PROJECT IMPLEMENTATION PLAN

7 December 2017

1.	**Project Code**	17-IN-06-GE-DLN-A-11
2.	**Title**	Self-learning e-Course on Integrating Lean Manufacturing Systems and Industry 4.0 Concepts
3.	**Reference**	Project Notification 17-IN-06-GE-DLN-A dated 22 December 2016
4.	**Timing and Duration**	1 January–31 December 2018 (12 months)
5.	**Implementing Organizations**	APO Secretariat and National Productivity Organizations (NPOs)
6.	**Number of Participants**	Minimum 400 participants
7.	**Self-registration**	Self-registration opens from 10:00 AM Japan Standard Time on 20 December 2017 on the eAPO web portal: http://eAPO-tokyo.org

Note: Participants can register directly from this portal on the APO website. Those who are already registered can access the course by using the assigned username and password. If you have forgotten your username and password, please refer to the help page on the home page of the portal.

8. Objectives

The main objective of the course is to familiarize learners with the evolution of lean manufacturing systems, including the latest developments, and enable them to incorporate lean management practices into the concept of Industry 4.0. It is also intended to achieve the following specific objectives:
a. Reviewing the concepts of lean manufacturing systems and their most recent developments;
b. Outlining the detailed steps in creating lean systems;
c. Discussing how to combine lean manufacturing, technological advances, and big data analytics in the Industry 4.0 era; and
d. Revisiting lean concepts to enhance their relevance in the current context of rapid technological change.

9. Background

Lean manufacturing is a system of techniques and activities widely adopted to improve productivity. It is also involves reducing operational costs by the elimination of waste and activities that do not add value. The Industry 4.0 concept emphasizes the establishment of smart factories with advanced ICT and future-oriented technologies including cyberphysical systems, the Internet of Things, big data analytics, cloud computing, and cognitive computing. It is thus possible to combine the two concepts into a single approach to achieve greater efficiency on the production floor.

The integration of lean manufacturing and Industry 4.0 appears inevitable with the increasing need to raise production efficiency in manufacturing. It will allow interconnectivity of

production lines and functions, raising productivity to higher levels.

This e-learning course on Integrating Lean Manufacturing Systems and Industry 4.0 Concepts consists of 10 modules covering fundamental lean concepts that can be integrated into Industry 4.0. The course will benefit production and manufacturing floor managers who want to learn about new concepts and techniques to increase overall production efficiency.

10. Scope and Methodology

Scope
The course will cover the following modules:

Module 1:   Overview of Lean Manufacturing Systems
Module 2:   Introduction to Fundamentals of Lean Manufacturing
Module 3:   Initiating the Lean Process
Module 4:   Creating Process Stability
Module 5:   Standardizing Work
Module 6:   Implementing the Pull Prediction System
Module 7:   Preventing Failure with Jidoka
Module 8:   Engaging People
Module 9:   Planning for Lean Adoption
Module 10:   Lean Implementation Enabled by Industry 4.0
Module 11:   Final Examination

Methodology
Module study, additional study material for participants, intermittent quizzes for self-assessment, and a final examination to qualify for the APO e-certificate for eligible participants.

11. Qualifications of Candidates

The target groups are production or manufacturing floor managers, particularly from SMEs or other relevant private/public entities, productivity practitioners, and those involved in adopting lean systems and seeking a better understanding of Industry 4.0.

12. Eligibility for e-Certificate

A minimum score of 75% on the final examination is required to qualify for the APO e-certificate.

Note: Participants from nonmember countries are welcome to take the course for self-development, although APO e-certificates will not be provided.

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