

TECHNOLOGY



Caltech | **Center for Technology & Management Education**

Full Stack Java Developer

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Agile

Kanban Method



Learning Objectives

By the end of this lesson, you will be able to:

- 👁 Understand the Kanban method
- 👁 Illustrate the Kanban practices
- 👁 Describe the Kanban board
- 👁 Comprehend the benefits of using Kanban



A Day in the Life of a Full Stack Developer

You are working as an Agile Master in an organization and you realize that the team is facing difficulties in managing their tasks and ensuring timely delivery of value to the stakeholders.

The current approach to task management lacks transparency, making it challenging to identify bottlenecks and resolve them. To address this issue and improve the task management process, it is proposed that the Kanban method be implemented in Jira.

By adopting this approach, the team can visualize their workflow, prioritize tasks, track progress, and enhance collaboration, resulting in improved productivity.



Introduction to Kanban

What Is Kanban?

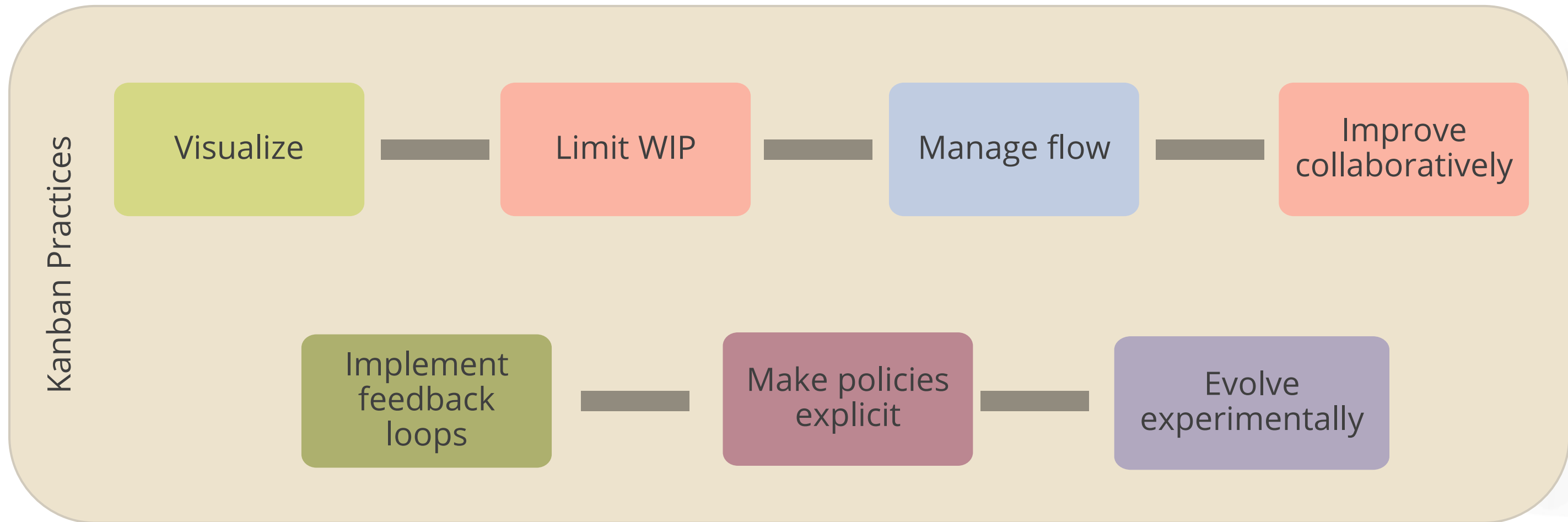
Kanban is an Agile Methodology that manages creation of products with emphasis on continuous delivery, while not overburdening the development team.



Kanban Practices

Kanban Practices

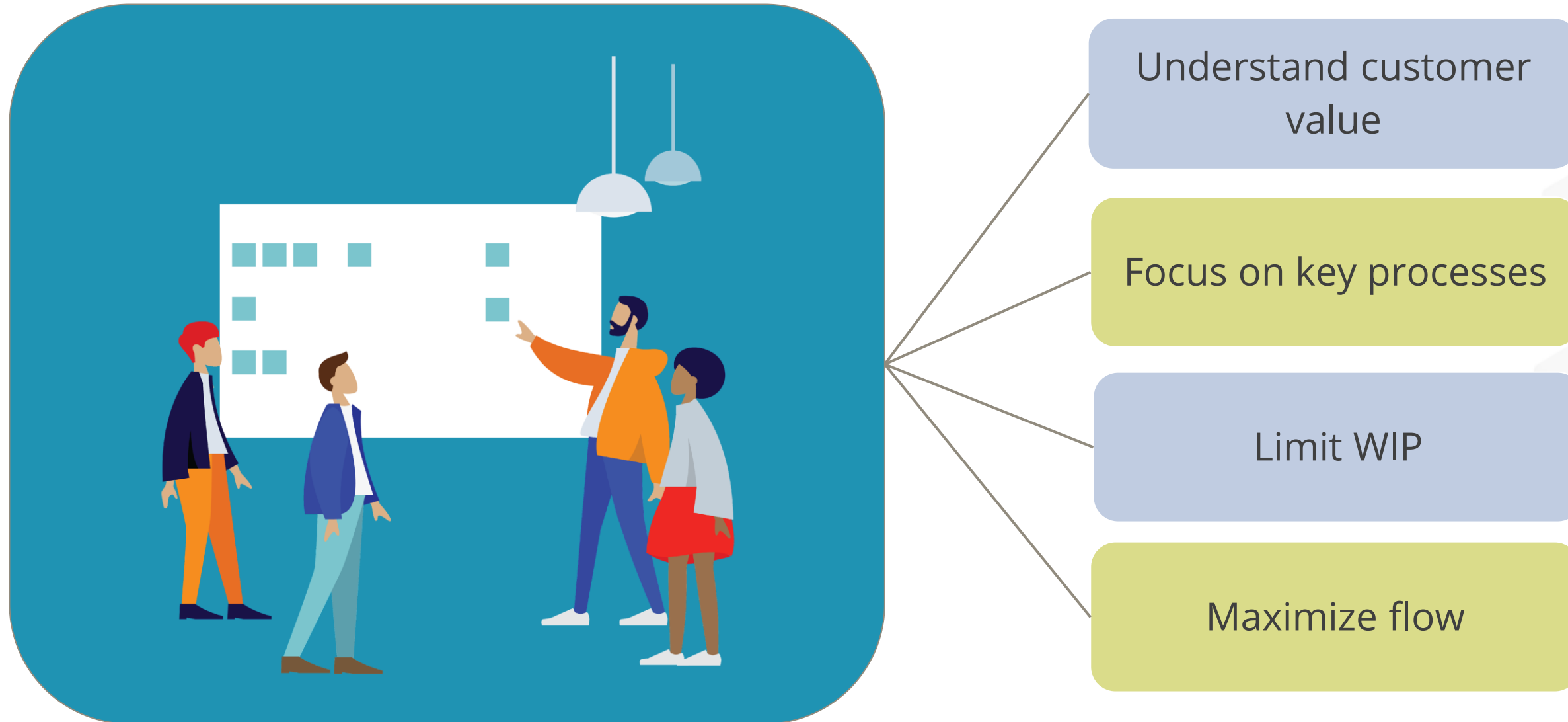
The Kanban method recommends a series of principles and practices that must be followed to manage and improve workflow. The core practices of Kanban are listed below:



