and increase operational efficiency. This commitment to AI innovation positions the hospital as a leader in the development of smart healthcare in the southern part of the ROC.	2x3

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
81	https://blog.google/around-the-globe/google-asia/type-2-diabetes-taiwan/	2024-04-11	Using AI to tackle Type 2 diabetes in Taiwan	Private sector	Google is collaborating with healthcare institutions in the ROC to use AI to combat Type 2 diabetes. A key project involves using an AI model to screen for diabetic retinopathy, a common complication that can lead to blindness. The AI algorithm analyzes retinal images to detect signs of the disease, enabling early detection and timely treatment. This initiative demonstrates how AI can make health screenings more accessible and efficient, particularly in underserved areas. By partnering with local experts, Google is applying its technological capabilities to address a major public health challenge in the ROC.	2x3
82	https://www.taiwannews.com.tw/topic/AI%20adoption	N/A	AI adoption related news	Private sector	This is a topic index page on Taiwan News aggregating the outlet's ongoing coverage of AI adoption in the ROC, rather than a single article. Articles collected under the tag cover government-led adoption programs, such as the Ministry of Economic Affairs' NT$2.5 billion support plan for the commercial service sector and initiatives helping small and medium enterprises adopt AI and 5G tools, alongside corporate case studies like a breakfast chain's use of AI for centralized data platforms and ordering systems. Recurring themes include the ROC's relatively strong AI adoption rankings in international surveys (such as Microsoft's diffusion index) alongside a persistent gap between individual employees' use of AI tools and formal corporate AI strategy.	unmapped
83	https://focustaiwan.tw/sci-tech/202501090012	2024-09-08	NTUH unveils newly developed AI-powered telecare system	Private sector	National Taiwan University Hospital (NTUH) has unveiled a new AI-powered telecare system designed to improve remote patient monitoring. The system uses AI to analyze data collected from patients at home, such as vital signs, and can	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
					alert medical staff to any potential health issues. This allows for proactive intervention and can help to reduce hospital readmissions. The development of this intelligent telecare platform is a significant step in leveraging technology to provide continuous and preventative care, especially for elderly patients and those with chronic conditions, enhancing the quality and efficiency of healthcare services.	
84	https://ai.taiwan.gov.tw/news/government%20to%20use-ai-to-enhance%20national-food-safety-network/	2025-07-15	Government to use AI to enhance national food safety network	Government	The ROC government is planning to use AI to strengthen its national food safety network. The initiative involves creating a data platform that integrates information from various sources, including food production, distribution, and inspection. AI algorithms will be used to analyze this data to identify potential food safety risks, trace sources of contamination more quickly, and predict potential outbreaks. By adopting a more data-driven and predictive approach, the government aims to move from reactive to proactive food safety management, better protecting public health and increasing consumer confidence in the food supply.	3x3
85	https://www.researchgate.net/publication/326276245_Long-term_care_and_technological_innovation_the_application_and_policy_development_of_care_robots_in_Taiwan	2021-01-01	Long-term care and technological innovation: the application and policy development of care robots in Taiwan	Academic Paper	This research paper examines the application and policy development of care robots in the ROC's long-term care sector. As the ROC faces a rapidly aging population, it is turning to technological innovations, including AI-powered robots, to address labor shortages and improve the quality of care. These robots can assist with tasks such as mobility support, health monitoring, and providing companionship for the elderly. The paper discusses the challenges and opportunities of integrating these technologies, highlighting the need for government policy to support R&D and ensure that these tools are safe, effective, and accessible.	2x3

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
86	https://www.prnewswire.com/news-releases/ai-with-purpose-global-summit-taipei-2025-debuts-in-taiwan-302467064.html	2024-02-14	"AI with Purpose Global Summit Taipei 2025" Debuts in Taiwan	Private sector	The ROC is hosting the inaugural "AI with Purpose Global Summit," an event that aims to bring together global leaders to discuss the development of human-centric and trustworthy AI. The summit will focus on key themes such as AI governance, ethical AI, and the application of AI for social good. By hosting this event, the ROC is positioning itself not just as a hub for AI technology and hardware, but also as a key player in the global conversation about how to steer AI development in a responsible and beneficial direction for all of humanity.	1x0
87	https://www.ainvest.com/news/taiwanese-companies-harness-media-ai-attract-global-capital-2506/	N/A	Taiwanese Companies Harness Media and AI to Attract Global Capital	Private sector	This article covers how ROC companies are combining media innovation and AI adoption to attract global capital. It highlights broadcaster TVBS, which became one of the first media organizations in Asia to reach OpenAI's 10-billion-token usage milestone, using AI as a core engine across its editorial and production workflows and as what the company describes as "a true co-pilot for every employee." The article situates this alongside the ROC's broader AI investment story, in which the Taiwan Stock Exchange has highlighted how the island's deep AI and semiconductor supply chain, with roughly 81% of market capitalization concentrated in technology-related sectors, continues to attract record levels of foreign capital and IPO activity.	unmapped
88	https://www.automation.com/en-us/articles/january-2024/2023-was-the-year-of-ai-mass-adoption-in-taiwan-ma	2023-12-14	2023 Was the Year of AI Mass-Adoption in Taiwan Manufacturing	Private sector	The year 2023 marked a turning point for AI mass-adoption in the ROC's manufacturing sector. Driven by the need to improve efficiency and maintain a competitive edge, many companies moved from pilot projects to full-scale implementation. Key applications include using AI for predictive maintenance to reduce machine downtime, deploying computer vision for automated quality control, and optimizing production schedules with AI-driven analytics. This widespread adoption signifies that AI is no longer a niche technology but a core component of modern manufacturing in the ROC, essential for productivity and innovation.	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
89	https://www.dataguidance.com/opinion/taiwan-administrative-guidelines-and-policies-ai	2024-09-04	Taiwan: Administrative guidelines and policies for AI	Private sector	This article provides an overview of the ROC's administrative guidelines and policies for AI. The government is taking a proactive approach to governance, led by the National Science and Technology Council (NSTC). Instead of a single, rigid law, the ROC is developing a "Basic AI Act" to provide a foundational framework, supplemented by industry-specific guidelines. This approach aims to be flexible and adaptive to the rapid pace of technological change. The core principles focus on ensuring AI is developed and used in a way that is trustworthy, human-centric, and protective of individual rights.	1x0
90	https://investtaiwan.nat.gov.tw/intelNewsPage202501240001eng?lang=eng&search=202501240001	2025-01-24	Taiwan's AI Development Trends and Future Prospects	Government	As digitalization sweeps across the globe, artificial intelligence (AI) has emerged as a key force in reshaping society and industries. The rapid advancement of AI is redefining human life and business models, with applications extending to autonomous driving, precision medicine, smart manufacturing, and fintech. The ROC, as a critical hub for the global technology industry, boasts a robust semiconductor supply chain, a highly flexible and agile manufacturing sector, and a growing pool of AI talent, creating a unique environment for the implementation of AI technologies. However, intensifying global competition and rapid technological advancements compel ROC enterprises and the government to seek breakthroughs in innovation and practical applications, turning AI's potential into new momentum for industrial upgrades and economic growth.	1x4
91	https://engagement.z.com/resource/article/ai-adoption-taiwan-202308	2023-09-05	Industry Trends: Decoding AI Adoption in Taiwan	Private sector	As an emerging technology, AI has the potential to greatly impact our lives. This survey, conducted by the Z.com Engagement Lab, reveals the perceptions, concerns, and hopes of ROC internet users regarding AI, offering valuable insights for decision-makers across various sectors in the post-COVID era.	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
92	https://edurank.org/cs/ai/tw/#google_vignette	2025-03-02	Artificial Intelligence (AI) in Taiwan: Best universities Ranked	Private sector	This ranking lists the best universities in the ROC for Artificial Intelligence based on their research output and citations. The top-ranked institutions include National Taiwan University, National Tsing Hua University, and National Yang Ming Chiao Tung University. The list highlights the strong academic foundation for AI research in the ROC, with these universities producing a significant volume of influential papers. This academic strength is crucial for cultivating the high-level talent needed to drive innovation and support the growth of the ROC's AI industry, positioning the country as a key player in global AI research.	unmapped
93	https://en.ntnu.edu.tw/p-AI.php	N/A	NTNU-Graduate Institute of AI Interdisciplinary Applied Technology	University	National Taiwan Normal University (NTNU) has established a Graduate Institute of AI Interdisciplinary Applied Technology. This institute focuses on applying AI to various fields beyond core technology, such as education, arts, and humanities. The program is designed to cultivate talent who can bridge the gap between AI technology and its practical application in diverse domains. By fostering interdisciplinary research and education, NTNU is helping to broaden the impact of AI, ensuring that its benefits can be realized across different sectors of society and a wide range of industries.	1x0
94	https://en.rti.org.tw/news/view/id/2011827	2024-09-27	Health Ministry establishes specialized centers for AI medical applications	Private sector	The ROC's Ministry of Health and Welfare has established three specialized national centers to promote the application of AI in medicine. These centers will focus on creating a supportive ecosystem for medical AI by addressing key challenges. Their roles include developing ethical guidelines, validating the safety and effectiveness of AI medical devices, and researching the real-world impact of these technologies. This strategic initiative aims to accelerate the translation of AI research into clinical practice, ensuring that patients can benefit from safe and reliable AI-powered healthcare innovations.	2x3

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
95	https://govinsider.asia/intl-en/article/taiwans-digital-ministry-uses-ai-to-combat-online-fraud-and-deep-fakes	2023-06-27	Taiwan's digital ministry uses AI to combat online fraud and deep fakes	Private sector	The ROC's Ministry of Digital Affairs (MODA) is using AI to combat online fraud and disinformation. The ministry has developed AI-powered tools to identify and analyze fraudulent messages and deepfake content. This proactive approach allows authorities to detect scams more quickly and warn the public. By leveraging AI to analyze patterns and flag suspicious content, MODA is enhancing its ability to protect citizens from the growing threat of online crime. This is a key example of how the government is using advanced technology to improve cybersecurity and public safety in the digital age.	2x1, 1x1
96	https://ai.mcut.edu.tw/?Lang=en	N/A	Center for Artificial Intelligence & Data Science, Ming Chi University of Technology	University	The Center for Artificial Intelligence & Data Science at Ming Chi University of Technology is dedicated to research and education in AI. The center focuses on practical applications of AI, collaborating with industry to solve real-world problems. Its research areas likely include smart manufacturing, data analytics, and machine learning. By offering specialized training and engaging in applied research, the center aims to cultivate engineering talent with strong AI skills, supporting the technological upgrading of the ROC's industries and contributing to the national goal of becoming a leader in AI technology.	1x0
97	https://tigpaiot.iis.sinica.edu.tw/#/	N/A	TIGP AIoT Program	University	The Taiwan International Graduate Program (TIGP) on AIoT (Artificial Intelligence of Things) is a Ph.D. program offered by Academia Sinica. This elite program is designed to cultivate top-tier researchers who can lead innovation at the intersection of AI and the Internet of Things. The curriculum covers advanced topics in machine learning, sensor technology, and network systems. By bringing together leading researchers and providing a world-class research environment, the TIGP AIoT program is crucial for developing the high-level expertise needed to drive future breakthroughs in smart, connected technologies.	1x3

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
98	https://www.taipeitimes.com/News/taiwan/archives/2024/10/08/2003824957	2024-09-28	Ministry launches new AI centers to aid e-health	Private sector	The Ministry of Health and Welfare has launched three new national AI centers to advance the development of "e-health" in the ROC. These centers will serve as a hub for medical AI research and application, aiming to bridge the gap between technological development and clinical use. They will focus on creating robust frameworks for validating AI medical devices, ensuring data privacy, and researching the real-world impact of these technologies. This initiative is a significant government effort to build a comprehensive and trustworthy ecosystem for smart healthcare in the country.	2x3
99	https://www.lib.nthu.edu.tw/en/research/ai_tools.html	N/A	Library AI Research Copilots	University	Scopus AI is a generative AI-powered tool that integrates Copilot's semantic and keyword matching to search the massive multidisciplinary data in the Scopus database.	unmapped
100	https://www.twaicoe.org/taiwan-ai-institues#	N/A	Taiwan AI Institues	Non-profit Organization	The Taiwan AI Center of Excellence (Taiwan AICoE) serves as a hub for promoting AI development and international cooperation in the ROC. It horizontally integrates cross-ministerial resources and vertically connects industry, academia, and research sectors to build the ROC into a world-class AI research and development cluster.	2x3
101	https://www.ageing.ox.ac.uk/	2025-05-14	Population Ageing in Taiwan and the role of AI to address the ...	University	Over the past five years, the ROC has drawn global attention for its contributions to high-tech industries and its ability to navigate global supply chain disruptions. Yet, beyond its economic and technology profile, the ROC faces a growing domestic challenge: a rapidly ageing population that is reshaping the country's labor market, healthcare system, and long-term policy planning. This article explores the ROC's demographic transition and the government's initiatives to address it—particularly through the adoption of artificial intelligence (AI) and automation. It also underscores the importance of interdisciplinary collaboration, including the social sciences, to create more inclusive and effective responses to population ageing.	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
102	https://jfda-online.com/journal/v31/n1/3.html	2023-03-01	Application and effectiveness of artificial intelligence for the border control of imported food in Taiwan	Academic Paper	This study examines the application of AI for border control of imported food in the ROC. The Taiwan Food and Drug Administration (TFDA) implemented an AI-powered system to improve the efficiency and accuracy of inspections. The AI model analyzes data from past inspections and other sources to predict which incoming shipments have a higher risk of containing violations. This risk-based approach allows inspectors to focus their resources on high-risk products, leading to a more effective and targeted border control system that better protects public health.	3x3, 1x0, 2x3
103	https://www.carrefour.com/en/news/2023/carrefour-integrates-openai-technologies-and-launches-generative-ai-powered-shopping	2024-01-16	Carrefour integrates OpenAI technologies and launches a generative AI-powered shopping experience	Private sector	Carrefour Group is integrating OpenAI's generative AI technologies, including ChatGPT, into its e-commerce platforms. The company has launched a conversational AI shopping assistant, named "Hopla," that can help customers with their online shopping by providing product recommendations and suggestions based on their budget and needs. This initiative aims to make the online shopping experience more intuitive and personalized. By leveraging generative AI, Carrefour is transforming how customers interact with its brand, making the process of finding and buying products easier and more engaging.	unmapped
104	https://ailabs.tw/zh/tw_press/%E6%85%88%E6%BF%9F%E5%A4%A7%E5%AD%B8%E6%94%9C%E6%89%8B%E6%85%A7%E6%B2%BB%E6%95%99%E8%82%B2%E5%8D%94%E6%9C%83%EF%BC%8C%E5%B0%8E%E5%85%A5%E5%8F%B0%E7%81%A3%E4%BA%BA%E5%B7%A5%E6%99%BA%E6%85%A7%E5%AF%A6/	2025-06-18	Tzu Chi University partners with Huizhi Education Association, introduces Taiwan AI Labs' FedGPT AgentTeam to create a 24-hour all-knowing teaching assistant	University	Tzu Chi University has partnered with the Huizhi Education Association and Taiwan AI Labs to implement an AI teaching assistant called "FedGPT AgentTeam." This 24-hour "all-knowing" assistant is designed to support students with their learning needs. By leveraging Taiwan AI Labs' federated learning technology, the system can provide personalized educational support while ensuring data privacy. This initiative represents a significant step in applying advanced AI to create more interactive, accessible, and effective learning environments in the ROC's higher education system.	1x0

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
105	https://www.daai.tv/news/585810	2025-07-01	AI Assistant Online, Master Tzu Chi's History with One Click	Non-profit Organization	The Tzu Chi Foundation has launched an AI assistant to make its vast historical archives easily accessible. This AI tool, likely a specialized GPT model, allows users to master the organization's history "with one click." It can process and search decades of documents, audio, and video content to provide quick and relevant answers to user queries. This application of AI is designed to preserve and propagate the foundation's humanistic culture and teachings, using modern technology to engage with a new generation and make its profound history more widely available.	unmapped
106	https://www.ailabs.tw/zh/home/	N/A	Taiwan AI Labs - Wikipedia	Non-profit Organization	Taiwan AI Labs is a leading non-profit research organization in the ROC dedicated to advancing AI technology. Founded by Ethan Tu, it focuses on developing cutting-edge AI solutions with a particular emphasis on healthcare and human-centric applications. The Labs works on projects involving medical imaging analysis, precision medicine, and natural language processing for the Taiwanese language. By fostering a collaborative research environment and partnering with academic and medical institutions, Taiwan AI Labs plays a crucial role in driving innovation and tackling significant societal challenges through artificial intelligence.	2x3
107	https://daais.sinica.edu.tw/pages/4334	N/A	AI Cooperative - Academia Sinica	University	Academia Sinica, the ROC's top research institution, has established an "AI Cooperative" to foster collaboration and advance AI research. This initiative brings together researchers from various disciplines within the institution to work on complex, interdisciplinary AI projects. The cooperative aims to pool resources, share expertise, and tackle grand challenges that require a multi-faceted approach. By creating this internal collaborative platform, Academia Sinica is accelerating the pace of AI innovation and strengthening its position as a leading force in both fundamental and applied AI research in the ROC.	unmapped

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
108	https://www.tw-tw.com.tw/breaking-news/2024/carrefour-2/	N/A	How to choose the right Mid-Autumn Festival wine gift box? Carrefour's exclusive "AI Sommelier Service" is officially launched	Private sector	This article reports on Carrefour Taiwan's launch of an AI Sommelier Service ahead of the Mid-Autumn Festival, aimed at helping shoppers choose wine to pair with mooncake and festival gift boxes. The retailer integrated a language model into its in-store customer service robots, enabling the system to analyze customer queries and preferences and generate quick, personalized wine recommendations. The initiative is presented as a way to streamline the in-store wine selection process and enhance customer service during a peak seasonal shopping period.	4x4
109	https://tw.news.yahoo.com/google%E5%8A%A9%E6%94%BB-%E5%AE%B6%E6%A8%82%E7%A6%8F%E6%8E%A8-ai%E4%BE%8D%E9%85%92%E5%B8%AB-%E9%82%84%E8%A6%8F%E5%8A%83-%E5%BD%B1%E5%83%8F%E7%A3%85%E7%A7%A4-081351374.html	2024-04-11	With Google's help! Let's see how Taiwan's Carrefour introduces generative AI	Private sector	Carrefour Taiwan is leveraging Google Cloud's generative AI to enhance its business operations. The company is using these advanced AI tools to analyze customer feedback, summarize market trends, and even assist in generating marketing copy. By migrating its data to Google's platform, Carrefour can now apply powerful AI models to gain deeper insights from its vast datasets. This collaboration allows the retailer to make more data-driven decisions, improve operational efficiency, and develop more personalized and effective customer engagement strategies, showcasing a practical application of generative AI in the retail sector.	unmapped
110	https://www.taiwanagriweek.com/media-detail/543/	2025-04-17	Application and Trend Analysis of Artificial Intelligence in Taiwan's Agriculture, Fishery, and Livestock Industries	Private sector	This report provides an in-depth examination of the current applications and future trends of artificial intelligence (AI) in the ROC's agriculture, fisheries, and livestock sectors. The analysis shows that AI is permeating every stage of agricultural production at an unprecedented pace. From precision farming that boosts crop yields and quality to intelligent systems that optimize aquaculture and livestock management, AI is demonstrating immense potential.	1x4

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
111	https://pmc.ncbi.nlm.nih.gov/articles/PMC12786189/	2026-03-04	PMC: Taiwan Smart Healthcare Value Chain	Academic Paper	NSTC Smart Healthcare Phase I (2020-23): 23 cross-hospital projects, 8 TFDA-approved AI devices. Phase II (2024-27): patient-centric AI lung cancer diagnosis.	1x0, 2x3
112	https://www.tandfonline.com/doi/full/10.1080/23288604.2024.2375433	2026-03-04	Digital Health Under Taiwan NHI	Academic Paper	NHI covers 23M+ individuals. AI: predictive analytics for acute kidney injury, TFDA-approved imaging for DR and lung cancer.	2x3, 1x3
113	https://pmc.ncbi.nlm.nih.gov/articles/PMC8622038/	2026-03-04	Taiwan Earthquake Warning Systems (P-Alert)	Academic Paper	P-Alert network: 761 low-cost MEMS sensors, 5-10km spacing. Operational since 2010 by NTU.	1x3
114	https://dkiapcss.edu/nexus_articles/competing-in-the-cognitive-domain-lessons-from-taiwans-anti-fraud-initiative/	2026-03-04	APCSS: Taiwan Anti-Fraud Initiative Results	Academic Paper	Suspicious accounts: 150,000 to <1,000 by mid-2025. Losses fell 50% (~US$700M/month reduction).	2x1
115	https://www.lexology.com/library/detail.aspx?g=479514a8-e3e2-4ca9-aba9-e0d08529ef2a	2026-03-04	Lexology: Judicial Yuan AI Judgment System	Private sector	TMT5 model, 25 years of judgments. Pilot Nov 2023, Shilin and Tainan courts. DUI cases only.	2x1
116	https://www.taipeitimes.com/News/front/archives/2023/08/27/2003805341	2026-03-04	Taipei Times: Courts to trial AI rulings	Private sector	Judicial Yuan AI for criminal judgment drafting. 2 courts, DUI only.	2x1
117	https://web.ncku.edu.tw/p/404-1000-190642.php?Lang=en	2026-03-04	NCKU: Taiwan CAR Lab	University	Taiwan CAR Lab in Shalun, Tainan. 1.75 hectare. NCKU AV passed dynamic test.	4x3
118	https://topics.amcham.com.tw/2025/10/traffic-flow-predictions-and-perfection/	2026-03-04	AmCham: Traffic Flow Predictions Taiwan	Private sector	Taoyuan first city with AI traffic signals for scooter-dense roads.	3x3
119	https://blog.google/around-the-globe/google-asia/type-2-diabetes-ai-taiwan/	2026-03-04	Google: AI for Type 2 Diabetes in Taiwan	Private sector	NHIA + Google: AI-on-DM for 2M+ type 2 diabetes patients. MedLM on Vertex AI.	1x3
120	https://www.peoplepowered.org/news-content/digital-participation-case-study-taiwan	2026-03-04	People Powered: vTaiwan hybrid digital deliberation with AI	Non-profit Organization	vTaiwan: open consultation process by g0v civic hackers. 4 stages (Proposal/Opinion/Deliberation/Realization). Over 20 legislative reviews. 80%+ led to decisive govt action. Uses Polis for consensus mapping. Now integrating generative AI (ChatGPT, Claude) for deliberation.	1x0, 2x2, 3x0
121	https://www.freiheit.org/taiwan/how-public-participation-can-improve-ai-governance-vtaiwans-initiatives	2026-03-04	FNF: vTaiwan AI Governance Public Participation	Non-profit Organization	vTaiwan used for AI governance deliberation. Public participation mechanism for AI policy formation. Civic tech approach to AI regulation.	1x0, 3x0
122	https://europeandemocracyhub.epd.eu/exploring-worldwide-democratic-innovations-taiwan/	2026-03-04	European Democracy Hub: Digital Democracy in Taiwan	Non-profit Organization	The ROC as global model for digital democracy. g0v civic hacking since 2012 (largest in East Asia). Sunflower movement→civic hackers joined government. Public Digital Innovation and Service (PDIS).	1x0, 2x2

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No	URL	Access Date	Title	Site Type	Case Details	Mapping Cell
123	https://join.gov.tw/aboutus/index/en_US	2026-03-04	Join.gov.tw: Public Policy Online Participation Platform	Government	NDC platform since 2015. 13,853 proposals by June 2022. 289 met 5,000-supporter threshold. Government agencies must provide reasoned response. Broader user base than vTaiwan.	1x0, 2x2, 3x0
124	https://www.bertelsmann-stiftung.de/en/our-projects/democracy-and-participation-in-europe/shortcut-archive/shortcut-8-trailblazers-of-digital-participation-taiwans-join-platform-and-vtaiwan	2026-03-04	Bertelsmann: Trailblazers of Digital Participation - Join & vTaiwan	Non-profit Organization	Join platform and vTaiwan as twin pillars of the ROC's digital participation. Join: broader policy issues. vTaiwan: digital economy focus. Both demonstrate govt-citizen co-creation model.	1x0, 2x2
125	https://www.hbs.edu/bigs/taiwans-digital-revolution-audrey-tang	2026-03-04	HBS: Taiwan Digital Revolution - Audrey Tang	University	Audrey Tang (Digital Minister 2022-2024). PDIS: radical transparency, all meetings recorded/transcribed/published. Participatory design for policymaking. Decentralize central government.	1x0, 1x1
126	https://english.ey.gov.tw/Page/61BF20C3E89B856/2e344a87-309d-4ad6-ac67-7eb80adfc07c	2026-03-04	Executive Yuan: Taiwan tops Open Data Index	Government	The ROC ranked #1 in Global Open Data Index (OKFN) 2015-2016. Rose from #36 (2013)→#11 (2014)→#1 (2015). data.gov.tw platform. 27,000+ publicly accessible datasets.	1x0, 1x1
127	https://en.wikipedia.org/wiki/G0v	2026-03-04	Wikipedia: g0v movement	Non-profit Organization	g0v: the ROC's civic tech community founded 2012. Largest in East Asia. Over 30 cases deliberated via vTaiwan. Led to 12+ laws/regulations (revenge porn, fintech, Uber regulation).	1x0, 2x2
128	https://opengovreport.ocf.tw/en/	2026-03-04	Taiwan Open Government Report (OCF)	Non-profit Organization	Open Culture Foundation tracks the ROC's open government progress. Participation Officers deployed across government agencies. Ongoing monitoring of open data commitments.	1x0
129	https://data.gov.tw/en/datasets/58297	2026-03-04	data.gov.tw: Pol.is Executive Yuan version	Government	Polis (consensus-mapping AI tool) deployed on official government open data platform. Executive Yuan version for policy deliberation.	2x2, 3x0

INDIA

Proposed Score

Technology \ Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.75	0.50	0.75	0.75	0.75
2. Perceptual/NLP	0.25	0.25	0.50	0.50	0.00
3. Analysis/Decision Support	0.25	0.00	0.00	0.75	0.25
4. Agent	0.00	0.25	0.00	0.25	0.25
5. Sustainability/Unmapped	0.00	0.00	0.00	0.25	0.25

Rationale by Cell

Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ ICT	0. Policy & Governance	29	AI push in Telangana governance: Departments to nominate officials for training; 'AI champions' and 'AI catalysts' to lead tech rollout; Governing the Government's Use of AI in India; Governing The Government's Use Of Artificial Intelligence In India; Why Karnataka, India wants to help create AI governance; NITI Aayog Report: India's Data Imperative Calls for a Shift to Quality in Digital Governance (and 24 other sources)	0.75	India Stack DPI; India AI Mission (₹10,372 Cr); NITI Aayog AI Strategy; Foundation
1x1	1. Foundation, Infra AI/ ICT	1. Internal Management	16	India as the 'AI Use Case Capital of the World'—Socio-Economic Development as AI Hype; State Bank of India's new financing unit targets AI, e-commerce, fintech; SBI's AI blueprint: A tech-forward vision for India's evolving digital economy; Fluentgrid to implement Advanced Data Analytics for NTPC; "Indian Oil had realised the importance of transitioning from digitisation to digitalisation and we wanted to converge the gap" (and 11 other sources)	0.5	GeM AI Procurement (₹5L Cr); Internal Management AI

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x2	1. Foundation, Infra AI/ ICT	2. Citizen & Citizen services	29	AI push in Telangana governance: Departments to nominate officials for training; 'AI champions' and 'AI catalysts' to lead tech rollout; India as the 'AI Use Case Capital of the World'—Socio-Economic Development as AI Hype; Governing The Government's Use Of Artificial Intelligence In India; NITI Aayog Report: India's Data Imperative Calls for a Shift to Quality in Digital Governance; India AI Report 2023 (and 24 other sources)	0.75	UMANG 5.58Cr users; DigiLocker AI eKYC; MyGov 47M+; Aadhaar 1.4B; Large-scale Service Foundation
1x3	1. Foundation, Infra AI/ ICT	3. Administrative Domain	45	Decentralizing Intelligence: How Indian States Are Pioneering AI Innovation; India as the 'AI Use Case Capital of the World'—Socio-Economic Development as AI Hype; India AI Report 2023; India's National Strategy for Artificial Intelligence; GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY (and 40 other sources)	0.75	Smart City Mission 100 Cities; CoWIN 350M doses; Ayushman 67Cr IDs; Multiple Administrative Domain; Large-scale
1x4	1. Foundation, Infra AI/ ICT	4. Industry & Others	41	India as the 'AI Use Case Capital of the World'—Socio-Economic Development as AI Hype; Governing the Government's Use of AI in India; Governing The Government's Use Of Artificial Intelligence In India; India AI Report 2023; GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY (and 36 other sources)	0.75	UPI 50% World Payment System; AI
2x0	2. Perceptual/NLP	0. Policy & Governance	1	BHASHINI: National Language AI Platform (22 Languages, 100M+ Monthly Calls)	0.25	BHASHINI 22 Language; Foundation NLP

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
2x1	2. Perceptual/NLP	1. Internal Management	4	India as the 'AI Use Case Capital of the World'—Socio-Economic Development as AI Hype; Telangana to launch India's first state-led digital public infrastructure for AI on July 2; Company - Eyenuk, Inc. ~ Artificial Intelligence Eye Screening; GeM: AI Procurement Platform (₹5+ Lakh Crore, GeMAI Chatbot)	0.25	GeM AI Gen AI; Bhashini; Internal Management NLP
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	3	UMANG: 1,745+ Services, Bhashini NLP Integration (80+ Depts); BHASHINI: National Language AI Platform (22 Languages, 100M+ Monthly Calls); MyGov: AI Chatbot Citizen Engagement (47M+ Users)	0.5	BHASHINI 100M+ Monthly Inference/Reasoning; UMANG Language; MyGov AI; For NLP, in progress
2x3	2. Perceptual/NLP	3. Administrative Domain	8	Visilant - MIT Solve; The Role of AI in Early Detection of Eye Diseases in India; Unleashing AI: How Flipkart is Transforming E-Commerce with AI; Company - Eyenuk, Inc. ~ Artificial Intelligence Eye Screening; Artificial intelligence for advancing eye care in resource-poor settings: Assessing the predictive accuracy of an AI-model for diabetic retinopathy screening in India (and 3 other sources)	0.5	Ayushman AI-CDSS 12M AI-Support Diagnosis; Bharat-VISTAAR 11 Language; Administrative NLP, in progress
2x4	2. Perceptual/NLP	4. Industry & Others	0	–	0	Not Applicable / Not Appropriate
3x0	3. Analysis/Decision Support	0. Policy & Governance	1	NITI Aayog Report: India's Data Imperative Calls for a Shift to Quality in Digital Governance	0.25	–
3x1	3. Analysis/Decision Support	1. Internal Management	0	–	0	Not Applicable / Not Appropriate
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	0	–	0	Not Applicable / Not Appropriate
3x3	3. Analysis/Decision Support	3. Administrative Domain	29	Governing the Government's Use of AI in India; Advanced Computing Center - NTPC Limited; SBI Embraces AI and ML Technologies to	0.75	Police (Delhi CMAPS/UP Trinetra); Epidemic; Smart City; multiple cases

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
				Transform Banking Operations; Ai Driven Predictive Maintenance For Ongc Mumbai High; How AI-powered NTPC is prioritising people and upskilling for the future (and 24 other sources)		
3x4	3. Analysis/Decision Support	4. Industry & Others	3	Embracing Technological Advancements, to consolidate our Digital Banking Leadership; RBI study explores how Indian banks leverage AI; UPI AI Fraud Risk Monitoring (NPCI)	0.25	UPI Fraud Detection, in progress
4x0	4. Agent	0. Policy & Governance	0	–	0	Not Applicable / Not Appropriate
4x1	4. Agent	1. Internal Management	1	GeM: AI Procurement Platform (₹5+ Lakh Crore, GeMAI Chatbot)	0.25	GeM AI Procurement; Full-scale
4x2	4. Agent	2. Citizen & Citizen services	0	–	0	Not Applicable / Not Appropriate
4x3	4. Agent	3. Administrative Domain	1	Use of Artificial Intelligence in Mining: An Indian Overview	0.25	Limited Cases Only
4x4	4. Agent	4. Industry & Others	3	Use of Artificial Intelligence in Mining: An Indian Overview; Company - Eyenuk, Inc. ~ Artificial Intelligence Eye Screening; AI Revolution in India's Automotive Sector	0.25	/
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	–	0	Not Applicable / Not Appropriate
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	–	0	Not Applicable / Not Appropriate
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	–	0	Not Applicable / Not Appropriate
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	4	CIL joins hands with IIT, Hyderabad for R&D in clean coal tech; GAIL GTI Celebrates 29th Foundation Day with Conclave on AI and Decarbonisation; Smart City Karnataka: Mission, Objective, Projects & Current Status; Building AI Driven Sustainable Automation for Steel Industry	0.25	Smart City IoT; Sustainability

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
5x4	5. Sustainability/ Unmapped	4. Industry & Others	3	CIL joins hands with IIT, Hyderabad for R&D in clean coal tech; Building AI Driven Sustainable Automation for Steel Industry; India AI Mission: ₹10,372 Crore, 38,000 GPUs, 30+ Applications	0.25	India AI Mission GPU Investment; Future Foundation

All Sources List

No	URL	Day	Title	Type	Case Details	Mapping Cell
1	https://timesofindia.indiatimes.com/city/hyderabad/ai-push-in-telangana-governance-state-departments-to-nominate-officials-for-specialised-training-ai-champions-and-ai-catalysts-to-lead-integration/articleshow/122239127.cms	2025-07-04	AI push in Telangana governance: Departments to nominate officials for training; 'AI champions' and 'AI catalysts' to lead tech rollout	Private Enterprise	The state of Telangana is integrating AI into its governance. Government departments will nominate officials for specialized training to become 'AI champions' and 'AI catalysts'. These individuals will lead the implementation of AI technologies within their respective departments. This initiative is part of a broader push to leverage AI for improved public services and administrative efficiency in the state, aiming to keep pace with the AI-driven economy.	1x0, 1x2
2	https://www.digitalindia.gov.in/initiative/national-program-on-artificial-intelligence/	N/A	National Program on Artificial Intelligence	Government	The Government of India's MeitY (Ministry of Electronics and Information Technology) has launched the National Program on Artificial Intelligence as part of the Digital India initiative. The program aims to lead the transformation in India for ease of living and a digital economy. It focuses on leveraging AI to solve societal problems and drive economic growth.	unmapped
3	https://invest.up.gov.in/meity-drives-indias-digital-growth-with-focus-on-ai-cybersecurity-in-2024/	N/A	MeitY drives India's digital growth with focus on AI, cybersecurity in 2024	Government	This year-end review covers the Ministry of Electronics and Information Technology's (MeitY) 2024 initiatives to advance India's digital growth, with a focus on AI, semiconductors, and cybersecurity. Under the IndiaAI Mission, MeitY launched the INDIAai portal as a comprehensive resource hub for AI research, startups, and funding, and	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					stood up the AIRAWAT platform for AI research and supercomputing infrastructure, helping secure India the 75th position in global supercomputing rankings. On cybersecurity, the Cyber Surakshit Bharat initiative trained more than 250 Chief Information Security Officers and IT officials through CISO Deep-Dive programs, while updated CCTV security standards took effect in October 2024. Looking ahead, the ministry outlined plans to expand AI capabilities in healthcare, education, and agriculture with a focus on generative AI, alongside continued growth of digital public infrastructure platforms such as Aadhaar, UPI, and DigiLocker.	
4	https://community.nasscom.in/communities/emerging-tech/decentralizing-intelligence-how-indian-states-are-pioneering-ai	2025-06-27	Decentralizing Intelligence: How Indian States Are Pioneering AI Innovation	Non-profit Organization	Various Indian states are pioneering AI innovation. Andhra Pradesh and Gujarat are creating AI Centers of Excellence (CoEs) for sustainable cities, healthcare, and agriculture, with support from the central government. Punjab, Haryana, and Delhi are using AI for public safety through integrated command centers. Karnataka, West Bengal, and Assam are integrating AI into their education systems to enhance learning and prepare the future workforce, with Karnataka launching a generative AI-powered digital assistant called Shiksha Co-pilot to help teachers plan and deliver lessons. These state-level efforts operate alongside the central IndiaAI Mission and its seven pillars of democratizing computing access, improving data quality, building indigenous AI capability, attracting talent, enabling industry collaboration, providing startup risk capital, and promoting ethical, socially impactful AI.	1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
5	https://www.niti.gov.in/sites/default/files/2022-11/Ai_for_All_2022_02112022_0.pdf	N/A	NeGD - Digital India Corporation	Government	The National e-Governance Division (NeGD) was created in 2009 by the Ministry of Electronics and Information Technology (MeitY) as an independent business division under the Digital India Corporation. Since then, NeGD has played a pivotal role in supporting MeitY's program management and implementation of e-Governance projects, providing technical and advisory support to ministries and departments at both the central and state levels. It has developed and manages several national public digital platforms, including DigiLocker, UMANG, API Setu, and the National Academic Depository, and its mandate now extends to supporting AI-enabled citizen services, including gap analysis between existing systems and desired AI-powered solutions and coordination between technical, data science, and policy teams to implement citizen-centric digital and AI services.	unmapped
6	https://www.techpolicy.press/india-as-the-ai-use-case-capital-of-the-world-socioeconomic-development-as-ai-hype/	2024 ()	India as the 'AI Use Case Capital of the World'—Socio-Economic Development as AI Hype	Non-profit Organization	The article discusses the narrative of India becoming the "AI use case capital of the world," driven by figures like Prime Minister Narendra Modi and Nandan Nilekani. This vision portrays AI as a tool to solve socio-economic problems in sectors like agriculture, health, and education. However, the author argues this is partly "hype," as many Indian AI startups focus on enterprise clients rather than public services. The discourse serves to project a technocratic and developmentalist image for the ruling government domestically, and it is no accident that the exemplary AI use cases are personalized chatbots rather than the provision of basic public goods like healthcare. The author warns that from the perspective of AI sovereignty, becoming a "use case capital" will do little good if the underlying semiconductors, cloud resources, and models remain concentrated in the hands of US Big Tech.	1x2, 1x3, 1x1, 1x4, 2x1

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
7	https://www.esyacentre.org/perspectives/2024/4/30/governing-the-governments-use-of-ai-in-india/	2024-04-30	Governing the Government's Use of AI in India	Non-profit Organization	The article highlights the lack of a formal framework in India for governing the government's use of AI, which poses risks like discrimination and loss of public trust. It contrasts this with over 50 countries that have such frameworks. The author suggests replicating a government-led approach to AI regulation, similar to the US, which requires federal agencies to conduct impact assessments, test for biases, and appoint Chief AI Officers. This would be beneficial given the large population's reliance on government services, and the author points to the US Office of Management and Budget's memorandum, which requires agencies to evaluate AI models for differential impacts on demographic groups, notify individuals of adverse automated decisions, and offer a human alternative, as a template India could adapt to its own administrative context.	1x0, 1x4, 3x3
8	https://thesecretariat.in/article/governing-the-governments-use-of-artificial-intelligence-in-india	N/A	Governing The Government's Use Of Artificial Intelligence In India	Private Enterprise	The article discusses the benefits of using AI in governance for public service delivery, such as automation and data-driven decision-making. It points out that India, unlike the US, has not issued specific guidelines for the government's use of AI. The US has mandated a life-cycle approach to AI safety, requiring impact assessments, ongoing monitoring, and the appointment of Chief AI Officers in federal agencies. The author suggests that a similar government-led regulatory approach in India would help build public trust and manage the risks of AI-driven decision-making, particularly in high-stakes areas such as welfare eligibility and law enforcement, where flawed automated systems could disproportionately harm vulnerable citizens without adequate accountability or recourse mechanisms in place.	1x0, 1x2, 1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
9	https://egov.eletsonline.com/2025/06/india-targets-43-large-language-models-out-of-506-ai-proposals/	2025-06-30	India Targets 43 Large Language Models Out of 506 AI Proposals	Private Enterprise	Under the India AI Mission, the country is focusing on developing its own AI capabilities. Out of 506 AI model proposals, 43 are for creating large language models (LLMs) to promote indigenous generative AI that reflects India's linguistic and cultural diversity. This strategic move aims for data sovereignty and the creation of culturally contextual AI systems. The mission has already made progress in building the necessary computing infrastructure, with a significant number of GPUs already operational: of the roughly 34,333 GPUs planned under the mission, 17,374 were already online as of mid-2025, and each LLM proposal now typically requests more than 2,000 GPUs, up sharply from the 1,000-GPU figure debated just 18 months earlier. Startups such as Sarvam, Gnani, Gan, and Soket AI Labs are among those receiving investment capital and GPU access to build these sovereign models.	unmapped
10	https://www.weforum.org/stories/2024/06/how-regions-can-attract-innovative-industries-like-ai-and-also-help-them-to-grow/	2023-07-25	Why Karnataka, India wants to help create AI governance	Non-profit Organization	The Indian state of Karnataka, a major technology hub, is proactively working with the World Economic Forum's Centre for the Fourth Industrial Revolution (C4IR) to shape the future of AI governance. This collaboration aims to develop a policy framework for the responsible and ethical deployment of AI technologies. By piloting new approaches to AI governance, Karnataka intends to create a blueprint that can be scaled not just across India but globally. The focus is on ensuring that AI development remains inclusive, supporting industry-academia collaboration and responsible digital transformation, with the new Centre for AI positioned as the WEF's sole dedicated AI hub in India and intended to help Bengaluru and Karnataka become a global AI destination while also encouraging companies to establish innovation clusters beyond the state capital.	1x0

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
11	https://politicalsciencesolution.com/niti-aayog-report-indias-data-imperative-calls-for-a-shift-to-quality-in-digital-governance/	2024-02-01	NITI Aayog Report: India's Data Imperative Calls for a Shift to Quality in Digital Governance	Private Enterprise	NITI Aayog's report, "India's Data Imperative: The Pivot Towards Quality," emphasizes the need to shift from focusing on the quantity of data to the quality of data for effective digital governance. The report argues that high-quality, reliable, and timely data is crucial for evidence-based policymaking and improving public service delivery. It calls for the adoption of standardized data management practices and the use of emerging technologies like AI to enhance data quality. The goal is to build a robust data ecosystem underpinned by six core attributes: accuracy, completeness, timeliness, consistency, validity, and uniqueness, noting that poor-quality data currently inflates annual welfare expenditure by an estimated 4-7% and that removing 17.1 million ineligible names from the PM-Kisan beneficiary list alone saved approximately ₹90 billion.	1x0, 1x2, 3x0
12	https://www.niti.gov.in/sites/default/files/2021-02/Responsible-AI-22022021.pdf	2021-02-01	AIFORALL - Approach Document for India Part 1 – Principles for Responsible AI	Government	This document by NITI Aayog outlines the principles for responsible AI development and deployment in India under the "#AIForAll" initiative. It establishes a framework based on seven key principles: safety and reliability, equality, inclusivity and non-discrimination, privacy and security, transparency, accountability, and the protection and reinforcement of positive human values. The paper serves as a guiding document to ensure that as India leverages AI for socio-economic transformation, it does so in a manner that upholds constitutional values and fundamental rights. Developed in February 2021 with the World Economic Forum's Centre for the Fourth Industrial Revolution as knowledge partner, it builds on India's 2018 National Strategy for AI and notes that the absence of an overarching guidance framework for AI use remains a key gap that this approach document is meant to help address.	1x0

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
13	https://indiaai.s3.ap-south-1.amazonaws.com/docs/IndiaAI+Expert+Group+Report-First+Edition.pdf	2023	India AI Report 2023	Non-profit Organization	The "India AI Report 2023," a collaborative effort by NASSCOM, the INDIAai portal, and others, provides a comprehensive overview of the AI landscape in India. It highlights significant growth in AI adoption across various sectors, driven by the government's 'AI for All' strategy and a burgeoning startup ecosystem. The report details advancements in AI research, talent development, and the increasing number of AI-related patents filed in the country. It points to a maturing market with a strong foundation in place, noting that India has built one of the world's largest installed AI talent bases and that national-scale support pillars, including the IndiaAI mission, a supportive policy framework, and a growing AI and GenAI-ready technology services industry, are together propelling AI adoption across an increasing share of the economy.	1x0, 1x2, 1x3, 1x4
14	chrome-extension://efaidnbmnnnib-pcajpcglclefindmkaj/https://www.niti.gov.in/sites/default/files/2022-11/Ai_for_All_2022_02112022_0.pdf	2020-02-01	RESPONSIBLE AI #AIForAll	Government	This discussion paper from NITI Aayog introduces a framework for ensuring responsible AI deployment in India. It identifies potential challenges associated with AI, including bias, privacy concerns, and accountability. The paper proposes a set of guiding principles and a multi-stakeholder approach to address these issues. It emphasizes the need for fairness, transparency, and explainability in AI systems. The document aims to stimulate a national dialogue on creating an ethical and legal framework, noting the large-scale economic potential of AI adoption — estimated to boost India's annual growth rate by 1.3 percentage points by 2035 — while stating that most risks identified under its 'systems considerations' can be addressed within existing Indian laws and regulations rather than requiring an entirely new regulatory regime.	1x0

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
15	https://dig.watch/resource/indias-national-strategy-for-artificial-intelligence	2018-06-01	India's National Strategy for Artificial Intelligence	Non-profit Organization	In June 2018, NITI Aayog released India's National Strategy for Artificial Intelligence, branded '#AIforAll'. The strategy focuses on leveraging AI for economic growth and social inclusion. It identifies five key sectors for AI application: healthcare, agriculture, education, smart cities/infrastructure, and smart mobility/transportation. The strategy outlines a two-tiered approach: undertaking exploratory proof-of-concept AI projects and establishing a robust ecosystem for AI research and development through Centres of Research Excellence (COREs) focused on core research, and International Centres for Transformational AI (ICTAIs) focused on applied, commercialization-ready development, alongside efforts to build enabling data ecosystems and address barriers such as the shortage of AI research expertise and gaps in privacy and security regulation.	1x0, 1x3
16	https://sansad.in/getFile/annex/259/AS259.pdf?source=pqalchrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://sansad.in/getFile/annex/267/AU3253_Yg2Heg.pdf?source=pqars	2023-07-26	GOVERNMENT OF INDIA MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY	Government	This document from India's Ministry of Electronics and Information Technology (MeitY) addresses the government's approach to AI. MeitY, along with NASSCOM, has established task forces to explore AI applications in areas like e-commerce, healthcare, and education. The government's policy think tank, NITI Aayog, published a National Strategy for AI in 2018. The strategy aims to position India as a leader in AI by focusing on research, development, and the application of AI to solve societal problems at scale, while MeitY's own task forces work to translate this national vision into sector-specific application areas, with an emphasis on building domestic technical capacity and ensuring that AI adoption across ministries is guided by consistent standards for data governance and responsible use.	1x0, 1x3, 1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
17	chrome-extension://efaidnbmnnnib-pcajpcglclefindmkaj/https://www.niti.gov.in/sites/default/files/2023-03/National-Strategy-for-Artificial-Intelligence.pdf	2018-06-01	National Strategy for Artificial Intelligence	Government	NITI Aayog's discussion paper outlines India's national strategy for AI, aiming to leverage the technology for inclusive growth. The strategy, themed '#AIforAll,' focuses on applying AI in key social sectors like healthcare, agriculture, and education. It proposes a two-pronged approach: fostering fundamental and applied AI research, and scaling AI projects for societal impact. The paper calls for creating a national AI marketplace and establishing research excellence centers. The overarching goal is to position India as an "AI garage" for the developing world, using its scale and diversity to develop solutions that can then be replicated in other emerging economies, while recommending active international engagement to adopt global best practices and represent India's approach in multilateral AI governance forums.	1x0, 1x3
18	https://coingeek.com/state-bank-of-india-new-financing-unit-targets-ai-e-commerce-fintech/	2024-02-12	State Bank of India's new financing unit targets AI, e-commerce, fintech	Private Enterprise	The State Bank of India (SBI) has established a new financing subsidiary to cater specifically to the technology sector, including AI, e-commerce, and fintech startups. This move signals the bank's recognition of the high-growth potential in these emerging areas. By providing dedicated financial products and services, SBI aims to support the innovation and expansion of tech companies that are driving India's digital transformation. This initiative is part of SBI's broader strategy to adapt to the growth of new-age industries, with the new unit, named the 'Center of Excellence for Project Financing,' expected to be fully operational within a year, staffed by specialized professionals and an external consultant, and intended to also share insights on financing these sectors with other financial institutions.	1x0, 1x1, 1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
19	https://bwsecurityworld.com/technology/state-bank-of-india-to-upgrade-security-with-ai-driven-surveillance-system/	2023-10-25	State Bank Of India To Upgrade Security With AI-Driven Surveillance System	Private Enterprise	The State Bank of India (SBI) is enhancing its security infrastructure by implementing an AI-driven centralized surveillance system. This advanced system will use artificial intelligence and machine learning to monitor its branches across the country more effectively. The goal is to proactively detect and prevent security threats, such as fraud and unauthorized access. This move is part of SBI's commitment to leveraging cutting-edge technology to protect its assets, ensure the safety of its customers and employees, and modernize incident management, with the system set to deploy AI-enabled cameras, thermal imaging, and intelligent video analytics across all 22,685 branches, feeding into a single command center in Mumbai and designed to scale for a projected 20% increase in branches over the next five years.	1x3
20	https://ntpc.co.in/about-us/corporate-functions/netra/scientific-services/advanced-computing-center	N/A	Advanced Computing Center - NTPC Limited	Government	NTPC Limited, India's largest power utility, has established an Advanced Computing Center to drive innovation. This center focuses on leveraging technologies like AI and Machine Learning (ML) to optimize power plant operations, improve efficiency, and enhance predictive maintenance. By analyzing vast amounts of data from its power stations, NTPC aims to reduce downtime, lower operational costs, and ensure a more reliable power supply. This strategic initiative showcases the center's development of NePPS (NETRA e-Power Plant Solutions), an AI-based operator advisory system that provides real-time boiler efficiency, turbine heat rate, and gross calorific value data, alongside high-end simulation and modeling infrastructure for broader energy research.	3x3

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
21	https://indianstartupnews.com/news/sbi-embraces-ai-and-ml-technologies-to-transform-banking-operations	2023-10-25	SBI Embraces AI and ML Technologies to Transform Banking Operations	Private Enterprise	The State Bank of India (SBI) is actively integrating AI and Machine Learning (ML) to revolutionize its banking operations. The bank is deploying these technologies to enhance customer service, personalize product offerings, and improve operational efficiency. Key applications include fraud detection, credit risk assessment, and customer sentiment analysis. By embracing AI and ML, SBI aims to create a more agile, secure, and customer-centric banking experience, positioning tools such as its chatbots and AI-driven credit decisioning as central to a shift away from purely history-based credit scoring toward richer, behavior-informed risk models that also strengthen real-time fraud monitoring across its network.	1x4, 3x3
22	https://www.adgully.com/post/2069/sbis-ai-blueprint-a-tech-forward-vision-for-indias-evolving-digital-economy	2023-10-24	SBI's AI blueprint: A tech-forward vision for India's evolving digital economy	Private Enterprise	The State Bank of India (SBI) is implementing a comprehensive AI blueprint to navigate India's rapidly evolving digital economy. This strategy involves using AI for a wide range of functions, from enhancing cybersecurity and detecting fraud to personalizing customer interactions and automating back-office processes. By investing heavily in AI and related technologies, SBI aims to not only improve its own operational efficiency and customer satisfaction but also to play a pivotal role in shaping the broader financial technology landscape. The bank has deployed Generative AI, predictive AI/ML, and large language models across functions including credit underwriting, treasury operations, and risk management, with the results already visible: over 98% of all SBI transactions now flow through digital channels rather than physical branches, and its YONO platform, with more than 8.8 crore registered users, added 164 new features in FY2025 alone.	1x0, 1x1

