



WORKSHOP ON DEMYSTIFYING SMART MANUFACTURING



All nations are talking about the storm of Smart Manufacturing / IOT / Industry 4.0. Classical models of manufacturing and business are giving way too much more collaborative, self-aware, innovative and productive techniques, using data sourced directly from sensors, machines, vendors and customers. This has a direct impact on competitiveness and quality of goods and services of an enterprise. Samarth Udyog is the goal of the Indian Manufacturing Ecosystem and is achievable in a manner that works for you. To strengthen the 'Make in India' eco-system with adoption of smart technologies, the Automation Industry Association and IIT Delhi have created a Special Purpose Vehicle, called the Foundation for Smart Manufacturing (FSM) to take the emerging wave of Smart Technologies and adapt it with relevance to the needs of grass root manufacturing in MSME and talent incubators in Educational and Vocational Institutes. Delivering consistent quality backed by stringent norms through the production and manufacturing pipeline, right from

raw material sourcing to finished product delivery for the quality conscious end user, it is essential that Indian industry aligns itself towards adopting newer and tested quality assurance practices. To facilitate, introduce and enlighten industry with an evolved genre of quality focused smart manufacturing, **Quality Council of India** supported by **IITD-AIA Foundation for Smart Manufacturing** brings to you an awareness workshop with hands-on exposure in the FSM Cyber Physical Laboratory.

REGISTER NOW

LAST DATE FOR REGISTRATION: Monday, 22nd October 2018

Workshop Agenda

Date: Monday, 29th October 2018

Time: 09:00 AM – 05:30 PM

Venue: 422, 3rd Floor, Mechanical Engineering Block,
IIT Delhi, Hauz Khas, New Delhi – 110016

PROGRAM SCHEDULE

09:30 – 10:00	Registration
	Keynote
	Session Type: Lecture
10:00 – 10:30	Theme: <i>Global Smart Manufacturing Scenario and Implications for India</i>
	Speakers:
	Mr. C K Biswas, CEO, NBQP, Quality Council of India
	Mr. Ravi Agarwal, Vice President AIA and Director FSM
	Technical Session - 1
10:40 – 11:40	Session Type: Demos in Laboratory + Lecture
	Theme: <i>Role of Sensors, Human-Machine Interaction, Precision Control in the Quality Journey</i>
	Lead Instructor: Prof. Sunil Jha, IIT Delhi and Director FSM
11:40 – 12:00	Tea & Phone Break (20 minutes)
	Technical Session - 2
12:00 – 13:00	Session Type: Case Studies + Lecture
	Theme: <i>Demystifying the Digital Thread and 'Anywhere' Data</i>
	Lead Instructor: Prof. Sunil Jha, IIT Delhi and Director FSM
13:00 – 13:40	Lunch & Phone Break (40 minutes)
	Laboratory Session - 1
13:40 – 14:40	Session Type: Demo + Hands - On in Laboratory
	Theme: <i>Familiarisation with the Building Blocks of Smart Automated Machines</i>
	Laboratory Facilitators: Mr. Arun Kumar – Mr. Onkar Chawla – Mr. Akash Tiwari
14:40 – 15:00	Tea & Phone Break (20 minutes)
	Laboratory Session - 2
15:00 – 16:00	Session Type: Demo + Hands - On in Laboratory
	Theme: <i>Familiarisation with Collaborative, Digital, Engineering and Asset Management Tools</i>
	Lab Facilitators: Mr. Tushar Ghosh – Mr. Prakhar Mishra – Ms. Preeti Joshi
	Concluding Thoughts
	Session Type: Open House
	Theme: <i>Road Map for Samarth Udyog / Smart Industry</i>
16:15 – 17:15	Moderator: Mr. Anup Wadhwa, AIA
	Panelists:
	Mr. Dilip Kumar, Head-Technical & Projects, East West Infosolutions
	Mr. Arun Kapur, COO (International Business), Luxor Writing Instruments
17:15 – 17:30	Certificates Distribution by Mr. Avik Mitra, Senior Advisor, NBQP, Quality Council of India
17:30 – 18:00	High Tea – Networking

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PROGRAM FEES

	Basic Fee	GST @18%	Total	
QCI & AIA Members	₹3,600/-	₹648/-	₹4,248/-	<i>Fee includes Course Materials Food & Beverages</i>
Others	₹4,000/-	₹720/-	₹4,720/-	

PROGRAM OVERVIEW

Inaugural Theme: Global Smart Manufacturing Scenario and Implications for India - Manufacturing industry is responding to consumer and environment demands with a high degree of technological innovation that is being fuelled by the rapid convergence of Information and Automation processes. The competitive equation is no longer determined by low wages. It is being replaced by speed, flexibility and first-time right abilities.