Kanban Board

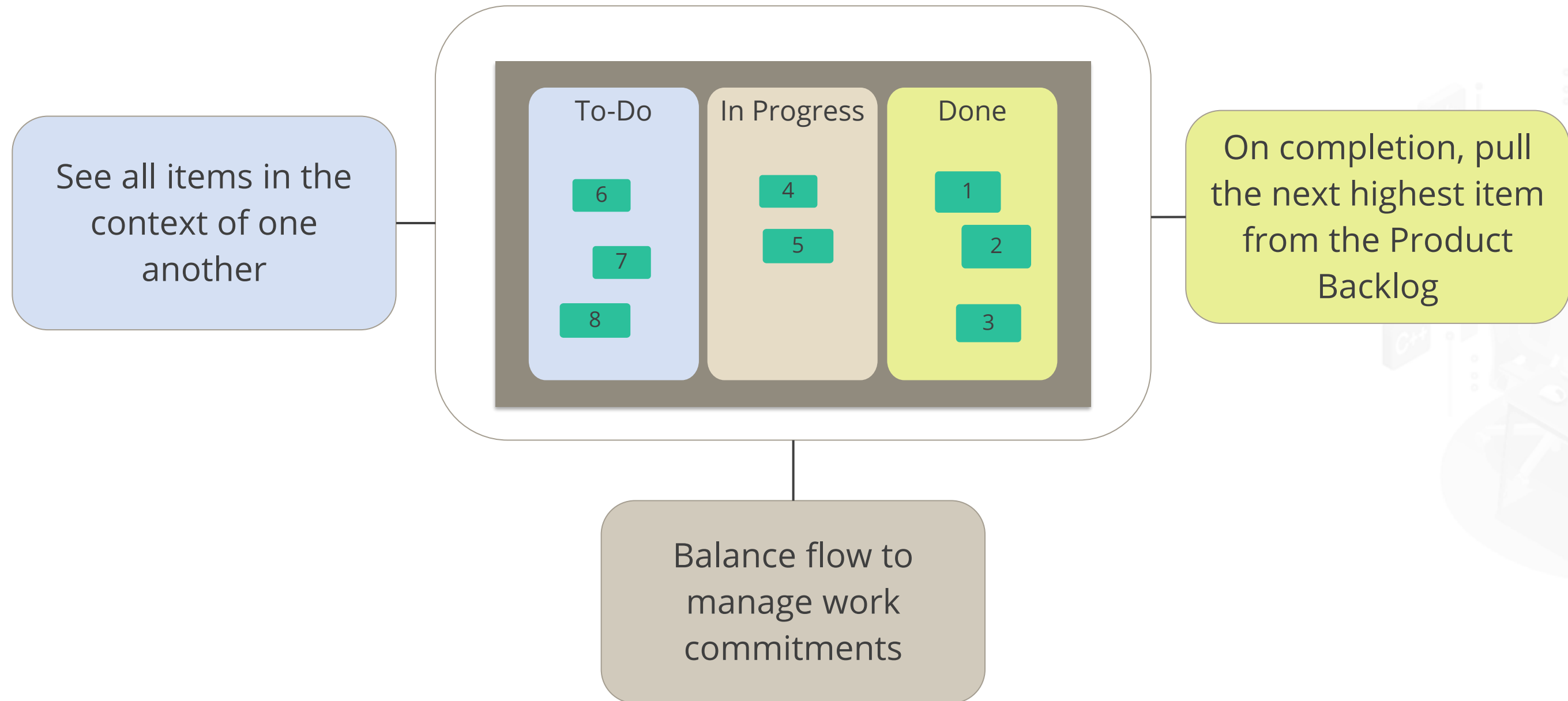
Kanban Board

A Kanban Board enables the main Kanban practices.



