

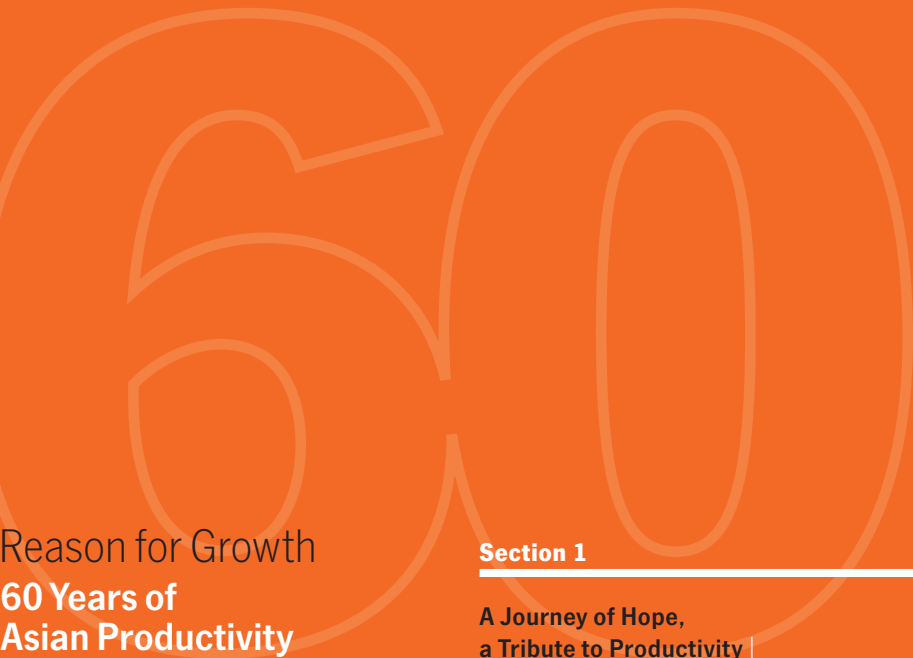


# Reason for Growth

## **60 Years of Asian Productivity**

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Reason for Growth  
60 Years of  
Asian Productivity

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# A Journey of Hope, a Tribute to Productivity

The Diamond Jubilee of the Asian Productivity Organization (APO) is more than an anniversary. It is an homage to the trailblazers who started the journey to enabling the region through productivity improvement six decades ago. It was an arduous mission when many Asian nations were in the nascent stage of socioeconomic development, commonly struggling with shortages of resources. Idealism, camaraderie, and shared aspirations among members prevailed. Along with improved productivity, economic development took off in the region, transforming Asia into the center of economic gravity and the powerhouse of the world.

This is certainly a remarkable achievement to take pride in. However, it does not mean the end of the productivity journey. In East Asian culture, a 60th anniversary marks a rebirth, and productivity remains the reason for growth. It is an enabler refitted and repurposed to meet today's socioeconomic landscape and its emerging, unprecedented challenges that are vastly different from those at the time of the APO's founding in 1961. The Diamond Jubilee therefore underlines the necessity for the APO to adapt and innovate. Longevity is a blessing, but our continuing relevance and achievements so far should not be taken for granted as we move ahead with our mission.

May our long, proud history bequeath us the wisdom and foresight to forge the path ahead to a better, brighter, more productive future.

Happy 60th anniversary, APO!

**AKP Mochtan**  
Secretary-General  
*Tokyo, 11 May 2021*





# Bangladesh

National Productivity Organization (NPO) | Established 1983



## NPO MISSION AND KEY MESSAGES

# Accelerating national economic development through productivity enhancement

**The NPO's mission** is to accelerate national economic development in Bangladesh by fostering more efficient manpower, improving systems, and increasing national productivity through activities such as training, consultancy, research, and technical expertise.



The handover ceremony for the Bangladesh National Productivity Master Plan (FY2021–2030).

## BACKGROUND AND KEY TAKEAWAYS

### Background

Most SMEs in Bangladesh find it difficult to adopt modern cost accounting best practices due to a lack of data.

### Aims

To implement Material Flow Cost Accounting with the aim of enhancing material productivity in manufacturing operations.

### Actions

Two demonstration company projects were initiated in the leather footwear industry to act as role models for other SMEs in Bangladesh.



## SUCCESS STORIES

# Enhancing material productivity by sharing best practices



Ceremonies for National Productivity Day in 2019, under the slogan Productivity for Global Competitiveness.

**THE APO RUNS** demonstration company projects in member economies to generate success stories that document the development and implementation of productivity enhancement initiatives. The demonstration company should epitomize

an enterprise-wide productivity movement that achieves business expansion, increases profit and customer satisfaction, reduces waste, enables energy saving, and leads to fair, equitable, and mutually satisfying productivity-gain-sharing for both management and workers.

In 2018, a demonstration company project was implemented in Bangladesh for the first time with the aim of successfully implementing

Material Flow Cost Accounting (MFCA), a branch of Environmental Management Accounting that aims to enhance material productivity in manufacturing operations.

Two companies in the leather goods sector were selected: Kusumkoli Shoe Factory Limited and Blue Ocean Footwear Limited. This industry sector was selected for its high value-added products that make up Bangladesh's second-largest export sector.

Many challenges had to be overcome to implement MFCA in the two demonstration companies, especially in meeting the data collection requirements—most companies in Bangladesh simply do not collect the necessary data.

... companies were able to reduce their material costs by around 2% after adopting MFCA

With the invaluable help of MFCA subject expert Wichai Chattinnawat, the NPO team and SR Asia members were able to successfully implement MFCA in the two shoe companies—a first among APO member economies. Both companies were able to reduce their material costs by around 2% after adopting MFCA.

A seminar was organized to disseminate and promote MFCA using the successful examples of the two shoe companies as case studies. Representatives from around a hundred other footwear companies and other SMEs attended.

The success of this demonstration company project has positively affected SMEs in Bangladesh with many companies now expressing an interest in adopting MFCA. Implementation has already begun in three sugar factories, and implementation proposals have been received from several other companies.

## APO PARTICIPANT VOICES

# IMPLEMENTING REAL-WORLD KAIZEN THROUGH APO COURSE KNOWLEDGE

AS A PRODUCTIVITY PRACTITIONER at the NPO, Bangladesh, I attended an APO-organized training course in Tagaytay, Philippines, in August 2018 to learn more about productivity tools and techniques and data analysis. The "Certified

Productivity Practitioners Course" concluded with an assignment to write a productivity-related research report about an unfamiliar economic sector. I felt that the course objectives, scope and coverage were all highly relevant and hoped to deepen my knowledge and broaden my experience, as well as share ideas on productivity promotion with other participants from APO member countries. As a platform for learning about new ideas, tools, and techniques, the APO course was excellent.

Back home after successfully completing the course, I submitted a project proposal for enhancing productivity in the Bangladesh Blade Factory Limited, a manufacturer of stainless-steel razor blades, through the implementation of 'kaizen' (continuous improvement).

We successfully implemented the project in three stages from November 2018 through May 2019 with the result that the company has reduced all types of waste, increased production efficiency, boosted profitability and raised product quality.

**Ripan Miah** has worked at the National Productivity Organization, Bangladesh, since 2014 as a productivity practitioner, trainer, and consultant.



# Cambodia

National Productivity Centre of Cambodia (NPCC) | Established 2004



NPO MISSION AND KEY MESSAGES

## Demonstration companies set the standard for success

### The National Productivity Centre of Cambodia (NPCC)

aims to measure and improve productivity and encourage innovation in the country. By working in conjunction with the Cambodian government's existing, rectangular strategy, the NPCC hopes to build a knowledge-based economy Cambodia and improve the well-being of the people.



Meeting at the Ministry of Industry, Science, Technology & Innovation (MISTI)

#### BACKGROUND AND KEY TAKEAWAYS

##### Background

The NPCC selected three important enterprises to trial a host of APO demonstration projects.

##### Aims

The goal of the project was to overcome a range of common challenges.

##### Actions

All challenges were met and solved and representatives from the demo companies shared their findings with other SMEs in Cambodia.



## SUCCESS STORIES

# Leading Cambodian enterprises tackle legacy challenges with APO assistance



A range of seminars and workshops provided a valuable forum for industry experts and company representatives to share relevant knowledge on good management and quality standards.

**BETWEEN 2016 AND 2017**, three Cambodian enterprises benefited from APO demonstration projects. The companies included EUROTECH Import Export Co., Ltd, Leang Leng Enterprise, and Cam Paint Co., Ltd.

EUROTECH, a bottled water company, was selected to participate in several training schemes including Good Manufacturing Practices (GMP), the International Organization for Standardization on food security ISO 22000:2015 standard, and Advanced Food Safety Management Systems for SMEs.

In 2016, Leang Leng Enterprise, a fish sauce producer, was chosen as a candidate for the quality management program commonly known as ISO9001:2015, and, like EUROTECH, Advanced Food Safety Management Systems for SMEs.

Finally, Cam Paint Co., Ltd., a producer of water-based paint products also engaged in ISO9001:2015 in 2016 and is currently implementing the APO's Lean Manufacturing System & Innovation and Quality Control (IQCs) project with strong support from top-level management.

## A model for change

Before embarking on these APO projects, all the above companies had encountered challenges including untidy working environments, unmotivated staff members, resistance to change, inefficient operational process, frequent defective products, a poor understanding of how to operate machinery safely, and a lack of knowledge on how to maintain quality standards.

As part of the demonstration project process, the APO assigned an expert who worked alongside NPCC consultants to assist the companies involved. The challenges that motivated the NPCC to select the companies were solved through a process of intensive coaching and consultation.

After the project, the NPCC invited company representatives to share what they had learned on a public platform. They discussed the models they adopted to improve work efficiency, quality, and product safety, issues that affect many other SMEs in the country.

Challenges were solved through a process of intensive coaching and consultation

## APO PARTICIPANT VOICES

# APO PRODUCTIVITY TRAINING HAS WIDE-REACHING BENEFITS FOR CAMBODIAN SMES

I HAVE PARTICIPATED in several courses through the APO training program. The courses were conducted online and in-class on location in Singapore and Taiwan.

Through the training programs, I have improved my knowledge and skills and shared what I have learned with my teammates and colleagues.

Using APO tools and techniques, I have gained a deeper understanding of productivity enhancement. In particular, I have learned how to develop strategies that underpin the vision, mission, and philosophy of a company.

During my training, I learned about best practices from participants from other countries. These insights surrounded the process of building human resources, company strategy and developing operational procedures. They were delivered through presentations by resource speakers, during company site visits, and as the result of group discussions.

I applied the key learning points into my company and from the outset we were able to see improvements. I also shared my knowledge and experiences on performance

management with other participants through a training program organized by the NPCC in conjunction with the APO.

I have also shared my knowledge on SME business models, strategies, and cash flow management with other business owners in Cambodia. These outcomes are the result of an action plan launched on completion of my training programs.

**Duong Kimlang** is Head of SME at Phillip Bank and a member of Cambodia Women Entrepreneur Association. She has worked in the banking industry for over 15 years and held numerous positions during her career.





# Republic of China

China Productivity Center (CPC) | Established 1955



NPO MISSION AND KEY MESSAGES

## Industry 4.0: Transforming industry through smart manufacturing

**CPC's mission** is to act as a promoter for the transformation of industry value chains, be the hub of a developing Chinese economic network, and become a leading brand in knowledge management. The mission of the CPC is to be a new paradigm pioneer, navigator in knowledge management, and promoter of value speed.



Professor Chen-Fu Chien,  
ROC's Chief Expert, in discussion  
with national experts

### BACKGROUND AND KEY TAKEAWAYS

#### Background

In 2019, the APO designated the China Productivity Center (CPC) as the 'APO Center of Excellence on Smart Manufacturing' (COE on SM).

#### Aims

The Center has formed a smart manufacturing technical service team that is disseminating best practices through member countries.

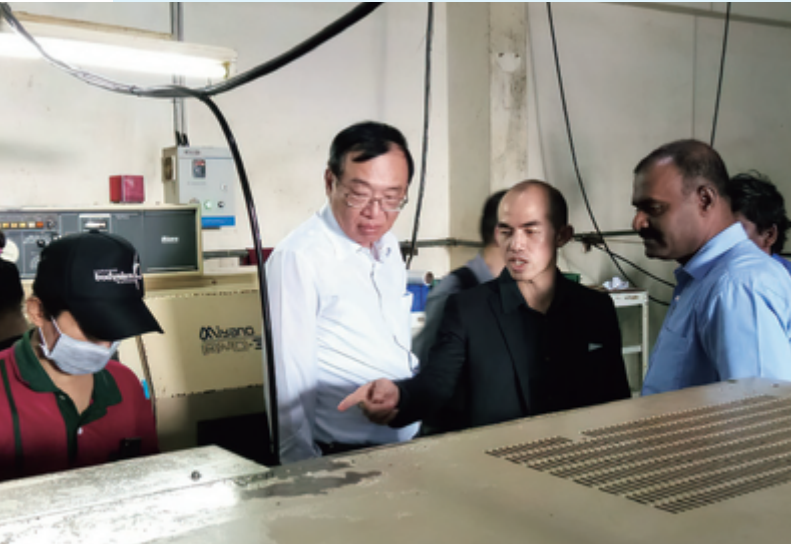
#### Actions

The Center has formed a smart manufacturing technical service team that is disseminating best practices through member countries.



## SUCCESS STORIES

# APO Center of Excellence on Smart Manufacturing



The technical service team from the APO COE on Smart Manufacturing

**INDUSTRY 4.0** refers to the automation of traditional manufacturing and industrial practices. It is being driven by rapid developments in automatic control, communications, information and other 'smart' technologies. With industry in the Republic of China (ROC) facing long-term labor shortages due to a declining birth rate, smart manufacturing is a key requirement for the ROC's industrial upgrading and transformation.

Smart technologies are being incorporated into the precision machinery that the ROC excels at and smart manufacturing is steadily being implemented through smart production lines. The eventual aim is to export whole plants and build a smart manufacturing industry ecosystem.

The ROC's 5+2 Innovative Industries Program lays the foundation for smart manufacturing built on the integration of smart machinery with the Internet of Things (IoT), helping to make the ROC the global epicenter of smart manufacturing development.

Smart manufacturing is a key requirement for Taiwan's industrial transformation

## Spreading the word in Thailand and Vietnam

In 2019, experts from smart manufacturing think-tanks teamed up with specialists from relevant equipment and systems suppliers through the APO Center of Excellence on Smart Manufacturing platform to form a smart manufacturing technical service team.

The team visited Thailand and Vietnam to hold a series of technical exchange and matching events and to spread the word on smart manufacturing at meetings with local enterprises and government departments, discussing smart manufacturing technologies, equipment, and services.

One such visit was to Thai Micromatics, a manufacturer of high-quality mechanical components. The team inspected the manufacturing plant and explored various possibilities for introducing smart manufacturing solutions. This meeting and others like it are laying the groundwork for enhanced productivity through the sharing of best practices.

Additionally, the Vietnam National Productivity Institute (VNPI) and Thailand's Thailand Productivity Institute (FTPI) are working closely with the CPC to introduce smart manufacturing training courses in the region. Seed instructors will be trained with the aim of accelerating the adoption of smart manufacturing industry in each member economy.

## APO PARTICIPANT VOICES

# APPLYING THE LESSONS OF GREEN PRODUCTIVITY METHODOLOGY

IN JUNE 2019, I joined the APO program 'Training of Trainers and Consultants in Green Productivity (GP)' with the aims of connecting with other international experts in the field and learning about how GP is being successfully applied in other countries.

The training brought me into contact with specialists in energy efficiency, green factory management, environmental policy, and international cooperation. Everyone shared their experiences and knowledge among the members of the sub-teams formed in the class. We learned how to effectively execute each step of the GP methodology, and on passing the final exam were awarded a GP specialist certification.

One fascinating part of the program was an onsite factory visit that included a discussion with the management team, which provided an opportunity to apply the lessons from the classroom.

The Green Productivity methodology learned through the APO program helps plan, analyze and generate GP approaches and then evaluate, prioritize, and implement them. The concepts we learned have improved the efficiency and effectiveness of my work and have led to better outcomes for the CGE.

*Huating Yen is an assistant research fellow at the Center for Green Economy (CGE) at the Chung-Hua Institute for Economic Research, a leading think-tank in the ROC.*







NPO MISSION AND KEY MESSAGES

# Supporting sustainable development with Green ICT policies

**The National Training and Productivity Center (NTPC)** is Fiji’s leading organization that provides in-service skills training across a wide range of industries, including specialized consultative services to help companies achieve their productivity goals. It also offers Technical & Vocational Education and Training (TVET) programs to assist Fiji’s trade sectors.



The team participants in the National Quality Convention.

BACKGROUND AND KEY TAKEAWAYS

**Background**  
In 2019, the NTPC began establishing policies for green and sustainable ICT.

**Aims**  
The Green ICT policies aim to reduce costs, increase efficiency, while contributing to a more sustainable Fiji.

**Actions**  
The NTPC continues to find opportunities to help other organizations realize the benefits of sustainable practices.

## SUCCESS STORIES

# Green Computing brings benefits beyond carbon footprint reduction



Winning the Gold award at FNU's Internal Quality Convention Competition 2019.

**THE CONCEPT OF GREEN COMPUTING** covers an array of approaches to use ICT (information and communications technology) resources more efficiently. It's a journey that can begin with small steps on the way to reducing the carbon footprint of an organization, industry or country.

In 2019, the NTPC's department of IT Training embarked on just such a journey. The first modest step was to introduce e-copies of

their training manuals—something that at first met with resistance from people long used to having everything provided on paper.

Next they designed a consultancy course in Green ICT, which helped their clients reduce the use of printed paper and recycle the paper that was still used. This naturally led to a systematic reconsideration of existing paper-based systems. Overcomplex, pedantic work processes were redesigned into leaner standard operating procedures, which promoted greener work methods, all of which have contributed to a more sustainable Fiji.

