





# **Course: Lean Six Sigma Green Belt Certification Programme**

Code	City	hotel	Start	End	price	Hours
260	London (UK)	Hotel Meeting Room	2024-05-20	2024-05-24	5450 €	25

## Introduction

This high impact programme skillfully trains the participant to become certified as a Lean Six-Sigma Green Belt. This certification enhances professional core competencies in World-Class business processes. Additionally, praticipants are better qualified to increase operational effectiveness, engage employees, reduce operating expenses, improve industry reputation, and leverage business excellence. Customer value creation awareness is a prime element of this unique training initiative.

- In this hands-on learning expereince, you will:
  - Understand how to deploy the potential of Lean Six-Sigma as a strategic business tool.
  - $\circ\,$  Learn the basics of Lean Processing and Six-Sigma applications to focus on the reduction of operational costs.
  - $\circ\,$  Learn to maximize profits by reducing process variation and expanding operational control and stability.
  - $\circ~$  Re-define your perception of "normal" to "excellent" with the skillful application of Lean Six-Sigma tools.

"Upon successful completion of this worldclass high-impact programme, which includes all established certification skill points of Lean Six-Sigma Body of Knowdlege, participants would receive Lean Six-Sigma Green Belt Certification"

## **Objectives**

## • Participants attending this programmeme will:

- Enhance their understanding of the basic level Lean Six-Sigma process.
- $\circ\,$  Learn to successfully deploy Six-Sigma into current business operations for effectiveness through teamwork.
- $\circ\,$  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 behaviours required to fully deploy Lean Six-Sigma into your organization.

## **Training Methodology**



This high impact training and development is a proven blend of Lean Six-Sigma theory, lecture, hands-on classroom exercises and video programmes to facilitate the learning experinece.

This is a highly interactive prorgarm which involves the participant in every level. We "learn by doing" in a safe classroom environment. This is "hands-on, common-sense" learning in which we skillfully utilize proven elements of contemporary adult learning theory.

Many of the exercises emphaisze the integration of teamwork to facilitate Six-Sigma success. We use workplace examples from all types of business processes to make this training more applicable to the participant's work environment.

## **Organisational Impact**

The organization will benefit from Six-Sigma integration by having more money returned to working capital. This is facilitated by the reduction of process errors and a more stable process. Subsequently, more time is available to the management team by reducing process variation. This will allow the organization to gain a competitive advantage with more accurate material flow and processing.

# **Personal Impact**

Delegates attending this programme gain a deeper appreciation and understanding of Six-Sigma methodology and the skillful application of this World-Class concept. Additionally, Six-Sigma deployment enhances the managerial skill set and professional competency of the participant.

## **SEMINAR OUTLINE**

- Understanding the strategic power of Six-Sigma Methodology
  - $\circ\,$  VoC, stakeholders & process owners, CTQ elements
  - $\circ\,$  The basis of Six-Sigma; history and development; Understanding DMAIC process
  - $\circ~$  Strategic concepts & benefits of Benchmarking
  - Six-Sigma deployment: DMAIC Concept
  - $\circ~$  Tollgate concept for Six-Sigma organizational functionality
  - $\circ~$  The power of data analysis in organization effectiveness and clarification
  - $\circ~$  Concepts of the Kano Analysis...three key elements of customer awareness
  - $\circ~$  Six Sigma in action. Project charters...Six-Sigma project integration
  - $\circ\,$  The impact of lean process and Six Sigma, the perfect algorithm
  - $\circ~$  "Do It Yourself Six-Sigma" The application of Project Templates
  - $\circ~$  Defining Timelines and Deliverables...a clear project game plan
  - $\circ\,$  The focus on value creation in business processes
  - "Speed and Accuracy" Blending proven processing concepts
  - $\circ$  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 effectivenessmarket share
- World-Class Transformation to enhance competitiveness
- Kano analysis; three levels of customer responsiveness

