



ASIAN PRODUCTIVITY ORGANIZATION

PROJECT IMPLEMENTATION PLAN

7 October 2016

- 1. Project Code** 16-IN-04-GE-DMP-C-02
- 2. Title** Development of Demonstration Companies (MFCA-linked Lean Manufacturing for SMEs in the Manufacturing Sector, India)
- 3. Reference** Project Notification 16-IN-04-GE-DMP-C dated 19 November 2015
- 4. Timing and Duration** The duration of the implementation of the project will be from 12 to 15 months including the dissemination period. The commencement date is scheduled for November 2016. Tentative details of the implementation schedules will be given later.
- 5. Implementing Organization** National Productivity Council (NPC), India
- 6. Mission** The mission of an APO Productivity Demonstration Company is to convey success stories on the development and implementation of productivity improvement initiatives undertaken by all stakeholders. An APO Productivity Demonstration Company should epitomize an enterprise-wide productivity movement that achieves business expansion, increases profits and customer satisfaction, reduces waste, enables energy saving, and leads to fair, equitable, mutually satisfying productivity gain-sharing for both management and workers.

7. Objectives

Under an APO Productivity Demonstration Company project, the designated National Productivity Organization (NPO) is expected to:

- a. Showcase how an organization can successfully design and implement productivity improvement initiatives with the commitment and active participation of all productivity stakeholders;
- b. Demonstrate visibly and tangibly how productivity improvement initiatives lead to outstanding results for the organization;
- c. Illustrate the benefits of productivity gain-sharing in boosting the motivation, morale, welfare, and overall achievements of the workers; and

- d. Disseminate results of the model organization to inspire other institutes, workers, and all stakeholders to promote productivity more vigorously in their workplaces.

8. Background

In response to the project notification for the development of demonstration companies dated 19 November 2015, the NPC submitted a proposal for a demonstration company project on material flow cost accounting (MFCA)-linked lean manufacturing for SMEs in the manufacturing sector, leveraging the synergy of the two productivity enhancement methodologies and expected to contribute to the “zero-defect, zero-effect” outcome that India’s recent industrial policies aim to achieve.

MFCA is a management tool that promotes efficient use of materials and energy, contributing to reductions in nonproducts, waste, and emissions. With its international standard, ISO 14051, MFCA has helped numerous SMEs reduce waste and costs and thus increase overall productivity. Lean manufacturing, on the other hand, is a systematic approach to production aiming at optimization of production streams and removal of all types of unnecessary waste. It has been extensively adopted in industries, services, and the public sector, and, with its pursuit of continuous improvement, has evolved into a management philosophy that helps organizations to improve their efficiency. With the combined effect of these two powerful productivity tools, the proposed project intends to develop the demonstration companies into role models in the value chains which achieve harmony among product quality, business efficiency, and environmental sustainability while fostering innovation as an extension of existing manufacturing processes to enhance the technological capacity of SMEs.

The APO has organized numerous projects related to MFCA and lean manufacturing, including two demonstration company projects on MFCA in Thailand and Mongolia in 2013 and 2015, respectively, and one demonstration company project on lean applications in the service sector in Vietnam in 2009. The APO is commissioning this project for the multiplier effects envisaged by the NPC as well as to extend its continuous efforts to promote productivity improvement and sustainable manufacturing.

9. Collaborating Partners

This project is to be implemented in close collaboration with the following parties:

- a. The APO Secretariat (hereafter referred to as the APO);
- b. The NPC, India (hereafter referred to as the NPO); and
- c. Modvak Engineering India Pvt. Ltd., United Cores Pvt. Ltd., Reva Industries Ltd., Sanatan Autoplast Pvt. Ltd., Matrix Tools India, and Hind Hydraulics & Engineers (hereafter referred to as the demonstration companies).

10. Roles and Responsibilities

The collaborating parties will perform the following duties:

The APO

- a. Coordinate communication among the international expert(s), NPO, and demonstration companies to ensure smooth implementation of the project;
- b. Identify, select, and assign an appropriate international technical expert(s) to the demonstration companies to implement productivity improvement plans and activities based on MFCA and lean manufacturing; and
- c. Advise the NPO and demonstration companies on planning and organizing a dissemination workshop for local participants and, if applicable, a multicountry observational mission for overseas participants enabling them to learn directly from the experiences of the demonstration companies.

The NPO

- a. Appoint a coordinator from the NPO office/NPO branch office who will serve as the focal point for communication and coordinate the overall schedule for implementation of the project in the country;
- b. Provide, in addition to a coordinator, the necessary number of technical experts from the NPO to work as counterparts to the international expert(s) assigned by the APO;
- c. Monitor closely the process of implementation, particularly the key performance areas;
- d. Measure the productivity improvement progress at the demonstration companies using quantitative and qualitative data and analyses;
- e. Coordinate and supervise the companies in the production of a multimedia record such as video/DVD demonstrating the experiences of the demonstration companies;
- f. Assist and supervise the demonstration companies in preparing an interim report and comprehensive final report for submission to the APO;
- g. Organize a dissemination workshop upon completion of the project to enable experience sharing and learning by the local public and/or international participants following the advice of the APO;
- h. Compile the overall activities of the project in a practical, easy-to-follow manual/guidelines so that similar exercises can be replicated by other enterprises in the country; and
- i. Prepare a final report, stressing analyses of the impact of the demonstration project on NPO activities and productivity promotion in the region in general, as well as suggestions/recommendations for replication in the country with emphases on the utilization of local talent, local networks, and local resources.