Organizations throughout the economy are now realizing the importance of establishing policies for green and sustainable ICT as they see the benefits of reduced costs and greater efficiency.

At the Fiji National University's (FNU) Internal Quality Convention Competition 2019, Team IT took the Gold award for their Green ICT policy, which was developed in line with Fiji's Sustainable Development Plan. The Green ICT policy has set a benchmark for other departments to follow as it has been shown to reduce costs, save natural resources, and reduce energy consumption—all of which helps reduce the FNU's carbon footprint. The team's participation in the National Quality Convention presented them with a unique opportunity to help other organizations realize the benefits of sustainable practices.

The promotion of greener work methods has contributed to a more sustainable Fiji.

## APO PARTICIPANT VOICES

### A CHANCE TO REFILL YOUR STRATEGY TANK!

I AM A FIRM BELIEVER in lifelong learning, and I'm grateful that the APO provides a platform to facilitate this. Participating in the Total Quality Management (TQM) and Business Excellence (BE) programs and being a part of the APO-sponsored Green Project has led to all kinds of positive outcomes. The programs have given me the opportunity to unlearn some outdated concepts and learn new ones, to connect

with highly experienced practitioners and develop my network, and to transfer what I've learned to others in my organization back home.

My association with the APO goes back to 2014, the year my team won the Gold Award in Fiji's National Competition. I think one of the most valuable things about participating in APO programs is the opportunity to interact and exchange ideas with the diverse set of people attending, giving you new insight into the factors that drive workplace productivity.

My advice to anyone wishing to join an APO activity is to approach it with passion. Not just because it's a great opportunity to network, make new friends, and experience other cultures, but because

you will come away with new ideas and understanding. Go with an open mind so you can 'refill your strategy tank', and then work to apply what you've learned to your own organization—your programs, business and policies.

**Ritesh Ronald Reddy** works in the area of strategic people leadership, development and motivation, and organizational productivity at Future Farms Pte Ltd, a premium poultry supplier to the Fijian market.





# India

National Productivity Council (NPC) | Established 1958



## NPO MISSION AND KEY MESSAGES

# Going GLEAN to shape a sustainable future

The National Productivity Council (NPC) is an autonomous, non-profit organization tasked with promoting a culture of productivity in India. The NPC's mission is to provide state of the art services that contribute to the sustainable, inclusive socio-economic development of the country by enhancing national productivity.



A workshop on GLEAN and booklet launch event organized by NPC India on 15 February, 2019.

## BACKGROUND AND KEY TAKEAWAYS

### Background

The NPC Team formulated GLEAN, an integrated approach to maximize productivity and environment sustainability.

### Aims

By combining both processes in a green initiative, the NPC hoped to further improve productivity and encourage environmentally sustainable practices.

### Actions

The five companies involved in the trial all experienced significantly beneficial outcomes.

## SUCCESS STORIES

# Integrated practices lead to a green outcome for Indian manufacturing



**Left:** An onsite visit by Hiroshi Tachikawa of APO's Technical Expert Services (TES) at one of Reva Industries' crane demo units in Faridabad.

**Right:** Interaction with the plant supervisor during a diagnostic survey conducted at Vibgyor Automotive Private Ltd, the demonstration company.

**MATERIAL FLOW COST ACCOUNTING (MFCA)** was first introduced in India as an APO demonstration project in 2012. The initiative led to significant improvements, notable monetary savings, and higher overall productivity in the companies involved.

The primary objective was to change mindsets

Lean manufacturing is a systematic approach recognized as a solution for optimizing production streams and removing unnecessary waste.

The NCP team, alongside Hiroshi Tachikawa, managing director of Propharm Ltd, decided to formulate

a new approach and integrate these tools to maximize productivity and improve environmental sustainability. The integrated approach was named Green Lean (GLEAN).

The GLEAN concept was adapted for implementation in five selected Indian micro-SMEs in the manufacturing sector. The participating companies were Modvak Engineering India Pvt. Ltd., United Cores Pvt. Ltd., Reva Industries Ltd., Sanatan Autoplast Pvt. Ltd., and Matrix Tools India. The project commenced in November 2016 and continued for 15 months.

## Education drives adoption

With production staff focused on outputs and finance teams concentrated on budgets, the primary objective was to change mindsets.

It took a lot of training to help teams understand the general concept of GLEAN and its applications in their operations. However, as a result of this persistence, almost all of the initial project objectives were met, including improvements in the companies' productivity, quality, environmental impact, energy efficiency, and safety.

One of the participating companies, Sanatan Autoplast Pvt. Ltd., a manufacturer of plastic injection molding components for the automotive industry, reported an increase in productivity of 8–10%, a 50% reduction in the rate of rejection, and savings amounting to USD35,935.

GLEAN implementation as a continuous improvement cycle has moved production processes in India closer to optimization, from increasing the economic effectiveness of production, to positively affecting the environment through energy savings, to creating a safer workplace.

## APO PARTICIPANT VOICES

# CHAMPIONING SUSTAINABLE AGRICULTURE IN INDIA'S REMOTE NORTHEAST

IN MAY 2017, I participated in the APO's Workshop on Successful Models of Integrated Farming in Dhaka, Bangladesh. The majority of farmers in the North Eastern Hill Region of India were already practicing integrated farming (IF) but productivity using existing IF systems (IFS) was stagnating.

The challenge was to boost productivity and cut input costs to improve profitability.

I hoped to learn about the latest agronomic and technological interventions so I could implement them at home.

I had the opportunity to interact, learn, and exchange ideas with other participants, and chalk-out strategies for potential solutions that addressed the present and future challenges of IFS.

If you're thinking of joining a similar APO activity, I would recommend it. Participants are expected to undertake follow-up actions after completion of the project, and this I have done.

On invitation from IFOAM—Organics International, I represented India and delivered a lecture at the 2018 International Conference on Nutrition Sensitive Agriculture in Mountain Areas. I also arranged a national conference on Natural Resource Management on Climate Smart Sustainable Agriculture, which included a full session on IFS, and, as Course Director, conducted a 21-day, IFS-focused training program sponsored by the Indian Council of Agriculture Research.

As well as delivering further related lectures, I have also published numerous articles and papers on the topic.

**Dr. Sanjay Swami** completed his doctorate in Soil Science at CCS Haryana Agricultural University, Hisar. He is currently a professor at the School of Natural Resource Management, College of Post Graduate Studies in Agricultural Sciences, Barapani Shillong, Meghalaya.





# Indonesia

NPO Indonesia | Established 1968



NPO MISSION AND KEY MESSAGES

## Indonesia celebrates long and fruitful relationship with APO

**The Directorate General** of Training and Productivity Development, Ministry of Manpower, is Indonesia's National Productivity Organization (NPO). Since it was established in 1968, NPO Indonesia has coordinated productivity improvements in the country through awareness campaigns, implementation of productivity tools, training, workshops, and consultancy.



A demonstration company project (DMP) in Sorong Regency to disseminate knowledge on solar energy and technologies.

### BACKGROUND AND KEY TAKEAWAYS

#### Background

Since it was established in 1968, Indonesia's NPO has maintained close ties with the APO.

#### Aims

Through collaboration with the APO, NPO Indonesia works to transform the culture of productivity in the country.

#### Actions

NPO Indonesia continues to champion productivity alongside the APO, most recently through a comprehensive off-grid solar power training project.

## SUCCESS STORIES

# A history of collaboration: breaking productivity barriers in Indonesia



Productivity award presented by Vice President of Indonesia and Minister of Manpower

**SINCE JOINING THE APO**, Indonesia has collaborated with the organization on various programs to promote productivity in Indonesia. NPO Indonesia's most recent collaboration is a program to support Green Productivity—an off-grid solar training project based at the Vocational Training Center in Serang and Klayli District, Papua, Indonesia.

The training program demonstrates how best to establish photovoltaic system (PV) systems and provides guidance on how to develop a training curriculum on solar energy, solar power technologies, and off-grid PV systems.

In another example, every year, NPO Indonesia representatives attend APO programs in other member countries. On their return, they apply their newly acquired knowledge within their respective organizations.

### An ongoing relationship

Today, NPO Indonesia faces challenges in measuring productivity in the industrial sector. To overcome them, it has launched a productivity information system called SIPRONI (Sistem Informasi Layanan Produktivitas Terkini).

The software application uses a range of indicators to display productivity information on a dashboard. Using this application, companies can measure productivity levels independently and give NPO Indonesia access to the data so it can better assist them to improve.

NPO Indonesia representatives attend APO programs in other member countries. On their return, they apply their newly acquired knowledge within their respective organizations.

## APO PARTICIPANT VOICES

### INDONESIAN SME CO-FOUNDER BENEFITS FROM VIRTUAL APO TRAINING COURSE

I ATTENDED SEVERAL NPO productivity seminars, both online and offline, before signing up for a virtual APO training course on Strategic Management. I have no formal business training and hoped the course would give me a deeper understanding of managerial practices—in particular, strategic planning for risk management and financial management.

The training program exceeded my expectations. Not only did we cover extensive strategic planning theories, but the speakers also gave us a practical and

easy-to-use business framework to work within. Since the training, I have conducted a SWOT analysis with my team to identify our position in the market and better understand our ultimate business goals.

What excited me most about the program was the opportunity to gain an insight into SMEs from other APO member countries through conversations with speakers and other participants. The program was highly interactive and positive, and by the end I found myself wishing there was more time to continue our discussions.

The training changed the way I think about my business. Before, I tended to make decisions based largely on emotion in the hope that they would have a positive effect. The training helped me understand that my approach needed improvement.

Today, we are making decisions based on data, and that's thanks to the business excellence framework. The pandemic is not yet over, but I am confident that we are heading in the right direction.

**Mariana Oktavia** is the co-founder of the Sankimo, an SME from Bandung, West Java. The Sankimo P Bag is a hygienic, odorless, absorbent sanitation product that's designed for use on the go. Mariana heads up the company's Marketing and Financial division.





# Islamic Republic of Iran

National Productivity Organization of IR Iran (NPO of IR Iran) | Established 1992



NPO MISSION AND KEY MESSAGES

## Fine-tuning knowledge management techniques to drive productivity growth

The National Productivity Organization of IR Iran (NPO of IR Iran) is responsible for planning, managing, monitoring, evaluating, and devising policies for productivity at a macroeconomic level. It enables executive bodies and significant economic enterprises in IR Iran to adhere to an established framework of productivity laws, guidelines and documentation.



Members attending the APO demonstration project for knowledge management.

BACKGROUND AND KEY TAKEAWAYS

Background

The NPO of IR Iran joined forces with the APO to improve knowledge management (KM) practices in the country.

Aims

The plan was to introduce KM initiatives to the 200 subsidiaries operating under the Iranian Ministry of Energy (MOE) umbrella.

Actions

The project realized a significant number of targets, and planning is underway for the next phase of the rollout.



## SUCCESS STORIES

# IR Iran's Ministry of Energy rolls out knowledge management initiatives



Over the course of the APO demonstration project in Iran, Mr. Ogiwara engaged participants in project discussions and workshops on knowledge management initiatives.

**IN 2016**, the NPO of IR Iran implemented an APO demonstration project titled Knowledge Management for Quality and Productivity Enhancement in the Electricity and Power Industry, IR Iran. Participating demonstration companies included the Niroo Research Institute (NRI) and the Tehran Regional Electricity Company (TREC).

The APO assigned renowned KM expert Mr. Naoki Ogiwara to help design and execute the project over four connected phases.

The ultimate objective of the project is to expand successful Knowledge Management initiatives across the entire Ministry of Energy ecosystem.

### Support from a leader in governance and management initiatives

To manage the dozens of new KM initiatives introduced, the MOE was required to administer executive rules and regulations, facilitate incentive programs, manage IT systems, and effectively collect and distribute information.

The ultimate objective of the project is to expand successful KM initiatives across the entire MOE ecosystem. The MOE's network constitutes 200 subsidiaries, including research and educational institutions and companies from the electricity, water and wastewater sectors.

To date, the MOE has recruited pilot teams to implement KM proposals, developed KM regulations, launched KM intranet programs, implemented expert location techniques, created a digital library to record the results of project reports, developed knowledge sharing activities, and more.

## APO PARTICIPANT VOICES

# INTRODUCING NEW PRODUCTIVITY TECHNIQUES IN IRAN'S HEALTH SECTOR

IN 2018, I was accepted into the APO's E-Learning Course on Customer Satisfaction Management for the Health Sector. The following year, I traveled to Indonesia to participate in a training-of-trainers course on Smart Service and Technology for the Health Sector.

With the advent of Industry 4.0, organizations must become familiar with the latest technologies and measures designed to improve performance and productivity. Organizations within the health sector are no exception and must address multiple challenges, including increased expectations and an aging population.

By attending both APO courses, I hoped to get better acquainted with the latest technology trends and smart services in the health sector. I found both courses incredibly valuable, and each of them has played an indispensable role in shaping my approach to my work.

On completion of the training courses, I put my newly acquired knowledge into action. I presented my findings to senior managers in a series of formal briefings and set up a training session for health sector stakeholders coordinated by the NPO of IR Iran.

Following this, I designed and ran four training sessions based on the introduction of smart technologies in the health sector for managers within my organization and industry experts.

As an academic research project, I also designed a model for establishing smart services in the country. Aiming to both improve productivity and develop a new approach to smart service integration, the model incorporated health experts' insights and is currently used in the field.

I would definitely advise others to use these valuable courses to improve their knowledge and skills in their specific fields.



**Sharareh Mirsaedi Farahani** is a senior expert in Performance Assessment and Quality Monitoring at the Iranian Social Security Organization's Medical Services Assessment and Excellence Department.

# Japan

Japan Productivity Center (JPC) | Established 1955

NPO MISSION AND KEY MESSAGES

## Japanese training bears fruit in productivity gains



The Japan Productivity Center (JPC) was established in 1955. It launched a nationwide productivity movement based on three guiding principles: expansion of employment, cooperation between labor and management, and fair distribution of the fruits of productivity. The JPC contributed greatly to the subsequent high economic growth Japan experienced.



A seminar on Material Flow Cost Accounting (MFCA) in India

### BACKGROUND AND KEY TAKEAWAYS

#### Background

The JPC has gained a wealth of valuable knowledge regarding productivity that it shares with other APO members.

#### Aims

To train colleagues in India in the latest Material Flow Cost Accounting (MFCA) methods.

#### Actions

The four pilot companies reduced material and operational costs by almost one-million USD.



## SUCCESS STORIES

# Japanese productivity insights lead to resource efficiency and cost optimization



A multi-country observational study mission hosted in Tokyo by the APO in collaboration with JPC and the Japanese Ministry of Economy, Trade and Industry (METI)

**SINCE 1962**, the JPC has provided multi-country APO programs for over 11,000 participants. And with backing from the Japanese Ministry of Economy, Trade and Industry (METI), it has dispatched more than 1,000 experts to provide productivity improvement support to numerous APO Member Economies.

The JPC has gained invaluable know-how and insights on how best to provide technical assistance for productivity improvement.

Through these experiences, the JPC has gained invaluable know-how and insights on how best to provide technical assistance for productivity enhancement. These efforts have paved the way for technical cooperation projects by the Japan International Cooperation Agency (JICA) in Singapore and Thailand with the aim of supporting capacity building of NPOs and fostering their national productivity movements.

### Ongoing success stories

Among the most recent success stories was a Member Country Support Program (MCSP) in India on Material Flow Cost Accounting (MFCA). The program was implemented by the National Productivity Council (NPC) in 2012.

This initiative was designed to deliver technical assistance to NPC consultants in Gujarat State, equipping them with an internationally standardized MFCA tool for environmental management. The Indian team then disseminated this management methodology to local companies to improve productivity and quality.

Four pilot companies achieved a significant reduction in both material and operational costs of around one million USD in total. On completion of the program, the NPC Gujarat branch disseminated the MFCA methodologies to other states in India, and many of these states now include MFCA training and consultation as part of their service.

## APO PARTICIPANT VOICES

# JAPAN EXPORTS INNOVATIVE MANAGEMENT QUALITY TECHNIQUES TO FELLOW APO MEMBERS



THE JAPAN Quality Award Council (JQAC) was established in June 1996 to recognize and support excellence in management performance. The council's activities are focused on the administration of the Japan Quality Award (JQA).

For over 20 years, the JQAC has shared its management quality concepts with participants from every APO member nation through APO initiatives including I-OSMs, BCBNs, and Multicountry Observational Study Missions.

In one example from 2005, the JQAC conducted a multi-country business excellence training course. The course provided participants from APO countries with the necessary methods to share the knowledge they had gained with companies at home.

The training comprised a lecture outlining Japan's efforts to improve management quality, detailed evaluation criteria, a self-assessor training program, and case studies of former JQA beneficiaries. The participants then devised ways to share what they had learnt in their own countries.

**Mr. Naoyuki Yanagimoto** is Director of the Japan Quality Award (JQA) Promotion Department. Similar activity programs are carried out in over 70 countries worldwide, including at least 17 countries in Asia. In Japan, over 1,200 members in 22 regions have participated in the program.



# Republic of Korea

Korea Productivity Center (KPC) | Established 1957



NPO MISSION AND KEY MESSAGES

## Multinational study mission a golden opportunity for Korean SME

The Korea Productivity Center (KPC) was established in 1957 to aid national economic development by improving national, corporate, and individual productivity. Since the end of the Korean War, the KPC has contributed to a significant increase in national competitiveness and has evolved in tandem with the Korean economy.



The first APO Board of Directors meeting held in the Republic of Korea.

### BACKGROUND AND KEY TAKEAWAYS

#### Background

Smart factory technology manufacturer Ullala Lab is one of Korea's most successful SMEs.