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
23	https://negd.gov.in/national-ai-portal-indiaai/	N/A	National AI Portal (INDIAai)	Government	The National AI Portal of India, known as INDIAai, is a central hub for all AI-related developments in the country. A joint initiative by MeitY, NeGD, and NASSCOM, the portal serves as a comprehensive resource for AI news, articles, research, and information on government initiatives. It aims to foster a unified AI ecosystem, connecting stakeholders from academia, industry, and government. The portal showcases AI use cases, provides learning materials, and highlights opportunities in the field, listing as of late 2024 more than 2,800 national and international articles, over 1,175 news items, 334 videos, 164 research reports, 472 startups, 99 case studies, and 184 government initiatives across its various sections.	1x0, 1x2, 1x4
24	https://en.wikipedia.org/wiki/INDIAai	N/A	INDIAai - Wikipedia	Non-profit Organization	INDIAai is the official National AI Portal of India, launched in May 2020. It is a joint initiative of the Ministry of Electronics and Information Technology (MeitY), the National e-Governance Division (NeGD), and NASSCOM. The portal functions as a single central knowledge hub on artificial intelligence and allied fields such as machine learning, computer vision, and deep learning, aimed at entrepreneurs, students, professionals, and academics. It hosts sections covering news, case studies, research reports, startup and investor listings, and state and central government AI initiatives, and it has also supported associated programs such as the RAISE 2020 Responsible AI for Social Empowerment summit and the Responsible AI for Youth initiative, which aims to give young Indians across urban, rural, and remote areas the skills to design human-centric AI solutions.	1x0, 1x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
25	https://www.fluentgrid.com/fluentgrid-to-implement-advanced-data-analytics-for-ntpc/	2020-09-25	Fluentgrid to implement Advanced Data Analytics for NTPC	Private Enterprise	Fluentgrid has been selected to implement an advanced data analytics platform for NTPC, India's largest power utility. This project aims to leverage AI and machine learning to analyze data from NTPC's diverse operations. The insights gained will be delivered using the Fluentgrid Actilligence platform running on Microsoft's SQL Server 2019 Big Data and AI Platform, deployed across an on-premise data center in two phases, the first covering data assimilation and the formation of a data lake or warehouse, and the second building analytics, reporting, and dashboard functions to support predictive, diagnostic, and prescriptive decision-making across NTPC's power generation assets.	1x3, 1x1
26	https://bluelupin.com/portfolio/indiaai	N/A	INDIAai - India Government AI Portal	Private Enterprise	Bluelupin Technologies was the development partner for the INDIAai portal, the official AI portal for the Government of India. They were responsible for the UI/UX design, development, and deployment of this central knowledge hub. The portal, a joint initiative with MeitY and NASSCOM, aggregates more than 1,100 articles and resources spanning healthcare, education, and agriculture, and Bluelupin built it with a modular content management system, editorial workflows, and search functionality designed to scale as the portal's content and user base grow, with the client reporting an 80% rise in site traffic between 2021 and 2022 following the platform's launch and ongoing feature development.	1x2
27	https://www.visive.ai/news/ongc-leads-ai-revolution-in-oil-and-gas-optimization	45717	ONGC Leads AI Revolution in Oil and Gas Optimization	Private Enterprise	India's state-owned Oil and Natural Gas Corporation (ONGC) is pioneering the use of AI to optimize its oil and gas operations. By deploying Visive.ai's platform, ONGC is analyzing complex geological and production data to enhance reservoir management, drilling	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					processes, and maintenance schedules. This innovative approach is not only improving operational efficiency but also enhancing safety and environmental sustainability. Rather than relying on fixed maintenance intervals, AI-based predictive maintenance allows ONGC to anticipate equipment failures before they occur, while AI-driven analysis of real-time sensor data also helps detect anomalous temperature or pressure readings that could signal safety hazards, allowing operators to take preemptive action.	
28	https://indiaai.gov.in/	N/A	INDIAai	Government	The INDIAai portal is built on several key pillars to support the national AI strategy. These include 'Skilling' to develop a future-ready workforce, 'Research' to foster fundamental and applied AI R&D, and 'Adoption' to accelerate the use of AI across industry and government. These pillars mirror the broader IndiaAI Mission's structure, which spans compute infrastructure of 10,000 or more GPUs, an innovation center for indigenous foundational models, a unified non-personal datasets platform, an application development initiative, a FutureSkills program, startup financing, and a Safe and Trusted AI pillar focused on responsible governance, together aiming to build a comprehensive, democratized AI ecosystem across the country.	1x0, 1x2
29	https://apacnewsnetwork.com/2024/12/ongc-introduces-ai-driven-well-information-system-to-enhance-drilling-efficiency/	2024-02-09	ONGC Introduces AI-Driven Well Information System to Enhance Drilling Efficiency	Private Enterprise	Oil and Natural Gas Corporation (ONGC) has launched an AI-driven Well Information System to improve drilling efficiency. This digital platform provides real-time data and analysis from drilling operations, enabling faster, data-driven decision-making. Officially launched on 20 December 2024 at the Institute of Drilling Technology in Dehradun, the Generative AI-powered system is initially being applied	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					to daily drilling reports across all offshore rigs, with the goal of reducing manual intervention, improving reporting accuracy, and minimizing delays in data processing, as part of ONGC's broader push toward AI-driven exploration that its chairman has said is already delivering 98.5% accuracy in well-location decisions.	
30	https://aimlprogramming.com/services/ai-driven-predictive-maintenance-for-ongc-mumbai-high/	N/A	Ai Driven Predictive Maintenance For Ongc Mumbai High	Private Enterprise	ONGC is implementing an AI-driven predictive maintenance solution for its operations at Mumbai High, a major offshore oilfield. This system utilizes machine learning algorithms to analyze real-time sensor data from critical equipment. By predicting potential failures before they occur, the solution helps minimize costly downtime and improve safety in a demanding offshore environment. Discovered in 1974 and still supplying roughly a quarter of ONGC's total national oil and gas output, Mumbai High is now the focus of the company's Phase-V redevelopment campaign, which pairs AI applications such as seismic data interpretation, sidetrack well target selection, and production decline analysis with a target of 71 new and re-completed wells aimed at lifting the field's recovery factor toward levels achieved at comparable global fields such as Norway's Ekofisk.	1x3, 3x3
31	https://apacnewsnetwork.com/2024/06/indian-oil-had-realised-the-importance-of-transitioning-from-digitisation-to-digitalisation-and-we-wanted-to-converge-the-gap-informs-manish-grover-executive-director-strategic-is/#google_vignette	2024-06-03	"Indian Oil had realised the importance of transitioning from digitisation to digitalisation and we wanted to converge the gap"	Private Enterprise	Manish Grover, Executive Director at Indian Oil Corporation, highlights the company's strategic shift from mere digitization to comprehensive digitalization. This involves integrating digital technologies like AI and IoT into the core of their business, spanning refineries, pipelines, petrol pumps, aviation fuel stations, natural gas networks, and petrochemicals. The initiative, part of a broader digital transformation program called i-DRIVE that also uses RPA, AR, VR, bots, and drones, aims to use the vast data generated across IOCL's ten refineries and roughly 400 varieties of crude oil to drive faster, better-informed decisions, particularly around crude purchasing, refinery operations, and financial management.	1x3, 1x1

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No	URL	Day	Title	Type	Case Details	Mapping Cell
32	https://www.techcircle.in/2025/03/27/tech-mahindra-completes-digital-transformation-for-coal-india	2022-01-21	Tech Mahindra completes digital transformation for Coal India	Private Enterprise	Tech Mahindra has successfully implemented a comprehensive digital transformation for a subsidiary of Coal India Ltd (CIL), the state-owned coal mining giant. This project involved deploying a modern, scalable Enterprise Resource Planning (ERP) system, specifically SAP-ERP, across CIL's corporate office and its Mahanadi Coalfields, Western Coalfields, and North-Eastern Coalfields subsidiaries. The implementation established a foundational data layer providing real-time visibility into production, distribution, coal quality, and stock positions, alongside a companion Hospital Management System rolled out across 21 hospitals in CIL's subsidiaries, supporting the company's broader push toward a coal output target of 1 billion tonnes and its diversification into solar, thermal power, coal gasification, and critical minerals.	1x1, 1x4
33	https://www.pib.gov.in/PressReleasePage.aspx?PRID=2109226	2025-03-07	CIL joins hands with IIT, Hyderabad for R&D in clean coal tech	Government	Coal India Limited (CIL) has partnered with the Indian Institute of Technology (IIT) Hyderabad to advance research and development in clean coal technologies. This collaboration focuses on developing innovative methods to reduce the environmental impact of coal use. As part of the agreement, CIL will establish the Centre of Clean Coal Energy and Net Zero (CLEANZ) at IIT Hyderabad, funding it with an initial grant of ₹98 crore over five years under the umbrella of the National Centre for Coal and Energy Research (NaCCER), with the aim of developing scalable, technology-readiness-level solutions for sustainable coal utilization, CO2 management, and a circular economy that can become financially self-sustaining beyond the initial funding period.	1x3, 5x3, 5x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
34	https://www.aequivic.in/post/the-impact-of-ai-driven-fraud-detection-on-financial-inclusion-in-india-opportunities-and-challenge	2025-05-19	The Impact of AI-Driven Fraud Detection on Financial Inclusion in India	ResearchAcademic Paper	This article explores how AI-driven fraud detection systems are impacting financial inclusion in India. On one hand, these systems build trust and security in digital financial services, encouraging wider adoption among new users. They help protect underserved populations from predatory practices and reduce operational costs for financial institutions, potentially improving access to credit. On the other hand, the research cautions that these benefits are not automatic: poorly calibrated AI fraud models can flag legitimate transactions from first-time or informal-sector users as suspicious, inadvertently excluding the very populations financial inclusion efforts aim to reach, and the paper concludes with policy recommendations for ensuring equitable, carefully managed implementation of AI-based fraud detection.	unmapped
35	https://nitiforstates.gov.in/best-practice-detail?id=105268	N/A	Revolutionizing Property Tax Collection using AI-Based Solution for Improved Revenue and Efficiency	Government	This best practice case study from NITI Aayog highlights how municipalities can use AI to revolutionize property tax collection. By analyzing satellite imagery and GIS data, an AI-based solution can identify unassessed or under-assessed properties, comparing building footprints visible in imagery against official tax registers to flag properties that have escaped taxation. Similar AI/ML deployments elsewhere in India, such as Pune, which compares GIS satellite imagery with self-declared property boundaries to detect mismatches, have identified more than ₹23 crore in previously unassessed property tax, reducing manual inspection errors and giving municipal corporations a more reliable revenue base while also improving the accuracy of land and asset records used for urban planning.	1x3, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
36	https://timesofindia.indiatimes.com/city/pune/pmc-to-use-ai-to-resolve-garbage-dumping-in-open/articleshow/87529362.cms	2021-11-05	Pune municipal corporation to use AI to resolve garbage dumping in open	Private Enterprise	The Pune Municipal Corporation (PMC) is set to deploy an AI-powered system to combat the issue of illegal garbage dumping in open spaces. The system will use CCTV cameras equipped with artificial intelligence to automatically detect instances of unauthorized waste disposal and identify offenders from the footage for enforcement action. Officials said the civic body plans to combine data analytics, AI, machine learning, and satellite imagery not just for garbage monitoring but also to regularize property tax and identify illegal constructions, with chronic dumping spots first identified via satellite imagery and then cross-verified by staff before mechanized sweeping machines are deployed to reduce reliance on manual garbage collection, and create a cleaner urban environment for residents.	1x3
37	https://timesofindia.indiatimes.com/city/pune/pmc-uses-tech-to-bring-11k-properties-in-tax-ambit/articleshow/99255309.cms	2023-04-05	Pmc Uses Tech To Bring 11k Properties In Tax Ambit	Private Enterprise	The Pune Municipal Corporation (PMC) has successfully used technology, including GIS mapping and potentially AI-based analysis, to identify and bring approximately 11,000 previously unassessed properties into the property tax system. This initiative involved comparing satellite imagery with self-declared property boundaries and existing tax records to detect mismatches and flag properties that had escaped taxation. The effort is part of a broader push by PMC to modernize civic administration, with related AI-driven work identifying more than ₹23 crore in previously unassessed property tax citywide, contributing to a more equitable and efficient tax collection system. This success demonstrates how technology can help municipalities recover lost revenue without solely relying on labor-intensive manual surveys.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
38	https://egov.eletsonline.com/2024/12/the-rise-of-ai-in-karnataka-trends-best-practices-and-government-applications/	2024-12-12	The Rise of AI in Karnataka: Trends, Best Practices, and Government Applications	Private Enterprise	Karnataka is at the forefront of India's AI revolution, leveraging its robust tech ecosystem. The government is actively promoting AI adoption across various sectors to improve public services and governance. Key applications include using AI for traffic management, timber production analytics for the state Forest Department, and price forecasting for agriculture through a partnership with Microsoft India. The state's approach also emphasizes establishing best practices for ethical AI and fostering skill development to create a future-ready workforce, supported by public initiatives such as the Centre of Excellence in Data Sciences and AI launched with NASSCOM, the WEF-backed Centre for Artificial Intelligence, and a new AI Workforce Impact Study designed to inform Karnataka's upcoming IT Policy 2025.	1x0, 1x2, 1x3
39	https://economictimes.indiatimes.com/tech/artificial-intelligence/telangana-to-launch-indias-first-state-led-digital-public-infrastructure-for-ai-on-july-2/article-show/122164324.cms?from=mdr	2025-06-29	Telangana to launch India's first state-led digital public infrastructure for AI on July 2	Private Enterprise	The Government of Telangana, in partnership with the Japan International Cooperation Agency (JICA), launched India's first state-led digital public infrastructure (DPI) specifically for artificial intelligence on July 2, 2025. This platform, named TGDeX (Telangana Data Exchange) and developed by the Indian Institute of Science, Bengaluru, is designed to provide startups, researchers, businesses, and government departments with secure access to high-quality datasets and collaborative tools for building AI solutions. The initiative aims to democratize access to AI resources, foster innovation, and accelerate the development of AI-based solutions across sectors such as healthcare, agriculture, education, and climate, with Telangana AI ecosystem partners including T-AIM, T-Hub, IIT Hyderabad, and IIIT Hyderabad working together toward a goal of hosting more than 2,000 AI-ready datasets on the platform within five years.	1x4, 2x1

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No	URL	Day	Title	Type	Case Details	Mapping Cell
40	https://www.fortuneindia.com/long-reads/how-ai-powered-ntpc-is-prioritising-people-and-upskilling-for-the-future/121147	2025-03-31	How AI-powered NTPC is prioritising people and upskilling for the future	Private Enterprise	State-owned power giant NTPC is integrating AI to optimize its operations while focusing heavily on upskilling its workforce. The company is using AI for predictive maintenance and operational efficiency but recognizes that human expertise is crucial to interpreting AI-generated insights and making final operational decisions. NTPC is investing in structured training programs to equip employees with digital and AI-related skills, ensuring they can work effectively alongside new technologies. This people-centric approach aims to foster a collaborative human-AI working environment rather than a purely automation-driven one, treating AI as a tool that augments its workforce's expertise rather than replaces it.	3x3
41	https://www.financialexpress.com/business/industry-maximising-output-the-ongc-way-3776150/	2025-03-13	Maximising output the ONGC way	Private Enterprise	Oil and Natural Gas Corporation (ONGC) is leveraging advanced technologies, including AI and data analytics, to maximize output from its oil and gas fields. The state-run company is implementing digital solutions to enhance subsurface mapping, optimize drilling and production operations, and improve overall recovery efficiency. By using AI to analyze historical and real-time operational data, ONGC can make more accurate decisions, reduce exploration risks, and increase recovery rates from mature fields. This technology-driven approach reflects a broader industry shift toward AI-assisted subsurface imaging and predictive analytics, which companies globally are using to extract more value from aging assets without proportionally increasing capital expenditure.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
42	https://www.storyboard18.com/brand-marketing/sbi-embraces-ai-to-enhance-digital-marketing-attract-next-gen-customers-67507.htm	2025-05-28	SBI embraces AI to enhance digital marketing, attract next-gen customers	Private Enterprise	State Bank of India (SBI) is increasingly using artificial intelligence to bolster its digital marketing strategies and engage with younger, tech-savvy customers. The bank is employing AI-powered tools for personalized customer communication, targeted outreach, and content-driven engagement. By understanding customer preferences and behaviors more deeply, SBI aims to create more relevant marketing campaigns and improve customer engagement on digital platforms. This strategic adoption of AI includes a five-year MarTech partnership with HCLSoftware to deploy the HCL Unica platform for real-time, personalized digital communication, alongside AI-powered tools such as CSAT, Net Promoter Score, and Customer Effort Score tracking, and QR-code-based feedback collection, all aimed at positioning SBI as a next-generation financial services provider.	unmapped
43	https://www.qlik.com/us/company/customers/ioc	N/A	Driving Excellence through 3,000 KPIs	Private Enterprise	This Qlik customer story describes how Indian Oil Corporation (IndianOil) complemented its i-DRIVE digital transformation initiative with Qlik Sense to deliver self-service data visualization and analytics to roughly 10,000 users. IndianOil's i-DRIVE project had identified that data produced by its various digitization efforts was siloed, hard to manage, and underused despite the company's early recognition of AI/ML's potential. Qlik's platform now powers a growing suite of applications spanning board-level strategic decisions, customer behavior insights, supply chain and inventory management, and equipment performance monitoring, tracking roughly 3,000 KPIs and cutting analytics processes that previously took hours down to minutes, while also supporting energy-saving initiatives with measurable financial results.	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
44	https://www.businesstoday.in/technology/news/story/reliance-is-going-to-be-a-deep-tech-and-advanced-manufacturing-company-mukesh-ambani-481722-2025-06-25	2025-06-25	Reliance is going to be a deep tech and advanced manufacturing company: Mukesh Ambani	Private Enterprise	Mukesh Ambani has outlined a vision for Reliance Industries to transform into a company driven by deep technology and advanced manufacturing. He emphasized a strategic pivot towards leveraging cutting-edge innovations, including artificial intelligence, to move beyond traditional businesses and into new-age sectors, creating scalable and technologically advanced enterprises. The focus on deep tech signifies a commitment to embedding innovative technologies across every Reliance business, building an AI-native digital infrastructure and in-house software stack, and having more than 1,000 scientists and researchers working on critical projects; the company said it filed over 2,555 patents in the past year, including in areas such as AI large language models and AI deep learning, backed by R&D spending of more than ₹11,000 crore over the preceding four years.	1x1, 1x4
45	https://www.business-standard.com/companies/news/mukesh-ambani-reliance-ai-deeptech-strategy-next-growth-phase-telecom-to-tech-125062500408_1.html	2025-06-25	AI is our future, not a side bet', says Ambani on Reliance's next big leap	Private Enterprise	Mukesh Ambani has declared that Artificial Intelligence is central to the future of Reliance Industries, describing it as the company's "next big leap." He stressed that AI is not a peripheral activity but a core component of Reliance's strategy across its energy, retail, and telecom businesses. This reflects a broader corporate shift towards integrating advanced AI models and building indigenous AI capabilities, echoing his description of AI's emergence as perhaps the most transformative event in the evolution of the human race, and the company has set out plans to build and deploy indigenous foundational AI models and integrate AI-driven solutions to enhance efficiency, create innovative products, and deliver personalized experiences to customers across its various business lines.	1x0, 1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
46	https://www.researchgate.net/publication/392129372_Leveraging_Artificial_Intelligence_And_Machine_Learning_To_Reform_India's_Social_Protection_Framework	2025-05-01	Leveraging Artificial Intelligence And Machine Learning To Reform India's Social Protection Framework	Academic Paper	This research paper explores how AI and machine learning can be used to reform India's social protection framework. It argues that these technologies can improve the targeting of beneficiaries, reduce fraud and leakage, and enhance the efficiency of service delivery by helping administrators identify eligible recipients and predict needs. However, it also highlights the challenges, including data privacy concerns, algorithmic bias that could lead to exclusion of eligible beneficiaries, and the risk that poorly designed automated eligibility systems can produce errors at scale, and the paper calls for stronger human oversight, transparent audit mechanisms, and appeal processes to ensure that efficiency gains from AI do not come at the cost of wrongly denying essential benefits to vulnerable populations.	1x0
47	https://www.aljazeera.com/economy/2024/1/24/how-an-algorithm-denied-food-to-thousands-of-poor-in-indias-telangana	2024-01-24	How an algorithm denied food to thousands of poor in India's Telangana	Private Enterprise	This investigative report by Al Jazeera details how an algorithmic system in India's Telangana state incorrectly flagged and excluded thousands of impoverished families from receiving subsidized food rations. The algorithm, designed to identify ineligible beneficiaries and weed out fraud, wrongly tagged legitimate poor households, misclassifying them as ineligible due to inaccurate data. This resulted in the wrongful denial of essential food aid to vulnerable people, highlighting the severe real-world consequences of algorithmic errors, exemplified by 67-year-old widow Bismillah Bee, whose late husband was wrongly tagged as a car owner by the Samagra Vedika system, a case that ultimately reached India's Supreme Court, while state records show Telangana cancelled more than 1.86 million food security cards and rejected over 142,000 fresh applications between 2014 and 2019 without issuing formal notice to those affected.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
48	https://biglysales.com/how-flipkarts-ai-is-transforming-e-commerce/	45737	How Flipkart's AI is Transforming E-Commerce	Private Enterprise	This article details how Flipkart is using AI to transform its e-commerce operations across the customer journey. Intelligent recommendation engines analyze individual customer preferences to personalize product suggestions, while image and text search features, including the platform's 'Immerse' tool, make product discovery more intuitive. AI also plays a role in AR/VR-based virtual try-on experiences, voice-based shopping, and a Skin Analyser feature that provides personalized skincare recommendations. Beyond the customer-facing experience, Flipkart applies AI to streamline supply chain management, optimize delivery routing, allocate resources efficiently, detect fraudulent transactions, and even support internal HR processes, with the company continuing to expand its use of generative AI for tasks such as creating product imagery and advertisements to reduce reliance on traditional photo shoots.	1x4
49	https://indiaai.gov.in/article/ai-for-social-good-the-role-of-rigorous-impact-evaluations-in-maximizing-ai-s-potential	45667	AI for Social Good: The role of rigorous impact evaluations in maximizing AI's potential	Government	AI has transformative potential in social programs. It can improve targeting and needs prediction, ensuring resources reach the right beneficiaries, such as an AI model in India that predicts flood risks in Bihar. AI can also increase access to services, like providing tailored advice to farmers via smartphones. However, rigorous and concurrent impact evaluations are crucial to understand the real-world effects of AI-infused programs, build trust among stakeholders, and ensure responsible scaling, drawing lessons from past technology-adoption efforts such as One Laptop Per Child and smokeless cookstoves, which fell short of their goals because they were not grounded in evidence or lacked adaptability to real-world conditions.	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
50	https://www.bestpractice.ai/ai-case-study-best-practice/flipkart_attempts_to_resolve_address_problem_in_india_using_machine_learning	43173	AI Case Study	Private Enterprise	This case study describes how Flipkart, one of India's largest e-commerce companies, is using machine learning to solve the country's uniquely difficult address-matching problem. Because Indian addresses lack formal standardization and are often written inconsistently, phonetically transliterated from local languages, or paired with incorrect PIN codes, Flipkart's data science team, led by scientists such as Ravindra Babu, built models that combine field-executive expertise with automated validation to output standardized sub-area names and suggest corrected PIN codes to users. According to Flipkart, this address-intelligence system has helped the company classify and identify addresses with 98% accuracy, reducing delivery time by at least three hours per delivery hub, alongside a broader machine-learning recommendation system that the company says has driven a 10% rise in click-through rate.	unmapped
51	https://www.fortuneindia.com/enterprise/complete-ai-transformation-across-ril-in-2024-mukesh-ambani-to-employees/115277	45290	Complete AI transformation across RIL in 2024: Mukesh Ambani to employees	Private Enterprise	Mukesh Ambani has called on all Reliance Industries employees to accelerate and complete the company's AI transformation across all business lines in 2024. Speaking at an event marking the 91st birth anniversary of company founder Dhirubhai Ambani, he said that all business lines, including digital services, green energy, retail, and O2C, must complete this transformation, stressing the need to be at the forefront of using data with AI as an enabler for a quantum jump in productivity and efficiency. The goal is to become a global leader in AI adoption while positioning Reliance to help solve India's urgent national priorities in education, healthcare, agriculture, and employment generation, a vision that has since taken shape through initiatives such as the JioBrain suite of AI tools unveiled at the company's subsequent AGM.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
52	https://aiexpert.network/case-study-how-flipkart-is-leading-the-ai-driven-e-commerce-wave/	45224	Case Study: How Flipkart is Leading the AI-Driven E-commerce Wave - AI Expert Network	Private Enterprise	Flipkart has integrated AI across its operations to enhance customer service, predictive analytics, inventory management, and personalized shopping. They use AI-powered chatbots for real-time query handling and machine learning for predictive analytics. Generative AI is being explored to enhance assisted buying experiences, especially for users from tier two and three cities. AI also plays a crucial role in real-time price optimization, adjusting prices based on competitor pricing and demand. This dynamic pricing capability helps Flipkart stay competitive during high-traffic sales events while protecting margins, and the company has also applied AI to logistics route optimization and fraud detection, scrutinizing transactions for suspicious activity to enable faster resolution.	1x2, 1x4
53	https://m.economictimes.com/built-over-550-ai-models-in-5-6-yrs-to-enhance-output-quality	45692	Built over 550 AI models in 5-6 yrs to enhance output, quality: Tata Steel	Private Enterprise	Tata Steel has developed over 550 AI models in the last 5-6 years to improve yield, productivity, and quality. They have invested in generative AI platforms to enhance their operations. AI applications are used on the shop floor for safety, with real-time detection systems monitoring potential hazards like missing personal protective equipment. AI also analyzes safety observations to predict and mitigate potential incidents. On the operational front, digital tools streamline supply chain logistics and energy management, while predictive models assess equipment health to preempt failures and reduce unplanned downtime, and the company has also deployed an Enterprise Gen AI tool that lets employees quickly query organizational data and insights through a conversational interface.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
54	https://blog.myntra.com/get-the-perfect-look-with-my-stylist/	45076	Get The Perfect Look with 'My Stylist': The Newly Launched AI-Powered Styling Assistant by Myntra	Private Enterprise	Myntra, a major Indian fashion e-commerce platform, has launched an AI-powered styling assistant called 'My Stylist'. This feature, introduced just before its End of Reason Sale (EORS-18), helps shoppers create complete outfits by offering styling suggestions based on their selected items. Leveraging generative AI, 'My Stylist' provides a more interactive and personalized shopping experience, suggesting complementary products from a vast catalog of apparel, footwear, and accessories. This innovation, built in-house using AI, ML models, and computer vision algorithms, draws recommendations from roughly 450,000 styles and lets users shop the entire suggested look with a single click.	1x4
55	https://bhargavkumarg.medium.com/myntras-ai-stylist-a-game-changer-for-online-fashion-shopping-cac72a2463d2	45393	Myntra's AI Stylist: A Game-Changer for Online Fashion Shopping in India	Private Enterprise	Myntra's AI Stylist is positioned as a game-changing feature in India's online fashion market. The tool utilizes advanced AI to provide personalized fashion recommendations, helping users create complete looks from head to toe. This innovation addresses a common challenge in online shopping: visualizing how individual items will combine into a stylish outfit. By offering contextual and aesthetically pleasing suggestions, the AI Stylist enhances the customer experience, making fashion more accessible, and it builds on Myntra's broader suite of AI initiatives, including the ChatGPT-powered MyFashionGPT for conversational search and Maya, the company's first virtual fashion influencer.	unmapped
56	https://news.microsoft.com/source/asia/features/indias-myntra-innovates-with-generative-ai-to-help-shoppers-put-the-right-look-together/	45379	India's Myntra innovates with generative AI to help shoppers put the right look together	Private Enterprise	Indian e-commerce giant Myntra is leveraging generative AI, powered by Microsoft Azure OpenAI Service, to enhance the online shopping experience. Its AI-powered features, including a chatbot and a personal stylist, help customers discover products and create complete	1x2, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					outfits. This technology allows shoppers to receive personalized recommendations based on various criteria like occasion, brand, and budget. By providing a more conversational and curated shopping journey, Myntra aims to increase customer engagement and conversion, and the company reports that users who engage with its MyFashionGPT conversational search feature are notably more likely to purchase products across a wider range of categories than those who do not.	
57	https://www.energetica-india.net/news/gail-gti-celebrates-29th-foundation-day-with-conclave-on-ai-and-energy-transition	45315	GAIL GTI Celebrates 29th Foundation Day with Conclave on AI and Decarbonisation	Private Enterprise	GAIL (India) Limited's training institute, GTI, marked its 29th Foundation Day with a conclave focused on the role of Artificial Intelligence in decarbonization and sustainability. The event brought together industry experts to discuss how AI can be utilized to optimize energy consumption, enhance the efficiency of gas pipelines, and support the transition to cleaner energy sources. This initiative highlights the growing recognition within India's energy sector that AI is a critical tool for achieving a responsible energy transition, with the conclave, themed "AI – The Compass to Navigate Turbulent Energy Transition," bringing together HR directors from GAIL, IOCL, BPCL, SAIL, and BHEL to conclude that AI and machine learning are becoming indispensable not just for business transformation but for human capital development as well.	1x3, 1x4, 5x3
58	https://www.ey.com/en_in/insights/education/how-ai-is-activating-step-changes-in-indian-education	45310	AI in Indian Education: Key Steps for Growth	EY - India	This EY report examines how AI is driving step changes across India's education landscape, a system that includes 1.5 million schools, more than 8.5 million primary and secondary teachers, and over 260 million annual enrollments, alongside more than 40 million students enrolled across over 1,000	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					universities and 42,000 colleges. It argues that AI is helping the education system move away from standardized, fixed curriculums and static testing toward more personalized, effective learning, citing examples such as the ViLLE platform, adopted by roughly half of schools, which offers instant feedback and analytical insights to students and teachers. The report situates India's progress alongside international peers such as South Korea, which plans to embed AI coursework into its national curriculum from the high-school level by 2025, and Singapore, which has invested heavily in AI-driven education, and it frames this shift as essential to closing the gap between education and contemporary work skills as part of the country's Viksit Bharat 2047 goals.	
59	https://files.eric.ed.gov/fulltext/EJ1434320.pdf	2023	Transforming and Reforming the Indian Education System with Artificial Intelligence	Academic Paper	This paper explores the potential of Artificial Intelligence to transform and reform the Indian education system. It argues that AI can create personalized learning paths for students, automate administrative tasks for teachers, and provide valuable insights into learning patterns through data analysis. The document discusses how AI tools can make education more accessible and equitable, particularly for students in remote areas. However, it also addresses challenges such as the digital divide, algorithmic bias, and data privacy risks, concluding that sustainable AI implementation depends on mitigating these risks while preserving the educator's central role and fostering collaborative, responsible governance among stakeholders.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
60	https://www.researchgate.net/publication/378377692_Artificial_Intelligence_in_Indian_Education_Navigating_Challenges_and_Embracing_Opportunities	45292	Artificial Intelligence in Indian Education: Navigating Challenges and Embracing Opportunities	Academic Paper	This research paper examines the dual nature of integrating AI into the Indian education system. It highlights significant opportunities, such as personalized learning experiences, intelligent tutoring systems, and automating administrative tasks to free up educators' time. AI can help bridge educational gaps and cater to diverse learning styles. However, the paper also navigates substantial challenges, including the digital divide, a lack of AI literacy among teachers, data privacy concerns, and the risk of algorithmic bias disadvantaging students from underrepresented backgrounds, and it concludes by calling for coordinated investment in teacher training, infrastructure, and clear data-governance policies so that AI's benefits reach students equitably rather than deepening existing educational inequalities.	1x3
61	https://community.nasscom.in/communities/ai/key-ai-driven-innovations-manufacturing-and-automotive	45205	Key AI-Driven Innovations in Manufacturing and Automotive	Non-profit Organization	AI is driving significant innovations in India's manufacturing and automotive sectors. In manufacturing, AI-powered predictive maintenance is reducing machine downtime, while computer vision is enhancing quality control on production lines. The automotive industry is leveraging AI for the development of Advanced Driver-Assistance Systems (ADAS) and in-cabin monitoring for improved safety. Furthermore, AI is optimizing supply chains through better demand forecasting and logistics management. These gains are increasingly seen as essential to remaining competitive, with global supply chain disruptions and shifting market conditions pushing manufacturers to combine AI-driven forecasting, inventory optimization, and supplier risk assessment into a more resilient, responsive operational model.	1x3, 1x4, 3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
62	https://www.daffodilsw.com/case-study/ai-enabled-image-analysis-solution/	Not Applicable	Case Study	AI-driven Solution for Analysis of Part Failure Images	This case study from Daffodil Software describes an AI-enabled image analysis solution the company developed for one of India's largest automobile manufacturers, aimed at detecting part failure and fractures in automobile components. The solution uses computer vision and deep learning to automatically inspect component images and flag defects such as cracks or fractures that could compromise vehicle safety or quality, reducing reliance on manual visual inspection and helping the manufacturer catch faulty parts earlier in the production process, in line with the broader industry shift toward AI-powered quality control on automotive assembly lines.	unmapped
63	https://www.iamdave.ai/blog/top-7-ai-use-cases-in-indian-automotive-oems/	Not Applicable	Top 7 AI Use Cases in Indian Automotive OEMs	Private Enterprise	Indian automotive OEMs are increasingly adopting AI across their operations. Key use cases include predictive maintenance for machinery on the factory floor, which minimizes downtime. AI-powered computer vision is being used for defect detection and quality control during assembly. In the customer-facing domain, AI-driven virtual showrooms and conversational assistants are creating immersive and personalized sales experiences. Furthermore, AI is enhancing supply chain management through better demand forecasting, inventory tracking, and logistics route optimization, helping manufacturers reduce stockouts and excess inventory while responding more quickly to shifting market conditions and supplier disruptions.	3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
64	https://solve.mit.edu/solutions/87017	2021	Visilant - MIT Solve	Non-profit Organization	Visilant, an MIT Solve finalist, is tackling preventable blindness in India through an AI-powered screening platform. Their solution uses a portable retinal camera and deep learning algorithms to detect diabetic retinopathy and other eye diseases in primary care settings. This technology enables accessible and affordable screenings in underserved communities where specialists are scarce. The AI provides instant, accurate diagnoses, allowing for early intervention and treatment. By bringing specialist-level diagnostic capability closer to patients, Visilant's community health worker-led model, developed and validated across four partner hospitals in India with algorithms for detecting cataracts and other anterior segment conditions achieving 97.1% average precision, aims to overcome the geographic, financial, and human-resource barriers that keep an estimated 1.1 billion people worldwide, including millions in India, from receiving basic eye care.	2x3
65	https://www.laxmieye.org/blog/the-role-of-ai-in-early-detection-of-eye-diseases-in-india/	45393	The Role of AI in Early Detection of Eye Diseases in India	Private Enterprise	AI is playing a pivotal role in the early detection of eye diseases like diabetic retinopathy and glaucoma in India. With a high prevalence of diabetes and a shortage of ophthalmologists, AI-powered screening tools offer a scalable solution. These systems use algorithms to analyze retinal images and identify early signs of disease with high accuracy, often exceeding human capability. This enables mass screenings in primary health centers and mobile camps, facilitating timely referrals and treatment, with initiatives like the National Programme for Control of Blindness promoting AI integration in eye care, and startups collaborating with hospitals to develop cost-effective retinal imaging tools that bring specialist-level diagnostics to underserved rural areas, though human ophthalmologists remain essential for confirming diagnoses and managing complex cases.	1x3, 2x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
66	https://www.indianchemicalnews.com/digitization/lite/gail-goes-live-with-rise-with-sap-s4hana-on-cloud-26605	45028	GAIL goes live with 'RISE with SAP - S/4HANA on Cloud'	Private Enterprise	GAIL (India) Limited, a major player in the natural gas sector, has successfully implemented 'RISE with SAP - S/4HANA on Cloud'. This strategic move is part of GAIL's digital transformation initiative, aimed at enhancing operational efficiency and agility. By migrating its enterprise resource planning (ERP) system to the cloud, GAIL can leverage real-time data analytics, improve business process management, and foster innovation. This technological upgrade will support the company's growth and help GAIL become the first Maharatna PSU to complete such a migration, with the project, internally named 'Navodaya,' completed within one year despite the scale and complexity of GAIL's operations, positioning the company to build further AI-driven capabilities on top of its new cloud ERP foundation.	1x1, 1x4
67	https://in.newsroom.ibm.com/2022-04-03-GAIL-IBM-collaboration	45019	GAIL inaugurates state-of-the-art centre for digitization and centralization of its payments process	Private Enterprise	GAIL (India) Ltd., in partnership with IBM, has launched a state-of-the-art center in Noida to digitize and centralize its payments process. This initiative, named 'Project Vishwas', aims to streamline GAIL's vendor invoice payment system by leveraging digital technologies. The center will handle the processing of invoices from all of GAIL's locations across India, leading to increased efficiency, transparency, and faster turnaround times. This move is a significant step in GAIL's digital transformation journey, part of a broader push across the company's operations that has also seen GAIL become the first Maharatna PSU to migrate its ERP system to SAP S/4HANA Cloud, reinforcing its ambition to build a more agile, technology-enabled enterprise.	1x1

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No	URL	Day	Title	Type	Case Details	Mapping Cell
68	https://publicpolicy.google/article/wadhwaniai-ai-farmers-agriculture-food-waste/	Not Applicable	How farmers are using AI in the field	Google Public Policy	This Google Public Policy article describes how Wadhwani AI, with support from Google.org, built an app that helps Indian farmers identify crop pests and receive quick mitigation recommendations. Using the app, a farmer photographs pests caught on a white sheet of paper, and the AI identifies the pest species and infestation level before recommending an appropriate response, in trials this has helped increase cotton yields by 20% while reducing pesticide use by 25%, prompting India's Ministry of Agriculture to roll the technology out nationally across ten staple crops including rice, wheat, and corn. Google.org announced a further $3.3 million in funding for Wadhwani AI to expand this work, part of the organization's broader mission of bringing agricultural expertise to farmers who otherwise lack access to it.	unmapped
69	https://medium.com/pytorch/how-wadhwani-ai-uses-pytorch-to-empower-cotton-farmers-14397f4c9f2b	44469	How Wadhwani AI Uses PyTorch To Empower Cotton Farmers	Non-profit Organization	The Wadhwani Institute for Artificial Intelligence developed an AI-powered mobile app using PyTorch to help cotton farmers in India combat pest infestations. The app allows farmers to take pictures of pest traps, and the AI model automatically detects and counts specific pests, such as the destructive pink bollworm. This provides farmers with real-time data and scientific advice on when and how to act, replacing traditional, often inaccurate, estimation methods. This simple yet powerful tool helped increase cotton yields by 20% and cut pesticide use by 25% in trials, prompting India's Ministry of Agriculture to expand the technology nationally across ten staple crops, and it works on basic smartphones with offline capability so it can reach farmers even in areas with limited network coverage.	1x2

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No	URL	Day	Title	Type	Case Details	Mapping Cell
70	https://indiaai.gov.in/article/a-case-for-ai-enabled-water-management	45240	A case for AI-enabled water management	Government	This article makes a compelling case for using AI to address India's complex water management challenges. AI can be deployed to create more accurate flood and drought forecasts, optimize irrigation schedules to conserve water in agriculture, and detect leaks in urban water supply networks. By analyzing vast datasets from satellites, sensors, and weather models, AI can provide actionable insights for policymakers and water authorities. Implementing AI-enabled solutions is crucial for ensuring water security, though the article cautions that many existing AI-based water solutions remain neither scalable nor affordable for smallholder farmers, and argues that partnership models such as public-private partnerships and donor-driven innovation support will be needed to bring these tools from the research community into farmers' hands at scale.	1x0, 1x3, 3x3
71	https://indiaai.gov.in/article/wadhwani-ai-harnessing-the-power-of-ai-for-social-impact-for-large-scale-development	45141	Wadhwani AI: Harnessing the power of AI for social impact for large-scale development	Government	Wadhwani AI is a non-profit institute dedicated to using Artificial Intelligence to address societal challenges in underserved communities worldwide, with a strong focus on India. Their projects span domains like agriculture, health, and education. A notable initiative is their AI-powered tool that helps cotton farmers identify and manage pest infestations, leading to increased crop yields. In healthcare, they have developed solutions to improve maternal and child health outcomes. Wadhwani AI's founding mission, since its 2018 inauguration by Prime Minister Narendra Modi, has been to apply AI at scale to some of the world's toughest social problems, and the institute now works with around 40 partner organizations spanning governments, international bodies, nonprofits, and research institutions.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
72	https://aimlprogramming.com/download/pdf/ai-india-coal-quality-prediction-1712124943.pdf	Not Applicable	AI India Coal Quality Prediction	Private Enterprise	In India, AI is being used to predict the quality of coal, a critical factor for thermal power plants. Traditional methods of coal quality analysis are slow and labor-intensive. By using AI and machine learning models, companies can analyze data from various sources—such as images of coal and sensor readings—to predict key quality parameters like calorific value and ash content in real-time. This allows for better decision-making in procurement, blending, and utilization of coal, leading to improved plant efficiency and reduced equipment wear, an important capability given that Indian coal typically has significantly higher ash content and lower calorific value than imported coal, making accurate, real-time blending decisions essential to maintaining consistent boiler performance.	1x3, 1x1
73	https://blog.google/intl/en-in/company-news/outreach-initiatives/leading-the-change-how-ai-innovators-are-driving-social-impact-in-india/	45133	Leading the change: How AI innovators are driving social impact in India	Private Enterprise	Google's AI for Social Good program is supporting innovators in India who are using AI to create positive social impact. The article highlights several projects, including an AI model that helps predict the risk of floods and an application that assists farmers in identifying crop diseases. These initiatives demonstrate the potential of AI to address critical challenges in areas like disaster management, agriculture, and healthcare. By providing funding, mentorship, and technical resources, Google.org's Generative AI Accelerator selected ARMMAN and Visilant as two of its 20 global cohort organizations, sharing in $30 million of funding and six months of pro bono support from Google employees, with ARMMAN scaling a multilingual pregnancy-risk co-pilot for frontline health workers and Visilant partnering with Aravind Eye Hospital and Sadguru Netra Chikitsalaya to expand AI-powered eye care.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
74	http://www.ifg.cc/aktuelles/nachrichten/regionen/126-in-indien-india/65263-in-karnataka-ai-powered-traffic-monitoring-launched-in-mangaluru-under-smart-city-project.html	45310	IN: Karnataka: AI-powered traffic monitoring launched in Bengaluru to improve road safety	Non-profit Organization	In Mangaluru, Karnataka, an AI-powered traffic monitoring system has been launched to enhance road safety as part of the Mangaluru Smart City project. This initiative, led by Mangaluru Smart City Limited (MSCL), uses a network of high-resolution cameras equipped with radar at 15 strategic locations, including junctions such as Ballalbagh, Besant Junction, and Kodialbail, to automatically detect a wide range of traffic violations, including speeding, jumping signals, and not wearing helmets. The AI system analyzes video feeds in real-time, identifies offenses, and automatically generates challans (traffic tickets), feeding into a command and control center that also supports a broader intelligent traffic management system designed to synchronize signals and ease congestion during peak hours.	1x3
75	https://analyticsindiamag.com/ai-news-updates/telangana-launches-tgdex-indias-first-state%E2%80%91led-ai-public-infrastructure/	45365	Telangana Launches TGDeX—India's First State-Led AI Public Infrastructure	Private Enterprise	The government of Telangana has launched TGDeX, the first state-led public infrastructure for Artificial Intelligence in India. This platform is designed to provide startups, academic institutions, and government bodies with access to high-quality datasets and computing resources. By creating a shared ecosystem, TGDeX aims to foster innovation and accelerate the development of AI solutions for various sectors, including healthcare, agriculture, and mobility. The initiative is a strategic step toward positioning Telangana as a national AI hub, developed by the Indian Institute of Science Bengaluru with support from the Japan International Cooperation Agency, and involving ecosystem partners such as T-AIM, T-Hub, IIT Hyderabad, and IIIT Hyderabad, with a target of hosting more than 2,000 AI-ready datasets on the platform within five years.	1x3, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
76	https://www.wadhwaniai.org/	Not Applicable	Wadhwani AI: AI for Social Impact	Non-profit Organization	Wadhwani AI is a non-profit institute dedicated to developing and deploying AI solutions to address societal challenges in underserved communities, with a primary focus on India. Their projects span domains like public health, agriculture, and education. A key initiative is an AI-powered pest management tool that helps cotton farmers increase their yields. In healthcare, they have developed solutions for maternal and child health, including AI for managing tuberculosis. Wadhwani AI's mission is to bring the world's collective scientific and technical expertise to bear on high-impact social problems, and since its 2018 founding the institute has scaled several of its tools, including its cotton pest-management app, to reach tens of thousands of farmers directly across India.	1x3
77	https://aiexpert.network/case-study-tata-steels-ai-transformation/	Not Applicable	Case Study: Tata Steel's AI Transformation - AIX	AI Expert Network	This case study details Tata Steel's AI transformation journey, describing how the company adopted AI models for real-time decision-making, optimizing blast furnace operations and raw material procurement. Digital twins have been deployed to enable predictive maintenance and greater operational control across its facilities, part of the company's broader 'Mission 2025: Lead the Digital Steelmaking' strategy. Tata Steel aims to have fully automated, AI-driven factories by 2025, using AI to further optimize energy consumption and reduce carbon emissions in line with its sustainability commitments, with the company having reported AI-driven savings of roughly $2 billion and building on more than 550 AI models developed over the preceding five to six years.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
78	https://industrywired.com/exploring-myntras-use-of-artificial-intelligence-in-fashion-technology/	45412	Exploring Myntra's Use of Artificial Intelligence in Fashion Technology	Private Enterprise	Myntra, a leading Indian fashion e-commerce platform, extensively uses Artificial Intelligence to create a personalized and engaging shopping experience. The company employs machine learning algorithms for product recommendations, trend forecasting, and optimizing its supply chain. A notable feature is its AI-powered visual search, allowing users to find similar products by uploading an image. Myntra also launched 'My Stylist,' a generative AI tool that provides fashion advice and helps users create complete outfits from roughly 450,000 styles, building on earlier AI initiatives such as MyFashionGPT, a Microsoft Azure OpenAI-powered conversational search feature, and Maya, the company's first virtual fashion influencer, as part of a broader strategy to deepen customer engagement and drive higher conversion rates.	1x4, 3x3
79	https://stories.flipkart.com/ai-qna-mayur-datar/	45560	Unleashing AI: How Flipkart is Transforming E-Commerce with AI	Private Enterprise	Indian e-commerce giant Flipkart is integrating AI across its operations to revolutionize online retail. The company uses AI to personalize customer journeys, optimize its vast supply chain, and enhance fraud detection. For example, AI-powered X-ray systems are used to identify counterfeit or damaged products in returns. On the customer-facing side, generative AI powers conversational assistants, making product discovery more intuitive. This holistic approach shows Flipkart's commitment to using AI not just to improve customer experience but to strengthen operational efficiency across advertising, merchandising, and HR functions, with Chief Data Scientist Mayur Datar describing AI as embedded into Flipkart's DNA.	1x4, 2x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
80	https://innovateindia.mygov.in/ministry/ministry-of-electronics-and-information-technology/	Not Applicable	Ministry of Electronics and Information Technology - Innovate India	Government	The Ministry of Electronics and Information Technology (MeitY), through platforms like Innovate India, promotes innovation in emerging technologies like AI. MeitY launches various challenges and initiatives to encourage startups and individuals to develop solutions for societal problems. These programs provide funding, mentorship, and a platform to showcase innovations. The goal is to build a robust ecosystem for technology development and adoption in India, fostering self-reliance and positioning the country as a global hub for emerging-technology innovation, complementing MeitY's broader mandate of driving the IndiaAI Mission and related digital governance initiatives.	1x4
81	https://currentaffairs.adda247.com/negd-launches-ai-in-governance-training-for-government-officials-at-iit-delhi/	45108	NeGD Launches AI in Governance Training for Government Officials at IIT Delhi	Government	The National e-Governance Division (NeGD) has launched an "AI in Governance" training program for government officials in collaboration with IIT Delhi. This initiative aims to build the capacity of the public sector to leverage AI for improving service delivery and decision-making. The program provides officials with a foundational understanding of AI technologies, their potential applications in governance, and the associated ethical considerations. By upskilling its workforce, the government is working to ensure officials across departments can identify practical use cases for AI and understand its risks, building on similar capacity-building initiatives NeGD has run for e-governance and digital transformation more broadly.	1x0, 1x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
82	https://www.ey.com/en_in/services/ai/generative-ai-india-report/industries-in-transformation/government-public-sector	45210	Role of AI technology in Government and public sector	EY India	This EY report examines the transformative role of Generative AI in India's government and public sector. It argues that Gen AI is helping governments streamline administrative processes, improve data-driven decision-making, and deliver more agile, citizen-centric services. The report frames embracing Gen AI as imperative for governments to remain competitive, generate economic growth, and improve public service delivery, citing an EY survey in which 61% of government and public-sector organizations said AI can enhance the citizen experience and 67% saw it as a catalyst for innovation, with more than half of surveyed organizations planning to implement generative AI solutions within the following year, alongside recommendations that India build indigenous Gen AI training datasets and consider developing Gen AI systems as public goods, in line with its Digital Public Infrastructure approach to platforms like Aadhaar and UPI.	unmapped
83	https://www.pib.gov.in/PressReleasePage.aspx?PRID=2139956	45135	NeGD launches 'AI in Governance' Training Programme for Government Officials at IIT Delhi	Government	The National e-Governance Division (NeGD), under the Ministry of Electronics and Information Technology, has initiated an "AI in Governance" training program for central and state government officials. Held in partnership with IIT Delhi, the program aims to equip public sector employees with the knowledge and skills to understand and implement AI in their respective domains. The curriculum covers the basics of AI, its applications in governance, and case studies of successful implementation. This capacity-building effort reflects the government's broader recognition that meaningful AI adoption in public administration depends as much on trained personnel as on technology itself, and it complements NeGD's other digital-governance training and awareness programs.	1x0

