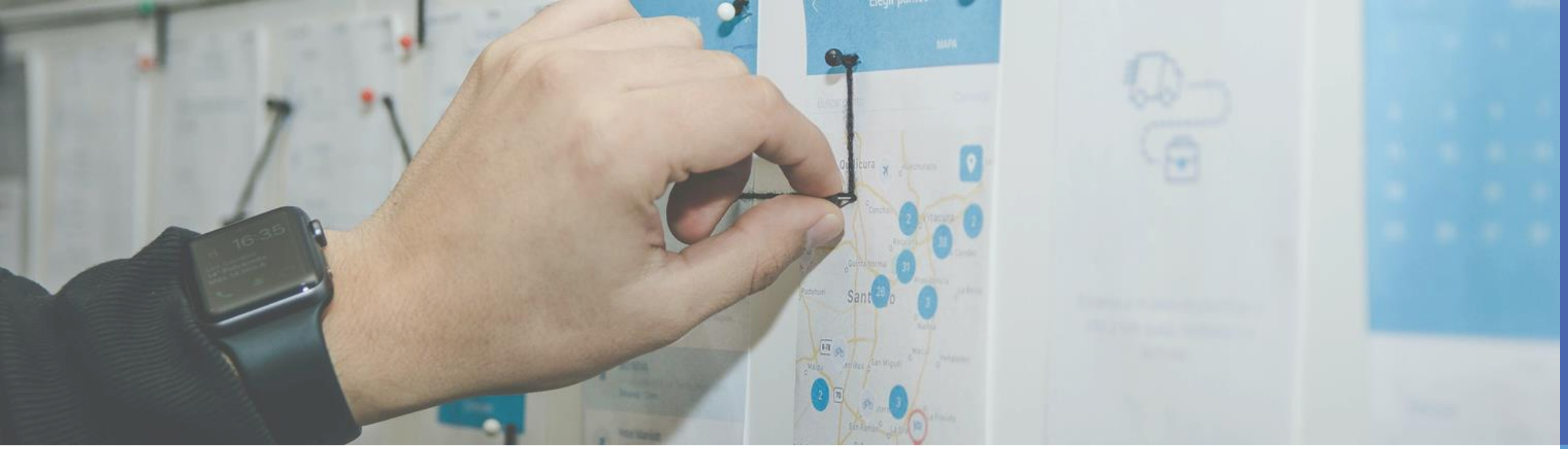
Lean project management



Welcome!

1 minute read time

What this course is about

This module is designed to give a short introduction into the topic of Lean project management. It has no formal prerequisites, but it is helpful to have some prior knowledge of project management.

Upon completing this module, you should have basic knowledge about the benefits and background of Lean project management, the lean principles, the Deming cycle, and six sigma.

Introduction

1 minute read time

Lean project management focuses on delivering a manufacturing project with more value and less waste. It does this by systematically eliminating waste in the value stream of the lean manufacturing process.

To work, lean project management relies on continuous improvement. That means that every process in the overall business value stream is improved by applying the principle of greater value, reduced waste.

Lean manufacturing was developed by Toyota, which is why it uses Japanese words to refer to the elimination of waste in a manufacturing system (Muda), waste created by overburden (Muri) and waste that comes about because of uneven workloads (Mura).

The lean manufacturing methodology has 5 lean principles: value, value stream, pull system, continuous flow, and perfection. We'll learn about those in this module.

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Background and definition

Background

1 minute read time

Lean Manufacturing – Toyota Production System

Japanese engineers at Toyota invented the Toyota Production System (TPS) between 1948 and 1975, which served as the inspiration for what we know as the lean methodology today. The TPS was used to improve manufacturing and enhance interactions with suppliers and customers, as well as eliminate waste.

John Krafcik was the one to introduce the lean approach to project management in his 1988 article titled, “Triumph of the Lean Production System.” Lean project management has influenced a whole subset of methodologies, including Agile, Kanban, and Scrum.

https://asana.com/sv/resources/lean-project-management

Definition of a lean project

1 minute read time

Lean project management was developed in manufacturing, but the lean principles have spread to many different industries since. A lean project is simply one in which there is continuous improvement.

