

## Supply Chain Academy

### Program “Lean manufacturing in SCM”

Description content per Lesson



## General introduction

1

- The training module “Lean manufacturing in SCM” put lean and 6sigma in the context of Supply Chain Management and creates awareness of application in your business throughout the organization.
- The 10 lessons give a comprehensive overview from different angles of Lean in Supply Chain Management. It is considered as one of the main pillars to build your business on.
- The total program takes 3 days. Different work forms will be used in a highly interactive setting.
- All 10 lessons will prepare the participant for his job and for future participation in Supply Chain Processes and Activities. He will learn to recognize the potential improvements in the own environment, and will get into an action mode to realize these improvements.



## The Lessons

2

1. Waste elimination
2. A lean improvement methodology
3. Leadership
4. The transparent workplace
5. Lean process improvement
6. Lean product development
7. Just-In-Time
8. Controlling processes
9. Standard work
10. Continuous improvement



## Lesson 1: Waste elimination

3

1. The importance of Waste Elimination
2. The seven popular wastes
3. The nature of wastes
4. Correcting wastes
5. Seven additional wastes within manufacturing
6. Twelve wastes within Warehousing/Transportation
7. The waste of complexity
8. The "ilities"

### Exercise



## Lesson 2: A lean implementation methodology

4

1. Lean transformation
2. Lean implementation methodology



## Lesson 3: Leadership

5

1. Leadership
  2. Organization culture
- Exercise**
3. To become lean
  4. Managing complex change
  5. Elements of change
  6. Lean change infrastructure



## Lesson 4: Transparent workplace

6

1. What are processes?
2. Visual order and control
3. What are value-added activities
4. A value added step
5. Value versus non-value added
6. Flow analysis
7. Value stream mapping
8. Brown paper mapping
9. Typical process flow analysis
10. Visual order – the 5 Ss
11. The 6 Ss
12. Visual control
13. Andon warning lights



## Lesson 5: Lean process development

7

1. Womack and Jones lean thinking principles
2. Emphasis on process flow
3. Continuous flow
4. Major flow inhibitors
5. Production systems
6. Batch manufacturing
7. Using production lines
8. Load leveling
9. Line balancing
10. Cellular manufacturing
11. Cell design
12. Apply parts presentation
13. Shadow boarding right-sized equipment
14. Operator versatility



## Lesson 6: Lean product development

8

1. Initial design
2. Design for manufacturing and assembly (DFMA)
3. Traditional design
4. Design improvement
5. The IPPD team approach
6. Cost factors
7. Time reduction benefits
8. Flattened BOMs
9. Using failure mode and effects analysis (FMEA)



## Lesson 7: Just-In-Time

9

1. JIT definition
2. Relation to lean
3. Inventory reduction
4. Pull systems and Kanban
5. Load leveling / takt time
6. Batch flow versus single piece flow
7. Workers versus takt time
8. Setup time reduction



## Lesson 8: Controlling Processes

10

1. A lean environment
2. Self-verification
3. Error prevention
4. Root cause analysis



## Lesson 9: Standard work

11

1. Standard work
2. Standard work components
3. Cycle / takt time and line balancing
4. Machine / work sequence
5. Standard work-in-process



1. Six sigma
2. Six sigma philosophy
3. The six sigma methodology
4. Variability
5. Sources of process variability
6. Cost of quality
7. Kaizen
8. Kaizen event
9. Performance measurement

