



Process Excellence
Beyond Boundaries

IPEC AI Enabled LSS White Belt Brochure

January 2025



AI Enabled Lean Six Sigma White Belt Body of Knowledge

Your gateway to understanding process excellence and the power of artificial intelligence in transforming how we work.

Duration : 3 hrs

Mode: Classroom/Online



Foundations of Continuous Improvement

Lean

A methodology focused on eliminating waste and maximizing value. Born from the Toyota Production System, Lean emphasizes continuous improvement and respect for people.

Six Sigma

A data-driven approach to reducing defects and variation. Developed at Motorola, it uses statistical methods to achieve near-perfect quality in processes.

Lean Six Sigma combines the speed of Lean with the precision of Six Sigma, creating a powerful framework for operational excellence and customer satisfaction.

The Foundation: Customer Value



Voice of Customer (VOC)

Understanding what customers truly need and value through surveys, feedback, and direct engagement.



Value Creation

Delivering outcomes that customers are willing to pay for while eliminating activities that don't add value.



Customer Focus

Designing every process with the end customer in mind, ensuring satisfaction at every touchpoint.

DMAIC Methodology: AI-Enabled Excellence



Define

Problem statements, Project Charter, SIPOC, NLP based VoC Sentiment Analysis



Measure

AI powered Process maps and VSMS, Baseline Metrics, Automated Data Extraction, Live Dashboards



Analyze

AI enabled Root Cause Analysis, Pareto charts, Digital FMEA, Pattern Mining, Predictive Drivers



Improve

Solution Generation, FMEA, what-if simulations, Generative Ideation



Control

Control Plans, SPC charts, Automated alerts, Drift Detection



Process Thinking vs. Functional Thinking

Functional Thinking

- Focuses on individual departments
- Optimizes silos independently
- Limited visibility across functions
- Handoffs create delays

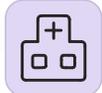
Process Thinking

- Focuses on end-to-end flow
- Optimizes the entire value stream
- Cross-functional collaboration
- Smooth transitions and efficiency

☐ Process thinking helps identify waste and variation that functional thinking often misses.



DMAIC in Action: Real-World Examples



Healthcare

An Indian hospital reduced patient wait times by 40% by mapping the admission process, identifying bottlenecks, and implementing digital registration systems.



IT Services

A Bangalore tech company decreased software deployment errors by 65% through standardized testing protocols and automated quality checks.



EdTech

An online learning platform improved course completion rates by 30% by analyzing student engagement data and redesigning content delivery.



Understanding Artificial Intelligence

Artificial Intelligence refers to computer systems that can perform tasks typically requiring human intelligence—learning, reasoning, problem-solving, and decision-making.



Conversational AI

Tools like ChatGPT and Copilot that understand natural language, answer questions, and generate content to accelerate knowledge work.



Automation Bots

Intelligent systems that handle repetitive tasks, process data, and execute workflows without human intervention.



Decision Intelligence

AI that analyzes vast amounts of data to identify patterns, predict outcomes, and recommend optimal actions faster than humans.

How AI Enhances Lean Six Sigma



Faster, Smarter Decisions

- **Rapid Data Analysis:** AI processes millions of data points instantly, identifying patterns and anomalies that would take weeks manually
- **Predictive Insights:** Machine learning forecasts defects before they occur, enabling proactive prevention
- **Automated Root Cause Analysis:** AI algorithms pinpoint problem sources across complex processes
- **Continuous Monitoring:** Real-time alerts when processes drift from control limits

Your White Belt Journey: Key Outcomes

1 Speak the Language

You now understand core Lean Six Sigma terminology—VOC, DMAIC, waste, variation—enabling meaningful conversations about process improvement.

2 Spot Opportunities

You can identify DOWNTIME waste in your daily work and recognize where processes can be streamlined for better customer value.

3 Leverage AI

You understand how artificial intelligence accelerates improvement efforts while maintaining ethical standards and human-centered decision-making.





Thank you