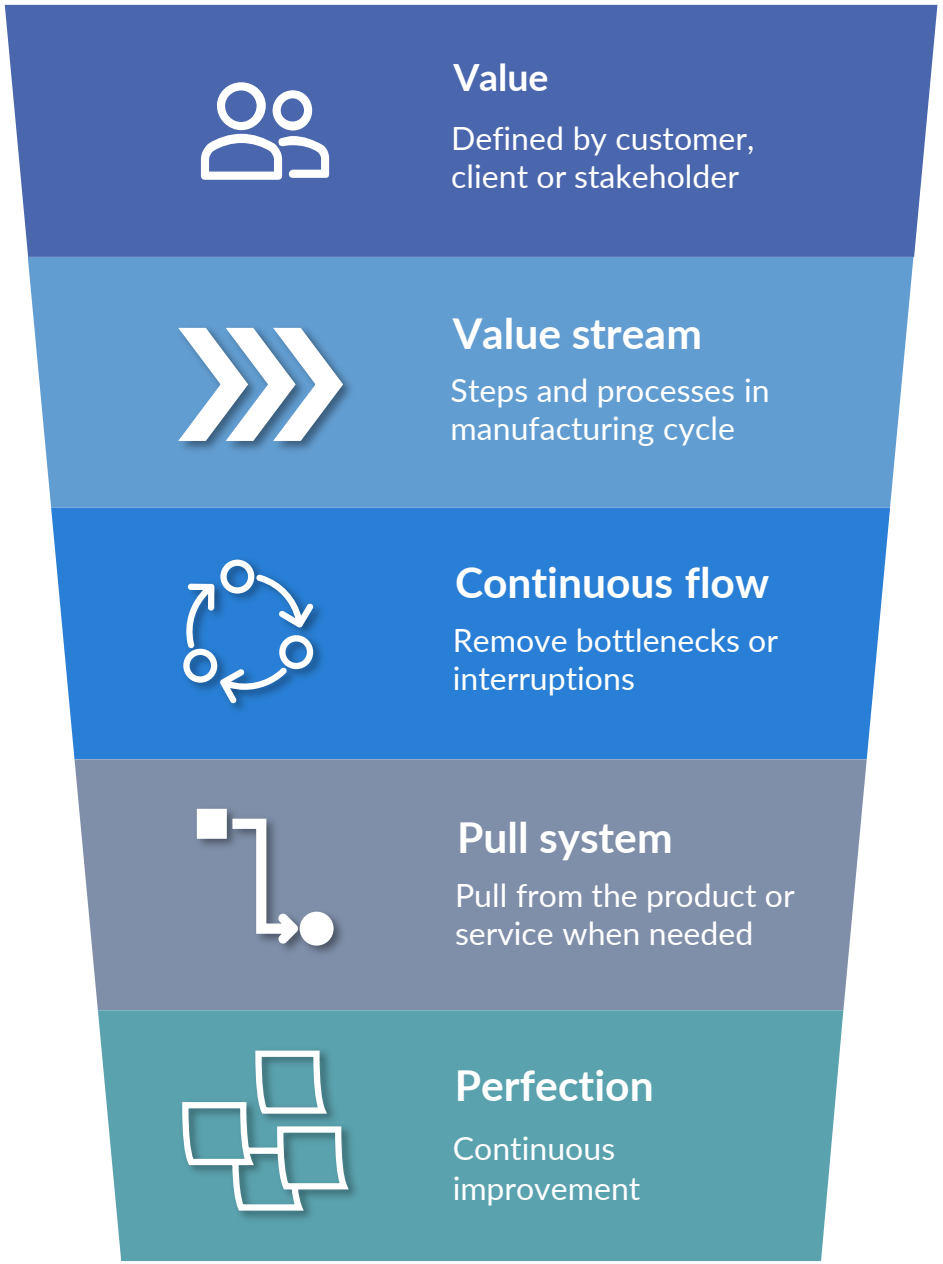
That makes it part of the larger agile project management environment, in that it's flexible and willing to change as needed. It's all about delivering value to the customers and stakeholders, which is the same whether you're manufacturing a car or an app.

One of the aspects of a lean project, that makes it unique from traditionally managed projects, is that it applies the five principles of lean project management. That's the first step in a lean project; identifying the five lean principles, then applying them to your project.

Lean philosophy is focused on waste elimination. Any activity or material, which does not add value to the end product, has to be treated as waste.

