



Body of Knowledge (BoK): Lean Six Sigma Green Belt with AI

Version 1.1

Guiding principle:

AI augments—not replaces—the Lean Six Sigma practitioner. The competencies below identify where AI can accelerate work while accountability remains with the practitioner.

Responsible Use of AI:

All outputs should be verified, confidential information protected, and professional judgement retained.

Vendor-neutral disclaimer:

AI applications are examples only. Choose the correct AI vendor or product for your needs.

LEAN

Competency Area	AI can support...	Practitioner must...	Example AI Applications
Lean Principles	Summarise Lean principles, explain concepts and generate learning examples.	Understand and apply Lean thinking appropriately within the organisation.	For example: ChatGPT, Microsoft Copilot, Famla.ai, DMAIC.app
Customer Value	• Smart survey: Interview customers to collect data • Analyse VOC data, identify themes and suggest CTQs.	Confirm customer needs directly with customers and stakeholders.	For example: ChatGPT, Perplexity, Famla.ai , DMAIC.app Famla AI has a smart survey feature to interview stakeholders and collect data at scale. This feature is not available in ChatGPT or Claude as of today
Flow	Highlight delays, queues and interruptions from process maps.	Validate constraints by observing the real process.	For example: DMAIC.app, ChatGPT, Famla AI
Pull	Model pull systems and inventory scenarios.	Select an appropriate replenishment strategy.	For example: Microsoft Copilot, ChatGPT

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			Famla.ai
DOWNTIME	- Suggest likely wastes from observations and process descriptions. - Smart survey: Interview stakeholders to collect wastes data	Verify wastes through Gemba observation.	For example: DMAIC.app, Famla.ai Famla AI has a smart survey feature to interview stakeholders and collect data at scale. This feature is not available in ChatGPT or Claude as of today
Gemba	Prepare observation sheets, interview questions and checklists.	Visit the Gemba, observe respectfully and engage employees.	For example: Famla.ai, ChatGPT

DEFINE

Competency Area	AI can support...	Practitioner must...	Example AI Applications
Project Charter	Draft project charters from business objectives.	Agree scope, objectives and benefits with the Sponsor.	For example: Famla.ai, ChatGPT, DMAIC.app
Voice of Customer	- Smart survey: Interview customers to collect data - Cluster customer comments into themes.	Interpret customer priorities without bias.	For example: Perplexity, DMAIC.app Famla AI has a smart survey feature to interview stakeholders and collect data at scale. This feature is not available in ChatGPT or Claude as of today
CTQs	Suggest measurable CTQs from VOC.	Confirm CTQs with customers and stakeholders.	For example: ChatGPT, DMAIC.app, Famla AI
SIPOC	Generate draft SIPOC diagrams. Not sure how the AI will do this or why we need AI here	Verify the SIPOC with process owners.	For example: DMAIC.app, Microsoft Copilot
Stakeholders	Produce stakeholder matrices and communication plans.	Build relationships and manage expectations.	For example: ChatGPT, Famla.ai



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Problem Statement	Refine problem statements using project facts.	Ensure the statement is factual, measurable and unbiased.	For example: ChatGPT, Claude
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MEASURE

Competency Area	AI can support...	Practitioner must...	Example AI Applications
Process Mapping	Create draft process maps from descriptions. Create automated and editable process maps from stakeholders interview, from system logs and from documents (both text and images)	Verify accuracy, adjust for errors and validate maps with process owners at the Gemba.	For example: Famla AI
Data Collection	- Generate sampling plans and check sheets - Generate data collection plan: what data is needed, sample size, how best to collect it - Smart survey: Interview stakeholders to collect data that is not recorded in systems	Collect accurate, representative data	For example: Microsoft Copilot, Claude Famla AI has a smart survey feature to interview stakeholders and collect data at scale. This feature is not available in ChatGPT or Claude as of today
MSA	Explain Gauge R&R results and prepare worksheets.	Conduct and interpret the Measurement System Analysis.	For example: DMAIC.app, Claude Famla.ai
Baseline	Summarise baseline performance.	Establish an accurate baseline before improvements.	For example: ChatGPT, Perplexity
Capability	Interpret Cp/Cpk and capability indices.	Judge capability against customer requirements.	For example: Claude DMAIC.app Famla.ai
Visualisation	Create charts and dashboards.	Select appropriate visuals and explain findings.	For example: Microsoft Copilot, ChatGPT, DMAIC.app Famla.ai



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ANALYSE

Competency Area	AI can support...	Practitioner must...	Example AI Applications
Root Cause	Generate possible causes from available evidence.	Confirm root causes using facts and data.	For example: ChatGPT, Claude Famla.ai
5 Whys	Draft iterative Why questions.	Facilitate questioning with the improvement team.	For example: Famla.ai, ChatGPT Famla.ai
Fishbone	Generate Ishikawa categories and candidate causes.	Lead the cause analysis workshop.	For example: DMAIC.app, ChatGPT Famla.ai
Pareto	Interpret Pareto results and prioritise issues.	Decide which problems warrant action.	For example: Claude, Microsoft Copilot Famla.ai
Hypothesis Testing	Recommend suitable statistical tests.	Choose and correctly interpret the test.	For example: DMAIC.app, Claude Famla.ai
Regression	Explain regression outputs and trends.	Assess assumptions and practical significance.	For example: ChatGPT, Claude

IMPROVE

Competency Area	AI can support...	Practitioner must...	Example AI Applications
Solution Selection	Compare improvement options objectively.	Select feasible solutions balancing benefit and risk.	For example: ChatGPT, Famla.ai
Kaizen	- Scenario 1: Generate workshop agendas and idea lists (not sure what idea we are talking about here). - Scenario 2: AI-facilitated asynchronous workshops	- Identify participants and gain engagement - Scenario 1: Facilitate workshops - Scenario 2: set up the AI (enter scope) then approve	For example: Famla.ai, Microsoft Copilot



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		the findings/ present them to the team	
Pilot	Draft pilot plans and success criteria.	Evaluate pilot results before rollout.	For example: ChatGPT, DMAIC.app
FMEA	Generate draft FMEA tables.	Assign realistic ratings and mitigation actions.	For example: DMAIC.app, ChatGPT
Standard Work	Draft standard work instructions.	Train personnel and confirm adoption.	For example: Microsoft Copilot, ChatGPT, Famla AI
Implementation	Create implementation checklists and timelines.	Lead change and remove implementation barriers.	For example: ChatGPT, Famla AI

CONTROL

Competency Area	AI can support...	Practitioner must...	Example AI Applications
Control Plan	Draft control plans from improvements.	Define ownership, monitoring and review.	For example: DMAIC.app, Microsoft Copilot, Famla AI
SPC	Interpret control charts and signals.	Investigate special causes and respond appropriately.	For example: Claude, DMAIC.app, Famla AI
Visual Management	Suggest visual dashboards and KPI boards.	Ensure measures drive the right behaviours.	For example: Microsoft Copilot, Famla AI