

Lean Six Sigma for Innovation and Design

Create the future for your organisation

As a Lean Six Sigma practitioner, are you finding that improving your existing products, processes and services is not sufficient to meet your goals?

Are you frustrated with unsuccessful attempts to innovate brand new ways of doing things? Do you want to design new products or services quickly and right first time? Do you sometimes wish you could start with a 'blank sheet of paper' and develop a new concept that excited the customer, was 'lean', flexible, responsive, and was defect free from day 1?

This course builds on your existing knowledge of improvement and DMAIC methodology and provides an additional and complementary range of tools and techniques to support highly effective and rapid innovation.

Objectives

- Empower yourself to be more effective in creating the future of your organisation
- When to apply DMADV versus the DMAIC process?
- Understand the DMADV process and the tools you can apply to your projects
- Design and tollgate reviews and how these reviews should be conducted and managed

“The best way to predict the future is to create it.”

Peter F. Drucker, American Management Guru

So Why and How Does Lean Six Sigma Help? The Lean Six Sigma Innovation and Design Journey

- Provides a design methodology that integrates customer focus and structured tools with a systematic design process.
- A total design approach that maintains focus on the customer throughout the process
- Consider use of Tollgates and Design Reviews to assure appropriate governance of innovation development work
- Describe and practice an extended range of techniques to capture and analyse voice of customer
- Build "House of Quality" matrices, using Quality Function Deployment, through an extensive and detailed case study

Day 1

- Introductions and Objectives
- Importance of Innovation and DMAIC vs DMADV?
- Change Management
- DEFINE: Segmenting Customers and Multi-Generation Planning
- MEASURE: VOC techniques and issues

- **Day 2**
- QFD, creating the 'House of Quality'
- CTQs and rating needs, Competitive and Benchmark assessment
- Value Proposition and Design Scorecards
- ANALYSE: Functional Analysis, Transfer Functions and HOQ2
- Concept Development and Testing

Day 3

- Design Elements and High Level Design
- Capability Evaluation, Modelling and Risk
- DESIGN: Detailed Design and Design of Experiments
- Design Integration and Pilot planning
- VERIFY: Piloting and Implementation
- Control, Process Management, Transition and Closing

Supported by lots of exercises and discussion breaks

Course Outline

The Curriculum is built around a case study and a variety of practical exercises to give participants real hands on experience in application of Lean-Six Sigma thinking and techniques to the challenges faced when innovation and design is required in your organisation.

Introduction & Overview

The importance of effective and rapid innovation to modern business and barriers to success, An overview of DMADV (the LSSID Framework) and why it makes the critical difference, Quality Function Deployment and the 'House of Quality', DMADV building on DMAIC, Linking DMADV with new product stage gate processes.

Define

Project start up, Market and customer segmentation, the change management challenges of DMADV.

Measure

Voice of the Customer and Introduction to advanced VOC techniques, Quality Function Deployment (House of Quality 1), Benchmarking and setting design goals, Design scorecards, Defining the value proposition.

Analyse

Function and Functional Analysis, House of Quality 2, Creative Thinking, Concept development, testing and selection, Building the Design Elements, Simulation.

Design

Detailed Design planning, Lean design tools, Modelling and Introduction to Design of Experiments, assessing Design Capability, Robust Designs, Design Integration, Design Review, Risk Management.

Verify

Piloting and testing, Control Planning, Implementation and Handover to operations/BAU