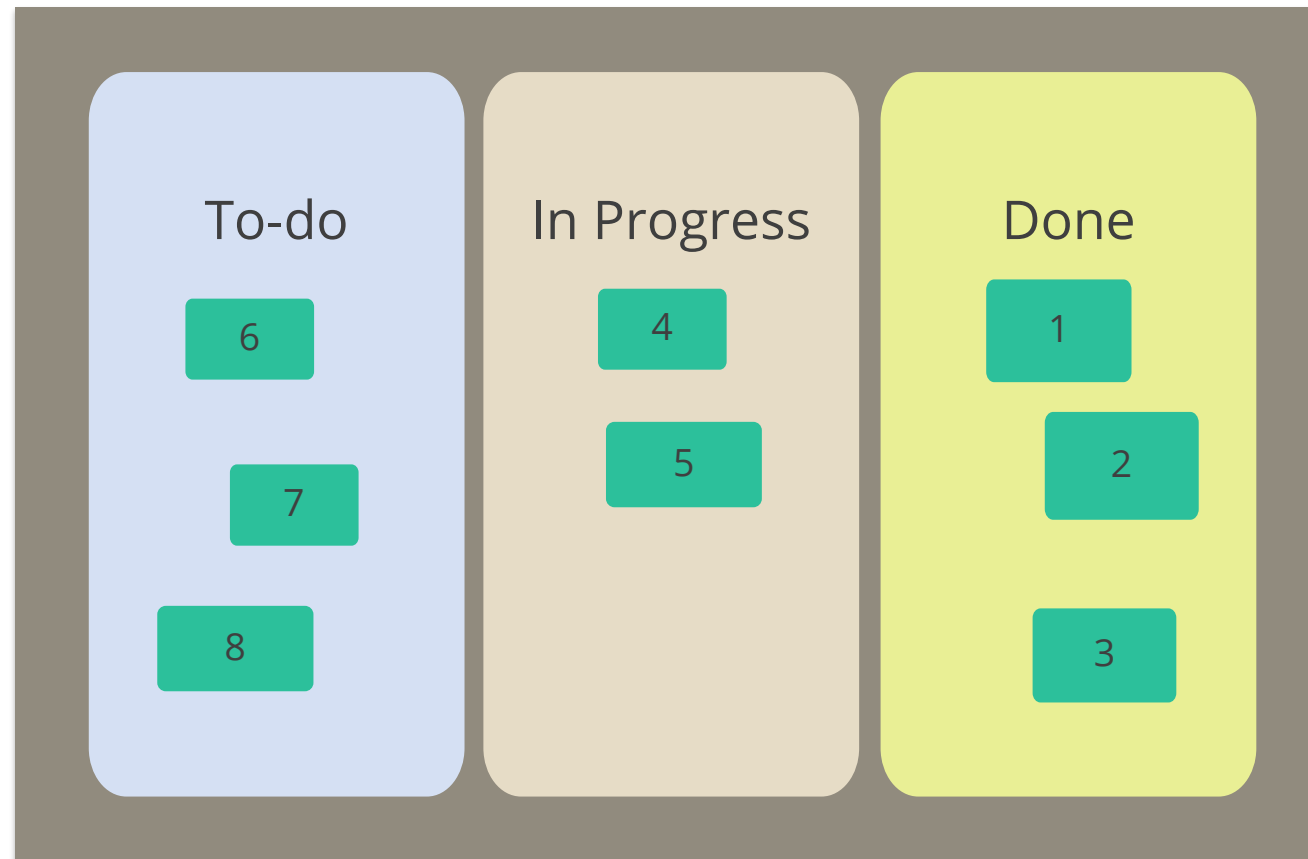
Kanban Board

The Kanban Board helps make your work visible, so it can be shown to others, and keeps everyone on the same page.



Sample Kanban Board

Kanban Boards can be simple or detailed.



Depending on the project environment, Kanban boards can be physical or digital.

Every work item is represented as a separate card.



In Japanese, Kanban literally translates to “Visual Signal”.

Kanban Cards

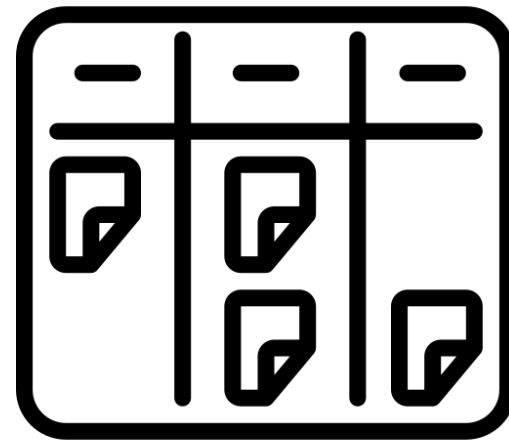
Kanban Cards are visual artifacts that represent a work item.



Benefits of Using Kanban

Benefits of Using Kanban

Some of the key benefits of using the Kanban Methodology are:



Flexibility while planning

Shortened cycle time

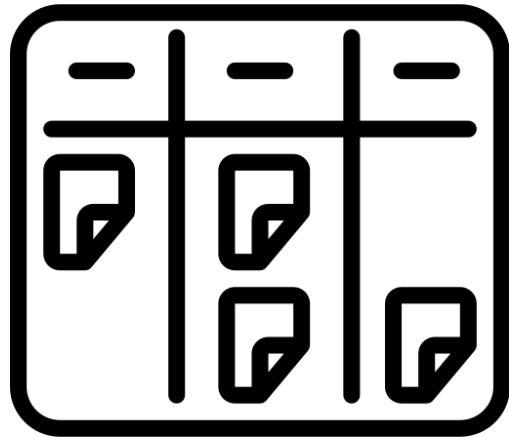
Fewer bottlenecks

Visual metrics

Continuous delivery



Benefits of Using Kanban



Flexibility while planning

Shortened cycle time

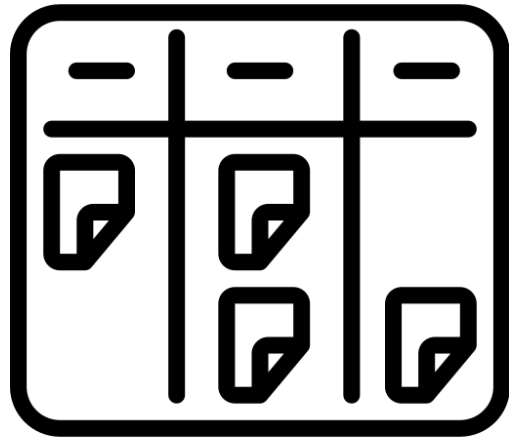
Fewer bottlenecks

Visual metrics

Continuous delivery

- Allows staying focused on active work items.
- Product Owner can reprioritize without disturbing the Development Team.
- Unlike Scrum, there is no need for fixed length iterations.

