

Productivity E-Newsletter

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Research to support SMEs in adopting Industry 4.0



Under its COE Program, the APO is assessing the level of digitization and the critical needs of SME to achieve it.

The initial research coordination meeting was attended by chief expert Dr. Eva Diedrichs, Managing Director of IMP³rove–European Innovation Management Academy of Germany, and five national experts.

During the coordination meeting, the team of APO experts defined the project scope, including data collection and analysis methods and timeline. They also designed a set of questionnaires to assess current levels of digitization and the critical needs of SME to

achieve it. Recommendations on national SME digitization strategies will be generated through the research.

In APO economies, however, while SMEs are on a fast-growth trajectory, only a small fraction of them have access to the type of ICT commonplace in larger enterprises. SMEs must also overcome numerous barriers before taking full advantage of Industry 4.0 opportunities, including a lack of digitization knowledge, steep learning curve involved, and difficulty in defining the starting point. The newly designated APO COE under the NPC will support SMEs in member countries in their move

toward digitization and in staying competitive in global value chains as the Fourth Industrial Revolution proceeds.

During the coordination meeting, NPC Director General and APO Alternate Director for India Dr. Vandana Kumar pointed out that SMEs accounted for 80% of jobs in the Indian manufacturing sector. “They are directly impacted by Industry 4.0 and therefore India cannot ignore related trends,” she stressed, highlighting the importance of the COE and what the country expects to achieve through it.

Centre of Excellence on IT for Industry 4.0

“CoE will function as a knowledge center”



Industry 4.0 or the fourth industrial revolution as it is called, is emerging globally as a powerful force and is being touted as the next industrial revolution. It is characterized by the increasing digitization and interconnection of products, value chains and business models. Industry 4.0 is driven by an amalgamation of emerging technologies like data volumes, computational power, Internet of Things (IoT), business analytics, augmented reality, artificial intelligence, elemental design, simulation, advanced robotics and cyber-physical systems. Industry 4.0 would mean the convergence of real and

virtual worlds - the next phase in bringing together conventional and modern technologies in manufacturing. Today, the global manufacturing sector is undergoing a structural transformation. A new paradigm that is in tune with the digital 21st century is fast emerging which is driven by Industry 4.0 (I 4.0).

NPC has established a “Centre of Excellence on IT for Industry 4.0 (CoE: IT for I4.0)” in collaboration with Asian Productivity Organization (APO).

Scope of CoE

- CoE will function as a knowledge center for the entrepreneurs, start-ups regarding concepts of

information technology and its application in Industry 4.0

- CoE will also disseminate this knowledge through workshops, lectures and training programmes
- CoE will also coordinate with APO for guest faculty to disseminate knowledge regarding practical applicability of industry 4.0 in other countries
- CoE will also facilitate display of latest technology / demonstration projects for helping the new start-ups.
- CoE will also facilitate establishment of CoEs in other non- APO countries especially in Africa.

APO research on science, technology, and innovation



Scientific advances, technological changes, and innovative value creation are important drivers of productivity and economic growth. Effective science, technology, and innovation (STI) systems can absorb technical know-how, strengthen scientific capabilities, improve firm innovation, and lead to sustainable growth. However, STI policies (STIPs) must be well designed to contribute their full economic potential.

To determine the key trends impacting these factors in member economies and review collaborative linkages among STI actors and recent developments in STIPs, the Asian Productivity Organization (APO) held a three-day

coordination committee meeting in Vientiane, Lao PDR, 21–23 November 2017. The meeting was the start of an APO research project to support more informed policymaking by its member countries.

The one-year research will examine the latest trends impacting STI and future of STI systems in member countries. It will also involve cross-country comparative analyses of STIP priorities, assessment of the effectiveness of instruments used to monitor STI performance, and review of key strengths and weaknesses of STI systems. After agreement on the research format, methodology, and coverage at the Vientiane meeting, the final report will present

future STI scenarios, provide policy insights for efficient interventions to strengthen national economies, and make recommendations to encourage stronger linkages among STI players.

The coordination meeting was inaugurated by Department of SME Promotion Deputy Director General Dr. Keomorakhoth Sidlakone of the Ministry of Industry and Commerce, Lao PDR. Subsequent discussions were led by the APO chief expert from Japan, Prof. Atsushi Sunami of the National Graduate Institute for Policy Studies, Tokyo.

“Effective science, technology, and innovation (STI) systems can strengthen scientific capabilities, improve firm innovation, and lead to sustainable growth.”