The Demonstration Companies

- a. Accept and facilitate consultancy services conducted by the expert(s) assigned by the APO and counterpart experts from the NPO;

- b. Designate a coordinator and necessary team members to work closely with the APO and NPO team of experts;
- c. Arrange all logistical requirements relating to the project (such as local transportation, discussion rooms, etc.) for both the APO expert(s) and counterpart experts from the NPO;
- d. Submit an interim report at midterm to review the progress of implementation and identify corrections and adjustments as necessary;
- e. Record on video from the start of the process of implementation activities to produce a multimedia record such as video/DVD upon completion of the project in association and consultation with the NPO;
- f. Announce, publicize, and prominently display the APO's presence and involvement in the demonstration companies throughout the duration of the project;
- g. Share the experiences of the demonstration companies with local and overseas parties who are interested in learning about productivity improvement via applying MFCA and lean manufacturing;
- h. Present the experiences in a dissemination workshop to be organized upon completion of the project; and
- i. Prepare a comprehensive final report for submission to the APO explaining the initiatives and technical details of the projects, overall analyses of the benefits, impact of the implemented methodologies of MFCA and lean manufacturing, and competitiveness gained by the demonstration companies upon completion of the project.

11. Expense Sharing

The APO

- a. All expenses for assignment of the international expert(s), covering airfare, daily subsistence allowances, and overseas travel insurance;
- b. Expenses* for producing a practical manual for replication of the experience (to be prepared by the NPO) of up to USD2,000;
- c. Expenses* for the production of a video/DVD (to be prepared by the NPO) of up to USD3,000; and
- d. Expenses* for conducting a dissemination workshop for the local public (to be arranged by the NPO) of up to USD5,000.

*The disbursement of expenses will be made at the appropriate times corresponding with the specific activities undertaken and following submission of the necessary supporting documents under the applicable APO rules and regulations for disbursement of project expenses. Please also refer to clause 14-c of this document.

The NPO

- a. Expenses relating to the assignment of a coordinator and NPO expert(s) involved in this project.

The Demonstration Companies

- a. Expenses for logistical arrangements related to the implementation of the project, including the local travel costs of the APO international expert(s) and NPO experts for transportation between the demonstration companies/sites and the NPO office/branch office;
- b. Costs associated with the purchase and installation of equipment and/or fixtures relating to the implementation of the project, if any; and
- c. All other expenses for the implementation of the project not covered by the APO and/or NPO.

12. Methodology

The project will be conducted in the following three stages:

- Planning;
- Implementation; and
- Dissemination.

The planning stage consists of a diagnostic survey regarding the application of MFCA and lean manufacturing, which includes understanding the operations of the demonstration companies, identifying the challenges faced by them, collecting data and information, and developing a master plan for the remainder of this project and the implementation of MFCA and lean manufacturing in the demonstration companies. This stage will also involve the capacity building of all stakeholders engaged in the implementation. It is expected to be completed within two to three months.

The implementation stage involves the actual application of MFCA and lean manufacturing in the demonstration companies to improve their production systems, waste management, and overall productivity. This refers to practical, action-oriented, on-site activities that involve the international and local experts, NPO, and all other stakeholders. This stage will be carried out by the demonstration companies with the guidance of the experts and is expected to be completed in eight to 10 months.

The dissemination stage evaluates the improvement efforts and initiatives implemented. It also extracts the main lessons learned to provide a practical guide and encourage other organizations to follow it in the future. Among the main activities expected in this stage are the finalization and production of a practical manual, a multimedia record, and the organization of a national dissemination workshop. This stage should be completed in two months.

13. Project Schedule

It is expected that four visits of an APO expert(s) will be required for this project, although the actual number and duration will be identified by the expert(s), demonstration companies, and the APO after the first expert visit in December 2016. Subsequent visits should tentatively be scheduled at intervals of two to three months such as in February, April, and July 2017. The duration of each visit should be approximately within one to two weeks subject to the availability of the expert(s) and approval by the APO.

14. Accounting Procedures

- a. In regard to the expenses for the multimedia record and training manual production, 50% of the APO share can be advanced after the Project Implementation Plan is issued. The remaining 50% will be paid in exchange for the training manual, multimedia record, and final project report according to the proof of expense payment.
- b. If a local seminar/workshop is to be held, 50% of the APO share can be advanced before the seminar/workshop implementation and the remaining 50% will be paid after implementation according to the proof of expense payment.
- c. For the settlement of expenses, the NPO is requested to provide all necessary proof of payment to the APO after completion of the program. The proof of payment, such as bills, payment records, and receipts, should be issued by third parties and must be submitted to the APO altogether at one time. The proof of payment should be written in clear English or with an English translation if not originally in English. The final payment will be made based on the actual expenditure after the NPO submits the proof of payment, training manual, multimedia record, and the final project report. In general, internal evidence is not accepted as proof of payment and the expenses claimed by it will not be reimbursed.

15. Final Project Outputs

The Demonstration Company Project will be completed with the submission of the following:

- a. A final report prepared by NPO and demonstration companies and endorsed by the NPO;
- b. Practical manual for replication (in soft copies and/or printed hard copies) prepared by the NPO and demonstration companies; and
- c. A multimedia record such as video/DVD of the experiences of the demonstration companies prepared by the demonstration companies.

The APO will issue a certificate of completion to the demonstration companies upon completion of the project.



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