Benefits of Using Kanban



Flexibility while planning

Shortened cycle time

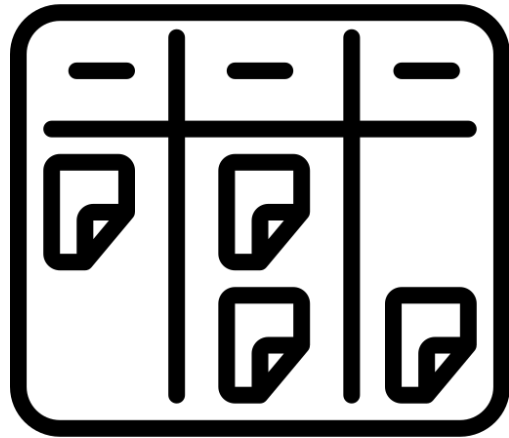
Fewer bottlenecks

Visual metrics

Continuous delivery

- Shared skill sets reduce cycle time.
- Cycle time is a key metric for Kanban, as it helps forecast future deliveries.

Benefits of Using Kanban



Flexibility while planning

Shortened cycle time

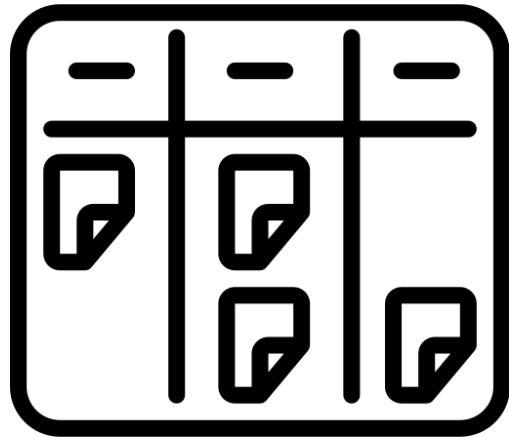
Fewer bottlenecks

Visual metrics

Continuous delivery

- Limit WIP items to ensure attention is paid to under-review items.

Benefits of Using Kanban



Flexibility while planning

Shortened cycle time

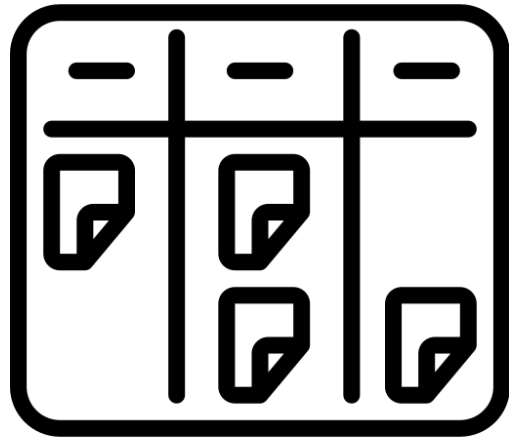
Fewer bottlenecks

Visual metrics

Continuous delivery

- Continually improve team efficiency through control charts and cumulative flow diagrams.

Benefits of Using Kanban



Flexibility while planning

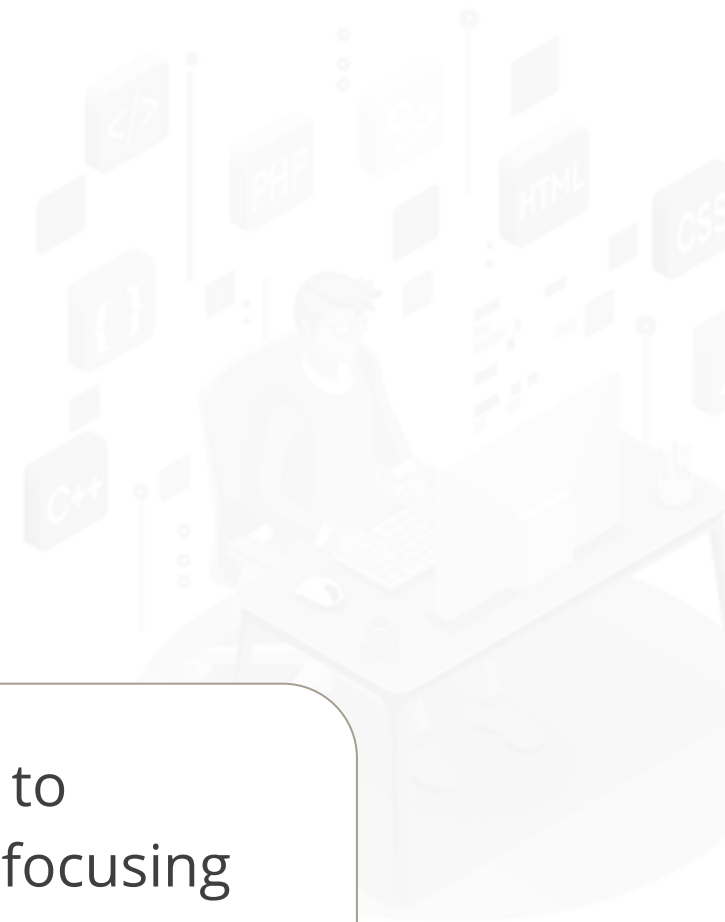
Shortened cycle time

Fewer bottlenecks

Visual metrics

Continuous delivery

- Optimize flow to customers by focusing on just-in-time and one-at-a-time delivery.