#### Aims

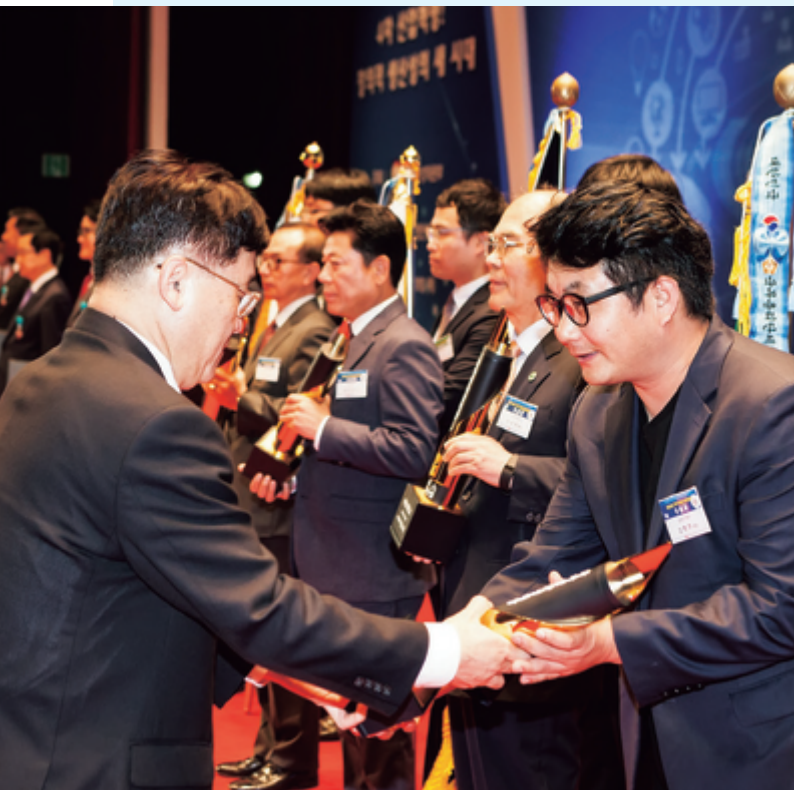
A delegation of 20 APO members visited the company on a study mission to learn more about its objectives and product range.

#### Actions

Following positive feedback from the group, the company is now confident about expanding its operations into Southeast Asia.



# APO recognizes standout Korean enterprise setting the standard for SMEs



At the National Productivity Award competition, ulalaLAB was awarded for their innovative smart factory platform.

**ULALALAB**, a leading SME in the Republic of Korea, was provided the opportunity to introduce its products to a study group as part of a dedicated APO program. The ultimate aim was to unearth sales prospects in Southeast Asia.

The APO study mission included delegates from 20 countries in the Asia-Pacific region. Participants visited ulalaLAB headquarters where staff introduced them to the company's smart factory platform, WimFactory, before conducting a live demonstration.

UlalaLAB's WimFactory platform for SME manufacturing companies has been widely praised. It can be constructed quickly and easily, uses industrial IoT technology, includes cloud connectivity, enables big data analysis, and supports innovative AI functions.

"Large-scale smart factory solutions and platforms are very expensive time consuming to construct, making it difficult for SMEs to take advantage of them," said ulalaLAB CEO Kang Hak-ju.

## Smart solutions for SMEs

Existing manufacturing facilities can quickly adopt WimFactory technology by connecting ulalaLAB's smart factory IoT device WICON to their existing equipment and attaching a measurement sensor.

Real-time data is collected through WICON, which can be monitored with a smartphone, PC, or other similar device. Any operating defects can be quickly identified through a facility malfunction notification service, helping to improve production efficiency.

Visiting participants showed great interest in ulalaLAB's products and, based on the feedback received, the ulalaLAB team hopes this successful visit will have a positive impact on the company's plans to enter the Southeast Asian market.

APO study missions aim to support SMEs—the basis of national competitiveness in many APO member countries—by enabling participants from diverse backgrounds to share information and experiences, develop strategies to raise SME innovation, and strengthen competitiveness. This collective approach will ultimately increase productivity across the Asia-Pacific region.

Visiting participants showed great interest in ulalaLAB's products and, based on the feedback received, the ulalaLAB team hopes this successful visit will have a positive impact on the company's plans to enter the Southeast Asian market.



With its beginnings as the first consulting firm for productivity and the top industrial educational institution in Korea, KPC continues to work with customers to build a better tomorrow.

# Lao PDR

Lao National Productivity Organization (LNPO) | Established 2002



## NPO MISSION AND KEY MESSAGES

# Demonstration companies showcase productivity gains in Lao PDR

Lao PDR joined the APO in 2002. Since then, the Lao National Productivity Organization (LNPO), alongside the Department of Small and Medium Enterprise Promotion (DOSMEP) and the Ministry of Industry and Commerce, has contributed greatly to advancing national productivity, quality and technology in the country's public and private sectors.



Opening ceremony of the Green Solar Demonstration Project

## BACKGROUND AND KEY TAKEAWAYS

### Background

Productivity experts from Lao PDR were quick to make use of the APO's wealth of training and knowledge-sharing resources.

### Aims

The LNPO concentrated its efforts on testing initiatives through multiple demonstration company projects.

### Actions

Many of the demonstration companies are now in receipt of internationally recognized quality certifications.



## Lao PDR attributes impressive productivity gains to APO membership



LNPO working group discuss how to promote productivity initiatives.

**SINCE JOINING THE APO IN 2002**, the LNPO has helped strengthen productivity, technology, and innovation efforts in Lao PDR, particularly through technical assistance. It has received a lot of support from the APO through seminars, training sessions, study tours, exchange programs for high-level delegates, consulting services, and knowledge-sharing activities.

As a result, the LNPO has been in a position to provide staff from multiple organizations the means to develop their own productivity practices and roll them out across the companies they represent. These efforts are especially evident in the achievements of Lao PDR's demonstration companies.

In one example, significant productivity gains were recorded in five demonstration companies that applied the 5S and Kaizen methods. Out of these five organizations, three have been awarded ISO 9001:2000 certification.

In 2011, four companies from Lao PDR's food and beverage sector completed a demonstration program in 5S and good manufacturing practices (GMP). One of the companies was eventually awarded GMP certification.

Later, in 2014, the LNPO established a model food safety management system using the Hazard Analysis Critical Control Point (HACCP) standard for food processing. The model was successfully trialed by three companies: the Leo Trio Coffee Factory, the Houng Heuang Sin Padek Factory, and the Hong Tae Meatball Factory.

### Not without challenges

Over the past 10 years in particular, the LNPO has achieved a great deal, but it's important not to overlook the challenges it's faced, both internally and externally.

Internal challenges included an unfavorable environment for the promotion of productivity initiatives due to a shortage of qualified staff, budget constraints, unfocussed promotion efforts, and a lack of enthusiasm to champion the efforts.

Externally, the LNPO encountered many obstacles when attempting to raise awareness and develop a wider understanding of productivity issues amongst people in both the public and private sectors. The LNPO struggled to promote productivity initiatives and was forced to navigate numerous coordination hurdles.

In the past, the implementation of productivity work was not carried out according to a specific plan that identified guidelines, methods, and sources of funding for promotion. One key issue was a lack of structure, which made it difficult to undertake a full range of activities related to productivity promotion, training, and consulting.

In addition, past activities lacked monitoring and previous projects weren't evaluated, making it difficult to determine the next phase of promotion or how best to continue with the initiative.

Currently, the LNPO and the APO are working together to develop a National Productivity Master Plan for Lao PDR. This comprehensive plan will help Lao PDR meet the challenges of the past to ensure more efficient and effective implementation of productivity-related work.

Over the past 10 years in particular, the LNPO has achieved a great deal, but it's important not to overlook the challenges it's faced, both internally and externally.



# Malaysia

Malaysia Productivity Corporation (MPC) | Established 1962



NPO MISSION AND KEY MESSAGES

## Promoting productivity goals through collaboration

Although **Malaysia** didn't join the APO until 1983, the Malaysia Productivity Corporation (MPC) was established in 1962 as a joint project between the United Nations Special Fund and the Federal Government of Malaysia. Its vision is to be Malaysia's leading productivity enhancement organization for global competitiveness and innovation.



The 2019 observational study mission to Korea by Malaysian representatives.

### BACKGROUND AND KEY TAKEAWAYS

#### Background

A Malaysian productivity team traveled to Korea on a fact-finding mission.

#### Aims

The purpose of the visit was to gather useful insights into how best to communicate productivity goals.

#### Actions

The visit led to a series of research papers and a commitment to overhauling how productivity is encouraged in schools.

## SUCCESS STORIES

# Malaysian productivity ambassadors inspired by Korean innovation



A range of meetings and workshops provided the Malaysian productivity ambassadors with insights and ideas regarding productivity improvement initiatives.

**IN LINE WITH** the Malaysia Productivity Blueprint (MPB), the Malaysian Government's latest productivity drive, a national-level campaign has been launched to instill a stronger culture of productivity across all segments of society.

A panel, led by Tan Sri Dzulkifli, Rector of The International Islamic University Malaysia, was established, and in 2019, an integrated

communication plan and strategy was unveiled. Its purpose was to share productivity improvement initiatives across all levels of industries in both the public and private sectors.

To support these objectives, Malaysian representatives visited Korea to observe how that country's productivity organization used effective communication strategies to boost its efforts. The aim of this benchmarking exercise was to gain insights and ideas on how government and communities could collaborate to promote effective and sustainable productivity goals.

## Innovative methods to enhance productivity

Experience and takeaways from the visit were shared through various means including seminars, group discussions, face-to-face meetings, the MPC's media communication channels, and a series of research studies focused on monitoring productivity levels and the resulting societal impact.

In Korea, children are introduced to work-related environments early in order to cultivate a culture of productivity at a young age. The Malaysian observers believed a similar approach could be incorporated into the country's education system to help develop an efficient labor market.

Malaysian representatives visit ROK to observe how the country's productivity organization used effective communication strategies to boost its efforts

## APO PARTICIPANT VOICES

# EXPERT TRAINING TUITION HAS FAR-REACHING IMPLICATIONS

I HAVE TAKEN PART in many APO programs over the years, but most recently I participated in the Training of Trainers in the GLOBALGAP Standard for Greater Market Access. The program took place in Lahore, Pakistan in 2016.

Since attending the course, I have become a very active trainer, working closely with the agriculture industry in Malaysia. My approach to project implementation has also changed dramatically. Today, it isn't based solely on individuals and financial constraints, but also on the commitment of senior



managers. With management fully on board, the chances of success are far higher.

APO courses bring together participants from diverse backgrounds

and from various countries with different standards of living and technologies. This has given me an opportunity to better appreciate and understand my own position and, indirectly, has made me more open to challenges.

The advice I would give to those thinking of participating in an APO activity is to be ready to learn and share what you know. I would also recommend choosing a course that will help you with your job so you can deliver a better service to your customers.

**Dr. Maktir Singh Gardir Singh** is a senior veterinary officer in the Livestock Commodity Development Division, part of the Department of Veterinary Services at the Ministry of Agriculture and Food Industries, Malaysia.





# Mongolia

Mongolian Productivity Organization (MPO) | Established 1992



NPO MISSION AND KEY MESSAGES

## Championing energy efficient practices across Mongolia

**The Mongolian Productivity Organization (MPO)** undertakes productivity improvement activities that support government policies and contribute to social development in the country. The MPO is committed to strengthening its capacity as a national institution by promoting the productivity movement in public sector organizations and through partnerships with private industry leaders.



Recognition for the 5S Project at the Mayor's office in Ulaanbaatar

### BACKGROUND AND KEY TAKEAWAYS

#### Background

Energy efficient technologies and techniques are helping Mongolian corporations reduce waste and save money.

#### Aims

Three of the country's largest companies took part in an energy efficiency demonstration project.

#### Actions

All three demonstration companies recorded a significant reduction in energy usage.

## SUCCESS STORIES

# Mongolian industrialists flip the switch on inefficient energy use



Together with the APO, the Mongolian Productivity Organization conducts a range of training workshops and initiatives, such as the Development of Productivity Practitioners (DPP) pictured above.

**THE MPO HAS BEEN PROMOTING** the productivity movement in Mongolia since 1992, with strong support from the Asian Productivity Organization (APO). During this time, they have undertaken five APO demonstration projects involving 15 companies. Most projects are ongoing, and hundreds of local entities have implemented similar schemes across the country. One of the critical areas of focus is Mongolia's energy sector.

Ulaanbaatar Electricity Distribution Network Joint Stock Company (UBEDN JSC) was one of three demonstration companies chosen to participate in a landmark energy efficiency project that concluded in March 2017. Just by improving the lighting systems at their offices, the company was able to decrease annual consumption by 2,160 kWh, equating to yearly savings of 4 million tugghriks (1,412 USD).

## Saving money and resources

The other two companies involved in the project were the TESO Corporation and APU Company. At the TESO Corporation's Icemark factory, engineers use steam to heat and sterilize food products. As part of the energy efficiency project, the company installed mechanisms that collect, distribute, and reuse water vapor. The process has enabled the TESO Corporation to reduce water consumption by 700 tons.

To address inefficient electricity consumption, APU Company trialed the use of inverter/compensation equipment. The savings were more substantial than the organization could have hoped for, totaling 24 million tugghriks (8,482 USD) annually. After replacing all industrial lighting with LED alternatives, the company also reduced the energy consumed by its lighting system by 54%.

The MPO believes the earth's resources are very much limited. For sustainability, green productivity, and the green economy, conservation efforts are crucial.

With the support and guidance of the APO, the MPO will continue to spread and apply sustainable and inclusive economic growth practices and business models by introducing Mongolian industries, agents, and organizations to new ideas and advanced technologies.

For sustainability, green productivity, and the green economy, conservation efforts are crucial

## APO PARTICIPANT VOICES

# TWO-WEEKS TO FINE-TUNE TRAINING AND TEAMWORK TECHNIQUES

IN 2019, I participated in a two-week Development of Productivity Practitioners (DPP) training course in the Philippines. I increased my understanding of vital productivity goals through discussions with other national productivity organizations, experts, and specialists from other APO member economies.

The training was split into three core modules. In the first, each participant shared their personal productivity project experiences. For the second part, we were divided into teams and invited to

participate in a series of one-day study tours of public and private organizations.

Finally, the third module consisted of a test based on the knowledge and skills we'd gained from the training, as well as a project presentation plan outlining our productivity objectives.

The field tours gave me a wealth of insights, and by the end of the training course, I had greatly improved my teamwork skills and learned several new teaching methods and techniques. The most important part of my job is to

conduct training, so I was pleased to learn new skills that helped me to organize training more effectively and efficiently.

Moreover, I acquired a great deal of awareness and experience in the field of knowledge management and process approach.

**Khishigdelger Myagmarsuren** is a productivity specialist at the Mongolian Productivity Organization. Since 2019, she has led implementation projects focused on crucial productivity improvement tools, change management initiatives, and organizational productivity improvement.





# Nepal

National Productivity and Economic Development Centre (NPEDC) | Established 1974

NPO MISSION AND KEY MESSAGES

## Spearheading energy efficiency and conservation training



**Nepal's National Productivity and Economic Development Centre (NPEDC)** is a focal point and think-tank for productivity improvement and economic development in the country. Leading Nepal's national productivity movement, the NPEDC provides research, consultancy, and training services focused on boosting productivity and economic success.



Onsite training energy efficiency and conservation was organized by the APO in Nepal.

### BACKGROUND AND KEY TAKEAWAYS

#### Background

In 2015, the NPEDC joined the Development of Demonstration Companies on Energy Efficiency and Conservation project, a scheme funded by the Japanese government.

#### Aims

The program would develop energy efficiency and conservation practices in Mongolia, Bangladesh, Pakistan, Sri Lanka, and Nepal.

#### Actions

Energy efficiency increased in the industries and enterprises involved and continues to do so.

## SUCCESS STORIES

# Energy efficiency education changes the tide on conservation efforts in Nepal



Facility tours and workshops in Nepal revealed energy efficiency methods that were implemented across major work sites.

**THE DEVELOPMENT** of Demonstration Companies on Energy Efficiency and Conservation project was launched in 2015 by Japan's Ministry of Economy, Trade, and Industry. Nepal joined the initiative alongside several other APO members including Bangladesh, Mongolia, Nepal, Pakistan, and Sri Lanka.

At the time, Nepal was load shedding to quell an excess in demand and high consumption of energy. So, a scheme that could ultimately lower energy consumption and increase efficiency was very suitable.

Later that year, the NPEDC attended a training course in Tokyo, Japan. The organization was joined on the course by representatives from four major Nepalese enterprises including Udayapur Cement Udyog Ltd (UCIL), Hetauda Cement Udyog Ltd (HCIL),

Himal Iron and Steel (P) Ltd, and Himal Oxygen (P) Ltd.

### Impressive results inspire support

As a result of the training and follow-up meetings, both UCIL and HCIL agreed to get on board. Extra training was provided to the core teams at UCIL and HCIL and on completion of the project, the results from both organizations signaled success. UCIL was able to save 19% of total energy consumption, while HCIL saved 22%.

These encouraging results attracted the attention of other industries and entrepreneurs in Nepal. As a result, these industries and individuals became aware of the importance of energy conservation and were more willing to invest in it.

UCIL was able to save 19% of total energy consumption, while HCIL saved 22%.

Industries introduced new technologies that would better facilitate energy conservation wherever possible, and updated existing technology that was not so easy to replace.

Top-level management executives showed more interest in providing support for energy conservation projects, realizing the need for proper infrastructure. Regarding education, informal training filtered down through teams, with experienced staff passing on their knowledge to colleagues.

The success of the project has led to a reduction in both the energy load and the expenses required to manage the alternate sources of energy required for day to day production.

## APO PARTICIPANT VOICES

### OVERSEAS SUCCESS STORIES ENCOURAGE ENERGY EFFICIENT INNOVATION IN NEPAL

In 2018, I participated in the Development of Demonstration Companies on Energy Efficiency and Conservation project. I hoped to learn more about different approaches to energy efficiency and the issues and challenges of creating environment-friendly living, in order to prepare a framework for an energy-efficient neighborhood.

