



ASIAN PRODUCTIVITY ORGANIZATION

## PROJECT IMPLEMENTATION PLAN

6 June 2017

1. **Project Code:** 17-IN-06-GE-DLN-A-05
2. **Project Title:** Self-learning e-Course on Material Flow Cost Accounting (ISO 14051)
3. **Reference:** Project Notification 17-IN-06-GE-DLN-A dated 22 December 2016
4. **Timing:** 1 July–31 December 2017 (six 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 1 July 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. Objective:

To impart knowledge to participants on the basic concept and principles of material flow cost accounting (MFCA) and enhance their understanding of ISO 14051.

### 9. Background

The concept of MFCA, developed in Germany in the late 1990s and since adopted widely in Japan, focuses on tracing waste, emissions, and nonproducts and can help boost an organization's economic and environmental performance. It is one of the major tools of environmental management accounting (EMA). EMA is a set of procedures used within corporations and other organizations for linking environmental considerations with economic objectives. Today, organizations cannot ignore the environmental aspects of their activities and consequently seek management tools to link concern for the environment with economic considerations. MFCA is a management tool that promotes the efficient use of materials more effectively, contributing to reductions in waste, emissions, and nonproducts. MFCA increases the transparency of material flow, which is a key to successful problem solving and improvement.

To standardize MFCA practices, a working group of the ISO Technical Committee ISO/TC 207, Environmental Management, developed ISO 14051, which complements the ISO 14000 family of environmental management system standards, including life cycle assessment (ISO 14040, ISO 14044) and environmental performance evaluation (ISO 14031). The standard was published in the second half of 2011. This course will cover the basic concept of MFCA and enhance understanding of ISO 14051.

## **10. Scope and Methodology**

### **Scope**

The course will cover the following modules:

- Module 1: General Concept of MFCA
- Module 2: Background to the MFCA Standard ISO 14051 (Standardization History and Dissemination of MFCA)
- Module 3: Understanding the MFCA Standard ISO 14051 I (Scope, Terms, and Definition) and Quiz
- Module 4: Understanding the MFCA Standard ISO 14051 II (Objectives and Principles of MFCA)
- Module 5: Understanding the MFCA Standard ISO 14051 III (Fundamental Elements of MFCA) and Quiz
- Module 6: Understanding the MFCA Standard ISO 14051 IV (MFCA Implementation Steps)
- Module 7: Final Exam

### **Methodology**

Self-learning e-modules, additional study material for participants, intermittent quizzes for self-assessment, and a final examination to qualify for the APO e-certificate.

## **11. Qualifications of Candidates**

The target groups are environment/Green Productivity/energy management personnel, trainers or consultants, and senior/mid-level managerial and technical personnel from industry in the environmental field.

## **12. Eligibility for e-Certificate**

A minimum score of 70% 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.



Santhi Kanoktanaporn  
Secretary-General



ASIAN PRODUCTIVITY ORGANIZATION

## PROJECT NOTIFICATION

22 December 2016

1. **Project Code** 17-IN-06-GE-DLN-A
2. **Title** Self-learning e-Courses for the Industry and Service Sectors
3. **Timing and Duration** Throughout 2017
4. **Implementing Organizations** APO Secretariat and National Productivity Organizations (NPOs)
5. **Number of Participants** 400 participants per course
6. **Registration** APO Institute of Productivity e-learning web portal:  
<http://apo-ipro.org/>  
(Participants can register directly on this portal through the APO website.)

### 7. Objectives

- a. To provide basic training to numerous participants in productivity tools and techniques in selected subject areas of broad significance related to the industry and service sectors in a cost-effective manner;
- b. To introduce productivity concepts and techniques that are related with the technological advancements and innovations such as smart technologies, smart factory etc.
- c. To create a pool of certified productivity professionals and practitioners with best-in-class knowledge of the most recent productivity trends and best practices.

