

Agile

What is Agile?

Agile is a set of principles and practices, an umbrella of different methods and frameworks. Agile Manifesto is a document that contains 12 Principles and values. It helps the teams work more efficiently. It is an alternative approach to project management. Agile is not only for software development or Information Technology.

Agile Principles.

Main principles of Agile are,

- It mainly focuses to satisfy the customer through early and continuous delivery.
- Response to change
- It is value based.
- It has iterative approach.
- It has Adaptive planning.
- Early delivery/ deliver frequently.
- It welcomes continuous improvement.

What is Scrum?

Scrum is a specific framework or methodology that follows the agile principles. It is mainly intended for teams of 10 or less individuals. They divide their work into goals that can be achieved in that time frame iterations known as sprints which is mostly two weeks sometimes goes upto one month.

Roles in Scrum Team

Scrum team includes just the Product Owner, Scrum Master and the Team members.

Ceremonies:

the five Scrum ceremonies that make up a Sprint:

- Sprint Planning.
- Daily Scrum.
- Sprint Review.
- Sprint Retrospective.
- Backlog Refinement.

Program Increment and Sprint

In most cases the team may not be working on stories that would have an outcome to deliver working software, they might be building a server or applying software updates or even documentation. It consists of four -five sprints followed by PI planning. Sprint is mostly 10 days long. On Day 1 team does their planning and they commit and on the end of day 10

Team Meetings

Teams meets daily which is usually called Daily stand-ups. It is usually first thing in the morning. It takes less than 30 mins. Scrum master, product owner and team members attend the daily stand-ups. They update about what they did yesterday and what they are going to do that day and if they are any blocker.

User Story:

As a team member we should be able to create User stories. Estimating a story using Fibonacci series sequence (0, 1, 2, 3, 5, 8, 13) gives more clarity of its complexity and relative sizing in terms of development.

Consider the following factors while estimating stories.

- **Complexity:** Consider the complexity of the story.
- **Risk:** Consider the team's inexperience with developing this story.
- **Implementation:** Consider the implementation factors.
- **Deployment:** Consider the deployment requirements.
- **Interdependencies:** Consider other outside issues.

Tools

There are many Agile Software. Most popular software tools are Rally and Jira.

Difference between Waterfall and Agile.

Waterfall and Agile are two different software development methodologies that has been used mostly. The main difference is as below,

- In Waterfall methodology if any changes has to be made then it has to be started from the beginning but Agile accepts change then and there.
- Waterfall requires completion of work before the work is released whereas Agile focuses on quick delivery.

- Waterfall is a process where each phase of development process is completed before moving on the next one. On the other hand, in Agile the process is broken down into small, incremental stages.
- Communication are more formal in waterfall where as in Agile communication is informal.
- In waterfall method all the requirements are gathered at the beginning of the project. In Agile the requirements are continuously reviewed and updated throughout the project allowing room for more flexibility and adaptability.
- Waterfall method emphasizes documentation and requires details design documents and test plans. Agile on the other hand, emphasizes working software over documentation .

Reference:

PDF from Class

<https://www.float.com/resources/agile-vs-waterfall/>

<https://guide.quickscrum.com/scrum-guide/estimate-story/#:~:text=Story%20points%20represent%20the%20relative%2ctake%20to%20complete%20the%20work>