Kanban vs. Scrum

Kanban vs. Scrum

While Kanban and Scrum share common concepts, they take very different approaches.

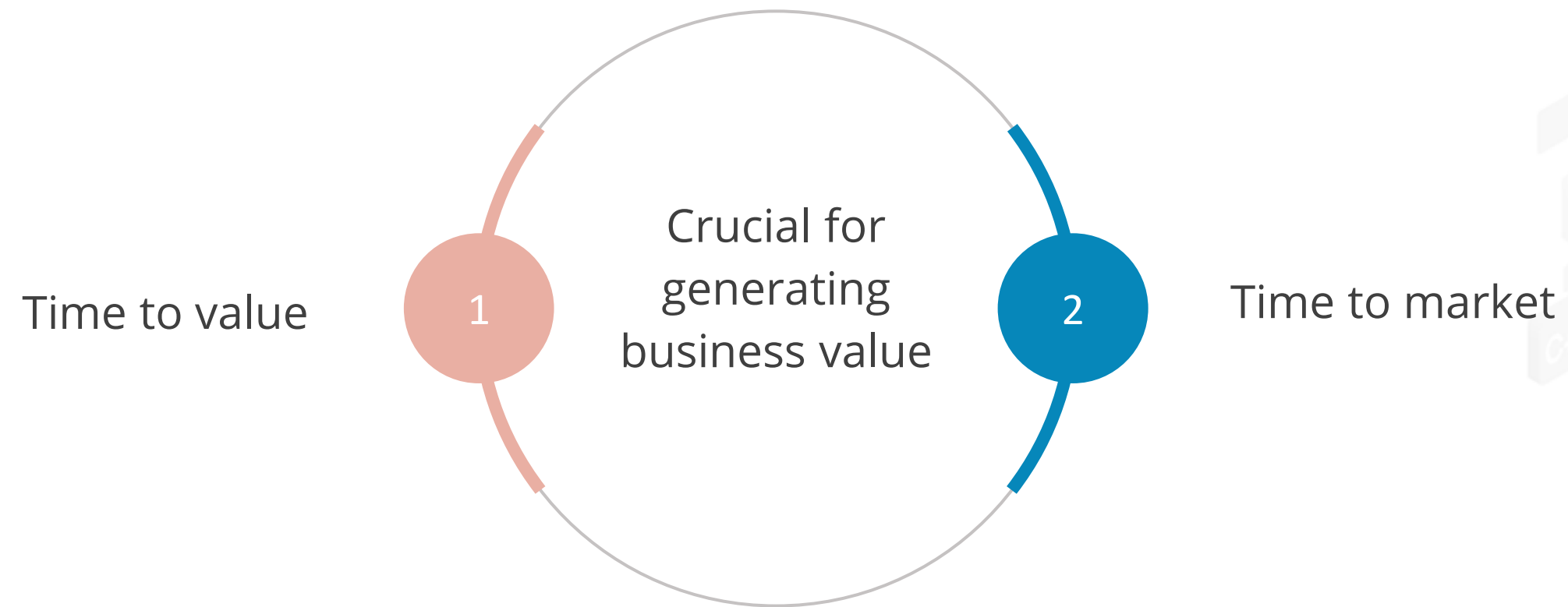
	Release	Cadence	Key metrics	Roles	Changes
Kanban	Continuous delivery or at discretion of team	Continuous flow	Cycle time	No existing roles	Changes possible at any time
Scrum	Increment release at end of every Sprint if approved by Product Owner	Fixed length Sprints at regular intervals	Velocity	Product Owner Development Team Scrum Master	Does not recommend forecast changes during Sprint



