

Training Objectives

- ★ Manage, lead and organize the Lean approach in project mode
- ★ Manage complex projects at Black Belt level
- ★ Define and deploy an approach adapted to the company and its objectives

PROGRAM OVERVIEW

DEFINE

History of Lean, the 7 wastes, VA and NVA, the Gemba Walk, the 5S, etc.

MEASURE AND ANALYZE

Problem solving, Spaghetti flow, Takt Time, OEE/GEE, etc.

IMPROVE

Theory of constraints, WIP, quality control tools, maintenance, etc.

CONTROL

Involvement of the personnel, animation rituals and visual management.

PLAN PRODUCTION ACCORDING TO COMPLEX ORDERS

Queueing tool, ERP, product mix, changeover planning, etc.

IMPROVE AND STRETCH THE FLOWS

Takt Time, existing and future VSM, flow analysis, FIFO, Kanban, etc.

PILOT AND MAINTAIN PERFORMANCE

Kaizen meetings, standards, logistics rounds, AUP/EAP, etc.

LEAN APPLIED TO SERVICES

Yamazumi, Takt Time appliqué to the office, etc.

LEAN OFFICE DIAGNOSTIC TOOLS

SMED, TPM, Swimlane, etc.

LEAN OFFICE IMPROVEMENT

New employees, Kanban, training, etc.

MAINTAIN PERFORMANCE

Agile methods, visual management, standards, SCRUM, etc.

ROLE OF A BLACK BELT

Hoshin, A3 report, Supply Chain, etc.

CAPACITY

Line balancing, advanced OEE/GEE, etc.

DEPLOY LEAN

Standard, agility, visual management, etc.

BLACK BELT PROJECT

FMECA, expert interviews, DDMRP, etc.

YELLOW BELT SECTION

1. **Notion** : Introduction
2. **Notion** : Tutorial
3. **Video** : Lean history
4. **Notion** : The 7 types of Waste
5. **Notion** : The Gemba Walk
6. **Mini-game** : The 5S method
7. **Video** : Value Added and Non-Value Added
8. **Mini-game** : Red / Green Analysis Mini-Game
9. **Notion** : The Indicators
10. **Video** : Project-scoping tools
11. **Video** : The DMAIC method
12. **Notion** : The Dashboard
13. **Challenge** : Factory : First diagnosis
14. **Challenge** : Factory : Second diagnosis
15. **Video** : The 5 key principles of Lean
16. **Video** : The difference between Lean & Lean Six Sigma
17. **Quiz** : The basics of Lean and the definition of a project
18. **Video** : Red/Green interactive analysis
19. **Notion** : The Spaghetti Diagram
20. **Notion** : The Relocation
21. **Challenge** : Relocate a production line (difficulty level 1)
22. **Challenge** : Relocate a production line (difficulty level 2)
23. **Notion** : Assigning logisticians
24. **Challenge** : Manage logistics (difficulty level 1)
25. **Challenge** : Manage logistics (difficulty level 2)

- 26. Notion** : The Relocation
- 27. Challenge** : Relocate a production line (difficulty level 1)
- 28. Challenge** : Relocate a production line (difficulty level 2)
- 29. Notion** : Assigning logisticians
- 30. Challenge** : Manage logistics (difficulty level 1)
- 31. Challenge** : Manage logistics (difficulty level 2)
- 32. Video** : The Takt Time and the Cycle Time
- 33. Notion** : The VSM (Value Stream Mapping)
- 34. Challenge** : Relocate a production line and manage logistics
- 35. Mini-game** : Problem Solving : 4W1H
- 36. Mini-game** : Problem Solving : Ishikawa Diagram
- 37. Mini-game** : Problem Solving : 5 Why
- 38. Video** : Control tools
- 39. Quiz** : Measure and analyze flow performance
- 40. Notion** : Transported Batch Size
- 41. Challenge** : Manage the transported batch size
- 42. Challenge** : Manage the transported and logistic batch size
- 43. Video** : Lead Time and Little's law
- 44. Notion** : Work-in-process
- 45. Challenge** : Manage the Work-in-process (difficulty level 1)
- 46. Challenge** : Manage the Work-in-process (difficulty level 2)
- 47. Challenge** : Manage the batch size and the Work-in-process
- 48. Challenge** : Diagnosis : Manage a production line with 3 workstations
- 49. Challenge** : Manage a production line with 3 workstations
- 50. Video** : The Bottleneck and Theory of constraints

- 51. **Challenge** : Diagnosis : Identify and eliminate a bottleneck
- 52. **Challenge** : Identify and eliminate a bottleneck
- 53. **Video** : The 10 commandments of Kaizen
- 54. **Quiz** : Initiate improvement projects
- 55. **Challenge** : Diagnosis : Manage a production line with 5 workstations
- 56. **Challenge** : Manage a production line with 5 workstations
- 57. **Video** : The Standard
- 58. **Mini-game** : Standard Mini-Game
- 59. **Video** : Animation rituals
- 60. **Challenge** : Diagnosis : Manage a production line with 6 workstations
- 61. **Challenge** : Manage a production line with 6 workstations
- 62. **Quiz** : Control and sustain performance
- 63. **Quiz** : Pass your Yellow Belt level in 50 questions!