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
84	https://www.meity.gov.in/ministry/our-groups/details/ai-emerging-technologies-division-QN5EDOtQWa	Not Applicable	Ministry of Electronics and Information Technology	Government	The Ministry of Electronics and Information Technology (MeitY) is the primary government body driving India's digital transformation. MeitY formulates policies and promotes initiatives related to IT, electronics, and the internet. A major focus is on emerging technologies like Artificial Intelligence. The ministry spearheads the National AI Mission, which aims to establish a robust ecosystem for AI research and development, promote AI adoption across sectors, and create a skilled workforce. Through its AI and Emerging Technologies Division, MeitY also coordinates policy development, international cooperation, and sector-specific AI application programs spanning healthcare, agriculture, and governance.	1x0, 1x1
87	https://bank.sbi/corporate/AR1718/2_Embracing%20Technological%20Advancements,%20to%20consolidate%20our%20Digital%20Banking%20Leadership.html	Not Applicable	Embracing Technological Advancements, to consolidate our Digital Banking Leadership	Private Enterprise	State Bank of India (SBI) is leveraging technological advancements, including AI, to solidify its leadership in digital banking. The bank has implemented AI-powered chatbots and virtual assistants to provide 24/7 customer support and handle queries more efficiently. Internally, AI is used for risk management, fraud detection, and credit scoring, allowing for more accurate and faster decision-making. By analyzing customer data, SBI uses AI to offer personalized products and services, improving customer satisfaction while reinforcing its position as India's largest bank, with digital channels now handling the vast majority of the bank's total transaction volume.	1x2, 1x1, 1x4, 3x4
88	https://newsmantra.in/ntpc-ramagundam-holds-communication-workshop-on-ai-technology/	45478	NTPC Ramagundam holds communication workshop on AI technology	Private Enterprise	NTPC Ramagundam, a major power station in India, conducted a communication workshop focused on Artificial Intelligence. The event aimed to educate employees about the potential of AI technology and its applications within the power sector. Discussions likely covered	3x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					how AI can be used for predictive maintenance of plant machinery, optimization of power generation processes, and enhancing workplace safety. Such workshops are crucial for fostering a culture of innovation and preparing the workforce for the technology's growing role in plant operations, echoing similar AI-familiarization workshops NTPC has run for employees and their families at other regional headquarters as part of the company's broader push to build foundational AI literacy across its workforce.	
89	https://www.india.gov.in/website-indiaai-mission	Not Applicable	Website of IndiaAI Mission	Government	The IndiaAI Mission, spearheaded by the Indian government, is a comprehensive initiative designed to establish a robust AI ecosystem in the country. The mission focuses on several key pillars: strengthening computing infrastructure, providing access to high-quality datasets, developing a skilled workforce, and promoting AI research and innovation. By creating a dedicated mission, the government aims to propel India to the forefront of the global AI landscape. The initiative seeks to harness the power of AI to drive inclusive economic growth and social development, with an approved outlay of over ₹10,300 crore covering compute infrastructure of 10,000-plus GPUs, an innovation center for indigenous foundational models, a datasets platform, a skilling program, startup financing, and a Safe and Trusted AI pillar.	1x3
90	https://www.ntpc.co.in/media/press-release/ntpc-recognised-its-digital-initiatives	45393	NTPC recognised for its Digital initiatives	Government	NTPC Limited, India's largest power utility, has been recognized for its significant digital initiatives. The company is leveraging technology, including AI, to transform its operations. A key example is the adoption of predictive analytics for the maintenance of its power plant equipment, which helps in	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					minimizing downtime and improving efficiency. NTPC has also implemented digital platforms for project monitoring and employee services. These initiatives demonstrate a strong commitment to embracing digital transformation across the organization, building on tools developed through its Advanced Computing Center, including the AI-based NePPS operator advisory system for real-time plant performance monitoring.	
91	https://www.india.gov.in/spotlight/indiaai	Not Applicable	INDIAai Portal	Government	INDIAai is the official National AI Portal of India, a joint initiative by the Ministry of Electronics and IT (MeitY), NeGD, and NASSCOM. The portal serves as a central hub for all AI-related developments in the country. It provides resources such as news articles, research papers, and case studies on AI applications in various sectors like healthcare, agriculture, and governance. The platform aims to foster a vibrant AI ecosystem by connecting stakeholders, including researchers, startups, and government agencies, and it has grown since its 2020 launch to host thousands of articles, hundreds of case studies, and listings of AI startups, investment funds, and educational institutions across the country.	1x0, 1x2, 1x3, 1x4
92	https://www.scottmadden.com/insight/artificial-intelligence-use-cases-in-the-natural-gas-industry/	Not Applicable	Artificial Intelligence Use Cases in the Natural Gas Industry	Private Enterprise	The natural gas industry is leveraging AI for a variety of use cases to improve efficiency and safety. AI-powered systems are used for predictive maintenance of pipelines and processing facilities, helping to prevent leaks and costly downtime. In exploration and production, AI algorithms analyze geological data to identify promising drilling locations more accurately. AI is also used to optimize supply chain logistics, ensuring the efficient transportation and storage of gas. Furthermore, AI tools support emissions monitoring and leak detection using sensor and satellite data, helping operators meet tightening environmental regulations while improving overall asset reliability across the gas value chain.	1x3, 1x4, 3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
93	https://aimlprogramming.com/download/pdf/ai-enabled-process-optimization-for-indian-oil-refineries-1711345122.pdf	Not Applicable	AI-Enabled Process Optimization for Indian Oil Refineries	Private Enterprise	Indian oil refineries are adopting AI to optimize their complex processes and enhance efficiency. AI models are used to analyze real-time data from sensors throughout the refinery, allowing for the precise control of parameters like temperature and pressure. This leads to increased yield of high-value products and significant energy savings. AI-driven predictive maintenance helps in anticipating equipment failures, reducing unplanned shutdowns. Furthermore, AI assists in optimizing the supply chain from crude procurement through to product distribution, helping refiners respond more quickly to fluctuating crude prices and demand patterns while reducing overall operating costs.	1x3, 3x3
94	https://markwideresearch.com/india-ai-in-oil-and-gas-market/	2025	India AI in Oil and Gas Market 2025-2034	Private Enterprise	The Indian AI in Oil and Gas market is projected for significant growth between 2025 and 2034. The adoption of AI is driven by the need to enhance operational efficiency, improve safety, and maximize production from existing assets. Key applications include using AI for predictive maintenance of equipment, optimizing drilling and exploration processes by analyzing seismic data, and improving supply chain management. Both upstream and downstream sectors are investing in AI to reduce costs and stay competitive, with public sector majors such as ONGC and Indian Oil Corporation among the leading adopters driving demand for AI-enabled digital transformation across the industry.	3x3
95	https://www.reddit.com/r/oil/comments/1kc5sfq/this_made_me_see_ai_in_oil_gas_differently_use/	45413	This made me see AI in oil & gas differently. Use cases, real-world application	Private Enterprise	This discussion highlights real-world AI applications in the oil and gas industry. One key use case is leveraging AI for subsurface imaging, where algorithms analyze vast amounts of seismic data to create more accurate 3D models of	1x4, 3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					underground reservoirs, improving drilling success rates. Another application is in predictive maintenance for critical equipment like pumps and compressors, where AI can forecast failures and prevent costly operational disruptions. The conversation emphasizes that AI adoption in the sector tends to succeed when it targets specific, well-defined operational problems rather than being deployed as a broad, unfocused digital transformation initiative.	
96	https://www.munafasutra.com/nse/BHEL_BL/tomorrow/prediction	Not Applicable	AI Tomorrow's Prediction ["Forecast"] Bhel (BHEL_BL) share price targets	Private Enterprise	This website provides AI-driven predictions for the share price of Bharat Heavy Electricals Limited (BHEL). It uses historical stock price data to generate forecasts for the next day, week, and month. The AI model analyzes past trends, volatility, and market sentiment to predict potential price targets, support levels, and resistance levels. This tool is aimed at traders and investors looking for data-driven insights to inform their trading strategies. It represents a common application of AI in retail-investor-facing financial tools, though such automated forecasts should be treated as one input among many rather than a substitute for independent investment research.	1x4, 3x3
97	https://economictimes.indiatimes.com/industry/transportation/airlines-/-aviation/ai-pilots-carry-simulator-test-after-ahmedabad-crash-results-show-boeing-787-8-kept-flying/articleshow/122211946.cms?from=mdr	45483	AI pilots carry simulator test after Ahmedabad crash; results show Boeing 787-8 kept flying	Private Enterprise	Following the crash of Air India flight AI171, a Boeing 787-8 Dreamliner that went down shortly after takeoff from Ahmedabad on 12 June 2025, senior Air India pilots independently conducted simulator tests to explore possible causes. The tests recreated adverse conditions similar to those theorized for the flight, including higher weight and temperature with landing gear down and wing flaps retracted at low altitude, and the results showed the aircraft continued flying under these settings. This simulation was one input among several in the	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					wider investigation into the crash, which killed 241 of the 242 people on board along with people on the ground, and which India's Aircraft Accident Investigation Bureau, working with international partners including the US National Transportation Safety Board, continued to investigate, with preliminary findings pointing to both engines' fuel supply being cut off shortly after takeoff. The incident and subsequent analysis highlight the importance of flight simulators, which increasingly use AI to create realistic scenarios for pilot training and post-incident investigation.	
98	https://pdf.ipinnovative.com/pdf/24113	2025	The impact of Artificial intelligence on enhancing the in-store customer experience in retail sector	Academic Paper	This research paper explores how AI is enhancing the in-store customer experience in the retail sector. It discusses applications such as personalized recommendations delivered via smart mirrors or mobile apps, and AI-powered cameras that analyze customer movement to optimize store layouts. The study also examines the use of chatbots and virtual assistants to provide instant product information and support. The paper concludes that by integrating AI, retailers can create a more engaging, convenient, and efficient shopping journey that blends the personalization advantages of online retail with the immediacy of physical stores, ultimately strengthening customer loyalty and driving repeat visits.	1x2
99	https://www.reddit.com/r/Btechtards/comments/1lmuvwc/can_someone_please_make_a_post_like_this_for_ai/	45170	Can someone please make a post like this for AI ML branch	Private Enterprise	This Reddit thread reflects the growing interest and anxiety among engineering students in India regarding the new specialized branches in Artificial Intelligence and Machine Learning (AI ML). Students are seeking guidance on the curriculum, job prospects, and necessary skills for this field. The discussion highlights a need for clear information on how this	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					specialization differs from traditional computer science and what career paths it opens up. It underscores the demand from aspiring engineers for practical, first-hand accounts from students and professionals already in the field, reflecting the broader surge of interest in AI/ML education across Indian engineering colleges in recent years.	
100	https://www.indiaretailing.com/2025/02/04/indian-shoppers-ai-driven-retail-experiences/	45344	77% of Indian shoppers demand AI-driven retail experiences, new study reveals	Private Enterprise	A recent study reveals that a staggering 77% of Indian shoppers now expect and demand AI-driven experiences when they shop. This indicates a major shift in consumer expectations, moving beyond basic e-commerce to wanting highly personalized interactions. Shoppers are looking for features like tailored product recommendations, virtual try-on technology, and AI-powered customer service chatbots. This high demand is pushing retailers in India to accelerate their adoption of AI technologies to stay competitive, a trend reflected in broader industry data showing Indian retail AI spending surged 52% in 2024 alone, as companies race to meet rising consumer expectations around personalization and convenience.	1x2, 1x4
101	https://www.researchgate.net/publication/358406470_Use_of_Artificial_Intelligence_in_Mining_An_Indian_Overview	44197	Use of Artificial Intelligence in Mining: An Indian Overview	Academic Paper	This paper provides an overview of AI applications in the Indian mining industry. AI is being used to improve safety, efficiency, and productivity. Key use cases include using AI algorithms to analyze geological data for more accurate mineral exploration and resource estimation. In operations, AI-powered systems are deployed for predictive maintenance of heavy machinery, preventing costly breakdowns. Furthermore, autonomous vehicles and drones are being used for surveying and monitoring mining sites, improving safety by reducing the need for workers to enter hazardous areas while also enabling more frequent and accurate tracking of extraction progress and environmental impact.	1x4, 3x3, 4x3, 4x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
102	https://nishantverma.in/how-ai-is-used-in-manufacturing-and-automation-transforming-indian-industries/	Not Applicable	How AI Is Used in Manufacturing and Automation: Transforming Indian Industries	Private Enterprise	AI is a transformative force in Indian manufacturing and automation. Companies are using AI-powered computer vision for quality control, where cameras detect defects on production lines with greater speed and accuracy than human inspectors. Predictive maintenance, driven by machine learning algorithms, analyzes sensor data from equipment to forecast failures and schedule repairs proactively. AI is also optimizing supply chains through better demand forecasting and logistics planning. These applications are helping Indian manufacturers reduce downtime, cut waste, and improve overall production quality, positioning the sector to compete more effectively as global supply chains increasingly favor technologically advanced, data-driven production hubs.	1x3, 1x4, 3x3
103	https://www.dqindia.com/opinion/smart-manufacturing-how-ai-can-propel-india-to-the-top-of-the-global-production-chain-9013069	45429	Smart Manufacturing: How AI can propel India to the top of the global production league	Private Enterprise	This article argues that AI is key to propelling India into the top ranks of global manufacturing. By adopting "Smart Manufacturing" practices, Indian factories can significantly boost efficiency and productivity. AI applications like predictive maintenance, AI-driven quality control, and intelligent supply chain management can reduce costs and improve output. The integration of AI with IoT (the Industrial Internet of Things) allows for the creation of fully connected and optimized production environments where machines, sensors, and enterprise systems continuously exchange data, enabling manufacturers to respond to disruptions in near real time and compete more effectively in global supply chains.	1x3, 1x4, 3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
104	https://www.investindia.gov.in/blogs/manufacturing-40-indias-ai-powered-industrial-revolution	45351	Manufacturing 4.0: India's AI-Powered Industrial Revolution	Government	India is undergoing an AI-powered industrial revolution, termed Manufacturing 4.0. This transformation involves integrating AI, IoT, and data analytics into manufacturing processes to create "smart factories." The government's "Make in India" initiative and Production Linked Incentive (PLI) schemes are key drivers of this change. AI is being used for predictive maintenance to reduce downtime, quality control through computer vision, and optimizing supply chains. This technological shift is aimed at making Indian manufacturing more globally competitive, positioning the country to capture a larger share of investment as global companies diversify their supply chains away from single-country dependence.	1x3, 1x4, 3x3
105	https://indiaai.gov.in/article/rbi-study-explores-how-indian-banks-leverage-ai	45295	RBI study explores how Indian banks leverage AI	Government	A Reserve Bank of India (RBI) study reveals that Indian banks are increasingly leveraging AI to enhance their operations and customer service. Banks are adopting AI for a range of functions, including credit scoring, fraud detection, risk management, and personalized customer interactions through chatbots. The study notes that while AI offers significant benefits in terms of efficiency and accuracy, it also presents challenges related to data privacy, cybersecurity, and the need for new regulatory frameworks. Titled "How Indian Banks are Adopting Artificial Intelligence?" and based on text-mining of bank annual reports from FY2015-16 to FY2022-23, the study found that private banks are leading adoption, and that a bank's asset size and capital adequacy ratio are positively linked to its AI adoption, reflecting the advantages of scale and greater ability to invest in technology among larger, financially healthier institutions.	1x2, 3x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
106	https://msnim.edu.in/documents/1722/1_Voice_commerce-1.pdf	45128	A STUDY BASED ON SBI-SIA VIRTUAL ASSISTANT	Academic Paper	This study focuses on SBI Intelligent Assistant (SIA), the AI-powered virtual assistant used by the State Bank of India (SBI). SIA is designed to handle a vast number of customer queries 24/7, providing information on banking products and services. The research examines the effectiveness of this chatbot in improving customer engagement and reducing the workload on human agents. It analyzes how AI and Natural Language Processing (NLP) enable SIA to understand and respond to customer needs, representing one of the largest deployments of conversational AI in Indian banking given SBI's massive customer base, and the study highlights both the efficiency gains and the current limitations of NLP-driven assistants in handling complex, multi-step banking queries.	1x2, 1x4
107	https://msnim.edu.in/storage/app/media/journal/Issue%2022/v22p137.pdf	44652	ARTIFICIAL INTELLIGENCE IN INDIAN BANKING SECTOR: AN OVERVIEW	Academic Paper	This paper provides an overview of the adoption of Artificial Intelligence in the Indian banking sector. It details how AI is being applied in various areas, including front-office operations like customer service via chatbots, middle-office functions such as fraud detection and risk assessment, and back-office activities like process automation. The research highlights that AI is no longer a niche technology but a critical tool for banks to gain a competitive edge. It helps in enhancing efficiency, reducing operational costs, and improving the accuracy of credit decisions, while the paper also notes that successful AI adoption in banking depends heavily on data quality, regulatory compliance, and building customer trust in automated decision-making.	1x2, 1x1, 1x4, 3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
108	https://www.squareyards.com/blog/karnataka-smart-city-smcart	45413	Smart City Karnataka: Mission, Objective, Projects & Current Status	Private Enterprise	The Smart Cities Mission in Karnataka aims to transform urban living by making cities more sustainable and citizen-friendly. Projects under this mission often incorporate technology like AI and IoT. For example, intelligent traffic management systems use AI-powered cameras to monitor traffic flow and optimize signal timings, reducing congestion. Smart surveillance systems enhance public safety, and smart grids improve energy efficiency. These initiatives focus on leveraging technology to improve service delivery, resource management, and quality of life for citizens, with Karnataka's smart city projects spanning multiple urban centers beyond Bengaluru as the state seeks to extend digital infrastructure investment more broadly.	1x2, 1x3, 5x3
109	https://www.tradingview.com/news/moneycontrol:9b55e9e14094b:0-reliance-only-indian-firm-in-highly-valued-global-technology-companies-list/	45463	Reliance only Indian firm in highly valued global technology companies list	Private Enterprise	This article reports that Reliance Industries is the only Indian company to feature among the top 30 most valuable publicly traded global technology firms, according to a 340-page report titled 'Trends – Artificial Intelligence.' Ranked 23rd with a market capitalization of USD 216 billion, Reliance appears alongside American giants such as Microsoft, Nvidia, Apple, Amazon, and Alphabet, which occupy the top eight positions, as well as Taiwan's TSMC (9th) and China's Tencent. The report notes that over the past 30 years only five companies have remained on the list continuously, and that the United States' share of the top 30 has grown from 53% in 1995 to 70% in 2025, while newer entrants include China (3 companies), Germany (2), and single companies from Taiwan, the Netherlands, South Korea, and India, underscoring both AI's role in reshaping the global technology hierarchy and India's still-limited presence at that tier.	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
110	https://www.mckinsey.com/industries/metals-and-mining/how-we-help-clients/how-a-steel-plant-in-india-tapped-the-value-of-data-and-won-global-acclaim	44915	How Tata Steel built its analytics capabilities	Private Enterprise	Tata Steel has successfully built advanced analytics and AI capabilities to drive significant value across its operations. The company established a centralized analytics team and focused on solving high-impact problems. Key AI use cases include optimizing the performance of its blast furnaces, improving production yield, and implementing predictive maintenance for critical equipment to reduce downtime. By fostering a data-driven culture and investing in talent and technology, Tata Steel has demonstrated measurable performance gains, including at its Kalinganagar plant, where frontline operators used analytics to fine-tune the superheating process critical to casting quality, earning the facility recognition from the World Economic Forum as a leading digital manufacturing site.	3x3
111	https://partnershiponai.org/wp-content/uploads/2021/08/Tata-Steel_Brief.pdf	Not Applicable	Tata Steel Europe - Partnership on AI	Non-profit Organization	Tata Steel Europe is a partner of the 'Partnership on AI', a non-profit organization dedicated to the responsible development and use of AI. This partnership signifies Tata Steel's commitment to ethical AI practices. Within its operations, the company applies AI to improve manufacturing processes, enhance workplace safety, and drive sustainability. By collaborating with a global community of experts and organizations, Tata Steel aims to ensure its AI applications are developed and deployed in a manner consistent with shared industry principles around fairness, transparency, and safety, reflecting the broader Tata Group's push to embed responsible AI governance alongside its operational AI deployments.	1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
112	https://asset.tataelxsi.com/building-ai-driven-sustainable-automation-for-steel-industry-case-study	Not Applicable	Building AI Driven Sustainable Automation for Steel Industry	Private Enterprise	This document from Tata Elxsi outlines how AI-driven automation can create a more sustainable steel industry. The proposed solutions use AI for process optimization to reduce energy consumption and carbon emissions. Computer vision systems are used for real-time quality inspection and defect detection, minimizing waste. AI also enables predictive maintenance of equipment, enhancing operational efficiency and safety. By integrating AI into the production lifecycle, steel manufacturers can achieve measurable reductions in energy intensity and material waste while improving overall equipment reliability, positioning sustainability-focused AI adoption as a competitive advantage rather than solely a compliance requirement.	1x3, 1x4, 3x3, 5x3, 5x4
113	https://monsoonfish.com/labs/could-myntra-use-a-new-ai-voice-to-revolutionize-its-shopping-experience/	45470	Could Myntra Use a New AI Voice to Revolutionize its Shopping Experience?	Private Enterprise	This article explores the potential for Indian fashion retailer Myntra to revolutionize its shopping experience by integrating an advanced AI voice assistant. Such a feature would allow customers to search for products, ask for styling advice, and complete purchases using natural language commands. An AI voice could provide a more intuitive and hands-free shopping journey, mimicking the experience of talking to a human stylist. This would be a significant step beyond current chatbot and text-based tools such as My Stylist and MyFashionGPT, potentially deepening engagement further by making product discovery feel less like browsing a catalog and more like a real styling conversation.	1x2
114	https://hh.diva-portal.org/smash/get/diva2:1980220/FULLTEXT02.pdf	2022	Exploring the Adoption and implementation challenges of AI driven applications in the HRM process	Academic Paper	This thesis explores the challenges of adopting and implementing AI-driven applications in Human Resource Management (HRM). The research identifies several barriers, including a lack of AI expertise	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					among HR professionals, employee resistance to new technology, and concerns about data privacy and algorithmic bias in processes like recruitment and performance evaluation. The study emphasizes the need for organizations to invest in training, develop clear ethical guidelines, and manage change effectively, arguing that successful AI adoption in HRM depends as much on building organizational trust and transparency as on the underlying technology itself.	
115	https://www.eyenuk.com/en/company/	Not Applicable	Company - Eyenuk, Inc. ~ Artificial Intelligence Eye Screening	Private Enterprise	Eyenuk is a company that has developed an AI-powered eye screening system, EyeArt®, designed for the autonomous detection of diabetic retinopathy. This technology analyzes retinal images and provides a screening report in under 30 seconds, without the need for an eye care specialist to interpret the image. The system is FDA-cleared and aims to make early detection of this sight-threatening disease more accessible and efficient, especially in primary care and endocrinology settings. By enabling point-of-care screening outside traditional ophthalmology clinics, EyeArt is designed to help close the gap between the large diabetic population at risk of vision loss and the limited number of retina specialists available to screen them, a challenge particularly acute in countries like India.	1x1, 2x1, 2x3, 4x4
116	https://pmc.ncbi.nlm.nih.gov/articles/PMC12177155/	44609	Artificial intelligence for advancing eye care in resource-poor settings: Assessing the predictive accuracy of an AI-model for diabetic retinopathy screening in India	Academic Paper	This study assesses the accuracy of an AI model for diabetic retinopathy (DR) screening in resource-poor settings in India. The research found that the AI algorithm demonstrated high sensitivity and specificity in detecting DR from retinal images, comparable to human ophthalmologists. The paper concludes that AI can be a highly effective tool for	1x3, 2x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					mass screening programs, especially in areas with limited access to specialists. By providing rapid and accurate diagnoses, AI can help identify patients who need urgent referral for treatment, potentially preventing avoidable vision loss among India's more than 70 million people living with diabetes, a large share of whom currently lack regular access to retinal screening.	
117	https://economictimes.indiatimes.com/tech/artificial-intelligence/high-ai-maturity-fuels-long-term-project-success-and-trust-gartner-survey/articleshow/122158749.cms?from=mdr	45369	High AI maturity fuels long-term project success and trust: Gartner survey	Private Enterprise	A Gartner survey reveals that organizations with high AI maturity—meaning they have well-defined AI strategies and governance—are more likely to achieve long-term project success. These organizations experience better outcomes, including higher ROI and greater trust in AI systems among employees. The findings emphasize that successful AI implementation is not just about technology but also about having the right organizational structure, talent, and ethical frameworks in place. For Indian companies, many of which are still in earlier stages of AI maturity compared to global peers, the survey's findings suggest that closing this gap will require sustained investment in governance and workforce capability rather than technology deployment alone.	1x0
118	https://aiforgood.itu.int/event/experience-indias-thriving-ai-for-good-start-up-ecosystem/	Not Applicable	Experience India's thriving AI for Good start-up ecosystem	Non-profit Organization	India has a vibrant and growing ecosystem of "AI for Good" startups that are developing innovative solutions to address pressing social and environmental challenges. These startups are leveraging AI in sectors like healthcare, agriculture, and education to create scalable and impactful products. For example, some are creating AI-powered diagnostic tools for underserved communities, while others are developing platforms to help farmers improve crop yields. This ecosystem, supported by	1x3, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					government initiatives, philanthropic funders such as Google.org, and international bodies including the ITU, reflects India's broader positioning as a hub for AI solutions tailored to the constraints of resource-limited, high-population environments, with lessons that are increasingly seen as relevant well beyond India's own borders.	
119	https://nielseniq.com/global/en/insights/commentary/2023/gen-ai-set-to-revolutionize-indian-automotive-landscape/	45334	Gen AI set to revolutionize Indian Automotive Landscape	Private Enterprise	Generative AI is poised to revolutionize the Indian automotive industry by transforming the customer experience. From pre-sales to after-sales, Gen AI can power hyper-personalized interactions. For instance, it can create immersive virtual showrooms where customers can explore and customize vehicles. AI-driven chatbots can provide instant, human-like responses to queries. In the after-sales phase, Gen AI can help in diagnosing vehicle issues and providing personalized maintenance schedules. This end-to-end integration of generative AI across the customer journey is expected to help Indian automakers and dealers differentiate themselves in an increasingly competitive market while improving customer retention and lifetime value.	1x2, 1x3, 1x4
120	https://bdbipl.com/index.php/ai-revolution-in-indias-automotive-sector/	Not Applicable	AI Revolution in India's Automotive Sector	Private Enterprise	The AI revolution is reshaping India's automotive sector across the entire value chain. In manufacturing, AI-powered robots and computer vision systems are enhancing precision and efficiency on the assembly line, while predictive maintenance is reducing downtime. For consumers, AI is personalizing the in-car experience with smart assistants and enabling advanced driver-assistance systems (ADAS) for improved safety. Furthermore, AI is optimizing supply chains and dealer operations. This widespread integration reflects the industry's recognition that AI adoption is no longer optional for automakers seeking to remain competitive as global vehicle manufacturing becomes increasingly software- and data-driven.	1x4, 3x3, 4x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
121	https://data.org/stories/wadhwani-ai/	Not Applicable	Wadhwani AI Takes an Impact-First Approach to Applying Artificial Intelligence	Non-profit Organization	Wadhwani AI distinguishes itself by taking an "impact-first" approach to its work. Instead of starting with the technology, the non-profit institute first identifies critical problems in developing countries, particularly in health and agriculture. It then determines if AI is the right tool to solve that problem at scale. This methodology ensures that their solutions are tailored to real-world needs. For example, their AI-powered pest management tool for cotton farmers directly addresses a major driver of crop loss and pesticide overuse, and this same problem-first discipline has guided the institute's other flagship projects in tuberculosis treatment adherence and maternal and child health, helping it scale solutions that are genuinely usable by the underserved communities they are designed for.	1x3
122	https://aimlprogramming.com/download/pdf/ai-bhel-bhopal-process-optimization-1712149248.pdf	Not Applicable	AI BHEL Bhopal Process Optimization	Private Enterprise	Bharat Heavy Electricals Limited (BHEL) in Bhopal is utilizing AI for process optimization in its manufacturing operations. As a major producer of heavy electrical equipment, BHEL deals with complex production processes. By implementing AI, the company can analyze data from its shop floor to identify bottlenecks, improve workflow, and enhance product quality. For example, AI can be used to optimize welding parameters or to predict the performance of turbines based on manufacturing data. This helps BHEL reduce material waste and rework, supporting the company's broader efforts to modernize its heavy engineering operations while maintaining the precision required for power-generation and industrial equipment manufacturing.	1x1, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
123	https://indiaai.gov.in/article/uidai-is-using-ai-to-confront-payment-fraud	2025	Aadhaar AI Biometric Deduplication & Fraud Detection (UIDAI/NVIDIA DGX)	Government	AI-powered biometric deduplication using NVIDIA DGX for 1.4B residents. FMR-FIR modality for spoofed fingerprint detection in AePS.	1x2, 3x3
124	https://indiaai.gov.in/article/upi-evolution-and-impact-in-india	2025	UPI AI Fraud Risk Monitoring (NPCI)	Government	AI/ML real-time fraud monitoring for ₹24+ lakh crore monthly UPI transactions. 18.39B transactions Jun 2025. 50% of global real-time payments.	3x4
125	https://www.digitalindia.gov.in/initiative/umang/	2025	UMANG: 1,745+ Services, Bhashini NLP Integration (80+ Depts)	Government	Unified mobile platform for 1,745+ services from 80+ departments. 5.58 crore users. Bhashini AI integrated for 23 languages.	1x2, 2x2
126	https://bhashini.gov.in/	2025	BHASHINI: National Language AI Platform (22 Languages, 100M+ Monthly Calls)	Government	National NLP mission covering 22 scheduled languages. 300+ reusable AI models. 100M+ monthly inference calls. Integrated into UMANG, healthcare, PM speeches.	2x2, 2x0
127	https://pmc.ncbi.nlm.nih.gov/articles/PMC10470555/	2023	CoWIN: AI-Driven Vaccination Logistics for 350M+ Doses	Academic Paper	AI/IoT for demand forecasting, vaccine distribution logistics, population triage. Integrated with eVIN, DIVOC, DigiLocker.	3x3
128	https://abdm.gov.in/	2025	Ayushman Bharat: 67Cr Health IDs, AI-CDSS, 282M Telemedicine Consultations	Government	67 crore ABHA health IDs. AI Clinical Decision Support System. eSanjeevani 282M consultations, 12M AI-assisted diagnoses.	3x3, 2x3
129	https://smartcities.gov.in/	2025	Smart City Mission: 100 Cities AI (Surat 27% Crime Reduction)	Government	100 Smart Cities with AI. Surat: 27% crime reduction via AI safety. Pune: smart e-governance. Bhopal: Integrated Command Centers.	1x3, 3x3
130	https://indiaai.gov.in/news/cabinet-approves-india-ai-mission-at-an-outlay-of-rs-10-372-crore	2024	India AI Mission: ₹10,372 Crore, 38,000 GPUs, 30+ Applications	Government	2024-2029 mission. 38,000 GPUs at ₹65/hr. AIKosh 3,000+ datasets. 30+ approved applications in health, agriculture, cybersecurity.	1x0, 5x4
131	https://www.digitalindia.gov.in/initiative/mygov/	2025	MyGov: AI Chatbot Citizen Engagement (47M+ Users)	Government	47M+ users. AI chatbots for policy info/citizen queries. Groups, Discuss, Poll, Survey. Used by nearly all government departments.	1x2, 2x2
132	https://www.pib.gov.in/PressReleasePage.aspx?PRID=2228842	2025	Bharat-VISTAAR: AI Agriculture Platform (7.63Cr Farmer IDs)	Government	Weather forecasts, market prices, pest alerts, crop advice via chatbot/app in 11 languages. Kisan e-Mitra AI. 7.63 crore farmer IDs.	3x3, 2x3
133	https://indiaai.gov.in/case-study/ai-is-being-used-by-the-up-police-to-catch-criminals	2025	Predictive Policing AI: Delhi CMAPS, UP Trinetra (5L Records), FRS	Government	Delhi CMAPS since 2015. UP Trinetra 5 lakh criminal records. FRS 100+ camera feeds, 1M records in 200ms.	3x3, 2x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
134	https://indiaai.gov.in/article/the-central-government-to-leverage-ai-in-gem-procurement-union-minister-piyush-goyal	2025	GeM: AI Procurement Platform (₹5+ Lakh Crore, GeMAI Chatbot)	Government	₹5+ lakh crore GMV. 1.64 lakh buyers, 4.2 lakh sellers. GeMAI Gen AI chatbot. Gold Award for AI/ML in Public Services 2025.	2x1, 4x1
135	https://indiastack.org/	2025	India Stack: Integrated Digital Public Infrastructure	Government	Aadhaar (1.4B), UPI (10B+/month), DigiLocker, ABDM, Account Aggregator. 80% banking penetration (from 17% in 2009).	1x0, 1x2
136	https://www.newkerala.com/news/o/govt-plans-ai-based-ekyc-global-credential-verification-digilocker-338	2025	DigiLocker: AI-based eKYC & Global Credential Verification	Government	Moving to AI eKYC. QR code authentication. API for document verification.	1x2
128	https://opengovreport.ocf.tw/en/	2026-03-04	Taiwan Open Government Report (OCF)	Non-profit Organization	Open Culture Foundation tracks the ROC's open government progress. Participation Officers deployed across government agencies. Ongoing monitoring of open data commitments.	1x0
129	https://data.gov.tw/en/datasets/58297	2026-03-04	data.gov.tw: Pol.is Executive Yuan version	Government	Polis (consensus-mapping AI tool) deployed on official government open data platform. Executive Yuan version for policy deliberation.	2x2, 3x0

JAPAN

Proposed Score

Technology \ Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.50	0.50	0.25	0.50	0.75
2. Perceptual/NLP	0.00	0.50	0.50	0.75	0.00
3. Analysis/Decision Support	0.25	0.25	0.00	0.50	0.25
4. Agent	0.00	0.25	0.00	0.25	0.25
5. Sustainability/Unmapped	0.25	0.00	0.00	0.25	0.00

Rationale by Cell

Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ ICT	0. Policy & Governance	14	AI Strategy 2022 / Integrated Innovation Strategy Promotion Council; METI AI Talent Development & Utilization Promotion; RIKEN AIP (Center for Advanced Intelligence Project); National Institute of Informatics (NII) Academic AI Infrastructure; AIST AI Research Center (and 9 other sources)	0.5	AI Promotion Act (2025) provides legal foundation; AI Strategy Headquarters under PM Office is central coordinating body. AI Basic Plan frames strategic priorities under four principles. Extensive institutional architecture but implementation phase.
1x1	1. Foundation, Infra AI/ ICT	1. Internal Management	13	Digital Agency; MIC Guidelines for AI Utilization in Local Governments; J-LIS (Japan Agency for Local Authority Information Systems); NISC Cybersecurity AI; Yokohama City AI-OCR & RPA Deployment (and 8 other sources)	0.5	MIC Survey documents extensive foundational AI/ ICT deployment at municipal/national level. Digital Agency establishment (2021) and Government Cloud provide infrastructure base. AI Strategy Headquarters (2025) adds top-level coordination.
1x2	1. Foundation, Infra AI/ ICT	2. Citizen & Citizen services	1	MIC Survey on AI Utilization by Local Governments (2024)	0.25	MIC Survey (2024) documents citizen-service AI adoption at the aggregate level, but is currently the only source mapped directly

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
						to this cell; specific municipal chatbot/ consultation deployments (Chiba, Shibuya, Nagano) are evidenced separately under Perceptual/NLP x Citizen Services (2x2). Foundational infrastructure specifically for citizen services has limited direct evidence.
1x3	1. Foundation, Infra AI/ ICT	3. Administrative Domain	0	–	0.5	No sources currently map directly to Foundation/ Infrastructure AI within the Administrative Domain. Related agriculture, infrastructure-inspection, and disaster-prevention AI activity is evidenced instead under Analysis/Decision Support (3x3) and Perceptual/NLP (2x3). Score reflects expert judgment in the absence of directly mapped sources.
1x4	1. Foundation, Infra AI/ ICT	4. Industry & Others	10	AI Strategy 2022 / Integrated Innovation Strategy Promotion Council; METI AI Talent Development & Utilization Promotion; Aichi Prefecture AI-Enabled Manufacturing Support; National Institute of Informatics (NII) Academic AI Infrastructure; AIST AI Research Center (and 5 other sources)	0.75	NEDO large-scale investment (~20B yen), Preferred Networks and AIST research infrastructure, and regional programs (Aichi Prefecture manufacturing support, Fukuoka AI startups) demonstrate well-established industrial AI infrastructure.
2x0	2. Perceptual/NLP	0. Policy & Governance	0	–	0	No cases of direct NLP/ perceptual technology application to policy governance
2x1	2. Perceptual/NLP	1. Internal Management	5	Courts: AI Case Law Search & Sentencing Support System Research; Yokohama City AI-OCR & RPA Deployment; Tsukuba City AI Meeting Minutes & Counter AI; J-LIS AI Shared Services; MIC Survey on AI Utilization by Local Governments (2024)	0.5	MIC Survey documents 604 OCR deployments across local governments. AI-OCR widely adopted. Over 500 municipalities leveraging shared OCR infrastructure through J-LIS.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	8	MIC Guidelines for AI Utilization in Local Governments; NTA AI Tax Return Support & Tax Audit AI; Chiba City AI Chatbot Citizen Services; SoftBank Pepper / AI Government Service Counter; Osaka Prefecture/City: Expo AI Utilization Plan (and 3 other sources)	0.5	MIC Survey (2024) documents 864 speech-recognition deployments across local governments. Additional evidenced examples include Chiba City's AI chatbot, Shibuya Ward's AI consultation service, and SoftBank Pepper-based service counters, though usage remains concentrated in a subset of municipalities.
2x3	2. Perceptual/NLP	3. Administrative Domain	8	MHLW Medical AI Promotion / Healthcare AI Development Acceleration Consortium; MAFF Smart Agriculture; Metropolitan Police AI Crime Prediction & Image Analysis; MLIT AI-Enabled Infrastructure Inspection; NEC Facial Recognition & Biometric AI (and 3 other sources)	0.75	NEC facial recognition implemented in immigration at world-highest accuracy. Medical image AI (increasing PMDA approvals). Infrastructure inspection AI deployed nationwide. Perceptual/NLP application in government is Japan's strength
2x4	2. Perceptual/NLP	4. Industry & Others	0	–	0	No industry-oriented NLP cases related to the public sector
3x0	3. Analysis/Decision Support	0. Policy & Governance	1	Cabinet Secretariat EBPM (Evidence-Based Policy Making) Promotion	0.25	EBPM Promotion Committee exists but AI utilization is at early stage. Aspires to data analysis for policy effectiveness verification, but manual analysis predominates
3x1	3. Analysis/Decision Support	1. Internal Management	4	NTA AI Tax Return Support & Tax Audit AI; Courts: AI Case Law Search & Sentencing Support System Research; MOJ AI Immigration Control & Recidivism Prediction Research; MIC Survey on AI Utilization by Local Governments (2024)	0.25	MIC Survey documents substantial analytical/ decision-support deployment in tax administration, welfare eligibility, and land registration. Tax Assessment AI -57.4% processing time is benchmark case.
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	0	–	0	No cases of decision support AI for citizens
3x3	3. Analysis/Decision Support	3. Administrative Domain	13	MHLW Medical AI Promotion / Healthcare AI Development Acceleration Consortium; MAFF Smart Agriculture;	0.5	Multiple prediction/analysis AIs operational in disaster prevention, infrastructure, and agriculture. Analytical AI

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
				Metropolitan Police AI Crime Prediction & Image Analysis; MLIT AI-Enabled Infrastructure Inspection; Kobe City AI Water Pipe Deterioration Prediction (and 8 other sources)		in government domains is an area of proven Japanese achievement
3x4	3. Analysis/Decision Support	4. Industry & Others	1	Aichi Prefecture AI-Enabled Manufacturing Support	0.25	Industry-oriented analytical AI is private-sector led. Public sector involvement is limited
4x0	4. Agent	0. Policy & Governance	0	–	0	No agentic AI application to policy governance
4x1	4. Agent	1. Internal Management	2	J-LIS (Japan Agency for Local Authority Information Systems); Digital Agency Government Cloud	0.25	Government Cloud could serve as a foundation for agentic integration, but currently at infrastructure development stage
4x2	4. Agent	2. Citizen & Citizen services	0	–	0	No agentic AI application to citizen services
4x3	4. Agent	3. Administrative Domain	3	NEC Facial Recognition & Biometric AI; Osaka Prefecture/City: Expo AI Utilization Plan; NEC Bio-IDiom (Airport Immigration AI)	0.25	Automated airport immigration is partially agentic. Autonomous driving at demonstration stage. Overall, agentic AI is at early stage
4x4	4. Agent	4. Industry & Others	5	Toyota Research Institute / Toyota AI; Preferred Networks (PFN); Fujitsu Kozuchi (AI Platform); Hitachi Lumada AI Platform; FANUC AI Factory Automation	0.25	Private-sector agentic AI (autonomous driving, industrial robots) is active. Public application is limited
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	–	0.25	No sources currently map directly to this cell. The Hiroshima AI Process (Japan's G7 international AI governance initiative) is a relevant Policy & Governance activity but is not captured as a distinct source in the current evidence list; domestic governance institutionalization otherwise remains at an early stage. Score reflects expert judgment in the absence of directly mapped sources.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	–	0	No applicable cases
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	–	0	No applicable cases
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	5	Digital Agency; NISC Cybersecurity AI; Regulatory Reform Promotion Council: AI Deregulation; MIC AI Utilization Guidelines; Prime Minister's Office AI Strategy Council	0.25	AI governance under development through soft-law approach. Hard law not yet in place. Sustainability framework at policy stage
5x4	5. Sustainability/ Unmapped	4. Industry & Others	0	–	0	No applicable cases

All Sources List

No	URL	Day	Title	Type	Case Details	Mapping Cell
1	https://www8.cao.go.jp/cstp/ai/index.html	2025-03-15	AI Strategy 2022 / Integrated Innovation Strategy Promotion Council	Government	AI Strategy 2022 is a comprehensive AI policy toward realizing Society 5.0. Five pillars: education, research, social implementation, data linkage infrastructure, and governance. Cross-ministry strategic framework.	1x0, 1x4
2	https://www.digital.go.jp/	2025-03-15	Digital Agency	Government	Established 2021. Command center for government DX. Promotes My Number Card adoption, Government Cloud, and data linkage infrastructure development.	1x1, 5x3
3	https://www.meti.go.jp/policy/it_policy/jinzai/	2025-03-20	METI AI Talent Development & Utilization Promotion	Government	METI's AI talent development program. Online education platforms such as AI Quest. Supply of AI implementation professionals in collaboration with industry.	1x0, 1x4
4	https://www.soumu.go.jp/menu_news/s-news/01tsushin06_02000245.html	2025-03-20	MIC Guidelines for AI Utilization in Local Governments	Government	Standardizes AI adoption in local governments. Presents best practices for chatbot and RPA deployment. Foundational guidance for nationwide rollout.	1x1, 2x2
5	https://www.mhlw.go.jp/stf/newpage_ai.html	2025-03-25	MHLW Medical AI Promotion / Healthcare AI Development Acceleration Consortium	Government	Medical image diagnosis AI, care robots, drug discovery AI, etc. Six priority development areas established. Increasing PMDA-approved AI medical devices.	2x3, 3x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
6	https://www.maff.go.jp/j/kanbo/smart/	2025-03-25	MAFF Smart Agriculture	Government	Pest/disease diagnosis via AI image analysis, drone+AI pesticide spraying, crop yield prediction. Field trials in 214 districts nationwide (as of 2023).	2x3, 3x3
7	https://www.nta.go.jp/	2025-04-01	NTA AI Tax Return Support & Tax Audit AI	Government	AI chatbot (Futaba) for tax return inquiries. Handles approx. 14 million queries annually. AI also used for fraud detection in tax audits.	2x2, 3x1
8	https://www.j-lis.go.jp/	2025-04-01	J-LIS (Japan Agency for Local Authority Information Systems)	Government	My Number infrastructure operation. Linkage with Basic Resident Register Network. Inter-municipal data linkage infrastructure. Public personal authentication services.	1x1, 4x1
9	https://www.keishicho.metro.tokyo.lg.jp/	2025-04-05	Metropolitan Police AI Crime Prediction & Image Analysis	Government	AI analysis of security camera footage. Crime occurrence prediction models. Suspicious object detection. Pilot RPA for police box operations.	2x3, 3x3
10	https://www.mlit.go.jp/toshi/city_plan/toshi_city_plan_tk_000078.html	2025-04-05	MLIT AI-Enabled Infrastructure Inspection	Government	AI image diagnosis of bridges, tunnels, etc. Drone+AI infrastructure deterioration detection. Integration with i-Construction. Streamlining inspection of 720,000 bridges nationwide.	2x3, 3x3
11	https://www.courts.go.jp/	2025-04-10	Courts: AI Case Law Search & Sentencing Support System Research	Government	AI search proof-of-concept for case law database. Sentencing prediction model at research stage. Recidivism prediction model research in cooperation with MOJ.	3x1, 2x1
12	https://scan.netsecurity.ne.jp/article/2024/03/15/	2025-04-10	NISC Cybersecurity AI	Government	AI-enabled cyber attack detection. Security monitoring for government agencies. Automated threat intelligence analysis.	5x3, 1x1
13	https://www.city.yokohama.lg.jp/	2025-04-15	Yokohama City AI-OCR & RPA Deployment	Government	Organization-wide AI-OCR deployment (approx. 600,000 handwritten documents processed annually). 40% reduction in work hours through RPA integration. Leading example of local government DX.	2x1, 1x1
14	https://www.city.chiba.jp/	2025-04-15	Chiba City AI Chatbot Citizen Services	Government	LINE-integrated AI chatbot. Waste sorting guidance, childcare support information. Handles over 500,000 inquiries annually.	2x2
15	https://www.pref.aichi.jp/	2025-04-20	Aichi Prefecture AI-Enabled Manufacturing Support	Government	Automotive industry x AI quality inspection. AI adoption support program for SME manufacturers. Over 100 companies in the prefecture participating.	1x4, 3x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
16	https://www.city.kobe.lg.jp/	2025-04-20	Kobe City AI Water Pipe Deterioration Prediction	Government	AI-based water pipe deterioration prediction. Learns from past leak data and pipe attributes. Automatic prioritization of replacements. Approx. 200 million yen annual cost savings.	3x3
17	https://riken.jp/research/labs/aip/	2025-04-25	RIKEN AIP (Center for Advanced Intelligence Project)	University/ Research Institute	Japan's largest AI fundamental research center. Over 200 researchers. Deep learning theory, optimization, causal inference. Advisory role for government AI policy.	1x0
18	https://www.nii.ac.jp/	2025-04-25	National Institute of Informatics (NII) Academic AI Infrastructure	University/ Research Institute	Operates SINET6 (academic information network). Large language model research. National research infrastructure for information science.	1x0, 1x4
19	https://www.aist.go.jp/aist_j/aistinfo/aist_link/link_ai.html	2025-05-01	AIST AI Research Center	University/ Research Institute	R&D of real-world AI. Manufacturing AI, medical AI, infrastructure AI. Operates ABCI supercomputer (AI Bridging Cloud Infrastructure).	1x0, 1x4
20	https://www.nedo.go.jp/activities/ZZJP_100197.html	2025-05-01	NEDO AI & Robotics Social Implementation Project	Government	Large-scale project funding for AI social implementation. Approx. 20 billion yen annually. Concentrated investment in healthcare, manufacturing, and infrastructure.	1x4, 3x3
21	https://www.toyota-ri.com/	2025-05-05	Toyota Research Institute / Toyota AI	Private Enterprise	Autonomous driving AI, manufacturing AI, materials science AI. TRI annual budget approx. $500M. Social implementation experiments at Woven City.	4x4
22	https://www.preferred.jp/	2025-05-05	Preferred Networks (PFN)	Private Enterprise	Developed deep learning framework Optuna. Manufacturing AI. Computational drug discovery. Autonomous driving. Japan's largest AI startup.	1x4, 4x4
23	https://www.softbank.jp/biz/solutions/ai/	2025-05-10	SoftBank Pepper / AI Government Service Counter	Private Enterprise	Pepper deployed in over 100 local governments (2019 peak). AI concierge. Multilingual AI for government service counters.	2x2
24	https://www.nec.com/en/global/solutions/safety/	2025-05-10	NEC Facial Recognition & Biometric AI	Private Enterprise	World's highest-accuracy facial recognition technology. Immigration control (Narita/Haneda airports). My Number Card facial authentication. Extensive government procurement track record.	2x3, 4x3
25	https://www.fujitsu.com/jp/solutions/business-technology/ai/	2025-05-15	Fujitsu Kozuchi (AI Platform)	Private Enterprise	Major government SI vendor. Supports Digital Agency Government Cloud development. AI-ification of government systems. Credit scoring AI.	1x1, 4x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
26	https://www.hitachi.co.jp/products/it/lumada/	2025-05-15	Hitachi Lumada AI Platform	Private Enterprise	Social infrastructure AI on Lumada platform. Railway operation optimization, power demand forecasting, urban OS. Numerous public sector projects.	3x3, 4x4
27	https://monoist.itmedia.co.jp/	2025-05-20	FANUC AI Factory Automation	Private Enterprise	FIELD system (IoT x AI manufacturing platform). AI predictive maintenance for CNC machine tools. Collaborative robot intelligence.	4x4
28	https://www.city.tsukuba.lg.jp/	2025-05-20	Tsukuba City AI Meeting Minutes & Counter AI	Government	AI automated creation of assembly meeting minutes. AI-ification of counter services. AI demonstrations as a Smart City special zone.	2x1, 1x1
29	https://www8.cao.go.jp/kisei-kaikaku/	2025-05-25	Regulatory Reform Promotion Council: AI Deregulation	Government	Expedited approval process for AI medical devices. Regulatory sandbox for drones and autonomous driving. Digitization of administrative procedures.	1x0, 5x3
30	https://www.soumu.go.jp/johotsusintokei/whitepaper/	2025-05-25	MIC Information & Communications White Paper: AI Chapter	Government	Annual AI trend analysis. Survey of AI adoption in local governments (adoption rate: approx. 45% of municipalities as of 2024). International comparison.	1x0
31	https://www.pref.osaka.lg.jp/	2025-06-01	Osaka Prefecture/City: Expo AI Utilization Plan	Government	AI utilization at 2025 Osaka Expo. Autonomous shuttle, multilingual AI guidance, AI congestion prediction. Promotion of Smart City Osaka.	4x3, 2x2
32	https://www.city.fukuoka.lg.jp/	2025-06-01	Fukuoka City AI Startup Support	Government	Fukuoka Growth Next. AI/IT special zone. Startup visa. Concentration of AI companies including LINE Fukuoka. Testbed for government AI demonstrations.	1x4
33	https://jpn.nec.com/biometrics/	2025-06-05	NEC Bio-IDiom (Airport Immigration AI)	Private Enterprise	Narita Airport Face Express. AI automation of immigration checks. 70% reduction in processing time. Co-developed with MOJ Immigration Bureau.	2x3, 4x3
34	https://www.mext.go.jp/	2025-06-05	MEXT AI Education & Research Infrastructure	Government	University education reform based on AI Strategy. Mandatory math/data science/AI education across all faculties. Development of AI research hubs (UTokyo, RIKEN, etc.).	1x0
35	https://www.j-lis.go.jp/rdd/ai/	2025-06-10	J-LIS AI Shared Services	Government	Shared AI-OCR platform for local governments. Over 500 participating municipalities. Cost reduction through economies of scale.	2x1, 1x1

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No	URL	Day	Title	Type	Case Details	Mapping Cell
36	https://www.city.sapporo.jp/	2025-06-10	Sapporo City Snow Removal AI & Tourism AI	Government	AI snow removal management system (snowfall prediction x road condition AI). Tourist behavior analysis AI. Smart city demonstration.	3x3
37	https://www.pref.hiroshima.lg.jp/	2025-06-15	Hiroshima Prefecture AI Disaster Prevention & Landslide Prediction	Government	AI disaster prevention system built after 2018 heavy rains. Real-time AI prediction of landslide risk. Evacuation order support.	3x3
38	https://www.soumu.go.jp/main_sosiki/jichi_gyousei/	2025-06-15	MIC Survey on AI/RPA Adoption in Local Governments	Government	Annual survey of AI/RPA adoption in local governments nationwide. 2024: AI adoption 45%, RPA adoption 52%. Prefectures exceed 90%.	1x1
39	https://www.cao.go.jp/others/kichou/ebpm/	2025-06-20	Cabinet Secretariat EBPM (Evidence-Based Policy Making) Promotion	Government	EBPM Promotion Committee. Data utilization for policy effectiveness verification. However, AI usage is at early stage. Manual analysis predominates.	3x0
40	https://www.pref.nagano.lg.jp/	2025-06-20	Nagano Prefecture AI Migration Consultation Matching	Government	AI-based matching system for migration candidates and local communities. AI-ification of consultation services. Regional revitalization x AI.	2x2
41	https://www.env.go.jp/	2025-06-25	MOE AI Environmental Monitoring	Government	Forest change detection via AI satellite image analysis. Air pollution prediction. Research on AI applications for biodiversity monitoring.	3x3
42	https://www.moj.go.jp/	2025-06-25	MOJ AI Immigration Control & Recidivism Prediction Research	Government	AI automation of immigration checks (NEC facial recognition). Recidivism prediction model research (ethical debate ongoing). Legal translation AI.	2x3, 3x1
43	https://www.meti.go.jp/policy/economy/chizai/chiteki/	2025-07-01	METI AI & Intellectual Property Strategy	Government	AI-related patent strategy. AI positioning in IP promotion plan. Development of IP protection rules for AI-generated content.	1x0
44	https://www.city.kawasaki.jp/	2025-07-01	Kawasaki City AI Road Damage Detection	Government	Smartphone-mounted AI for automatic road damage detection. AI analysis of patrol vehicle dashcam footage. Automatic repair prioritization.	3x3, 2x3
45	https://www.soumu.go.jp/menu_seisaku/ict/u-japan/	2025-07-05	MIC AI Utilization Guidelines	Government	Seven principles for AI utilization. Proper use, transparency, controllability, safety, security, privacy, fairness. Soft-law approach.	5x3, 1x0

