Lean Six Sigma Green Belt Masterclass

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Introduction:

The Six Sigma methodology is a systematic application focused on achieving significant financial results and increasing customer satisfaction. When properly deployed on carefully selected business projects, this methodology can lead to a significant reduction, and in many cases elimination, of defects, process waste and out-of-control processes which translate into dramatic business gains. This Six Sigma and Lean course teaches participants the Define, Measure, Analyze, Improve and Control (DMAIC) methodology using case studies from several industries. Participants will learn to define improvement projects to satisfy customers and reduce variation. This course will teach and prepare individuals to implement the principles, practices, and techniques of Lean Six Sigma. Green belts traditionally lead process stakeholders and may also be assigned specific process level improvement projects to conduct on their own projects that normally do not require the statistical rigor demonstrated by a black belt.

Who Should Attend?

Quality Managers, Quality Assurance Engineers/Officials, Quality Engineers, Quality Improvement Professionals, Manufacturing/Process Engineers Project Managers, Corporate Managers, Executive Managers, Senior Managers, Middle Managers, Junior Managers, Human Resource Managers, Board of Directors, Entrepreneurs, Production Managers, Production Supervisors, Product Engineers, Inspectors, Line Leaders, Production Operators, Customer Service Professionals, Training Managers, Practitioners in the field of Quality Management, all those who are engaged in quality management implementation and improvement of organizational performance, those with an interest in quality management systems, those starting their career in quality management, staff who are involved in influencing, formulating or supporting the long term planning and strategy of the quality department or organization, as well as those who are responsible for linking,

measuring and improving the performance of others, individuals from all organization departments including finance, quality and business operations staff functions as well as those who have direct intervention as process owners or stakeholders

Course Objectives:

By the end of this course delegates will be able to:

- Develop statistical hypotheses using simple statistical tools
- Use quantifiable tools to solve problems related to an improvement project
- Develop the Six Sigma methodology and apply its roadmap
- Apply the principles of the Six Sigma 'DMAIC' performance improvement model
- Examine in detail the various elements of building a complete project for improvement
- Eliminate waste and defects by applying Lean and Six Sigma
- Collect, analyze, and quantify data that enable process improvements
- Employ statistical analysis using statistical tools and software

Course Outline:

Six Sigma Overview

- History and origins
- Why Six Sigma?
- Cost of poor quality
- Project details

Define Phase: Tools and Methods

- Charter the improvement project
- Define the scope
- Six Sigma project definition
- Project selection process
- Define the Voice of Customer (VOC) and 'CTQ'
- Kano model analysis
- Team development phases
- Communication plan
- Project planning and management

Measure Phase: Introduction and Tools

- Types of data
- Computing 'DPMO' and sigma levels
- Process mapping
- 'FMEAs' and cause and effect
- Graphical analysis
- Analysis of Variance (ANVOA) and multi plot diagrams
- Chi square analysis
- Histograms
- Measurement systems analysis: gauge R&R
- Sampling techniques
- Introduction to Minitab and 'QIMacro' software

Analyse Phase: Introduction and Tools

- Probability and basic statistics
- Control charts and stability
- Data normality
- Process capability, 'cp' and 'CPK'

Improve Phase: Introduction and Tools

- Piloting and implementation
- Introduction to lean enterprise
- Types of waste
- Lean tools
- '5S' program
- Value stream mapping
- Lean and Kaizen

Control Phase: Introduction and Tools

- Statistical process control
- Standardization and documentation
- Control plans
- Mistake proofing

Green Belt Project and Tollgate Review

- Project charter submission
- Tollgate questions

Tips and tricks to get your project started