GREEN BELT SECTION

- 1. **Notion** : Introduction
- 2. **Quiz** : Let's review the basics of Yellow Belt
- 3. **Video** : Red/Green interactive analysis - Complex
- 4. **Challenge** : Diagnosis : Why did we expand the factory? We're running out of cash!
- 5. **Challenge** : Why did we expand the factory? We're running out of cash!
- 6. **Notion** : Customer Order
- 7. **Video** : Queueing Management Tool
- 8. **Notion** : The ERP : Enterprise Resource Planning
- 9. **Quiz** : Constraints related to customer orders
- 10. **Quiz** : VSM's are hard
- 11. **Video** : KANBAN : How it works

- 12. **Video** : KANBAN : Limits and uncertainties
- 13. **Notion** : Product Mix
- 14. **Challenge** : Manage the changeover with 2 colors
- 15. **Video** : SMED Method
- 16. **Mini-game** : SMED Method
- 17. **Video** : EPEI calculation
- 18. **Notion** : Changeover planning
- 19. **Challenge** : Manage a production line (difficulty level 1)
- 20. **Notion** : FIFO (First In, First Out)
- 21. **Challenge** : Adapt to customer demand
- 22. **Video** : TPM
- 23. **Quiz** : Tools and methods linked to the product mix
- 24. **Notion** : Logistic routes or Milk run
- 25. **Challenge** : Set up a milkman system
- 26. **Quiz** : Preparation for the Green Belt final quiz
- 27. **Challenge** : Manage a production line with 3 references
- 28. **Challenge** : Manage a production line (difficulty level 2)
- 29. **Challenge** : Manage a production line (difficulty level 3)
- 30. **Challenge** : Manage a production line (difficulty level 4)
- 31. **Quiz** : Pass your Green Belt level in 50 questions!

GREEN BELT OFFICE SECTION

- 1. **Notion** : Introduction to Green Belt Office
- 2. **Quiz** : Positioning quiz Green Belt Office - Agile
- 3. **Quiz** : Let's review the basics of Yellow Belt
- 4. **Challenge** : Diagnosis : Why did we expand the factory? We're running out of cash!
- 5. **Challenge** : Why did we expand the factory? We're running out of cash!

6. **Video** : The 5 principles and 7 wastes of Lean adapted to the Office
7. **Quiz** : the 5 principles and 7 wastes of Lean adapted to the Office
8. **Quiz** : VSM
9. **Video** : Process Mapping (Yamazumi)
10. **Challenge** : The Basics of Yamazumi
11. **Challenge** : Managing the Yamazumi with 3 departments
12. **Challenge** : Re-location of departments
13. **Challenge** : The VA and the NVA in Yamazumi
14. **Challenge** : Let's review the basics of the office
15. **Quiz** : Yamazumi & Swimlane
16. **Video** : TPM
17. **Video** : SMED Method
18. **Mini-Game** : SMED Method Mini-Game
19. **Quiz** : SMED TPM
20. **Video** : Additional employees
21. **Challenge** : Several employees per department
22. **Challenge** : A fourth service
23. **Video** : Kanban : how it works
24. **Video** : The Standard
25. **Quiz** : JIT, Kanban, Standards
26. **Video** : Visual Management
27. **Video** : Queuing Management Tool
28. **Video** : Lean and Agile, differences and similarities
29. **Quiz** : Quiz : agile, rituals and visual management
30. **Quiz** : Pass your Green Belt level in 50 questions!

BLACK BELT SECTION

1. **Notion** : Non-quality and quality control station
2. **Challenge** : Faulty drones: Quality control
3. **Notion** : The Jidoka
4. **Challenge** : Faulty drones: The Jidoka
5. **Quiz** : Cycle Efficiency calculation: VSM, Takt Time & Calculations
6. **Quiz** : flow analysis and capacity of a production line
7. **Quiz** : Black Belt training n°1 with timer
8. **Notion** : The Poka-Yoke
9. **Challenge** : Faulty drones: The Poka-Yoke
10. **Challenge** : Non-quality everywhere
11. **Quiz** : Production equipment performance calculation (OEE, GEE)
12. **Quiz** : Team and autonomous production and Kaizen Blitz
13. **Quiz** : Black Belt training n°2 with timer
14. **Notion** : Machine breakdowns and maintenance
15. **Challenge** : Unreliable machines
16. **Challenge** : An efficient maintenance team
17. **Challenge** : Problems everywhere, help!
18. **Quiz** : Flow management (FIFO, Kanban, Heijunka Box and Pace Maker)
19. **Quiz** : Series change and lot size (SMED & EPEI methods)
20. **Quiz** : Black Belt training n°3 with timer
21. **Notion** : The Kanban
22. **Challenge** : A new organization for logistics
23. **Challenge** : A solution for every problem
24. **Quiz** : Black Belt training n°4 with timer
25. **Quiz** : Animation rituals, visual management (Obeya)
26. **Quiz** : Black Belt Final training with Timer