I learned about policy gaps, energy auditing, eco-labeling, manuals developed by various countries, the applicability of Japanese approaches with contextual modification, implementation challenges, and actions to gradually achieve energy efficiency from an industry to a national level.

During my short stay in Japan, I had an opportunity to learn about the country's efforts and achievements in the energy sector. The various sessions delivered by Japanese experts were extremely insightful and exciting. Moreover, learning about the efforts and progress of other participants in their respective countries was eye-opening for me.

After the program in Japan, I had an opportunity to help the national team demonstrate Nepalese projects at a sharing conference and finalize its report. Also, I used energy efficiency techniques in the design of public health and education infrastructure that was rebuilt in the wake of the 2015 earthquake.

I would not only advise but strongly encourage my colleagues to submit applications for similar activities under the umbrella of APO. The wide range of projects the APO offers is unique and covers the essentials needed to promote the productivity of a nation.

**Arjun Koirala** is a highly experienced civil engineer and urban planning expert and the former General Secretary of the Regional and Urban Planners' Society of Nepal. Currently, Arjun is a senior consultant at the global engineering firm CDM Smith Inc.





# Pakistan

National Productivity Organization (NPO Pakistan) | Established 1961



NPO MISSION AND KEY MESSAGES

## Green initiatives for an energy-efficient future

### Pakistan's National Productivity Organization

(NPO Pakistan) is committed to nationwide growth with a focus on people-centred development and resource leveraging through corporate partnerships and alliances. Its goal is to boost the national capacity for productivity, quality, and competitiveness and, in turn, drive sustainable socioeconomic development in the country.



The demonstration project underway at Asian Food Industries.

#### BACKGROUND AND KEY TAKEAWAYS

##### Background

NPO Pakistan began its Development of Demonstration Companies on Energy Efficiency and Conservation project in July 2017.

##### Aims

Pakistan is facing significant energy efficiency issues. It was hoped the trial would result in the development of methods to address them.

##### Actions

All three demonstration companies recorded substantial savings in energy costs and usage.



# APO scheme encourages green economy in Pakistan

IN JULY 2017, NPO Pakistan implemented the Development of Demonstration Companies on Energy Efficiency and Conservation project in the hope of improving the country's green economy. Three demonstration companies were chosen to trial the scheme: Islamabad Serena Hotel, Asian Food Industries (AFI), and Pakistan Engineering Company (PECO).

NPO Pakistan sought to address the company's long-standing energy issues. These included a lack of technical knowledge and awareness of suitable energy auditing tools, non-existent industry benchmarks and relevant best practices, and high expenditure on energy consumption with low productivity outcomes.

Each demonstration company came from a different sector. The sectors themselves were selected for several reasons including a high potential for job creation, significant value

addition, and future export opportunities. Across the board, each company experienced positive results.



APO experts conducting a technical audit of the compressed air distribution system at Pakistan Engineering Company.

## Success in every sector

The Islamabad Serena Hotel recorded annual savings of PKR22.20 million (USD135,500) by improving power consumption monitoring, thermal insulation, boiler efficiency, machine maintenance schedules, and various other energy systems.

Better organizational support within departments also led to better yield and productivity and helped increase the transparency of energy use, its associated costs, and environmental aspects that could translate into future benefits too.

At AFI, new practices to control losses led to considerable savings in energy costs, a total of PKR5.04 million (USD30,800) annually. Prior to the scheme, AFI was facing challenges regarding wasteful energy practices that had become so prevalent, they were considered routine.

Finally, PECO recorded savings of PKR3.05 million (USD18,600) after initiating best practices regarding the operation of its compressed air distribution system and welding machine, and improving its power factor and lighting system.

The lessons learned by introducing this initiative could support Pakistan's efforts in achieving the UN's Sustainable Development Goals, Clean Green Pakistan (an initiative championed by the Pakistan Prime Minister), and other global environmental commitments.

Across the board, each company experienced positive results

## APO PARTICIPANT VOICES

### THREE-YEAR PLAN FOR PAKISTAN'S TECHNOLOGY-FOCUSED TRANSFORMATION

IN NOVEMBER 2018, while CEO of the Technology Upgradation and Skill Development Company (TUSDEC), I participated in the APO workshop Science, Technology, and Innovation Policies (STIP) and Productivity Enhancement in Hanoi, Vietnam.

The workshop's objectives focused on the scientific application of knowledge and technology upgrading. The most inspirational program was delivered by the Korea Institute of Science and Technology

(KIST), whose approach to shaping South Korea through the introduction of innovative national research and development programs was impressive.

After returning to Pakistan, my team developed a proposal called the National Strategic Programme for Acquisition of Industrial Technology (NSPAIT) based on KIST initiatives and other takeaways from the workshop. TUSDEC conducted a detailed analysis of global best practices—particularly the Korean Technology Acquisition Model—to bring a systematic approach to developing Pakistan's technological capabilities as a knowledge-based economy.

In April 2019, TUSDEC unveiled the NSPAIT proposal, and it was later presented to the Central Development Working Party (CDWP), Pakistan's highest authority on development projects. The CDWP agreed, in principle, to the proposals and authorized the launch of NSPAIT for critically

important industrial sectors.

Based on the recommendations, TUSDEC prioritized key sectors, including textiles, engineering and technology, and construction.

We are optimistic that the implementation of this project will bring about technological advancement in the country as well as create jobs and boost productivity and exports.

**Muhammad Alamgir Chaudhry** is a mechanical engineer currently working as CEO of NPO Pakistan. Prior to joining NPO Pakistan he served as CEO of the Technology Upgradation and Skill Development Company (TUSDEC).



# Philippines

Development Academy of the Philippines (DAP) | Established 1973



NPO MISSION AND KEY MESSAGES

## Promoting productivity in the public sector

**Established in 1973**, the Development Academy of the Philippines (DAP) addresses the need for productivity and quality improvement by introducing productivity specialists to organizations across multiple sectors. This capability-building initiative has spanned more than 25 years and included many program partnerships with the APO and its member countries.



The 1st GBPC in 2015 coincided with the APO's declaration of DAP as the Center of Excellence (COE) on Public Sector Productivity.

### BACKGROUND AND KEY TAKEAWAYS

#### Background

Since 1997, the DAP has championed public sector participation in the Philippine Quality Award (PQA).

#### Aims

One of the top priorities of the DAP was to develop best practices in the public sector.

#### Actions

The Government Best Practice Recognition (GBPR) program was launched as a platform for sharing best practices with public sector agencies.



## SUCCESS STORIES

# DAP drives business excellence in the Philippines



The DAP Project Team (top photo) has been instrumental in coordinating the GBPR initiative. Through the years it has featured best practices of public sector agencies including a range of speakers, while in the very first run of the Government Best Practice Competition (GBPC), the former DAP Chairman, Dr. Cayetano Paderanga (bottom right photo), served as one of the judges.

**THE DAP HAS SERVED** as the award administrator for the public sector arm of the Philippine Quality Award (PQA) since 1997. It's always been a priority of the DAP to enhance its business excellence (BE) program to better promote productivity and extend the reach and depth of the BE framework in the public sector.

Dr. Robin S. Mann, lead author of the APO BE Package for SMEs, Understanding Business Excellence, was enlisted as the DAP's technical expert on business excellence and best practice benchmarking.

Dr. Mann's technical intervention has helped the DAP enhance its BE program and guided the organization in spearheading the launch and implementation of its Government Best Practice Recognition (GBPR) and Government Excellence Class (GEC) initiatives. The aim of the program is to promote, showcase, and share knowledge on best practices with public sector agencies in the Philippines.

Public sector organizations are invited to submit best practice entries. These entries are then screened and assessed at two tiers. First, by the DAP screening committee, and secondly as a presentation to a panel of judges. A ceremony is held to formally recognize the winning entries.

Since its inception in 2015, the GBPR has generated more than three hundred best practice points in the public sector. While the GBPR has also served as a vessel for knowledge sharing, the GEC Organizational Self-Assessment has paved the way for better realization of public sector agencies on the importance of organizational self-assessment using the PQA Framework for Performance Excellence.

It's always been a priority of the DAP to enhance its business excellence (BE) program to better promote productivity.



Dr. Robin S. Mann presenting during the 1st Government Best Practice Competition (GBPC), now GBPR.

## APO PARTICIPANT VOICES

### BUILDING FARMS OF THE FUTURE

IN NOVEMBER 2019, I attended an APO workshop in Bangkok, Thailand on Smart Farming Models. During the workshop, participants learned about the urgent need to transform current agricultural systems to promote sustainable production.

Many APO member countries—including the Philippines—have faced significant challenges in their attempts to increase yields, improve labor efficiency and animal welfare, and adapt quality control measures. Through the transformation strategies outlined in

the workshop, countries should be able to develop more resource-efficient, productive, climate-resilient, and sustainable agricultural practices with an emphasis on digital transformation.

As a participant, I discovered a great deal about Smart Farming strategies and gained a broad knowledge of the related technologies. This enabled me to quantify the preparedness of the Philippines based on the criteria used by the APO and compare this with other member countries. I was heartened to learn that the Philippines is on a par with many other Asia-Pacific nations.

I gained a new perspective on farming technology in the Philippines, and I was encouraged to think my approach to it

differently. The technical parameters that the APO introduced may also be adopted to assess the readiness of our country in terms of infrastructure facilities and digital resources. Smart farming can greatly aid the progress of agriculture and help with solutions to future food security, but to ensure successful implementation, multiple parties and agencies must be willing to collaborate.

**Rodrigo C. Muñoz, Jr.** is a professor at Bataan Peninsula State University (BPSU). He is an Electronics and Communications Engineering graduate and holds a Master's degree in Electronics Engineering at PaiChai University, South Korea.





# Singapore

Singapore Productivity Centre (SGPC) | Established 2013

NPO MISSION AND KEY MESSAGES

## Singapore hosts the APO's pilot Centre of Excellence for Business Excellence



**Singapore** became a member of the APO in 1969. Singapore's pursuit of productivity began in the 1960s when unemployment rates were high. The industrialization process focused on labor-driven economic activities to create jobs, and by the 1990s, Singapore's productivity had skyrocketed. Throughout its 50-year affiliation with the APO, Singapore has benefitted from its training programs, resources, and expertise.

From 1 April 2019, Singapore appointed the Singapore Productivity Centre (SGPC) as the National Productivity Organization, working with the APO to continue to raise Singapore's competitiveness to greater heights through productivity, innovation, and internationalization.



Caption (left page): An APO COE Workshop to develop a Business Excellence Consultant Manual in 2011

### BACKGROUND AND KEY TAKEAWAYS

#### Background

In 2009, SPRING Singapore was selected to host the APO's pilot Centre of Excellence for Business Excellence.

#### Aims

The primary goal of the initiative was to help other APO member nations with their business excellence efforts.

#### Actions

More than 300 participants from 15 member countries attended 14 project workshops.



## SUCCESS STORIES

# Singaporean business achievements inspire success in other APO member economies



In a panel discussion at the 2009 Business Excellence Global Conference, business leaders shared thoughts about how leveraging on business excellence frameworks have helped organizations succeed. (Left to right: Chad Kymal, Chairman, Omnex Inc, USA, Lars Aagaard, Group Executive Vice President, Grundfos Management A/S, Denmark, Thom Schamberger, Executive Director, The Foundation for the Malcolm Baldrige National Quality Award, USA and NK Sharan, General Manager, Tata Quality Management Systems, Tata Group, India)

IN 2009, SPRING (Standards, Productivity and Innovation Board) Singapore—now known as Enterprise Singapore—facilitated the APO's pilot Centre of Excellence for Business Excellence (COE-BE).

The aim of the project was to help member economies to strengthen their BE capabilities.

The COE-BE has two specific roles. The first is to provide participating APO member economies and their organizations with a greater understanding of BE through international collaboration, best practice sharing, and recognition. The second is to assist APO member economies with

developing and strengthening their BE procedures.

To achieve these goals, the SPRING has undertaken research projects, developed learning platforms, curated expert training and development initiatives, shared practices, and deployed experts from Singapore to support member economies in developing BE capabilities, frameworks, and quality award models.

### Local resources for national outcomes

For any national BE initiatives to be successful, the availability of local experts, including program administrators, assessors, and consultants, is a critical requirement. That's why one of the core aims of the COE-BE has been to build the competence of BE experts through various training and development programs.

Since 2009, COE-BE has organized and presented 14 workshops attended by 300 participants from 15 member countries. Each workshop was facilitated by experts and practitioners from Singapore, or invitees from other excellence programs, such as

Malcolm Baldrige, EFQM, and the Australian Organisational Excellence Foundation (AOEF)

In addition to the annual workshops, COE-BE has supported member countries in their BE efforts by deploying experts.

These programs have helped participating member economies to strengthen their BE capabilities across the board. In one notable example, experts were sent to Malaysia, the Philippines, and Vietnam to share their know-how with national quality award administrators and participate in their conferences as speakers.

## APO PARTICIPANT VOICES

# PUTTING BUSINESS EXCELLENCE PROCEDURES INTO PRACTICE

IN MARCH 2019, I attended the APO Developmental Workshop for Practitioners of Business Excellence (BE), a BE initiative hosted by the Singapore government's enterprise development agency, Enterprise Singapore.

I hoped to gain insights into how best to integrate and implement national BE frameworks, expand networking efforts, and develop BE ecosystems in the Asia-Pacific region.

The Business Excellence Award Winners Sharing Conference, in particular, was a very effective platform for delegates from APAC countries to learn, share, and collaborate.

I was excited to share my perspectives on BE implementation in Indonesia, enjoyed hearing other opinions regarding my country's implementation efforts, and receiving constructive feedback.

It was fascinating to hear from BE experts about their methods, and the opportunity I was given to grow my network was invaluable. I would encourage anyone to participate in an APO program.

My advice would be to keep an open mind, share your experiences, and maximize the time you spend with practitioners and experts during conferences and benchmarking. Since the workshop, I have shared my BE development journey through ANTAM's knowledge management platform and applied new insights to my workflow process using the KPKU-BUMN (Kriteria Penilaian Kinerja Unggul - Kementerian Badan Usaha Milik Negara) framework.

**Dialah Hokosuja Hutabalian** is a Senior Specialist in Organization Effectiveness at PT Aneka Tambang Tbk (ANTAM), Head of Communications and Public Relations at Forum Ekselen BUMN (FEB), and a graduate of the University of Virginia Darden School of Business.



For BE initiatives to be successful, the availability of local experts is a critical requirement



## NPO MISSION AND KEY MESSAGES

# Pioneering Knowledge Management project transforms rural community in Sri Lanka

**The National Productivity Secretariat (NPS)** has been championing productivity in Sri Lanka since 1966. With a staff of 685 spread throughout the country, the NPS provides training and consultancy programs that aim to enhance productivity in Sri Lanka's public, education, manufacturing, services, and community sectors.



Community knowledge was shared via group discussions in this community development project.

## BACKGROUND AND KEY TAKEAWAYS

### Background

Following a successful demonstration project, the NPS embarked on an ambitious initiative in a remote rural community.

### Aims

The project aimed to help the community in Elahera tackle multiple, persistent socio-economic issues.

### Actions

The NPS increased productivity in the community and alleviated several fundamental problems.



# Isolated group in Sri Lanka's Dry Zone benefits from APO Knowledge Management model

IN 2014, the NPS embarked on the Maternal and Child Mortality Reduction Project, a demonstration project supported by the APO. The community-focused initiative was the first project in Sri Lanka to be based on the APO's Knowledge Management (KM) model.

Since the successful implementation of the first demonstration project, the NPS has launched 54 community-based KM projects across the country. Among these endeavors was the Elahera Savilio project.

The Elahera area in Polonnaruwa District has significant historical value in the North Central Province of Sri Lanka. Situated at an altitude of 100–900 feet above sea level,

Elahera is part of Sri Lanka's Dry Zone.

## Ongoing socio-economic problems

The people of Elahera, whose livelihood predominantly revolves around agriculture, are a relatively isolated ethnic group. Rice is the principal crop in the area, which is harvested twice a year. Prior to the intervention of the NPS, rice cultivation was the only way most community members could earn a wage, and the



NPS members conducted regular field visits to find practical solutions to community problems.

income generated by the two annual harvests had to sustain them year-round.

This was often difficult, and as a result, debt had become a major problem, alongside alcoholism among male members of the community. As a result, the community's female population were suffering great hardships. To compound matters further, human-elephant conflict was common, a lack of interest in education was an accepted problem, and kidney disease was widespread.

Within the community, motivation to identify common goals and potential improvements was low. In response, the NPS worked with community members to establish objectives and develop strategies to achieve these objectives.

## Increased productivity across the community

This process narrowed the existing knowledge gap and provided an opportunity to use previously unused community knowledge to achieve results. The primary focus was on community empowerment and the practical implementation of selected knowledge management tools and techniques.

Problems were identified through regular field visits and later discussed and monitored by individual committees. Practical solutions were provided and approaches to new markets identified.

As a result, this isolated rural community is now far more productive. Regular income generation, self-sufficiency, and saving for the future has flourished.

Product diversification and access to new markets through quality products have so far met economic expectations, while the community as a whole has grown much stronger.

The KM framework introduced by the APO was a major contributor to the overall success of this project and we would like to thank the APO staff involved for their support.

This isolated rural community is now far more productive



The Elahera Savilio project helped uplift the living standards of the rural villagers.

# Thailand

Thailand Productivity Institute (FTPI) | Established 1994



NPO MISSION AND KEY MESSAGES

## APO lean-principle training boosts productivity efforts in Thailand

**Under the supervision** of Thailand's Ministry of Industry, the Thailand Productivity Institute (FTPI) is focused on increasing the competitiveness of Thailand's industry and service sectors on the global stage. The FTPI strives to be a leading institution in organizational management, dedicated to enhancing and sustaining Thailand's productivity.