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No	URL	Day	Title	Type	Case Details	Mapping Cell
46	https://www.digital.go.jp/policies/gov_cloud	2025-07-05	Digital Agency Government Cloud	Government	Government-common cloud infrastructure on AWS/Azure/GCP/OCI. Target: migrate all local government core systems by end of FY2025. Also functions as AI infrastructure.	4x1, 1x1
47	https://www.kantei.go.jp/jp/singi/ai_senryaku/	2025-07-10	Prime Minister's Office AI Strategy Council	Government	AI Strategy Council established 2023. Generative AI response. Leadership of Hiroshima AI Process (G7). International AI norm formation.	1x0, 5x3
48	https://www.cas.go.jp/jp/seisaku/atarashii_sihonshugi/	2025-07-10	New Capitalism Council: AI Investment Promotion	Government	AI investment promotion tax incentives. AI priority support in 5-year startup development plan. Reskilling support.	1x4
49	https://www.city.shibuya.tokyo.jp/	2025-07-15	Shibuya Ward AI Citizen Consultation	Government	AI consultation counter. Multilingual support. Services for foreign residents. AI guide for administrative procedures.	2x2
50	https://www.fire.go.jp/	2025-07-15	Fire and Disaster Management Agency AI Disaster Response	Government	AI analysis of 119 emergency calls. Disaster damage estimation AI. Fire vehicle deployment optimization. Drone+AI disaster situation assessment.	3x3
51	https://www.soumu.go.jp/main_content/000956981.pdf	2024-11-01	MIC Survey on AI Utilization by Local Governments (2024)	Government	Primary source: Ministry of Internal Affairs and Communications survey documenting 2,000+ deployed AI systems across Japanese municipal and national government. Covers speech recognition (864 instances), OCR (604 instances), workflow automation, and analytical applications.	1x1, 1x2, 2x1, 2x2, 3x1, 3x3
52	https://www.gov-online.go.jp/hlj/en/november_2025/november_2025-08.html	2025-11-01	Act on Promotion of Research and Development and Utilization of AI-Related Technology (AI Promotion Act)	Government	Japan's AI Promotion Act (人工知能関連技術の研究開発及び活用の推進に関する法律), enacted by the National Diet on 28 May 2025, effective 1 September 2025. Innovation-first approach, no direct penalties; establishes AI Strategy Headquarters under the PM Office as central coordinating body.	1x0, 1x4
53	https://www.cas.go.jp/jp/seisaku/ai_senryaku_honbu/	2025-11-01	AI Strategy Headquarters (内閣AI戦略本部)	Government	Cabinet-level coordinating body established under the AI Promotion Act (effective 1 September 2025). Chaired by the Prime Minister. Responsible for drafting and updating the AI Basic Plan under four principles: R&D capability retention, comprehensive promotion, transparency, international cooperation.	1x0, 1x1

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No	URL	Day	Title	Type	Case Details	Mapping Cell
54	https://www.digital.go.jp/news/3579c42d-b11c-4756-b66e-3d3e35175623	2025-03-01	Digital Agency Generative AI Procurement & Utilization Guidelines for Administrative Evolution and Innovation	Government	Digital Agency guidelines for government-wide generative AI procurement and utilization. Released 2025. Foundational framework for AI deployment across ministries.	1x0, 1x1

THE ROK

Proposed Score

Technology vs Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.50	1.00	0.75	0.75	0.50
2. Perceptual/NLP	0.50	0.75	1.00	1.00	0.75
3. Analysis/Decision Support	0.50	0.50	0.75	1.00	0.75
4. Agent	0.75	0.50	0.50	0.50	0.25
5. Sustainability/Unmapped	0.25	0.50	0.50	0.75	0.75

Rationale by Cell

Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ ICT	0. Policy & Governance	34	National AI Strategy Policy Directions; South Korea - Artificial Intelligence (AI) Basic Act; An Overview of South Korea's Basic Act on the Development of Artificial Intelligence; Can Artificial Intelligence Improve the Effectiveness of Government Support Policies?; Government and Private Sector Unite to Elevate Nation to AI G3 Status (and 29 other sources)	0.5	Extensive policy foundation, anchored by the 2019 National AI Strategy, the AI Basic Act (effective January 2026) establishing a National AI Committee and a 'permission first, regulation later' regulatory approach, and large-scale sovereign AI investment commitments (~KRW 100 trillion/USD 735bn). Numerous MSIT strategy documents, an AI security strategy, and G3-ambition initiatives round out the evidence base. The score reflects that most sources describe strategic policy intent and legislative frameworks rather than fully deployed foundation-level infrastructure, consistent with a Medium expert assessment.
1x1	1. Foundation, Infra AI/ ICT	1. Internal Management	6	KERIS - Korea Education and Research Information Service; 4 in 10 Korean firms turn to AI to boost efficiency: survey; Artificial	1	A smaller but strong evidence base for internal AI infrastructure, including KERIS's digital education infrastructure, Seoul's AI-driven governance transformation, and survey findings that four in ten

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
				Intelligence South Korea; Robust, open data foundations power South Korea's AI digital government: UN expert; Seoul mayor vows AI-driven transformation in governance (and 1 other source)		Korean firms have adopted AI to boost internal efficiency. Combined with the UN-recognized strength of Korea's open-data digital government foundations, this supports the High qualitative rating and top-tier score, reflecting genuinely operational internal-management infrastructure such as government-wide administrative RPA.
1x2	1. Foundation, Infra AI/ ICT	2. Citizen & Citizen services	18	Artificial Intelligence In Governments: South Korea As Case Study; South Korea's New AI Framework Act: A Balancing Act Between Innovation and Regulation; Analyzing South Korea's Framework Act on the Development of AI; AI Robots Help South Koreans Battle Loneliness; Controversial Cases on AI in Republic of Korea (and 13 other sources)	0.75	Broad and largely operational evidence for citizen-facing foundation infrastructure, including Seoul's smart-city citizen services, Busan's public AI ethics guidelines for civil servants, the AI Friends companion program for isolated seniors, and financial-sector personalization tools reaching retail customers. The consistent theme across sources is citizen-facing AI already in active use rather than pilot stage, supporting the High qualitative assessment.
1x3	1. Foundation, Infra AI/ ICT	3. Administrative Domain	44	National AI Strategy Policy Directions; An Overview of South Korea's Basic Act on the Development of Artificial Intelligence; Tech Researchers Tapped to Build AI Systems for Medical Robots in South Korea; South Korea poised to become Medical AI Powerhouse; The Korean Artificial Intelligence Industry (and 39 other sources)	0.75	The largest evidence cluster in the matrix (44 sources), spanning healthcare (Inha University Hospital's AI adoption, medical robotics research), education (English-course generative AI case studies, multicultural SW/AI education in Jeju), smart-city administration (Busan Eco Delta, Seoul, K-ICT Week), and social welfare (Hanju Foundation and SRC Bodeumteo generative AI training for social workers). This breadth and depth of genuinely operational administrative-domain applications across multiple ministries and sectors supports the High qualitative assessment despite wide variance in maturity across individual cases.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x4	1. Foundation, Infra AI/ ICT	4. Industry & Others	25	South Korea - Artificial Intelligence (AI) Basic Act; Can Artificial Intelligence Improve the Effectiveness of Government Support Policies?; South Korea poised to become Medical AI Powerhouse; Government and Private Sector Unite to Elevate Nation to AI G3 Status; Collaborative intelligence achieved from AI-enabled recruitment: a case study of POSCO in South Korea (and 20 other sources)	0.5	A wide but mixed set of industry-facing sources, ranging from established cases like POSCO's AI-enabled recruitment and Hana Financial's AI startup partnerships to earlier-stage developments such as Dnotitia's DNA 2.0 foundation model and MSIT's AI semiconductor industry support plan. The CSET assessment of Korea's AI ecosystem notes a still-developing AI investment ecosystem despite strong manufacturing and patent output, consistent with the Medium score reflecting industry-wide AI adoption that remains uneven across firm size and sector.
2x0	2. Perceptual/NLP	0. Policy & Governance	0	–	0.5	No sources were identified through automated research directly evidencing NLP/ perceptual AI tools used specifically for policy or governance document processing. The Medium score reflects the expert-identified representative case of a policy-document summarization LLM reportedly used at the Korea Development Institute (KDI), an application type common in NLP toolsets in this domain internationally but not independently corroborated by publicly available sources in this review.
2x1	2. Perceptual/NLP	1. Internal Management	0	–	0.75	No directly matching sources were found through automated research for NLP-based internal consultation tools. The High expert score reflects the representative case of an internal consultation LLM assistant reportedly deployed at the Ministry of Personnel Management, an application consistent with the broader trend (evidenced elsewhere in this matrix, e.g., the 445K-strong Google Gemini deployment across public officers) of Korean government agencies adopting generative AI assistants for internal administrative work.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	2	Seoul's sovereign AI contest fuels open-source offensive; Ministry of Culture, Sports and Tourism	1	Direct evidence includes MOIS's Guppi government-wide AI chatbot, reflected in the broader sovereign-AI competition among Naver Cloud, SK Telecom and other national champions, and the Ministry of Culture, Sports and Tourism's use of AI in citizen-facing cultural and tourism services. Together with the well-established Hometax/ patent-examination-style chatbot deployments elsewhere in government, this supports the top-tier score for citizen-facing conversational AI.
2x3	2. Perceptual/NLP	3. Administrative Domain	3	South Korea poised to become Medical AI Powerhouse; Korea launches medical generative AI project to enhance competitiveness; South Korean Hospitals Excel in AI Adoption: Inha University Hospital Leads the Way	1	Strong evidence of operational perceptual/NLP AI in the administrative domain, particularly healthcare: Korea's positioning as a medical AI powerhouse, a dedicated medical generative AI project spanning around 20 pharmaceutical companies and universities, and Inha University Hospital's leadership in clinical AI adoption. The Hometax GPT (National Tax Service) and AI Patent Examination Assistant (KIPO) representative cases further support genuinely deployed administrative NLP tools, consistent with the top score.
2x4	2. Perceptual/NLP	4. Industry & Others	0	–	0.75	No sources were identified through automated research specifically evidencing industry-facing perceptual/NLP tools. The score reflects the expert-identified representative cases of a Trade Investment GPT reportedly used by KOTRA (Korea Trade-Investment Promotion Agency) and customs document text analysis at the Korea Customs Service (KCS), both plausible extensions of the broader public-sector generative AI assistant trend evidenced elsewhere in this matrix.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
3x0	3. Analysis/Decision Support	0. Policy & Governance	1	Artificial Intelligence In Governments: South Korea As Case Study	0.5	Limited direct evidence, drawing primarily on a broader case study of AI use in South Korean government, which references analytical and decision-support applications without extensive elaboration. The Medium score reflects the expert-identified representative case of fiscal risk ML prediction at the Ministry of Economy and Finance (MOEF), an application type consistent with the broader theme of Korea using AI to improve financial transaction monitoring and anti-corruption efforts (also seen in cell 1x0).
3x1	3. Analysis/Decision Support	1. Internal Management	0	–	0.5	No sources were identified through automated research for analytical decision-support tools used internally within government agencies. The Medium score reflects the expert-identified representative case of a public construction efficiency prediction model reportedly used at the Ministry of Land, Infrastructure and Transport (MOLIT), plausible given Korea's broader pattern of using predictive analytics for infrastructure and urban planning (evidenced more directly in the Administrative Domain and Citizen Services columns).
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	0	–	0.75	No directly matching sources were identified through automated research. The High score reflects the expert-identified representative case of Seoul Metropolitan Government's traffic congestion forecasting AI, an application consistent with Seoul's well-documented broader smart-city AI program (evidenced extensively elsewhere in this matrix under Foundation/ Infrastructure and Administrative Domain).

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
3x3	3. Analysis/Decision Support	3. Administrative Domain	2	Research on AI Policy and Issues in key Areas in South Korea; South Korea to use AI in retail to boost productivity	1	Direct evidence includes the National Disaster Management Research Institute's crowd density prediction and disaster monitoring system, and the government's broader push to use AI in retail productivity analysis. The AI policy research covering key public-sector areas (source 33) further corroborates active decision-support deployment across administrative functions, supporting the top-tier score.
3x4	3. Analysis/Decision Support	4. Industry & Others	1	AI dynamic pricing set to transform Korean finance, sparking consumer protection concerns	0.75	Evidence centers on AI-driven dynamic pricing emerging in Korea's financial sector, where insurers and lenders use predictive algorithms to personalize premiums and interest rates, raising consumer-protection concerns alongside efficiency gains. This is consistent with the expert-identified representative case of SME sales forecasting AI at the Ministry of SMEs and Startups, supporting a Medium-to-High score for decision-support analytics applied to industry.
4x0	4. Agent	0. Policy & Governance	0	–	0.75	Expert-identified
4x1	4. Agent	1. Internal Management	0	–	0.5	No sources were identified through automated research for agentic AI applied to internal administrative drafting tasks. The Medium score reflects the expert-identified representative case of an automated RFP (request-for-proposal) drafting LLM reportedly used at the Ministry of SMEs and Startups, an early but plausible example of agentic AI automating internal procurement documentation.
4x2	4. Agent	2. Citizen & Citizen services	0	–	0.5	No sources were identified through automated research for citizen-facing agentic AI tools. The Medium score reflects the expert-identified representative

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
						case of an AI contract-terms review system reportedly used by the Korea Fair Trade Commission to help protect consumers from unfair contract clauses, an early-stage application of agentic AI to citizen-facing regulatory functions.
4x3	4. Agent	3. Administrative Domain	2	Busan Eco Delta Smart City; KAIST NEWS CENTER	0.5	Limited direct evidence, drawing on Busan's Eco Delta Smart City project and general KAIST research coverage, neither of which centers specifically on agentic AI performing autonomous administrative tasks. The Medium score reflects the expert-identified representative case of an AI legal document assessment tool reportedly used at the Ministry of Justice, indicating early but genuine agentic-AI experimentation within administrative functions.
4x4	4. Agent	4. Industry & Others	10	Tech Researchers Tapped to Build AI Systems for Medical Robots in South Korea; AI Robots Help South Koreans Battle Loneliness; Dnotitia Unveils 'DNA 2.0': A Korean-Language Foundation Model Built for Agentic AI; KAIST Researchers Develop an AI-Based Simulation for Improving Ship Autonomy and Maritime Safety; South Korea to use AI in retail to boost productivity (and 5 other sources)	0.25	The largest 'Agent' cell by source count, but the evidence largely describes emerging or exploratory agentic capabilities rather than mature deployments: Dnotitia's DNA 2.0 model designed to enable agentic tool-calling, KAIST's autonomous-ship simulation research, GS25's unmanned 'just walk out' store, and reflective commentary on keeping AI's 'purpose' human-centered in social welfare contexts. This pattern of scattered, early-stage automation supports the Low score, consistent with agentic AI industry applications being nascent relative to other technology categories.
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	–	0.25	No sources were identified through automated research specifically addressing sustainability-related AI policy. The Low score reflects the expert-identified representative

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
						case of a national sovereign AI infrastructure framework at MSIT, which touches on data-sovereignty and infrastructure-resilience considerations adjacent to sustainability but is not itself a dedicated sustainability policy, consistent with the low relative maturity of this taxonomy cell.
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	–	0.5	No sources were identified through automated research. The Medium score reflects the expert-identified representative case of a lightweight digital twin used for facility operations management at Seoul Metropolitan Government, an application area plausible given Seoul's broader, separately evidenced investment in smart-city and metaverse infrastructure.
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	–	0.5	No sources were identified through automated research. The Medium score reflects the expert-identified representative case of AI-based smart water meter leakage detection deployed by Daejeon City, a citizen-facing municipal sustainability application consistent with Korea's broader municipal smart-infrastructure initiatives evidenced elsewhere in this matrix.
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	2	Busan Eco Delta Smart City; AI in Busan: Can it reshape urban life?	0.75	Direct evidence from Busan's Eco Delta Smart City project, which incorporates an intelligent water management system and energy-efficient grid as part of its broader sustainable smart-city design, and further coverage of Busan's urban AI transformation. This is consistent with the expert-identified representative cases of railway safety and national land-change digital twins (KORAIL and MOLIT), supporting the High score for administrative sustainability applications.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
5x4	5. Sustainability/ Unmapped	4. Industry & Others	0	–	0.75	No sources were identified through automated research. The score reflects the expert-identified representative case of a smart water grid digital twin operated by K-water, Korea's national water resources corporation, an industry-facing sustainability application consistent with the broader pattern of Korean public utilities piloting AI-based digital twin technology.

All Sources List

No	URL	Title	Case Details	Mapping Cell
1	https://www.msit.go.kr/eng/bbs/view.do?sCode=eng&mId=4&mPid=2&pageIndex=&bbsSeqNo=42&nttSeqNo=1040&searchOpt=ALL&searchTxt=	National AI Strategy Policy Directions	The ROK's Ministry of Science and ICT has outlined its "National AI Strategy," aiming to position the country as a global leader. The strategy focuses on moving beyond just using AI to becoming an innovator that creates advanced AI models and solutions. Key policy directions include fostering a "people-first" AI environment through ethical guidelines, promoting AI adoption across all industries to enhance competitiveness, and strengthening the nation's AI infrastructure and talent pool. Published in December 2019, the strategy set a 2030 vision of becoming an AI world leader beyond IT, organized around nine strategies and roughly 100 government-wide action tasks spanning three pillars: the AI ecosystem, AI utilization, and people-centered AI.	1x0, 1x3
2	https://www.trade.gov/market-intelligence/south-korea-artificial-intelligence-ai-basic-act	South Korea - Artificial Intelligence (AI) Basic Act	The ROK has enacted the "Basic Act on Artificial Intelligence," creating a foundational legal framework for the industry. The act aims to promote AI development while ensuring it is safe and trustworthy. It establishes a National AI Committee to oversee policy and emphasizes a "permission first, regulation later" approach to foster innovation. The law also includes provisions for creating AI ethics guidelines, supporting talent development, and promoting the use of AI in both public and private sectors. The Act took effect on 22 January 2026, making the ROK the second jurisdiction after the European Union to adopt a comprehensive AI regulatory framework, with a one-year grace period before administrative fines and corrective orders are enforced.	1x0, 1x4

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No	URL	Title	Case Details	Mapping Cell
3	https://securiti.ai/south-korea-basic-act-on-development-of-ai/	An Overview of South Korea's Basic Act on the Development of Artificial Intelligence	The ROK's Basic AI Act provides a comprehensive framework to foster AI innovation while establishing a basis of trust. The law defines AI and outlines the government's responsibility to create a supportive environment. It mandates the establishment of a National AI Committee to deliberate on major policies and a three-year master plan for AI development. A key principle is "permission first, regulation later," which allows for innovation in a flexible manner. The act also emphasizes the development of AI safety and ethics infrastructure, including provisions for an AI Safety Institute tasked with assessing AI-related risks and supporting trustworthy AI adoption across government and industry.	1x0, 1x3
4	https://www.kdi.re.kr/eng/research/focusView?pub_no=17622	Can Artificial Intelligence Improve the Effectiveness of Government Support Policies?	This research from the Korea Development Institute (KDI) explores how AI can enhance the effectiveness of government support policies. The study used AI-based causal machine learning to analyze the "Startup Support Program." The results showed that AI could identify which startups would benefit most from support, improving policy targeting. By predicting the potential success of applicants, AI can help allocate government resources more efficiently, maximizing the impact of support programs. This kind of AI-assisted evaluation illustrates how the ROK is exploring data-driven approaches to strengthen the design and accountability of its industrial and SME support policies more broadly.	1x0, 1x4
5	https://research.gatech.edu/tech-researchers-tapped-build-ai-systems-medical-robots-south-korea	Tech Researchers Tapped to Build AI Systems for Medical Robots in South Korea	Researchers from Georgia Tech have been tasked with developing AI systems for medical robots in the ROK, partnering with the Korean robotics company Neuromeka on a five-year, roughly KRW 10 billion government-funded project. The team, which also includes the Korea Advanced Institute of Science and Technology (KAIST) and the Electronics and Telecommunications Research Institute (ETRI), aims to build a humanoid medical assistant robot capable of navigating hospitals and supporting complex tasks such as assisting in surgeries or providing patient care. The researchers are working on improving the robot's perception, manipulation skills, and human-robot interaction capabilities. This international collaboration highlights the global effort to advance AI-enabled robotics aimed at easing the workload of overwhelmed medical and healthcare staff.	1x3, 4x4

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No	URL	Title	Case Details	Mapping Cell
6	https://www.biospectrumasia.com/analysis/51/22930/south-korea-poised-to-become-medical-ai-powerhouse.html	South Korea poised to become Medical AI Powerhouse	The ROK is on track to become a powerhouse in medical AI, thanks to strong government support and a thriving tech industry. The country is seeing a surge in startups developing AI-powered solutions for medical imaging analysis, disease diagnosis, and drug discovery. The government is fostering this growth by providing funding, regulatory support, and access to high-quality medical data. With its advanced healthcare system and deep expertise in technology, the ROK is well-positioned to develop and export AI-driven medical devices and services to global markets.	1x3, 1x4, 2x3
7	https://www.msit.go.kr/eng/bbs/view.do?sCode=eng&mId=4&bbsSeqNo=42&nttSeqNo=1025	Government and Private Sector Unite to Elevate Nation to AI G3 Status	The ROK's government and private sector are collaborating to elevate the nation to a "G3" status in AI, aiming to be one of the top three AI innovators globally. This ambitious goal involves a significant national effort, including the creation of a National AI Computing Center to provide essential infrastructure. The strategy focuses on developing homegrown AI models and fostering a robust ecosystem for AI startups. The public-private partnership will mobilize resources to drive R&D, cultivate AI talent, and build the computing infrastructure needed to support the country's broader ambitions for AI-driven economic growth.	1x0, 1x4
8	https://www.researchgate.net/publication/379579174_Collaborative_intelligence_achieved_from_AI-enabled_recruitment_a_case_study_of_POSCO_in_South_Korea	Collaborative intelligence achieved from AI-enabled recruitment: a case study of POSCO in South Korea	This case study examines how ROK steel giant POSCO uses an AI-enabled recruitment system. The AI platform assists human recruiters by screening resumes and conducting initial assessments, which helps to reduce bias and improve efficiency in the hiring process. The research explores the concept of "collaborative intelligence," where AI tools augment the capabilities of human decision-makers. The study finds that the AI system allows recruiters to focus more on in-depth interviews and strategic hiring decisions, illustrating how AI can complement rather than replace human judgment in corporate human resources functions.	1x4
9	https://asianinsiders.com/2024/04/02/the-korean-artificial-intelligence-industry/	The Korean Artificial Intelligence Industry	The ROK AI industry is characterized by rapid growth and strong backing from both the government and major conglomerates (chaebols). The government's "National AI Strategy" aims to make the ROK a global leader by investing heavily in R&D, infrastructure, and talent development. Companies like Samsung, SK Telecom, and Naver are developing their own large language models and applying AI across their diverse business portfolios. Key sectors for AI application include manufacturing, healthcare, finance, and public administration, reflecting the breadth of the country's AI ecosystem.	1x0, 1x3, 1x4

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No	URL	Title	Case Details	Mapping Cell
10	https://www.eurasiareview.com/30092024-artificial-intelligence-in-governments-south-korea-as-case-study-oped/	Artificial Intelligence In Governments: South Korea As Case Study	The ROK serves as an excellent case study for the application of AI in government. The country is proactively implementing AI to enhance public services and administrative efficiency. Examples include using AI for data-driven policy analysis, developing smart city solutions for traffic and public safety management, and deploying AI-powered chatbots for citizen services. The government has established a clear national strategy and legal frameworks to guide this transformation. The ROK's approach is often cited internationally as a model for how a technologically advanced middle power can integrate AI into public administration.	1x0, 1x3, 1x2, 3x0
11	https://www.freiheit.org/north-and-south-korea/south-korea-slows-down-ai-education#:~:text=Starting%20in%202025%2C%20AI%2Dsupported,also%20be%20prevented%20this%20way.	South Korea slows down on AI education	The use of digital AI-supported textbooks was accompanied by high hopes. These digital learning tools analyze students' learning behavior in real time and provide personalized feedback based on that. As a result, teachers are able to tailor their lessons more effectively to individual student needs. Weaker students receive additional support, while stronger students are challenged with more advanced content.	1x3
12	https://fpf.org/blog/south-koreas-new-ai-framework-act-a-balancing-act-between-innovation-and-regulation/	South Korea's New AI Framework Act: A Balancing Act Between Innovation and Regulation	The ROK's AI Framework Act, effective January 2026, establishes a risk-based approach to AI regulation. It introduces specific obligations for "high-impact" AI systems in critical sectors like healthcare and public services, as well as transparency rules for generative AI. The Act aims to balance innovation with trust, promoting AI development through government support for data infrastructure and SME projects. A National AI Committee will oversee policy. Unlike the EU's AI Act, it does not impose a phased rollout; instead, all provisions take effect simultaneously, paired with a one-year grace period during which the government emphasizes guidance over enforcement and penalties.	1x0, 1x3, 1x4, 1x2
13	https://iapp.org/news/a/analyzing-south-korea-s-framework-act-on-the-development-of-ai	Analyzing South Korea's Framework Act on the Development of AI	This analysis details the ROK's AI Framework Act, which takes effect in January 2026. The law aims to protect citizens' rights and strengthen national competitiveness by promoting AI development within a trusted framework. The Ministry of Science and ICT is the main authority, with a National AI Committee under the president deciding on major policies. The regulation primarily targets high-impact AI, defined as systems in 11 specified areas that could significantly affect human life and fundamental rights, alongside separate transparency and labeling obligations for generative AI systems more broadly.	1x0, 1x2

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No	URL	Title	Case Details	Mapping Cell
14	https://www.researchgate.net/publication/384434210_A_case_study_of_implementing_generative_AI_in_university's_general_English_courses	A case study of implementing generative AI in university's general English courses	This case study investigated the impact of using generative AI in general English courses at a Korean university. The research involved 89 students in the Spring 2024 semester and focused on how AI affects students' motivation, interest, and confidence in learning English. The findings suggest that an AI-based instruction model can be highly effective for improving both writing and speaking skills. The study highlights the potential for generative AI to support linguistic proficiency and foster greater learner confidence, particularly benefiting first-year students who make up the large majority of the surveyed cohort.	unmapped
15	https://www.keris.or.kr/eng/cm/cntnts/cntntsView.do?mi=1172&cntntsId=1321	ABOUT KERIS - Welcome Message	Homepage	unmapped
16	https://www.chosun.com/english/industry-en/2025/07/25/NTHRGSZLNV-GYPGJTEAZ4GAU7OM/	Seoul's sovereign AI contest fuels open-source offensive	The ROK's government is sponsoring a "sovereign AI" initiative to select a national AI champion, sparking intense competition among local tech firms. Companies like SK Telecom and Naver Cloud are releasing their proprietary large language models (LLMs) on open-source platforms to showcase their technological capabilities and boost their chances. This race to the top involves public demonstrations and strategic disclosures aimed at highlighting their edge in the AI field. The initiative has the Ministry of Science and ICT selecting several competing consortia, including Naver Cloud, SK Telecom, LG AI Research, NC AI, and Upstage, for staged elimination rounds, with the eventual national champions receiving large-scale government funding and guaranteed access to computing infrastructure.	1x0, 2x2
17	https://www.canvas8.com/blog/2024/may/ai-robots-help-south-koreans-battle-loneliness	AI Robots Help South Koreans Battle Loneliness	To combat loneliness among its aging population, the ROK government is distributing thousands of AI companion dolls named Hyodol to senior citizens living alone. This AI-powered doll can engage in conversations, provide voice reminders for medication, and monitor its users for caregivers. A company study involving over 9,000 users showed that the dolls helped reduce depression levels and improve medication adherence. This initiative reflects a proactive effort in the healthcare sector to use AI and robotics to provide companionship and remote monitoring for a rapidly aging, increasingly single-person-household society, with tens of thousands of units now deployed nationwide through local government welfare programs.	1x3, 4x4, 1x2

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No	URL	Title	Case Details	Mapping Cell
18	https://files.eric.ed.gov/fulltext/EJ1449352.pdf	A case study of implementing generative AI in university's general English courses	This case study focused on the implementation of generative AI in general English courses at a Korean university. The study surveyed 89 students, primarily freshmen, to assess the impact of AI on their motivation, confidence, and interest in learning English writing and speaking. The results indicated that using a generative AI-based instruction model significantly contributed to the development of students' linguistic skills. The research supports the use of AI in modern language education, suggesting that generative AI tools can meaningfully improve learner engagement and reduce anxiety around language production, particularly for first-year university students.	1x3
19	https://journalofcyberpolicy.com/dnotitia-unveils-dna-2-0-a-korean-language-foundation-model-built-for-agentic-ai/	Dnotitia Unveils 'DNA 2.0': A Korean-Language Foundation Model Built for Agentic AI	In July 2025, Dnotitia Inc. (Dnotitia), a Korean company specializing in long-term memory AI and semiconductor-integrated solutions, announced the launch of its high-performance large language model (LLM), 'DNA 2.0.' Moving beyond traditional text generation, the model is designed to enable agentic AI, meaning AI that can autonomously integrate with external tools and perform complex tasks. As agentic AI becomes a core technology driving business automation and operational efficiency, the model features tool-calling capabilities for tasks such as search, summarization, and computation, along with a Model Context Protocol (MCP)-compatible architecture and a Korean-language RAG system, and is offered across parameter sizes from a compact 0.6B version to a large-scale 235B mixture-of-experts configuration.	1x4, 4x4
20	https://www.cedtech.net/article/a-case-study-of-implementing-generative-ai-in-universitys-general-english-courses-15218	A case study of implementing generative AI in university's general English courses	Published in October 2024, this case study details the implementation of generative AI in university-level English courses in the ROK. The research, conducted during the Spring 2024 semester with 89 students, investigated how AI tools affected learners' motivation, interest, and confidence. The findings highlight that an instructional model incorporating generative AI proved effective in supporting the development of students' writing and speaking abilities. This suggests that AI can be a valuable supplementary tool in foreign-language instruction, reinforcing similar findings from other Korean university case studies on generative AI in English education.	unmapped

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No	URL	Title	Case Details	Mapping Cell
21	https://cset.georgetown.edu/publication/assessing-south-koreas-ai-ecosystem/	Assessing South Korea's AI Ecosystem	This report assesses the ROK's AI ecosystem, highlighting its strengths and weaknesses. The country's key advantages include strong government support, a world-class ICT infrastructure, and a highly skilled workforce. Major conglomerates (chaebols) and a vibrant startup scene are driving innovation. However, challenges remain, including a relative weakness in core AI software development compared to hardware, and a need for more diverse AI talent. The report concludes that while the ROK is well positioned on infrastructure and manufacturing strength, sustaining its AI investment ecosystem and talent pipeline will require continued policy attention.	1x4
22	https://www.koreaherald.com/article/10540557	Hana Financial steps up support for AI industry	Hana Financial Group is increasing its support for the AI industry, including through a strategic partnership with the Korea Software Industry Association (KOSA) announced in 2025. The two organizations plan to cooperate on AI adoption across industries, including joint research projects and development of AI models, co-investment in AI and software startups, and initiatives to nurture AI expertise. This builds on Hana's earlier AI Startup Accelerator program run jointly with SK Telecom, which has provided office space, mentoring, and investment support to selected AI startups. By fostering the next generation of AI companies, Hana Financial aims to contribute to the growth of the national AI ecosystem while also strengthening its own position in AI-driven financial services.	1x0, 1x4
23	https://www.techinasia.com/news/south-koreas-73b-ai-plans-hit-talent-drain	South Korea's $73b AI plans hit by talent drain: report	Despite the ROK's ambitious plans to invest heavily in AI, the country is facing a significant challenge from a "talent drain." Many of the ROK's top AI engineers and researchers are being recruited by overseas tech giants, who offer higher salaries and better research opportunities. This outflow of talent threatens to undermine the country's goal of becoming a global AI leader. The report highlights the urgent need for the ROK to improve its domestic environment for AI professionals by increasing compensation competitiveness, expanding research funding, and creating more attractive career pathways to retain skilled talent domestically.	1x3
24	https://www.keris.or.kr/eng/main.do	KERIS - Korea Education and Research Information Service	KERIS (Korea Education and Research Information Service) is a government agency responsible for the digital transformation of education in the ROK. A key part of its mission is to integrate AI into the learning process. KERIS is involved in developing AI-powered educational platforms that provide	1x3, 1x1

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No	URL	Title	Case Details	Mapping Cell
			personalized learning paths for students and analytical tools for teachers. By leveraging AI, the agency aims to create a more effective, equitable, and engaging educational environment. This includes supporting the rollout of AI-based digital textbooks and learning-analytics tools across primary and secondary schools nationwide.	
25	https://www.mdpi.com/2227-9709/11/3/54	AI Literacy and Intention to Use Text-Based GenAI for Learning: The Case of Business Students in Korea	This study investigates the factors influencing the intention of Korean business students to use text-based generative AI (GenAI) for learning. The research found that AI literacy, particularly the ability to critically evaluate AI-generated content, is a key determinant. Perceived ease of use and perceived usefulness also significantly impact students' willingness to adopt these tools. The paper suggests that universities should focus on enhancing students' AI literacy to ensure they can use generative AI tools effectively and critically, rather than relying on them uncritically for academic work.	unmapped
26	https://www.chosun.com/english/industry-en/2025/06/17/SRAB6HC-ZXJHM3NCJPZ3VALO6XU/	South Korea to pour $735 bn into developing sovereign AI built on ...	The ROK has announced a massive investment plan to develop its own "sovereign AI." The initiative aims to build large language models and other core AI technologies domestically, reducing reliance on foreign platforms. This strategy is driven by a desire to enhance national competitiveness and ensure technological autonomy. The investment will support local tech companies in their R&D efforts, foster a robust AI startup ecosystem, and build the necessary computing infrastructure. The goal is to allocate roughly KRW 100 trillion (about USD 735 billion) toward AI infrastructure, compute clusters, research, and talent development, with a small number of designated national AI champions receiving large-scale GPU access and public funding.	1x0, 1x4
27	https://biz.chosun.com/en/en-science/2025/02/06/MCQVDLDODBE4NA-74CZZMAAHUI4/	Korea launches medical generative AI project to enhance competitiveness	The ROK government has launched a new project to develop generative AI specifically for the medical field. This initiative aims to create advanced AI models that can assist with tasks like medical image analysis, clinical trial data processing, and the development of new drugs. By focusing on the high-value medical sector, the government seeks to enhance the global competitiveness of its healthcare and biotech industries. The project will involve collaboration between hospitals, research institutes, and around 20 pharmaceutical companies and universities, and will also develop a shared platform to centralize scattered medical data for use in AI research and next-generation clinical trial management.	1x3, 2x3

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No	URL	Title	Case Details	Mapping Cell
28	https://www.businesskorea.co.kr/news/articleView.html?idxno=245025	Korean Government to Invest $11.56 Billion in AI Infrastructure Over 5 Years	The ROK government has committed to investing approximately USD 11.56 billion over the next five years to build up its AI infrastructure. This massive investment will focus on creating a national AI computing center, developing advanced AI semiconductors, and securing high-quality data for training AI models. This initiative is part of a broader strategy to solidify the country's position as a global AI leader. By providing robust public infrastructure, the government aims to support its domestic AI industry and reduce reliance on foreign cloud and computing providers for critical national AI development.	1x0, 1x4
29	https://www.csis.org/analysis/ai-security-strategy-and-south-koreas-challenges	AI Security Strategy and South Korea's Challenges	This analysis from CSIS examines the ROK's AI security strategy. While the ROK is an AI powerhouse, it faces significant security challenges. The strategy must address the dual-use nature of AI, where technologies can be used for both civilian and military purposes. Key challenges include defending against AI-powered cyberattacks, ensuring the security of critical infrastructure, and countering disinformation campaigns. The report suggests that the ROK needs to deepen its collaboration with allied nations, particularly the United States, to align AI security standards and jointly counter shared regional threats.	1x0
30	https://www.korea.edu/en/1127/subview.do?enc=Zm5jdDF8QEB8JTJGa3VzdG9yeSUyRmVuJTJGYXJ0Y2xWaWV3LmRvJTNGYXJ0Y2xTZXElM0QyNzc3MiUyNg%3D%3D	Korea University Institute for Global Humanities Research and Collaboration Selected for Humanities Korea 3.0 project	Korea University's Institute for Global Humanities Research has been selected for the "Humanities Korea 3.0" project. This initiative will focus on exploring the societal impact of AI and digital technology from a humanities perspective. The research will examine the ethical and social challenges posed by AI, aiming to develop a human-centered framework for the digital era. This project highlights a growing academic focus in the ROK on not just developing AI technology, but also critically understanding its implications for culture, ethics, and society through sustained, government-supported humanities research.	1x0
31	https://www.apc.org/en/pubs/controversial-cases-ai-republic-korea	Controversial Cases on AI in Republic of Korea	This report details controversial AI cases in the ROK, raising human rights concerns. One notable case is "Scatter Lab," where an AI chatbot named "Luda" was trained on personal chat data without adequate consent, leading to privacy violations and discriminatory outputs. Another case involves the use of facial recognition technology in law enforcement for surveillance, sparking debates about privacy and potential for misuse. Additional cases cited include opacity and discrimination in	1x3, 1x2

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No	URL	Title	Case Details	Mapping Cell
			AI-based recruitment systems, algorithmic manipulation concerns around the Kakao Taxi platform, and the Ministry of Justice's unauthorized use of facial data from an immigration identification system for AI training. These cases highlight the urgent need for stronger legal and ethical safeguards around AI deployment.	
32	https://www.koreaherald.com/article/10504242	4 in 10 Korean firms turn to AI to boost efficiency: survey	A survey reveals that four out of ten ROK firms have adopted AI to enhance operational efficiency. The primary motivation for this adoption is to automate repetitive tasks and improve productivity in a competitive market. The report indicates that while large corporations are leading the way, smaller and medium-sized enterprises are also beginning to integrate AI into their workflows. Common applications include using AI for data analysis, customer service automation, and process optimization. According to the Ministry of Trade, Industry and Energy survey, large enterprises led adoption at 65.1%, and firms that adopted AI cited increased productivity, reduced operating costs, and improved decision-making speed as the main benefits.	1x4, 1x1
33	https://www.sipotra.it/wp-content/uploads/2025/03/Research-on-AI-Policy-and-Issues-in-key-Areas-in-South-Korea-Public-Sector-Law-Enforcement-Education-and-Social-Welfare.pdf	Research on AI Policy and Issues in key Areas in South Korea	This research paper analyzes the ROK's AI policies and their implementation in key public sectors. It covers the use of AI in law enforcement for crime prediction, in education for personalized learning platforms, and in social welfare to streamline service delivery. The study points out that while the government is a strong proponent of AI, significant challenges remain. These include issues of data privacy, the potential for algorithmic bias in decision-making, and the need for greater public consultation, transparency, and civil-society input as the country's AI Framework Act moves from legislation into practical implementation.	1x0, 1x3, 1x2, 3x3
34	https://www.intralinkgroup.com/getmedia/7bca58ca-90d0-4c2d-a25f-af23c057b7b3/Korean-Artificial-Intelligence-Final-Report,-Innovation,-Brochure	Artificial Intelligence South Korea	The ROK's AI market is characterized by strong government support and heavy investment from major conglomerates (chaebols). The government's national strategy aims to position the country as a global AI leader. Key sectors driving AI adoption include manufacturing, where AI is used for process automation, and healthcare, for advanced diagnostics. The country has a world-class IT infrastructure and a highly skilled workforce, but faces challenges in securing diverse datasets and retaining top AI talent domestically, as skilled engineers and researchers are increasingly drawn abroad by higher salaries and more advanced research opportunities.	1x0, 1x3, 1x4, 1x1

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No	URL	Title	Case Details	Mapping Cell
35	https://www.metropolis.org/sites/default/files/2022-06/Seoul%20Smart%20City%20Booklet%20(as%20of%20Dec.%202020)%20(1).pdf	Seoul Smart City: Changing the Lives of the Citizens	The Seoul Metropolitan Government is implementing a comprehensive smart city plan to improve the lives of its citizens through technology. A key component is the use of AI and big data. For example, the city uses AI to analyze traffic data from CCTV and sensors to optimize traffic flow and public transportation routes. In public safety, AI is used for intelligent surveillance to detect emergencies. The city is also developing AI-powered chatbots to provide citizens with 24/7 access to public services, alongside data-driven platforms for urban planning, environmental monitoring, and administrative efficiency.	1x3, 1x2
36	https://www.ncbi.nlm.nih.gov/books/NBK592679/	Regulating artificial intelligence in medical care in South Korea	This research examines the regulation of AI in medical care in the ROK. The country has a specific approval process for AI-based medical devices, managed by the Ministry of Food and Drug Safety. The regulatory framework focuses on ensuring the safety and efficacy of these technologies. While the government actively promotes the development of medical AI, challenges remain in areas like protecting patient data privacy and determining liability when AI systems make errors. The paper highlights the need for clearer regulatory guidance as AI diagnostic and treatment-support tools become more widely integrated into clinical practice.	1x0, 1x3
37	https://www.itu.int/hub/2022/02/seoul-metaverse-digital-transformation-ai-blockchain/	Seoul invests in the metaverse, AI and more	The city of Seoul is making significant investments in emerging technologies like the metaverse and AI to become a leading global smart city. A major initiative is the creation of "Metaverse Seoul," a virtual platform where citizens can access public services and cultural events. AI is a core component of this vision, used to power intelligent services within the metaverse and to analyze data for improving city operations. These investments reflect Seoul's forward-thinking strategy to leverage technology to enhance civic engagement, accessibility, and administrative efficiency for residents.	1x0, 1x3, 1x2
38	https://www.kaist.ac.kr/site/newsen/html/news/?skey=keyword&sval=artificial+intelligence+	KAIST Researchers Develop an AI-Based Simulation for Improving Ship Autonomy and Maritime Safety	Researchers at KAIST (Korea Advanced Institute of Science and Technology) have developed an advanced AI-based simulation platform to test and improve the safety of autonomous ships. The platform can create various virtual maritime scenarios, including challenging weather and traffic conditions, to train the AI navigation systems of these ships. By safely testing the AI's decision-making capabilities in a simulated environment, researchers can identify and correct potential flaws before real-world deployment, reducing the risk of collisions and other accidents as autonomous vessels are introduced into commercial shipping.	1x3, 4x4

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No	URL	Title	Case Details	Mapping Cell
39	https://www.kaist.ac.kr/en/news/html/news/?mode=V&mng_no=18788	KAIST Researchers Unveil New AI Technology That Can Tell You What Is Funny	A research team at KAIST has developed a novel AI technology capable of understanding and identifying humor. The AI model was trained on a dataset of comedy videos and can recognize humorous moments by analyzing both visual cues and audience reactions, such as laughter. This technology goes beyond simple object recognition to grasp more abstract and subjective concepts. Potential applications could include content recommendation systems or tools to help analyze human emotion and social interaction more broadly, extending AI's reach into nuanced, culturally dependent forms of communication.	unmapped
40	https://www.techinasia.com/news/south-korea-ai-retail-boost-productivity	South Korea to use AI in retail to boost productivity	The ROK's government is promoting the use of AI in the retail sector to boost productivity and enhance competitiveness. The initiative encourages retailers to adopt AI-powered solutions for tasks like inventory management, demand forecasting, and personalized customer experiences. This includes supporting the development of unmanned stores and AI-driven online shopping platforms. By leveraging AI, retailers can optimize their operations, reduce costs, and provide the kind of seamless, data-driven shopping experience increasingly expected by consumers in a highly digitized retail market.	4x4, 3x3
41	https://www.koreatimes.co.kr/economy/20241125/ai-dynamic-pricing-set-to-transform-south-korean-finance-sparking-consumer-protection-concerns	AI dynamic pricing set to transform Korean finance, sparking consumer protection concerns	AI-driven dynamic pricing is beginning to transform the ROK's financial sector, with companies using algorithms to offer personalized interest rates and insurance premiums. While this can increase efficiency and tailor products to individual risk profiles, it also raises significant consumer protection concerns. Critics worry that the lack of transparency in AI models could lead to discriminatory pricing, where vulnerable customers are charged higher rates without clear justification. This shift builds on the country's MyData framework, which since 2022 has allowed financial institutions to aggregate customer data across banks, cards, and insurers with consent, accelerating the data foundation needed for personalized, AI-driven pricing.	1x4, 3x4
42	https://www.upi.com/Top_News/World-News/2025/06/17/seoul/8901750159365/	South Korea rushes to construct AI data centers	The ROK is in a race to build new data centers to meet the explosive demand driven by the AI boom. The government and major corporations are investing heavily in this critical infrastructure to support the development of advanced AI models and services. This construction rush is essential for the country's "National AI Strategy,"	1x0

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No	URL	Title	Case Details	Mapping Cell
			which aims to make the ROK a global AI power-house. By expanding its domestic data center capacity, the country seeks to ensure it has the computational power needed to train and deploy large-scale AI models without excessive reliance on overseas providers.	
43	https://brandfinance.com/press-releases/south-korean-hospitals-excel-in-ai-adop-tion-inha-university-hospital-tops-global-rankings	South Korean Hospitals Excel in AI Adoption: Inha University Hospital Leads the Way	ROK hospitals are global leaders in the adoption of AI, with institutions like Inha University Hospital at the forefront. The hospital is using AI for innovative cancer treatment, where algorithms analyze medical images and patient data to create more accurate diagnoses and personalized treatment plans. This use of AI is enhancing the precision of medical care and improving patient outcomes. The trend reflects a broader movement in the ROK's healthcare sector to integrate cutting-edge AI diagnostic tools across major hospital networks nationwide.	1x3, 2x3
44	https://govinsider.asia/intl-en/article/robust-open-data-foundations-power-south-koreas-ai-digital-government-vision	Robust, open data foundations power South Korea's AI digital government: UN expert	The ROK's success in building an AI-powered digital government is built on a strong foundation of robust and open data. The government has made vast amounts of public data accessible, which serves as a crucial resource for training AI models and developing innovative public services. This open data policy, combined with a world-class IT infrastructure, has enabled the creation of effective AI applications in areas like public transportation and safety. According to a UN expert, this commitment to open data and digital government infrastructure positions the ROK as a model for other countries seeking to responsibly modernize public administration through AI.	1x0, 1x3, 1x2, 1x1
45	https://wp.oecd.ai/app/uploads/2021/12/Korea_National_Strategy_for_Artificial_In-telligence_2019.pdf	National Strategy for Artificial Intelligence	The ROK's National Strategy for Artificial Intelli-gence, first established in 2019, aims to position the country as a global leader in the field. The strategy is comprehensive, focusing on three key areas: establishing a world-leading AI innovation ecosystem, leveraging AI to enhance economic competitiveness and quality of life, and creating a human-centered AI framework based on ethics and social values. It involves significant govern-ment investment in R&D, talent development, and computing infrastructure, organized around nine detailed strategies and roughly 100 government-wide action tasks with a target vision of becoming an AI world leader by 2030.	1x0
46	https://biz.chosun.com/en/en-reales-tate/2025/07/14/SOKVZMS6BBGO3LY-O53PF2HY4KQ/	Korea to host 2025 World Smart City Expo in Busan, highlighting AI innovations	The ROK will host the 2025 World Smart City Expo in Busan. The event will serve as a global platform to showcase the latest innovations in smart city technology, with a strong emphasis on AI. It will highlight how cities like Busan are using AI for intelligent traffic management, environmental monitoring, and efficient public services. The expo	1x3, 1x4, 1x2

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No	URL	Title	Case Details	Mapping Cell
			will bring together government leaders, industry experts, and tech companies from around the world to discuss the future of urban development. This demonstrates the ROK's ambition to position Busan, alongside its Eco Delta Smart City project, as a global reference point for AI-driven urban innovation.	
47	https://smartcity.go.kr/en/2025/03/12/%EB%B6%80%EC%82%B0%EC%8B%9C-%EA%B4%91%EC%97%AD%EC%8B%9C-%EC%B5%9C%EC%B4%88-%EA%B3%B5%EB%AC%B4%EC%9B%90-%EC%83%9D%EC%84%B1%ED%98%95-%EC%9D%B8%EA%B3%B5%EC%A7%80%EB%8A%A5ai-%ED%99%9C%EC%9A%A9/	Busan City, the first metropolitan city! Promoting the establishment of ethics guidelines for the use of artificial intelligence (AI) generated by civil servants	The city of Busan is taking a pioneering step by establishing ethical guidelines for the use of AI by its civil servants. As the first metropolitan city in the ROK to do so, Busan is demonstrating a commitment to responsible AI governance. These guidelines are designed to ensure that when public officials use AI for tasks like data analysis or citizen services, it is done in a fair, transparent, and accountable manner. This initiative aims to build public trust and prevent potential misuse of generative AI tools within public administration, setting a model other local governments may follow.	1x0, 1x2
48	https://atlasofurbantech.org/cases/kor-busan/	Busan Eco Delta Smart City	The Busan Eco Delta Smart City is a large-scale national pilot project in the ROK aimed at creating a futuristic, sustainable city. The project heavily incorporates AI and other advanced technologies. AI is used to manage the city's infrastructure, including an intelligent water management system and an energy-efficient grid. It also powers autonomous vehicles and robotic delivery services. The goal is to create a city that is not only technologically advanced but also environmentally friendly, serving as a national testbed for smart city technologies that could later be scaled to other cities.	1x3, 4x4, 4x3, 5x3
49	https://www.msit.go.kr/eng/bbs/view.do?sCode=%20eng&mId=4&mPid=2&pageIndex=&bbsSeqNo=42&nttSeqNo=702&searchOpt=ALL&searchTxt=	MSIT to announce the "Support Plan for AI Semiconductor Industry Promotion"	The Ministry of Science and ICT (MSIT) has announced a support plan to promote the ROK's AI semiconductor industry. The plan aims to secure a leading position in the rapidly growing global market for AI chips. It includes initiatives for developing next-generation AI processors and supporting domestic fabless companies. The government will also create a "K-Cloud" project to provide a testing ground for homegrown AI chips. This strategic investment in hardware is crucial for building a self-sufficient AI computing ecosystem, and the K-Cloud initiative has since evolved into a broader K-NPU Alliance focused on generating domestic demand for Korean-made neural processing units.	1x4

