

Lean Six Sigma Black Belt Training

This Lean Six Sigma Black Belt training course forms the second part of our Six Sigma Black Belt Training Package following on from our 10-day Lean Six Sigma Green Belt training course.

Delegates should bring a well-defined project with them to the course, including DMAIC, Process Map and Data. You will be able to undertake live project work during the training course and in the month's gap between the two weeks of training.

Objective

At the end of the intensive ten-day programme delegates will understand and be able to:

- Apply the principles of the Six Sigma DMAIC performance improvement model
- Establish the "Voice of the Customer" in defining the required performance standard
- Use a number of measurement approaches and tools to establish current performance
- Appropriately apply a number of advanced statistical analysis tools and techniques to establish the root cause of a problem
- Recognise the difference in approach and techniques for incremental and redesign improvement strategies and know how to decide on the correct approach
- Establish ongoing process controls and process governance structures
- Use Minitab to provide data analysis and process capability

Details

Duration: 10 Days

Who is this course for

Managers, internal consultants, change agents, project managers, team leaders and team members who will be involved in Lean Six Sigma projects.

Course Content

Define - Week 1

- Understanding Variability
- Project Charter
- Basic Statistics
- QFD/VOC
- COPQ
- Process Maps

Measure - Week 1

- Measurement Basics
- Histograms
- Equipment R & R/MSA
- Scatter Plots
- Sigma Levels & DPMO
- Process Capability
- Yield Calculation
- Sampling Techniques
- Confidence Intervals
- Gauge R&R
- Implementing the measurement
- Data Collection
- Brainstorming
- FMEA

Analyse - Week 1 / Week 2

- Data Analysis Pareto charts Frequency charts Run charts Variation
- Process Mapping and Analysis Value Stream Analysis Complexity
- Cause-Effect Diagram & 5 Why's
- Central Limit Theorem
- Confidence Intervals
- Capability Studies
- Correlation
- Regression
- Design of Experiments (DoE) Full Factorial 2k Fractional Fractional Multi-Vari
Correlation/Regression ANOVA Stratification Box Plots

Improve - Week 2

- Hypothesis Testing T-Tests F-Tests ANOVA Chi Square
- Selecting solutions
- Developing solution options
- FMEA risk analysis
- DoE in Optimisation
- Simulation
- Remedy Selection Matrix

Control - Week 2

- Mistake Proofing
- Statistical Control
- Variation
- Control Charts
- I, X Bar and R Charts
- Response Charts
- Process Scorecards