Attendees of Digital Lean for Industry 4.0

### BACKGROUND AND KEY TAKEAWAYS

#### Background

The FTPI used the APO's Technical Expert Service (TES) to reimagine the future of productivity in Thailand.

#### Aims

To prepare Thailand's industry and service sectors for Industry 4.0, the fourth industrial revolution.

#### Actions

More than 200 businesses and 600 individuals participated in related projects.



## SUCCESS STORIES

# Thailand making strides towards Industry 4.0 with an emphasis on lean principles



Digital Lean for Industry 4.0 was just one of the training and capability development programs being rolled out in the industrial and service sectors.

**THE FOURTH INDUSTRIAL REVOLUTION** will see the digital and physical worlds collide when the Internet of Things meets manufacturing. Moreover, lean principles are likely to become more important as they support higher productivity with less waste.

The FTPI believes that lean principles, combined with digital technology and Industry 4.0 concepts, are key to boosting productivity and enhancing Thailand's competitiveness. The organization aims to optimize the capability of its consultants, ensuring they possess the knowledge to guide and support entrepreneurs in the manufacturing and service sectors.

## Lean principles take center stage

The APO has championed the importance of enhancing productivity in the Industry 4.0 era through lean principles, and its Technical Expert Service (TES) has supported the FTPI's efforts in this space.

"Since joining the project, we have shared our knowledge through FTPI training and capability development programs in the industry and service sectors," said Ms. Varin Jittayanuruk, Director of the FTPI's Capability Development Division.

In all, more than 200 businesses and 600 individuals participated in the projects spearheaded by Thailand's Ministry of Industry. With efficiency and effectiveness improved, these companies could reduce the time and cost of their processes, saving a total of more than 57m Baht (1.9m USD), while sales could increase by 14m Baht (500,000 USD) by the end of the projects.

The fourth industrial revolution will see the digital and physical worlds collide when the Internet of Things meets manufacturing.



## APO PARTICIPANT VOICES

# MATERIAL FLOW COST ACCOUNTING SET TO TRANSFORM PRODUCTIVITY PRACTICES

I WAS FIRST INVOLVED with the APO as a participant, appointed by the FTPI, in a workshop on Material Flow Cost Accounting (MCFA), held in Tokyo in 2011. During the sessions, participants received considerable theoretical and practical knowledge from APO experts.

It was a great experience meeting people from other member countries as an APO participant. Engaging in discussions with participants from different backgrounds helped broaden my views, both culturally and socially.

Since learning about MFCA concepts and methodologies, I have done further

research into how best to apply these processes to productivity improvement. In response to this research, I conducted my first public workshop on MFCA in Bangkok in July 2012, in collaboration with the FTPI.

Following further workshops in Thailand, I was appointed by the APO as an expert for the MCFA demonstration project in 2018 for the leather and footwear sectors in Bangladesh. Most recently, I have extended this MFCA initiative into the country's food sector.

I believe APO programs are an effective and practical way to manage sustainable development. It proactively enhances



economic and social development in member countries.

**Wichai Chattinnawat, Ph.D.** is an Associate Professor of Industrial Engineering at Chiang Mai University in Thailand. He holds a Ph.D. and M.S. in Industrial Engineering, and an M.S. in Statistics from Oregon State University.

# Turkey

Ministry of Industry and Technology | Joined APO 2020



NPO MISSION AND KEY MESSAGES

## Turkey becomes APO member through exceptional productivity advances

**The Ministry of Industry and Technology** absorbed Turkey's existing National Productivity Organization in 2011. Since then, it has spearheaded the country's productivity initiatives and worked tirelessly to increase and coordinate national productivity efforts. Its vision is to provide Turkey with a strong industry supported by the latest technologies.



At the 2018 Productivity Project Awards, organized by Turkey's Ministry of Industry and Technology

### BACKGROUND AND KEY TAKEAWAYS

#### Background

For close to a decade, Turkey has been actively participating as an observer in APO meetings.

#### Aims

In 2018, the Turkish government made the decision to become an APO member and began internal preparation.

#### Actions

In March 2020, Turkey was officially announced as an APO member and its Ministry of Industry and Technology adopted the role of NPO.



## SUCCESS STORIES

# APO membership marks a significant step forward in Turkey's productivity journey



In 2019, the APO Secretariat made its first visit to Turkey.

**TURKEY'S PRODUCTIVITY JOURNEY** dates back to the 1940s. By 1954, an inter-ministerial body, the Inter-Ministerial Productivity Committee, had been formed, kickstarting the official productivity movement in the country. This movement accelerated until 1965 when the National Productivity Centre was established, and productivity efforts have continued ever since.

The National Productivity Centre contributed in numerous ways to Turkey's productivity efforts. It conducted research, provided consultancy services, carried out productivity measurements, developed productivity indicators, and undertook practical training and awareness-raising activities.

In 2011, the National Productivity Centre became part of the Ministry of Industry and Technology and was renamed, first to the Directorate for Productivity and then to the Directorate of Strategic Research and Productivity. The Ministry of Industry and Technology's mission is to create a high-tech, competitive, sustainable, domestic, and national industrial structure.

Turkey is a member of the European Association of Productivity Centres (EANPC), a member of the World Confederation of Productivity Science (WCPS), and a former observing member of the APO. In March 2020, Turkey became a full member of

the APO after almost 10 years of proceedings and preparations. In June 2020, the Turkish representatives attended the APO's General Assembly.

## Outstanding achievements

Turkey's APO membership is facilitated by the Directorate for Strategic Research and Productivity. The office is in Ankara, at the Ministry of Industry and Technology, and carries out outreach with other ministries in Turkey and related organizations. Primary contacts at each establishment have been selected to disseminate news related to the activities of the APO.

Not only does the Ministry of Industry and Technology carry out key activities independently, but it is also affiliated with a group of other important institutions in Turkey. These include the Turkish Patent and Trademark Office, the Turkish Academy of Sciences, the Scientific and Technological Research Council of Turkey (TUBİTAK), the Turkish Standards Institution, and the Small and Medium Enterprises Development Organization (KOSGEB).

To date, the Ministry has established SME Competence and Digital Transformation Centers (Applied Centers for Lean Manufacturing and Industry 4.0 or Model Factories) in 8 provinces.

As a fledgling member of the APO, Turkey attended a series of training programs and has plans to undertake projects open to all member states during 2021 and 2022. Today, Turkey is applying to be an accredited certification body for certifying productivity experts on behalf of the APO.



**Top:** Attendees at the Workshop on Finance and Operating Models for Service Providers on Cleaner Production and Resource Efficiency in Turkey.

**Bottom:** Recognizing the efficiency efforts of Turkey businesses at the 2019 Productivity Project Awards.

In March 2020, Turkey became a full member of the APO after almost 10 years of proceedings and preparations.

# Vietnam

Vietnam National Productivity Institute (VNPI) | Established 1997



## NPO MISSION AND KEY MESSAGES

# LED manufacturer is a leading light in Vietnam's productivity efforts

Since 1997, the Vietnam National Productivity Institute (VNPI), formerly the Vietnam Productivity Centre (VPC), has implemented a variety of productivity initiatives. These include proposing policies and solutions for labor productivity enhancement, carrying out training and human resources development programs, and providing consultancy services for productivity improvement and business innovation.



Participants at the 61st Workshop Meeting of Heads of NPOs.

## BACKGROUND AND KEY TAKEAWAYS

### Background

Rang Dong Company is Vietnam's leading lighting manufacturer.

### Aims

The company received support from the VNPI to boost its productivity efforts and, in turn, increase profits.

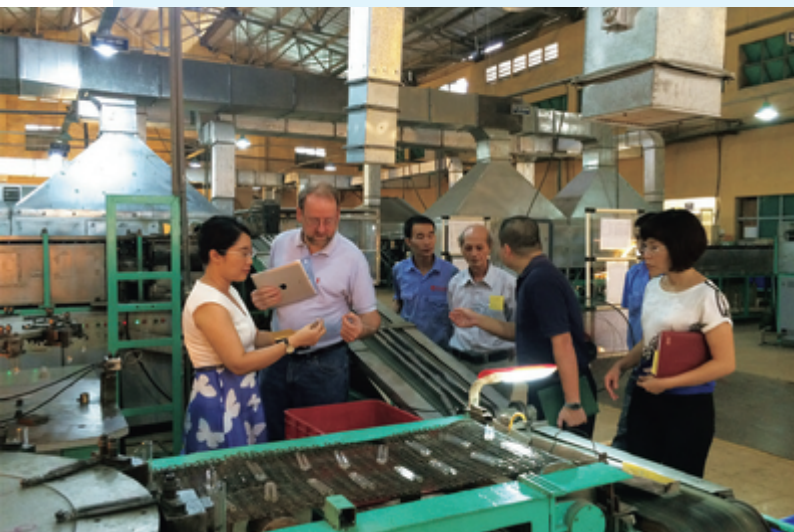
### Actions

As a result of the project, Rang Dong Company is predicted to double the productivity of its workforce.



## SUCCESS STORIES

# Lighting manufacturer Rang Dong shines following Vietnamese productivity drive



APO expert Mark Warren helping to identify manufacturing productivity issues on a factory tour in Vietnam.

**FOR 30 CONSECUTIVE YEARS**, lighting manufacturer Rang Dong Company has achieved remarkable growth, rising to become the leading Vietnamese manufacturer and distributor of lighting products. With the advent of Industry 4.0, finding new opportunities and solutions to improve production and business capacity has become one of the company's top priorities.

Over the past 20 years, Rang Dong Company has implemented various quality management systems and multiple innovation methods, including 5S and Six Sigma, to optimize production efficiency and lay the foundation for future innovation.

Recently, the company also participated in the Overall Productivity Model project implemented by the VNPI with support from the

Vietnamese Ministry of Industry and Trade. Since then, many new improvement methods have been applied at the company including line balance, waste reduction, production modeling, and operation optimization.

### A step-by-step process

Rang Dong Company trialed initiatives with test groups on specific production lines instead of attempting a company-wide

roll out. Eventually, every line will include staff members that are knowledgeable about the new techniques, can point out any shortcomings in the production process and, invite others to contribute ideas to solve these problems.

The VPNI's consultancy team, led by Ms. Vu Hong Dan, has played a major role in the success of the Rang Dong Company and, by 2025, the manufacturer's LED product sales are projected to increase three-fold, while labor productivity is forecast to double.

## APO PARTICIPANT VOICES

# VIETNAMESE RESEARCHER TEAMS UP WITH INTERNATIONAL COLLABORATORS AFTER APO WORKSHOP

DESPITE HAVING SOME EXPERIENCE in climate-smart land use, irrigation practices, and hydrological modelling, it wasn't sufficient experience to warrant a position as a professional lecturer or researcher in these fields. To achieve these goals, I needed to up my skills and broaden my knowledge.

That's why I was pleased to be selected to participate in the APO Workshop on Innovative Water Resource Management held in Tehran, Iran in 2017.

The aim of the workshop was to share information on smart technologies, practices, and farming systems for the efficient and effective use of agricultural water resources. It also promoted farmer-friendly water resource management techniques to enhance sustainable water productivity and encourage smart agriculture applications.

The workshop culminated in an opportunity for participants to formulate strategic action plans to promote such technologies, practices, and systems in their home countries.

One of my objectives when participating in the workshop was to help improve Vietnam's research capacity by establishing relationships with both the APO and other Asia-based researchers. I wanted to find opportunities to conduct collaborative research projects in Vietnam and publish these findings jointly in international journals.

As I had hoped, the workshop provided excellent opportunities for knowledge sharing, networking and exploring new collaborations and prospects in different sectors. Thanks to the training program, I am now better qualified to carry out future research projects and find relevant solutions to the practical issues facing farmers and other people living in rural Vietnam.

*Ngo Thanh Son is a lecturer at the Vietnam National University of Agriculture. He teaches a range of postgraduate and undergraduate courses in the university's Faculty of Land Management.*



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# Accolades & Tributes



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## An Acknowledged Authority on Green Productivity

It is my great pleasure to congratulate the APO on its 60th anniversary and Diamond Jubilee—all the staff of the APO secretariat led by my old friend, SG Dr. AKP Mochtan. I would like to take this opportunity to briefly highlight some of the major events that took place while I held the post of SG.

When we first started to promote the productivity movement, we used the 5S's approach. Around 1994, however, the focus shifted as Green Productivity (GP) gradually became dominant. In 2002, the APO participated in the World Summit on Sustainable Development in Johannesburg and organized three GP side events. It was the first time the APO attended with a formal qualification at a UN conference, and as a result, the APO was acknowledged in the international community.

I wish the APO and its staff continued success.

**TAKASHI TAJIMA**

APO Secretary-General (1998–2004)



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## Challenges of Pandemic will Make Organization Stronger

Let me congratulate you on the occasion of the 60th anniversary of the APO.

I served as Secretary-General of the APO for six years from 2004–2010. Managing an international organization and orchestrating its activities were by no means an easy task for me but I managed thanks to the cooperation of my colleagues at the Secretariat and friends at the NPOs.

The world currently finds itself confronted by the COVID-19 pandemic. For many international organizations, both global and regional, this is the first time they have faced the kinds of difficulties brought about by the pandemic. But I am sure that with ingenuity and the inherent passion for excellence the APO possesses, it will weather this period and pave the way for an even more productive 60 years to come.

**SHIGEO TAKENAKA**

APO Secretary-General (2004–2010)





## Remembering a Time of Transformation

Congratulations on the 60th anniversary of the APO!

I look back at my days as Secretary General (2010–2013) and realize it was a time of transformation.

The year 2012 was a defining one in the APO's history, and in some ways a new beginning with the move to new secretariat premises — which were significantly smaller than the old ones. We used the new space more efficiently and transitioned from paper to electronic formats and fostered better communication among staff. In this way, the APO managed to persevere in the face of the many challenges posed by the changing environment and economic circumstances of our member countries.

The SG's days are like the productivity journey itself, whose noble objective is to raise the standard of living for the people of our member countries.

Thank you all very much. I wish you all further success.

**RYUICHIRO YAMAZAKI**

APO Secretary-General (2010–2013)



## The Journey to Become the Next APO

The APO must reassume the productivity leadership mantle by enabling, pioneering, and providing future-oriented expertise to meet the needs and expectations of member countries more completely.

The following highlight a few of the initiatives introduced between 2016–2019 to elevate the APO to the next level:

The APO Accreditation Body to raise the APO's visibility and authority as a leading productivity organization and to standardize capacity-building programs and training courses in member countries.

The Specific National Program to enable member countries to embark on effective national initiatives and to shift our approach to working with individual member countries to address their specific needs by offering policy advisory services, e.g., the national productivity master plan.

The strategic foresight movements in member countries aiming for a sustainable future for their public sectors.

APO's brightest and best days are still to come. I look forward to watching and contributing to its success.

**DR. SANTHI KANOKTANAPORN**

APO Secretary-General (2016–2019)

# Accolades & Tributes



## Six Decades as a Productivity Catalyst for the Region

The 60th anniversary of the APO is a time for reflecting on the past and looking ahead to the future.

Facing the challenge of productivity improvement is of tremendous importance in the socioeconomic development of APO member economies. Since its establishment in 1961, the APO has played a catalytic role in promoting productivity growth in the region. It has enabled an effective platform for sharing knowledge, best practices, and networking among policy makers, academia, and executives and managers of SMEs in the region. Together they have helped strengthen institutions and upskill the workforce, contributing to productivity improvement and economic growth. The APO achieved these with the steadfast support and cooperation of member governments and other partners.

For the APO to remain relevant and sustainable in the long run, it must deepen the support it provides to its members by leveraging technology and new knowledge, especially in their post-pandemic rehabilitation and recovery efforts.

I congratulate the founders of the APO and all the women and men in the organization who have kept the productivity torch burning in the region.

**MARGARITA R. SONGCO**

APO Director for the Philippines (2003–2017)



## Productivity Movement as Relevant Now as 60 Years Ago

My heartfelt congratulations to the APO on its 60th anniversary. As APO Director for Malaysia for 30 years from 1988 to 2018, I experienced half of the 60-year journey. During that period, I made many friends and had valuable experiences that will stay with me forever.

During my 30 years as APO Director, I worked effectively with seven different APO Secretaries-General and the APO Directors from the many member countries. I have many happy memories as well as enduring friendships with many of them.

The productivity movement has proven to be a critical element in driving the economic development and progress of member countries. The benefits of efficiency, cost savings, and innovating new ways of doing things are immeasurable.

I wish the APO even greater success in the future in fulfilling its mission and ambition with additional new member countries.

**TAN SRI DATO' AZMAN HASHIM**

APO Director for Malaysia (1988–2018)





## Building on Past Successes as We Look to the Future

It was my great honor to serve as APO director for Lao PDR from 2006 to 2019. I witnessed the rapid development of the organization, including adoption of a new membership contribution formula that allowed member countries to take enhanced ownership, and the establishment of the APO Action Plan, which mapped out strategic directions that are timely and relevant to the development needs of member countries — namely, to strengthen NPOs and promote development of SMEs and communities, catalyze innovation-led productivity growth, and promote green productivity.

The APO also supports member countries through various programs. Lao PDR has benefited greatly since joining the organization in 2002. I hope that the APO will achieve even greater things in the future and continue to perform its key roles as a think tank, catalyst, regional advisor, institution builder, and clearinghouse for productivity information.

On the auspicious occasion of its 60th anniversary, I wish the APO every success as it stays relevant to the development needs of member countries and the region as a whole.

### **SOMDY INMYXAI**

APO Director & NPO Head for Lao PDR (2006–2019)



## A History of Progress in Driving Productivity and Innovation

On behalf of Singapore, I wish to convey my heartiest congratulations to the Asian Productivity Organization (APO) on the occasion of its 60th Anniversary, Diamond Jubilee.

Since its establishment in 1961, the APO has been highly respected as organization concerned with the promotion, practice, and propagation of productivity in the Asia-Pacific region. Over the past 60 years, the APO has made remarkable progress in building the institutional capacity and capabilities of its member countries to drive productivity growth and innovation through a wide range of programs.