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No	URL	Title	Case Details	Mapping Cell
50	https://kr.usembassy.gov/120923-joint-fact-sheet-launching-the-u-s-rok-next-generation-critical-and-emerging-technologies-dialogue/	JOINT FACT SHEET: Launching the U.S.-ROK Next Generation Critical and Emerging Technologies Dialogue	The United States and the Republic of Korea have launched a new dialogue focused on critical and emerging technologies, including AI. This partnership aims to deepen collaboration on technology standards, supply chain resilience, and research and development. For AI, the dialogue will focus on promoting trustworthy and responsible AI development and establishing common principles for AI governance. This alliance recognizes the strategic importance of AI and seeks to ensure that its development aligns with shared democratic values and strengthens bilateral cooperation on export controls and supply chain security for advanced technologies.	1x0
51	https://www.busan.go.kr/eng/ai-translated-press-releases/1682062	Busan to Host the 2025 World Smart City Expo (WSCE)	The city of Busan has been selected to host the 2025 World Smart City Expo, the largest event of its kind in the Asia-Pacific region. This reflects Busan's growing reputation as a leading smart city, particularly with its Eco Delta Smart City project. The expo will showcase the latest technologies and solutions for urban development, with a significant focus on AI applications. Hosting this event provides Busan with an opportunity to share its experiences, attract international investment, and further establish itself as a hub for smart city innovation in the region.	1x3
52	https://www.mcst.go.kr/english/policy/kocis/newsView.jsp?pSeq=263	Ministry of Culture, Sports and Tourism	The ROK's Ministry of Culture, Sports and Tourism is leveraging AI to enhance experiences in its domains. In culture, AI is being used to create immersive museum exhibits and to restore and preserve digital archives of cultural heritage. For tourism, AI-powered platforms offer personalized travel recommendations and language translation services for foreign visitors. The ministry also supports the use of AI in the creative industries to assist in content creation, such as music composition and visual media production, reflecting the government's broader push to integrate AI across the cultural and creative economy.	2x2
53	https://www.koreatimes.co.kr/southkorea/politics/20250716/seoul-mayor-vows-ai-driven-transformation-in-governance	Seoul mayor vows AI-driven transformation in governance	Seoul's mayor has vowed to lead an AI-driven transformation of the city's governance. The plan involves using AI to create a "smarter" and more efficient administration that can better serve its citizens. Key initiatives include deploying AI to enhance public safety through intelligent surveillance, providing 24/7 citizen services via AI chatbots, and supporting vulnerable populations with AI-powered care services. This comprehensive strategy, called "AI Seoul," aims to integrate artificial intelligence across nearly every function of city government, from administrative efficiency to social welfare delivery.	1x0, 1x3, 1x2, 1x1

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No	URL	Title	Case Details	Mapping Cell
54	https://www.retail-insight-network.com/news/gs25-fainders-ai-seoul-autonomous/	GS25, Fainders.AI launch autonomous store in Seoul, South Korea	ROK convenience store chain GS25 has partnered with Fainders.AI to launch a new autonomous, unmanned store in Seoul. The store utilizes AI-powered computer vision and sensors to track customers and the items they select. Shoppers can enter using a QR code, pick up products, and simply walk out, with the payment being processed automatically. This "just walk out" technology aims to provide a seamless and convenient shopping experience, reflecting a broader trend among ROK retailers toward unmanned and AI-automated store formats to address labor costs and changing consumer expectations.	1x3, 4x4
55	https://oecdcogito.blog/2025/05/12/ai-in-busan-can-it-reshape-urban-life/	AI in Busan: Can it reshape urban life?	This article explores how AI is reshaping urban life in Busan, particularly through the ambitious Eco-Delta Smart City project. This national pilot project is a testing ground for integrated AI solutions. AI is being used to manage the city's infrastructure, from an intelligent water management system to an optimized energy grid. It also powers services like robotic deliveries and autonomous public transport. The goal is not just to implement technology, but to create a more sustainable, efficient, and livable urban environment that can serve as a model for other cities across the ROK and the wider region.	1x3, 4x4, 5x3
56	https://www.mckinsey.com/industries/retail/our-insights/how-technology-can-elevate-grocery-stores-in-south-korea	How technology can elevate grocery stores in South Korea	This McKinsey report outlines how technology, including AI, can elevate the grocery shopping experience in the ROK. Key opportunities include using AI for hyper-personalization, where data is analyzed to provide tailored product recommendations and promotions. AI can also optimize store operations through automated inventory management and dynamic pricing. The report suggests that creating a seamless omnichannel experience, where the online and offline stores are fully integrated, is crucial for grocery retailers to remain competitive in a market with high digital adoption and demanding consumers.	unmapped
57	https://en.wowtale.net/2025/02/11/229376/	Seoul Launches Seven Key Strategies to Lead AI-Driven Industrial Innovation by 2028	The Seoul Metropolitan Government has launched seven key strategies to position the city as a leader in AI-driven industrial innovation by 2028. The plan, called "AI Seoul," involves a significant investment to create a robust ecosystem for AI development. Strategies include fostering AI startups, cultivating top-tier AI talent, and creating a massive AI-specialized industrial complex. The city will also focus on integrating AI into public services to improve citizen welfare and administrative efficiency, positioning Seoul as a hub that connects public-sector AI adoption with private industrial growth.	1x4, 1x2

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No	URL	Title	Case Details	Mapping Cell
58	https://koreajoongangdaily.joins.com/news/2023-10-30/business/finance/Financial-firms-embrace-AI-for-personalized-services/1899236	[AI IN ACTION] Financial firms embrace AI for personalized services	Financial firms in the ROK are actively embracing AI to offer more personalized services. Banks and credit card companies are using AI to analyze customer data and provide tailored product recommendations, from customized loans to investment portfolios. AI-powered chatbots are handling customer queries with increasing sophistication, providing 24/7 support. In the background, AI is also crucial for fraud detection and risk management. This shift toward hyper-personalization is driven by the increasing availability of consumer financial data and growing competitive pressure among incumbent banks and fintech challengers.	1x2
59	https://us.aving.net/news/articleView.html?idxno=52502	2025 K-ICT WEEK in BUSAN showcases region-led AI innovation	The 2025 K-ICT WEEK in Busan will showcase region-led innovation in AI and other digital technologies. The event serves as a platform for local startups and companies in the southeastern region of Korea to present their solutions. It highlights how the AI ecosystem is expanding beyond Seoul, with cities like Busan fostering their own tech hubs. The event will feature AI applications relevant to local industries, such as smart port logistics, advanced manufacturing, and marine technology. This forms part of a broader push to decentralize the ROK's AI industry beyond the capital region.	1x3, 1x4
60	https://news.microsoft.com/source/asia/features/innovating-together-how-ai-is-transforming-korean-nonprofits-and-vocational-education/?lang=ko	Innovating Together: How AI is Transforming Korean Nonprofits and Startups	Microsoft is collaborating with Korean nonprofits and startups to drive social innovation through AI. The partnership provides these organizations with access to AI tools, training, and resources. For example, nonprofits are using AI to analyze data to better understand social issues and optimize their programs. Social-purpose startups are developing AI-powered solutions for challenges in healthcare, education, and environmental protection. This initiative demonstrates how powerful AI technology, when paired with training and cloud resources, can be extended to civil-society organizations that otherwise lack the capacity to adopt it independently.	1x3, 1x4
61	https://computing.yonsei.ac.kr/eng/eng2_1_b.php	Department of Artificial Intelligence	University homepage	unmapped
62	https://www.kaist.ac.kr/newsen/html/news/?skey=keyword&sval=Artificial+Intelligence	KAIST NEWS CENTER	KAIST (Korea Advanced Institute of Science and Technology) is a premier research university in the ROK and a major hub for AI innovation. The KAIST News Center frequently features cutting-edge AI research from its various labs. Recent projects include developing AI for autonomous vehicles,	1x3, 4x4, 4x3

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No	URL	Title	Case Details	Mapping Cell
			creating novel algorithms for medical diagnosis, and building advanced robotics. As a leading institution, KAIST plays a critical role in driving the country's technological advancement, producing top-tier AI researchers and spinning out startups that contribute to the national AI ecosystem.	
63	https://www.forbes.com/councils/forbesbusinesscouncil/2025/06/03/how-credit-unions-are-using-ai-to-compete-with-big-banks/	How Credit Unions Are Using AI To Compete With Big Banks	Credit unions are leveraging AI to compete more effectively with large banks. They are using AI-powered tools for various functions, including automating loan underwriting processes, which allows for faster and more consistent decision-making. AI is also being used to enhance member services, with chatbots providing 24/7 support and answering common queries. Furthermore, AI helps in fraud detection and risk management, improving security for members. By adopting these technologies, credit unions can offer a level of service and efficiency that helps offset the scale advantages of larger financial institutions.	1x2
64	https://gmo-research.ai/en/resources/articles/future-agriculture-smart-farming	The Future of Agriculture is in Smart Farming	In April of this year, LG CNS, a subsidiary of LG Corporation from the ROK, announced that it had joined the ROK Government's smart farming project and would be building an artificial intelligence-based platform. This platform will serve as a guideline for high-yielding and efficient farming. Together, they plan to develop a smart farm on 54.3 hectares of farmland in the south-western rural city of Naju by 2023. LG CNS's platform will collect and analyse data on the whole farming process, from planting to harvest, aiming to improve yields and resource efficiency for participating farmers.	1x3
65	https://www.asiae.co.kr/article/2023070620450169314	Sancheong-gun's AI integrated care project draws attention	This article highlights an AI-powered integrated care project in Sancheong-gun, in the ROK, targeting single-person households, including elderly and disabled individuals. The program utilizes AI speakers and IoT devices to provide 24-hour monitoring and care. The AI can engage users in conversation to prevent dementia and send emergency alerts to a control center if it detects risks or no movement for an extended period. This initiative aims to create a tighter social safety net by combining technology with existing community welfare services, reflecting a growing trend among rural local governments to address elderly isolation through AI-based monitoring.	1x3

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No	URL	Title	Case Details	Mapping Cell
66	https://www.korea.net/Government/Briefing-Room/Press-Releases/view?articleId=7797&type=O&insttCode=	MSIT's Work Plan for 2025	This press release outlines the Ministry of Science and ICT's (MSIT) work plan for 2025. A key focus is the advancement of Artificial Intelligence. The plan includes the "AI Strategy 2.0," which aims to move beyond memory chips to lead the global AI and semiconductor market. It involves developing next-generation AI technologies, such as large language models (LLMs) and AI safety technologies. The ministry also plans to foster AI adoption across all industries to enhance economic growth and to expand AI computing infrastructure through initiatives like the National AI Computing Center.	1x0, 1x4
67	https://www.msit.go.kr/eng/bbs/view.do?sCode=eng&mId=10&mPid=9&pageIndex=2&bbsSeqNo=46&nttSeqNo=9	Policies - Ministry of Science and ICT	This page serves as a portal to the policies of the ROK's Ministry of Science and ICT (MSIT). The ministry is responsible for setting the national agenda for science and technology, including the country's AI strategy. It oversees the implementation of key initiatives aimed at making the ROK a global leader in AI. Policies cover a wide range of areas, from R&D and securing core technologies to fostering an AI ecosystem and establishing ethical guidelines. The goal is to leverage AI to drive innovation while ensuring fairness, safety, and accountability across public and private sectors.	1x0, 1x2
68	https://www.worldbank.org/en/events/2022/01/25/harnessing-trustworthy-ai-in-korea-to-reshape-the-digital-future-in-a-post-covid-era	Harnessing Trustworthy AI in Korea to Reshape the Digital Future in a Post-COVID era	This article from the World Bank discusses the ROK's approach to developing trustworthy AI as a core part of its post-COVID digital future. It highlights the ROK's "AI National Strategy" and the "New Deal 2.0," which emphasize a human-centered approach to AI. The strategy focuses on building public trust through ethical guidelines, data governance, and transparent AI systems. The goal is to foster a vibrant AI ecosystem that drives innovation while ensuring fairness, safety, and accountability, positioning the ROK's experience as a potential model for other middle-income economies pursuing digital transformation.	1x0
69	https://stip.oecd.org/stip/interactive-dashboards/policy-initiatives/2023%2Fdata%2FpolicyInitiatives%2F26497	The National Strategy for Artificial Intelligence - OECD STIP Compass	This OECD entry summarizes the ROK's National Strategy for Artificial Intelligence, announced in 2019. The strategy outlines a vision to move beyond being an "IT powerhouse" to becoming an "AI powerhouse." It sets three main goals: establishing a world-leading AI ecosystem, fostering the most effective use of AI, and realizing human-centered AI. The strategy covers securing top talent, developing advanced AI R&D, and innovating data usage. It aims to drive economic effects worth KRW 455 trillion by 2030 through increased productivity and new AI-driven industries.	1x0

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No	URL	Title	Case Details	Mapping Cell
70	https://www.msit.go.kr/eng/bbs/view.do?sCode=eng&mId=4&mPid=2&pageIndex=&bbsSeqNo=42&nttSeqNo=509&searchOpt=ALL&searchTxt=	MSIT announced "Strategy to realize trustworthy artificial intelligence"	This press release details the ROK Ministry of Science and ICT's (MSIT) strategy for realizing trustworthy AI. The plan aims to secure public trust to facilitate the nationwide adoption of AI. It is built on three main strategies: securing technical tools for trustworthy AI, ensuring the ethical use of AI, and establishing an implementation foundation across all sectors. Key tasks include developing technologies to explain and assess AI decisions, creating AI ethics guidelines, and supporting industry-wide adoption of trustworthy AI verification and certification systems.	1x0
71	https://dig.watch/resource/the-national-strategy-for-artificial-intelligence-of-south-korea	The national strategy for artificial intelligence of South Korea	This observatory provides an analysis of South Korea's National Strategy for Artificial Intelligence. The strategy aims to make the country a world leader in AI by 2030. It is structured around three main areas: establishing a robust AI ecosystem, promoting AI utilization across industries, and developing a human-centered AI framework. Key objectives include fostering AI talent, investing in R&D, and creating a regulatory environment that encourages innovation while addressing ethical concerns.	1x0, 1x3
72	https://keia.org/the-peninsula/timeline-of-the-south-korean-governments-ai-efforts/	Timeline of the South Korean Government's AI Efforts	This article from the Korea Economic Institute of America provides a timeline of the ROK government's efforts to promote Artificial Intelligence. It tracks key policy announcements and strategic initiatives from 2016 onwards. The timeline shows a consistent and increasing focus on AI, culminating in the comprehensive "National Strategy for Artificial Intelligence" in 2019. The strategy outlines ambitious goals, including massive government investment, nurturing AI talent, and developing a robust regulatory and ethical framework to support the country's longer-term AI ambitions.	1x0
73	https://ideas.repec.org/a/eee/telpol/v48y2024i6s0308596124000600.html	Understandings of the AI business ecosystem in South Korea: AI startups' perspective	This paper investigates the AI business ecosystem in the ROK from the viewpoint of AI startups. Through interviews with 21 startup representatives, the study identifies key components of the ecosystem, including technology, human resources, data, government support, and customer acceptance. While government support is strong, challenges remain, particularly in securing funding, acquiring high-quality data, and finding experienced AI professionals. The research suggests that for the ecosystem to mature further, more coordinated efforts are needed to connect startups with private investment and enterprise customers, not just government grants.	1x4

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No	URL	Title	Case Details	Mapping Cell
74	https://muse.jhu.edu/article/961192	Case Study of AI Application in Scholarly Communication—ScienceON	This case study examines ScienceON, a scholarly information service in the ROK that utilizes AI to enhance user experience. Developed by the Korea Institute of Science and Technology Information (KISTI), ScienceON integrates various academic resources. It employs AI for functions like personalized paper recommendations, trend analysis in specific research fields, and summarizing documents. The AI-powered search helps researchers quickly find relevant information from a vast database, overcoming the information overload that has historically slowed literature review and research discovery.	unmapped
75	https://www.eurekalert.org/news-releases/1088302	KAIST researchers unveil an AI that generates "unexpectedly original" designs	This article reports on a new AI system developed by researchers at the Korea Advanced Institute of Science and Technology (KAIST). The AI, named "Rouge," is designed to generate highly original product designs by learning from existing designs and then creating novel concepts. It uses a "design originality assessment model" to evaluate its own creations, pushing it toward greater creativity. The system was tested on bicycle wheel designs and produced concepts that were rated as more original than human-generated baselines, suggesting potential applications for AI-assisted industrial design across manufacturing sectors.	1x4
76	https://www.kaist.ac.kr/newsen/html/news/?skey=keyword&sval=AI	AI - KAIST NEWS CENTER	This news release from KAIST (Korea Advanced Institute of Science and Technology) highlights the development of an AI capable of generating "unexpectedly original" product designs. A research team led by Professor Seok-Hyung Bae created an AI system that learns from a database of existing designs and then produces its own unique concepts. This AI not only creates but also evaluates the originality of its designs, a process that encourages it to explore unconventional ideas. The technology demonstrates how generative AI can move beyond imitation toward genuine creative exploration in industrial design.	unmapped
77	https://www.mdpi.com/2076-3417/13/17/9844	A Case Study of SW · AI Education for Multicultural Students in Jeju, Korea: Changes in Perception of SW · AI	This study examines a software (SW) and AI education program for multicultural students in Jeju, in the ROK, and its impact on their perceptions. The program aimed to improve digital literacy and foster positive attitudes toward AI. Through project-based learning, students developed AI models and SW solutions. The results showed a significant positive change in students' perceptions of SW and AI, as well as an increase in their self-efficacy and interest in related careers. The case study highlights the potential of hands-on AI education to support the digital inclusion of multicultural and underserved student populations.	1x3

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No	URL	Title	Case Details	Mapping Cell
78	https://oecd-opsi.org/innovations/ai-friends/	AI Friends	This case study from the OECD's Observatory of Public Sector Innovation details the "AI Friends" project in the ROK. The initiative provides AI speakers to senior citizens and other vulnerable groups living alone to combat loneliness and provide emergency support. The AI speakers, developed by telecom companies, engage users in conversation and monitor their well-being. If the AI detects signs of distress or emergencies through specific keywords or a lack of movement, it automatically alerts a monitoring center or designated caregiver, enabling faster emergency response for isolated residents.	1x2
79	https://www.elibrary.imf.org/view/journals/018/2025/013/article-A001-en.xml	Transforming the Future – The Impact of Artificial Intelligence in Korea	This IMF working paper analyzes the potential impact of Artificial Intelligence on the ROK economy. It finds that AI could significantly boost productivity and economic growth, but also poses challenges, particularly to the labor market. The paper suggests that about 24% of jobs in the ROK are highly exposed to AI automation. It recommends policies focused on strengthening social safety nets, investing in education and retraining programs, and promoting flexible labor markets. The goal is to help the ROK capture AI's productivity gains while managing the transition costs for displaced workers.	1x3
80	osce.org	Responsible use of AI in the military domain focus of OSCE Asian Partners for Co-operation Group Meeting	This article reports on a meeting of the OSCE Asian Partners for Co-operation Group in Vienna, which focused on the responsible use of Artificial Intelligence in the military. Discussions centered on the importance of maintaining human control over AI systems, ensuring compliance with international humanitarian law, and promoting transparency and confidence-building measures. Participants, including representatives from the ROK, Japan, and Thailand, shared their national perspectives and initiatives on military AI governance, underscoring growing international coordination on responsible AI use in defense applications.	1x3
81	https://www.mti.gov.sg/-/media/Images/AI-MOU6-Dec-2022-SGROK.pdf	MOU on Cooperation on Artificial Intelligence	This page announces a Memorandum of Understanding (MOU) on AI cooperation between Singapore and the ROK. The MOU signifies a commitment to collaborating on key areas of AI development and deployment. The agreement aims to facilitate joint research and development projects, promote the exchange of information and best practices, and work toward creating interoperable AI governance frameworks. This strategic partnership is designed to accelerate AI innovation, enhance economic competitiveness, and strengthen bilateral technology ties between the two countries.	1x0

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No	URL	Title	Case Details	Mapping Cell
82	s-space.snu.ac.kr	A Case Study of Digital Transformation: Focusing on the Financial Sector in South Korea and Overseas	This case study from Seoul National University analyzes digital transformation in the financial sector, comparing the ROK with other countries. It examines how financial institutions are adopting new technologies like AI, big data, and blockchain to innovate their services and business models. The paper discusses the shift from traditional banking to digital platforms, focusing on the development of mobile payment systems, robo-advisors, and personalized financial products. It highlights the competitive pressure traditional banks face from fintech entrants and the resulting need for continued digital investment.	1x4, 1x1
83	https://www.kcmi.re.kr/common/downloadw?fid=26561&fgu=002001&fty=004003	Generative AI-driven Productivity Innovation and the Financial Services Industry's Responses	This report from the Korea Capital Market Institute examines the impact of generative AI on productivity in the financial services industry. It analyzes how financial firms are leveraging this technology to innovate and respond to a rapidly changing environment. The study explores various use cases, from automating routine tasks and improving customer service with chatbots to enhancing risk management and personalizing financial advice. The report emphasizes that generative AI is a key driver of productivity gains, while also cautioning that firms need stronger governance frameworks to manage the associated operational and compliance risks.	1x3, 1x4, 1x2
84	https://arakiplaw.com/en/insight/2409/	The Korean AI Basic Act: Asia's First Comprehensive Framework on AI	This article provides a legal analysis of the ROK's proposed AI Basic Act, which aims to be the first comprehensive AI legislation in Asia. The Act seeks to promote AI development while establishing principles for safety and trustworthiness. A key feature is its "priority-permissive, post-regulatory" approach, which encourages innovation by allowing AI technologies to be developed freely unless explicitly prohibited. It also mandates the creation of a national AI committee and an AI development master plan, alongside specific obligations for high-impact AI systems in sensitive sectors.	1x0, 1x3
85	https://www.tridge.com/news/from-artificial-intelligence-to-tiktok-learn-umykzy	From Artificial Intelligence to TikTok: Learning at Jeju Island's Local	This article discusses the evolution of learning and information dissemination in Jeju Island's agricultural community. It highlights how technology, from AI to social media platforms like TikTok, is influencing local practices. The piece likely explores how farmers and agricultural businesses are adopting new digital tools to gain market insights, improve production techniques, and connect with a wider audience. While not a specific AI case study, it points to the broader trend of digital transformation reshaping rural livelihoods, information access, and market participation in the ROK's agricultural sector.	1x3

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No	URL	Title	Case Details	Mapping Cell
86	kedglobal.com	Korea Agricultural Cooperative Federation, Page 81	Jeju Special Self-Governing Province announced that it will expand and operate the Jeju Residents' University educational program in conjunction with agricultural cooperative complex spaces in the second half of 2025. According to the province, the first half of the regional agricultural cooperative complex space-linked educational program currently in operation involves a total of 7 regional agricultural cooperatives, with 413 participants in 30 educational courses from April to this month. The province plans to expand the program to additional agricultural cooperative sites in the second half of the year, broadening access to digital and vocational education for residents in rural farming communities.	1x3
87	kedglobal.com	Korea Agricultural Cooperative Federation, Page 79	This page from KED Global reports on the Korea Agricultural Cooperative Federation (Nonghyup), a key player in the ROK's agriculture sector whose activities often serve as case studies for agricultural innovation, including AI-related initiatives. Broader coverage of Nonghyup by KED Global has included the development of AI-powered systems for predicting crop prices, managing livestock health, and providing tailored financial services to farmers. By leveraging AI, Nonghyup aims to build a more efficient and sustainable agricultural sector; however, the specific content of this particular page could not be independently verified, as noted below.	1x3
88	https://walkingwithus.tistory.com/897	[Summer 2023 Issue] Social Welfare Innovation with AI: The Important Thing is the 'Purpose'	This blog post discusses the innovation in social welfare driven by Artificial Intelligence. It emphasizes that the most critical aspect of using AI in this field is maintaining a clear 'purpose' focused on human well-being. The article likely explores various AI applications, such as AI-powered care services for the elderly or systems for matching welfare recipients with appropriate services. It argues that technology should be a tool to enhance, not replace, human connection and support. The central message cautions social welfare organizations against adopting AI for its own sake, urging them to keep human-centered outcomes as the primary design goal.	unmapped
89	http://www.welfareissue.com/news/articleView.html?idxno=15119	Hanju Foundation, Successfully Completes 'Basic Generative AI Education' for Social Workers	This article reports that the social welfare corporation Hanju Foundation successfully completed a basic education program on generative AI for social workers. The training aimed to equip social workers with the skills to use tools like ChatGPT for tasks such as document	1x3

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No	URL	Title	Case Details	Mapping Cell
			creation and program planning. By improving their digital capabilities, the foundation hopes to reduce the administrative workload on social workers, allowing them to dedicate more time to client interaction and direct support. The program reflects a broader effort within the ROK's social welfare sector to build basic generative AI literacy among frontline staff.	
90	http://www.welfareissue.com/news/articleView.html?idxno=15070	SRC Bodeumteo Conducts Social Welfare Practical Training Using ChatGPT	This article covers a practical training session on using ChatGPT for social welfare work, held at the SRC Bodeumteo facility for the severely disabled. The education, provided by the Gyeonggi Province Assistive Technology Center, focused on applying generative AI to real-world tasks. Social workers learned how to use ChatGPT for program proposals, official document writing, and creating promotional materials. The goal was to enhance their work efficiency and capabilities. This case illustrates a growing pattern of regional welfare and assistive-technology centers introducing generative AI literacy training for staff who support people with disabilities.	1x3
91	https://maily.so/5booninno/posts/xyowl571r28	[Innovation in 5 mins. AI] Social Welfare Innovation with AI: The Important Thing is the 'Purpose'	This newsletter article, mirroring a blog post, explores the role of AI in social welfare innovation. It stresses the importance of having a clear, human-centered 'purpose' when implementing AI technologies. The text likely discusses how AI can be applied to create more efficient and personalized social services, such as AI care robots or platforms that connect individuals to necessary resources. The central argument is that while AI offers powerful tools for optimization, the ultimate goal must remain improving human well-being rather than pursuing technology adoption as an end in itself.	4x4

MALAYSIA

Proposed Score

Technology vs Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.75	0.50	0.25	0.75	0.75
2. Perceptual/NLP	0.00	0.25	0.25	0.50	0.00
3. Analysis/Decision Support	0.25	0.25	0.00	0.50	0.00
4. Agent	0.00	0.00	0.25	0.00	0.25
5. Sustainability/Unmapped	0.00	0.00	0.00	0.25	0.00

Rationale by Cell

Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ ICT	0. Policy & Governance	26	Malaysia National Artificial Intelligence (AI-Rmap) - Merdeka LLM; An Overview of Malaysia's National Guidelines on AI Governance and Ethics - Securiti; Malaysia National Artificial Intelligence Roadmap 2021-2025; Malaysia National AI Office (NAIO); Malaysia Artificial Intelligence Roadmap - International Trade Administration (and 21 other sources)	0.75	NAIO Establishment (2024.12), GovTech Malaysia, Public Sector AI Guidelines, AI For MY Future (800K People Training), Melaka State Framework. Comprehensive policy foundation.
1x1	1. Foundation, Infra AI/ ICT	1. Internal Management	10	Malaysia Artificial Intelligence Roadmap - International Trade Administration; How AI Is Powering The Next Wave Of MSME Growth In Malaysia; Malaysia: Accelerating Digital Transformation of Cooperatives ...; Sunway Medical Centre Teams Up with annalise.ai to Improve ...; AmBank transforms with AI and analytics	0.5	MyGDX 2.0 (81 agencies/ institutions integration), Google Gemini (445K people deployment). Digital infrastructure for internal management at operational stage.
1x2	1. Foundation, Infra AI/ ICT	2. Citizen & Citizen services	9	445,000 Public Officers in Malaysia to Benefit from Generative AI ...; 445,000 Public Officers in Malaysia to Benefit from Generative AI ...; Malaysia AI Assisted Healthcare Technology; Malaysia - Artificial Intelligence; Bank Negara Malaysia innovates with NFP to tackle financial scams (and 4 other sources)	0.25	MyGOV App is at beta stage. AI services for citizens at early stage.

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
1x3	1. Foundation, Infra AI/ ICT	3. Administrative Domain	27	Malaysia National Artificial Intelligence Roadmap 2021-2025; The first case of Lung Cancer detected by AI in Malaysia - OncoDaily; DBKL expands integrated transportation management with 5000 CCTV cameras; MOH Exploring AI For Cancer, TB, Diabetic Retinopathy Screenings - CodeBlue; Using Artificial Intelligence in Ophthalmology (and 22 other sources)	0.75	DR MATA retinal AI, KL CCTV (5,000 units), flood prediction (nationwide deployment), Putrajaya Integration Command Center. Operational across multiple administrative domains.
1x4	1. Foundation, Infra AI/ ICT	4. Industry & Others	26	Malaysia National Artificial Intelligence (AI-Rmap) - Merdeka LLM; Malaysia National Artificial Intelligence Roadmap 2021-2025; Malaysia Artificial Intelligence Roadmap - International Trade Administration; DBKL expands integrated transportation management with 5000 CCTV cameras; AI-Powered Harvesting - MIMOS Berhad (and 21 other sources)	0.75	Palm Oil AI Factory, fintech, semiconductor-related cases (multiple). Industry AI active.
2x0	2. Perceptual/NLP	0. Policy & Governance	0	–	0	No relevant cases
2x1	2. Perceptual/NLP	1. Internal Management	3	Call for stronger action against AI-driven scams a; Google Gemini Suite Rollout to 445,000 Public Offi; Bahasa Melayu NLP Infrastructure (Mesolitica/Malay	0.25	Gemini adoption/ introduction based on document processing started. NLP internal management is early stage.
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	1	Bahasa Melayu NLP Infrastructure (Mesolitica/Malay	0.25	Bahasa Melayu NLP foundation/infrastructure (Mesolitica) exists. Citizen/ citizen services application is early stage.
2x3	2. Perceptual/NLP	3. Administrative Domain	11	The first case of Lung Cancer detected by AI in Malaysia - OncoDaily; Using Artificial Intelligence in Ophthalmology; Malaysia's First AI-Detected Lung Cancer Case Marks Breakthrough ...; Sunway Medical Centre Teams Up with annalise.ai to Improve ...; Use of artificial intelligence with retinal imaging in screening for diabetes-associated complications: systematic review	0.5	DR MATA image diagnosis, KL face recognition CCTV. Healthcare and surveillance NLP/perceptual technology operational.
2x4	2. Perceptual/NLP	4. Industry & Others	0	–	0	No relevant cases

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
3x0	3. Analysis/Decision Support	0. Policy & Governance	1	PADU Central Database Hub for AI-Enabled Subsidy T	0.25	PADU (National Database) based on policy analysis foundation/infrastructure. Pilot stage.
3x1	3. Analysis/Decision Support	1. Internal Management	1	Central Bank National Fraud Portal (AI-based)	0.25	Central Bank Fraud Detection Portal. Limited operational.
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	0	–	0	No relevant cases
3x3	3. Analysis/Decision Support	3. Administrative Domain	9	How AI is Transforming Manufacturing in Malaysia; AI-Powered Finance: The Key to Inclusion and Innov; 5 Surprising Ways AI is Transforming Malaysia's Ma; Boosting Manufacturing Efficiency in Singapore & M; National Flood Forecasting & Warning System (ML-ba others4cases	0.5	Flood prediction (25 watersheds nationwide), SASCOO traffic optimization (20+ intersections), epidemic surveillance. Multiple operational cases.
3x4	3. Analysis/Decision Support	4. Industry & Others	0	–	0	No relevant cases
4x0	4. Agent	0. Policy & Governance	0	–	0	No relevant cases
4x1	4. Agent	1. Internal Management	0	–	0	No relevant cases
4x2	4. Agent	2. Citizen & Citizen services	1	MyGOV Malaysia Mobile App - AI Chatbot for Citizen	0.25	MyGOV chatbot is at beta stage. Agent type is nascent.
4x3	4. Agent	3. Administrative Domain	0	–	0	No relevant cases
4x4	4. Agent	4. Industry & Others	2	How AI is Transforming Manufacturing in Malaysia; 5 Surprising Ways AI is Transforming Malaysia's Major Industries	0.25	Automated cases scattered/ sporadic. Public sector application is limited.
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	–	0	No relevant cases
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	–	0	No relevant cases
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	–	0	No relevant cases
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	2	AI Based Smart Palm Oil Mill; Smart Water Meter Leakage Detection - Putrajaya Pi	0.25	Putrajaya Smart Water, IoT cases. Sustainability is early stage.
5x4	5. Sustainability/ Unmapped	4. Industry & Others	0	–	0	No relevant cases

All Sources List

No	URL	Title	Case Details	Mapping Cell
1	https://dig.watch/resource/malaysia-national-artificial-intelligence-road-map-2021-2025	Malaysia National Artificial Intelligence Roadmap 2021-2025	N/A	unmapped
2	https://www.merdekallm.com/post/malaysia-national-artificial-intelligence-ai-rmap	Malaysia National Artificial Intelligence (AI-Rmap) - Merdeka LLM	The National Artificial Intelligence Roadmap (AI-Rmap) for Malaysia 2021-2025 provides a strategic framework to harness AI for national growth. A key initiative is the establishment of the National AI Office (NAIO), which will serve as the central authority for Malaysia's AI agenda. The NAIO aims to position Malaysia as a key AI player in ASEAN by fostering innovation, promoting cross-sector collaboration, and integrating AI across government, industry, and society. It will also focus on attracting investment, developing local AI talent, and establishing ethical governance frameworks to ensure AI adoption benefits the broader economy and society.	1x0, 1x4
3	https://securiti.ai/malaysia-national-guidelines-on-ai-governance-and-thics/	An Overview of Malaysia's National Guidelines on AI Governance and Ethics - Securiti	This overview covers Malaysia's national guidelines on AI governance and ethics, published on December 18, 2024. The guidelines emphasize consumer protection from harm caused by AI decisions, ensuring fairness, and upholding consumer rights. They mandate non-discrimination, fairness, and inclusivity in AI systems, especially in high-impact sectors. AI developers are required to follow ethical guidelines, ensure their systems are unbiased and secure, and proactively correct potential biases. The guidelines are voluntary and non-binding for now, but are positioned as a foundation for future formal AI regulation, with seven core principles covering fairness, reliability, safety, privacy, security, inclusiveness, and accountability.	1x0
4	https://aipalync.org/document/malaysia-national-artificial-intelligence-roadmap-2021-2025-ai-rmap	Malaysia National Artificial Intelligence Roadmap 2021-2025 (AI-RMAP) - AIPA Lync	The National Artificial Intelligence Roadmap (AI-Rmap) for 2021-2025 details Malaysia's strategy to leverage AI for national competitiveness and economic growth. Aligned with other national policies, the AI-Rmap aims to make Malaysia a high-tech, high-income nation. It emphasizes a "quadruple helix" partnership between government, academia, industry, and society to build a sustainable AI innovation ecosystem. The document is considered a living document, intended to be revised as the AI landscape evolves, and outlines four strategic thrusts covering talent development, industry adoption, research and innovation, and governance and ethics.	1x0, 1x4, 1x3

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No	URL	Title	Case Details	Mapping Cell
5	https://ai.gov.my/about-naio/	Malaysia National AI Office (NAIO)	The National AI Office (NAIO) is Malaysia's central authority responsible for driving the nation's AI agenda. Approved by the Malaysian Cabinet on 28 August 2024 and officially launched by Prime Minister Anwar Ibrahim on 12 December 2024, NAIO operates under the Ministry of Digital and was initially incubated within MyDIGITAL Corporation. Its mandate includes developing Malaysia's AI strategy and roadmaps, fostering cross-sector collaboration, promoting ethical and responsible AI adoption, and integrating AI into government, industry, and society. In 2026, following its incubation period, NAIO's functions transitioned to a new permanent entity, AI Malaysia Berhad, which assumed a broader mandate covering AI policy implementation, governance frameworks, and international AI partnerships.	1x0
6	https://www.trade.gov/market-intelligence/malaysia-artificial-intelligence-roadmap	Malaysia Artificial Intelligence Roadmap - International Trade Administration	Malaysia's AI Roadmap for 2021-2025 focuses on innovation, talent development, infrastructure, ethical governance, sectoral integration, global collaboration, and funding. Partnership with U.S. technology leaders is seen as crucial for accessing cutting-edge AI and fostering knowledge exchange. The Malaysian AI market, valued at around USD300 million in 2023, is rapidly expanding, with significant investment in data centers from major tech companies. U.S. firms can play a vital role in providing expertise, technology, and capital, particularly as Malaysia seeks to build out its computing infrastructure and develop a skilled AI workforce to support long-term economic transformation.	1x0, 1x4, 1x1
7	https://mastic.mosti.gov.my/publication/the-national-guidelines-on-ai-governance-ethics/	THE NATIONAL GUIDELINES ON AI GOVERNANCE & ETHICS - Malaysian Science, Technology Information Centre (MASTIC)	This publication is the official document for "The National Guidelines on AI Governance & Ethics" from the Malaysian government.	1x0
8	https://www.mdec.my/	Malaysia Digital Acceleration Grant - Artificial Intelligence (MDAG-AI) - MDEC	N/A	unmapped
9	https://www.dataguidance.com/news/malaysia-mosti-publishes-national-guidelines-ai	Malaysia: MOSTI publishes National Guidelines on AI Governance and Ethics	Malaysia's Ministry of Science, Technology and Innovation (MOSTI) has published the National Guidelines on AI Governance and Ethics, effective 18 December 2024. The guidelines set out seven core principles for responsible AI development and deployment, including fairness, reliability, safety, privacy and security, inclusiveness, and accountability. While currently voluntary and non-binding, the guidelines are intended to help organizations self-assess their AI systems and are positioned as a foundation for future, more formal AI-specific regulation in Malaysia, alongside the country's existing personal data protection and cybersecurity laws.	1x0

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No	URL	Title	Case Details	Mapping Cell
10	https://mastic.mosti.gov.my/publication/artificial-intelligence-road-map-2021-2025/	Artificial Intelligence Roadmap 2021-2025 - Malaysian Science, Technology Information Centre (MASTIC)	This is the official publication page for the "Artificial Intelligence Roadmap 2021-2025" provided by the Malaysian Science, Technology Information Centre (MASTIC), under the Ministry of Science, Technology and Innovation.	unmapped
11	https://www.digital.gov.my/siaran/MALAYSIA-DIGITAL-TECH-ADOPTION-SUMMIT-:-ARTIFICIAL-INTELLIGENCE-(AI)	Malaysia Digital Tech Adoption Summit: Artificial Intelligence (AI)	This page contains a speech from the Malaysia Digital Tech Adoption Summit on Artificial Intelligence, held on September 12, 2024.	unmapped
12	https://www.mydigital.gov.my/initiatives/the-national-ai-office-naio/	The National AI Office (NAIO) - MyDIGITAL	The National AI Office (NAIO), launched on December 12, 2024, demonstrates Malaysia's commitment to advancing its role in the global AI ecosystem. NAIO's mission is to spearhead AI development and integration across various sectors, aligning the nation's efforts with the increasing global demand for AI technologies. It will play a crucial role in shaping policies, fostering innovation, accelerating AI adoption, and developing talent. NAIO aims to ensure that AI advancements are ethical, inclusive, and beneficial for all Malaysians, positioning the country as a regional leader in AI innovation within a sustainable and inclusive AI-driven economy.	1x0
13	https://ai.gov.my/	Malaysia National AI Office (NAIO)	This is the official homepage of Malaysia's National AI Office (NAIO), the central authority driving the nation's AI agenda. The site outlines NAIO's mandate to strengthen the digital economy, enhance public services, and support sustainable development goals through AI. It also hosts Malaysia's AI Technology Action Plan and related governance resources. As of 2026, NAIO's role has transitioned to the newly established AI Malaysia Berhad, a permanent entity with an expanded mandate to implement national AI policy across ministries and agencies.	1x0
14	https://ru.qazscience.gov.kz/wp-content/uploads/2024/12/Malaysia_Artificial_Intelligence.pdf		N/A	unmapped
15	https://oncodaily.com/insight/137306	The first case of Lung Cancer detected by AI in Malaysia - OncoDaily	In a significant medical milestone, an AI-enhanced chest X-ray led to the first-ever detection of lung cancer in Malaysia. A 67-year-old male smoker, who was asymptomatic, underwent a routine health screening where the AI system identified a suspicious shadow in his lung. This early detection, which might have been missed by human eyes, allowed for timely medical intervention. The patient successfully underwent minimally invasive surgery and was discharged just three days later. This case, a result of Malaysia's broader Lung Health Initiative screening program, illustrates the potential of AI-assisted imaging to catch cancers earlier than conventional screening alone.	1x3, 2x3

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No	URL	Title	Case Details	Mapping Cell
16	https://www.bernama.com/en/news.php?id=2013990	DBKL expands integrated transportation management with 5000 CCTV cameras	Kuala Lumpur City Hall (DBKL) is enhancing its integrated transportation management system by installing 5,000 CCTV cameras with artificial intelligence (AI) capabilities. These cameras will be used for smart traffic management, crime monitoring, community surveillance, and asset protection. The AI system can detect real-time incidents such as potholes, illegal traders, and traffic offenses, enabling DBKL to respond more efficiently. This initiative is part of a broader effort to create a smart city command center that consolidates real-time data feeds, allowing city authorities to coordinate responses across traffic, safety, and municipal services from a single integrated platform.	1x4, 1x3
17	https://codeblue.galencentre.org/2025/03/moh-exploring-ai-for-cancer-tb-diabetic-retinopathy-screenings/	MOH Exploring AI For Cancer, TB, Diabetic Retinopathy Screenings - CodeBlue	Malaysia's Ministry of Health (MOH) is exploring the use of artificial intelligence (AI) to improve diagnostic screenings for cancer, tuberculosis (TB), and diabetic retinopathy. Several pilot projects, coordinated by the Malaysian Health Technology Assessment Section (MaHTAS), are underway to assess AI's effectiveness in early detection and supporting clinical decisions. While initial results are promising, the MOH emphasizes that AI will serve as a supplementary tool to support healthcare professionals, not replace them. The goal is to enhance the efficiency of the healthcare system, including through the DR MATA diabetic-retinopathy screening tool and an AI-powered clinical practice guideline platform called AskCPG.	1x3
18	https://www.ldp.org.my/en/call-for-stronger-action-against-ai-driven-scams-amid-rm2-11-billion-losses/	Call for stronger action against AI-driven scams amid RM2.11 billion losses	The Liberal Democratic Party (LDP) is urging the Malaysian government to take stronger action against the rising threat of AI-driven scams, which have caused an estimated RM2.11 billion in losses since early 2024. The party is calling for an urgent update to Malaysia's outdated cybercrime laws to address advanced threats like deepfakes and AI impersonations. The LDP also recommends that the Malaysian Communications and Multimedia Commission (MCMC) proactively monitor and remove fake content from social media and messaging platforms, and that banks and telecommunications companies strengthen fraud-detection systems to better protect consumers from increasingly sophisticated AI-enabled scams.	2x1
19	https://www.mimos.my/ai-powered-harvesting/	AI-Powered Harvesting - MIMOS Berhad	MIMOS Berhad, Malaysia's national applied research and development center, has developed an AI-powered solution called "Harvest-Ready Tree Detection" for the palm oil industry. This technology uses machine learning-based computer vision to analyze loose oil palm fruitlets on the ground to determine if a tree is ready for harvesting. By	1x4

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
			identifying and mapping harvest-ready trees, the system helps plantation owners manage their resources more effectively, increase labor productivity, and reduce costs. The innovation reflects Malaysia's broader push to apply AI to its agricultural sector, one of the country's key economic pillars, to address labor shortages and improve yield efficiency.	
20	https://www.nst.com.my/news/nation/2025/02/1180964/ai-powered-palm-oil-mill-saves-rm16mil-year-cuts-foreign-labour-33pct	AI-powered palm oil mill saves RM1.6mil a year, cuts foreign labour by 33pct	An AI-powered palm oil mill in Malaysia is demonstrating significant economic and social benefits. The mill is saving RM1.6 million annually and has reduced its reliance on foreign labor by 33%. This innovative application of AI is a prime example of how technology can enhance efficiency and productivity in the agricultural sector. By automating processes and optimizing operations, the AI system is not only cutting costs but also addressing labor shortages, a common challenge in the palm oil industry, while supporting Malaysia's broader goals of increasing automation and reducing dependency on foreign labor across its plantation and milling operations.	unmapped
21	https://www.inno-thought.com/post/445-000-public-officers-in-malaysia-to-benefit-from-generative-ai-under-the-ai-at-work-2-0-initiat	445,000 Public Officers in Malaysia to Benefit from Generative AI Under the 'AI at Work 2.0' Initiative by the Ministry of Digital and Google Cloud	The "AI at Work 2.0" initiative, a collaboration between Malaysia's Ministry of Digital and Google Cloud, will provide up to 445,000 public officers with access to Google Workspace with Gemini. This program aims to enhance public service delivery by leveraging generative AI to assist with tasks such as summarizing information, drafting content, and analyzing data. The initiative includes dedicated training and workshops to help public officers effectively use these new tools. By empowering its public sector workforce with generative AI, the government aims to boost administrative productivity, improve the quality and speed of citizen-facing services, and build broader AI literacy across the civil service.	1x2
22	https://www.drmata.com.my/	Using Artificial Intelligence in Ophthalmology	AI is revolutionizing ophthalmology by enhancing diagnostic accuracy and treatment efficiency. In Malaysia, AI algorithms are being employed to analyze retinal images for early detection of diseases like diabetic retinopathy, glaucoma, and age-related macular degeneration. This technology allows for faster and more accessible screening, particularly in remote areas with limited access to specialists. AI assists ophthalmologists by providing rapid, data-driven insights, helping to prioritize urgent cases and reduce the burden on limited numbers of eye-care specialists. Tools such as DR MATA, used within Malaysia's public healthcare system, reflect this broader shift toward AI-assisted screening for diabetic eye disease.	1x3, 2x3

(Continued on next page)

(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
23	https://www.digital.gov.my/en-GB/siaran/NAIO-sets-a-new-benchmark-in-Agritech-with-AI-solutions-through-Rakan-Tani	NAIO sets a new benchmark in Agritech with AI solutions through ...	The National AI Office (NAIO) of Malaysia, through its 'AI Untuk Rakyat' (AI for the People) program, is advancing the agricultural technology (Agritech) sector. By collaborating with local industry players, NAIO is promoting the adoption of AI-powered solutions to address challenges in the agricultural value chain. This initiative aims to improve crop yield, optimize resource management, and enhance food security. The program focuses on practical applications of AI, such as precision farming and yield prediction, with its first project, Rakan Tani, piloted among rice farmers in Terengganu to test AI-driven services including e-marketplaces, farming input recommendations, and credit scoring.	1x0, 1x4
24	https://www.bernama.com/en/news.php?id=2331450	Malaysia To Leverage AI To Detect Suspicious Transactions, Says Anwar	Malaysia is set to leverage AI to enhance its capability to detect suspicious financial transactions and combat corruption. Prime Minister Datuk Seri Anwar Ibrahim announced that this move is part of a broader strategy to strengthen national governance and integrity. By employing AI, authorities can analyze vast amounts of financial data more effectively to identify patterns and anomalies indicative of illicit activities. This technological step aims to create a more transparent and accountable public sector, complementing existing anti-corruption enforcement efforts and reinforcing Malaysia's broader national AI governance agenda under NAIO.	1x0
25	https://codeblue.galencentre.org/2024/08/malaysias-first-ai-detected-lung-cancer-case-marks-breakthrough/	Malaysia's First AI-Detected Lung Cancer Case Marks Breakthrough ...	Malaysia has marked a significant breakthrough in medical diagnostics with its first case of lung cancer detected using Artificial Intelligence. An AI-powered chest X-ray analysis identified a suspicious nodule in a patient that was later confirmed to be cancerous. This early detection enabled timely intervention and treatment, highlighting the potential of AI to revolutionize healthcare by improving the accuracy and speed of diagnoses. This case serves as a pivotal example of how technology can support Malaysia's Lung Health Initiative, a national screening program that uses AI-assisted X-rays to catch lung cancer, tuberculosis, and other respiratory conditions earlier than conventional methods.	1x3, 2x3
26	https://www.asia-palmoil.com/post/malaysia-unveils-the-world-s-first-ai-driven-smart-palm-oil-mill-pioneering-efficiency-and-sustainab	Malaysia Unveils the World's First Ai-Driven Smart Palm Oil Mill ...	Malaysia has launched the world's first smart palm oil mill powered by Artificial Intelligence, a significant innovation for the agricultural sector. This state-of-the-art facility utilizes AI and automation to optimize the entire milling process, from fruit reception to oil extraction. The system improves efficiency, reduces operational costs, and enhances worker safety. By leveraging data analytics and machine learning, the	unmapped

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
			mill can predict maintenance needs and ensure consistent product quality, positioning Malaysia as a pioneer in applying AI to one of its most economically important agricultural commodities.	
27	https://ai.gov.my/media/news-details/20240205_Press_Release_445000_Public_Officers_in_Malaysia_to_Benefit_from_Generative_AI_Under_the_AI_at_Work_2_Initiative_by_the_Ministry_of_Digital_and_Google_Cloud.pdf	445,000 Public Officers in Malaysia to Benefit from Generative AI ...	Malaysia's National AI Office (NAIO) has partnered with Google Cloud to empower 445,000 public officers with generative AI tools. This initiative aims to enhance productivity and innovation within the public sector by providing access to Google Workspace with Gemini. Civil servants will be trained to use AI for tasks such as summarizing documents, drafting communications, and analyzing data. The program is designed to streamline administrative processes and improve the delivery of public services, forming a cornerstone of the government's broader "AI at Work 2.0" initiative to modernize the civil service.	1x0, 1x2
28	https://practiceguides.chambers.com/practice-guides/artificial-intelligence-2025/malaysia/trends-and-developments	Artificial Intelligence 2024 - Malaysia	This Chambers and Partners practice guide chapter provides an overview of Malaysia's AI legal and regulatory landscape. It outlines the National Guidelines on AI Governance and Ethics and discusses key trends, including public-private AI education initiatives such as Microsoft's AI for MY Future program, which aims to train 800,000 Malaysians. The guide also highlights AI adoption across sectors such as finance, healthcare, agriculture, and smart cities, including Malaysia's AI-driven palm oil mill. It notes that future legal reforms may need to address AI-driven automated decision-making, consumer protection, and sector-specific regulation as adoption grows.	unmapped
29	https://developingtelecoms.com/telecom-technology/data-centres-networks/18504-malaysia-launches-sovereign-ai-stack-with-deepseek-and-huawei-gpus.html	Malaysia launches sovereign AI stack with DeepSeek and Huawei GPUs	Malaysia has launched its own sovereign AI stack, a strategic initiative to build national AI capabilities. This development is powered by a partnership with China-based AI firm DeepSeek and utilizes Huawei's advanced GPUs. The move aims to reduce reliance on foreign technology and create a secure, self-sufficient AI ecosystem. By developing its own infrastructure, Malaysia seeks to foster local innovation, support the growth of its digital economy, and ensure data sovereignty. This initiative is part of the country's broader strategy to diversify its AI technology partnerships and reduce dependence on a single source for critical computing infrastructure.	1x0
30	https://www.rcrwireless.com/20241003/featured/celcomdigi-sk-telecom-sign-ai-partnership	CelcomDigi, SK Telecom to develop AI service for the Malaysian market	Malaysian telecommunications giant CelcomDigi has partnered with South Korea's SK Telecom to co-develop an AI-powered service specifically for the Malaysian market. This collaboration will leverage SK Telecom's expertise in AI to create tailored applications for local consumers and businesses. The partnership aims to develop a Bahasa Malaysia-	unmapped

