1. Project Code: 15-IN-73-GE-TRC-B

2. Title: Training Course on Industrial Engineering Techniques for Productivity Improvement in SMEs

3. Timing and Duration: 23–27 November 2015 (five days)

4. Venue: Nadi, Fiji

5. Implementing Organization: National Training & Productivity Centre (NTPC)
   Fiji National University
   Address: Hotel & Catering School Buildings, 2/8 Queen Elizabeth Drive, Nasese, Suva, Fiji
   Phone: 679-3311-004/3313-074/9990-724
   Fax: 679-3311-756
   e-Mail: warea@labour.gov.fj

6. Number of Overseas Participants: Up to 18 qualified overseas participants from Bangladesh, Cambodia, Republic of China, India, Indonesia, IR Iran, Lao PDR, Malaysia, Mongolia, Nepal, Pakistan, Philippines, Sri Lanka, Thailand, and Vietnam. Other member countries with special interest in this project may nominate candidates upon consultation with the APO Secretariat.

7. Number of Local Participants: Up to six qualified participants

8. Closing Date for Nominations: 1 September 2015

9. Objectives:
To train participants in the application of industrial engineering (IE) techniques to analyze and control work processes to increase productivity, reduce costs, and improve quality in organizations.

10. Background:
IE is an abbreviation familiar to engineers and productivity practitioners, which was initiated through a scientific management approach. The performance of workers is observed, recorded, and analyzed, and a new set of more efficient methods for shorter operation times is developed to form new work processes. This helps to achieve higher productivity, which can
lead to higher wages for workers. Since IE was identified as a powerful tool for operational efficiency, it has been widely studied and further refined and thus become a popular field of study in academia.

The Institute of Industrial Engineers defined IE as a technique “concerned with design, improvement, and installation of integrated systems of people, materials, information, equipment, and energy. It draws upon specialized knowledge and skill in the mathematical, physical, and social sciences, together with the principles and methods of engineering analysis and design, to specify, predict, and evaluate the results to be obtained from such systems.” The IE concept and technique have been widely applied to work processes for productivity improvement.

IE techniques used to only be utilized by engineers and specialists at the supervisory level. However, nowadays, with the understanding that productivity improvement comes from each and every individual regardless of work level, IE techniques have become a tool deserving the attention and commitment of all, and thus everyone in any organization can be empowered by this tool to improve work efficiency. This training course aims to train participants to apply IE techniques in SMEs, which is in line with the APO’s strategic direction of strengthening SMEs in member countries. During this course, participants will acquire skills for analyzing and streamlining work flow and can thus improve their work quality, cost efficiency, and work time management.

11. Scope and Methodology

Scope:
The tentative modules will include:
a. History and overview of IE;
b. Method study from process flow to motion study;
c. Work measurement; and
d. Process line balancing.

Methodology:
This training course will consist of interactive lectures, exercises, case studies, and observational site visit.

The tentative program is outlined below:

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>Sun., 22 November 2015</td>
<td>Arrival of participants in Nadi</td>
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<tr>
<td>Mon., 23 November 2015</td>
<td>Opening session, course introduction, and overview of IE</td>
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<tr>
<td>Tues., 24 November 2015</td>
<td>Methodology (1)</td>
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<tr>
<td>Wed., 25 November 2015</td>
<td>Site visit</td>
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<tr>
<td>Thurs. 26 November 2015</td>
<td>Methodology (2) and workshop</td>
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<tr>
<td>Fri., 27 November 2015</td>
<td>Action plan presentation, summary, and closing session</td>
</tr>
<tr>
<td>Sat., 28 November 2015</td>
<td>Departure of participants from Nadi</td>
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</tbody>
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12. Qualifications of Candidates

The participants are expected to possess the following qualifications:
Present position: Trainers/consultants who provide productivity improvement consultancy for SMEs or SME managers in manufacturing and related industries who wish to acquire knowledge of IE tools and implement such techniques to enhance productivity.

Experience: At least five years of experience in consultancy for productivity improvement or in managing SMEs in the manufacturing sector.

Education: University degree or equivalent qualification from a recognized university/institution.

Language: All proceedings of the project are conducted in English, and participants are frequently required to make oral and written presentations. They must therefore be proficient in spoken and written English. Those who are not proficient in English will not be accepted.

Health: Physically and mentally fit to attend an intensive project requiring participants to complete a number of individual and group activities and strenuous fieldwork. It is therefore recommended that member countries not nominate candidates likely to suffer from physical and mental stress.

Age: Candidates meeting the above qualifications are typically between 35 and 50 years of age.

APO certificate: Participants are required to attend the entire training course to receive the APO certificate of attendance.

13. Financial Arrangements

To be borne by participants or participating countries

For participants from profit-making organizations except for SMEs, and from APO member countries other than Bangladesh, Cambodia, Lao PDR, Mongolia, and Nepal

a. Round-trip international airfare between the member country and Nadi; and

b. Participating country expenses of US$50.00 per participant, payable to the APO in convertible currency.