Technical Theme - 1: Role of Sensors, Human-Machine Interaction, Precision Control in the Quality Journey - Quality assurance is largely a function of the material processing and inspection functions, whereas cost competitiveness is largely a function of idle time reduction and waste elimination. Sensors are the 24*7 watchdogs, measuring every minute aspect of operation. Information that is relevant for automated control is passed on to PLCs or Servos, whereas information to alert and guide plant personnel is presented via appropriate Human-Machine interface devices. This session will help participants understand the various classifications of Sensors, HMIs and Control Systems used in modern machineries.

Technical Theme - 2: Demystifying the Digital Thread and 'Anywhere' Data - Possibilities of Cyber Physical integration are increasing rapidly because of the rapid deployment of cloud based digital platforms. It is now possible for people to collaborate sitting far away from each other. This session will help participants differentiate general IoT platforms with IIoT platforms. It will also cover relevant digital services for manufacturing such as deployment of Augmented Reality and Analytics.

Laboratory Session - 1: Familiarisation with the Building Blocks of Smart Automated Machines - This session offers a practical and live demonstration of a smart machine, built for precision assembly. Lab facilitators will provide hands on opportunity to participants to experience Presence Sensors, RFID, Vision Systems, Touch-screen interactive HMIs, Process and Motion Control Systems that are deployed globally in Smart Automated Machines

Laboratory Session - 2: Familiarisation with Collaborative, Digital, Engineering and Asset Management Tools - This session offers a live demonstration of software tools and cloud-based services. With the help of simple case studies, participants can experience how physical components are converted into 'digital' format and presented for human collaboration. Some of the tools that will be available are 3D Visualisation, Augmented Reality and Real-time Analytics.

Panel Discussion Theme: Road Map for Samarth Udyog / Smart Factory - The indicators of 'Samarth Udyog' or Smart Factory will be presented by the panelists and these will be discussed in an open house format. This session will also provide participants an opportunity to explore a few relevant steps they can initiate in their existing roles, to prepare for the journey into Smart Manufacturing.

EXPECTED PARTICIPANT PROFILE

- Manager level and above from manufacturing and process industries dealing with technical subjects
- Consultants and Auditors / Assessors of the above domain
- Academicians
- Any professional who wants to understand the future of Industry 4.0

ADVISED EXPOSURE

- Basic Exposure to Manufacturing Functions
- Understanding of Real-time data
- Responsibility for Improvement Projects

KEY TAKEAWAYS

- Participants attending this programme would get a balanced view of the fundamental shifts taking place relevant to the Indian ecosystem.
- They will also have an exposure to the possibilities of 'Digitalisation' - its benefits as well as key challenges.
- They will go back with a basic framework of readiness for Industry 4.0.
- Participants who have their internal systems and budgets already set for improving quality and transparency can start identifying teams, technologies and detailed engineering needs for conducting proof-of-concept activity.

IITD and AIA have launched the 'Foundation for Smart Manufacturing', a fully integrated smart manufacturing and learning facility for discrete and hybrid manufacturing segments such as automotive, machine tools, consumer durables, processed food, and others. The Government of India has approved this project as a Common Engineering Facility Center (CEFC) under the Samarth Udyog Mission.



Samarth Udyog

A Government of India Initiative



Indian Institute of
Technology Delhi

Hosting Institute



Department of Heavy Industry
Ministry of HI & PE

Government of India



Automation Industry
Association

Industry Partner

PROGRAM CO-ORDINATOR

**Quality Council of India
Automation Industry Association**

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