

# **LEAN MANUFACTURING FOR SMEs**

## **FOR HIGH-/MID-/FRONTLINE-LEVEL MANAGERS FROM MANUFACTURING**

**17-19-21 October 2011 - Malta Enterprise - Malta**

### **COURSE TIMETABLE**

#### **DAY 1**

##### **Module 1 World Class Manufacturing Operations**

- Understanding the scenario

##### **Module 2 Value Adding Management In Manufacturing Industry**

- Focusing on the productive processes to maximise the output value
- Identifying waste in manufacturing operations

##### **Case Studies and Movie Time: "Spot The Waste!"**

##### **Module 3 Systematic Elimination Of Waste In Manufacturing Industry**

- What is waste: Classification of waste
- The SOCO (5S) approach as a starting point for fighting waste
- Halting waste proliferation
- Reducing waste
- Eliminating waste

##### **Module 4 Productive Systems**

- The "Batch" and "Line" types of operations
- The "push" and "pull" productive methods
- The Kanban approach to pull production
- Why the Kanban method is no longer to be considered "lean" and in which cases it should be adopted
- Effects of the "push" method

##### **Case Study - The "Stock" Issue**

##### **Module 5 Productive Process Time And Cost Analysis**

- Identifying value-adding and non-value-adding activities
- Understanding "takt-time", "throughput-time", WIP (work-in-progress) and their inter-relationships

##### **Module 6 The Target**

- Continuous Flow Production, or production with no waste

##### **Module 7 The Relationship Between**

- JIT - Just in Time, LM - Lean Manufacturing and Flow Production
- The development of the Toyota Production System (TPS) into Lean Manufacturing – what are the main differences.

##### **Module 8 The Small-Lot Production Systems: The Smaller The Lot, The Less The Waste!**

##### **Case Study - One-Piece Flow vs. Batch Production - Interactive Exercise**

##### **Module 9 Flow Production In Three Different Situations**

- Labour-intensive
- Machine-intensive
- Combination

##### **Case Studies and Movie Time**

#### **DAY 2**

##### **Module 10 The Stock Issue**

- Why does stock pile up and (sometimes) flood the factory?

##### **Module 11 What Are The Necessary Requirements To Implement Flow Production**

- Flow Production's golden rules
- How to reduce drastically all lead times through flow production: Produce today what your customers ordered yesterday

##### **Module 12 Is Continuous Flow Production Suited To You?**

- The product-quantity analysis
- Process mapping
- Process-raising studies

### **Module 13 Cell Production And Group Technology**

- Design of manufacturing cells: Principles and techniques
- When to consider One-Piece-Flow production and Cell Manufacturing
- How to improve productivity by a minimum of 35%, by eliminating the bulk of the waste

### **Module 14 Plant, Equipment, Machinery, Layouts And Flow Production**

- The relationship between Lean Manufacturing and Total Productive Maintenance (TPM)
- Lean Disciplines: TPM basic principles for the Manufacturing Industry
- Not all machines are suited for Flow Production: How to avoid the “super star galactica” cul-de-sac

### **Module 15 Flow Production And Quick Change-Over: The Missing Link**

- Lean Disciplines: The Quick Change-Over approach
- How to improve set-up and change-over time by 50% to 80%
- How to achieve "instantaneous change-over" situations

#### ***Live Simulation***

## **DAY 3**

### **Module 16 Total Quality Management (TQM) and Lean Manufacturing**

- TQM 2010: Customer focus attitude – The ISO system requirements - Typical Quality Assurance and Control Systems – Documented TQM Systems. The techniques: Reactive and Proactive Quality Systems – Process Control Techniques – Quality Reporting and Analysing – Quality Improvement Techniques
- Lean Disciplines: The 6 Sigma Methodology for drastic reduction of process variability – overview.
- The Poka-Yoke approach.

#### ***Case Studies: The 100% Testing Approach In Manufacturing***

#### ***Interactive Case Study: The Poka-Yoke approach for Zero-Defects***

### **Module 17 How To Deploy LM Techniques In The Manufacturing Industry**

- Starting from the top or from the bottom?
- Can Flow Production be extended factory-wide? The mixed “push/pull” compromise
- Where and how to position the “coupling” between the “push/batch” and the “pull/flow” systems
- Basic Lean and Continuous Flow principles for the Continuous Process manufacturing industry and the highly mechanised/automated factory

### **Module 18 Value Stream Management: A Global Approach To Lean**

- The Value Stream Mapping technique: A practical deployment of all Lean Disciplines in an integrated fashion
- The VSM “storyboard”: A common, practical tool understandable both to Top Management and to Shop-floor people
- The “Milestone Charter” and the Kaizen approach to the implementation of Lean Improvement projects

### **Module 19 New Operations Management Style for Lean Manufacturing**

- Simple is beautiful!
- Small is beautiful!

### **Module 20 People for Lean Manufacturing: Multi skill, Multi-function, Flexible, Responsible, Empowered**

- New challenges for Human Resources Management, and new frontiers in people performance
- Management's and employees' approach to Lean Manufacturing
- TEI -Total Employee Involvement and Lean Manufacturing: The perfect symbiosis

#### ***Lean Manufacturing: A Cultural Revolution***

For further, comprehensive details, please visit  
<http://www.scodanibbio.com/malta2011/>