The recent COVID-19 pandemic has illustrated the critical role of productivity, innovation, and digitalization in maintaining the economic competitiveness of enterprises and countries. I applaud the APO for its endeavours in working with member countries through timely initiatives to overcome the impact of COVID-19 and make it through the crisis. This could not be achieved without the APO's spirit of collaboration and mutual support amongst the member countries.

I wish the APO every success in achieving many more brilliant milestones in the future.

### **CHEW MOK LEE**

APO Director for Singapore  
(2015–2021)

# Accolades & Tributes



## 60 Years of Helping to Make Tomorrow Better than Today

Congratulations to the APO. Sixty years of service to the Asia-Pacific region and the world is a great achievement and well worth celebrating.

I have had the immeasurable pleasure and honour of being involved with the APO as a participant of programmes, national Manager of APO activities in Fiji, as NPO Head for 10 years, and finally, two stints as Minister responsible for Productivity and APO activities in Fiji.

The opportunity to have worked with other member countries, members of the APO family, and our current Secretary General over many years is something I cherish.

The APO has had an indelible impact on my service to my country, and more importantly it has had a profound impact on Fiji and on all other APO member countries.

May the APO continue to help make tomorrow better than today.

### **JONE USAMATE**

Minister for Infrastructure, Meteorological Service,  
Lands and Mineral Resources  
Fiji  
(Honorary APO Productivity Fellow)



## A Lifetime of Contributing to the APO

I have worked for the National Productivity Organisation of Vietnam since the country joined the APO in 1996. Because the NPOs are an integral part of the APO structure, right from the beginning we became a part of the whole body.

Vietnam has benefitted greatly from various APO programs. Some of them have had a great impact, such as green productivity for poverty alleviation in rural villages, knowledge management, development of productivity specialists, Kaizen, and more. We have received wide-ranging support from the NPOs of Japan, Singapore, Malaysia, RoC, and others.

This year, the APO is celebrating its 60-year anniversary. I am proud that I have spent my life contributing to it, facilitating economic and social progress and development in my country and in the wider Asia-Pacific region.

Congratulations to all the productivity activists in the APO! May you continue the journey of success with pride!

### **NGUYEN THI BICH HANG**

Former APO Alternative Director for Vietnam and  
former NPO Head of Vietnam





## The APO's Message of Prosperity, Welfare and Hope for People

For six decades, the APO's advocacy of productivity has been heard from Mount Fuji in Japan to Kish Island in the Persian Gulf. It has conveyed a message of prosperity, welfare, and hope for people and member countries, and 60 years of accumulated experience is our heritage.

The APO is a valuable research, training, and consulting hub for empowering member countries and productivity advocates, transferring new technologies, know-how, knowledge, and skills. It is also a unique productivity ecosystem with remarkable features: cross cultural interactions, constructive dialogue between the secretariat and NPOs, effective planning, programming and budgeting, collective decision-making, tolerance, friendship, and resilience to emerging shocks.

Looking to the future, I would like to propose cooperation with new strategic partners such as WIPO, UNEP, and leading global institutions for the post-COVID-19 era, as well as greater flexibility in future strategy formulation, agile decision-making, and stronger synergy.

### **MAHMOUD GHANIZADEH**

APO Fellow  
I.R. of Iran



## Promoting the Centrality of Productivity

Since its establishment, the APO has integrated regional resources and played an important role in assisting member economies carry out industrial transformation to better meet the challenges of a rapidly changing environment.

Today, under the wise leadership of Dr. AKP Mochtan, the APO promotes programs and policies under the theme of “Centrality of Productivity” that foster the upgrading of industrial infrastructure to meet new economic development trends. This mirrors the concept of “Total Productivity” that I have propounded; that is, enterprises should internally accumulate talent and wisdom capital—including management property, innovation property, and intellectual property—through environmental virtual-physical integration; outside the enterprise organization, competitiveness should be raised by enterprises through the mutualism and symbiosis of the “Ecosystem” business model, linking regional resources to create value.

I am happy to see all that the APO has achieved in its 60 years of existence. In this highly significant year, I wish the APO a happy birthday on behalf of the China Productivity Center of the Republic of China.

### **PAO-CHENG CHANG**

NPO Head for the Republic of China (2000–Present)

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# Accolades & Tributes



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## Leading the Asia-Pacific Productivity Movement

I would like to extend my congratulations to the Asian Productivity Organization on the occasion of its 60th anniversary in 2021.

The rise of the Asia-Pacific region to its present global economic significance is the result of the collaborative spirit of several generations to uplift the region from poverty and strive for higher standards of living. The economic diversity of the region provides both challenges and opportunities for driving cooperative efforts to enhance productivity.

Founded in 1961, the Asian Productivity Organization is a manifestation of successful cooperation amongst countries with the shared aim of improving productivity and accelerating the pace of economic development in the region. The COVID-19 pandemic and the advent of Industry 4.0 has brought about new challenges for the APO—challenges that I'm confident will be overcome.

I hope the APO continues to lead and build the Asia-Pacific productivity movement for many more years to come.

All the best to APO!

**KUNJUNG MASEHAT**

Chairman of Indonesia Professional Certification Authority (IPCA)



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## Reflecting on the Productivity Movement in the Philippines

The 60th anniversary of the APO in 2021 is a special occasion to showcase its milestones in enhancing productivity in the Asia-Pacific region. We congratulate the APO for its significant contributions to the productivity movement of member countries.

The Philippines has benefitted from APO programs in the areas of capability building within the NPO, government agencies, and SMEs, and from APO projects in the areas of agriculture, industry, services, and the public sector, as well as adaptation of productivity technologies through TES, BCBN, I-OSM, and productivity research and information. Programs implemented include Development of Productivity Specialists, which became the APO Certified DPP Course, the Philippine Quality Award, ISO 9000 QMS, Conferences on Green Productivity 1996 and 2002, Organic Agriculture, the Food Safety Management System, and the CoE for Public Sector Productivity.

We thank the other NPOs and the APO Secretariat for their support of NPO programs, and we wish APO further success in the pursuit of its strategic directions and programs.

**CARLOS A. SAYCO, JR.**

APO Liaison Officer for the Philippines  
(1995–2018)





## The APO Shows its Value in Higher Economic Growth

I am delighted to extend my warm congratulations to the APO on its 60th anniversary. Over the past six decades, the unique contributions made by the APO to promote productivity concepts in Asia have been invaluable.

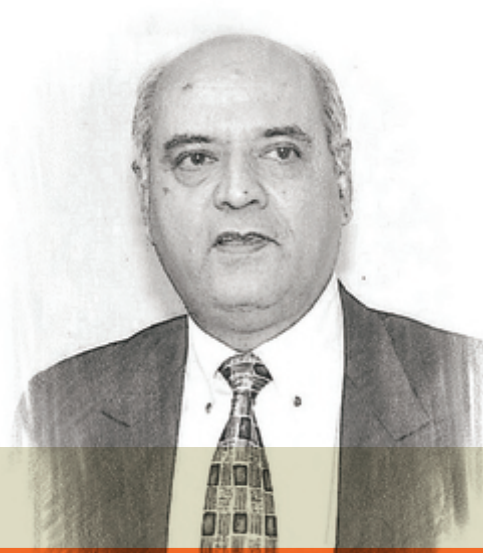
I joined the APO in 2002 as Director of Finance & Administration and served for about five years. My analysis of international financial statistics revealed that most APO members have achieved higher economic growth after joining the APO.

I will never forget my interactions with the APO family, the various projects and programs implemented under the excellent leadership of Mr. Takashi Tajima, SG, with the assistance of dedicated staff and in collaboration with the National Productivity Organizations of member countries.

The APO's services are always admired and appreciated by member nations. May the journey of the APO's success continue in the years to come!

### **N.G. KULARATNE**

Director of Administration & Finance Department, APO Secretariat (2002–2004) and Director of Information and Public Relations Department, APO Secretariat (2005–2006)



## Disruptive Technologies will be a Key Challenge

I am delighted that the APO is celebrating its Diamond Jubilee in 2021, starting with a virtual launch on January 21, 2021. My congratulations to the Secretary General and his staff, both past and present.

In its 60-year journey, the APO has done a remarkable job, launching a series of innovative projects to meet the diverse productivity needs of member countries. It is no mean task to balance these fast-changing requirements of member countries at different stages of socioeconomic development. It is the right time to acknowledge the significant contribution of the NPOs and productivity professionals for their active participation in the design and implementation of APO projects.

While this is indeed a moment of pride, we cannot rest on past laurels. Emergence of disruptive manufacturing and digital technologies, data analytics, AI, new work & management strategies, societal concerns, and more, is having a profound impact on the practice and measurement of productivity. The integration of productivity with corporate and national development strategies and plans has also assumed added importance and urgency.

I wish the APO great success in its future endeavours.

### **R.C. MONGA**

Senior Research & Planning Officer,  
APO Secretariat (1995–2000)

# Accolades & Tributes



## The Importance of People's Mindset and Human Networks

I remember well the 'good old days' when I worked for the APO secretariat in the early 2000s. With much kind and warm support, I learned a lot from my colleagues and friends in the NPOs. Before joining, I had been obsessed with the idea that capital investment and technical progress were the keys to productivity growth, as proved by the Green Revolution. But my four-year experience in the APO taught me that two more fundamental factors were crucial: people's mindset and human networks. This is exactly the arena in which the APO has been working hard—and perhaps one reason why Asia's economic performance has outpaced other regions.

Through countless workshops and other programs, the APO has successfully created in the region millions of productivity-minded people and their respective networks. Though less visible, it is comparable to the role the Asian Development Bank played for regional development. I am convinced that this role will become more important even in the age of AI.

### **KUNIO TSUBOTA**

Director of Agriculture Department,  
APO Secretariat (2002–2005)



## APO Founding Principles Still Relevant Today

Happy 60th Anniversary, APO!

It has been a great honor, privilege, and pleasure to work with the APO. I have learned a lot, met many dedicated productivity professionals in different fields from all over the world, and formed lasting friendships.

What seems most important during the APO's history is the continuing dedication to its founding principles, especially the spirit of mutual cooperation. That strong foundation has allowed the organization to grow, expand its connections and global reach, and cope with many challenges. The APO has adapted to a shifting geopolitical landscape, fundamental changes in technology, the SARS and H1N1 epidemics, and now the COVID-19 pandemic, a global financial crisis, and the aftermaths of natural disasters. Those rapid adaptations to changing realities and sustained organizational resilience were only possible with the experience and expertise built up over 60 years of learning how to do more with less more efficiently and sustainably, while seeking to improve the quality of life for all.

I feel sure that the APO's next 60 years will be even more meaningful and memorable than the first. Many congratulations on the Diamond Jubilee in 2021! Thank you.

### **CYNTHIA YENCHIES**

Copy Editor, APO Secretariat (1987–present)





## Nurturing a Culture of Continuous Adaptation and Improvement

I joined the APO Secretariat four years after the establishment of the APO and retired from the office in 2006. I served the APO for exactly 40 years. Upon reflection, I have no regrets about devoting my whole working life to the APO. Initially it was a small organization composed of just eight member countries. Thereafter, countries in the Asia-Pacific region joined the APO one after another, growing the organization to the current 21-country family that shares a common vision and spirit of productivity improvement. This achievement carries the full weight of the mission endowed with the APO.

Japan, by virtue of its large presence and financial role, took the lead in creating the APO, expanding the membership and sustaining program activities. But at the same time, we should not overlook other countries that have fully understood the significance of the productivity movement as a fundamental source of economic growth. These countries have had remarkable success in promoting domestic productivity activities. They were cognizant of a shared commitment to partner with fellow members, which had a profound effect on the growth of the organization itself. Cooperation became a bedrock principle ingrained into our productivity movement. Development of NPOs (DON) is a good showcase of performance, with developed NPOs sharing their experience with less developed NPOs so that the latter can kickstart their own initiatives.

It is not an overstatement to say that higher productivity, competitive markets, and rapid economic growth can be achieved by strengthening small- and medium-sized industries. Since its

inception, the APO has focused on the software of its drive to reinforce the competitiveness of SMEs. But it is not sufficient. The recent arguments raised by the Japanese government on the low labor productivity of SMEs is a case in point. As for the APO, we should establish an SME-oriented CoE in each member country to provide the best business environment for SMEs. This is where partnership with other member countries should come into play.

I am confident that, whatever the difficulties—including the ongoing COVID-19 pandemic—the APO will achieve much progress in line with its Vision 2025 under the dynamic leadership of the Secretary General. However, we must never be complacent. The challenge for the APO is to build on its historic strengths—our sense of cooperation, creative mindset, and flexibility—so that we can retain a distinct identity in the global community. We should step up our efforts to expand cooperation with global and regional organizations and uphold the campaign for new membership in Central Asia and in the Pacific Islands. I place my unshakable confidence in the Secretary General and his able staff to nurture a culture of continuous adaptation and improvement to stay abreast of our changing world.

### **YOSHIKUNI OHNISHI**

Director of Research and Planning, APO Secretariat (1965–2006)

# Accolades & Tributes

## Participant Messages



### Creating a Valuable Opportunity to Share Knowledge and Experience

I truly respect the way the APO set up the seminar and training course for APO members. It was a valuable experience that allowed us to share knowledge with each other. We were all very happy to join, and I was proud to be able to attend these APO activities.

#### **NGUYEN THI HUYEN**

Senior Manager & Advisor

Workshop for Practitioners of Business Excellence – Virtual Session (16–18 November 2020)  
International Forum on Productivity – Seminar (12–14 September 2017, Malaysia)



### Productivity as a Pathway Towards Innovation

I am grateful to the APO for offering capacity building courses on the latest development and cooperation strategies. As a technology transfer officer, being updated with these latest strategies is an imperative as we continue to bridge inventions towards innovations. May you continue to advocate for productivity, as productivity is also the pursuit for effectiveness and efficiency. It has the power to make things valuable, and the pathway towards innovation.

#### **ABIGAIL F. GUECO**

Senior Science Research Specialist  
DOST-PCAARRD

APO Training Course on Workshop on Innovative Rural Community Development Models (22–26 October 2018, Yogyakarta, Indonesia)



### Enhancing My Skills as a Consultant with APO Mentors

As a consultant who is specialized in sustainable development, joining the intensive two-week training course on Green Productivity from the APO improved my skills as a consultant immensely. I still remember the intense training, as well as the laughter, during the course. I am grateful to the organization and truly appreciate the dedication of the APO experts, these mentors of mine.

#### **CHENG-HSIU TSAI**

Team Leader, Sustainable Strategy Group  
Plastics Industry Development Center (2017–2021)





## Gaining Experience from Experts and Using It in Practice

I would like to thank the APO for providing the opportunity to participate in this international project. Following my participation in the APO project in Taichung, Taiwan, I have learned new skills, received new knowledge, and gained new experience from the experts in biofertilizer and biopesticide that has boosted my job performance in soil fertilization and improvement.

### **PAKPOOM DARAPONG**

Highland Research and Development Institute  
2nd International Conference on  
Biofertilizers and Biopesticides  
(8–11 August 2017, Taichung, Republic of China)



## Encouraging the Understanding of Productivity Leads to Positive Support

The APO, as an active organization in disseminating productivity knowledge through countries in the Asian region, has always strived to play an important role in teaching the basic and specialized concepts of productivity, such as new tools and techniques of productivity during its 60 years of activities.

It has always encouraged member and non-member countries to develop a deep understanding of emerging concepts of productivity, as well as the importance of smart concepts and innovation in current world of digitalization. This has been one of the most important factors in maintaining the positive attitude of its members towards its growing activities.

As one of the APO graduates who started distributing the concept of MFCA and GP throughout the country with the help of APO training — while wishing success to the APO in achieving its goals — I also offer my congratulations on the 60th Anniversary of the APO's establishment.

### **DR. ESMAEIL FATEHIFAR**

Professor of Chemical (Environmental)  
Engineering



## Connecting through Culture and Providing a Powerful Capacity-Building Platform

It is undeniable that Small and Medium Enterprises (SMEs) significantly contribute to the economic development, social uplifting, and political stability of every country. This is no exception in Malaysia.

APO connects through culture and provides a powerful capacity-building platform that shares practices from many APO countries including India, Indonesia, Iran, Nepal, Fiji, Sri Lanka, the Philippines, and Japan. This platform gave me an opportunity to share, learn, and put what I learned into practice and as inputs for the development of SMEs in our country.

I thank APO for giving me the opportunity to participate in this learning journey, and I wish APO the best in developing similar programmes that will advocate and guide many of us in serving our country to become a much more productive nation.

