

INDUSTRY 4.0

And Supply Chain Transformation Workshop

A 3-day training and project facilitation program that includes hands-on technology interaction at Smart Technologies Lab (located at Singapore Polytechnic)



Overview

The Industry 4.0 & Supply Chain Transformation Workshop is a hands-on workshop to provide basic knowledge and foundation on new emerging technologies and its impact on logistics and supply chain management. These include the applications of smart robotics, Internet of Things, Robotic Process Automation (RPA), Machine Learning and Deep Learning. The Supply Chain Transformation workshop is run in conjunction with SMU Academy and conducted by Supply Chain Asia's facilitators. The entire program will be supported by SCA's network of industry professionals and veterans and will include practical hands-on application, site visits, development of your own company case study, formation of proposals to justify ROI as well as submission for application of grants from relevant local agencies (may not be applicable to every company and support will be given on a case-by-case basis).

Program Outline

- Day 1 - Overview of Industry 4.0/Advanced Analytics
- Day 2 - Robotic Process Automation & Internet of Things
- Day 3 - Autonomous Technologies & Robotics

For training dates - please visit our website for more information.

Register Now!

Industry 4.0 & Supply Chain Transformation Workshop

Industry 4.0 is sometimes explained as the fusion of digitalization with traditional industrial processes. This results in intelligent value chains and product lifecycles that start with development, go through manufacturing, assembly, product delivery and maintenance, and end with recycling.

The 4.0 represents the fourth revolution that has taken place in manufacturing and extending its impact to various other industries, particularly, the Supply Chain & Logistics.

The first industrial revolution featured mechanization through water and steam power. The second industrial revolution was the beginning of mass production and assembly lines using electricity. This was followed up by Industry 3.0, characterized by the adoption of computers and automation.

In recent years, Industry 4.0 has come to be associated with the various specific technologies such as Internet of Things (IoT), autonomous technologies and robotics as well as artificial intelligence. In this context, Supply Chain 4.0 refers to the next step in adoption of new and emerging technologies, with robotics, smart machines as well equipment and systems becoming connected to the Internet of Things, and enhanced through by deep learning and machine learning algorithms.



Program Objectives

Industry 4.0 emphasizes a concept known as “predictive maintenance/analytics.” This is all about predicting when potential problems are going to arise before they actually happen. Without IoT, preventative maintenance is an inefficient manual task. With IoT systems in place, preventive maintenance is much more automated and streamlined. Systems can sense when problems are arising or machinery needs to be fixed, and can empower you to solve potential issues before they become bigger problems.

Asset tracking and optimization via IoT influenced automation and robotics also helps manufacturers to become more efficient with assets at each stage of the supply chain. It allows manufacturers to keep better track on inventory, quality and optimization opportunities relating to logistics. Additionally, standard asset management tasks such as asset transfers, disposals, reclassifications, and adjustments can be streamlined and managed centrally and in real time.

Other benefits from IoT-infused Industry 4.0, include:

- Richer and more timely analytics
- Digitizing and making sense of information
- Improving customer satisfaction and customer experience
- Improving product quality or keeping product quality intact
- Boost efficiency and profitability across the entire organization
- Real-time insights that lead to better, faster decisions
- Providing all team members with up-to-date, relevant views of production and business processes

In applying the benefits of technologies arising from Industry 4.0 into supply chain and logistics, autonomous applications that are integrated through the end to end process structure will lead to the optimization of a highly customized, flexible and efficient distribution management. It could potential impact the entire supply chain management, engaging its upstream as well as downstream integration.

In a Smart Warehouse context, there will be absolute control over the entire storage and distribution process. The digital integration of information provides real-time access to the data, which will be chosen for each product, distributor or consumer profile so that they are relevant to the business.

COURSE OBJECTIVES & OUTLINE

Industry 4.0 & Supply Chain Transformation workshop covers key concepts of future smart logistics and supply chain, the cyber-physical systems and physical processes within these various operating process and infrastructure as well as the virtualization techniques and intelligent decision making capabilities which would support managers in leading these initiatives.

