INFOSOFT IT SOLUTIONS

Training | Projects | Placements

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LEAN SIX SIGMA YELLOW BELT TRAINING

1. Introduction to Lean Six Sigma

- **Overview of Lean Six Sigma**
  - History and Evolution
  - Key Principles and Methodologies
- **Lean Six Sigma Roles and Responsibilities**
  - Yellow Belt Role
  - Other Belt Levels (Green, Black, Master Black)

2. Lean Principles

- **Understanding Lean**
  - Definition and Goals
  - The 5 Lean Principles

- **Identifying and Eliminating Waste (Muda)**
  - The 8 Wastes: DOWNTIME (Defects, Overproduction, Waiting, Not utilizing talent, Transportation, Inventory, Motion, Excess processing)

- **5S Methodology**
  - Sort, Set in order, Shine, Standardize, Sustain

3. Six Sigma Basics

- **Understanding Six Sigma**
  - Definition and Goals
  - The DMAIC Methodology (Define, Measure, Analyze, Improve, Control)

- **Key Concepts in Six Sigma**
  - Critical to Quality (CTQ)
  - Defects per Million Opportunities (DPMO)
  - Process Capability

4. Define Phase

- **Project Identification and Selection**
  - Identifying Improvement Opportunities
  - Developing a Project Charter
- **Voice of the Customer (VoC)**
  - Gathering and Analyzing Customer Feedback
  - Translating VoC into Requirements

5. Measure Phase

- **Process Mapping**
  - Creating SIPOC Diagrams (Suppliers, Inputs, Process, Outputs, Customers)
  - Flowcharting Processes
- **Data Collection Techniques**
  - Types of Data (Qualitative vs. Quantitative)
  - Developing Data Collection Plans
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- **Measurement System Analysis**
    - Understanding Measurement Accuracy and Precision

6. <u>Analyze Phase</u>

- **Root Cause Analysis**
    - Cause and Effect Diagrams (Fishbone/Ishikawa)
    - The 5 Whys Technique

- **Basic Data Analysis Tools**
    - Pareto Analysis
    - Histograms and Scatter Plots

7<u>. Improve Phase</u>

- **Generating Improvement Ideas**
    - Brainstorming and Creativity Techniques
    - Evaluating and Selecting Solutions

- **Implementing Improvements**
    - Pilot Testing Solutions
    - Developing Implementation Plans

8. <u>Control Phase</u>

- **Sustaining Improvements**
    - Creating Control Plans
    - Standard Operating Procedures (SOPs)

- **Monitoring and Control Tools**
    - Control Charts
    - Process Capability Analysis
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9. Lean Tools and Techniques

- Value Stream Mapping (VSM)
- Kanban Systems
- Poka-Yoke (Error Proofing)
- Total Productive Maintenance (TPM)

10. Six Sigma Tools and Techniques

- **Basic Statistical Tools**
  - Descriptive Statistics
  - Run Charts and Control Charts
- **Quality Tools**
  - Process Capability Indices (Cp, Cpk)
  - Failure Mode and Effects Analysis (FMEA)

ADVANCE TOPICS ;-

1,**Advanced Introduction to Lean Six Sigma**

- **Deeper Dive into Lean Six Sigma**
  - Advanced history and evolution
  - In-depth understanding of methodologies
- **Roles and Responsibilities**
  - Detailed overview of Yellow Belt role
  - Integration with other belt levels (Green, Black, Master Black)
  - Cross-functional team roles

2. Advanced Lean Principles

- **Lean Principles Revisited**
  - Deep dive into the 5 Lean Principles
- **Advanced Waste Identification and Elimination**
  - Detailed examination of the 8 wastes: DOWNTIME
  - Strategies for eliminating each type of waste
- **Enhanced 5S Methodology**
  - Advanced techniques for Sort, Set in order, Shine, Standardize, Sustain
  - Implementation case studies

3. Advanced Six Sigma Basics

- **Understanding Six Sigma in Depth**
  - Advanced concepts and goals
  - Detailed DMAIC Methodology (Define, Measure, Analyze, Improve, Control)
- **Key Concepts in Six Sigma**
  - Critical to Quality (CTQ) in depth
  - Advanced Defects per Million Opportunities (DPMO) analysis
  - Process Capability and Performance metrics

4. Define Phase

- **Advanced Project Identification and Selection**
  - In-depth techniques for identifying improvement opportunities
  - Advanced project charter development
- **Voice of the Customer (VoC)**
  - Advanced techniques for gathering and analyzing customer feedback
  - Translating VoC into detailed requirements and project goals

5. Measure Phase

- **Advanced Process Mapping**
  - Creating and analyzing detailed SIPOC Diagrams
  - Advanced flowcharting and process mapping techniques
- **Data Collection Techniques**
  - In-depth data collection planning
  - Advanced measurement system analysis
  - Statistical analysis of measurement systems

6. Analyze Phase

- **Root Cause Analysis**
  - Advanced cause and effect diagrams (Fishbone/Ishikawa)
  - The 5 Whys technique and beyond
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- **Advanced Data Analysis Tools**
  - In-depth Pareto Analysis
  - Advanced use of histograms, scatter plots, and control charts
  - Statistical hypothesis testing basics

7. **Improve Phase**

- **Generating Improvement Ideas**
  - Advanced brainstorming and creativity techniques
  - TRIZ (Theory of Inventive Problem Solving)
- **Implementing Improvements**
  - Detailed pilot testing plans
  - Developing comprehensive implementation plans
  - Risk analysis and mitigation

8. Control Phase

- **Sustaining Improvements**
  - Advanced control plan development
  - Standard Operating Procedures (SOPs) and their enhancements
- **Monitoring and Control Tools**
  - Detailed control chart analysis
  - Process capability analysis and continuous monitoring

9 Advanced Lean Tools and Techniques

- **Value Stream Mapping (VSM)**
  - Advanced VSM techniques and case studies
- **Kanban Systems**
  - In-depth Kanban system design and implementation
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- **Poka-Yoke (Error Proofing)**
  - Advanced mistake-proofing techniques
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- **Total Productive Maintenance (TPM)**
    - Detailed TPM strategies and real-world applications

10. Advanced Six Sigma Tools and Techniques

- **Advanced Statistical Tools**
    - Detailed descriptive and inferential statistics
    - Advanced use of run charts and control charts

- **Quality Tools**
    - In-depth process capability indices (Cp, Cpk)
    - Failure Mode and Effects Analysis (FMEA) with advanced examples