### **SHANTHINI TAMADORAM**

Assistant Manager  
Malaysia Productivity Corporation  
APO Training Course on Workshop on  
Productivity Measurement in SMEs  
(3–7 September 2018, Nadi, Fiji)

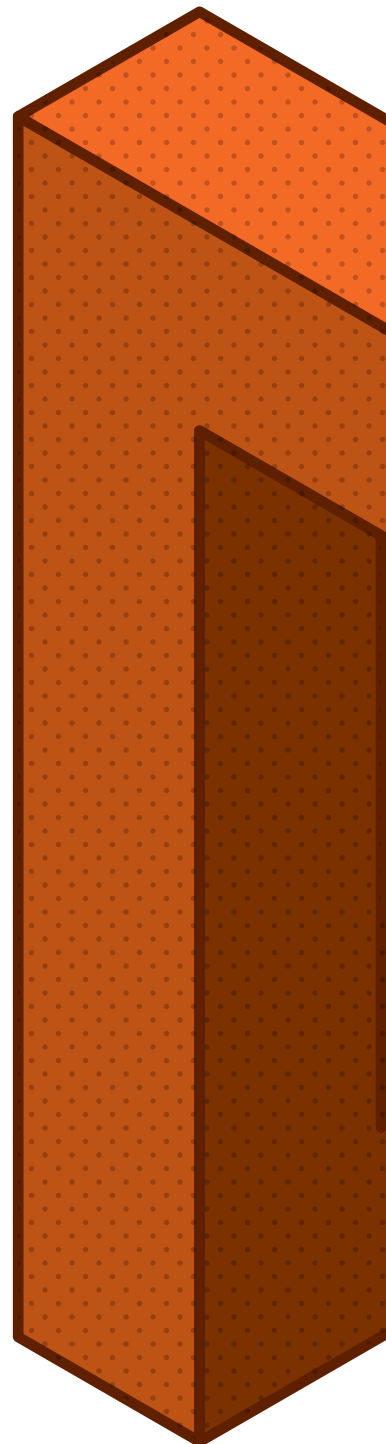
## The Way

# Forward

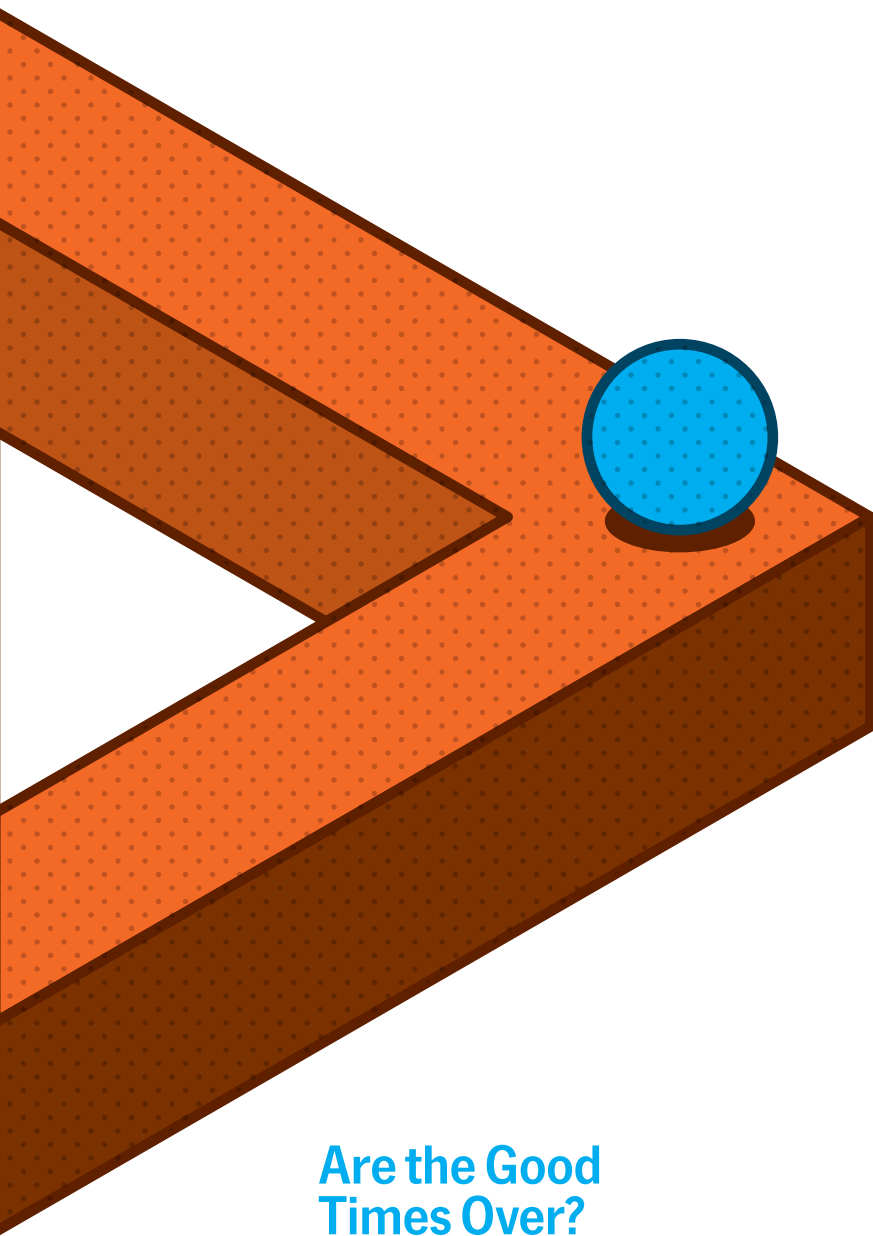
**N**ear the close of Charles Dickens' *A Christmas Carol*, Ebenezer Scrooge is shown a terrible vision by the Ghost of Christmas Yet to Come. It is of Scrooge himself, dead and buried, remembered without regret, his grave overgrown with grass and weeds. As he approaches his tombstone, he asks his silent, ghostly guide one question: "Are these the shadows of the things that will be, or are they the shadows of things that may be only?"

While a Dickens novel seems worlds away from productivity in the Asia-Pacific, Scrooge's concern is something that animates anyone invested in ensuring productivity growth and sustainable development. Are we able to change the trajectory of our lives, or is the future inevitable? When we are presented with a convincing vision of the future, how much confidence should we place in it? What actions should we take in response? In this chapter, a mix of historical trends and speculative analysis is used to present what the future of productivity may look like in the Asia-Pacific. Since the future of productivity is deeply complex and uncertain, this chapter highlights the different paths that may lie ahead and some of the major issues relating to productivity, growth, and the APO. In light of these possibilities, the APO will outline its current vision of the way forward.

“The future of productivity is deeply complex and uncertain, this chapter highlights the different paths that may lie ahead and some of the major issues relating to productivity, growth, and the APO.”







## Are the Good Times Over?

The past 60 years have seen unusually rapid growth in GDP and GDP per capita around the world, particularly in Asia and the Pacific. This was fueled by an expanding pool of workers and their rising productivity. It is an open question, however, whether that can continue. There are signs that this golden age of growth is winding down. Today, productivity growth is just one-tenth of the level it was 40 years ago in advanced economies, and even emerging economies are facing challenges in replicating past progress. Many countries in the Asia-Pacific have rapidly aging populations, which impose constraints on demand, growth, and productivity. Given that productivity is central to increasing long-term living standards, this is a worrying pattern.

The slowdown in productivity, sometimes known as the productivity puzzle, is a contested issue among experts. It is considered paradoxical because this slowdown has coincided with enormous advances in technology. Over a short time, an extra 3.5 billion people have gained Internet access and computers have become exponentially more powerful, cheaper, and smaller. Smartphones can be found in the hands of farmers in remote areas, and online

business is mainstream. With the spread of email, GPS, and other software, new business models have emerged, for example, the sharing economy. However, as economist Robert Solow remarked, “You can see the computer age everywhere but in the productivity statistics.”

Some economists argue that this slowdown is because the peak age of disruptive technology is behind us. This seems counterintuitive because of the rise of new digital technologies. However, economists like Robert Gordon and Tyler Cowen believe that the productivity-boosting potential of these technologies pales in comparison to past innovations like electricity or the steam engine. In this view, growth is the exception rather than the rule. Scholars of this school point to evidence that growth was absent for most of history and suggest that a return to the norm is more likely than not. This would not rule out the adoption of virtual headsets, robotics, and autonomous vehicles in the future economy, although it would mean that they would do little to lift productivity.

Perhaps more worryingly, there is evidence that innovation is becoming harder. Nicholas Van Bloom and other researchers have found that getting one “unit” of innovation seems to take more R&D resources now than ever before. One explanation for this is that since new knowledge requires understanding earlier knowledge, the total amount of knowledge needed to solve problems keeps rising over time. Another explanation is that because a greater share of R&D spending is on applied research rather than basic science, there is a growing division of labor between academia and the private sector. If it becomes harder to make truly disruptive innovations, then it will be difficult to replicate the past 60 years of growth.

The slowdown in productivity, sometimes known as the productivity puzzle, is a contested issue among experts. It is considered paradoxical because this slowdown has coincided with enormous advances in technology.

## The Second Machine Age?

In contrast to the productivity pessimists, some economists believe that we are on the cusp of another major era of productivity growth. For example, Nobel Laureate William Nordhaus points to historical data showing a lag between technological innovation and productivity. As argued by Harvard's Marc Melitz, at the firm level, a few enterprises are highly productive, while others lag behind. ICT and management-related innovations are concentrated in those "superstar firms" and specific industries. If those innovations are disseminated, the computer age might finally be reflected in the productivity statistics.

At the time of writing, the world economy was still being ravaged by the COVID-19 pandemic. Its immediate effect on productivity was mixed. Filippo di Mauro and Chad Syverson noted that globalization, labor mobility, and small firms were particularly vulnerable. However, the crisis also forced firms and employees to upgrade their IT infrastructure and skills to enable remote work. Many organizations had to adopt some of the technology and management practices of leading firms to do this, which may narrow the gap between frontier and laggard firms.

Beyond the current crop of technologies becoming more widespread, some scholars believe that new technologies that are coming into maturity will be truly transformative. These include artificial intelligence (AI), augmented and virtual reality (AR, VR), data science,

biotech, robotics, and digital fabrication. Any of these could be a general-purpose technology (GPT) affecting entire economic systems and leading to far-reaching changes in society. Past GPTs, for example, included the steam engine and electricity. MIT economists Erik Brynjolfsson and Andrew McAfee call this a "Second

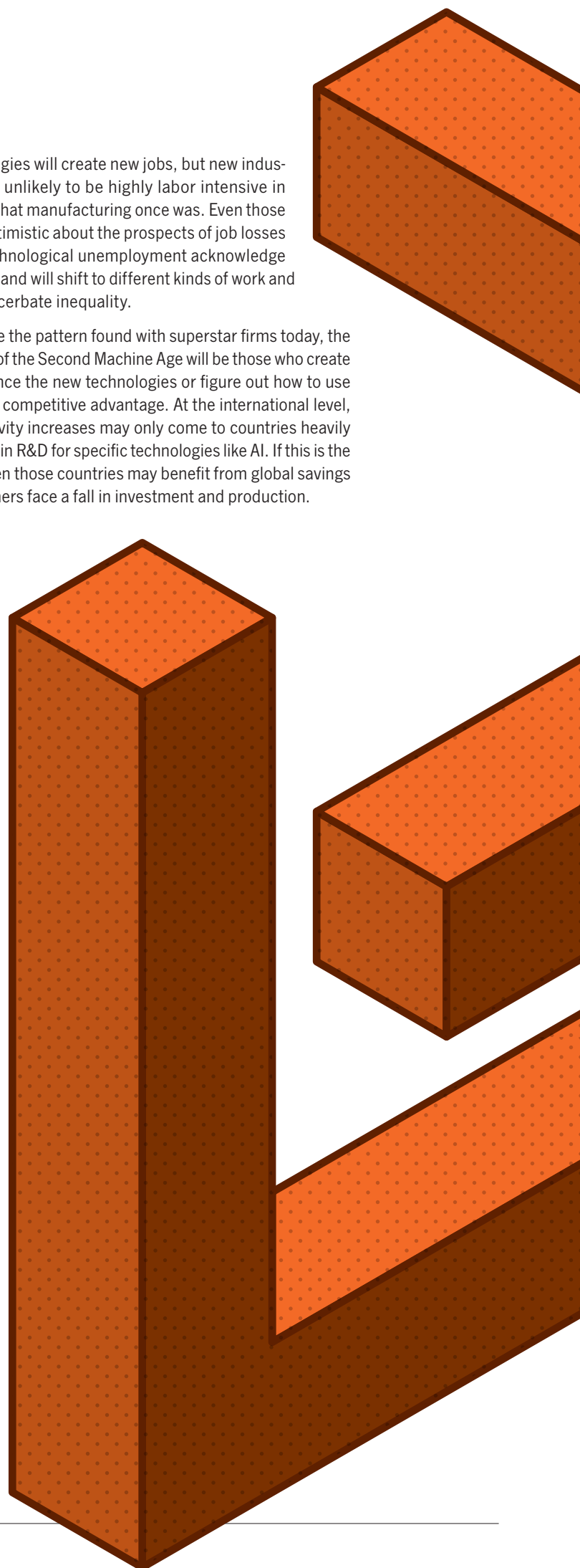
Machine Age" succeeding the Industrial Revolution started in the UK in the 18th century. They argue that the big winners will be consumers who will be able to access a wider range of higher-quality goods and services at lower prices.

Some futurists, such as Martin Ford, fear that this new Machine Age will result in large-scale technological unemployment as tasks become susceptible to automation. This would go beyond the automation of industrial labor-intensive jobs and include work in the legal sector, medicine, and even software design. If this scenario plays out, emerging

technologies will create new jobs, but new industries are unlikely to be highly labor intensive in the way that manufacturing once was. Even those more optimistic about the prospects of job losses from technological unemployment acknowledge that demand will shift to different kinds of work and may exacerbate inequality.

Much like the pattern found with superstar firms today, the winners of the Second Machine Age will be those who create and finance the new technologies or figure out how to use them for competitive advantage. At the international level, productivity increases may only come to countries heavily invested in R&D for specific technologies like AI. If this is the case, then those countries may benefit from global savings while others face a fall in investment and production.

...the winners of the Second Machine Age will be those who create and finance the new technologies or figure out how to use them for competitive advantage.







## Problems of Productivity: Equity, Social Inclusion, and Sustainability

Alongside a productivity slowdown across the world's major economies, there are rising wealth and income inequalities within countries. Technological innovation alone is not responsible; how it interacts with other factors is important. Researchers from the Brookings Institute suggest that market conditions and policy have driven this phenomenon. Weak competition policy and enforcement have allowed global businesses to exercise almost unchecked market power over the past few decades.

Michael Pettis and Matthew Klein argue that a combination of policies to encourage high household savings, low interest rates, and weak social safety nets shifts income from workers and retirees to companies and capital owners in countries like PR China and Germany. This has implications for international trade as excess savings in those countries is met with unsustainable credit and trading booms in others. The effect is that the workers cannot afford to buy what they have produced, lose their jobs, or are forced into greater debt. There are also flaws in the international

patent regime which prevent wider diffusion of innovations. Lax antitrust enforcement has enabled overlapping corporate ownership by large institutional investors and a rise in rent-seeking.

Inequalities in educational attainment and skilling also contribute to broader inequality. Digital technology, automation, and globalization have shifted demand toward higher-level technical and managerial skills, particularly in advanced economies. Routine, middle-level skills, on the other hand, seem vulnerable to automation. While demand has shifted, the skill supply response has been slower, preventing broader diffusion of innovation. Those with access to appropriate education and training can find work in leading firms. Those without such access are more likely to have unstable employment, unsustainable debt, and poor prospects for upward mobility. Considering this, the APO is enabling free and easy access to skilling opportunities through its own digital learning platform.

The effect is that the workers cannot afford to buy what they have produced, lose their jobs, or are forced into greater debt.

Economic inequality is coupled with the systematic exclusion of certain segments of society from the full benefits of development. Vulnerable members of society, like the elderly, minorities, women, the poor, and persons with disabilities (PWDs) face unique challenges that are not traditionally incorporated in the productivity movement. Ensuring that these groups can participate more actively in productive activities helps them secure sustainable livelihoods. Women everywhere experience barriers to full participation in the workforce. Close to two-thirds of all working women in the Asia-Pacific are in the informal sector, with insecure employment and little, if any, social protection. Minorities and PWDs are also excluded from many economic opportunities, and their needs are not adequately considered in employment policies. Inequality and inequity, outside of being ills in themselves, may also undermine peace and stability in the region.

Finally, human civilization faces a myriad of serious environmental challenges over the coming decades. They come in the form of climate change, a degraded natural resource base, and pollution. Past productivity growth and economic development relied heavily on the use of fossil fuels. However, this trajectory cannot continue without dire social and economic consequences from rising sea levels, more extreme weather, and reduced biosphere integrity. Many countries in the Asia-Pacific region will be especially hard hit by these issues. To manage these problems and sustain productivity growth, development must be decoupled from carbon-intensive forms of production.

## Rethinking Productivity?

It is impossible to disentangle productivity growth from other issues like inequality, inclusion, and sustainability. Productivity is the engine of economic growth and development, but many now recognize that productivity improvement and economic growth do not necessarily lead to greater human happiness. First, innovation and its spread across firms and sectors are not guaranteed. As a key component of productivity growth, APO member countries must focus on driving innovation. Further, concerns about equity and inclusion should be taken seriously so that no one is left behind in the quest for productivity. Finally, the productivity movement must pay attention to sustaining growth by respecting environmental boundaries.

Beyond the trends and issues highlighted above, the future may involve a change in the way that productivity itself

is understood. For other major metrics like GDP, there are ongoing efforts to change how they are conceptualized and measured. The European Commission has launched a “beyond GDP” initiative to identify indicators that account for environmental and social aspects of progress. Taking GDP as a single compass point does not give policymakers a sufficiently rich and accurate picture of how

an economy performs for its citizens and the impacts of growth on sustainability. Working with the OCED, it has put forward the idea of an “economy of well-being” in which human well-being is an intrinsic good and a driver of long-term economic growth and stability.

