What is DMAIC?

DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

DMAIC
a structured problem-solving method where each phase builds on the previous one – implementing long-term solutions

A data-driven improvement cycle that controls what can be controlled, keeps factors stable over time, and **improves and optimizes** existing business processes

DMAIC is the method for improving, optimizing, and stabilizing **existing** business processes

Components of DMAIC

D **DEFINE** — Define the project goals and customer (internal and external) deliverables

M **MEASURE** — Measure the process to determine current performance and capabilities

A **ANALYZE** — Analyze the data to identify waste and process inefficiencies

I **IMPROVE** — Improve the process by eliminating waste and increasing process efficiencies

C **CONTROL** — Control future & sustainable process performance

DEFINE: Translate Customer Needs to Project Objectives

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- ☐ **Identify customer(s)**
- ☐ **Develop a team charter**
  - **Business case**
  - **Problem scope and goal statements**
  - **Communication plan**
- ☐ **Ensure team readiness**
- ☐ **Develop a process map**
- ☐ **Identify and assess potential risk**
- ☐ **Capture Voice of the Customer (VOC)**
- ☐ **Define Critical to Quality Requirements**

MEASURE: Identify the gap between current and required performance

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- ☐ Key measures identified and baseline established
- ☐ Create plan for data collection and begin the tracking
- ☐ Communicate the variation to the process (IS ≠ WANT)
- ☐ Determine the Measurement System to be used and perform a Measurement System Analysis
- ☐ Document your Gage R&R
- ☐ Pareto Analysis for your baseline data

ANALYZE: Find the root cause for the performance gap

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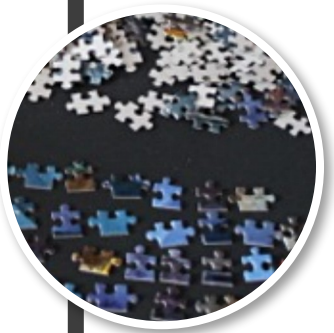
- ☐ Benchmark solutions in place
- ☐ Analyze data and determine dependencies
- ☐ Data and process analysis
- ☐ Root cause analysis
- ☐ Verify root causes
- ☐ Use tools such as:
  - ☐ 5 Why
  - ☐ Cause & Effect Diagram
  - ☐ Pareto Analysis
- ☐ Confirm potential solutions



IMPROVE: Close the gap between current and desired performance

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- ☐ Generate and test possible solutions
- ☐ Select the best solution
- ☐ Test the solution to be sure it makes sense
- ☐ Design an implementation plan
- ☐ Ensure that the correct capability exists to support the solution

CONTROL: Maintain improved state & results to establish new baseline

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- ☐ Monitor the plan
- ☐ Document the procedures to establish Standard Work practices
- ☐ Establish a response plan if excess variation occurs
- ☐ Implement a transfer of ownership to process owners
- ☐ Generate an A3 to communicate and track