



*Conference:
Lean Six-Sigma Green Belt Certification
Programme*

*12 - 16 July 2027
Barcelona (Spain)*

Conference: Lean Six-Sigma Green Belt Certification Programme

Conference code: CO8055 From: 12 - 16 July 2027 Venue: Barcelona (Spain) - Conference Fees: 6300 € Euro

Introduction

This high-impact conference is designed to develop participants into certified Lean Six-Sigma Green Belts by equipping them with practical tools and methodologies for process improvement and operational excellence. The program combines Lean principles and Six-Sigma techniques to help organizations reduce waste, minimize process variation, improve quality, increase efficiency, and enhance customer value. Through hands-on applications, participants will learn how to drive continuous improvement and achieve measurable business results.

Objectives

Participants attending this program will:

- Enhance their understanding of the basic level Lean Six-Sigma process.
- Learn to successfully deploy Six-Sigma into current business operations for effectiveness through teamwork.
- Learn the basics of Lean Six-Sigma methodology, statistical analysis, and its analytical integration into the business process.
- Learn to integrate the principles of Lean Six-Sigma to establish process control and minimize process variation, subsequently, reducing operational costs.
- Develop their understanding of the skills and behaviors required to fully deploy Lean Six-Sigma into your organization.

Target Audience

- Quality Assurance and Quality Control Professionals
- Process Improvement and Continuous Improvement Specialists
- Operations and Production Managers
- Lean and Six-Sigma Practitioners
- Supply Chain and Logistics Professionals
- Manufacturing and Industrial Engineers
- Project Managers and Team Leaders
- Business Process Analysts
- Professionals involved in operational excellence initiatives
- Organizations seeking to improve efficiency, reduce costs, and enhance process performance

Outlines

Day 1: Understanding the strategic power of Six-Sigma Methodology

- VOC, stakeholders & process owners, CTQ elements
- The basis of Six-Sigma; history and development; Understanding DMAIC process
- Strategic concepts & benefits of Benchmarking
- Six-Sigma deployment: DMAIC Concept

- Tollgate concept for Six-Sigma organizational functionality
- The power of data analysis in organization effectiveness and clarification
- Concepts of the Kano Analysis—three key elements of customer awareness
- Six Sigma in action. Project charters—Six-Sigma project integration
- The impact of lean process and Six Sigma, the perfect algorithm
- “Do It Yourself Six-Sigma” The application of Project Templates
- Defining Timelines and Deliverables—a clear project game plan
- The focus on value creation in business processes
- “Speed and Accuracy” Blending proven processing concepts
- Quality function deployment QFD for business operations
- Six Sigma as a Strategic Strategy and a Measurement of organizational quality
- Data-driven decision making—removing subjectivity in business decisions
- Key Metrics & Drivers for Organizational effectiveness market share
- World-Class Transformation to enhance competitiveness
- Kano analysis; three levels of customer responsiveness

Day 2: Six-Sigma Deployment for organization effectiveness

- Calculation: The costs of poor quality: COPQ; Understanding ROI
- Attribute and Continuous Data—recognizing the differences for application
- Descriptive and Inferential statistics—knowing when to use what
- Histograms. Measures of central tendency—normal statistical distributions
- Normal Distributions, Standard Scores, Z tables
- Student’s t-Tests, statistical degrees of freedom
- Process Capability - a voice of the process; central tendency of the data set
- Statistical Mean, Median & Mode; Calculation of Sigma Failure Rates; DPMO
- Microsoft Excel & Minitab Statistical Software Applications
- Process Base Line; Data Collection Plan
- $Y = f(x)$ - Matrix; Identification of KPIV
- Graphing Discrete & Continuous Data; software interface
- Graphing Discrete & Continuous Data; software interface
- Population & Sample data; $\bar{x}$, s , & σ
- Central Limit Theorem, confidence intervals
- Hypothesis Testing for the mean, Type I & Type II Errors, alpha risks
- Process Capability, $1 - \frac{1}{2} \sigma$ drift
- Process Tolerance, Measures of Dispersion, central tendency, C_p & C_{pk} ,
- Statistical natural process Limits & Customer Specification Limits: LCL & UCL
- Bivariate data analysis in Six-Sigma applications
- Gauge R&R; Measurement Systems Analysis MSA

Day 3: Concepts of Lean Processing

- History of Lean Manufacturing
- Lean Analysis: transformation from current state to future state
- Cycle Time Compression; improving process throughput
- Supply Chain Acceleration
- Value Stream Mapping; focus on value creation: value chain identification
- Muda: Identifying Seven Types of Wastes
- Muri: Work complexity & fatigue factors
- Mura: Focus on Process Flow; Roll Throughput Yield RTY
- 5S concepts for workplace organization & effectiveness
- Visual controls, Poka Yoke concept; prevention/detection/mitigation

- SMED Concepts to speed up processes
- Team dynamics, Team conflict: forming, storming, norming, performing
- SIPOC Diagrams; three levels of Process maps, flowcharts

Day 4: Blending Lean Principles in Business All Processes

- Standardized Work Applications to maximize efficiency and reduce variation
- Batch & Queue vs. Single element processing
- Kanban Inventory operational systems
- Understanding the Theory of Constraints
- Total Productive Maintenance TPM for operational costs reduction
- The effective integration of RFID/bar codes
- Employee Empowerment for organizational effectiveness/Kaizen interface *
- Point of Use Supply
- Quality at the Source
- Green Process Integration
- Six-Sigma project work/team dynamics and interaction
- Cause & Effect Diagrams: Ishikawa/fishbone chart Analysis
- FMEA Matrix applications for Six-Sigma; calculating the RPN
- Production Balance: The Importance of TAKT Time Awareness
- Project tools: Gantt charts, critical path method CPM & PERT evaluation
- Brainstorming for Results, Pareto Analysis 80/20 Analysis*
- Improving the Process for effectiveness; Lean process & Six-Sigma Integration
- High-level Green Analysis
- Ishikawa Diagrams, Brainstorming, Pareto 80/20
- Brainstorm for Project Benefits—integration of team dynamics: the Five whys

Day 5: Skillfully Applying the Tools of Six-Sigma for success

- Tools to speed analysis—finding the root cause of variation
- Measuring and tracking improvement; Establishing Process Baseline
- Hold the line... standardization/optimization
- Tools to prioritize improvement opportunities
- Successful ways to define and mitigate failure modes
- FMEA Diagrams in Action—how to identify process trouble spots
- Project Closure; Control plans that WORK!
- Continued workplace training...SOP for success planning for success;
- Innovative Six-Sigma deployment opportunities
- SPC; Monitoring Systems, Locking the Learning
- Control Chart Utilization; Juran, Deming, & Shewhart
- Lean Six-Sigma Certification Test Pass: 80%

Registration form on the Conference: Lean Six-Sigma Green Belt Certification Programme

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