

ICT Mahidol Dev Club

Work Methodology



Introduce the how our club
work on project

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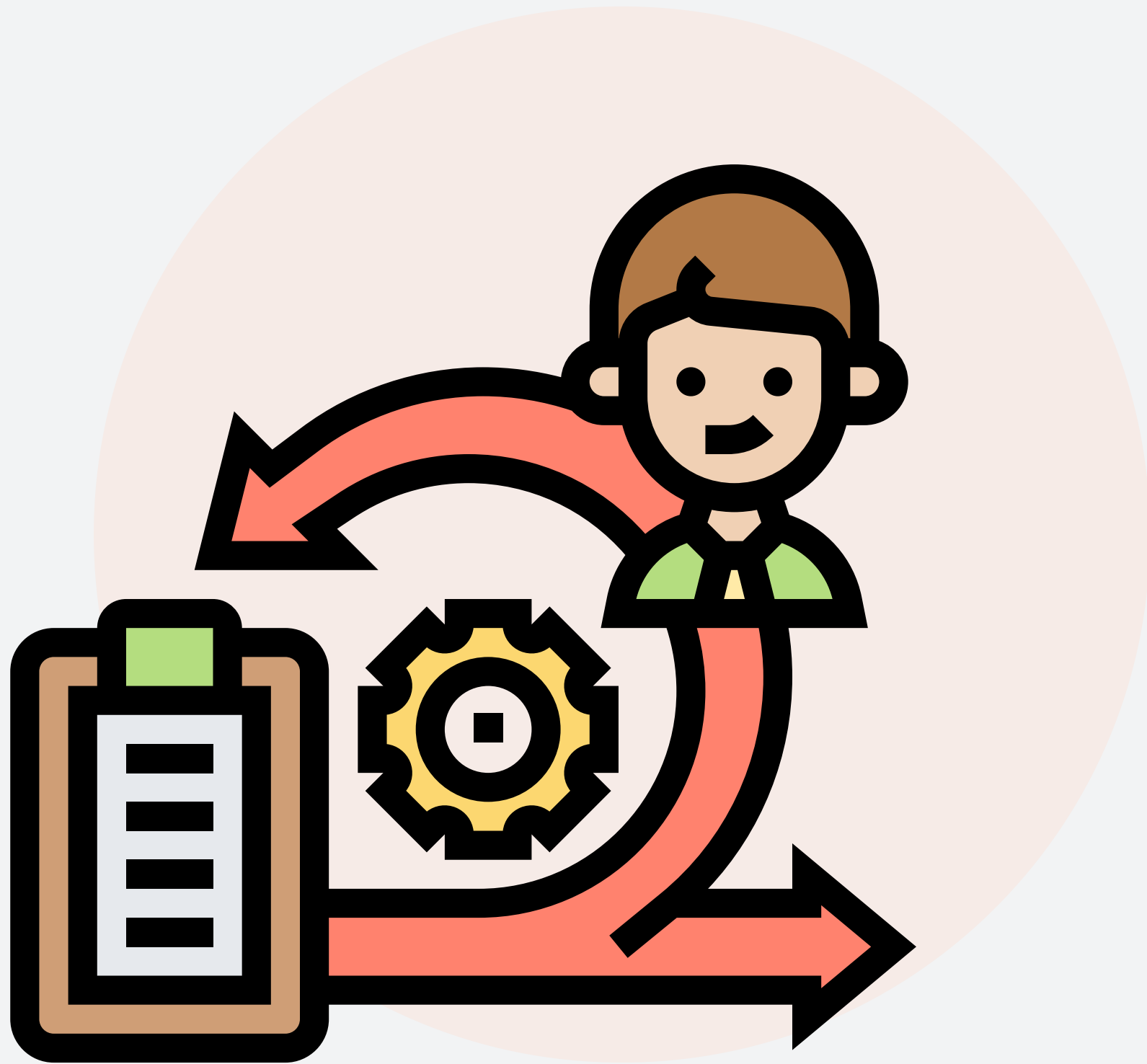
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Agile Methodology

An iterative and incremental approach to project management, focusing on

- Flexibility
- Customer satisfaction
- continuous improvement.



Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

Agile vs Waterfall

the comparison between agile and waterfall methodology

Agile

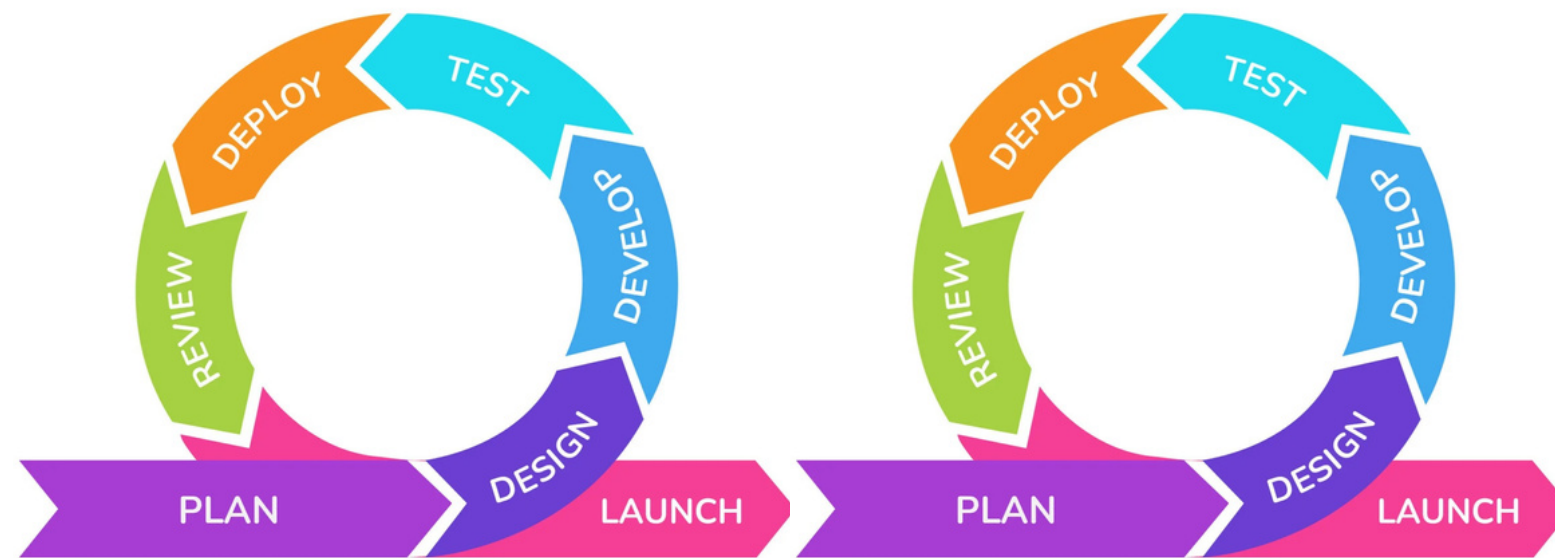