### 8. Background

In addressing the need of APO member economies to maintain know-how on productivity tools and techniques of relevance in specific subject areas, the APO develops self-learning e-courses and offers them on its e-learning portal (<http://apo-ipro.org/>). These courses are developed based on the APO's experience and knowledge accumulated over years of organizing capacity-building projects in its focus areas. In 2011, the APO conducted a highly successful pilot self-learning e-course on the Occupational Health and Safety Management System (OHSAS 18001) that received positive feedback and drew more than 2,700 participants. In 2013, two self-learning e-courses on Integrated Management Systems and Material Flow Cost Accounting were offered. In 2014, the APO implemented/launched four self-learning e-courses on the Environmental Management System, Energy Management System, Information Security Management System, and Climate Change. In 2015, self-learning e-courses on ISO 26000:2010 Guidance on Social Responsibility, SA8000:2014

Social Accountability International, Green Growth and Ways to Operationalize It for Green Economy Development, and OHSAS 18001 were offered. In 2016, the APO organized similar self-learning e-courses on productivity practices, Green Productivity, etc. As a way to improve the deliverability of the courses, in 2017 the APO will offer a new platform of courses that are more animated and interactive on OHSAS 18001, Sustainable and Resilient Supply Chains and Integration into Global Value Chains, Green Productivity, and Integrated Management Systems (Basic) in addition to any other relevant courses on productivity tools and techniques that will be delivered in the standard format. For each course, separate project implementation plans (PIPs) containing specific information on the course and subject will be issued. NPOs are requested to start promoting the courses only after receiving the PIP.

## **9. Scope and Methodology**

### **Scope**

The scope of each course will be decided based on the chosen subject and will be detailed in the PIP issued later for each course.

### **Methodology**

Each course will consist of self-learning e-modules, additional study material for participants, intermittent quizzes for self-assessment, and a final examination to qualify for the APO certificate. All learning modules, carefully prepared by internationally recognized experts, will be uploaded to the APO Institute of Productivity e-learning web portal.

## **10. Modality of Implementation**

Courses will be offered through <http://apo-ipro.org>, the e-learning web portal of the APO Institute of Productivity. Participants can register on this portal and create their own accounts. Registered participants are required to complete all learning modules and self-assessment quizzes before taking the final examination. Based on the results of the final examination, successful participants from APO member economies will be awarded APO certificates that can be downloaded from the e-learning portal itself.

## **11. Special Features**

- a. Participants can register on the APO Institute of Productivity e-learning web portal and create accounts by themselves.
- b. Registered participants' progress will be tracked and monitored by the APO Secretariat throughout the course.
- c. Participants can complete the course at their own pace within the prescribed official duration of the course.
- d. Completion of all modules and quizzes is compulsory before taking the final examination.
- e. A minimum score of 70% on the final examination is required to qualify for the APO e-certificate. The e-certificates will be sent to participants' registered e-mail addresses one day after completion of the final examination.
- f. Successful participants may be given preference based on merit for selection to attend future APO multicountry face-to-face projects on the same subject in consultation with NPOs.

## **12. Qualifications of Candidates**

The target groups are productivity practitioners, consultants, engineers, managers, and all professionals working in the subject area concerned. They may come from industries, the business sector, NPOs, government organizations/departments, universities, and consultancy firms who wish to acquire a working knowledge of the subject.

## **13. Financial Arrangements**

### **To be borne by the NPOs**

- a. Coordination, communication, and promotional support for the course.
- b. Any other local costs.

### **To be borne by the APO**

- a. All costs related to the development of the self-study modules, additional study material(s) pertaining to the course, self-assessment quizzes, examinations, and e-certificates.
- b. Cost of hosting the course on the APO Institute of Productivity e-learning web portal and operating it from the APO Secretariat.


## **14. Actions by Member Countries**

Member countries/NPOs are requested to:

- a. Promote and market the courses by sending the project notification and PIP to as many relevant organizations as possible and encouraging all interested individuals to participate.
- b. Upload the course announcement on the NPO's website and/or provide a link to the APO Institute of Productivity e-learning web portal.
- c. Interact with registered participants and provide them with required inputs and guidance, if necessary.
- d. Provide all necessary support and cooperation proactively to the APO Secretariat for successful implementation of the course.

## **15. Participation of Individuals from Nonmember Countries**

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



Santhi Kanoktanaporn  
Secretary-General

