# **INFOSOFT IT SOLUTIONS**

## **Training | Projects | Placements**

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#### **LEAN SIX SIGMA BLACK BELT TRAINING**

#### 1: Introduction to Lean Six Sigma

- Overview of Lean Six Sigma concepts and principles
- History and evolution of Lean Six Sigma
- Benefits and importance of Lean Six Sigma in organizations
- Roles and responsibilities of a Lean Six Sigma Black Belt

#### 2: Define Phase

- Project identification and selection criteria
- Project charter development
- Stakeholder analysis and management
- Voice of the Customer (VOC) and Critical to Quality (CTQ) analysis

#### 3: Measure Phase

- Process mapping techniques (SIPOC, Value Stream Mapping)
- Measurement system analysis (MSA)
- Data collection strategies and techniques
- Basic statistics and probability concepts

### 4: Analyze Phase

- Root cause analysis tools and techniques (Fishbone diagram, 5 Whys, etc.)
- Advanced statistical analysis techniques (Hypothesis testing, ANOVA, Regression Analysis)
- Design of Experiments (DOE)
- . Failure Mode and Effects Analysis (FMEA)

### 5: Improve Phase

- Lean principles and tools (5S, Kaizen, Poka-Yoke, Kanban)
- Theory of Constraints (TOC)
- Process optimization strategies
- Solution selection and implementation planning

#### **6: Control Phase**

- Statistical Process Control (SPC)
- Control plan development and implementation
- Standardization and documentation
- Monitoring and sustaining improvements

#### 7: Lean Six Sigma Leadership

- Change management principles
- Team dynamics and facilitation skills
- Coaching and mentoring Green Belts and project teams
- Communicating results and benefits to stakeholders

## **ADVANCE TOPICS ;-**

### 1: Advanced Lean Six Sigma Principles

- Advanced understanding of Lean Six Sigma principles and philosophies
- Integration of Lean and Six Sigma methodologies for comprehensive process improvement
- Lean Six Sigma in service industries and transactional environments
- Challenges and considerations in deploying Lean Six Sigma across different organizational cultures

#### 2: Advanced Define Phase

- Advanced project selection and prioritization methods (e.g., Business Case Development)
- Advanced Voice of the Customer (VOC) techniques and analysis
- Critical to Quality (CTQ) flowdown and cascading metrics
- Advanced Project Charter development and alignment with organizational goals

#### 3: Advanced Measure Phase

- Advanced process modeling and simulation techniques
- Advanced Measurement System Analysis (MSA) methodologies (e.g., Gage R&R for non-destructive testing)
- Advanced data collection strategies (e.g., automated data collection, big data considerations)
- Complex statistical analysis methods (e.g., multivariate analysis, non-parametric statistics)

## **4: Advanced Analyze Phase**

- Advanced root cause analysis techniques (e.g., Fault Tree Analysis, Bayesian Analysis)
- Advanced hypothesis testing (e.g., advanced ANOVA techniques, hypothesis testing for non-normal data)
- Advanced correlation and regression analysis (e.g., multiple regression, logistic regression)
- Advanced Design of Experiments (DOE) techniques

## • 5: Advanced Improve Phase

- Advanced Lean tools and techniques (e.g., Value Stream Optimization, Total Productive Maintenance)
- Complex Theory of Constraints (TOC) applications (e.g., Drum-Buffer-Rope system)
- Advanced process redesign strategies (e.g., reengineering, process innovation)
- Innovation methodologies (e.g., TRIZ, Design Thinking) for breakthrough improvements

#### 6: Advanced Control Phase

- Advanced Statistical Process Control (SPC) techniques (e.g., advanced control charts, process capability analysis)
- Robust Control Plan development and implementation
- Advanced standardization methods (e.g., Standard Work Combination Sheets, Work Instructions)
- Sustaining improvements through advanced performance management and governance mechanisms

## 7: Lean Six Sigma Leadership Excellence

- Advanced change management strategies for Lean Six Sigma initiatives
- Effective leadership in driving cultural transformation
- Advanced team dynamics and conflict resolution strategies
- Coaching and mentoring techniques for Green Belts and project teams

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