

OpsPilot

Six Sigma / DMAIC — User Manual

Structured, Data-Driven Process Improvement · AI Engineering Co-Pilot



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What this guide covers — what DMAIC is, how the OpsPilot module runs it phase by phase, what to have ready, and the outputs you receive.

1. What is DMAIC?

DMAIC is the Six Sigma framework for improving a process with data rather than opinion. Its five phases impose a discipline that stops the two classic improvement failures — jumping to a solution before understanding the problem, and declaring victory before the gain is locked in. You don't move to the next phase until the current one is genuinely done.

Phase	What it delivers
Define	Problem statement, scope, business impact, success measures, team.
Measure	Data collection, baseline, KPIs — what “good” looks like.
Analyse	Root causes — fishbone, 5-Why, Pareto — and interim actions.
Improve	Solutions, pilot, implementation plan.
Control	Control plan and monitoring to sustain the gains.

2. What the OpsPilot module does

Role	Responsibility
AI Coach (OpsPilot)	Guides you phase by phase, asks the right questions, suggests the analysis tools, challenges vague answers and drafts the outputs for you to validate — “I don't know your process, you do; my job is to draw it out and structure it rigorously.”
Process Expert (you)	Provide the reality — the data, the context, the constraints, the people — and validate what OpsPilot suggests, correcting it where it's wrong.

3. What you will be asked — have this ready

- The problem and its business impact (for Define).
- The process data and baseline (for Measure).
- Context on likely causes and constraints (for Analyse).

- Candidate solutions and how the gain will be held (Improve/Control).

4. What you receive — the output

A professional Project Charter (Excel) and a full DMAIC Report (Word): the Define scope and measures, the Measure baseline, the Analyse root causes, the Improve plan and the Control plan that sustains the result.

5. Worked example (illustrative)

A packaging line has a high reject rate. Define pins the problem and its cost, and sets the success measure (reject rate below a target). Measure establishes the real baseline — the team thought it was 4%, the data says 7%. Analyse uses fishbone and Pareto and finds most rejects trace to one cause (a sealing-temperature variation), not the ten things people blamed. Improve pilots a temperature-control fix and proves it on a trial run. Control then locks it in with a control plan and monitoring, so the line doesn't quietly drift back to 7% once attention moves on. The discipline — baseline before solving, control after improving — is what makes the gain stick rather than evaporate.

6. Getting the best result

- **Don't skip Measure.** Solving before you have a baseline means you can't prove the gain — or even that there was a problem.
- **Let the data pick the cause.** Pareto usually shows the real driver isn't the one everyone blamed.
- **Pilot before rollout.** Prove the improvement small before betting the process on it.
- **Never skip Control.** Without a control plan, the process drifts back and the project was for nothing.

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