

# Lean Six Sigma Black Belt Practitioner

## Introduction

Lean and Six Sigma, both proven business improvement approaches, provide businesses with the ability to maximise customer, employee and shareholder value by minimising process variation and waste. This twenty day course provides delegates with the necessary tools and techniques to lead and deliver Lean Six Sigma projects. The course uses a blend of theory and practical exercises to develop the confidence of delegates to deliver their own improvement project and provides a real opportunity to deliver realisable quick wins. This is achieved through the delivery of a live business project which should be identified prior to the commencement of training. A period of approximately one month is left between modules to allow delegates the opportunity to progress their projects.

## Objectives

This twenty day course, ran as four 5 day sessions (1 Define; 2 Measure; 3 Analyse; 4 Improve & Control), will enable delegates to become self-sufficient process improvement practitioners with the capability to analyse opportunities and deliver solutions:

- Scope improvement projects including the development of project charters.
- Determining and managing stakeholder requirements.
- Define and develop accurate and relevant measurement tools.
- Analyse business processes both quantitatively and qualitatively.
- Apply lean principles to determine customer value, determine value streams, understand flow develop pull systems and ensure perfection.
- Identify, quantify and select the most suitable solutions.
- Control business processes and understand process change through the use of statistical process control and change management skills
- Manage and mentor Green Belt projects and resources

## Course Content

### DEFINE

- Project Charter
- Stakeholder analysis and mapping
- Communications plan
- Kano analysis
- Cost of Poor Quality
- Hidden factory
- Critical to quality
- SIPOC
- Process flow charts
- Quality function deployment (QFD)
- Reactive voice of the customer
- Customer experience mapping
- Project management and tracking

### MEASURE

- Introduction to Minitab
- Rational sub-grouping
- Data collection techniques
- Yield and lean metrics
- Metric considerations
- Work measurement
- Base-lining (continuous and discrete)
- Value stream & current state mapping

### ANALYSE

- Inferential statistics
- Sampling
- Confidence intervals
- Process capability
- Process and waste analysis
- Value add & value stream analysis
- Gap analysis
- Hypothesis testing
- Data manipulation and data transformation
- Descriptive statistics
- Data types
- Simple, multi-linear, best-subsets and logistic regression analysis
- MSA theory and MSA in Minitab
- Analysis of Variance (ANOVA)
- Cause and effect analysis
- Failure and value demand
- Failure modes and effects analysis (FMEA)
- Sampling theory, plan, size and risk
- Design of experiments overview, techniques and pitfalls
- Response surface experiments

## **Lean Six Sigma Black Belt Practitioner**

### **IMPROVE**

- Solution assessment
- Future state value stream mapping
- Visual management
- 5S analysis
- Creative thinking
- Kaizan events
- SMED
- SPAN
- Level scheduling
- Implementation planning
- Training plans
- Business as a system

### **CONTROL**

- Control charts
- Control planning
- Benefits validation
- Benefit realisation plans
- Roles and responsibilities
- Facilitation skills
- Transfer
- Replication
- Project closure
- Transition and audit

### **Who should attend?**

Delegates should have either the ability to directly affect the process performance of their business or a loosely defined improvement project. Delegates may well be pursuing process improvement as a full time role in conjunction with a Business Quality Council or Business Champion (if present).

### **Follow on courses**

Lean Six Sigma Master Black Belt (LSS109)

### **Further information**

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