Lean Six Sigma Green Belt

Course Code TGLS003

Lean and Six Sigma deliver business goals and objectives though the rigorous application of proven improvement methodologies. Combining both these methodologies eliminates waste, increases value and reduces variation. By focusing on the customer and delivering benefits quickly it is possible to improve quality performance and profitability simultaneously.

Thornley Group Green Belt training is carried out by professional trainers who are experienced as senior management practitioners in both Six-Sigma and Lean After completion of the training you will be equipped and eligible to sit the exam for certification as a Lean Six-Sigma Green Belt. Course details are as follows:

Course Duration

- 5 days classroom or 8 x 2.5-hour live Zoom video sessions.

Entry Requirements

- Candidates must have a basic working knowledge of algebra and be used to working with numerical data (See separate maths skills test on our resources page). A familiarity with spreadsheets is also required.
- Candidates should ideally have the authority to work on a project in their organisation as this will improve credibility. This should be a cost saving, defect reduction or other customer impact project.

Equipment Needed by Candidates

- Scientific Calculator (FX82AU Plus II is ideal)

Course Contents

Our Green Belt training gives an extensive grounding in Lean Six-Sigma which covers in detail: Lean tools and techniques and business benefits, project set-up, DMAIC and all the associated statistical tools and techniques. Thornley Group Green Belt training is targeted at people who spend a significant amount of time involved in process improvement. This could either be as a process owner or a member of a team working on an improvement project. The training provides the depth required to ensure that attendees gain all the knowledge required to be effective as a Green Belt. The Green Belt can be upgraded to a Black Belt certificate with a further 5 days of training.

Using their practical experience of improvement programmes, our trainers can take candidates through the process of applying the tools and techniques that they learn.

Thornley Group
Consulting & Training

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Programme Structure

The Define Phase

- Introducing Six Sigma Thinking
- What is an acceptable performance?
- Introduction to Six-Sigma DMAIC
- Six-Sigma Roles
- The History of Continuous Improvement
- Forming the Team
- The Team Charter
- The Voice of the Business (VOB)
- Project Management
- SIPOC - High Level End to End Map
- Customer Requirements
- Building the Case for Change

The Measure Phase

- Introduction to Variation and the Normal Distribution
- Quantifying Variation by Counting Defects
- Data Normality vs Non-Normality
- Samples and Populations
- Data Collection Planning
- Cause & Effect (Fishbone) Diagrams
- Affinity Diagrams
- Failure Modes and Effects Analysis (FMEA)
- X-Y Diagrams
- Gauge R&R
- Data Collection - Recording Methods
- Statistical Process Control (SPC)
- Graphical Analysis
- Process Capability
- Process Capability - Discrete Data
- Measuring Yield

The Analyse Phase

- Focused Problem Statement
- Pareto Diagrams
- Process Mapping and Charting
- 5 Whys
- Multi-Vari Studies
- Hypothesis Testing
- Normal Data - Common Hypothesis Tests
- Non-Parametric Hypothesis Tests
- Common Hypothesis Tests for Proportion Data
- Regression Analysis
- Design of Experiments (DOE)

The Improve Phase

- Brainstorming Methods
- Benchmarking
- Selecting the Solution
- Promoting the Solution
- Piloting the Solution
- Implementing the Solution

The Control Phase

- Process Control Planning
- Process Mistake Proofing
- Control Charts
- Control Chart Selection
- Control Charts for Normal Data
- Control Charts for Non-Normal Data
- Discrete Attribute and Count Charts
- Other Control Charts
- Sustaining the Improvement
- New Process Sigma
- Sharing the Knowledge
- DMAIC Project Review

Lean Thinking

- The Lean Toolkit
- 5 Steps in the Creation of a Lean Organisation
- Value in the Supply Chain
- Eliminate Waste.
- Value Stream Mapping
- The Eight Wastes
- Barriers to Flow.
- Workplace Organisation - The 5S
- Setup/Changeover Time Improvement
- Total Productive Maintenance (TPM)
- Do only what is Needed, When Requested.
- Takt Time and Cycle Time
- Bottlenecks
- Visual Management
- Strive for Perfection (PDCA or DMAIC).
- Kaizen Blitz/Process Workout
- Barriers to Implementing Lean
- Sustainability of Improvements