SELANGOR HUMAN RESOURCE DEVELOPMENT CENTRE (SHRDC)

INDUSTRY 4.0 FOR SME - GET STARTED WITH SMART FACTORY

Course Description

The programme offers options and demonstrations of available technologies to support SMEs to upgrade and digitize their operations to improve manufacturing, towards Industry 4.0 standards.

Who Should Attend?

Business leaders and owners with their technical team leads.

Duration

2 days

Objectives / Benefit from attending the program

- ✓ Understand the components of smart factory and cyber-physical systems. The program offers demonstration of enabling technology and tools that facilitates the implementation of Industry 4.0
- ✓ Identify the platforms supporting industrial IT within the 3 main areas; cloud-based services, big data and analytics, smart operation technology
- ✓ Understand the underlying technology for digital factory, insights in digital twin and digital product memory
- ✓ Able to understand possibilities of connecting existing manufacturing with new technologies that may include Internet of Things (IoT), automation and artificial intelligence.

Course Outline

Day 1

- Smart Factory
  - Smart Factory Concept
  - The Smart Factory System Architecture
- Cyber-Physical Systems
  - Automation Pyramid
  - Relevant Communication Standards

- Case Study
  - Proof-of-Concept
- Technology Demonstration
  - IO Link Sensors
  - IoT Gateway
- NodeRED
  - MQTT
  - Activities
- Discussion & knowledge sharing

DAY 2

- Cloud-based Services
  - Analysis and design principles for cloud and edge connections
  - Interoperable IT-based communication standards
- Big Data & Analytics
  - Analysis and design principles for (big) data analytical applications
- Technology Demonstration
  - Cloud platform
  - Visualization
  - Machine Learning
- Smart Operation Technology
  - Design and implementation of advanced human-machine-systems
  - Analysis and design principles for usability and user acceptance
- Digital Twin
  - Analysis and design principles for digital twin representations
  - Interoperable information models for description of digital twins (machines, tools, equipment)
- Digital Product Memory
  - Analysis and design principles for cross-value-chain digital product memories
  - Interoperable information models for description of products
- Technology Demonstration
  - Product Lifecycle Management (PLM) platform
- Assessment

SHRDC contact:
Koo Yi Lin
03 5513 3560 ext 407 / 017 575 6622
koo.yilin@shrdc.org.my