Source:https://www.sciencedirect.com/topics/engineering/lean-philosophy
Source: https://www.projectmanager.com/blog/lean-project-management%20)

The lean principles



The lean principles

2 minute read time

These principles have been around for a while, but were codified in 1997 by the Lean Enterprises Institute (LEI):

Identifying customer value: Value is defined by your customer, client or stakeholder. Value can be the quality, timeline or price point of your deliverable—though it's likely a bit of all three. Know what requirements you need, and what expectations to meet.

Managing the value Stream: You have defined value, now it's time to map all the steps and processes in your manufacturing cycle. That sequence of steps is known as a value stream in lean project management. Identify every action that must take place in the project, including design, procurement, production, HR, admin and more. It's helpful to draw this value stream map on one page to illustrate the flow of resources.

Continuous Flow: There shouldn't be any points that will create bottlenecks or interrupt production. According to LEI, "Make the value stream steps occur in tight sequence so that the product or service will have a continuous flow toward the customer." It often requires cross-functional teams, but results in greater productivity.

Pull System: This is when the customer, client or stakeholder "pulls" the product or service from the project as needed. In other words, the improvements of the prior step leads to faster time-to-market. The advantage of the pull system is no warehousing or stockpiling. That saves money for the business that can then be passed on to their customers.

Perfection: The final step is spreading the philosophy throughout the entirety of your business. Lean is about continuous improvement. Therefore, everyone in the business must always striving to better themselves and the processes they're involved with. Often it takes several go-throughs to get to the value and really reduce the waste.

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Difference between agile and lean

1 minute read time

In Lean, team increase speed by managing flow, in Agile, teams emphasize small batch sizes to deliver quickly

Lean and Agile terms are sometimes used interchangeably, which - while harmless - isn't necessarily correct. Both Lean and Agile describe a way of approaching work in a value-focused way, but they recommend somewhat different ways of achieving it. The scale to which the two approaches can extend in a company is also a strong differentiator here.

Lean originates from manufacturing practices and is more of a systematic approach, an organization-wide method of streamlining how to generate value.

Agile, with its roots in software engineering, also focuses on producing high value fast. But does it through applying short iterations and through attention to perfecting team collaboration.

The bottom line is that both Lean and Agile help teams and companies to work better and deliver higher quality to their customers. Therefore, it's common for organizations to take advantage of both methods' recommendations to achieve the best possible results

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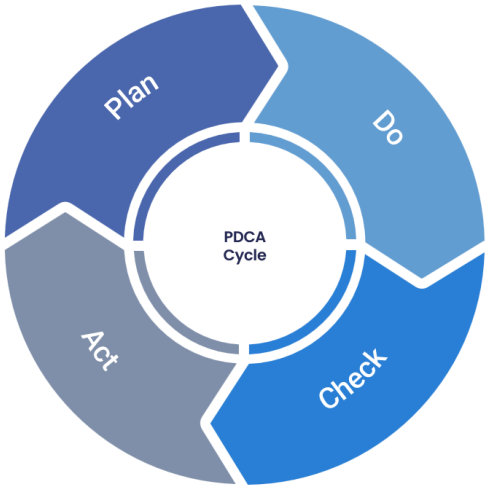
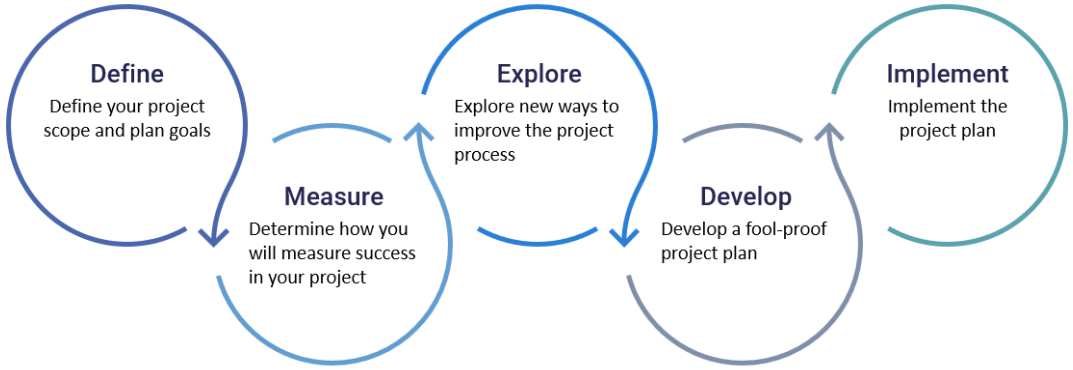
Management tools





Management tools

1 minute read time

There are several processes and tools available for professionals seeking to implement Lean. In this section we will briefly cover two: Six sigma and PDCA.