Kanban Metrics

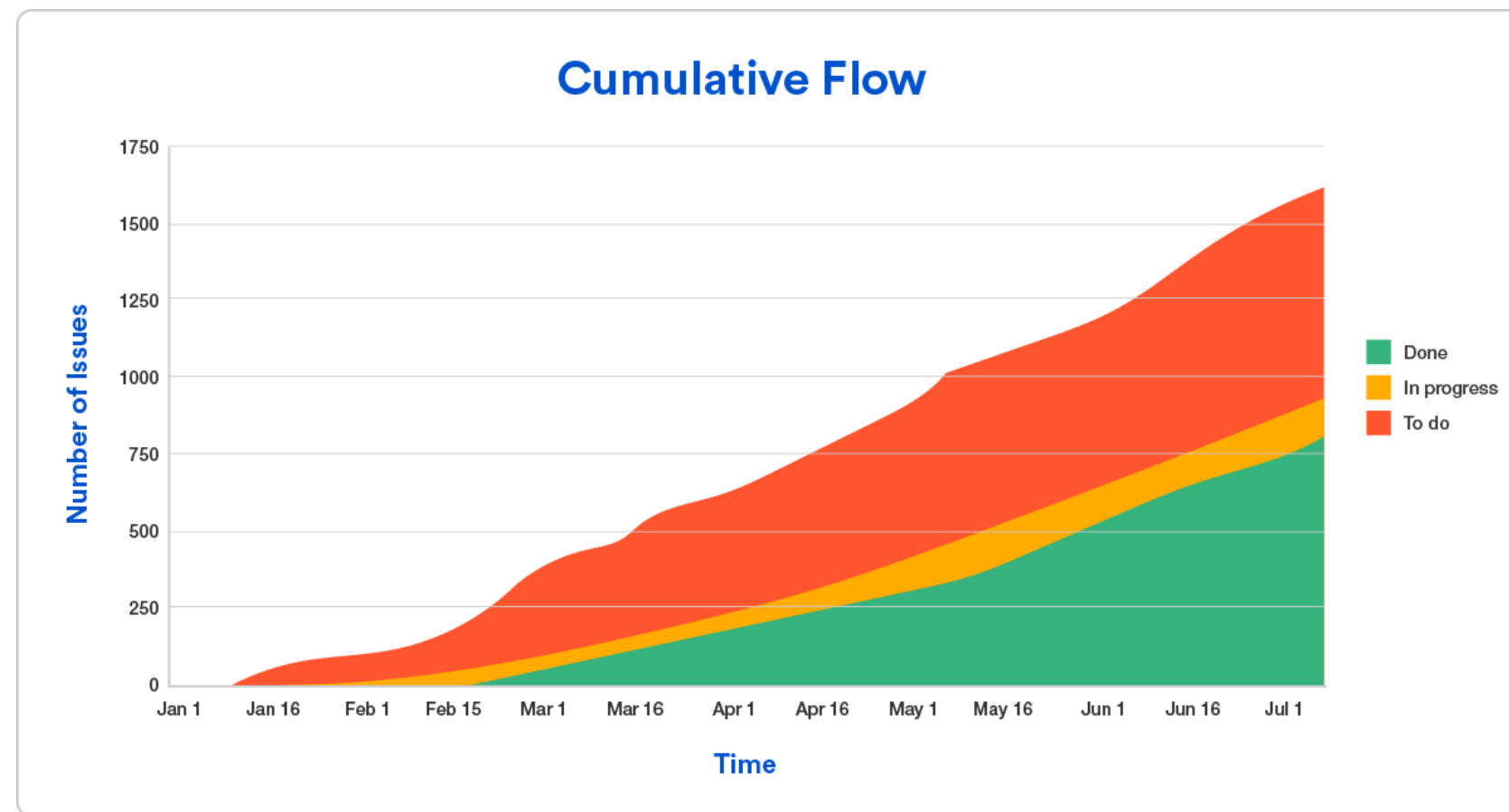
Kanban Metrics

Kanban metrics help to measure “time to value” or “time to market.”



Kanban Metrics

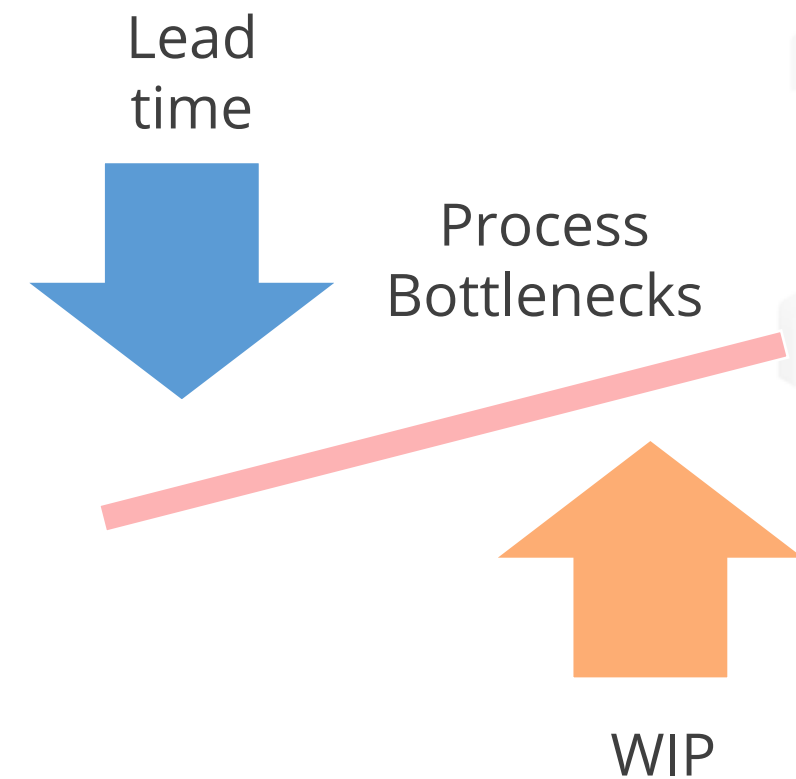
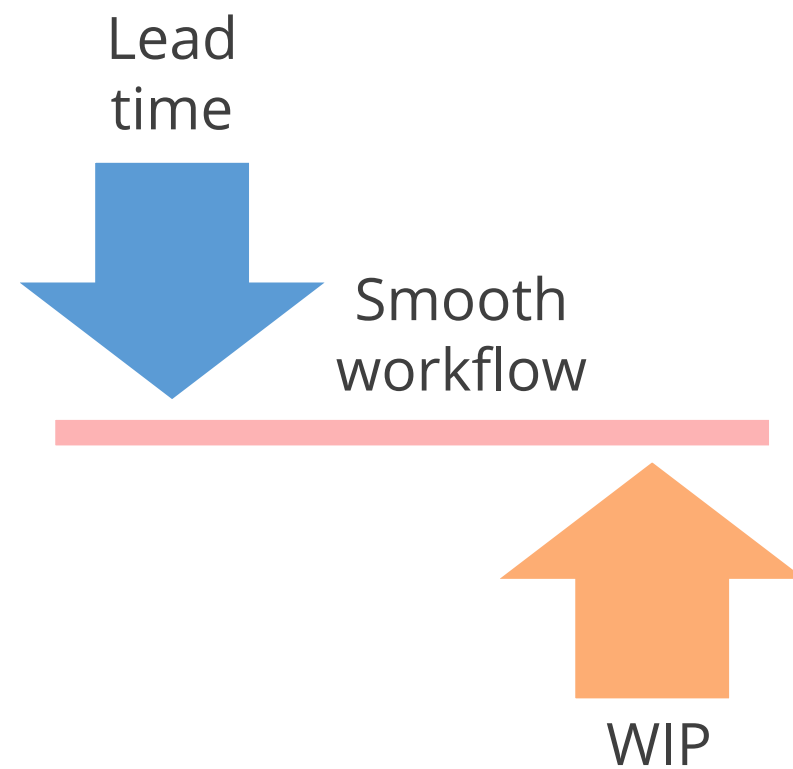
A Cumulative Flow Diagram (CFD) refers to the time-based plot of the cards.