WHAT YOU WILL LEARN FROM THIS PROGRAM

The program aims to help participants envision and lead strategic and technical elements of Industry 4.0-based organizational transformations. The course will:

- Demystify key Industry 4.0 and the ecosystem of stakeholders involved, particularly in the logistics and supply chain sectors
- Review sample road maps for the real-world application of Industry 4.0 across a range of organizations in the supply chain industry, and its business and technological impacts.
- Connect its participants with leaders and managers from diverse roles and organizations and understand their opportunities and challenges.
- Provide use cases of successful Industry 4.0 implementations in supply chain and logistics on an ongoing basis.

Key Benefits of Participating in this program

Acquire data, tools and techniques to drive change and leverage Industry 4.0 across your organization.

This 3-day intensive workshop integrates rich, interactive learning activities as well as traditional didactic components. There are opportunities for collaborative learning through discussion. Small group projects provide participants with a complete overview of the field of Industry 4.0 in business, operation and technology contexts, including emerging and innovative topics:

- List requirements for a specific operation or process to be considered Industry 4.0.
- Explore how Industry 4.0 will change the current supply chain and logistics technologies and management processes by digitalizing the value chain.
- Understand key Industry 4.0 components such as: automation & autonomous technologies, data exchanges, cloud, cyber-physical systems, mobile, robots, Big Data, AI, deep machine learning, IoT and agile methodology.
- Explore impact of IoT, autonomous robotics, cloud computing, cyber security, 5G mobile technologies, big data tools, and other areas are driving Supply Chain & Logistics growth & development.
- Leverage Industry 4.0 technologies for competitive advantage in logistics and supply chain applications.
- Strategize about how to create a culture to support Industry 4.0 and innovation in your company.
- Recognize ways to build Industry 4.0 power and influence in your organization.
- Recognize Data security issues and IT security principles, reliability and stability, and maintaining the integrity of the production process.
- Leverage Interoperability, Information transparency and Decentralized decision-making applied to machines, devices, sensors and people that connect and communicate with one another.
- Observe cyber-physical systems to make simple decisions on their own and become as autonomous as possible.

Core modules

- Demystifying Industry 4.0
- Understand Key Industry 4.0 Technologies
- Applications Data Analytics Techniques & Tools
- Aligning Industry 4.0 and Strategies

Day 3 Demystifying Smart Technologies

Practical overviews on Artificial Intelligence, Machine Learning and Deep Learning will be covered in this section.

In addition, participants will also explore the adoption of the various innovative solutions and scope out a potential project that could be implemented or adopted by their companies.

Day 2 Demystifying Smart Technologies

Practical overviews on 2 key technologies will be covered in this section:

- Internet of Things (IoT)
- Robotic Process Automation (RPA)

Day 1 Introduction to the Digitalisation of Supply Chain

Participants will get a hands-on practical overview of the applications and use cases of various smart technologies including

- Internet of Things
- Machine Learning
- Robotic Process Automation
- Virtual Reality
- Augmented Reality

Target Audience

This programme is suitable for the following:

- Supply Chain & Logistics executives and managers
- SMEs and manufacturers who manage their own logistics operations
- Third party logistics service providers

Participation fees:

- Full Course Fees - **S\$3,745.00 (S\$3,500 w/out GST)**
- @70% funding - Singaporeans and PRs. Nett Fees payable = **S\$1,123.50 (S\$1,050 w/out GST)**
- @90% funding - Singaporeans above 40 or participants sponsored by SMEs. Nett Fees payable = **S\$423.50 (S\$350 w/out GST)**
- @95% funding - For those on WTS. Net course fee payable = **S\$248.50 (S\$175 w/out GST)**

Registration can be done online at www.supplychainasia.org or fill up the enclosed registration form and email to us at admin@supplychainasia.org.