Image Source: [Krasamo.com](https://krasamo.com)

Waterfall

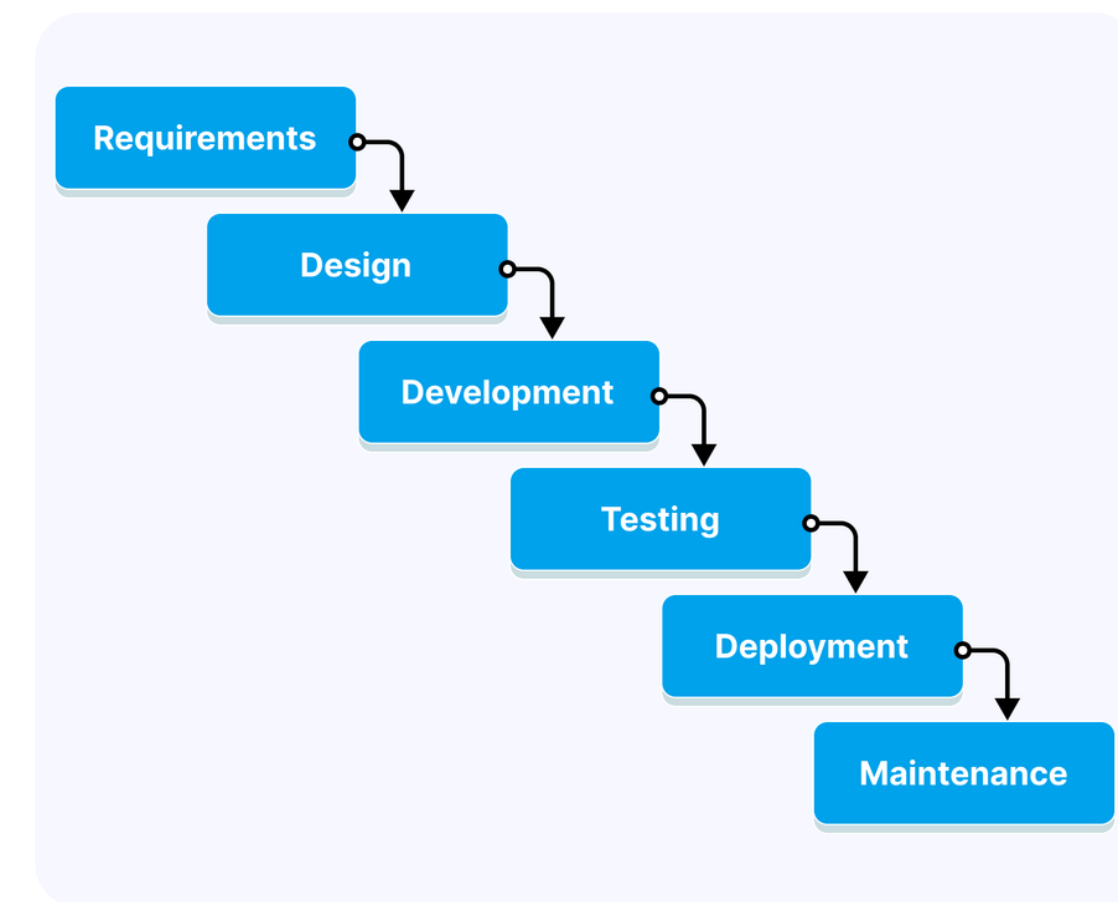
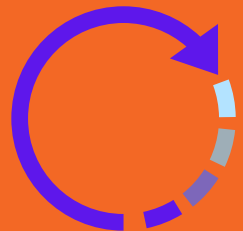
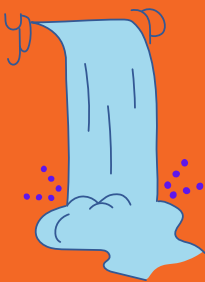