#### • Six-Sigma Deployment for organization effectiveness

- Calculation: The costs of poor quality: COPQ; Understanding ROI
- Attribute and Continuous Data...recognizing the differences for application
- $\circ\,$  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
- $\circ~$  Process Capability 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
- $\circ$  Y= f x Matrix; Identification of KPIV
- Graphing Discrete & Continuous Data; software interface
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- $\circ\,$  Population & Sample data;  $\sigma,\,x,\,s,\,\&\,\mu$
- $\circ~$  Central Limit Theorem, confidence intervals
- $\circ~$  Hypothesis Testing for the mean, Type I & Type II Errors, alpha risks
- $\circ\,$  Process Capability, 1-  $^{1\!\!/_2}\sigma\,drift$
- Process Tolerance, Measures of Dispersion, central tendency, Cp & Cpk,
- $\circ~$  Statistical (natural process) Limits & Customer Specification Limits: LCL & UCL
- Bivariate data analysis in Six-Sigma applications
- $\circ~$  Gauge R&R; Measurement Systems Analysis (MSA)

## Concepts of Lean Processing

- History of Lean Manufacturing
- $\circ~$  Lean Analysis: transformation from current sate to future state
- $\circ~$  Cycle Time Compression; improving process throughput
- $\circ~$  Supply Chain Acceleration
- $\circ\,$  Value Stream Mapping; focus on value creation: value chain identification
- $\circ\,$  Muda: Identifying Seven Types of Wastes
- $\circ~$  Muri: Work complexity & fatigue factors
- $\circ\,$  Mura: Focus on Process Flow; Roll Throughput Yield RTY
- $\circ~5S$  concepts for workplace organization & effectiveness
- $\circ\,$  Visual controls, Poka Yoke concept; prevention/detection/mitigation
- $\circ~$  SMED Concepts to speed up processes
- $\circ\,$  Team dynamics, Team conflict: (forming, storming, norming, performing)
- $\circ~$  SIPOC Diagrams; three levels of Process maps, flowcharts

## • Blending Lean Principles in Business All Processes



- Standardized Work Applications to maximize efficiency and reduce variation
- $\circ\,$  Batch & Queue vs. Single element processing
- Kanban Inventory operational systems
- Understanding the Theory of Constraints
- $\circ\,$  Total Productive Maintenance (TPM ) for operational costs reduction
- $\circ~$  The effectiveness integration of RFID/bar codes
- $\circ$  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
- $\circ\,$  FMEA Matrix applications for Six-Sigma; calculating the RPN
- Production Balance: The Importance of TAKT Time Awareness
- $\circ~$  Project tools: Gantt charts, critical path method (CPM) & PERT evaluation
- Brainstorming for Results, Pareto Analysis 80/20 Analysis\*
- $\circ~$  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

## • Skillfully Applying the Tools of Six-Sigma for success

- $\circ\,$  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 successPlanning 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%)



The Scandinavian Academy employs modern methods in training and skills development, enhancing the efficiency of human resource development. We follow these practices:

- Theoretical Lectures:
  - We deliver knowledge through advanced presentations such as PowerPoint and visual materials, including videos and short films.
- Scientific Assessment:
  - $\circ\,$  We evaluate trainees skills before and after the course to ensure their progress.
- Brainstorming and Interaction:
  - We encourage active participation through brainstorming sessions and applying concepts through role play.
- Practical Cases:
  - $\circ\,$  We provide practical cases that align with the scientific content and the participants specific needs.
- Examinations:
  - $\circ\,$  Tests are conducted at the end of the program to assess knowledge retention.
- Educational Materials:
  - $\circ\,$  We provide both printed and digital scientific and practical materials to participants.
- Attendance and Final Result Reports:
  - $\circ\,$  We prepare detailed attendance reports for participants and offer a comprehensive program evaluation.
- Professionals and Experts:
  - $\circ\,$  The programs scientific content is prepared by the best professors and trainers in various fields.
- Professional Completion Certificate:
  - $\circ\,$  Participants receive a professional completion certificate issued by the Scandinavian Academy for
    - Training and Development in the Kingdom of Sweden, with the option for international authentication.
- Program Timings:
  - Training programs are held from 10:00 AM to 2:00 PM and include buffet sessions for light meals during lectures.