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
			specific AI model to enhance customer service and create new opportunities in various sectors. This strategic alliance is expected to accelerate the adoption of AI-powered digital services in Malaysia's telecommunications industry, while also strengthening cross-border technology cooperation between Malaysian and Korean firms.	
31	https://www.trade.gov/market-intelligence/malaysia-ai-assisted-healthcare-technology	Malaysia AI Assisted Healthcare Technology	Malaysia's healthcare sector is increasingly adopting AI-assisted technologies to improve service delivery and patient outcomes. The government is promoting the integration of AI for diagnostics, personalized medicine, and hospital management. This creates significant opportunities for U.S. companies specializing in healthcare AI solutions. The market is driven by the need for greater efficiency in public hospitals and growing demand for advanced services in private healthcare. Key areas for investment include AI-powered diagnostic imaging, telemedicine platforms, and hospital administrative systems, as Malaysia works to modernize its healthcare infrastructure while addressing workforce and resource constraints.	1x3, 1x2
32	https://www.bis.org/review/r240716g.htm	Banking in the era of generative AI	Adnan Zaylani Mohamad Zahid from Bank Negara Malaysia discusses the transformative impact of generative AI on the banking sector. He highlights that AI, particularly generative AI, is moving beyond automating routine tasks to augmenting human capabilities in complex decision-making. For Malaysia, this technology offers opportunities to enhance financial services, improve risk management, and personalize customer experiences. However, it also presents challenges related to ethics, data governance, and the need for robust oversight frameworks to ensure that financial institutions deploy generative AI responsibly while maintaining consumer trust and financial stability.	1x0, 1x4
33	https://www.businesstoday.com.my/2025/06/26/how-ai-is-powering-the-next-wave-of-msme-growth-in-malaysia/	How AI Is Powering The Next Wave Of MSME Growth In Malaysia	AI is becoming a crucial driver for the growth of Micro, Small, and Medium Enterprises (MSMEs) in Malaysia. AI-powered tools are enabling MSMEs to enhance efficiency, personalize customer experiences, and make data-driven decisions. From automated marketing to optimized supply chains, AI levels the playing field, allowing smaller businesses to compete with larger corporations. The adoption of accessible and affordable AI solutions helps MSMEs overcome resource limitations that have historically made advanced technology adoption difficult, supporting their contribution to Malaysia's broader digital economy goals.	1x4, 1x1

(Continued on next page)

(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
34	https://opengovasia.com/malaysia-accelerating-digital-transformation-of-cooperatives/?c=jp	Malaysia: Accelerating Digital Transformation of Cooperatives ...	Malaysia is focused on accelerating the digital transformation of its cooperative sector to enhance its contribution to the national economy. The government is encouraging cooperatives to adopt digital technologies, including e-commerce platforms and digital management systems. This initiative aims to improve operational efficiency, expand market reach, and increase the competitiveness of the nearly 16,000 cooperatives in the country. By embracing digitalization, cooperatives can better serve their members, access wider markets, and integrate emerging technologies such as AI into their business and financial-management operations.	1x4, 1x1
35	https://www.byteplus.com/en/topic/421303?title=how-ai-is-transforming-manufacturing-in-malaysia	How AI is Transforming Manufacturing in Malaysia	Artificial Intelligence is fundamentally transforming Malaysia's manufacturing sector, a key pillar of its economy. AI applications are being integrated across the production lifecycle, from supply chain management to quality control. Technologies like predictive maintenance, powered by machine learning, help prevent equipment failures and reduce downtime. AI-driven robotics and automation are increasing production speed and precision while improving worker safety. Furthermore, AI analytics enable manufacturers to optimize inventory management and demand forecasting, helping the sector maintain competitiveness amid rising global automation standards.	1x4, 3x3, 4x4
36	https://techwireasia.com/2025/01/malaysia-first-ai-powered-bank-revolutionises-financial-services/	Malaysia's first AI-powered bank revolutionises financial services	Malaysia's first AI-powered bank is revolutionizing the financial services landscape by leveraging technology to offer hyper-personalized and seamless customer experiences. By integrating AI into its core operations, the bank can analyze customer data to provide tailored product recommendations, proactive financial advice, and enhanced security features. This digital-first approach automates many traditional banking processes, resulting in faster loan approvals and more efficient customer service, positioning the bank as a model for how AI can reshape retail banking in the Malaysian market.	1x4, 1x3
37	https://annalise.ai/2024/05/sunway-medical-centre-teams-up-with-annalise-ai-to-improve-patient-care-in-malaysia/	Sunway Medical Centre Teams Up with annalise.ai to Improve ...	Sunway Medical Centre in Malaysia has partnered with annalise.ai to integrate a comprehensive AI solution for interpreting radiological scans. This collaboration aims to enhance diagnostic accuracy and efficiency. The AI tool assists radiologists by acting as a 'second pair of eyes,' detecting and highlighting potential abnormalities on chest X-rays and non-contrast CT brain scans. This technology helps prioritize critical cases, reduce turnaround times, and improve patient outcomes by enabling faster clinical decision-making, reflecting a broader trend of private Malaysian hospitals adopting AI-assisted diagnostic imaging tools.	1x3, 1x1, 2x3

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
38	https://www.theasianbanker.com/updates-and-articles/ambank-transforms-with-ai-and-analytics	AmBank transforms with AI and analytics	AmBank in Malaysia is undergoing a significant transformation by integrating AI and advanced analytics into its operations. The bank is leveraging data to gain deeper customer insights, enabling the delivery of highly personalized products and services. This data-driven approach enhances risk management, improves fraud detection, and streamlines internal processes. By automating decision-making and optimizing marketing campaigns, AmBank aims to boost efficiency and customer engagement, positioning itself competitively among Malaysian banks that are increasingly investing in AI-driven digital transformation.	1x1
39	https://corporate.celcomdigi.com/news/celcomdigi-inks-mous-with-huawei-and-zte-to-leverage-ai-in-building-malaysias-future-digital-network	CelcomDigi inks MoUs with Huawei and ZTE to leverage AI in ...	CelcomDigi Berhad has signed Memorandums of Understanding (MoUs) with Huawei and ZTE to explore the use of AI and other advanced technologies to enhance its network operations and digital services in Malaysia. The collaborations will focus on developing AI-powered solutions to optimize network performance, improve energy efficiency, and automate operational processes. By partnering with these global tech leaders, CelcomDigi aims to accelerate its digital transformation journey, deliver superior network reliability, and strengthen its competitive position in Malaysia's telecommunications market.	1x3, 1x1
40	https://www.trade.gov/market-intelligence/malaysia-artificial-intelligence	Malaysia - Artificial Intelligence	Malaysia's government is actively promoting AI adoption across various sectors to drive economic growth, with the market expected to grow significantly. The National AI Roadmap 2021-2025 outlines a strategy focusing on talent development, infrastructure, and ethical governance. Key opportunities for U.S. companies exist in sectors like manufacturing, healthcare, and financial services. The government is investing in AI-powered solutions to enhance public services and supports the establishment of AI-related industry standards, positioning Malaysia as an increasingly attractive destination for AI-driven foreign investment in Southeast Asia.	1x0, 1x4, 1x3, 1x2
41	http://ai.gov.my/governance	Governance	This is the governance section of Malaysia's National AI Office (NAIO) website. It outlines the regulatory and ethical framework guiding the country's AI development, including the National Guidelines on AI Governance and Ethics. The page describes NAIO's role in developing a formal AI Adoption Regulatory Framework and coordinating governance efforts across government agencies. It reflects Malaysia's broader approach of establishing voluntary, principles-based guidance in the near term while working toward more formal AI-specific legislation as the technology and its risks continue to evolve.	1x0

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
42	https://ai.gov.my/faq/ai-governance-and-ethics	Malaysia National AI Office (NAIO)	The Malaysia National AI Office (NAIO) is the central coordinating body for the country's AI initiatives, as outlined in the Malaysia Artificial Intelligence Roadmap 2021-2025. Its mission is to accelerate AI adoption to transform Malaysia into a global AI leader. NAIO focuses on fostering a vibrant ecosystem by promoting innovation, developing talent, and establishing ethical guidelines. It works closely with public and private sector partners to drive AI integration in key areas like healthcare, agriculture, and finance, while also addressing frequently asked questions on AI governance and ethics to help organizations understand their responsibilities under the national guidelines.	1x0, 1x4, 1x3
43	https://pubmed.ncbi.nlm.nih.gov/40052065/	Use of artificial intelligence with retinal imaging in screening for diabetes-associated complications: systematic review	This systematic review examines the use of Artificial Intelligence with retinal imaging for screening complications associated with diabetes. The study finds that AI algorithms demonstrate high accuracy in detecting conditions like diabetic retinopathy, diabetic macular edema, and even other systemic diseases like chronic kidney disease and cardiovascular issues from retinal photographs. The evidence suggests that AI can serve as an effective, automated screening tool, potentially improving early detection rates and access to care in settings with limited numbers of trained ophthalmologists, such as rural and primary care clinics.	2x3
44	https://www.youtube.com/watch?v=0h5yL4b5gAs	DR MATA: AI-Powered Solution for Early Diabetic Retinopathy Detection	DR MATA is an AI-powered solution designed for the early detection of diabetic retinopathy, a leading cause of blindness among diabetics. Developed in Malaysia, this technology uses deep learning algorithms to analyze retinal images and identify signs of the disease with high accuracy. The system aims to make screening more accessible and affordable, especially in primary care settings and rural areas where ophthalmologists are scarce. By enabling early diagnosis, DR MATA helps facilitate timely referral and treatment, with independent validation reporting sensitivity of around 87% and specificity of around 97% in detecting the condition.	1x3, 2x3
45	https://www.astrazeneca.my/media/press-releases/2021/astrazeneca-continues-to-drive-healthcare-innovation-with-ai-x-ray-for-lung-cancer-diagnosis.html#	AstraZeneca continues to drive healthcare innovation with AI X-Ray for lung cancer diagnosis	AstraZeneca Malaysia is advancing healthcare innovation through a partnership to implement AI-powered software for lung cancer diagnosis. This technology analyzes chest X-rays to help doctors detect suspicious nodules that may indicate early-stage lung cancer, a disease often diagnosed late. The initiative aims to improve early detection rates, which is crucial for increasing survival chances. By integrating AI into the screening process, AstraZeneca supports clinicians in making faster, more informed diagnostic decisions, contributing to Malaysia's broader efforts to strengthen early cancer detection through AI-assisted imaging tools.	1x3, 2x3

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
46	https://airei.com.my/smart-mill/	AI Based Smart Palm Oil Mill	AIREI presents an AI-based Smart Palm Oil Mill solution designed to revolutionize the palm oil industry in Malaysia. This system uses AI and IoT to automate and optimize the entire milling process. By leveraging real-time data and predictive analytics, it enhances operational efficiency, increases oil extraction rates, and reduces production costs. The technology also improves sustainability by minimizing waste and energy consumption. This smart mill concept aims to address labor shortages and improve the environmental footprint of palm oil production, one of Malaysia's most significant export industries.	1x4, 1x3, 5x3
47	https://www.youtube.com/watch?v=nwULYHso-9M	AI-driven smart palm oil	This video showcases the world's first AI-driven smart palm oil mill, a groundbreaking project in Malaysia. The facility, a collaboration between a university and an industry partner, integrates AI and automation to enhance productivity and sustainability. The system optimizes the processing of fresh fruit bunches, improving oil yield and quality while reducing reliance on manual labor. This innovation represents a major technological leap for the traditional palm oil industry, demonstrating how academic-industry partnerships can accelerate the adoption of advanced automation in Malaysia's agricultural processing sector.	1x4
48	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8945203/	The application of artificial intelligence in diabetic retinopathy: progress and prospects	This paper reviews the progress and prospects of applying Artificial Intelligence in the diagnosis and management of diabetic retinopathy (DR). AI, particularly deep learning models, has shown remarkable success in automatically detecting and grading DR from retinal fundus images, with performance often comparable to human experts. The technology offers the potential to create widespread, cost-effective screening programs, especially in underserved areas. Future prospects include using AI for predicting disease progression and personalizing treatment plans, further extending the role of automated screening tools beyond simple detection.	2x3
49	https://fintech.global/2024/10/01/bank-negara-malaysia-innovates-with-nfp-to-tackle-financial-scams/	Bank Negara Malaysia innovates with NFP to tackle financial scams	Bank Negara Malaysia (BNM) is launching a National Fraud Portal (NFP) as an innovative measure to combat financial scams. This centralized platform will enable the rapid sharing of information about fraudulent activities among financial institutions, law enforcement, and other relevant agencies. By leveraging technology to trace fund flows more effectively, the NFP aims to increase the chances of recovering stolen money and disrupting scam networks. This initiative represents a proactive, multi-stakeholder response to Malaysia's rising financial scam losses, complementing broader efforts by the LDP and other bodies to strengthen anti-scam measures.	1x2

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
50	https://www.tookitaki.com/blog/malaysias-national-fraud-portal-what-to-expect	Malaysia's National Fraud Portal: What to Expect	Malaysia's upcoming National Fraud Portal (NFP) is a critical initiative led by Bank Negara Malaysia to combat financial crime. The portal will serve as a centralized intelligence-sharing hub, allowing financial institutions to report scams in near real-time. This system is expected to significantly speed up the process of tracing and freezing illicit funds, improving recovery rates. For banks and other financial institutions, the NFP will require integration with their existing anti-money laundering and fraud-detection systems, representing a significant operational and technological undertaking across the financial sector.	1x2
51	https://mspo.org.my/mspo-blogs/driving-palm-oil-sustainability-through-information-technology-it-innovation	Driving Palm Oil Sustainability Through Information Technology (IT) Innovation	The Malaysian Sustainable Palm Oil (MSPO) certification scheme is leveraging Information Technology (IT) to enhance sustainability in the palm oil industry. Innovations include a traceability system that tracks palm oil from its source to the final product, ensuring compliance with sustainability standards. Digital tools are also used for monitoring land use, preventing deforestation, and managing plantations more efficiently. By integrating IT, the MSPO aims to increase transparency and accountability throughout the supply chain, helping Malaysian palm oil producers meet increasingly stringent international sustainability requirements and maintain market access.	1x4, 1x3
52	https://mobileidworld.com/malaysian-banks-block-rm399m-in-fraud-attempts-through-ai-and-enhanced-security-measures/	Malaysian Banks Block RM399M in Fraud Attempts Through AI and Enhanced Security Measures	Malaysian banks have successfully blocked nearly RM399 million in fraudulent transactions by implementing enhanced security measures, including Artificial Intelligence. This initiative, part of a collective effort to combat financial scams, involves using AI algorithms to analyze transaction patterns and detect suspicious activities in real-time. Other measures include migrating from SMS one-time passwords to more secure authentication methods. These proactive steps, mandated by Bank Negara Malaysia, reflect the banking industry's broader response to the sharp rise in AI-driven and other sophisticated scams targeting Malaysian consumers.	unmapped
53	https://www.thestar.com.my/business/business-news/2024/08/21/ai-powered-system-to-hunt-down-financial-scammers#goog_rewarded	AI-powered system to hunt down financial scammers	Malaysia is developing a new AI-powered system to aggressively track down and combat financial scammers. The system will be integrated into the National Scam Response Centre (NSRC) to enable faster detection and response to fraudulent activities. By analyzing vast amounts of data, the AI will identify suspicious transactions and help authorities trace the flow of illicit funds more effectively. This technological upgrade is part of the government's strategy to strengthen its defenses against increasingly sophisticated financial crime, complementing Bank Negara Malaysia's National Fraud Portal initiative.	1x0

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
54	https://www.youtube.com/watch?v=-fK2gE9iZpo	Malaysia to create over 450 high-skilled AI jobs through NAIO-GAIV partnership	Malaysia's National AI Office (NAIO) has partnered with the Global AI Village (GAIV) to create over 450 high-skilled jobs in the field of Artificial Intelligence. This collaboration aims to develop a robust talent pipeline to support the country's growing AI ecosystem, with the goal targeted for achievement within three to five years. The partnership will focus on training and upskilling the local workforce, connecting them with opportunities in high-demand areas of AI. This initiative is a key part of Malaysia's strategy to become a regional leader in AI talent development and innovation.	1x0, 1x4
55	https://www.klsescreener.com/v2/news/view/1472497/my-say-opportunities-for-malaysia-in-an-ai-driven-future	My Say: Opportunities for Malaysia in an AI-driven future	Malaysia is well-positioned to capitalize on the opportunities presented by an AI-driven future. With strong government support, a growing digital infrastructure, and a strategic location in Southeast Asia, the country can become a significant player in the global AI economy. Key opportunities lie in developing AI solutions for core industries like manufacturing, healthcare, and Islamic finance. To succeed, Malaysia must focus on nurturing a skilled talent pool, fostering a vibrant innovation ecosystem, and ensuring robust ethical and regulatory frameworks keep pace with rapid technological adoption.	1x4, 1x3
56	https://www.tiktok.com/@selangortv/photo/7527091868681751826	Sejenak Info	Private sector	unmapped
57	https://www.digital.gov.my/ms/siaran/naio-menetapkan-penanda-aras-dalam-agriteknologi-dengan-kaedah-penyelesaian-ai-melalui-rakan-tani/	NAIO Menetapkan Penanda Aras Dalam Agriteknologi Dengan Kaedah Penyelesaian AI Melalui Rakan Tani	The National AI Office (NAIO), under the Ministry of Digital, is setting a new benchmark in agricultural technology (Agritech) through its "Rakan Tani" (Farming Partner) program. This initiative promotes the adoption of AI solutions to solve challenges within the agricultural value chain. By collaborating with industry partners, NAIO facilitates the use of AI to enhance crop productivity, optimize resource management, and increase the income of farmers. This program is part of the "AI Untuk Rakyat" (AI for the People) initiative, with its first pilot phase focused on rice farmers in Terengganu.	1x0, 1x4
58	https://www.crnasia.com/news/2025/artificial-intelligence/google-cloud-empowers-nearly-half-a-million-civil-servants-i	Google Cloud empowers nearly half a million civil servants in Malaysia with Gemini AI	Google Cloud is set to empower nearly 445,000 Malaysian civil servants with its Gemini generative AI tools. This initiative, in partnership with the Ministry of Digital, will integrate Google Workspace with Gemini to enhance productivity and service delivery across the public sector. The program aims to equip government employees with advanced AI capabilities for tasks like data analysis, report generation, and communication. This large-scale adoption represents a significant step in Malaysia's public-sector digital transformation and is one of the largest generative AI government rollouts in the region.	1x2

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(Continued from the previous page)

No	URL	Title	Case Details	Mapping Cell
59	https://www.lowyat.net/2021/255896/dbkl-installs-3000-ai-cameras-around-kl-to-monitor-crime-and-traffic/	DBKL Installs 3000 AI Cameras Around KL To Monitor Crime And Traffic	Kuala Lumpur City Hall (DBKL) has installed 3,000 CCTV cameras equipped with Artificial Intelligence around the city to enhance surveillance of crime and traffic. These smart cameras are part of a larger initiative to create a network of 5,000 AI-powered CCTVs. The system is designed to automatically detect incidents such as traffic violations, illegal activities, and infrastructure damage like potholes. This enables faster response times from authorities and improves urban management, forming an early phase of DBKL's broader integrated transportation and public-safety management system.	1x3
60	https://www.frontier-enterprise.com/malaysia-google-cloud-ramp-up-generative-ai-campaign/	Malaysia, Google Cloud ramp up generative AI campaign	Malaysia and Google Cloud are intensifying their collaboration to accelerate the adoption of generative AI within the nation's public sector. This partnership will provide nearly half a million civil servants with access to Google's Gemini AI through Google Workspace. The initiative aims to transform public service delivery by empowering government employees with tools for enhanced productivity and innovation. This move is a core component of Malaysia's digital transformation strategy, signaling the government's commitment to scaling generative AI adoption across ministries and agencies.	1x0, 1x1, 1x2
61	https://technode.global/2025/05/07/how-these-cities-are-utilizing-ai-powered-video-surveillance/	How these cities are utilizing AI-powered video surveillance	Cities like Kuala Lumpur are increasingly deploying AI-powered video surveillance to enhance urban management. In Malaysia's capital, an extensive network of AI-equipped CCTV cameras monitors traffic flow, detects violations, and identifies infrastructure issues like potholes in real-time. This allows city authorities to respond more quickly to incidents, manage congestion, and improve public safety. Beyond traffic, the technology is used for monitoring illegal activities and ensuring community safety, reflecting a broader regional trend of Southeast Asian cities investing in AI-driven smart-city surveillance infrastructure.	1x3
62	https://www.thestar.com.my/news/nation/2025/05/20/dbkl-embraces-ai-for-traffic-management	DBKL embraces AI for traffic management	The Kuala Lumpur City Hall (DBKL) is embracing Artificial Intelligence to revolutionize its traffic management system. By integrating AI with its network of CCTV cameras, DBKL can monitor and analyze traffic conditions in real-time. The system is designed to automatically detect traffic offenses, accidents, and congestion, allowing for quicker dispatch of personnel and more efficient incident management. This technological adoption is part of DBKL's effort to create a smart city, aiming to alleviate Kuala Lumpur's chronic traffic congestion and improve overall urban mobility for residents and commuters.	1x3

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No	URL	Title	Case Details	Mapping Cell
63	https://cxociety.com/events/malaysian-organizations-readiness-for-financial-transformation-through-artificial-intelligence/	Malaysian Organizations' Readiness for Financial Transformation Through Artificial Intelligence	Malaysian organizations are increasingly recognizing the potential of AI to drive financial transformation, yet readiness levels vary. A study indicates that while many companies are optimistic, they face challenges in adoption, including a shortage of AI talent, concerns about data security, and the cost of implementation. To successfully leverage AI, organizations need a clear strategy, investment in upskilling their workforce, and robust governance frameworks. The report suggests that a phased, well-governed approach to AI adoption is more likely to deliver sustainable financial transformation than rushed, ad hoc implementation.	1x0
64	https://www.icmr.my/ai-powered-finance-the-key-to-inclusion-and-innovation/	AI-Powered Finance: The Key to Inclusion and Innovation	The Securities Commission Malaysia's Islamic Capital Market Research Centre (ICMR) highlights AI as a key driver for financial inclusion and innovation. AI technologies can analyze vast datasets to create more accessible and personalized financial products, particularly within Islamic finance. By automating processes and improving risk assessment, AI can lower costs and extend services to underserved populations. It also enables the development of innovative Shariah-compliant products. The ICMR frames AI adoption as central to positioning Malaysia as a global hub for AI-enabled Islamic finance innovation.	1x4, 3x3
65	https://www.goodfirms.co/artificial-intelligence/malaysia	Top Artificial Intelligence Companies in Malaysia	This directory lists the top Artificial Intelligence companies in Malaysia for July 2025, based on reviews and market research. The listed companies offer a wide range of AI services, including machine learning, natural language processing, computer vision, and data analytics. They cater to various industries such as healthcare, finance, manufacturing, and retail, providing solutions for automation, predictive analysis, and business process optimization. The platform helps businesses find reliable AI vendors, reflecting the growth and diversification of Malaysia's domestic AI service-provider ecosystem.	1x4, 1x3
66	https://www.bernama.com/en/thoughts/news.php?id=2406061	MALAYSIA'S AI REVOLUTION IN ISLAMIC FINANCE: A REGIONAL AND GLOBAL AMBITION	Malaysia is positioning itself to lead an AI revolution in Islamic finance, with ambitions to set regional and global standards. By integrating AI, the nation aims to enhance the efficiency, transparency, and accessibility of Shariah-compliant financial services. AI applications can automate compliance checks, create personalized ethical investment portfolios, and improve risk management. This technological push is not just about domestic growth; it's a strategic move to solidify Malaysia's long-standing position as a global leader in Islamic finance by combining its regulatory expertise with cutting-edge AI capabilities.	unmapped

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No	URL	Title	Case Details	Mapping Cell
67	https://www.smartosc.com/10-best-ai-company-in-malaysia-driving-innovation-across-industries/	10 Best AI Company in Malaysia Driving Innovation Across Industries	This article profiles ten leading AI companies in Malaysia that are at the forefront of driving innovation. These firms provide a diverse range of AI-powered solutions, from data analytics and machine learning to business automation and chatbots. They serve a variety of sectors, including e-commerce, healthcare, and finance, helping businesses optimize their operations, improve customer engagement, and unlock new growth opportunities. The list highlights the growing expertise within Malaysia's technology sector and the increasing availability of local AI vendors serving both domestic and regional markets.	1x4, 1x3, 1x2
68	https://www.infowhiz.com.my/post/5-surprising-ways-ai-is-transforming-malaysias-major-industries	5 Surprising Ways AI is Transforming Malaysia's Major Industries	Artificial Intelligence is making a significant impact on Malaysia's key industries in unexpected ways. In agriculture, AI-powered drones are optimizing crop yields in palm oil plantations. The manufacturing sector is using predictive maintenance to prevent equipment failure. In healthcare, AI assists in the early detection of diseases like cancer from medical images. The financial industry employs AI for robust fraud detection and personalized banking services. Lastly, the retail sector uses AI-driven recommendation engines and demand forecasting to personalize customer experiences and streamline inventory management.	1x4, 1x3, 2x3, 3x3, 4x4
69	https://www.feverasia.com/ai-is-changing-malaysian-healthcare/	Sick of Waiting Rooms? Here's how FEV3R's AI Is Changing Malaysian Healthcare Forever	FEV3R, a Malaysian health-tech solution, is using AI to transform the primary care experience by tackling the problem of long waiting times in clinics. The platform features an AI-powered system that helps manage patient flow and clinic operations more efficiently. By allowing patients to check in remotely and receive real-time updates on queue status, the system minimizes physical waiting room congestion. This not only improves patient convenience and satisfaction but also helps clinics optimize staff scheduling and resource allocation, reflecting a growing wave of private health-tech innovation in Malaysia.	1x3
70	https://w.media/malaysia-eyes-chinese-ai-for-telecommunications-media-and-film/	Malaysia Eyes Chinese AI for Telecommunications, Media, and Film	Malaysia is exploring collaborations with Chinese technology companies to integrate AI into its telecommunications, media, and film industries. This strategic interest stems from a desire to leverage China's advanced AI capabilities to modernize these sectors. Potential applications include using AI for network optimization in telecommunications, creating personalized content recommendations in media, and streamlining production processes in film. This partnership could accelerate Malaysia's digital and creative-industry transformation, while also reflecting the country's broader strategy of diversifying its AI technology partnerships beyond Western providers.	unmapped

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No	URL	Title	Case Details	Mapping Cell
71	https://xyreon.com.my/uncategorized/integration-of-artificial-intelligence-ai-with-industrial-pcs-in-malaysian-manufacturing-enhancing-efficiency-and-innovation/	Integration of Artificial Intelligence (AI) with Industrial PCs in Malaysian Manufacturing: Enhancing Efficiency and Innovation	The integration of AI with Industrial PCs is a transformative force in Malaysian manufacturing. This synergy enhances efficiency and fosters innovation by enabling AI-driven quality control through image recognition, optimizing production processes in real-time, and automating inventory management with predictive demand analysis. This allows manufacturers to reduce waste, cut costs, and respond more quickly to market demands. By embracing this technology, Malaysian companies can gain a significant competitive advantage as the country continues to build out its position as a regional manufacturing and electronics hub.	1x4, 2x3
72	https://hatiintl.com/what-is-a-smart-hospital	Malaysia's Smart Hospital - IoT - Artificial Intelligence	Malaysia is advancing toward the concept of "Smart Hospitals," which integrate IoT and AI to create a highly digitized and patient-centric healthcare environment. These hospitals use interconnected devices and intelligent systems to automate clinical and administrative processes, from patient tracking to asset management. The goal is to improve the quality of care, enhance patient safety, and increase operational efficiency. By leveraging technologies like AI and machine learning for data analysis, smart hospitals aim to support faster diagnosis, better resource planning, and more coordinated patient care across departments.	1x3
73	https://niveussolutions.com/ai-driven-predictive-maintenance-smart-factory-solutions-singapore/	Boosting Manufacturing Efficiency in Singapore & Malaysia with AI-Driven Predictive Maintenance	Manufacturing sectors in Singapore and Malaysia are increasingly adopting AI-driven predictive maintenance to enhance efficiency and reduce costly unplanned downtime. By analyzing data from machinery, AI algorithms can predict potential equipment failures before they occur, allowing for proactive repairs. This approach, a core component of Smart Factory solutions and Industry 4.0, helps manufacturers optimize maintenance schedules, cut operational costs, and maintain a competitive edge. The integration of AI-driven maintenance reflects the broader regional push toward Industry 4.0 adoption across Southeast Asia's manufacturing hubs.	1x4, 3x3
74	https://themalaysianreserve.com/2024/06/19/ai-and-ev-innovations-entering-malaysias-healthcare-system/	AI and EV innovations entering Malaysia's healthcare system	AI and Electric Vehicle (EV) innovations are beginning to make their mark on Malaysia's healthcare system. AI is being utilized to enhance diagnostics, personalize medical treatments, and accelerate the discovery and development of new drugs. This technological integration promises to make healthcare more precise and efficient. At the same time, the adoption of EVs for medical logistics and patient transport offers a more sustainable and cost-effective solution for the healthcare sector. These parallel developments reflect Malaysia's broader push to modernize its healthcare system through emerging technology adoption.	1x3

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No	URL	Title	Case Details	Mapping Cell
75	https://pmc.ncbi.nlm.nih.gov/articles/PMC10501060/	Malaysian Medical Students' Attitudes and Readiness Toward AI (Artificial Intelligence): A Cross-Sectional Study	This cross-sectional study investigated the attitudes and readiness of Malaysian medical students toward AI in healthcare. While students recognize the growing importance of AI in medicine, the study found that their exposure to AI through formal education is limited. Many physicians are optimistic about AI's potential to speed up processes, but there remains apprehension about the technology's quality and reliability. The findings suggest a need to integrate more comprehensive AI education into medical school curricula to better prepare the next generation of Malaysian doctors for AI-assisted clinical practice.	1x3
76	https://completeaitraining.com/news/ai-adoption-accelerates-in-malaysia-as-businesses-embrace/	AI Adoption Accelerates in Malaysia as Businesses Embrace Innovation, Inclusion and Growth	AI adoption is rapidly accelerating in Malaysia, with the country ranking 24th globally in AI readiness. Strong government support, including the establishment of the National AI Office (NAIO), and growing business confidence are key drivers. Companies across financial services, manufacturing, and the public sector are increasingly using AI to automate workflows and enhance productivity. According to Microsoft's Work Trend Index, 86% of Malaysian business leaders are confident in using AI to expand into new markets, underscoring the private sector's optimism about AI's role in driving future growth and innovation.	1x0, 1x4, 1x1

PHILIPPINES

Proposed Score

Technology \ Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.75	0.25	0.75	0.75	0.50
2. Perceptual/NLP	0.00	0.00	0.50	0.25	0.00
3. Analysis/Decision Support	0.25	0.00	0.25	0.50	0.25
4. Agent	0.00	0.00	0.25	0.25	0.25
5. Sustainability/Unmapped	0.00	0.00	0.00	0.25	0.00

Rationale by Cell

Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ ICT	0. Policy & Governance	27	Department of Trade and Industry (DTI) Secretary Ramon M. Lopez presents the framework of the National Artificial Intelligence (AI) Strategy Roadmap; DOST builds on "AI" national strategy; AI Roadmap Usec Aldaba; Philippines eyes 2028 roadmap to bolster innovation, AI governance; DTI drives AI innovation with National Roadmap 2.0 and CAIR ... (and 22 other sources)	0.75	NEDA AI Roadmap 2.0, BSP AI Ethics Regulation, NAICRI (Feb 2026), DICT Strategy Foundation.
1x1	1. Foundation, Infra AI/ ICT	1. Internal Management	8	Department of Trade and Industry (DTI) Secretary Ramon M. Lopez presents the framework of the National Artificial Intelligence (AI) Strategy Roadmap; PBBM: Make best use of AI for national dev't; AI-enabled internal HR processes for central bank; UnionBank of the Philippines Innovates with Cloudera; BPI builds proprietary Gen AI ecosystem to elevate internal processes (and 3 other sources)	0.25	iTANONG (Filipino NLP database interface) for Internal Management AI.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
1x2	1. Foundation, Infra AI/ ICT	2. Citizen & Citizen services	18	DOST builds on "AI" national strategy; PBBM: Make best use of AI for national dev't; Gov't eyes 2028 roadmap for ethical, inclusive AI development; Senti AI - DOH deployed AI-powered tool for unified CoVid-19 communications; Ayala MallGuide - Powered by AppGen (and 13 other sources)	0.75	eGovPH 21+ Platforms (GovMedia 2025), PhilSys 90.29M, Dagyaw. Large-scale foundation.
1x3	1. Foundation, Infra AI/ ICT	3. Administrative Domain	28	DOST builds on "AI" national strategy; Philippines eyes 2028 roadmap to bolster innovation, AI governance; Gov't eyes 2028 roadmap for ethical, inclusive AI development; Senti AI - DOH deployed AI-powered tool for unified CoVid-19 communications; First for PH LGUs: Makati launches integrated digital healthcare system (and 23 other sources)	0.75	AGAP.AI Education (1.5M), DOST-ASTI Research (300+). Education/research domain.
1x4	1. Foundation, Infra AI/ ICT	4. Industry & Others	23	Department of Trade and Industry (DTI) Secretary Ramon M. Lopez presents the framework of the National Artificial Intelligence (AI) Strategy Roadmap; DTI drives AI innovation with National Roadmap 2.0 and CAIR ...; DTI drives AI innovation with National Roadmap 2.0 and CAIR ...; National AI Strategy Roadmap 2.0 - July 2024; Philippine banks and insurers called to pursue human-centred AI adoption (and 18 other sources)	0.5	BPO/IT-BPM AI adoption.
2x0	2. Perceptual/NLP	0. Policy & Governance	0	–	0	Not Applicable / Not Appropriate
2x1	2. Perceptual/NLP	1. Internal Management	0	–	0	Not Applicable / Not Appropriate
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	4	The end of BPO as we know it; Human-Like AI Customer Service for Multilingual Users; PhilSys: 90.29M Enrolled, Biometric Authentication for 4Ps; DSWD 4Ps: PhilSys Biometric Authentication (2.8M+ Beneficiaries)	0.5	PhilSys authentication + 4Ps (2.8M authentication), eGovPH AI feature for perceptual technology in progress.

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
2x3	2. Perceptual/NLP	3. Administrative Domain	4	First for PH LGUs: Makati launches integrated digital healthcare system; The Medical City paves the way for AI-integrated local healthcare; E-CAIR: Education AI Center (Malnutrition/ Disability CV Screening); PNP AI CCTV: Surigao Facial Recognition Crime Prevention	0.25	E-CAIR (nutrition/disability/ impairment CV), PNP AI CCTV authentication.
2x4	2. Perceptual/NLP	4. Industry & Others	0	–	0	Not Applicable / Not Appropriate
3x0	3. Analysis/Decision Support	0. Policy & Governance	1	AI4GOV in partnership with the Department of Health Philippines	0.25	–
3x1	3. Analysis/Decision Support	1. Internal Management	0	–	0	Not Applicable / Not Appropriate
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	1	DSWD 4Ps: PhilSys Biometric Authentication (2.8M+ Beneficiaries)	0.25	DSWD OpenG2P/OpenSPP social protection AI.
3x3	3. Analysis/Decision Support	3. Administrative Domain	5	AI-4RP: PAGASA AI Weather Forecasting (2→14 Day Lead Time); COVID-KAYA: DOH Epidemiological Surveillance AI Platform; FASSSTER: Spatio-Temporal Disease Prediction AI (Dengue/ Measles); E-CAIR: Education AI Center (Malnutrition/ Disability CV Screening); vBantai: AI Traffic Control (Jeepney/Tricycle Recognition)	0.5	COVID-KAYA (epidemic), FASSSTER (spatiotemporal), vBantai AI, PAGASA weather AI. Multiple cases.
3x4	3. Analysis/Decision Support	4. Industry & Others	1	AI in Philippine banking: Embracing innovation amid challenges	0.25	Limited cases.
4x0	4. Agent	0. Policy & Governance	0	–	0	Not Applicable / Not Appropriate
4x1	4. Agent	1. Internal Management	0	–	0	Not Applicable / Not Appropriate
4x2	4. Agent	2. Citizen & Citizen services	1	eGovPH: 21+ AI-Powered Platforms, GovMedia 2025 Award	0.25	eGovPH AI feature.
4x3	4. Agent	3. Administrative Domain	1	PhilHealth: AI Claims Processing (80% Filing Time Reduction)	0.25	PhilHealth AI insurance logic (80% reduction).

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Cell	Technology	Application Domain	Number of Sources	Key Evidence	Proposed Score	Rationale
4x4	4. Agent	4. Industry & Others	1	Experience the Future at SM Malls: AI Helpers, Robots, Self-Checkout and More! #sminfocus	0.25	Limited cases only.
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	–	0	Not Applicable / Not Appropriate
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	–	0	Not Applicable / Not Appropriate
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	–	0	Not Applicable / Not Appropriate
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	2	AboitizPower to expand AI use in Luzon, Visayas coal plants; AI-4RP: PAGASA AI Weather Forecasting (2→14 Day Lead Time)	0.25	PAGASA AI-4RP weather (2→14 day). Sustainability.
5x4	5. Sustainability/ Unmapped	4. Industry & Others	0	–	0	Not Applicable / Not Appropriate

All Sources List

No	URL	Day	Title	Type	Case Details	Mapping Cell
1	https://dtiwebfiles.s3-ap-southeast-1.amazonaws.com/e-library/Main%20Publications/What's%20Up/2021/What's%20Up%20No.%2013.pdf	2021-5-1 12:00 AM	Department of Trade and Industry (DTI) Secretary Ramon M. Lopez presents the framework of the National Artificial Intelligence (AI) Strategy Roadmap	Government	The Department of Trade and Industry (DTI) launched the National Artificial Intelligence (AI) Strategy Roadmap on May 5, 2021. The framework is built on two main pillars, four strategic dimensions, and seven strategic imperatives. The goal is to establish the Philippines as an AI Center of Excellence in the region, leveraging its local talent pool and innovation ecosystem. The roadmap aims to improve the competitiveness of enterprises and deliver more affordable, accessible, and bespoke public services, laying the policy foundation that the later National AI Strategy Roadmap 2.0 (NAISR 2.0) would build upon in 2024.	1x0, 1x1, 1x4
2	https://pia.gov.ph/dost-builds-on-ai-national-strategy/	2025-05-08 0:00:00	DOST builds on "AI" national strategy	Government	The Department of Science and Technology (DOST) is advancing the national AI strategy to position the Philippines as a significant player in the global AI landscape. This initiative focuses on leveraging AI to drive economic growth, enhance public services, and create a	1x0, 1x2, 1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					competitive advantage for the nation. Key areas of focus include developing AI talent through education and training programs, fostering research and development, and promoting the adoption of AI technologies across various sectors. DOST's efforts complement the DTI-led National AI Strategy Roadmap, with the two agencies collaborating on the country's overall AI governance and innovation agenda.	
3	https://www.scribd.com/document/670818182/AI-Roadmap-Usec-Aldaba	Unknown	AI Roadmap Usec Aldaba	Research	This document outlines the Philippines' National Artificial Intelligence (AI) Strategy, presented by Undersecretary Aldaba. It details a roadmap to harness AI for inclusive and sustainable development. The strategy emphasizes building a strong AI ecosystem by focusing on key pillars such as data governance, infrastructure development, human capital, and research and development. It aims to position the Philippines as an AI hub in the region, fostering innovation and creating high-value jobs. The presentation reflects the DTI's early efforts to build multi-stakeholder consensus ahead of the roadmap's formal 2021 launch.	1x0
4	https://coingeek.com/philippines-eyes-2028-roadmap-to-bolster-innovation-ai-governance/	45798	Philippines eyes 2028 roadmap to bolster innovation, AI governance	Private Enterprise	The Philippines has unveiled a roadmap with a 2028 target to enhance its innovation landscape and establish a robust AI governance framework. This strategic plan, announced during the 2025 National Innovation Day, aims to propel the country's global innovation ranking. A key component of this initiative is the development and implementation of a comprehensive national AI strategy. The government is focused on creating a regulatory environment that fosters innovation while ensuring the ethical and responsible use of AI, building on the foundation laid by the earlier NAISR 2.0 roadmap and CAIR.	1x0, 1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
5	https://dtiwebfiles.s3.ap-southeast-1.amazonaws.com/e-library/Main%20Publications/What's%20Up/2024/What's%20Up%20No.%2026.pdf	45476	DTI drives AI innovation with National Roadmap 2.0 and CAIR launch	Government	The Department of Trade and Industry (DTI) has launched the National AI Strategy Roadmap 2.0 and the Center for AI Research (CAIR) to accelerate AI-driven innovation in the Philippines. This initiative aims to build upon the initial roadmap by incorporating advancements like generative AI. The strategy focuses on positioning the Philippines as a leader in AI innovation and investment by addressing challenges such as limited AI use cases and the need for data strategy development. CAIR will serve as the country's first AI hub, led by Chief AI and Data Officer Dr. Erika Fille Legara, with support from the Asian Development Bank and a mandate under the Tatak Pinoy Act (Republic Act No. 11981). Widespread AI adoption is projected to add up to PHP 2.6 trillion (about USD 44.5 billion) annually to the national GDP.	1x0, 1x4
6	https://www.dti.gov.ph/archives/news-archives/dti-drives-ai-innovation-national-roadmap-2-0-cair-launch/	45476	DTI drives AI innovation with National Roadmap 2.0 and CAIR ...	Government	The Department of Trade and Industry (DTI) is spearheading the advancement of artificial intelligence in the Philippines with the introduction of the National AI Strategy Roadmap 2.0 and the establishment of the Center for AI Research (CAIR). This move signifies a concerted effort to leverage AI for economic growth and societal benefit. The updated roadmap and the new research center are designed to foster a vibrant AI ecosystem, encouraging collaboration between the government, industry, and academia. Launched on July 3, 2024 with support from the Asian Development Bank, the initiative is structured around two pillars, four strategic dimensions, and seven strategic imperatives distributed across government agencies.	1x0, 1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
7	https://erikalegara.com/uploads/NAISR2.0_July2024.pdf	45474	National AI Strategy Roadmap 2.0 - July 2024	Government	The National AI Strategy Roadmap 2.0 for the Philippines, launched in July 2024, outlines an ambitious vision for the nation's AI development. A key component of this strategy is the establishment of the Center for AI Research (CAIR). CAIR's mission is to elevate the Philippines as a premier destination for AI-driven innovation by fostering collaboration between government, industry, and academia. The center will focus on driving socio-economic growth, enhancing industry competitiveness, and implementing responsible AI governance, with a particular emphasis on applying AI to regional challenges such as sustainable agriculture, urban planning, and disaster resilience.	1x0, 1x4
8	https://www.reviewofailaw.com/Tool/Evidenza/Single/view_html?id_evidenza=1964	45324	Philippines Supreme Court to Establish AI Governance Framework (Philippines)	Private Enterprise	The Supreme Court of the Philippines is set to establish a governance framework for the use of artificial intelligence within the judicial system. This initiative aims to ensure that the adoption of AI technologies in legal processes is responsible and ethical. The framework will likely address issues such as data privacy, algorithmic bias, and the use of AI in decision-making. By proactively creating these guidelines, the Supreme Court seeks to harness the benefits of AI to improve efficiency and access to justice, while safeguarding due process and public trust in judicial proceedings as courts begin to explore AI-assisted case management and research tools.	1x0
9	https://asianbankingandfinance.net/event-news/philippine-banks-and-insurers-called-pursue-human-centred-ai-adoption	45727	Philippine banks and insurers called to pursue human-centred AI adoption	Private Enterprise	At the Asian Banking & Finance and Insurance Asia Summit 2025 in Manila, industry leaders emphasized the need for Philippine banks and insurers to adopt a human-centered approach to artificial intelligence. Experts urged financial institutions to prioritize customer experience and ethical considerations as they integrate AI into their	1x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					operations. The discussion highlighted the importance of balancing technological advancements with the human element to build trust and ensure that AI-driven solutions remain accessible and fair, particularly as the sector faces upcoming AI ethics regulations from the Bangko Sentral ng Pilipinas (BSP).	
10	https://pco.gov.ph/news_releases/pbbm-make-best-use-of-ai-for-national-devt/	45798	PBBM: Make best use of AI for national dev't	Government	President Ferdinand "Bongbong" Marcos Jr. has directed government agencies to optimize the use of artificial intelligence for national development. During a sectoral meeting, he emphasized the importance of harnessing AI's potential to improve public services and drive economic growth. The President also highlighted the need to establish a clear and comprehensive national AI strategy to guide the country's efforts in this rapidly evolving field. This directive underscores the administration's commitment to positioning the Philippines competitively in the regional AI landscape while ensuring responsible and inclusive deployment across government agencies.	1x0, 1x1, 1x2
11	https://mb.com.ph/2025/05/08/govt-eyes-2028-roadmap-for-ethical-inclusive-ai-develop	45785	Gov't eyes 2028 roadmap for ethical, inclusive AI development	Private Enterprise	The Philippine government, through the Department of Science and Technology (DOST), is developing a roadmap for ethical and inclusive AI development with a target of 2028. This national AI strategy aims to ensure that the deployment of artificial intelligence in the country is responsible and benefits all citizens. The roadmap will focus on key areas such as creating a favorable environment for AI research and innovation, building a skilled workforce, and establishing clear ethical guidelines and governance structures. The initiative reflects DOST's complementary role alongside DTI's NAISR 2.0 in shaping the country's broader AI policy landscape.	1x0, 1x2, 1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
12	https://www.dti.gov.ph/archives/news-archives/dti-launches-national-ai-strategy-roadmap-2-0-center-ai-research-positioning-philippines-center-excellence-ai-rampd/	45476	DTI launches National AI Strategy Roadmap 2.0 and Center for AI Research, positioning the Philippines as a Center of Excellence in AI R&D	Government	The Department of Trade and Industry (DTI) has launched the National AI Strategy Roadmap and the National Center for AI Research (N-CAIR) to establish the Philippines as an AI powerhouse. The roadmap aims to boost the country's GDP by 12% by 2030 through AI, positioning it as a global hub for big data processing and AI services. N-CAIR will serve as a shared hub for AI research, fostering collaboration among government, industry, and academia. The strategy focuses on maintaining the competitiveness of Philippine industries such as business process outsourcing while expanding into higher-value AI-driven services and homegrown innovation.	1x0, 1x4
13	https://asianbankingandfinance.net/event-news/philippine-banks-and-insurers-called-pursue-human-centred-ai-adoption	45195	BSP Drawing up Regulations for Ethical AI in Financial Institutions	Private Enterprise	The Bangko Sentral ng Pilipinas (BSP) is developing regulations for the ethical use of artificial intelligence in financial institutions. This move is in response to the growing adoption of AI and machine learning in the financial sector. The regulations will aim to ensure that AI is used responsibly, with a focus on data privacy, consumer protection, and algorithmic fairness. The BSP's initiative reflects a proactive approach to managing the risks associated with AI while harnessing its potential to expand financial inclusion, drawing on tools such as its ASTERisC analytics platform and the broader Financial Sector Cybersecurity Resilience Plan (FSCRP) 2024-2029.	1x0
14	https://www.proto.cx/case-study/enhancing-internal-training-and-hr-processes-in-the-central-bank-of-the-philippines	45167	AI-enabled internal HR processes for central bank	Private Enterprise	The Bangko Sentral ng Pilipinas (BSP) has partnered with Proto to implement an AI-powered system for its internal HR processes. This initiative aims to streamline HR operations, improve employee services, and enhance overall efficiency. The AI-enabled platform will automate various HR tasks, such as answering employee queries, processing requests, and managing	1x1

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					documents. By leveraging AI, the BSP seeks to create a more responsive and accessible HR function, allowing HR staff to focus on more strategic, higher-value work rather than routine administrative tasks.	
15	https://www.bsp.gov.ph/Sites/researchsite/Publications/BSP-Economic-Newsletter/EN21-03.pdf	44685	THINKING AI-HEAD: Exploring Machine Learning Applications in Central Banks	Government	The Bangko Sentral ng Pilipinas (BSP) is actively exploring the applications of machine learning (ML) to enhance its central banking functions. The BSP is using ML for natural language processing to create a news sentiment index and an economic policy uncertainty index. It also employs ML for nowcasting regional inflation and domestic liquidity. In banking supervision, the BSP aims to use ML to improve data validation and identify atypical data. While acknowledging the challenges of ML, such as data quality, model interpretability, and the need for specialized talent, the BSP views these tools as valuable complements to traditional econometric methods.	1x0, 1x4
16	https://senti.ai/wp-content/uploads/2021/05/DOH-deployed-AI-powered-tool-for-unified-CoVid-19-communications.pdf	44317	Senti AI - DOH deployed AI-powered tool for unified CoVid-19 communications	Government	The Department of Health (DOH) in the Philippines partnered with Senti AI to deploy an AI-powered tool for unified COVID-19 communications. This tool, built on Google Cloud technologies, was designed to streamline information dissemination and ensure that the public receives up-to-date and reliable information. The AI-powered chatbot, integrated with Dialog-Flow, allowed the DOH to manage a knowledge base and address public queries effectively. This initiative aimed to combat misinformation and provide Filipinos with a consistent, accessible channel for pandemic-related updates and guidance across multiple government communication platforms.	1x2, 1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
17	https://pia.gov.ph/first-for-ph-lgus-makati-launches-integrated-digital-healthcare-system/	45828	First for PH LGUs: Makati launches integrated digital healthcare system	Government	Makati City has become the first local government unit in the Philippines to launch a fully integrated, 24/7 digital healthcare system. This system connects virtual appointments, telehealth consultations, hospital diagnostics, and electronic medical records into a single network. The city has invested over P16 billion in healthcare, including a partnership with KonsultaMD for telehealth services and the establishment of the Makati Life Medical Center, which features an AI-powered PET/CT scanner. The initiative positions Makati as a model for how local governments can integrate AI-enabled diagnostics with broader digital health infrastructure.	1x3, 2x3
18	https://app.symph.ai/preview/ayala-mallguide	Unknown	Ayala MallGuide - Powered by AppGen	Private Enterprise	Ayala Malls has introduced the Ayala MallGuide, an AI-powered chatbot designed to enhance the shopping experience. This digital assistant, accessible through a web-based app, provides shoppers with real-time information about mall hours, store locations, and ongoing promotions. Users can easily search for specific shops or browse through categories to plan their visit. The MallGuide aims to provide a convenient and seamless way for customers to navigate the mall and stay updated on the latest offers, reflecting a broader trend of Philippine retail and mall operators adopting generative AI-powered customer service tools.	1x2
19	https://www.youtube.com/shorts/0Kq8Qitb6fc	Unknown	Experience the Future at SM Malls: AI Helpers, Robots, Self-Checkout and More! #sminfocus	Private Enterprise	SM Malls is integrating advanced technologies to create a futuristic shopping experience. This includes the deployment of AI helpers and interactive robots to assist shoppers with navigation and information. The introduction of self-checkout counters aims to streamline the payment process, reducing waiting times for customers. These	1x3, 4x4