Similarly, our understanding of productivity may change in the future. Productivity and efforts to improve it have maintained an underlying link to the Industrial Age, with an emphasis on efficiency and an eye toward constant growth. While still relevant, the future of productivity and the productivity movement can be more people-centric. In recent years, the APO has expanded productivity beyond agricultural and industrial production to the public sector. In the future, social productivity that takes into account care work and activities that build social capital and strengthen human relationships may be recognized. There could be even be forms of productivity that consider environmental services produced by natural resources such as rainforests and coral

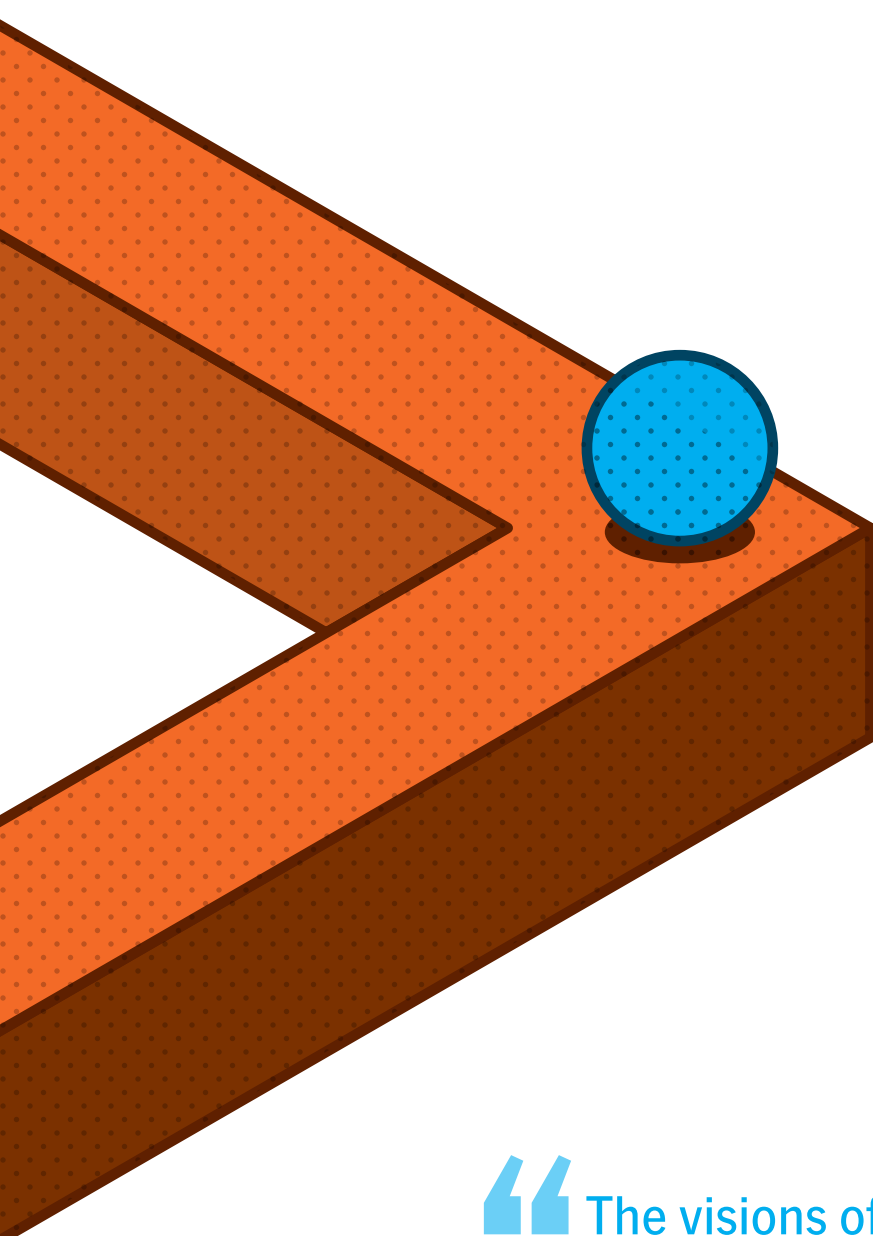
reefs. In the next 60 years, our understanding of productivity could expand and evolve in ways not yet anticipated.

The APO has taken some concrete steps in this direction with the declaration of its Vision 2025. Focusing on some key issues outlined above, Vision 2025 advocates “inclusive, innovation-led productivity growth in the Asia-Pacific.” Governments and other stakeholders in the region need to unshackle technological innovation and diffusion, invest in skills for a changing world of work, revamp labor market policies to include all segments of society in economic activities, and counter the detrimental effects of current activities on sustainable growth in the future. All these should pivot on the centrality of productivity in policymaking.

Returning to Dicken’s novel, Ebenezer Scrooge eventually realized that his future was not set in stone. Even late in life, Scrooge was able to change his ways and become a better

...innovation and its spread across firms and sectors are not guaranteed. As a key component of productivity growth, APO member countries must focus on driving innovation.

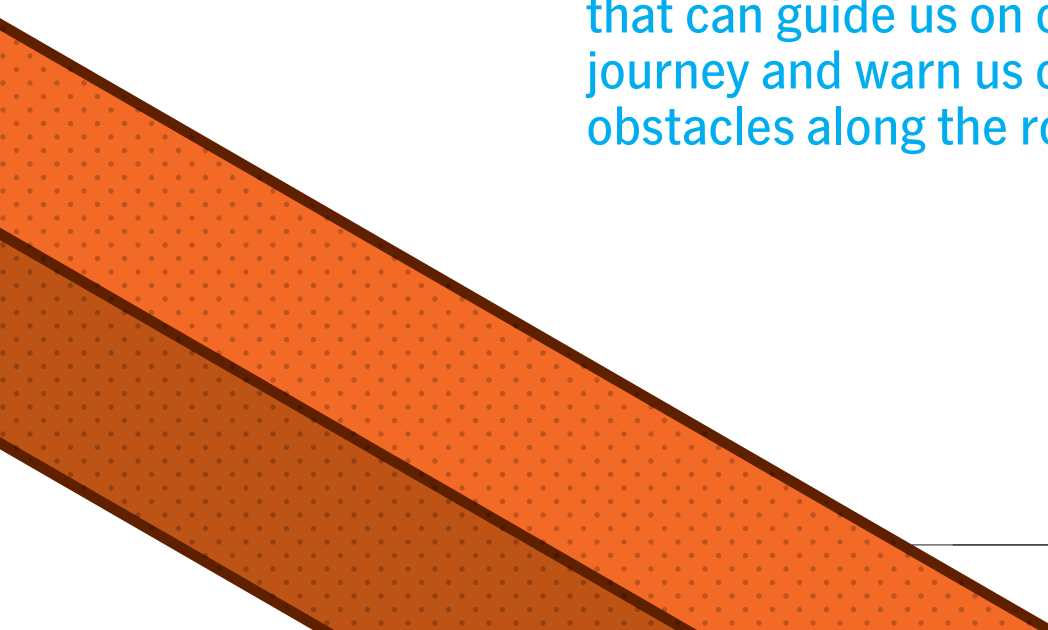




person. In the same way, the trajectory of productivity in the Asia-Pacific is not a given. Many visions of the future were presented in this chapter, good and bad, weird and wonderful. These represent not certainties but possibilities that can guide us on our journey and warn us of potential obstacles along the road. It is in the hands of individuals, communities, and organizations to shape a better future for the region.

The APO is in a unique position to guide strategies and programs to sustain productivity growth for long-term development. It has been playing this leadership role and providing support to its member countries' productivity movements since its founding in 1961. Support is still needed from all segments of society, from within the region and beyond. The past 60 years have been tremendously successful in terms of productivity enhancement and development. By taking seriously the power of human agency to shape the future and the gravity of the challenges ahead, the next 60 years can be even brighter for all in the Asia-Pacific.

“The visions of the future presented in this chapter were good and bad, weird and wonderful. These represent not certainties but possibilities that can guide us on our journey and warn us of potential obstacles along the road.”



# Six Decades of Progress in Asia

From its formal establishment in 1961 with eight founding members, to its 60th anniversary in 2021, the APO has grown steadily in scope, ambition, and membership. Today's 20 member NPOs are geographically, economically, and culturally diverse, but all share the conviction that productivity gains through mutual cooperation is the key to inclusive, sustainable social and economic progress, and prosperity.

Today, the APO organizes more programs and workshops, and publishes a wider range of reference and learning materials than ever, adapting to changing needs as the world is transformed by pressures such as climate change, digitalization, and artificial intelligence.

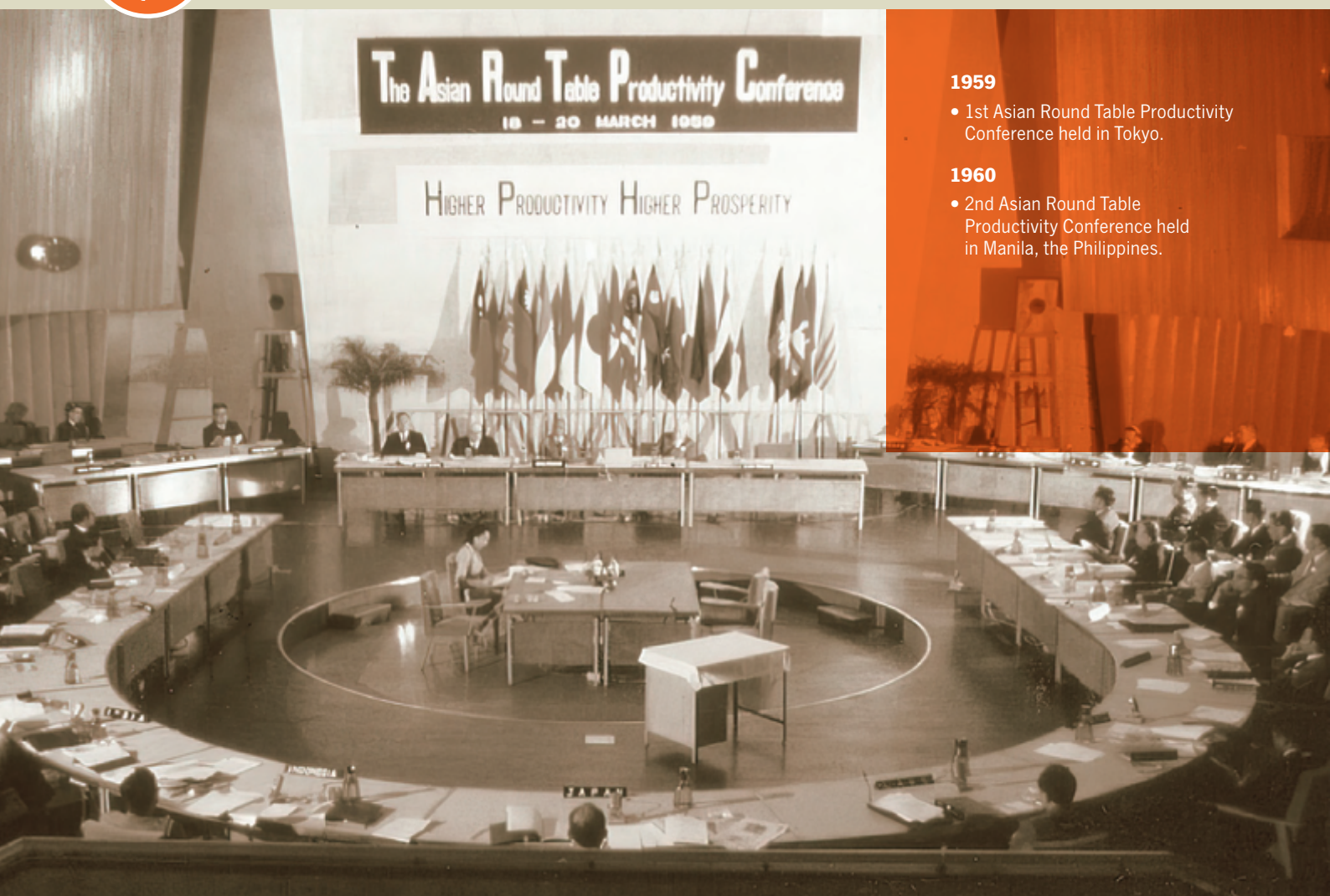
1961  
—  
1970



A P O H I S T O R Y T I M E L I N E

1959

1960



## 1959

- 1st Asian Round Table Productivity Conference held in Tokyo.

## 1960

- 2nd Asian Round Table Productivity Conference held in Manila, the Philippines.





#### 1964

- Agreement with ILO (International Labour Organization) signed.

#### 1965

- The quarterly Productivity Digest began publication.
- The Republic of Vietnam and Iran joined the APO.



#### 1961

- The APO formally established with 8 founding members: Republic of China, India, Japan, Republic of Korea, Nepal, Pakistan, Philippines, and Thailand.
- First session of the APO Governing Body held in Tokyo.
- Ichiro Oshikawa appointed first APO Secretary-General.
- Technical Expert Service (TES) Program launched.
- Asian Productivity, the APO monthly newsletter, launched.



#### 1968

- Indonesia joined the APO.

#### 1969

- First APO Five-Year Plan launched.
- Singapore joined the APO.

1961

1962

1963

1964

1965

1966

1967

1968

1969

1970



#### 1966

- Ceylon (later Sri Lanka) joined the APO.
- The Agriculture Program launched.

#### 1967

- Agreement signed with the Government of Japan on Privileges and Immunities.
- First APO Five-Year Plan Meeting in Hong Kong.



#### 1962

- Technical Enquiry Service launched.
- First Conference of Productivity Center Directors convened in Kathmandu, Nepal.

#### 1963

- Itinerant Seminars launched.
- Hong Kong joined the APO.



#### 1970

- 1970 declared Asian Productivity Year.
- Oikawa Fellowship for Small and Medium Industries launched.
- First Asian Productivity Congress held in Tokyo commemorating the 10th Anniversary of the APO.



1971  
—  
1990

1971 1972 1973 1974 1975 1976 1977 1978 1979 1980



#### 1976

- The APO flag adopted.

#### 1977

- APO Award established.

#### 1978

- APO Honorary Fellows scheme established.
- Bilateral Cooperation Between NPOs (BCBN) Program launched.



#### 1971

- Priced Publication Program launched.
- Asian Productivity renamed APO News.

#### 1972

- First Expert Meeting on Productivity Measurement held.

#### 1974

- Research and Planning Program launched.



#### 1980

- 2nd Asian Productivity Congress held in Hong Kong to mark the APO's 20th anniversary.
- First APO Awards conferred on 9 individuals.





1981 1982 1983 1984 1985 1986 1987 1988 1989 1990

#### 1982

- Bangladesh joined the APO.

#### 1983

- Malaysia joined the APO.

#### 1984

- Fiji joined the APO.



#### 1987

- The Productivity Fellowship launched.

#### 1988

- First Strategic Planning Committee meeting hosted by the Secretariat.



#### 1985

- APO Awards renamed APO Regional Awards, and APO National Awards introduced.

#### 1986

- The APO's 25th anniversary marked with an International Productivity Congress in Kuala Lumpur.





# 1991 — 2010



1991 1992 1993 1994 1995 1996 1997 1998 1999 2000



## 1994

- The concept of Green Productivity introduced.

## 1995

- The South–South Cooperation for Supporting Industry Assistance Program launched.

## 1996

- Vietnam joined the APO.
- The Integrated Community Development approach initiated.



## 1991

- International Productivity Congress to commemorate 30th anniversary of the APO held in Bangkok. The Bangkok Declaration on Productivity for a Better Quality of Work Life adopted.

## 1992

- Mongolia joined the APO.

## 1993

- The Productivity Journal began publication.



- The World Conference on Green Productivity held in Manila. The Manila Declaration on Green Productivity adopted.

## 1997

- MOU signed with the UN Environment Programme Industry and Environment Programme Activity Center.

## 1999

- Two new thrust areas designated: Development of SMEs and Integrated Community Development.





2001 2002 2003 2004 2005 2006 2007 2008 2009 2010

#### 2001

- The APO's 40th anniversary marked with the First International Conference on Productivity in the e-Age in New Delhi, along with the International Forum for SMEs.

#### 2002

- Lao PDR joined the APO.

#### 2003

- First APO web-based videoconferencing project organized.



#### 2007

- International Productivity Conference on Knowledge Management held in Bangkok.
- The APO Productivity Databook project started in partnership with the Keio Economic Observatory of Keio University, Tokyo.

#### 2008

- The first self-e-learning course on the Balanced Scorecard launched.

#### 2009

- Singapore appointed the COE on Business Excellence.



#### 2004

- Cambodia joined the APO.
- The 1st Eco-products International Fair organized in Kuala Lumpur.
- The One Village, One Product movement became part of the Agriculture Program.

#### 2006

- Cooperation with the Pan African Productivity Association.





2011  
—  
2020



2011

2012

2013

2014

2015



#### 2012

- The Secretariat office moved from Hirakawacho to Hongo.

#### 2013

- The ROC appointed the COE on GP.



#### 2011

- The Tohoku earthquake forced cancellation of 50th anniversary celebrations. The GBM venue moved from Tokyo to Kuala Lumpur.
- The APO developed a new mission, vision, and thrust areas for 2020.



#### 2015

- APO Certified Productivity Practitioners scheme launched.
- The COE on Public-sector Productivity in the Philippines established.





2016

2017

2018

2019

2020

## 2017

- The COE on IT for Industry 4.0 was established in India.
- The APO self-learning platform renewed.
- Accreditation Body established.



## 2020

- The Secretariat office returned to Hongo after renovation.
- Turkey joined the APO.
- The COVID-19 pandemic forced digital transformation of the APO. Programs were changed to virtual activities.
- The APO Vision 2025 was approved.



## 2019

- The COE on Smart Manufacturing was established in the ROC.
- The Secretariat office temporarily moved to Nijubashi following a fire incident.



# APO's Network in Member Countries

## Our National Productivity Organizations



### Bangladesh

National Productivity Organisation



### Cambodia

National Productivity Centre of Cambodia



### Republic of China

China Productivity Center



### Fiji

National Training and Productivity Centre



### India

National Productivity Council





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## Indonesia

Directorate General of Training  
and Productivity



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## Malaysia

Malaysia Productivity Corporation



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## Singapore

Singapore Productivity Centre



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## Islamic Republic of Iran

National Productivity Organization of  
Islamic Republic of Iran



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## Mongolia

Mongolian Productivity Organization



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## Sri Lanka

National Productivity Secretariat



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## Japan

Japan Productivity Center



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## Nepal

National Productivity and Economic  
Development Centre



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## Thailand

Thailand Productivity Institute



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## Republic of Korea

Korea Productivity Center



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## Pakistan

National Productivity Organization



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## Turkey

Ministry of Industry and Technology



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## Lao PDR

Lao National Productivity Organization



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## Philippines

Development Academy of the  
Philippines



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## Vietnam

Vietnam National Productivity Institute

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