

## CBMG Six Sigma Yellow Belt BoK

### Unit 1:

#### The Basics of Six Sigma

- Meanings of Six Sigma
- General History of Six Sigma & Continuous Improvement
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- The Problem Solving Strategy  $Y = f(x)$
- Voice of the Customer, Business and Employee
- Six Sigma Roles & Responsibilities

#### The Fundamentals of Six Sigma

- Defining a Process
- Critical to Quality Characteristics (CTQ's)
- Cost of Poor Quality (COPQ)
- Pareto Analysis (80:20 rule)
- Basic Six Sigma Metrics including DPU, DPMO, FTY, RTY Cycle Time

#### Selecting Lean Six Sigma Projects

- Building a Business Case & Project Charter
- Developing Project Metrics
- Financial Evaluation & Benefits Capture

#### The Lean Enterprise

- Understanding Lean
- The History of Lean
- The History of Lean
- Lean & Six Sigma
- The Seven Elements of Waste
- Overproduction, Correction, Inventory, Motion, Overprocessing, Conveyance, Waiting.
- 5S
- Straighten, Shine, Standardize, Self-Discipline, Sort

### Unit 2:

#### Measure Phase

- Process Definition
- Cause & Effect / Fishbone Diagrams
- Process Mapping, SIPOC, Value Stream Map
- X-Y Diagram
- Failure Modes & Effects Analysis (FMEA)

#### Six Sigma Statistics

- Basic Statistics
- Descriptive Statistics
- Normal Distributions & Normality
- Graphical Analysis

#### Measurement System Analysis

- Precision & Accuracy
- Bias, Linearity & Stability
- Gage Repeatability & Reproducibility
- Variable & Attribute MSA

#### Process Capability

- Capability Analysis
- Concept of Stability
- Attribute & Discrete Capability

- Monitoring Techniques

### Unit 3:

#### Control Phase

- Lean Controls
- Control Methods for 5S
- Kanban
- Poka-Yoke (Mistake Proofing)

#### Six Sigma Control Plans

- Cost Benefit Analysis
- Elements of the Control Plan
- Elements of the Response Plan