

Quality America, Inc.

Online Green Belt Training

Overview

1. Why Do Six Sigma
 - a) Definition and graphical view of Six Sigma
 - (i) Overview of business applications
 - (ii) Example Sigma Levels
 - (iii) Introduction to DPMO and cost as metrics.
 - b) Comparisons between typical TQM and Six Sigma Programs.
 - c) Origins and Success Stories.
2. How to Deploy Six Sigma
 - a) Leadership responsibilities.
 - b) Description of the roles and responsibilities.
 - c) Resource allocation.
 - d) Data driven decision making.
 - e) Organizational metrics and dashboards.
3. DEFINE: Project Definition
 - a) Tasks.
 - b) Work Breakdown Structure.
 - c) Pareto Diagrams.
 - d) Process Maps.
 - e) Matrix Diagrams.
 - f) Project Charters.
 - g) Reporting.
4. DEFINE: Project Scheduling
 - a) Activity Network Diagram.
 - b) PERT Analysis.
 - c) GANNT Chart.
5. DEFINE: Change Management / Teams
 - a) Problems with Change.
 - b) Achieving Buy-In.
 - c) Team Formation, Rules & Responsibilities.
 - (i) Stages of Team Development.
 - (ii) Overcoming Problems.
 - d) Consensus Building
 - (i) Affinity Diagram.
 - (ii) Nominal Group Technique.
 - (iii) Prioritization Matrix.
6. MEASURE: Tools
 - a) Measure Stage Objectives

- b) Flowcharts.
 - c) Process Maps.
 - d) SIPOC.
 - e) Box-Whisker Plots.
 - f) Cause & Effect Diagrams.
 - g) Check Sheets.
 - h) Interrelationship Digraph.
 - i) Stem & Leaf Plots.
7. MEASURE: Establishing Process Baseline
- a) Enumerative vs. Analytic Statistics.
 - b) Process Variation.
 - (i) Deming's Red Bead.
 - c) Benefits of Control Charts.
 - d) Requirements vs. Control.
 - (i) Tampering.
 - e) Control Chart Interpretation.
 - (i) Relative to Process Baseline Estimates.
8. MEASURE: X-Bar Charts
- a) Uses.
 - b) Construction & Calculations.
 - c) Assumptions.
 - d) Rational Subgroups.
 - e) Sampling Considerations.
 - f) Interpretation.
 - (i) Run Test Rules.
9. MEASURE: Individuals Data
- a) Uses.
 - b) Construction & Calculations.
 - c) Assumptions.
 - d) Sampling Considerations.
 - e) Interpretation.
 - f) Overview of Other Individuals Charts.
 - (i) Run Charts.
 - (ii) Moving Average Charts.
 - (iii) EWMA Charts.
10. MEASURE: Process Capability
- a) Histograms.
 - b) Probability Plots.
 - c) Goodness of Fit Tests.
 - d) Capability & Performance Indices.
 - (i) Relative to Process Control.
 - (ii) Interpretation.

- (iii) Estimating Error.
- 11. MEASURE: Attribute Charts
 - a) Uses.
 - b) Selection.
 - c) Construction & Calculations.
 - d) Sampling Considerations.
- 12. ANALYZE: Regression Analysis
 - a) Scatter Diagrams.
 - b) Linear Model.
 - c) Interpreting the ANOVA Table.
 - d) Confidence & Prediction Limits.
 - e) Residuals Analysis.
 - f) Overview of Multiple Regression Tools
 - (i) DOE vs. Traditional Experiments & Data Mining
- 13. ANALYZE: Lean Thinking
 - a) Definition of Waste.
 - b) Analyzing Process for NVA.
 - (i) Cycle Efficiencies
 - (ii) Lead Time and Velocity
 - c) Methods to Increase Velocity.
 - (i) Standardization
 - (ii) Optimization
 - (iii) Spaghetti Diagrams
 - (iv) 5S
 - (v) Level Loading.
 - (vi) Flow
 - (vii) Setup Reductions
- 14. IMPROVE: Tools
 - a) Improve Stage Objectives.
 - b) Tools to Prioritize Improvement Opportunities.
 - c) Tools to Define New Process Flow.
 - (i) Lean Tools to reduce NVA and Achieve Flow.
 - d) Tools to Define & Mitigate Failure Modes.
 - (i) PDPC.
 - (ii) FMECA.
 - (iii) Preventing Failures.
 - e) Reference to Tools for Defining New Process Levels.
- 15. CONTROL: Tools
 - a) Control Stage Objectives.
 - b) Control Plans.
 - c) Training.
 - d) Measuring Improvement.