It is used to provide key insights and information about team capabilities.

Kanban Metrics

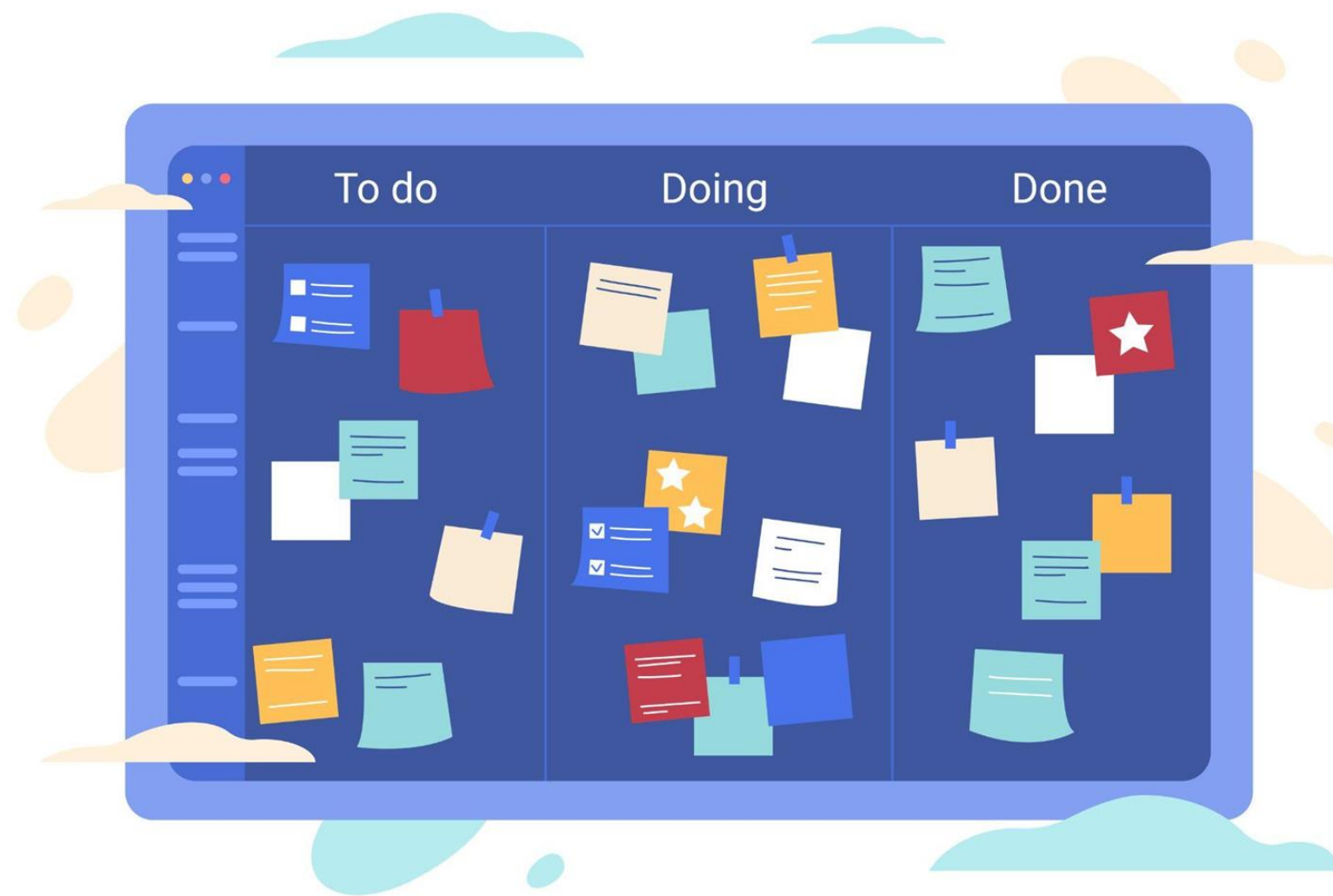
CFD provides the required information on the team's performance and valuable insights.



SwiftKanban

SwiftKanban

SwiftKanban helps to enhance the visualization process by providing a powerful board editor.