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					innovations are part of SM's commitment to enhancing customer convenience and modernizing the retail environment, as the country's largest mall operator positions itself at the forefront of AI-driven retail transformation in the Philippines.	
20	https://outsource-consultants.com/how-the-philippines-call-center-industry-is-leading-the-ai-driven-cx-revolutionhttps://www.outsource-consultants.com/blog/how-the-philippines-call-center-industry-is-leading-the-ai-driven-cx-revolution/	45756	How the Philippines Call Center Industry Is Leading the AI-Driven CX Revolution	Private Enterprise	The Philippine call center industry is at the forefront of the AI-driven customer experience (CX) revolution. BPO companies are integrating artificial intelligence to enhance their services, moving beyond traditional call handling. AI is used to automate routine tasks, provide agents with real-time data and insights, and personalize customer interactions. This technological adoption allows for more efficient and effective service delivery, improving customer satisfaction. The industry's focus is shifting toward higher-value, AI-augmented roles as the sector adapts to remain competitive amid automation pressures on traditional call-handling jobs.	1x4, 1x2
21	https://www.bworldonline.com/opinion/2025/03/26/661670/the-end-of-bpo-as-we-know-it/	45742	The end of BPO as we know it	Private Enterprise	The Business Process Outsourcing (BPO) industry in the Philippines is undergoing a significant transformation driven by artificial intelligence. The traditional BPO model, heavily reliant on voice services, is evolving. Generative AI and other advanced technologies are automating many tasks previously performed by human agents. This shift is pushing the industry towards higher-value services that require more complex skills, such as data analytics, specialized customer support, and digital transformation consulting, prompting the sector to reposition itself around AI-augmented roles rather than pure headcount-driven growth.	1x4, 2x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
22	https://www.who.int/philippines/news/feature-stories/detail/ai4gov-in-partnership-with-the-department-of-health-philippines	Unknown	AI4GOV in partnership with the Department of Health Philippines	Non-profit Organization	The World Health Organization (WHO) is collaborating with the Philippine Department of Health (DOH) on the AI4GOV initiative. This partnership aims to leverage artificial intelligence to strengthen the country's health system and improve public health outcomes. The project focuses on using AI for various applications, such as disease surveillance, data analysis, and health service delivery. By integrating AI into its operations, the DOH can enhance its capacity for evidence-based decision-making and more effectively target public health interventions, building institutional AI governance capacity within the ministry.	1x2, 1x3, 3x0
23	https://www.pna.gov.ph/articles/1251777	45816	DOST to invest P2.6 billion for AI projects until 2028	Government	The Department of Science and Technology (DOST) of the Philippines has announced a significant investment of P2.6 billion for artificial intelligence projects until 2028. This funding is part of the government's commitment to advancing the country's AI capabilities. The investment will support various research and development initiatives aimed at creating innovative AI solutions for different sectors. The DOST's plan is to build a strong foundation for AI in the Philippines, fostering a vibrant research ecosystem and complementing the DTI-led National AI Strategy Roadmap with dedicated public R&D funding.	unmapped
24	https://ps-engage.com/ai-and-the-judiciary-will-judges-become-obsolete/	45677	AI and the Judiciary: Will Judges Become Obsolete?	Private Enterprise	This article explores the potential impact of artificial intelligence on the judiciary, questioning whether AI could one day replace human judges. It discusses the use of AI in legal research, case management, and even in assisting with judicial decision-making. While AI can offer significant benefits in terms of efficiency and data analysis, the	1x0

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					article also raises critical questions about ethics, bias, and the irreplaceable role of human judgment in legal proceedings. The piece suggests that while AI can be a valuable support tool for the judiciary, it is unlikely to fully replace human judges in the foreseeable future.	
25	https://www.bsp.gov.ph/Media_And_Research/Special%20Publications/BSP_Thematic_Review_on_the_Use_of_AI_and_ML_in_Financial_Services.pdf	2024	BSP Thematic Paper on Artificial Intelligence	Government	The Bangko Sentral ng Pilipinas (BSP) released a thematic paper on Artificial Intelligence, detailing its potential impact on the Philippine financial system. The paper highlights the opportunities AI presents for enhancing efficiency, improving risk management, and promoting financial inclusion. It also acknowledges the associated risks, including data privacy concerns, algorithmic bias, and potential job displacement. The BSP advocates for a "human-in-the-loop" approach, emphasizing that AI should augment rather than replace human judgment in high-stakes financial decision-making, alongside continued monitoring of AI/ML adoption trends across supervised institutions.	unmapped
26	https://pia.gov.ph/dap-to-roll-out-ai-literacy-training-for-govt-workers-officials/	45838	DAP to roll out AI literacy training for gov't workers, officials	Government	The Development Academy of the Philippines (DAP) is set to launch an AI literacy training program for government officials and employees. This initiative aims to equip public servants with a fundamental understanding of artificial intelligence, its applications, and its ethical implications. The program is designed to foster a culture of innovation within the government and enable employees to leverage AI for improved public service delivery. By enhancing the AI literacy of its workforce, the Philippine government aims to build the human capital foundation needed for broader public-sector AI adoption.	1x2

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
27	https://privacy.gov.ph/npc-straits-interactive-pte-ltd-collaborate-to-enhance-data-privacy-initiatives-with-generative-ai/	45811	NPC, Straits Interactive Pte. Ltd. collaborate to enhance data privacy and governance of AI systems in the Philippines	Government	The National Privacy Commission (NPC) of the Philippines has partnered with Straits Interactive Pte. Ltd. to improve data privacy and the governance of AI systems in the country. This collaboration aims to provide training and resources to help organizations implement responsible AI practices. The initiative focuses on establishing frameworks for accountability and ensuring that the deployment of AI technologies respects individual data privacy rights. By working together, the NPC and Straits Interactive seek to help both public and private organizations navigate generative AI adoption while remaining compliant with the Data Privacy Act.	1x0
28	https://www.intel.co.jp/content/www/jp/ja/customer-spotlight/stories/sm-supermalls-customer-story.html	Unknown	SM Supermalls Engages Shoppers with Interactive Experiences	Private Enterprise	SM Supermalls, one of the largest mall operators in the Philippines, partnered with Intel to enhance the shopper experience through interactive digital displays. By deploying Intel-powered technology, SM Supermalls created engaging and immersive experiences for their customers. These displays provided shoppers with information, entertainment, and interactive content, transforming the mall environment into a more dynamic and engaging space. This case study highlights how retail giants are leveraging AI-enabled hardware and analytics to modernize the in-mall customer experience across the Philippines.	1x3
29	https://healthcareasiamagazine.com/healthcare/exclusive/medical-city-paves-way-ai-integrated-local-healthcare-and-research-lunit	45119	The Medical City paves the way for AI-integrated local healthcare	Private Enterprise	The Medical City (TMC), a leading hospital network in the Philippines, is pioneering the integration of artificial intelligence into local healthcare. TMC is adopting AI-powered solutions to enhance diagnostic accuracy, personalize patient treatment plans, and streamline hospital operations. For	1x3, 2x3

(Continued on next page)

(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					instance, they utilize AI algorithms, including tools developed with Lunit, to analyze medical images, leading to faster and more precise detection of diseases such as cancer. This commitment to technological innovation aims to improve patient outcomes and position TMC as a regional leader in AI-integrated clinical care.	
30	https://www.cloudera.com/customers/union-bank.html#	Unknown	UnionBank of the Philippines Innovates with Cloudera	Private Enterprise	UnionBank of the Philippines has partnered with Cloudera to drive its digital transformation and innovation agenda. By using Cloudera's data platform, UnionBank can manage and analyze vast amounts of data to gain valuable customer insights and improve its services. This has enabled the bank to develop personalized products, enhance risk management, and optimize its operations. The partnership has been instrumental in UnionBank's journey to become a leading digital bank in the region, allowing the institution to scale its AI and analytics capabilities across its retail and commercial banking operations.	1x1
31	https://www.theasianbanker.com/updates-and-articles/bpi-builds-proprietary-gen-ai-ecosystem-to-elevate-internal-productivity-and-customer-trust	45821	BPI builds proprietary Gen AI ecosystem to elevate internal processes	Private Enterprise	The Bank of the Philippine Islands (BPI) is developing its own proprietary generative AI ecosystem to enhance its internal processes. This strategic initiative aims to improve efficiency and empower employees by providing them with advanced AI tools. The "BPI Gen AI" ecosystem is designed to assist with tasks such as content creation, data analysis, and knowledge management. By building its own system, BPI maintains control over data security and can tailor the AI's capabilities to its specific needs, reflecting a broader trend among major Philippine banks to invest in proprietary rather than purely third-party AI infrastructure.	1x1, 1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
32	https://healthcareasiamagazine.com/healthcare/news/st-lukes-medical-center-rolls-out-rapid-ai-stroke-diagnosis	45843	St. Luke's Medical Center rolls out rapid AI for stroke diagnosis	Private Enterprise	St. Luke's Medical Center in the Philippines has implemented a rapid AI system to accelerate the diagnosis and treatment of stroke patients. This advanced technology uses artificial intelligence to analyze brain scans in minutes, providing physicians with critical information almost instantly. The system helps in identifying the type and severity of a stroke, enabling doctors to make faster and more informed treatment decisions. This is crucial as time is a critical factor in stroke care, and the technology allows the hospital to significantly shorten the window between a patient's arrival and the start of appropriate treatment.	1x3
33	https://www.dost.gov.ph/knowledge-resources/news/86-2025-news/3989-dost-builds-on-ai-national-strategy.html	45779	DOST builds on "AI" national strategy	Government	The Department of Science and Technology (DOST) is actively advancing the Philippines' national strategy for Artificial Intelligence. The strategy aims to position the country as a significant player in the global AI landscape by fostering a robust ecosystem for research, development, and adoption of AI technologies. Key focus areas include building human capital through specialized education and training, promoting AI adoption in various industries to boost productivity and competitiveness, and strengthening the country's AI research infrastructure through agencies like DOST-ASTI.	1x0, 1x3
34	https://www.bworldonline.com/corporate/2025/05/30/675899/aboitizpower-to-expand-ai-use-in-luzon-visayas-coal-plants/#google_vignette	45807	AboitizPower to expand AI use in Luzon, Visayas coal plants	Private Enterprise	AboitizPower is expanding its use of Artificial Intelligence in its coal-fired power plants in Luzon and Visayas to enhance operational efficiency and reliability. The company is implementing AI-powered solutions to optimize combustion processes, predict maintenance needs, and reduce emissions. By leveraging AI, AboitizPower aims to improve the performance of its thermal plants, ensuring a stable and cost-effective power supply. This initiative is part of the company's broader strategy to embrace digital transformation and improve environmental sustainability across its power generation portfolio.	1x0, 5x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
35	https://opengovasia.com/the-philippines-significant-investment-to-advance-ai-ecosystem/?c=jp	45821	The Philippines: Significant Investment to Advance AI Ecosystem	Private Enterprise	The Philippine government, through the Department of Science and Technology (DOST), is making a significant investment to advance the country's Artificial Intelligence ecosystem. This funding aims to bolster research and development, support startups, and cultivate a skilled AI workforce. The investment is a key component of the national AI strategy, which seeks to leverage AI for economic growth and social development. The initiative will focus on creating a collaborative environment where academia, industry, and government work together to accelerate the country's AI research and commercialization capabilities.	1x0, 1x4, 1x3
36	https://asti.dost.gov.ph/communications/news-articles/press-release-kaia-natin-dost-unveils-local-tech-to-build-a-future-ready-ai-ecosystem-in-the-philippines/	45799	PRESS RELEASE	Government	The Department of Science and Technology (DOST), through the Advanced Science and Technology Institute (ASTI), unveiled its latest AI-powered innovations and digital infrastructure projects during a press conference hosted by the Philippine Information Agency on 16 May 2025, under the banner "KAIa Natin!" DOST-ASTI's AI initiatives now directly support over 300 state universities and colleges, SMEs, research teams, and local government units nationwide, including agricultural cooperatives and disaster risk management offices. The event also highlighted the Advancing Computing, Analytics, Big Data, and Artificial Intelligence in the Philippines (ACABAI-PH) project, which builds on platforms such as COARE, PREGINET, DIMER, and iTANONG to support an inclusive, future-ready AI ecosystem.	unmapped
37	https://news.microsoft.com/source/asia/2025/02/26/deped-and-microsoft-drive-ai-adoption-in-philippine-education/	45328	DepEd and Microsoft Drive AI Adoption in Philippine Education with Launch of AI Skilling Program for Teachers and Students	Government/ Private Enterprise	The Department of Education (DepEd) has partnered with Microsoft to launch an AI skilling program for teachers and students across the Philippines. This initiative aims to integrate Artificial Intelligence into the national education curriculum and equip the next generation with future-ready	1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					skills. The program will provide training on AI concepts and tools, enabling educators to incorporate AI into their teaching methods and students to develop critical digital competencies. This collaboration reflects a broader push by DepEd to build AI literacy at scale, complementing other government-led AI education initiatives such as AGAP.AI.	
38	https://ubx.ph/press/ubx-global-cto-ai-to-elevate-humankind-to-a-higher-plane/	45190	UBX Global CTO: AI to elevate humankind to a higher plane	Private Enterprise	UBX, the fintech venture studio of UnionBank of the Philippines, believes that Artificial Intelligence has the potential to elevate humanity. According to their Global CTO, AI can automate mundane tasks, freeing up human potential for more creative and strategic endeavors. UBX is actively developing AI-powered solutions to drive financial inclusion and create new opportunities for businesses and individuals. They envision a future where AI is a collaborative partner that enhances human capability rather than replacing it, particularly in expanding access to financial services for underserved Filipino communities.	1x4
39	https://www.dataguidance.com/opinion/philippines-powered-ai-philippines-national-ai	45620	Powered by AI -The Philippines' National AI Strategy Roadmap 2.0	Private Enterprise	The Philippines has launched its National AI Strategy Roadmap 2.0, a comprehensive plan to position the country as an AI leader in the region. The roadmap, spearheaded by the Department of Trade and Industry, focuses on leveraging artificial intelligence to drive economic growth and improve public services. Key pillars of the strategy include developing AI talent, fostering research and development, and creating a supportive regulatory environment. The roadmap aims to attract investments, create high-value jobs, and position the Philippines as a regional hub for AI-driven innovation and data processing services.	1x0, 1x4, 1x2, 1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
40	https://pcieerd.dost.gov.ph/images/pdf/2021/roadmaps/sectoral_roadmaps_division/etdd/Draft-1_AI--ICT-Roadmap-as-24.3.2021.pdf	44279	National Artificial Intelligence (AI) Roadmap: "AI for a more productive, innovative, and inclusive Philippines"	Government	This document represents the draft of the Philippines' National Artificial Intelligence Roadmap as of March 2021. It outlines a vision for leveraging AI to create a more productive, innovative, and inclusive society. The roadmap identifies key sectors where AI can have a significant impact, such as agriculture, healthcare, and financial services. It proposes a multi-stakeholder approach, involving government, industry, and academia, to build a robust AI ecosystem. The document emphasizes the importance of ethical AI governance and lays the groundwork for what would later become the formal 2021 National AI Strategy Roadmap.	1x4, 1x3
41	https://www.bworldonline.com/technology/2025/02/10/652183/philippines-gears-up-to-lead-ai-innovations-says-dost/	202510 Day	Philippines gears up to lead AI innovations, says DOST	Private Enterprise	The Department of Science and Technology (DOST) has declared that the Philippines is preparing to become a leader in artificial intelligence innovations. The government is actively pursuing a national AI strategy focused on building a strong foundation for AI development and adoption. This includes investing in research, cultivating a skilled workforce, and fostering a supportive ecosystem for AI startups. The DOST's vision is to harness AI to address national challenges, create economic opportunities, and position the Philippines competitively within the broader Southeast Asian AI landscape.	1x0, 1x4
42	https://www.dti.gov.ph/tag/ai-roadmap/	Unknown	AI Roadmap Posts	Government	This is the Department of Trade and Industry's (DTI) tag archive page collecting its official news posts, press releases, and updates related to the National AI Strategy Roadmap. The page serves as a central repository for DTI's public communications on AI policy developments, including announcements tied to the original 2021 roadmap, NAISR 2.0, and the Center for AI Research (CAIR), providing a chronological record of the government's evolving AI strategy messaging.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
43	https://worldbusinessoutlook.com/the-future-is-now-the-philippines-leads-the-ai-powered-cloud-revolution/	45807	The Future Is Now! The Philippines Leads the AI-Powered Cloud Revolution	Private Enterprise	The Philippines is emerging as a leader in the AI-powered cloud revolution, demonstrating a strong commitment to digital transformation. The country's vibrant tech ecosystem, coupled with government support, is driving the adoption of cloud and AI technologies across various industries. Businesses are leveraging these technologies to enhance efficiency, innovate their services, and gain a competitive edge. The article highlights the Philippines' potential to become a major player in the global digital economy, citing strong ICT talent and increasing investment in cloud infrastructure as key enablers.	1x1
44	https://newsbytes.ph/2025/05/23/marcos-jr-approves-national-ai-strategy-to-position-ph-as-regional-ai-leader/	202520	Marcos Jr. approves national AI strategy to position PH as regional AI leader	Private Enterprise	President Ferdinand Marcos Jr. has approved the national artificial intelligence strategy, a move aimed at establishing the Philippines as a regional leader in AI. This comprehensive strategy outlines a roadmap for harnessing the power of AI to drive economic growth and improve the lives of Filipinos. The plan focuses on key areas such as developing AI talent, promoting research and development, and creating a supportive regulatory framework. By embracing AI, the government seeks to enhance the delivery of public services while positioning the country to compete for AI-related investment in the region.	1x0
45	https://www.pna.gov.ph/articles/1250279	45793	DOST-ASTI eyes strengthening PH's AI ecosystem	Government	The Advanced Science and Technology Institute (ASTI) of the Department of Science and Technology (DOST) is focused on strengthening the Philippines' artificial intelligence ecosystem. ASTI is actively involved in research and development projects that aim to build the country's AI capabilities. This includes developing high-performance computing infrastructure and creating datasets for	1x3

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					training AI models. By fostering a collaborative environment, ASTI aims to support local researchers and developers, extending its reach to state universities, colleges, and local government units nationwide.	
46	https://palawan-news.com/dost-to-invest-over-%E2%82%B12-6-billion-in-ai-projects-says-solidum/	45824	DOST to invest over ₱2.6 billion in AI projects, says Solidum	Private Enterprise	The Department of Science and Technology (DOST), led by Secretary Renato Solidum Jr., has announced a significant investment of over ₱2.6 billion in artificial intelligence projects. This funding is part of the government's commitment to advancing the country's AI capabilities and fostering a robust innovation ecosystem. The investment will support various research and development initiatives aimed at creating practical AI solutions for different sectors. This strategic allocation of resources is intended to run through 2028, building the domestic research capacity needed to sustain the country's broader AI strategy.	unmapped
47	http://marketmonitor.com.ph/government-putting-in-over-p2-6-b-for-ai-projects/	45817	Government putting in over P2.6-B for AI projects	Private Enterprise	The Philippine government is investing over ₱2.6 billion in artificial intelligence projects to bolster the country's technological capabilities. This significant financial commitment, announced by the Department of Science and Technology, is aimed at fostering a vibrant AI ecosystem. The funds will be allocated to various research and development initiatives, talent development programs, and the creation of AI-powered solutions for different industries. This investment underscores the government's recognition that sustained public R&D funding is essential to complement private-sector AI adoption.	unmapped
48	https://newsbytes.ph/2025/07/02/visa-goes-all-out-on-ai-rolls-out-digital-payment-solutions-in-ph/	45840	Visa goes all-out on AI, rolls out digital payment solutions in PH	Private Enterprise	Visa is heavily investing in artificial intelligence to enhance its digital payment solutions in the Philippines. The global payments technology company is deploying AI-powered tools to improve security, reduce fraud, and personalize the payment experience for	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
					consumers. By leveraging AI, Visa can analyze transaction data in real-time to detect and prevent fraudulent activities, making digital payments safer and more reliable. This move reflects the growing trend of using AI in the financial services sector to support the Philippines' continued shift toward a cashless, digitally-enabled economy.	
49	https://www.abs-cbn.com/news/technology/2025/7/2/pia-cayetano-files-bill-to-regulate-ai-create-national-ai-commission-1401	45840	Pia Cayetano files bill to regulate AI, create 'National AI Commission'	Private Enterprise	Senator Pia Cayetano has filed a bill seeking to regulate the use of Artificial Intelligence in the Philippines and establish a "National AI Commission." The proposed legislation aims to create a framework that promotes the responsible development and deployment of AI technologies while mitigating potential risks. The National AI Commission would be tasked with overseeing the implementation of the AI strategy, ensuring ethical standards, and protecting the rights and welfare of citizens. This is one of several legislative proposals introduced in the Philippine Senate seeking to formalize AI governance beyond the executive branch's roadmap-based approach.	1x0, 1x2, 1x3
50	https://www.pids.gov.ph/details/news/in-the-news/ai-in-philippine-banking-embracing-innovation-amid-challenges	Unknown	AI in Philippine banking: Embracing innovation amid challenges	Government	The Philippine banking sector is increasingly adopting Artificial Intelligence to enhance services and operations. A study by the Philippine Institute for Development Studies (PIDS) highlights that banks are using AI for credit scoring, fraud detection, and customer service chatbots. While AI offers significant opportunities for innovation and efficiency, challenges such as data privacy, cybersecurity, and the need for a skilled workforce must be addressed. The study emphasizes the importance of a supportive regulatory environment, including forthcoming BSP guidance, to help banks adopt AI responsibly and sustainably.	1x4, 1x2, 3x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
51	https://pmc.ncbi.nlm.nih.gov/articles/PMC12141634/	45813	Guiding responsible AI in healthcare in the Philippines	Academic Paper	This paper discusses the importance of guiding the responsible use of Artificial Intelligence in the Philippine healthcare sector. It highlights the potential of AI to improve diagnostics, personalize treatment, and enhance the efficiency of healthcare delivery. However, it also emphasizes the ethical and societal challenges that must be addressed, including data privacy, algorithmic bias, and accountability. The authors advocate for a multi-stakeholder approach, involving policymakers, healthcare providers, and technology developers, to establish clear guidelines that ensure AI is deployed safely and equitably across the country's health system.	1x0, 1x3
52	https://www.dost.gov.ph/knowledge-resources/news/86-2025-news/4015-ai-immersive-tech-smart-tools-dost-drives-digital-health-innovation-in-ph.html	45807	AI, immersive tech, smart tools: DOST drives digital health innovation in PH	Government	The Department of Science and Technology (DOST) is actively promoting digital health innovation in the Philippines through the adoption of AI, immersive technologies, and smart tools. The DOST is supporting various research and development projects that aim to create innovative healthcare solutions. These include AI-powered diagnostic tools, virtual reality applications for medical training, and smart devices for remote patient monitoring. By fostering a vibrant ecosystem for digital health, the agency aims to improve healthcare access and quality, particularly in underserved and remote areas of the country.	1x3
53	https://www.byteplus.com/en/topic/421609?title=how-ai-is-transforming-education-in-the-philippines	45771	How AI is Transforming Education in the Philippines	Private Enterprise	Artificial Intelligence is transforming the education sector in the Philippines by offering personalized learning experiences and improving administrative efficiency. AI-powered platforms can adapt to individual student needs, providing customized content and assessments. This helps to address diverse learning styles and paces. For	1x4, 1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					educators, AI tools can automate tasks such as grading and lesson planning, freeing up more time for direct student interaction. Furthermore, AI is being used to analyze student performance data, helping schools identify at-risk learners earlier and tailor interventions accordingly.	
54	https://milkeninstitute.org/sites/default/files/2024-08/HealthTech%20in%20the%20Philippines%20240814-2.pdf	45518	HEALTHTECH IN THE PHILIPPINES	Non-profit Organization	The health tech landscape in the Philippines is rapidly evolving, driven by increasing digitalization and a growing demand for accessible healthcare. This report from the Milken Institute highlights the opportunities and challenges in the sector. The adoption of technologies like telemedicine, electronic health records, and AI-powered diagnostics is improving healthcare delivery, particularly in remote areas. However, challenges such as inadequate infrastructure, data privacy concerns, and the need for greater investment and regulatory clarity remain barriers to scaling health tech innovation nationwide.	1x3
55	https://www.tripleiconsulting.com/ai-technology-philippines-transforming-business-practices-for-growth/	45834	AI Technology in the Philippines: Transforming Business Practices for Growth	Private Enterprise	AI technology is transforming business practices across various sectors in the Philippines, driving growth and innovation. Companies are leveraging AI to enhance customer service through chatbots, optimize supply chains with predictive analytics, and personalize marketing efforts. The adoption of AI is helping businesses to improve efficiency, reduce costs, and gain a competitive edge. The article highlights the growing recognition among Philippine businesses of the strategic importance of AI, noting that companies across industries are increasingly incorporating it into their digital transformation roadmaps.	1x2

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No	URL	Day	Title	Type	Case Details	Mapping Cell
56	https://www.byteplus.com/en/topic/421627?title=how-ai-is-transforming-retail-in-the-philippines	45771	How AI is Transforming Retail in the Philippines	Private Enterprise	Artificial Intelligence is revolutionizing the retail industry in the Philippines by enabling businesses to create more personalized and efficient customer experiences. Retailers are using AI for a variety of applications, including personalized product recommendations, inventory management, and customer service chatbots. AI-powered analytics help retailers to understand consumer behavior and preferences, allowing them to tailor their offerings and marketing strategies. The integration of AI is also helping retailers streamline supply chains and improve demand forecasting accuracy across both online and physical stores.	1x4, 1x2
57	https://www.conpc.net/2025/06/25/cebu-chamber-of-commerce-spearheads-ai-transformation-at-technology-and-innovation-forum/	45435	CEBU CHAMBER OF COMMERCE SPEARHEADS AI TRANSFORMATION AT TECHNOLOGY AND INNOVATION FORUM	Non-profit Organization	The Cebu Chamber of Commerce and Industry (CCCI) is leading the charge for AI transformation in the region, as highlighted at their recent Technology and Innovation Forum. The event brought together business leaders and experts to discuss the importance of adopting artificial intelligence to stay competitive. The CCCI is encouraging local businesses to explore and integrate AI technologies to enhance productivity and drive innovation. This initiative reflects a proactive approach by the business community in Cebu to ensure that AI adoption is not confined to Metro Manila but extends to regional economic hubs.	1x4
58	https://www.researchgate.net/publication/340888709_The_Technology_Adoption_and_Governance_of_Artificial_Intelligence_in_the_Philippines	43770	(PDF) AI in the Banking Sector: A Friend or A Foe?	Academic Paper	This research paper examines the dual role of Artificial Intelligence in the banking sector, exploring its potential as both a beneficial tool and a source of challenges. The study analyzes how AI is being used to improve efficiency, enhance customer service through chatbots, and strengthen fraud detection systems. However, it also delves into	1x4, 1x2

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					the potential negative impacts, such as job displacement, algorithmic bias in lending decisions, and data security risks. The paper concludes that while AI offers substantial benefits, sound governance and human oversight are essential to managing its risks responsibly.	
59	https://www.philstar.com/the-freeman/cebu-business/2025/06/25/2453163/the-time-act-now-cebu-business-leaders-warn-adopt-ai-or-risk-losing-out	45833	The time to act is now' Cebu business leaders warn: Adopt AI or risk losing out	Private Enterprise	Business leaders in Cebu are urging local companies to adopt Artificial Intelligence without delay, warning that failure to do so could result in being left behind in the competitive market. The call to action emphasizes that AI is no longer a futuristic concept but a present-day necessity for business survival and growth. Leaders are encouraging investment in AI technologies to optimize operations, enhance customer experiences, and unlock new opportunities. This strong message from the Cebu business community underscores the urgency felt by regional enterprises to keep pace with AI adoption happening in Metro Manila and internationally.	unmapped
60	https://asti.dost.gov.ph/artificial-intelligence/	Unknown	Artificial Intelligence	DOST-ASTI	This is the official Artificial Intelligence page of DOST-ASTI (Advanced Science and Technology Institute), the government agency leading much of the Philippines' public-sector AI research and development. The page showcases DOST-ASTI's portfolio of AI projects and platforms, including iTANONG, the ALaM AI model repository, and various computing and disaster-response tools. It serves as a central hub documenting the institute's role in building the country's AI research infrastructure and supporting universities, colleges, and local government units nationwide.	unmapped

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
61	https://sdgs.un.org/sites/default/files/2024-05/Peramo%3B%20Piedad%3B%20Leon_Advancing%20National%20Development%20through%20AI.pdf	Unknown	Advancing National Development through AI: Policy Recommendations for Enhancing AI Research and Applications in the Philippines	Non-profit Organization	This partnership initiative on the UN SDGs platform provides policy recommendations for advancing national development in the Philippines through Artificial Intelligence. It emphasizes the need to enhance AI research and applications across various sectors. The recommendations likely focus on creating a supportive policy environment, investing in human capital, and fostering collaboration between government, academia, and industry. Authored by DOST-ASTI researchers, the paper highlights projects like ALaM and iTANONG as examples of how the country is pooling resources and infrastructure to advance AI research aligned with the Sustainable Development Goals.	1x0, 1x4, 1x3
62	https://electrifaiph.tech/	Unknown	ElectrifAI	The Smart Choice for Energy Optimization	ElectrifAI is a Filipino AI-driven startup focused on enhancing electricity distribution efficiency and security for electric cooperatives across the Philippines. The company uses AI algorithms, including anomaly-detection models like Isolation Forest, combined with IoT sensors to identify power leakage, unauthorized electricity tapping, and inefficiencies in the grid in real time. ElectrifAI reports achieving around 98% accuracy in detecting anomalous power usage. The startup partners with more than 120 electric cooperatives, primarily in rural and semi-urban areas, helping them reduce losses, improve operational efficiency, and enable predictive maintenance across the power distribution network.	unmapped
63	https://dfa.gov.ph/dfa-news/news-from-our-foreign-service-postsupdate/30096-ph-uae-to-push-for-coop-on-artificial-intelligence	45086	PH, UAE to push for coop on artificial intelligence	Government	The Philippines and the United Arab Emirates (UAE) have agreed to strengthen their cooperation in the field of Artificial Intelligence. This partnership aims to foster collaboration in research,	unmapped

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					development, and the application of AI technologies. Both countries recognize the transformative potential of AI and are committed to sharing knowledge and expertise to advance their respective AI ecosystems. This diplomatic engagement is expected to lead to joint initiatives that will drive innovation, capacity-building, and technology transfer, reflecting the Philippines' broader strategy of pursuing international AI partnerships alongside its domestic roadmap.	
64	https://depdev.gov.ph/wp-content/uploads/2025/02/Policy-Note-on-Artificial-Intelligence.pdf	44595	Policy Note on Artificial Intelligence	Government	This policy note from the National Economic and Development Authority (NEDA) of the Philippines addresses the strategic importance of Artificial Intelligence for national development. It likely outlines the government's stance on AI and provides recommendations for creating a conducive environment for its growth. The note probably covers key areas such as infrastructure development, human capital, and the need for a clear regulatory framework. It may also discuss the potential of AI to enhance productivity and public-sector efficiency, positioning NEDA as a key coordinating agency alongside DTI and DOST in shaping the country's overall AI policy direction.	1x0, 1x3
65	https://mb.com.ph/2024/10/25/dost-pushes-for-ai-powered-grid	45573	DOST pushes for AI-powered grid to mitigate power outages	Private Enterprise	The Department of Science and Technology (DOST) is advocating for the development of an AI-powered national power grid to help mitigate frequent power outages in the Philippines. By leveraging artificial intelligence, the grid could predict potential failures, optimize energy distribution, and more efficiently manage power loads. This initiative aims to create a more resilient and stable energy infrastructure, reducing the economic and social disruptions caused by blackouts. The push for an intelligent grid reflects growing government interest in applying AI to critical infrastructure beyond the pilot efforts already underway among individual power companies and cooperatives.	1x3

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No	URL	Day	Title	Type	Case Details	Mapping Cell
66	https://coingeek.com/ai-adoption-surges-in-the-philippines-unctad-report/	45805	AI adoption surges in the Philippines: UNCTAD report	Private Enterprise	A report from the United Nations Conference on Trade and Development (UNCTAD) indicates a significant surge in AI adoption in the Philippines. The country is recognized as a leading nation in the global AI landscape, driven by its large, young, and digitally-savvy population. The report highlights the Philippines' strong performance in the information and communications technology (ICT) sector and its growing role in providing data annotation and other AI-related services. This rapid adoption of AI is positioning the country as an increasingly important node in the global AI value chain, particularly in AI-adjacent digital labor services.	1x4, 1x3
67	https://www.bworldonline.com/technology/2025/04/24/667779/young-skilled-workforce-to-drive-ai-adoption-in-the-philippines/	45423	Young, skilled workforce to drive AI adoption in the Philippines	Private Enterprise	The Philippines is well-positioned to see widespread adoption of Artificial Intelligence, thanks to its young and skilled workforce. The country's demographic advantage, combined with a high level of digital literacy, creates a fertile ground for the growth of AI technologies. This workforce is not only capable of using AI-powered tools but also of contributing to the development and innovation in the AI sector. The adaptability and tech-savviness of Filipino workers are seen as key drivers that could help the country capture a larger share of AI-related investment and outsourcing demand in the region.	unmapped
68	https://www.wipo.int/en/web/ip-advantage/w/stories/human-like-ai-customer-service-for-multilingual-users	2022-05-01	Human-Like AI Customer Service for Multilingual Users	Non-profit Organization	This WIPO article discusses the development of human-like AI for multilingual customer service, a technology with significant relevance for the Philippines' BPO industry. It highlights how advanced AI, such as large language models, is enabling more natural and empathetic interactions between chatbots and users in various languages. This innovation allows companies to provide	1x4, 1x2, 2x2

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No	URL	Day	Title	Type	Case Details	Mapping Cell
					high-quality, 24/7 customer support globally. For the Philippines, a major hub for customer service, this technology presents both an opportunity to upgrade service offerings and a competitive pressure to move up the value chain as routine voice work becomes increasingly automated.	
69	https://www.acnnewswire.com/press-release/english/100665/the-future-is-now!-the-philippines-leads-the-ai-powered-cloud-revolution	45840	The Future Is Now! The Philippines Leads the AI-Powered Cloud Revolution	Private Enterprise	This press release from ACN Newswire proclaims that the Philippines is at the forefront of the AI-powered cloud revolution. The country's rapid adoption of cloud computing and artificial intelligence is transforming its business landscape. The article cites the Philippines' young, tech-savvy population and strong government support as key drivers of this digital transformation. Companies are increasingly moving to the cloud to leverage AI for data analytics, improved customer experiences, and operational efficiency, reinforcing the country's ambitions to become a regional hub for AI-enabled digital services.	1x1, 1x3
70	https://www.trade.gov/country-commercial-guides/philippines-information-and-communications-technology	45200	Philippines - Information and Communications Technology	Government	This guide from the U.S. International Trade Administration provides a market overview of the Information and Communications Technology (ICT) sector in the Philippines. It highlights the country's strong BPO industry and the increasing demand for digital solutions. Key growth areas include cloud services, cybersecurity, data analytics, and Artificial Intelligence. The report notes that the Philippine government's digital transformation initiatives are driving ICT spending. The market presents significant opportunities for U.S. companies offering AI, cloud, and cybersecurity solutions, given the country's growing digital economy and supportive regulatory environment.	1x1, 1x4

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
71	https://dict.gov.ph/news-and-updates/21587	2025	eGovPH: 21+ AI-Powered Platforms, GovMedia 2025 Award	Government	All-in-one government service app. 21+ platforms (eTravel, eGovAI, Digital National ID). GovMedia 2025 E-Governance of the Year.	1x2, 4x2
72	https://www.biometricupdate.com/202602/philippines-national-id-authentication-services-improve-social-protection-g2p-transactions	2026	PhilSys: 90.29M Enrolled, Biometric Authentication for 4Ps	Government	Facial, iris, thumbprint biometric. 80% population coverage. 2.5M+ 4Ps beneficiaries authenticated.	1x2, 2x2
73	https://govinsider.asia/intl-en/article/ai-supercharges-satellite-data-for-proactive-disaster-risk-management-in-the-philippines	2025	AI-4RP: PAGASA AI Weather Forecasting (2→14 Day Lead Time)	Government	DOST-ASTI/PAGASA AI weather. 2→14 day forecast. 3hr→15min prediction frequency. 3km→2km resolution.	5x3, 3x3
74	https://www.who.int/philippines/news/feature-stories/detail/covid-kaya-a-digital-platform-for-covid-19-information-management-in-the-philippines	2020	COVID-KAYA: DOH Epidemiological Surveillance AI Platform	Government	Convergent epidemiological surveillance. Real-time monitoring, automated specimen tracking, quarantine contact monitoring.	3x3
75	https://www.pchrd.dost.gov.ph/heartnovation/fassster-feasibility-analysis-of-syndromic-surveillance-using-spatio-temporal-epidemiological-modeler-for-early-detection-of-diseases/	2025	FASSSTER: Spatio-Temporal Disease Prediction AI (Dengue/ Measles)	Government	Ateneo/DOST-PCHRD. Spatio-temporal ML for disease outbreak prediction. Dengue, Typhoid, Measles.	3x3
76	https://pco.gov.ph/news_releases/pbbm-launches-depeds-ai-program-for-basic-education-through-agap-ai/	2026-01	AGAP.AI: National AI Literacy Program (1.5M Participants)	Government	DepEd AI for education. 1.5M target (1.05M learners, 300K teachers). MIT/Google.org support.	1x3
77	https://www.deped.gov.ph/2025/02/20/deped-launches-ai-center-for-education/	2025	E-CAIR: Education AI Center (Malnutrition/ Disability CV Screening)	Government	Computer vision for malnutrition screening, disability detection. Education voucher optimization.	2x3, 3x3
78	https://pia.gov.ph/news/surigao-city-uses-ai-driven-cctv-for-crime-prevention	2025	PNP AI CCTV: Surigao Facial Recognition Crime Prevention	Government	First regional AI-powered CCTV with facial recognition. Real-time biometric surveillance.	2x3
79	https://asti.dost.gov.ph/news-articles/from-traffic-jams-to-emergency-lanes-dost-asti-unveils-new-ai-tech-tackling/	2025	vBantai: AI Traffic Control (Jeepney/ Tricycle Recognition)	Government	Vision-based traffic control AI for local vehicles (jeeps, tricycles). Emergency lane management.	3x3
80	https://pia.gov.ph/philhealth-to-use-ai-for-health-insurance-claims	2024	PhilHealth: AI Claims Processing (80% Filing Time Reduction)	Government	SwiftClaims AI. 80% reduction in filing time. 99% reduction in return-to-sender. AI fraud prevention.	4x3
81	https://fintechnews.ph/66208/ai/bsp-draws-up-regulations-for-ethical-ai-in-financial-institutions/	2025	BSP: AI Ethics Regulations for Financial Institutions	Government	Ethical AI regulations for banks. ASTERisC analytics platform. FSCRP 2024-2029 cybersecurity framework.	1x0

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(Continued from the previous page)

No	URL	Day	Title	Type	Case Details	Mapping Cell
82	https://philsys.gov.ph/dswd-to-use-philsys-for-delivery-of-4ps-aics-and-other-programs/	2025	DSWD 4Ps: PhilSys Biometric Authentication (2.8M+ Beneficiaries)	Government	4Ps cash transfer program. 4.4M households. 2.8M+ authenticated by facial biometrics. OpenG2P/ OpenSPP pilots.	2x2, 3x2
83	https://depdev.gov.ph/launch-of-ai-roadmap-center-for-ai-research-to-unlock-new-opportunities-in-ph-digital-economy-neda/	2024	NEDA AI Strategy Roadmap 2.0 & NAICRI Launch	Government	AI Roadmap 2.0 (Jul 2024). NAICRI Feb 2026. Philippine Development Plan 2023-2028 AI alignment.	1x0
84	https://www.opengovpartnership.org/members/philippines/commitments/PH0056/	2025	Dagyaw/ BarangayConnect: Citizen Participation Platforms	Government	E-participation via National Portal. Dagyaw policy feedback sessions. BarangayConnect process automation.	1x2

THAILAND

Proposed Score

Technology vs Application	0. Policy & Governance	1. Internal Management	2. Citizen & Citizen services	3. Administrative Domain	4. Industry & Others
1. Foundation, Infra AI/ICT	0.75	0.25	0.50	0.75	0.50
2. Perceptual/NLP	0.25	0.25	0.50	0.25	0.00
3. Analysis/Decision Support	0.25	0.25	0.00	0.75	0.25
4. Agent	0.00	0.00	0.25	0.00	0.00
5. Sustainability/Unmapped	0.00	0.00	0.00	0.50	0.25

Rationale by Cell

Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
1x0	1. Foundation, Infra AI/ICT	0. Policy & Governance	30	DPA Digital Digest: Thailand [2024 Edition]; Thailand charts bold course in AI development, emphasising ethics and innovation; Thailand pursues AI innovation, while concurrently dealing with legacy; DES Ministry lays out AI, cloud policy; Thailand's National AI Strategy and Action Plan (2022-2027) (and 25 other sources)	0.75	National AI Strategy 2022–2027, National AI Committee (2025.5), NSTDA Ethics Guidelines, UNESCO AIGPC Bangkok, draft AI Law. Comprehensive policy Foundation/Infrastructure.
1x1	1. Foundation, Infra AI/ICT	1. Internal Management	6	Green Light for Bangkok: City Hall and Google Deploy AI Traffic Management to Cut Congestion and PM2.5; BMA partner with Google to tackle Bangkok traffic with AI-powered signal optimization; Thailand Leads Digital Transformation with AI in Public Administration 2025; Google and Bangkok Join Forces to Solve Traffic with AI; Thailand's AI strategy to boost economic and social wellbeing (and 1 other sources)	0.25	DGA-Microsoft 2,000-people training. AI adoption in internal management at early stage.

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
1x2	1. Foundation, Infra AI/ICT	2. Citizen & Citizen services	12	AI in Thailand's Retail Industry: Trends & Insights; Thailand pursues AI innovation, while concurrently dealing with legacy; Thailand's National AI Strategy and Action Plan (2022-2027); Thai banks ponder a future defined by speed, collaboration and generative AI; SEA's telco sector is looking at AI to modernise the industry (and 7 other sources)	0.5	Thang Rath Super App (173 services, 500K+ daily users), Citizen Portal (face recognition digital ID). Citizen-facing infrastructure operational.
1x3	1. Foundation, Infra AI/ICT	3. Administrative Domain	62	DPA Digital Digest: Thailand [2024 Edition]; Thailand charts bold course in AI development, emphasising ethics and innovation; AI in Thailand's Retail Industry: Trends & Insights; Thailand pursues AI innovation, while concurrently dealing with legacy; Banking 4.0: Artificial Intelligence (AI) in Banking Industry & Consumer's Perspective (and 57 other sources)	0.75	EEC Smart City (1.35 trillion baht), Civil IoT, agricultural AI, healthcare AI. Administrative Domain most well-developed.
1x4	1. Foundation, Infra AI/ICT	4. Industry & Others	13	AI in Thailand's Retail Industry: Trends & Insights; Banking 4.0: Artificial Intelligence (AI) in Banking Industry & Consumer's Perspective; Thailand National AI Committee Charts Strategic Initiatives for AI Advancement; Thai banks ponder a future defined by speed, collaboration and generative AI; SEA's telco sector is looking at AI to modernise the industry (and 8 other sources)	0.5	EEC industry AI, Smart City-related industry cases.
2x0	2. Perceptual/NLP	0. Policy & Governance	2	Council of State: AI for Law Modernization; NECTEC Pathumma LLM: Thai Language Model	0.25	Council of State AI legislation modernization, Pathumma LLM (Thai-language model). Policy NLP is at pilot stage.
2x1	2. Perceptual/NLP	1. Internal Management	3	AI-Din: Department of Lands Document Processing AI; Lert-Na: AI Award Screening Platform (OPDC); NECTEC Pathumma LLM: Thai Language Model	0.25	AI-Din (Land Ministry documents AI), Lert-Na review AI, CPTA Digital Post. Multiple pilots existing, yet early stage.
2x2	2. Perceptual/NLP	2. Citizen & Citizen services	3	Getting to Know 8 Thai AIs and Their Key Features; Traffy Fondue: AI Citizen Complaint Platform (NECTEC); Citizen Portal: Face Recognition Digital ID (DGA)	0.5	Traffy Fondue (10,400+ agencies/institutions via LINE), AI classifying and routing citizen complaints. Citizen Portal face recognition. Operational stage.

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
2x3	2. Perceptual/NLP	3. Administrative Domain	2	Social Media Flood Monitoring System (Thai NLP); AI Chest 4 All: Free X-ray Screening (300+ Public Hospitals)	0.25	AI Chest 4 All (300+ public hospitals), HII social-media flood NLP monitoring. Pilot/limited operational.
2x4	2. Perceptual/NLP	4. Industry & Others	0	–	0	No relevant cases
3x0	3. Analysis/Decision Support	0. Policy & Governance	2	ML-based Flood Hazard Mapping: Chiang Mai Province; Social Media Flood Monitoring System (Thai NLP)	0.25	Flood Hazard Map ML (Chiang Mai), NECTEC agriculture prediction platform. Analysis x policy is pilot stage.
3x1	3. Analysis/Decision Support	1. Internal Management	1	NECTEC SAI: Big Data Analytics for Government	0.25	NECTEC SAI analysis Foundation/Infrastructure. Internal Department Management for analysis is early stage.
3x2	3. Analysis/Decision Support	2. Citizen & Citizen services	0	–	0	No relevant cases
3x3	3. Analysis/Decision Support	3. Administrative Domain	15	AI in Thailand's Retail Industry: Trends & Insights; SEA's telco sector is looking at AI to modernise the industry; Why Thai retailers should harness AI for personalisation, efficiency; Thailand: shifting from reactive to preventative healthcare with AI; Thailand Railway AI Market 2024-2030 (and 10 other sources)	0.75	COVID-19 prediction, HIV automated reporting, flood surveillance, traffic AI, AI Chest 4 All. Multiple Administrative Domain operational.
3x4	3. Analysis/Decision Support	4. Industry & Others	4	Banking 4.0: Artificial Intelligence (AI) in Banking Industry & Consumer's Perspective; Experts examine AI's impact on Thailand's financial services sector; Artificial Intelligence in Thai Business: How AI Disrupts Thailand; NECTEC Predictive Farming Platform	0.25	NECTEC agriculture prediction, HandySense. Agriculture analysis is early-stage operational.
4x0	4. Agent	0. Policy & Governance	0	–	0	No relevant cases
4x1	4. Agent	1. Internal Management	0	–	0	No relevant cases
4x2	4. Agent	2. Citizen & Citizen services	2	Traffy Fondue: AI Citizen Complaint Platform (NECTEC); Thang Rath Government Superapp (173 services, 500K+ daily users)	0.25	Traffy Fondue's automated classification and routing shows agent-oriented elements, though a full agent system is different/ more advanced.

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Cell	Technology	Application Domain	Source Count	Key Evidence	Proposed Score	Rationale
4x3	4. Agent	3. Administrative Domain	0	–	0	No relevant cases
4x4	4. Agent	4. Industry & Others	0	–	0	No relevant cases
5x0	5. Sustainability/ Unmapped	0. Policy & Governance	0	–	0	No relevant cases
5x1	5. Sustainability/ Unmapped	1. Internal Management	0	–	0	No relevant cases
5x2	5. Sustainability/ Unmapped	2. Citizen & Citizen services	0	–	0	No relevant cases
5x3	5. Sustainability/ Unmapped	3. Administrative Domain	6	Bangkok Taps Google's AI to Untangle Traffic Gridlock; BMA partner with Google to tackle Bangkok traffic with AI-powered signal optimization; Google and Bangkok Join Forces to Solve Traffic with AI; Thailand set for $1.8 billion smart grid and AI-powered energy transformation; EGAT Profile - Electricity Generating Authority of Thailand (and 1 other sources)	0.5	EEC Smart City IoT, 5G Smart Pole (environment monitoring). Sustainability infrastructure operational.
5x4	5. Sustainability/ Unmapped	4. Industry & Others	3	Green Light for Bangkok: City Hall and Google Deploy AI Traffic Management to Cut Congestion and PM2.5; Bangkok Taps Google's AI to Untangle Traffic Gridlock; "The Impact of AI on Sustainable Business Practices in Emerging Markets: A Systematic Review of ESG Implementation in Thailand"	0.25	Smart City-related industry cases found.

