



**EXCENOR**  
— GLOBAL —  
In Pursuit of Excellence

# AI Enabled Lean Six Sigma Green Belt Training

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January 2026



# AI Enabled Lean Six Sigma Green Belt Body of Knowledge

Your complete roadmap to AI-enabled process excellence and continuous improvement mastery

Duration : 30 hrs

Mode: Classroom/Online



# Foundations of Continuous Improvement

## Core Philosophy

- Evolution of Lean + Six Sigma methodologies
- Customer Value meets Business Value
- Data-driven problem solving

## Roles & Governance

- Yellow, Green, Black Belt certification paths
- Project sponsorship structure
- Ethics, data integrity, responsible AI

### Voice of Customer

What customers need and expect

### Voice of Business

Strategic goals and metrics

### Voice of Process

Current capability and performance



# Lean Thinking: Eliminate Waste, Maximize Value

01

## Lean Principles

Value stream thinking, flow optimization, pull systems, Kaizen culture

02

## Waste Identification

8 wastes (DOWNTIME), digital waste patterns, AI-assisted detection

03

## Lean Tools

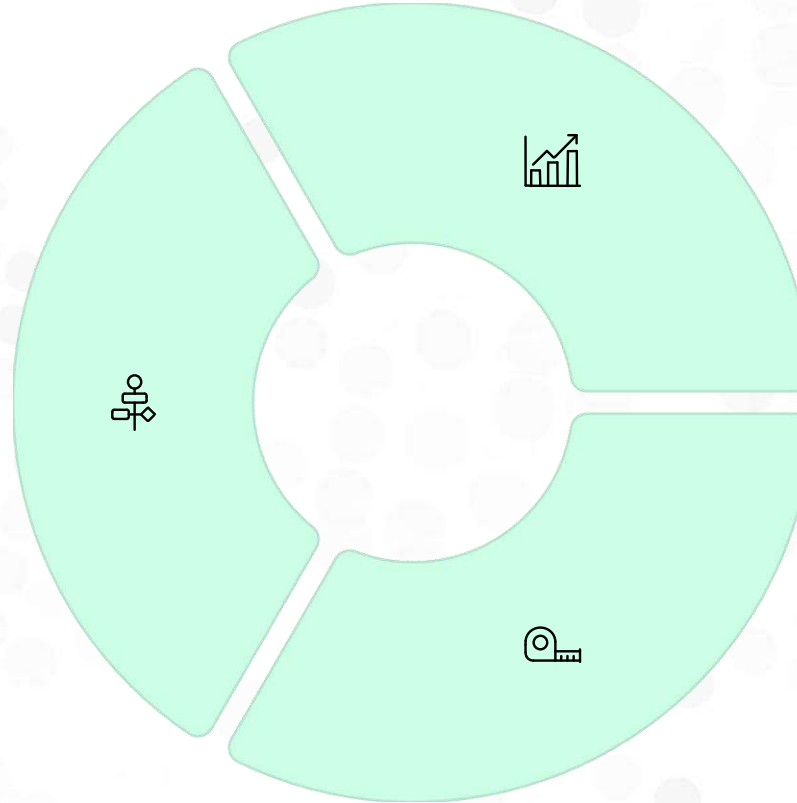
5S methodology, Kaizen events, standard work, Kanban systems

- ❑ **Digital 5S:** Sort, Set in Order, Shine, Standardize, Sustain—now applied to digital workspaces, files, and workflows

# Six Sigma Fundamentals

## Process & Variation

SIPOC mapping, Common vs Special cause variation, defects and sigma levels



## Statistics Essentials

Descriptive stats, Probability Distributions, Hypothesis Testing, Correlation Analysis

## Measurement Systems

Data Quality, MSA techniques, Sampling strategies, AI-based validation

**$Y = f(X)$**  Critical-to-Quality outputs driven by controllable inputs

# 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 through Predictive AI models, FMEA, what-if simulations, Generative Ideation



## Control

Control Plans, SPC charts, Automated alerts, Drift Detection

# Data Analytics & Digital Tools

## Excel Mastery

Statistical functions, pivot tables, data validation for Green Belt analysis

## Control Charts

X-bar, R, P, U charts for process monitoring and stability detection

## Visualization

Power BI dashboards, Low-Code Analytics, AI-assisted insight narration



# Generative AI in Lean Six Sigma

## AI Fundamentals

LLMs, Machine Learning vs Automation,  
Predictive Analytics

## Practical Use Cases

Defect classification, SLA prediction, cycle  
time forecasting, auto-generated SOPs

## Responsible AI

Bias mitigation, explainability, data  
privacy, human-in-the-loop decisions

**AI amplifies Green Belt impact:** faster identification, predictive insights, scalable improvements

# Project & Change Management



1

## Project Selection

Prioritization frameworks and strategic alignment

2

## Risk Management

FMEA, mitigation strategies, contingency planning

3

## Stakeholder Engagement

Communication plans, influence mapping

4

## Change Management

Stakeholder Matrix, AI-based resistance analysis

Successful projects require technical excellence + people enablement

# Applications Across Industries



## ITSM & Digital

Shared services, ticket optimization, SLA management



## Healthcare

Patient workflows, compliance, quality outcomes



## BFSI

Compliance-driven processes, risk management, efficiency



## EdTech

Learning workflows, student experience, operational excellence

### Financial Impact

- Cost of Poor Quality (COPQ)
- Hard vs soft savings
- Business case development

### AI-Enabled Benefits





- Automated benefit tracking
- Sustainability monitoring
- Real-time ROI dashboards





## Your Path to Certification



-  **Complete AI assisted DMAIC Project**  
End-to-end execution with measurable results
-  **Verify Data & Improvement**  
Documented baseline, intervention, sustained gains
-  **Control Sustainability**  
Evidence of monitoring, response plans, handover
-  **Executive Storytelling**  
Dashboard-driven narrative with AI-enabled insights

4

### Key Outcomes

of an AI-Enabled Green Belt

**Faster problem identification through AI-assisted detection**

**Predictive, data-driven decisions replacing reactive firefighting**

**Scalable improvement through automation and AI integration**

**Strong foundation for Black Belt and Digital Excellence roles**

To know more about our LSS trainings

Contact Us



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