Image Source: [Lambdatest.com](https://lambdatest.com)

Agile vs Waterfall

the comparison between agile and waterfall methodology

	 Agile	Waterfall 
Timeline	Iterative and Incremental: Focuses on flexibility and continuous improvement through short development cycles.	Sequential Phases: Follows a linear and sequential approach, often with long phases.
Client Involvement	Customer Collaboration: Emphasizes customer involvement and feedback throughout the development process.	Limited Customer Interaction: Often involves the customer primarily at the beginning and end of the project.
Flexibility	Responsive to Change: Welcomes changing requirements, even late in development.	Resistant to Change: Changes are often difficult and costly due to the rigid structure.



Scrum Framework

The popular management framework for software development

- Implemented from Agile Methodology
- Define the strict rule such as events, roles, and artifacts

Scrum Framework Overview

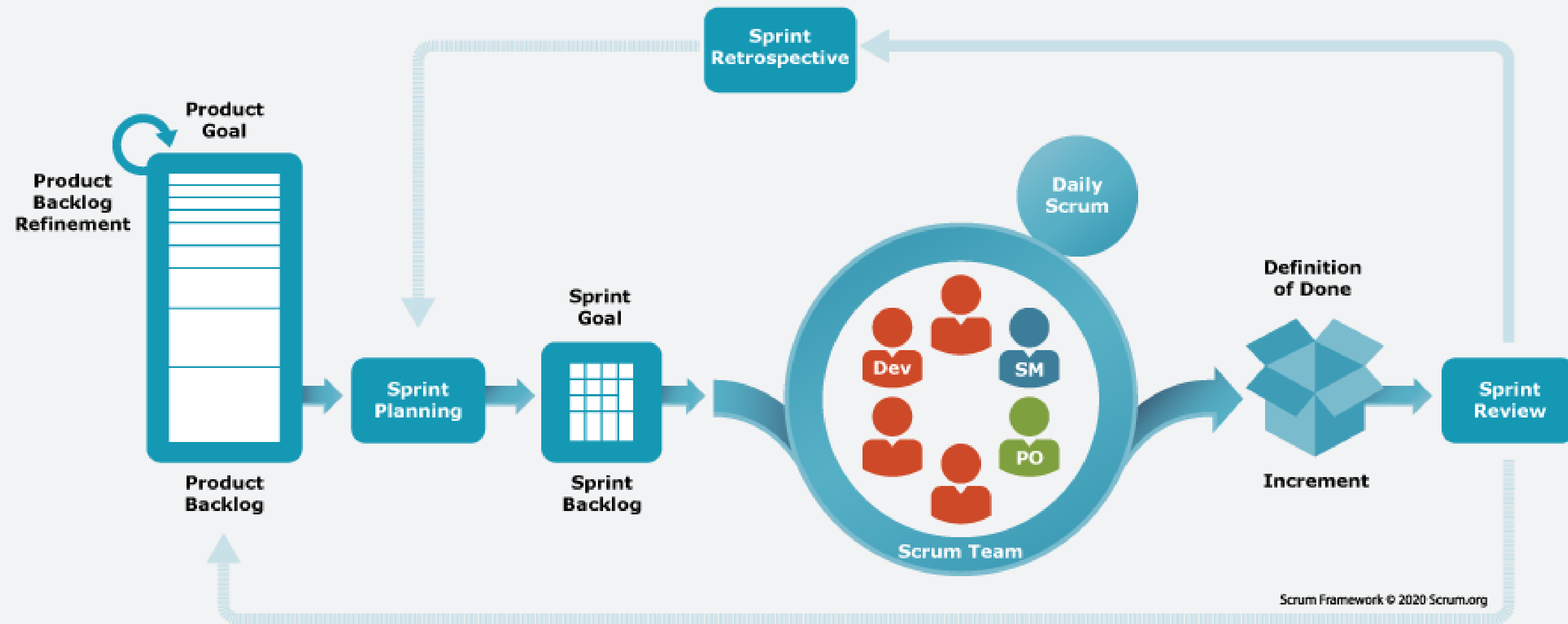


Image source: [Scrum Guide](#)

Scrum Roles



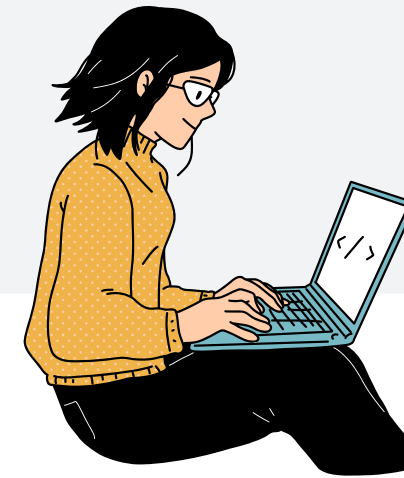
Product Owner

- Manage content, and priority of Product Backlog
- Define Product Goals
- Prioritize the needs of stakeholders and the business to create a clear product vision



Scrum Master

- Ensure the team understands and implements Scrum processes correctly.
- Help the team work productively, and facilitate Scrum events effectively.
- Remove obstacles impeding the team's progress.



Developers

- Manage and implement Sprint Backlog
- Adhere to the Definition of Done to maintain quality.
- Continuously adapt their plan toward the Sprint Goal.

Scrum Events

The formal opportunities within Scrum to inspect and adapt artifacts as needed.

The event includes:

- The Sprint
 - The fixed length of work mostly for 2-3 weeks.
 - Repeating over and over again until values reach product goal
 - Include sub events
 - Sprint Planning
 - Daily Scrum / Daily Meeting
 - Sprint Review
 - Sprint Retrospective



Sprint Planning

- **Goal Setting:** Define the Sprint Goal and select items from the Product Backlog to achieve it.
- **Task Breakdown:** Break down selected items into manageable tasks and estimate the effort required.
- **Commitment:** The team commits to completing a set of Product Backlog items during the Sprint.
- **Plan Development:** Develop a plan for delivering the Sprint Goal and Sprint Backlog.