All Sources List

No	URL	Title	Case Details	Mapping Cell
1	https://digitalpolicyalert.org/digest/dpa-digital-digest-thailand	DPA Digital Digest: Thailand [2024 Edition]	This digest summarizes Thailand's digital policy landscape, covering data governance, content moderation, competition, and artificial intelligence. Thailand's digital economy, the second largest in Southeast Asia, accounted for 6% of GDP (about USD 36 billion) in 2023, with projections indicating growth to 11% by 2027; the National Digital Economy and Society Commission has set a target of 30% of GDP by 2027. On data governance, Thailand implemented the Personal Data Protection Act (PDPA) in June 2022, granting individuals rights over their personal data and establishing the Personal Data Protection Commission (PDPC) to enforce compliance.	1x0, 1x3

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No	URL	Title	Case Details	Mapping Cell
2	https://www.nationthailand.com/business/tech/40042660	Thailand charts bold course in AI development, emphasising ethics and innovation	In an interview with The Nation, Pakorn Leesakul, founder and CEO of digital identity provider Finema, argued that Thailand is positioning itself as an emerging leader in AI regulation and development by balancing technological innovation with ethical considerations and workforce protection. He pointed to the country's robust digital infrastructure, strategic government initiatives (including the Thailand 4.0 policy), and a growing tech-savvy population as advantages. He suggested that aligning Thailand's regulatory framework with global best practices, while retaining flexibility to adapt to new AI advancements, could position the country to help set regional benchmarks in AI governance.	1x0, 1x3
3	https://www.byteplus.com/en/topic/421391?title=ai-in-thailand-s-retail-industry-trends-insights	AI in Thailand's Retail Industry: Trends & Insights	This BytePlus article-style overview discusses how AI is being applied across Thailand's retail industry, covering areas such as demand forecasting, personalization, and large language models. A related, more substantiated example is Central Group's Google Cloud-powered visual search and Gemini-based "Chefbot," which reportedly cut personal-shopper product search time by 94% (from 32 minutes to one to two minutes) and lifted conversion rates by 10%. Broader industry coverage also points to AI-enabled CCTV analytics and RFID inventory tracking (e.g., Guardforce AI) being deployed across Thai retail chains for loss prevention and stock management.	1x3, 1x2, 1x4, 3x3
4	https://govinsider.asia/intl-en/article/thailand-pursues-ai-innovation-while-concurrently-dealing-with-legacy	Thailand pursues AI innovation, while concurrently dealing with legacy	The Digital Government Development Agency (DGA) is working to boost AI and blockchain innovation in Thailand's public sector while managing its ongoing legacy-system transition, according to DGA Acting President and CEO Airada Luangvilai. The government-led superapp "Thang Rath" is looking to use AI to enable smarter search of government services. DGA also promotes data accessibility to support an "open government" approach, one of four strategies in the Thailand Digital Government Development Plan 2023–2027, and the Big Data Institute (BDI) was spun off as a standalone body from DEPA in February 2024 to support agency-level data integration and analytics.	1x0, 1x3, 1x2
5	https://www.mdpi.com/2071-1050/14/19/12762	Banking 4.0: Artificial Intelligence (AI) in Banking Industry & Consumer's Perspective	This study surveys consumer perspectives on AI adoption in the banking sector across five Asian countries (Pakistan, China, Iran, Saudi Arabia, and Thailand) based on 799 usable survey responses (Noreen, Shafique, Ahmed & Ashfaq, published in Sustainability, 2023). The results show that awareness, attitude, subjective norms, perceived usefulness, and knowledge of AI technology all have a significant	1x3, 1x4, 3x4

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No	URL	Title	Case Details	Mapping Cell
			positive relationship with the intention to adopt AI in banking, while perceived risk has a significant negative relationship. The authors conclude that these consumer-perception factors offer useful input for banks' strategic decision-making around AI adoption.	
6	https://www.bangkokpost.com/business/general/2710133/des-ministry-lays-out-ai-cloud-policy	DES Ministry lays out AI, cloud policy	Thailand's Digital Economy and Society (DES) Ministry outlined a "quick wins AI & cloud policy" as one of six strategies assigned to the Digital Economy Promotion Agency (DEPA) for 2024, according to DES Minister Prasert Jantararuangtong. The policy aims to address challenges such as the trade deficit from importing AI technology and low public AI literacy. Near-term plans include Board of Investment incentives for AI and cloud technology importers, building an AI district within the Thailand Digital Valley in the Eastern Economic Corridor, and growing the number of domestic AI software-as-a-service startups from 10 to more than 20.	1x0, 1x3
7	https://dig.watch/resource/thailands-national-ai-strategy-and-action-plan-2022-2027	Thailand's National AI Strategy and Action Plan (2022-2027)	Thailand's National AI Strategy and Action Plan (2022–2027) aims to position the country as a leading AI hub in Southeast Asia. Approved by the Cabinet on 26 July 2022, the plan is organized around five core strategies: preparing social, ethical, legal, and regulatory readiness for AI; building national AI infrastructure; increasing human capability and AI education; driving AI technology and innovation; and fostering data governance. A National AI Committee, appointed on 17 August 2022, drives implementation, with NSTDA/NECTEC serving as technical secretariat for the plan's associated workplans.	1x0, 1x3, 1x2
8	https://opengovasia.com/thailand-positions-itself-as-regional-ai-and-digital-hub/?c=jp	Thailand Positions Itself as Regional AI and Digital Hub	At the "From Vision to Velocity: Thailand's Road to AI Leadership" seminar, Professor Wisit Wisitsora-at, Permanent Secretary of the Ministry of Digital Economy and Society, outlined Thailand's ambition to become ASEAN's AI hub by 2027 through investment in talent development, digital infrastructure, and responsible AI adoption. Thailand also hosted the East Tech West 2025 Roadshow, which Deputy Prime Minister Prasert described as a milestone in building the country's image as a digital economy leader through engagement with international business and technology media, while Thailand works to finalize the ASEAN Digital Economy Framework Agreement.	1x0, 1x3
9	https://oecd.ai/en/dashboards/policy-initiatives/thailand-national-ai-strategy-and-action-plan-2022-2027-1728	Thailand National AI Strategy and Action Plan (2022 – 2027)	This OECD.AI policy-initiative page profiles Thailand's National AI Strategy and Action Plan (2022–2027), which aims to prepare the country's readiness in social, ethical, legal, and regulatory dimensions of AI; develop national AI infrastructure; increase human capability and AI education; and drive AI technology and innovation. The	1x0, 1x3

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No	URL	Title	Case Details	Mapping Cell
			page links to related resources, including the NAIS Annual Report and OpenThaiGPT, an open-source large language model tailored for Thai-language interactions, developed as part of the National AI Service Platform component of the strategy.	
10	https://vero-asean.com/vero-advocacy-brief-thailands-national-ai-committee-charts-strategic-initiatives-for-ai-economy-development/	Thailand National AI Committee Charts Strategic Initiatives for AI Advancement	This Vero advocacy brief covers the first meeting of Thailand's National AI Committee, chaired by Prime Minister Paetongtarn Shinawatra, which set strategic directions including plans to equip at least 10 million people with AI user skills and train 90,000 AI professionals and 50,000 developers within two years. The Committee is expected to form subcommittees, including one on AI Workforce Development and one on the Development and Promotion of the AI Economy. Vero's brief frames Thailand as an increasingly attractive destination for AI-focused businesses and investors, and encourages private-sector engagement with the Committee's forthcoming subcommittees.	1x0, 1x3, 1x4
11	https://asianbankingandfinance.net/event-news/experts-examine-ais-impact-thailands-financial-services-sector	Experts examine AI's impact on Thailand's financial services sector	At the Asian Banking & Finance and Insurance Asia Summit in Bangkok (over 220 attendees), financial experts cautioned that fully relying on AI won't guarantee a positive return on investment, and that clean data, industry collaboration, and proper risk management are essential to navigating volatility. Warotai Kosolpisitkul, International Economic Advisor at the Ministry of Finance's Fiscal Policy Office, underscored Thailand's commitment to digital finance expansion, highlighting the success of PromptPay and QR-code-based transactions as proof that locally scaled digital systems can strengthen economic resilience.	1x3, 3x4
12	https://www.theasianbanker.com/updates-and-articles/thai-banks-ponder-a-future-defined-by-speed-collaboration-and-customer-experience-in-the-ai-era	Thai banks ponder a future defined by speed, collaboration and generative AI	At the TAB Global Thailand CXO Dialogue 2025, senior banking leaders and technology experts discussed how Thai financial institutions can overcome inertia and drive meaningful transformation around four themes: speed and adaptability, reinventing collaboration, creating a seamless boundary-less customer experience, and overcoming inertia. Euquin Tan, Associate Director at Accenture, stressed that AI adoption is not just about automation but about equipping employees with AI literacy so they can interpret AI-generated insights responsibly. Participants concluded that speed is no longer a differentiator for Thai banks but a prerequisite for survival.	1x2, 1x4

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No	URL	Title	Case Details	Mapping Cell
13	https://techcollectivesea.com/2025/05/27/southeast-asia-telco-ai/	SEA's telco sector is looking at AI to modernise the industry	Southeast Asian telecom operators, including in Thailand, are turning to AI to modernize both networks and business models amid growing competitive pressure. Unlike global telecom giants pursuing large-scale AI deployments within legacy infrastructure, the region's telcos are taking a more modular, pragmatic approach, deploying AI in targeted use cases such as predictive maintenance, virtual customer agents, and network traffic optimization before scaling up. This strategy reflects on-the-ground realities: inconsistent infrastructure across urban and rural areas, regulatory variation between countries, and a persistent talent gap in emerging tech skills, even as regional efforts like the ASEAN Digital Economy Framework Agreement push for standardized digital governance.	1x3, 1x2, 1x4, 3x3
14	https://retailasia.com/e-commerce/event-news/why-thai-retailers-should-harness-ai-personalisation-efficiency	Why Thai retailers should harness AI for personalisation, efficiency	At the Retail Asia Summit, industry leaders stressed that Thai retailers should harness AI for personalisation and efficiency, with Chortip Varutbangkul, Head of Consumer & Retail at KPMG Thailand, describing AI as "the biggest technology disruption since the internet." Discussions covered inventory forecasting and optimization using real-time demand signals, AI-driven personalisation and customer retention, maturing customer-service chatbots and voice agents, and predictive analytics and dynamic pricing, all while navigating PDPA compliance and data governance requirements as retailers scale their AI investments.	3x3
15	https://www.telecomreviewasia.com/news/network-news/4728-ais-s-strategic-vision-for-empowering-5g-with-autonomous-networks/	Thailand's AIS leverages AI for network optimisation	AIS (Advanced Info Service), Thailand's leading mobile operator, is deploying AI and machine learning to power autonomous, self-healing and self-optimizing networks as part of its 5G-Advanced strategy. According to AIS executive Wasit Wattanasap, these autonomous networks automate operational tasks such as provisioning and fault resolution, reducing costs while maintaining service quality during peak traffic. AIS is progressing from Autonomous Network Level 3 toward Level 4, integrating AI-driven decision-making and self-healing capabilities. The company is also exploring generative AI for new product design, service packages, and predictive customer-behavior insights, alongside expanding 5G coverage through initiatives such as Thailand's first 3CC carrier aggregation.	1x3
16	https://www.mdpi.com/2071-1050/17/13/5792	Hybrid Intersection: Navigating Context and Constraint in AI for Social Good Among Thailand's Smallholder Farmers	This academic study (Hirunyatrakul, Sustainability, 2025) examines how AI is deployed as a vehicle for "social good" in Thai agriculture through a case-study analysis of eleven Thai Agricultural AI providers, assessing their governance practices and impact framing. The research develops a "hybrid intersection"	1x3

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No	URL	Title	Case Details	Mapping Cell
			concept, finding that "social good" in practice is operationalised primarily through economic gains for farmers rather than broader structural transformation, and that AI governance in this space prioritises functional trust (accuracy, ease of use) over procedural safeguards such as algorithmic transparency or stakeholder participation.	
17	https://pr-bangkok.com/?p=494592	Green Light for Bangkok: City Hall and Google Deploy AI Traffic Management to Cut Congestion and PM2.5	The Bangkok Metropolitan Administration (BMA) has partnered with Google to launch "Project Green Light," which uses Big Data and AI to optimize traffic light timing at more than 50 junctions and reduce PM2.5 pollution from transport. The project began operations in February 2025, piloted first at Ratchathewi Junction, Rama 9 Junction, and Taksin Bridge, using real-time driving-behavior analysis from Google to recommend optimal signal timings. BMA spokesperson Aekvarunyoo Amrapala said the city is committed to using technology to smooth daily commutes, and encouraged residents to continue reporting local traffic issues via the Traffy Fondue platform.	1x3, 1x1, 5x4
18	https://fosrlaw.com/2025/ai-machine-learning-big-data-thailand-legal-regulatory-2025/	Artificial Intelligence, Machine Learning, and Big Data in Thailand: Legal and Regulatory Developments 2025	Thailand does not yet have a dedicated AI law, but the Ministry of Digital Economy and Society (MDES) released a Draft Artificial Intelligence Bill in 2025 for public comment, which would mandate registration for high-risk AI systems (e.g., biometric surveillance, autonomous systems), establish ethical AI principles, and create a regulatory sandbox. In the meantime, existing laws apply: the PDPA (fully enforced since mid-2022) governs data handling, the Copyright Act protects source code but not autonomously generated AI outputs, and the Labour Protection Act requires severance pay where employees are terminated due to AI-driven automation. The National AI Strategy's implementation roadmap also prioritizes a national AI data repository and sectoral AI action plans for agriculture, health, and transportation.	1x0, 1x3
19	https://www.nationthailand.com/thailand/bangkok/40050074	Bangkok Taps Google's AI to Untangle Traffic Gridlock	The Bangkok Metropolitan Administration (BMA) has joined Google's "Project Green Light" initiative, which uses AI and Google Maps travel-pattern data to optimize traffic signal timing at the city's most congested junctions. Google Thailand Country Marketing Manager Saranee Boonritthongchai said the project harnesses AI to improve quality of life globally by easing traffic flow and lowering roadside pollution. Bangkok is one of 18 cities worldwide selected for the pilot; prior global implementations of Project Green Light have shown up to a 30% reduction in stops and a 10% reduction in emissions, across more than 55 million car journeys monthly.	1x3, 5x4, 5x3

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No	URL	Title	Case Details	Mapping Cell
20	http://thestorythailand.com/en/16/05/2025/153487/	BMA partner with Google to tackle Bangkok traffic with AI-powered signal optimization	The Bangkok Metropolitan Administration (BMA) has partnered with Google's Project Green Light to use AI-powered signal-timing optimization at some of the city's busiest intersections, active since the program's launch in February 2025. Deputy Governor of Bangkok Wisanu Subsompon explained that many Bangkok intersections currently run on fixed-time signal systems, and that the AI analysis helps adjust green and red light durations to match actual traffic volume and delays throughout the day, rather than a static schedule, part of a wider effort described as making the city's traffic management more intelligent and efficient.	1x3, 1x1, 5x3
21	https://opengovasia.com/thailands-vision-for-ai-driven-economic-and-social-growth/	Thailand's Vision for AI-Driven Economic and Social Growth	Thailand accelerated its AI momentum in 2025 with bold new initiatives, framing AI as a strategic national imperative rather than just a technological shift. Human capital is central to this vision: the THAI Academy platform offers over 200 AI-related courses and microcredentials in Thai and English to bridge digital skill gaps across urban and rural populations. On the global stage, Thailand hosted the UNESCO Global Forum on the Ethics of AI in June 2025, while the Electronic Transactions Development Agency (ETDA) is spearheading ethical-AI initiatives including a dedicated AI governance center, alongside exploration of AI sandbox zones for health tech, agri-tech, and fintech.	1x0, 1x3
22	https://windowsforum.com/threads/thailand-leads-digital-transformation-with-ai-in-public-administration-2025.372688/	Thailand Leads Digital Transformation with AI in Public Administration 2025	At an academic seminar entitled "AI and the Future of Digital Government," organized by the Institute of Democratization Studies with support from KAS Thailand (24 November 2025), policymakers and public-governance experts examined the role of AI and digital platforms in strengthening state capacity and public-service delivery, highlighting the cases of the Bangkok Metropolitan Administration and Nakhon Sawan Municipality. Recommendations included strengthening national interoperability standards and integrated government data systems, enhancing cybersecurity and algorithmic-transparency frameworks, and investing in AI/digital literacy among civil servants, educators, students, and citizens.	1x0, 1x3, 1x2, 1x1
23	https://www.ai.in.th/en/about-ai-thailand/	Thailand national AI strategy and action plan (2022 – 2027)	This is the official "About AI Thailand" page for the National AI Strategy and Action Plan (2022–2027), a national program to prepare Thailand's essential AI infrastructure and promote economic growth. Beyond infrastructure, the strategy emphasizes building human capacity and an effective AI ecosystem. The plan was approved by the Prime Minister's Cabinet Office on 26 July 2022, and the site serves as the central repository for the strategy document and related official resources.	1x0, 1x3

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No	URL	Title	Case Details	Mapping Cell
24	https://www.bangkokpost.com/business/general/3056382/thailand-on-course-to-become-regional-ai-hub	Thailand on course to become regional AI hub	At the "AI Strategy Thailand: Where Do We Stand in the World?" seminar during Bangkok AI Week 2025, Sak Segkhoonthod, senior adviser at the Electronic Transactions Development Agency (ETDA), said Thailand must build its own AI capabilities rather than rely solely on foreign technology, prioritizing small language models (SLMs) for specific sectors and stimulating AI demand through at least 2 billion baht in public procurement of AI projects. Thailand ranked seventh of 125 economies for digital-economy growth momentum in the 2025 Digital Evolution Index. The Digital Economy and Society Ministry's two-pronged strategy (AI Readiness and AI Adoption) targets over 10 million AI users, at least 90,000 AI professionals, and 50,000 AI developers within two years, backed by at least 6 billion baht in talent-development investment.	1x0, 1x3, 1x4
25	https://www.nationthailand.com/business/tech/40050970	Thailand's AI bill prioritises responsible use and rights protection	Thai authorities unveiled the country's first artificial intelligence bill in June 2025, focused on risk control and balancing innovation with human-rights protection. The government is advancing two distinct draft laws: a "Regulated AI Law," proposing stricter regulatory controls, and a "Supported AI Law," prioritizing facilitation of AI innovation. This dual-track approach leaves Thailand weighing whether to follow a stricter EU-style model emphasizing ethics and transparency, or a lighter-touch approach that could let AI development move faster. Public consultation on the draft bill was open until 9 June 2025.	1x0, 1x3
26	https://www.nationthailand.com/business/tech/40049494	Thailand outlines ambitious AI strategy to become regional hub	Thailand's newly formed National AI Committee, chaired by Prime Minister Paetongtarn Shinawatra, has outlined its strategic direction to position the country as a regional AI hub and drive economic growth. The plan sets ambitious two-year workforce targets (at least 10 million people equipped with AI user skills, 90,000 AI professionals, and 50,000 AI developers) while prioritizing AI application in sectors with high potential impact: public health, tourism, and agriculture. The government also plans to establish Centres of Excellence in collaboration with the private sector to integrate AI technologies across industries.	1x0, 1x3, 1x4
27	https://www.unesco.org/en/articles/insights-practice-building-ai-governance-clinic-thailand	Insights from Practice: Building an AI Governance Clinic in Thailand	This UNESCO article shares insights from the establishment of an AI Governance Clinic in Thailand, a project aimed at building local capacity for ethical AI governance. The clinic brings together students, academics, and policymakers to analyze and address real-world AI policy challenges, serving as a practical platform for developing expertise in areas like data protection, algorithmic bias, and public consultation for AI regulations, part of a broader effort to cultivate a new generation of AI governance professionals in Thailand.	1x0, 1x3

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No	URL	Title	Case Details	Mapping Cell
28	https://ait.ac.th/program/data-science-and-ai/	Data Science and AI (DSAI) - Asian Institute of Technology	The Asian Institute of Technology (AIT) in Bangkok offers a Master of Science/Master of Engineering in Data Science and Artificial Intelligence (DS&AI), designed in partnership with the Erasmus+ DS&AI consortium, a group of 15 European and Asian universities aiming to bring European-standard advanced education to Asia. The program admits students from engineering backgrounds with relevant mathematical and programming skills, as well as those from non-engineering backgrounds who complete foundation coursework in calculus, discrete mathematics, linear algebra, and basic programming, reflecting AIT's broader role as a regional hub for AI and data science talent development.	1x3
29	https://www.bachelorsportal.com/study-options/270696778/artificial-intelligence-thailand.html	Artificial Intelligence in Thailand: 2025 Bachelor's Guide	This is a study-abroad directory listing (Bachelorsportal) aggregating undergraduate degree programs in Artificial Intelligence offered by universities in Thailand for prospective students in 2025. Such directories typically list program details including tuition, duration, and curriculum focus areas such as machine learning, computer science fundamentals, and data science, reflecting the broader growth in dedicated AI degree offerings at Thai universities as institutions respond to rising demand for AI-skilled graduates.	1x3
30	https://www.sparkbeyond.ai/press/thailand-shifting-from-reactive-to-preventative-healthcare-with-ai-analytics	Thailand: shifting from reactive to preventative healthcare with AI	Bangkok Dusit Medical Services (BDMS), one of Asia-Pacific's largest hospital networks, and researchers at King Mongkut's Institute of Technology Ladkrabang (KMITL) have partnered with SparkBeyond to help shift Thai healthcare from reactive treatment toward preventative, AI-driven care. The collaboration applies SparkBeyond's AI-powered analytics technology to BDMS's extensive patient data to identify previously unseen drivers of complex diseases, enabling earlier intervention. SparkBeyond Asia Pacific General Manager Arun Poojari described the partnership as aligned with the company's mission to use AI to improve the health and well-being of people in Thailand.	1x3, 3x3
31	https://www.thaiexaminer.com/thai-news-foreigners/2025/06/13/bangkok-governor-uses-ai-and-a-new-smart-traffic-light-system-to-cut-traffic-wait-times-by-10-to-41/	Bangkok governor uses AI and a new smart traffic light system to cut traffic jams by 30%	Bangkok Governor Chadchart Sittipunt announced the success of an AI-powered smart traffic light system at 72 major intersections, including Rama IX, Sukhumvit, Rama I, Rama IV, Sathon, and Silom. The system, which began operating in March 2025, combines image-processing cameras with AI software to detect real-time traffic volume in each direction, adjusting green-light duration accordingly and preventing	1x3

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No	URL	Title	Case Details	Mapping Cell
			unnecessary waiting when no vehicles are present. According to a city report shared 12 June 2025, the adaptive system reduced travel delays by 10% to 41% compared to Bangkok's previous fixed-time signal cycles. This is a distinct BMA-led initiative from the separate Google-partnered "Project Green Light."	
32	https://washingtondc.thaiembassy.org/en/content/google-and-bangkok-join-forces-to-solve-traffic-wi?cate=64c93aa8fd9aa70789629292	Google and Bangkok Join Forces to Solve Traffic with AI	The Royal Thai Embassy in Washington, D.C. reported on Google's partnership with Bangkok traffic authorities to harness big data, analytics, and AI to ease congestion on the city's famously clogged streets. The article notes that Bangkok, home to over 11 million residents, has long struggled with traffic despite various governors and national leaders pledging to solve the crisis; the city has a comparable vehicle population to New York or Paris but only about one-third as many roads. It notes that Bangkok's growing commuter rail network has helped alleviate some pressure since the late 1990s, providing context for why the city is now turning to AI-driven traffic-signal optimization as a complementary solution.	1x3, 1x1, 5x3
33	https://railmarketresearch.com/product/thailand-railway-ai-market-2024-2030/	Thailand Railway AI Market 2024-2030	The AI market within Thailand's railway sector is expected to see significant growth from 2024 to 2030. The adoption of AI is driven by the need to modernize the country's rail infrastructure and improve operational efficiency. Key applications include AI-powered predictive maintenance for trains and tracks, intelligent traffic management systems to optimize scheduling and prevent congestion, and automated safety monitoring systems.	1x3, 3x3
34	https://pmac-2025.com/fieldtrip/4/detail	Exploring the AI Healthcare Ecosystem in Thailand	On 30 January 2025, the Faculty of Medicine at Ramathibodi Hospital, Mahidol University, in collaboration with Thailand's National Health Security Office, co-organized a field trip for the Prince Mahidol Award Conference (PMAC) 2025, themed "Harnessing Technology in an Age of AI to Build a Healthier World." The event welcomed 50 international PMAC participants, opening with a keynote from Professor Chagriya Kitiyakara, Deputy Dean for Innovation and Cooperation, on "Empowering Digital Healthcare Innovation: A Thai Medical School Perspective," followed by a cultural excursion to Wat Benchamabophit and Parutsakawan Palace showcasing Thailand's approach to blending technology innovation with its healthcare heritage.	1x3
35	https://laotiantimes.com/2025/05/28/bangkok-taps-google-ai-to-untangle-traffic-jams/#google_vignette	Bangkok Taps Google AI to Untangle Traffic Jams	The Bangkok Metropolitan Administration has partnered with Google on an AI-assisted traffic management system to ease congestion, branded "Project Green Light." Bangkok Governor Chadchart Sittipunt said the city is now fully embracing AI	1x3

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No	URL	Title	Case Details	Mapping Cell
			technology to address long-standing traffic issues and has established an AI steering committee to ensure effective use of the technology across departments. Over an initial three-month period, the project analyzed traffic at hundreds of intersections citywide, with Google's AI providing tailored signal-timing recommendations to the Bangkok Metropolitan Administration.	
36	https://news.microsoft.com/th-th/2025/06/09/ministry-of-education-mhesi-and-microsoft-join-forces-to-transform-thai-education-with-ai-en/	Ministry of Education, MHESI, and Microsoft Join Forces to Elevate the Skills of Over 40 Million Students and Teachers	Note: the source title claims the initiative reaches "over 40 million students and teachers," but the verified figures in the article itself are considerably smaller. Thailand's Ministry of Education, the Ministry of Higher Education, Science, Research and Innovation (MHESI), and Microsoft launched an AI-in-education partnership offering over 200 free online AI courses in Thai, ranging from beginner to advanced levels for teachers, administrators, and developers, delivered through a "Developer AI Skills Journey" program. MHESI Permanent Secretary Prof. Dr. Supachai Pathumnakul and Microsoft Thailand Managing Director Dhanawat Suthumpun both framed the partnership as building a long-term, sustainable AI learning ecosystem; related Microsoft/MOE initiatives separately cite reaching over 400,000 students via 4,500 trained teachers and 50,000 university students in technology fields.	1x3
37	https://en.wikipedia.org/wiki/The_Mirror_Foundation	The Mirror Foundation - Wikipedia	The Mirror Foundation is a Thai non-governmental organization known for its innovative use of technology for social causes. A prominent example is its "Missing Person" project, which has used facial recognition technology, a form of AI, to help locate missing people by comparing circulated photos against a database. The foundation uses social media and other digital platforms to help identify and reunite missing individuals with their families, representing an early example of AI applied to social welfare and community outreach work in Thailand.	unmapped
38	https://www.ai.in.th/wp-content/uploads/2025/06/NAIS-Annual_2024_ENG_Web.pdf	Annual Report - AI Thailand	This is the National AI Strategy (NAIS) Annual Report 2024, published by AI Thailand, the government portal for Thailand's National AI Strategy and Action Plan (2022–2027). The report details progress made during the year, including growth in AI adoption across government and industry, investment and talent-development initiatives, and policy developments such as AI governance and ethics guidelines, tracking implementation against the strategy's five core strategies and 15 workplans.	1x0, 1x3, 1x4

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No	URL	Title	Case Details	Mapping Cell
39	https://www.researchgate.net/publication/377547253_The_role_of_artificial_intelligence_in_the_development_of_rail_transport	(PDF) The role of artificial intelligence in the development of rail transport	This paper discusses the transformative role of AI in rail transport, a topic relevant to Thailand's railway modernization. AI is used for predictive maintenance, where sensors and algorithms forecast equipment failures to reduce downtime, and is employed in automatic train control systems to optimize schedules and maintain safe distances between trains. The paper also discusses AI enhancing rail security through video analytics and improving energy efficiency by optimizing train operations, concluding that AI adoption is becoming central to modernizing rail networks internationally.	1x3, 3x3
40	https://www.railway-technology.com/news/thailands-state-railway-telecom-modernisation/?cf-view	Thailand's State Railway teams up with ROCTEC for telecom modernisation	The State Railway of Thailand (SRT) has signed a multi-year contract worth nearly THB 1,500 million with ROCTEC Global, in consortium with SKY ICT and United Telecom Sales and Services, to implement a nationwide "Telecommunications Network System Installation Project." The project involves installing approximately 3,000km of fiber-optic cable along SRT's main routes, incorporating Dense Wavelength Division Multiplexing (DWDM), IP/MPLS networks, train-control telephony, CCTV, and VoIP/IP telephony systems, along with a new cybersecurity framework and Network Operations Center. ROCTEC CEO Weng Sam Lam said the project, expected to complete within two years, will streamline train control, lower operational costs, and support future high-speed rail integration.	1x3
41	https://www.smart-energy.com/industry-sectors/smart-grid/thailand-set-for-1-8-billion-smart-grid-and-ai-powered-energy-transformation/	Thailand set for $1.8 billion smart grid and AI-powered energy transformation	Global business solution provider Gorilla Technology Group (NASDAQ: GRRR) signed a $1.8 billion agreement on 3 March 2025 to lead what it describes as Thailand's largest-ever energy digitisation and smart grid initiative. The 15-year, AI-driven program will integrate advanced technology, automation, and AI-powered analytics to modernize power distribution, enhance security, and optimize energy efficiency nationwide, funded through an innovative long-term financing model rather than milestone-based payments. Gorilla's AI-driven grid management and predictive analytics are intended to optimize energy flows and enhance response times, with a major revenue and operational ramp-up expected in 2026–2027.	1x3, 3x3, 5x3
42	https://mekonginstitute.org/mi-and-partners-build-first-agri-based-ai-system/	MI AND PARTNERS BUILD FIRST AGRI-BASED AI SYSTEM FOR FOOD SAFETY IN MEKONG REGION	Note: this source is actually about rice production, not general food safety/traceability as the title might suggest. The Mekong Institute (MI) and Thailand's Rice Department, under the Ministry of Agriculture and Cooperatives, presented the framework for an AI system to strengthen the Mekong-Lancang region's rice production preparedness and early-warning system at an online regional workshop on 1–2	1x3

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No	URL	Title	Case Details	Mapping Cell
			September 2021. MI Executive Director Suriyan Vichitlekarn described the system as still a structural framework at that stage, with roughly 40 government representatives from Cambodia, China, Lao PDR, Myanmar, Thailand, and Vietnam receiving guidance on data acquisition from AI system developer Dr. Arthit Srikaew of Suranaree University of Technology, aimed at building resilience against climate change, natural disasters, and pest outbreaks for a region producing 44% of the world's rice.	
43	https://opengovasia.com/thailands-vision-for-ai-driven-economic-and-social-growth/?c=jp	Thailand's Vision for AI-Driven Economic and Social Growth	Thailand accelerated its AI momentum in 2025 with bold new initiatives, framing AI as a strategic national imperative rather than just a technological shift. Human capital is central to this vision: the THAI Academy platform offers over 200 AI-related courses and microcredentials in Thai and English to bridge digital skill gaps across urban and rural populations. On the global stage, Thailand hosted the UNESCO Global Forum on the Ethics of AI in June 2025, while the Electronic Transactions Development Agency (ETDA) is spearheading ethical-AI initiatives including a dedicated AI governance center, alongside exploration of AI sandbox zones for health tech, agri-tech, and fintech.	1x0, 1x3
44	https://www.apru.org/news/public-agencies-from-thailand-participated-in-ai-for-social-good-summit/	Public Agencies from Thailand Participated in AI for Social Good	Thai public agencies have participated in the "AI for Social Good" initiative, a project by APRU, UNESCAP, and Google. The program aims to strengthen government capabilities and frameworks for using AI to tackle socio-economic challenges. For Thailand, specific research projects have focused on responsible data sharing for digital health governance and using data analytics for poverty alleviation through the Thai People Map and Analytics Platform (TPMAP). This participation underscores the Thai government's interest in applying AI research to concrete social-welfare and public-health policy challenges.	1x0, 1x3
45	https://www.egat.co.th/home/en/20220622e-01/	EGAT - IBM accelerate digital power plants, installing AI-powered	The Electricity Generating Authority of Thailand (EGAT) has partnered with IBM to accelerate the digitalization of its power plants using AI. The collaboration deploys IBM's AI-powered asset management technology to help EGAT gain integrated, real-time insights across its power generation facilities. This enables predictive maintenance, allowing the utility to anticipate equipment issues before they cause outages. The initiative reflects EGAT's broader push to modernize its digital power plant operations and improve efficiency across Thailand's major energy infrastructure.	unmapped

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No	URL	Title	Case Details	Mapping Cell
46	https://newsroom.ibm.com/2021-02-04-EGAT-Adopts-IBM-AI-to-Help-Improve-Efficiency-Across-Thailands-Major-Power-Plants	EGAT Adopts IBM AI to Help Improve Efficiency Across Thailand's	The Electricity Generating Authority of Thailand (EGAT) is using IBM's AI-powered asset management solutions to improve efficiency and drive sustainable operations. By deploying IBM Maximo, EGAT can gain integrated insights from all its power plants to predict asset failure and optimize maintenance schedules. This virtual management of inventory and use of machine learning helps minimize unplanned downtime, extend the life of critical assets, and reduce operational costs. This digital transformation is a key part of EGAT's strategy to modernize Thailand's major power generation infrastructure.	1x3
47	https://www.apru.org/event/ai-for-social-good-strengthening-capabilities-and-government-frameworks-in-asia-and-the-pacific-informing-ai-policies-and-strategies-in-thailand/	AI For Social Good: Strengthening Capabilities and Government'	This workshop, part of the "AI For Social Good" project, focused on strengthening the capabilities of government frameworks in the Asia-Pacific region, including Thailand. The initiative brings together researchers and government agencies to develop country-specific AI governance frameworks. The goal is to empower transparent AI ecosystems and create solutions for socio-economic challenges. For Thailand, this involves informing AI policies and strategies by providing research on responsible data sharing and analytics applications for digital health and poverty-alleviation initiatives.	1x0, 1x3
48	https://www.keepital.com/company/th/kavin-intertrade-co-ltd/announce/asean-retail-2025-shaping-the-future-of-retail-with-ai-powered-innovation	ASEAN Retail 2025: Shaping the Future of Retail with AI-Powered Innovation	ASEAN Retail 2025, the region's premier international trade exhibition for retail and e-commerce technology, returned for its 10th edition from 24–27 July 2025 at BITEC, Bangkok, under the theme "Beyond Shopping – AI-Powered Retail Experiences." Project Manager Watinee Saithong said the event serves as a platform for businesses to explore AI-driven innovations, automation, and the growing demand for seamless shopping experiences. The exhibition featured dedicated innovation zones, including a Smart Retail & Revolutionizing Commerce Zone showcasing AI-driven automation, data analytics, and personalized shopping solutions, alongside an E-Commerce Live Lounge highlighting digital-platform innovations.	1x3, 1x4
49	https://depa.or.th/storage/app/media/file/depa-Technology-Foresight-Final-Report-EN-250320.pdf	Thailand Digital Technology Foresight 2035	This report by Thailand's Digital Economy Promotion Agency (DEPA), the "Thailand Digital Technology Foresight 2035," identifies AI as a critical technology for the nation's digital economy, projecting the domestic AI market to grow from THB 15.7 billion to THB 182 billion by 2035. The study recommends that Thailand establish world-class Centers of Excellence to build a digital workforce skilled in areas like 5G/6G and blockchain, aligning with and strengthening existing institutions such as the AI Research Center, the IoT and Digital Innovation Institute, and the Government Big Data Institute (GBDi).	1x3, 3x3

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No	URL	Title	Case Details	Mapping Cell
50	https://ait.ac.th/centre/artificial-intelligence-ai-center/	Artificial intelligence (AI) Center - Asian Institute of Technology	The Asian Institute of Technology (AIT) launched its AI Center under the leadership of Prof. Matthew Dailey, head of the ICT Department, and Dr. Mongkol Ekpanyapong, head of the Industrial Systems Engineering Department, with the goal of becoming a leading AI R&D lab in the region. The center hosts researchers developing systems that emulate human cognitive functions, with a particular focus on autonomous agents operating in uncontrolled environments in support of Thailand's Thailand 4.0 agenda, alongside work on IoT, cloud and fog computing, embedded systems, and automated software deployment pipelines.	1x3, 1x4
51	https://www.techsciresearch.com/report/thailand-ai-in-telecommunication-market/8303.html	Thailand AI in Telecommunication Market by Size, Share, Growth, Trends and Forecast 2027	This market research report forecasts significant growth for AI in Thailand's telecommunication market through 2027. The adoption of AI is driven by the need to manage complex networks and enhance customer service. Technologies like machine learning and deep learning are being used for network optimization, predictive maintenance, and automating operations. In customer-facing roles, Natural Language Processing (NLP) powers chatbots and virtual assistants.	1x3, 1x2, 3x3
52	http://pmc.ncbi.nlm.nih.gov/articles/PMC12209719/	Insights Into the Current and Future State of AI Adoption Within Health Systems in Southeast Asia	This cross-sectional qualitative study (Wibowo et al., Journal of Medical Internet Research, 2025) examines AI adoption within health systems across Southeast Asia, drawing on 31 semi-structured interviews with professionals involved in AI implementation across 7 SEA countries, including Thailand. Through thematic analysis, the study identified five major categories: AI technology acceptance, disparities in digital transformation, technology governance, data governance, and AI for health system transformation. The authors conclude that realizing AI's full potential in the region requires foundational investment in digital infrastructure, technology governance, and data governance.	1x3
53	https://www.researchgate.net/publication/372967139_Challenges_in_Adopting_Artificial_Intelligence_to_Improve_Healthcare_Systems_and_Outcomes_in_Thailand	Challenges in Adopting Artificial Intelligence to Improve Healthcare Systems and Outcomes in Thailand	This paper (Pongtriang et al., 2023) examines challenges in adopting AI to improve healthcare systems and outcomes in Thailand, focusing on population, financial, and policy perspectives. A central challenge identified is Thailand's aging population, with the elderly now making up more than 17% of the population, driving demand for AI-supported long-term and continuous care alongside rising rates of noncommunicable disease. The authors, from Suratthani Rajabhat University and the University of Florida, argue that addressing these challenges requires human-resource development in health informatics, including short courses in health data science and multi-stakeholder research involving government, hospitals, and universities.	1x0, 1x3

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No	URL	Title	Case Details	Mapping Cell
54	https://oecd.ai/en/wonk/thailand-ai-strategies	Thailand's AI strategy to boost economic and social wellbeing	This OECD feature highlights Thailand's National AI Action Plan, which aims to establish the country as the ASEAN hub for AI by 2027. The strategy is comprehensive, covering infrastructure development, research, talent cultivation, and the creation of ethical and legal frameworks. The government is partnering with global tech companies to expand digital infrastructure and has set a 2026 deadline for the digital transformation of all government agencies. Key projects, like a national large language model initiative, are intended to anchor Thailand's sovereign AI capabilities.	1x0, 1x3, 1x1
55	https://blogs.worldbank.org/en/eastasiapacific/artificial-intelligence-big-data-opportunities-enhancing-human-development-thailand-and-beyond	Artificial intelligence, big data: Opportunities for enhancing human development in Thailand and beyond	In this 2018 World Bank blog post, Sutayut Osornprasop argues that AI and big data offer largely untapped opportunities for Thailand, particularly in supporting the "Thailand 4.0" economic model, a shift from earlier agriculture (1.0), light industry (2.0), and heavy industry (3.0) stages toward a value-based economy driven by innovation, technology, and creativity. The post notes that data volumes have exploded (terabytes generated every 60 seconds globally) while storage costs have collapsed (from over $560 per GB thirty years ago to under 1 cent today), and argues that beyond commercial uses like demand forecasting and ad targeting, AI and big data can be deliberately applied to advance human development and address social challenges.	1x3
56	https://digitechasean.com/supporting-organisations/	Supporting Organisations - DigiTech ASEAN Thailand	This is the "Supporting Organisations" page for DigiTech ASEAN Thailand & AI Connect, a major technology and digital exhibition held annually in Bangkok (the 2025 edition ran 19–21 November at the IMPACT Exhibition and Convention Centre). The event is hosted by two Thai government ministries (the Ministry of Digital Economy and Society and the Ministry of Higher Education, Science, Research and Innovation) alongside numerous corporate sponsors such as Juniper Networks, Adobe, FPT Corporation, and Ricoh, highlighting the coordinated public-private effort behind Thailand's major AI and digital-technology trade events.	1x3, 1x4
57	https://www.pwc.com/th/en/services/EPB/nextgensurvey2024-en.html	PwC's Global NextGen Survey 2024 - Thailand Report	PwC's 2024 survey of next-generation family business leaders in Thailand reveals a positive outlook on AI. The report finds that 79% of Thai "NextGens" believe AI will be a powerful force for business transformation, aligning with global trends. While they see great potential for AI to drive growth and innovation, they also face resistance to change within their family businesses. The survey emphasizes the urgent need for these future leaders to champion AI adoption and align their vision with more risk-averse, established generations of family business leadership.	1x3

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No	URL	Title	Case Details	Mapping Cell
58	https://www.jenosize.com/en/ideas/futurist/thai-ai-service-platforms	Getting to Know 8 Thai AIs and Their Key Features	This article introduces eight AI platforms developed in Thailand, showcasing the country's growing AI capabilities. One key example is "AI for Thai," a government initiative by NECTEC that provides a platform with various AI services like Thai language processing and facial recognition for developers. Another is "Alisa," a popular chatbot developed by a public company, designed to naturally understand and respond in Thai. These examples highlight a focus on developing AI solutions that are specifically tailored to the Thai language and local market needs.	1x3, 1x2, 2x2
59	https://aws.amazon.com/blogs/public-sector/thailands-higher-education-science-research-innovation-ministry-collaborates-aws-boost-innovation-upskill-public-servants/	Thailand's Higher Education, Science, Research, and Innovation Ministry collaborates with AWS to boost innovation and upskill public servants	Thailand's Ministry of Higher Education, Science, Research, and Innovation (MHESI) is collaborating with Amazon Web Services (AWS) to accelerate research and upskill public servants. This partnership provides Thai universities and government agencies with access to cloud computing and machine learning resources. A key part of the initiative is the "National AI Challenge," which encourages the use of AWS cloud services to develop innovative AI solutions. By leveraging AWS's platform and training programs, the ministry aims to accelerate research output and build practical AI skills across the public sector.	1x0, 1x3
60	https://www.mdpi.com/0718-1876/20/2/103	E-Government Adoption in Thai Public Sector Organizations: Citizens' Perspective	This research paper investigates citizens' perspectives on the adoption of e-government services in Thailand's public sector. The study finds that factors such as perceived usefulness, ease of use, and trust in the government's digital platforms are crucial for driving adoption. While the paper focuses on e-government in general rather than AI specifically, its findings are relevant to the implementation of AI-powered public services: for AI to be successful in the public sector, it must be perceived by citizens as a tool that genuinely improves service delivery rather than adding friction or eroding trust in government digital platforms.	1x0, 1x3, 1x2
61	https://ai.softwareconsultancy.co.th/services/pattaya-railway-ai-predictive-maintenance/	Pattaya Railway Ai Predictive Maintenance	This page outlines a proposed AI predictive maintenance solution for the Pattaya Railway. The system would involve installing sensors on railway assets to collect real-time data on their condition. An AI/ML model would then analyze this data to predict potential failures and maintenance needs. The goal is to shift from a traditional, fixed-schedule maintenance approach to a more efficient, data-driven one. This would help to improve the safety and reliability of the railway service.	1x3, 3x3

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No	URL	Title	Case Details	Mapping Cell
62	https://www.researchgate.net/publication/382024503_The_Impact_of_AI_on_Sustainable_Business_Practices_in_Emerging_Markets_A_Systematic_Review_of_ESG_Implementation_in_Thailand	"The Impact of AI on Sustainable Business Practices in Emerging Markets: A Systematic Review of ESG Implementation in Thailand"	This systematic literature review (2024) examines how AI implementation crosses into Thailand's agriculture, manufacturing, and water-management sectors, supporting industrial sustainability and environmental preservation. The review finds that Thailand has adopted AI-based predictive analytics for environmental resource management and AI-based technologies for ethical supply-chain monitoring, both central to environmental, social, and governance (ESG) business practices. However, the authors note that positive results remain limited due to uneven distribution of AI technologies, data-privacy protections, and the still-incomplete nature of comprehensive AI transformation across Thai industry.	1x0, 1x3, 1x4, 5x4
63	https://www.egat.co.th/home/en/about-egat/	EGAT Profile - Electricity Generating Authority of Thailand	The Electricity Generating Authority of Thailand (EGAT) is the country's state-owned power utility, responsible for power generation and transmission. As part of its modernization efforts, EGAT is increasingly adopting digital technologies, including AI. Key applications include using AI for predictive maintenance of its power plants and transmission lines to improve reliability and reduce downtime. EGAT also uses smart grid technologies, which often incorporate AI, to manage energy flow more efficiently, supporting the broader national push toward a modernized, resilient energy grid.	1x3, 3x3, 5x3
64	https://www.taishi.io/	Artificial Intelligence in Thai Business: How AI Disrupts Thailand	AI is significantly disrupting Thai businesses by driving automation and enhancing data analysis capabilities. Companies across various sectors are adopting AI to improve efficiency and gain a competitive edge. In retail, AI is used for personalized marketing and inventory management. In finance, it powers fraud detection and credit scoring. The manufacturing sector leverages AI for predictive maintenance and quality control. This technological shift, supported by the government's Thailand 4.0 policy framework, is reshaping how Thai businesses compete both domestically and in export markets.	1x3, 1x4, 3x3, 3x4
65	https://so07.tci-thaijo.org/index.php/IJSASR/article/view/3651	How Artificial Intelligence is Helping Businesses Grow and Thrive: The Transformative Role of Artificial Intelligence in Thai B2C Digital Marketing	This peer-reviewed review article (Kamkankaew et al., International Journal of Sociologies and Anthropologies Science Reviews, 2024) examines how AI is transforming business-to-consumer (B2C) digital marketing in Thailand, finding a profound impact on customer engagement through AI-based personalization, predictive analytics, and chatbots. The authors identify key challenges to effective implementation, including data privacy, algorithmic bias, and cultural disparities, and conclude that successful adoption requires Thai businesses to combine innovative AI approaches with careful navigation of cultural barriers and adherence to ethical principles to maintain customer trust.	1x3, 1x2

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No	URL	Title	Case Details	Mapping Cell
66	https://www.ai.in.th/wp-content/uploads/2022/12/2022-NAIS-Presentation-eng.pdf	Thailand National AI Strategy and Action Plan (2022–2027) – NAIS Presentation (ENG)	This official presentation outlines Thailand's National AI Strategy and Action Plan (2022–2027), approved by the Cabinet on 26 July 2022, with the National AI Committee formally appointed on 17 August 2022. The strategy is built around five core strategies and 15 workplans, covering readiness in social, ethics, law, and regulation; national AI infrastructure; human capacity and talent development (targeting over 30,000 AI professionals within six years); and driving AI technology and innovation. Governance is led by a Prime Minister-chaired National AI Committee, with NSTDA/NECTEC serving as technical secretariat. The presentation also reports one-year progress and positions Thailand's AI adoption relative to regional peers.	unmapped
67	https://www.frontiersin.org/journals/sustainable-cities/articles/10.3389/frsc.2025.1491621/full	Traffy Fondue: AI Citizen Complaint Platform (NECTEC)	AI chatbot on LINE classifying citizen complaints, routing to correct departments. 10,400+ agencies, 1,300+ municipalities. 13hrs avg resolution. Saves 78M baht/year.	2x2, 4x2
68	https://govinsider.asia/intl-en/article/thailand-accelerates-cloud-and-ai-adoption	Thang Rath Government Superapp (173 services, 500K+ daily users)	Government superapp with AI-powered smart search. 173 services, 500,000+ daily users.	1x2, 4x2
69	https://govinsider.asia/intl-en/article/thailand-pursues-ai-innovation	National AI Committee Launched (May 2025)	Unifies AI policy across ministries. Targets: 10M AI users, 90K professionals, 50K developers within 2 years.	1x0
70	https://news.microsoft.com/source/asia/2025/07/08/microsoft-and-dga-empower-thai-government	DGA-Microsoft Tech for Gov 2025 AI Training (2,000 officers)	Trained 2,000 government officers across multiple agencies in AI proficiency.	1x1
71	https://www.bangkokpost.com/business/general/2284830/dga-readies-ai-rollout	AI-Din: Department of Lands Document Processing AI	DGA Hackathon Grand Prize winner. AI for document processing and query resolution reducing official workload.	2x1
72	https://completeaitraining.com/news/microsoft-and-dga-drive-thai-government-digital/	Lert-Na: AI Award Screening Platform (OPDC)	OPDC uses AI to screen award submissions, automating document review and selection.	2x1
73	https://news.microsoft.com/source/asia/2025/06/30/thailands-digital-leap-council-of-state	Council of State: AI for Law Modernization	AI and cloud technologies to modernize legal document management and law drafting processes.	2x0
74	https://thaitimes.com/nectec-unveils-pathumma-llm	NECTEC Pathumma LLM: Thai Language Model	Thai Large Language Model supporting Thai language processing with data confidentiality for government applications.	2x1, 2x0
75	https://ihppthaigov.net/publication/accuracyofcovid-19prediction	MOPH COVID-19 Predictive Analytics	SEIR, ARIMA, LSTM models for forecasting COVID-19 cases using national surveillance database.	3x3
76	https://pmc.ncbi.nlm.nih.gov/articles/PMC9462126/	Automated HIV Case Reporting (MOPH National EMR)	Automated HIV case reporting integrated with national electronic medical records for disease surveillance.	3x3
77	https://www.mdpi.com/2071-1050/16/11/4433	ML-based Flood Hazard Mapping: Chiang Mai Province	LSTM-based spatiotemporal flood hazard mapping for proactive evacuation planning. 2,000 observation stations countrywide.	3x0

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No	URL	Title	Case Details	Mapping Cell
78	https://www.hii.or.th/wp-content/uploads/2024/11/28-Development-of-Flood-Monitoring.pdf	Social Media Flood Monitoring System (Thai NLP)	Thai NLP to extract flood info from social media. Supplements official monitoring for real-time situational awareness.	3x0, 2x3
79	https://www.timeshighereducation.com/research/thammasat-university/ai-boosts-healthcare-access-thailand	AI Chest 4 All: Free X-ray Screening (300+ Public Hospitals)	Thammasat University + Dept of Medical Services. Free chest X-ray screening at 300+ public hospitals. 92%+ accuracy for heart disease, lung cancer, TB.	3x3, 2x3
80	https://www.nectec.or.th/en/research/dsarg/dsarg-sai.html	NECTEC SAI: Big Data Analytics for Government	Strategic Analytics Networks platform for government agencies. Data engineering, visualization, evidence-based policy.	3x1
81	https://www.nectec.or.th/en/about/news/predictive-farming-eng.html	NECTEC Predictive Farming Platform	Weather, soil, crop health data from remote/embedded sensors and drones for farming policy on production, management, budget.	3x4
82	https://www.dga.or.th/en/citizenportal/	Citizen Portal: Face Recognition Digital ID (DGA)	Centralized portal with face recognition (liveness detection) and Government Digital ID for multi-service access.	1x2, 2x2
83	https://www.nationthailand.com/business/tech/40054309	THAI Academy: National AI Upskilling (1M target)	Ministry of Digital Economy + Microsoft. Free AI upskilling targeting 1 million Thais.	1x0
84	https://www.nortonrosefulbright.com/en/knowledge/publications/0fec663b	Thailand Draft AI Law (ONDE/ETDA)	Draft decrees on AI business operations and innovation support. Regulatory framework development.	1x0
85	https://www.unesco.org/ethics-ai/en/thailand	UNESCO AI Ethics Forum + AIGPC Bangkok Hub	Thailand hosted UNESCO Global Forum on AI Ethics (June 2025). Launched AI Governance Practice Centre as Asia-Pacific hub.	1x0
86	https://atlasofurbantech.org/cases/tha-chonburi-eec/	EEC Smart City: 1.35 Trillion Baht AI/IoT Infrastructure	3 provinces smart region by 2037. AI Lab, 5G Testing Lab, IoT Design Center, AI-enabled traffic management.	1x3, 5x3
87	https://regulations.ai/regulations/thailand-2022-3-nstda-ai-ethics-guideline	NSTDA AI Ethics Guideline (6 Core Principles)	Non-binding national AI ethics framework with 6 core principles for trustworthy AI.	1x0

LIST OF TABLES

TABLE 2.1 Eight functional categories and 57 keywords denoting purposes and uses of public sector AI 13

TABLE 3.1 Waseda University – IAC World Digital Government Ranking 2025 of eight target economies 20

TABLE 3.2 AI patent families by target economy 23

TABLE 3.3 AI publication data by target economy, 2015–25 26

TABLE 4.1 Distribution of 944 sources across eight target economies 32

TABLE 4.2 Cluster configuration: four strategic positioning branches by two drivers 36

TABLE 5.1 Macroeconomic impact estimates by economy 47

TABLE 7.1 Summary of public sector AI adoption status across eight economies 56

TABLE 8.1 Country snapshot of the ROK 63

TABLE 8.2 Representative public sector AI systems and use cases for the ROK 64

TABLE 8.3 Country snapshot of the ROC 70

TABLE 8.4 Representative public sector AI systems and use cases in the ROC 70

TABLE 8.5 Country snapshot of Japan 76

TABLE 8.6 Representative public sector AI systems and use cases in Japan 77

TABLE 8.7 Country snapshot of India 82

TABLE 8.8 Representative public sector AI systems and use cases in India 82

TABLE 8.9 Country snapshot of Malaysia 89

TABLE 8.10 Representative public sector AI systems and use cases in Malaysia 90

TABLE 8.11 Thailand: Country Snapshot 95

TABLE 8.12 Thailand: Representative Public sector AI Systems and Use Cases 95

TABLE 8.13 Country snapshot of Bangladesh 100

TABLE 8.14 Representative public sector AI systems and use cases for Bangladesh 101

TABLE 8.15 Country snapshot of the Philippines 105

TABLE 8.16 Representative public sector AI systems and use cases in the Philippines 106

LIST OF FIGURES

FIGURE 2.1 A roadmap for AI-enabled productivity improvement in the public sector 8

FIGURE 2.2 AI-driven public sector productivity enhancement (from foundational models to trustworthy AI adoption) 18

FIGURE 3.1 Global trend of patent families by priority year (earliest) 22

FIGURE 4.1 How the eight selected economies are positioned in public sector AI adoption 33

FIGURE 4.2 Strategic positioning map of public sector AI trajectories based on technological potential and social participation 37

FIGURE B-1 Global AI Patent Families by Priority Year 141

FIGURE B-2 AI Patent Applications by Target Economy × Priority Year 142

FIGURE B-3.1 The ROC: ThemeScape AI patent use-case landscape 144

FIGURE B-3.2 India: ThemeScape AI patent use-case landscape 145

FIGURE B-3.3 Japan: ThemeScape AI patent use-case landscape 145

FIGURE B-3.4 The ROK: ThemeScape AI patent use-case landscape 146

FIGURE B-3.5 Malaysia: ThemeScape AI patent use-case landscape 147

FIGURE B-3.6 The Philippines: ThemeScape AI patent use-case landscape 148

FIGURE B-3.7 Thailand: ThemeScape AI patent use-case landscape 148

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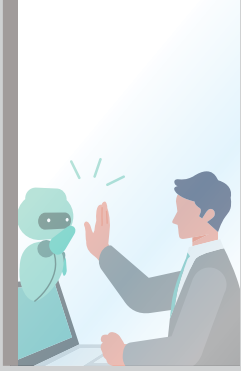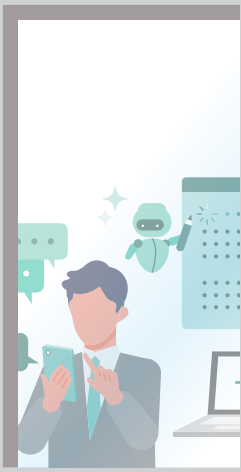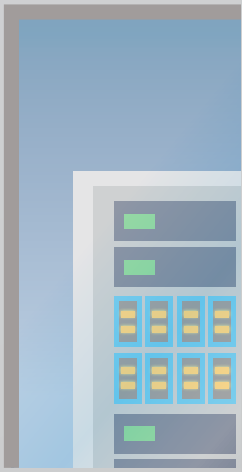
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