Productivity Practitioner Course



NPC entered into MoU with AICTE, with the aim to conduct low cost internationally recognized Asian productivity Organization (APO) Certified Basic and Advanced Productivity Practitioners courses for students or technical colleges and universities. First programme on Productivity Practitioner was conducted at DAV Institute of Engineering and Technology Jalandhar. Programme was conducted during 18-22, September 2017 and participated by 45 Students.

“Manufacture goods in the country with "zero defects" and to ensure that the goods have "zero effect" on the environment”

Zero Effect – Zero Defect

On India's 68th Independence Day, Hon'ble Prime Minister Shri Narendra Modi urged the industry, to manufacture goods in the country with "zero defects" and to ensure that the goods have "zero effect" on the environment. ZED model was developed addressing quality and environmental requirements of Domestic and Foreign customers. Adapting this model will help industries to improve their quality and environmental performance. Govt of India is conducting various programmes to create eco system for the promotion of this model.

One of the programme ZED-Consultant, was conducted at Ludhiana during 18-22, December 2017.



Tata International Limited

NPC undertook the Productivity improvement study at Tata International Limited, Finished Leather Business at Dewas, Madhya Pradesh.

Factors causing gap between present and proposed norms were identified. Some of the gaps identified are; gap between material and information flow causing delay in processing, blockage of material handling equipments causing

underutilization of operators, rework, rejections, employee motivation level were identified.

Process Failure Mode Effects Analysis (PFMEA) demonstration workshops were conducted for the Dye house in order to reduce failure rate, rework and improve efficiency.

Automation, line balancing, layout improvement opportunities were identified in the plant with an objective to

reduce the human effort in material handling, enhance resource utilization, reducing manual subjectivity in the process, reducing non value added activities and increase labour productivity.

Study suggests that by improving non value added activities, there is a possibility of enhancing labour productivity by 4.84%.

“improving Non value added activities , enhances labor productivity”

Performance Audit of PESO

National Productivity Council has carried out a performance audit of Petroleum & Explosives Safety Organisation (PESO). The study has examined the futuristic

challenges of the hydrocarbon & non hydrocarbon sector and has assessed the capability and readiness of PESO to meet those challenges.

The study has come with suitable measures which need consideration in order to further enhance the capability of PESO.

Dr Nitin Aggrawal,
Editor
National Productivity Council
5-6, Institutional Area,
Lodhi Road,
New Delhi, 110003

Phone 011 24607336

nitin.a @npcindia.gov.in

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www.npcindia.gov.in

Latest News

1. State Level Meet of BEE Certified Energy Manager and Auditor sponsored by Gujarat Energy Development Agency on 17th January, 2018 at Ahmedabad
2. BEE certified Energy Managers/Auditors Meet organised by NPC, Gandhinagar with Gujarat Energy Development Agency at Vadodara on 23rd Jan, 2018
3. Result- National Certificate in Supervision- 2017. [Read more..](#)

Upcoming Events

1. Eighth Regional 3R Forum in Asia and the Pacific During 9 – 12 April, 2018 at Indore, Madhya Pradesh, India. [Read more..](#)
2. Enhance the Managerial Skills of your Team Members through Distance Learning Course on **National Certificate in Supervision (NCS) Examinations** – 2018. Last date for receipt of Application is 15th June, 2018. [Read more..](#)
3. Empanelment of Consultants, Experts & Trainers. [Click Here For Apply](#)
4. Students Internship Program. [Click Here For Apply](#)

Upcoming Training Programs

| S.N | Title of Programme | Programme Date | Programme Venue/ Location | Participant Fee (Rs.) | Programme Details (Invitation letter/ Brochure) |
|-----|--|-------------------|---------------------------|----------------------------------|---|
| 1 | Productivity & Competitiveness Measurement for Organizational Excellence | Feb 20-24, 2018 | Munnar | 48,000+GST(R) 36,000+GST(NR) | Click Here |
| 2 | Negotiation & Conflict Resolution Strategies | 12-18 March, 2018 | Port Blair | 48,000 +GST(R) 38,000+GST(NR) | Click Here |
| 3 | Role of ICT in driving Government Performance | March 12-16, 2018 | Kanyakumari | 47000+GST(R) 35000+GST(NR) | Click Here |

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Meet with us:
National Productivity Council
5-6, Institutional Area, Lodi Road, New Delhi - 110003
Tel: 011-24690331, Fax: 011-24615002
Email: npcinfo@npc.india.gov.in | Website: www.npcindia.gov.in