What is DMAIC?

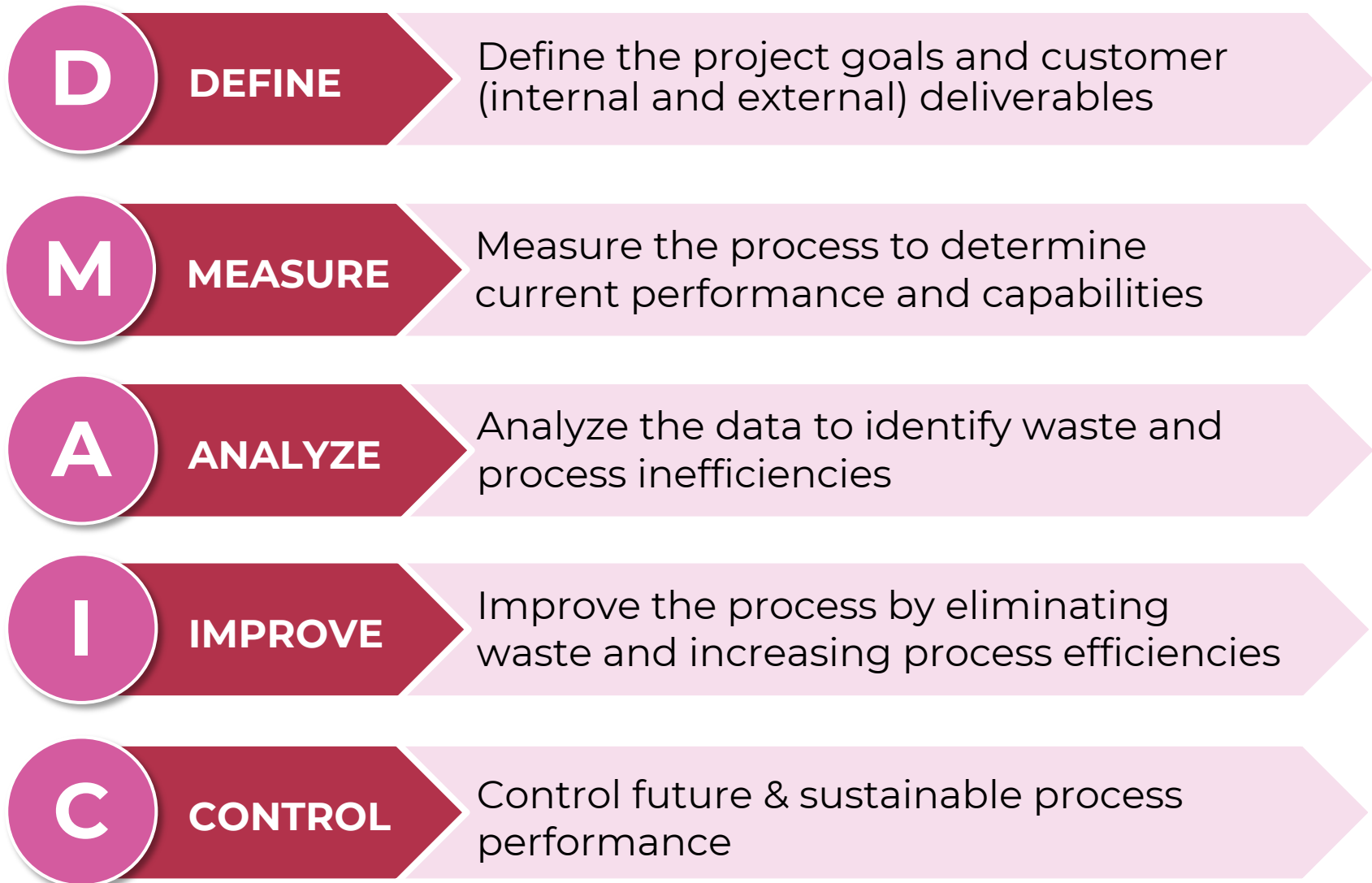## DEFINE | MEASURE | ANALYZE | IMPROVE | CONTROL

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 a 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**