Daily Scrum / Meeting

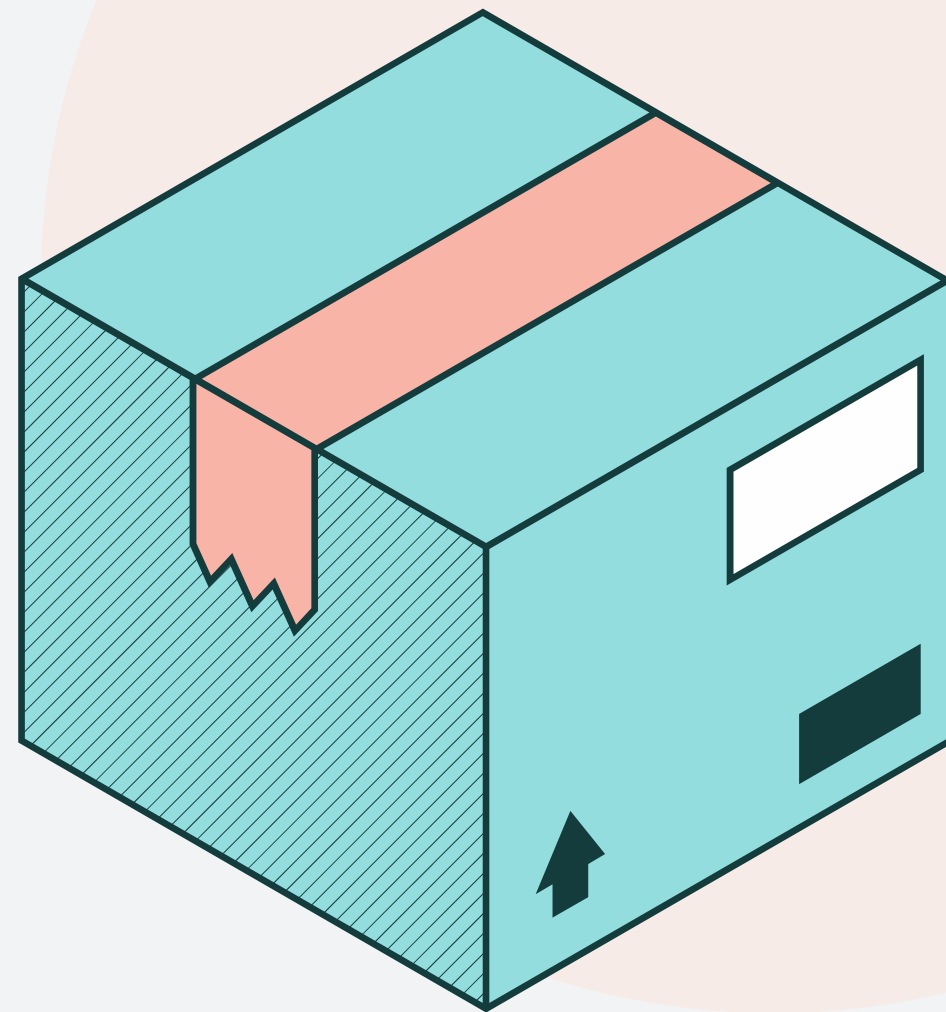
- **Daily Sync:** A quick, time-boxed meeting for the development team to synchronize activities
- **Progress Update:** Each team member discusses
 - **What they did yesterday?**
 - **What they will do today?**
 - **Is there any problems?**
- **Focus on Goals:** Ensure that the team remains focused on the Sprint Goal.

Sprint Review

- **Showcase Work:** Present the work done during the Sprint to stakeholders.
- **Gather Feedback:** Collect feedback on the Increment and potential backlog items for future Sprints.
- **Adapt Product Backlog:** Review and adapt the Product Backlog based on feedback and progress.
- **Stakeholder Collaboration:** Promote collaboration and alignment among team members and stakeholders.

Sprint Retrospective

- **Reflect on Sprint:** Discuss
 - **What went well**
 - **What went terrible**
 - **What should we continue**
- **Continuous Improvement:** Identify actionable ways to increase quality and effectiveness.
- **Team Dynamics:** Assess team dynamics, processes, and tools for efficiency.
- **Plan for Improvements:** Create a plan for implementing improvements in the next Sprint.



Scrum Artifacts

Represent work, value, and its commitment designed for transparency and adaptation

- Product Backlog
- Sprint Backlog
- Increment

Product Backlog

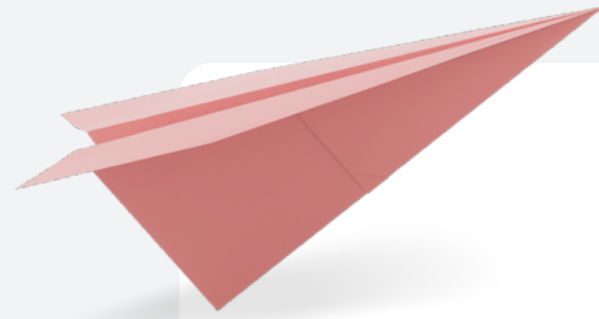
- An ordered list of work needed to implement to build the product
- The size (difficulty) of each work is determined by Developers.
- It is most likely a list of user story describing what user wants
- **Commitment - Product Goal:** Describes the long-term objective of the product. The Product Backlog evolves to fulfill this goal.

Sprint Backlog

- Includes the Sprint Goal (**why**), selected Product Backlog items (**what**), and the plan for delivering the Increment (**how**)
- **Commitment - Sprint Goal:** The single objective for the Sprint, providing focus and coherence for the team's work.

Increment

- Stepping Stone to Goal (**Completed Work / User Story**)
- It must meet the Definition of Done
- **Commitment - Definition of Done:** A formal description or criteria that must be satisfied first before marking work as done.



That's it!

Now, we should be able to work together !

For more information about Scrum: [Visit Official Scrum Guides](#)