You can use these to improve your product development workflow.

When striving for continuous improvement, the tools will help you and your team reduce waste, improve productivity, and increase customer value.

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Deming cycle (PDCA)

2 minute read time

Dr. W. Edwards Deming developed the Deming Cycle in the 1950s. His method, also known as the Plan-Do-Check-Act cycle, or PDCA, was a revision of an earlier three-step problem-solving method created in the 1920s by Dr. Walter Shewhart.

There are four steps in the PDCA cycle:

- Plan: Investigate your workflow and identify any problems that need solving.
- Do: Find solutions to the problem by analyzing data or collaborating with team members.
- Check: Monitor whether your solutions are effective and make improvements to your plan if needed.
- Act: Apply revised solutions and assess what you've learned.

The Deming cycle is a simple process you can apply to various organizational processes. When implemented correctly, this process can make a significant impact on your product value.

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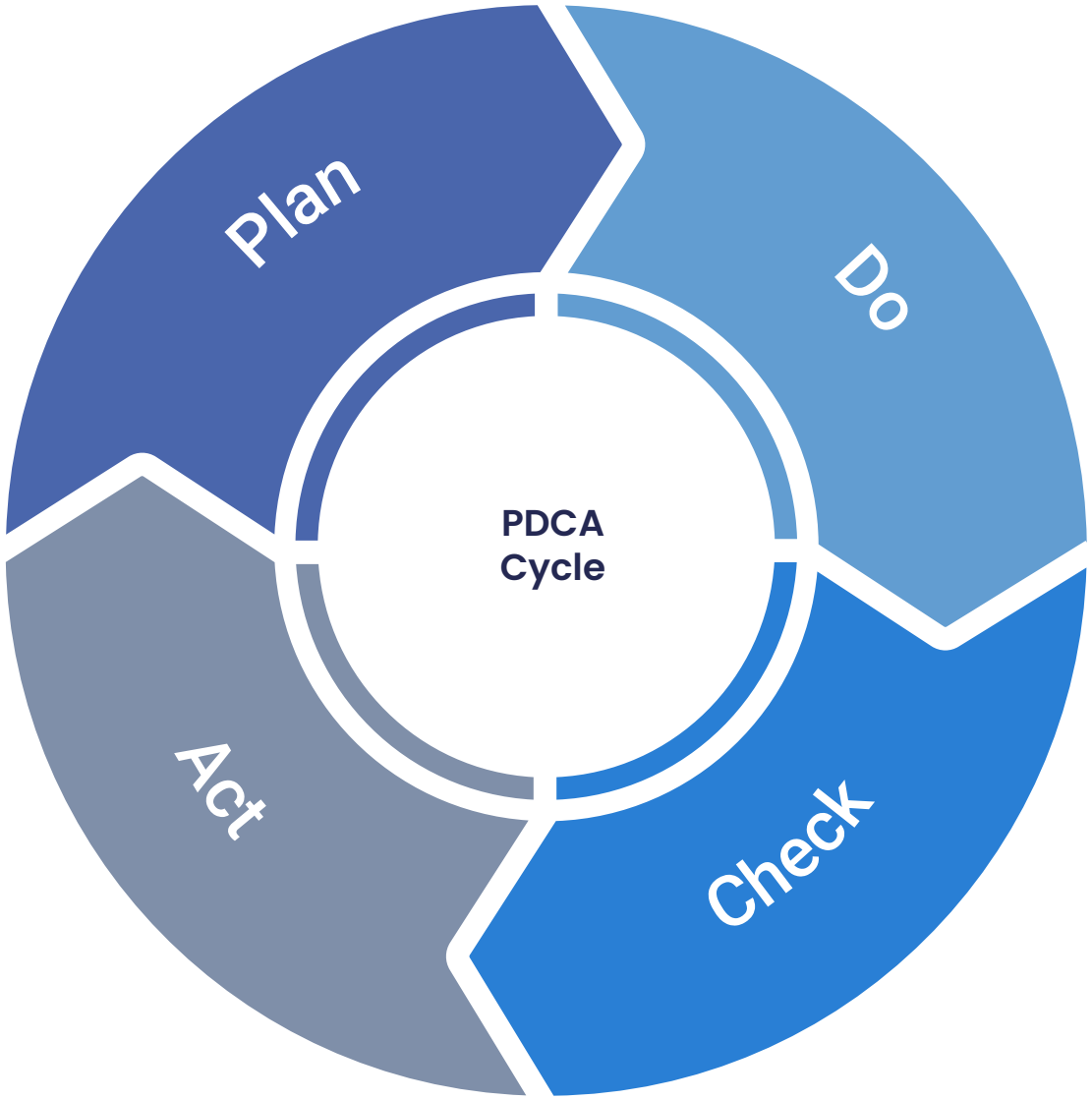