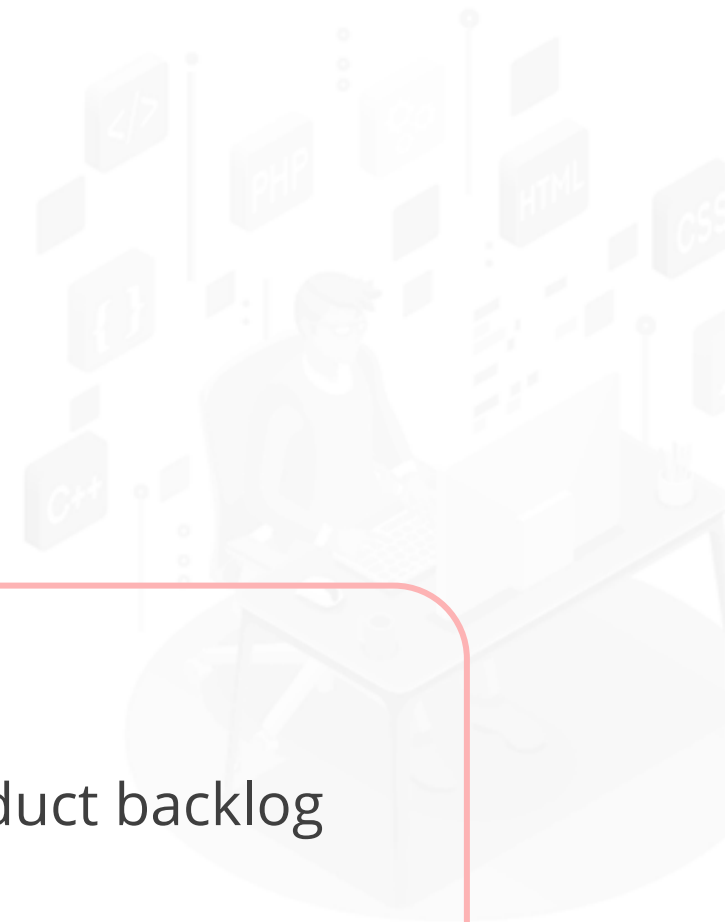
SwiftKanban

SwiftKanban board offers built-in feature for:

Highlighting bottlenecks

Defining WIP limits

Defining product backlog



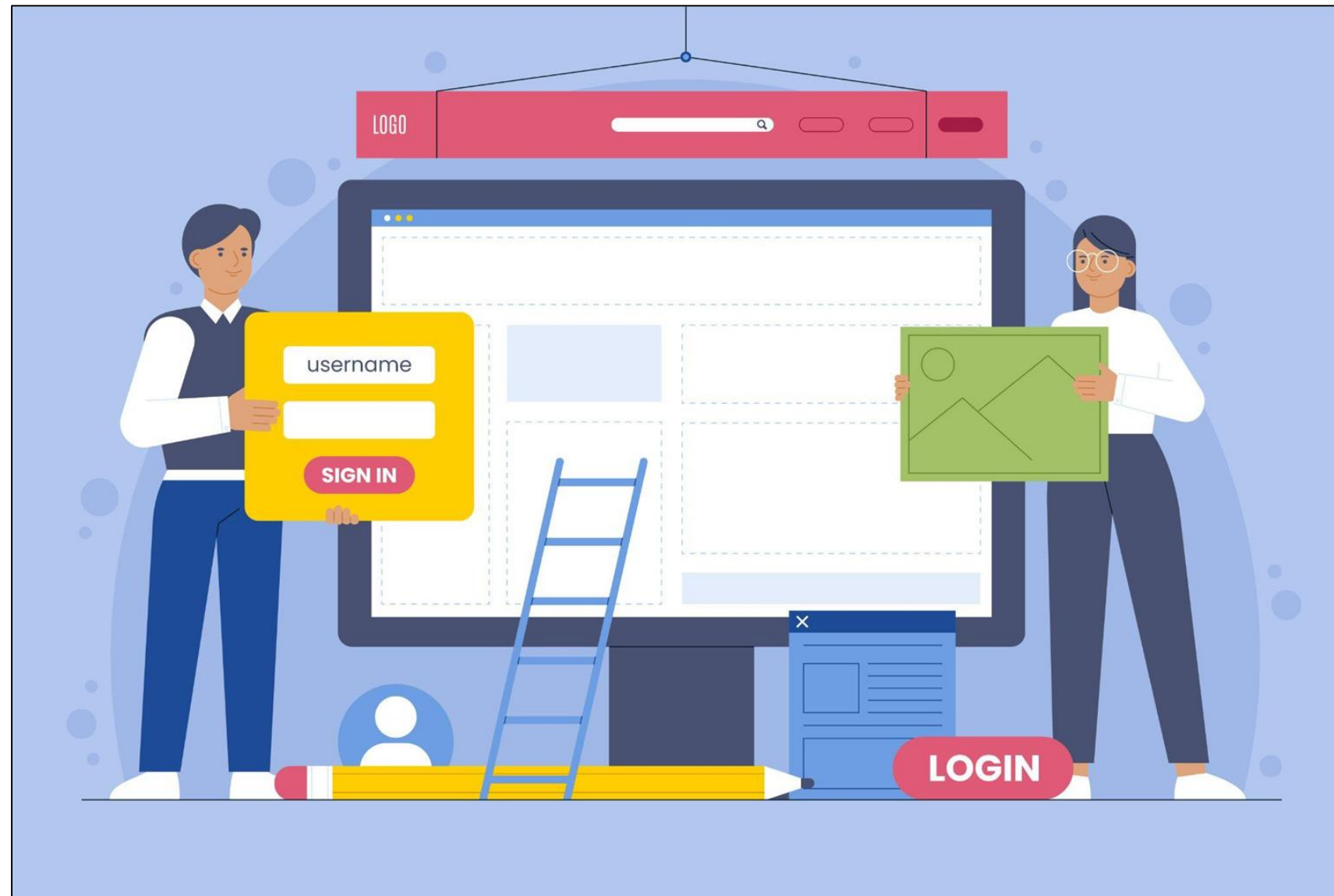
SwiftKanban

SwiftKanban board allows the team members to juggle the cards on board, ensuring that project guidelines are met.



SwiftKanban

SwiftKanban offers high-quality configurable from editors to define custom cards.



Key Takeaways

- 👁 Kanban is a highly visual methodology, which allows for continuous flow.
- 👁 The Kanban Board helps make your work visible, so it can be shown to others, and keeps everyone on the same page.
- 👁 Kanban is an Agile Methodology that manages creation of products with emphasis on continuous delivery, while not overburdening the development team.
- 👁 Kanban Cards are visual artifacts that represent a work item.



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Thank You