For all participants

a. All participants should be fully insured against accident and illness (including hospitalization and death) for the principal sum of US$10,000 for the entire duration of the project and travel and must submit to the APO before participation a copy of the comprehensive travel insurance certificate valid in Fiji. This insurance requirement is in addition to existing government insurance coverage in some member countries. If any participant is unable to insure himself/herself as stipulated above, he/she should secure...
this insurance in the host country at the commencement of the project and pay the premium himself/herself. Neither the APO nor the implementing organization will be responsible for any eventuality arising from accident or illness.

b. Any expenses incurred by participants for stopovers on the way to and from the project venue or for extra stay at the project venue before and/or after the official project period due to early arrival, late departure, or any other reason.

c. Any expenses related to visa fees and airport taxes.

**To be borne by the host country**

a. Per diem allowance and hotel accommodation for up to 18 overseas participants for up to six days at the rate to be specified later.

b. Assignment cost for local resource persons.

c. All local implementation costs.

**To be borne by the APO**

a. All assignment cost of overseas resource persons.

b. Round-trip economy-class international airfare by the most direct route between the international airport nearest to the participants’ place of work and Nadi for all participants from Bangladesh, Cambodia, Lao PDR, Mongolia, and Nepal, and for participants from nonprofit organizations and SMEs from other APO member countries. As far as practicable, all participants should purchase discount tickets (following IATA PEX or other applicable discount fares). Please note that the arrangements for the purchase of air tickets should follow the “Guide on Purchases of Air Tickets for APO Participants,” which will be sent to the selected participants and is available on the APO website and from APO Liaison Officers in member countries.

14. **Actions by Member Countries**

a. Each participating country is requested to nominate three or more candidates in the order of preference. Please ensure that candidates nominated meet the qualifications specified under section 12 above.

b. No form of self-nomination will be accepted. All nominations must be endorsed and submitted by an APO Director, Alternative Director, Liaison Officer, or their designated officer.

c. Please note that nomination of a candidate does not necessarily guarantee that he/she will be selected. Selection is at the discretion of the APO Secretariat. A basic criterion for selection is the homogeneity of the participants in terms of qualifications and work experience. Nonselection therefore does not mean that the candidates concerned are not competent enough. Sometimes candidates are not selected because they are overqualified for a project.
d. Each nomination should be accompanied by the necessary documents. A nomination lacking any of these documents may not be considered: two copies of the candidate’s biodata on the APO biodata form together with a passport-sized photograph. The biodata form can be downloaded from the APO website (www.apo-tokyo.org). We encourage submitting the biodata form to the APO Secretariat in electronic form as an attachment to a cover e-mail message from the APO Director, Alternate Director, or Liaison Officer. The nomination documents should be sent to the Industry Department, APO Secretariat (e-mail: ind@apo-tokyo.org; fax: 81-3-5840-5324).

e. The APO Medical and Insurance Declaration/Certification Form. Every candidate must complete and submit a copy of the APO Medical and Insurance Declaration/Certification Form with his/her biodata at the time of nomination. Please note that self-declaration is sufficient for candidates without any of health conditions or illnesses listed on the reverse side of the medical form. However, for all others, medical certification by a licensed physician on the reverse side of the medical form is required.

f. Necessary documents are to be submitted electronically. In that case, there is no need to send a hard copy by postal mail. However, if the documents are submitted by fax, member countries are requested to mail the originals of the documents to the APO Secretariat as well. If a digital photograph of a nominee is not attached to the electronic biodata form, a hard-copy photograph should be sent to the APO Secretariat by postal mail. Please give the candidate’s name and the project code on the reverse side of the photograph.

g. Member countries are requested to adhere to the nomination deadline given on page 1. The APO Secretariat may not consider late nominations as they have in the past resulted in considerable difficulties to the implementing organization in its preparatory work for the project.

h. For member countries where nominations are required to be approved by higher government authorities and require a longer time, the APO Liaison Officers/NPOs are urged to send the names of nominees on or before the deadline, indicating that government approval will follow.

i. If a selected participant becomes unable to attend, he/she should inform the APO Liaison Officer/NPO in his/her country immediately and give the reason for withdrawal. The NPO concerned is requested to transmit that information to the APO Secretariat and the host country promptly.

j. NPOs are requested to inform the selected participants that they are not to bring family members or to engage in any private business activities during the entire duration of the project.

k. Each selected participant should be instructed to arrive at the venue one day before the start of the official project. Also, he/she is expected to return home upon completion of the official project because he/she is visiting the host country for the specific purpose of attending this APO training course.

l. NPOs should inform participants that they must attend all five days of the project to
qualify for the certificate of attendance.

**15. Actions by the APO Secretariat**

a. Under normal circumstances, candidates who are selected will be informed of their acceptance at least four weeks prior to the start of the project.

b. If some candidates fail to qualify or are unable to participate after selection, or if some member countries fail to nominate any candidate, their slots may be filled by alternates from the same or another member country on a merit basis.

**16. Postproject Actions**

All participants are required to prepare action plans during the training course, and share the plans with their NPOs. The APO will also request participants to submit progress reports six months after completion of the training course.

**17. Guide for Participants**

Other conditions for participation are given in the *APO Guide for Participants*, which is available from APO Liaison Officers/NPOs in member countries and on the APO website (www.apo-tokyo.org).

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Mari Amano
Secretary-General