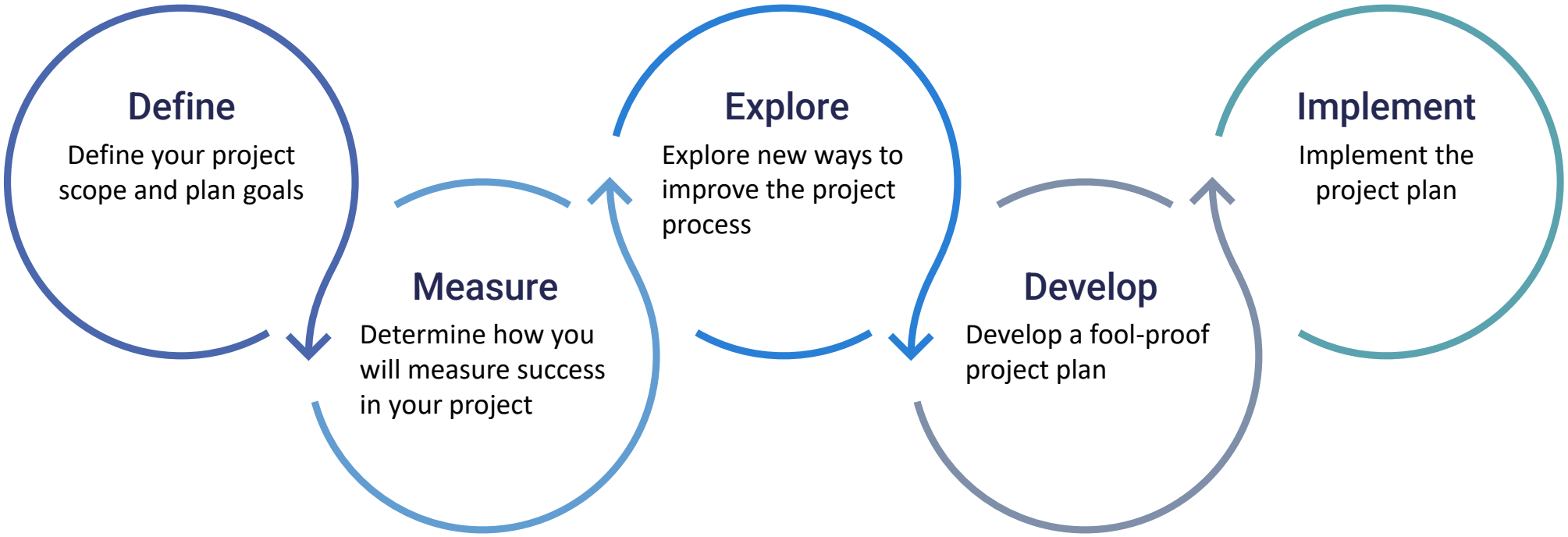


Lean Six Sigma project management (DMEDI)

1 minute read time

Lean Six Sigma is a lean management tool you can use to identify problems in your workflow. This tool has steps just like the Deming cycle, but it also has methods of analysis you can use alongside it. The Lean Six Sigma steps, also known as DMEDI, are as follows: Define, Measure, Explore, Develop, Implement:



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Summary

Summary

1 minute read time

Through adhering to Lean project management ideas (and tools), you can achieve:

1. Shorter lead times,
2. Cost reduction across the board
3. Improved quality and customer satisfaction
4. Better process efficiency and predictability

Knowledge check

Knowledge check

What does PDCA stand for?

1: Process, development, continuous improvement, awareness
2: Planning, developing, challenging, addressing
3: Plan, do, check, act

What is meant by Muri?

1: Waste created by overburden.
2: Value defined by the customer needs for a product
3: Perfection

What is the main philosophy of Lean

1: Deliver in iterations
2: Eliminate waste
3: Plan ahead

Thank you for your time!