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AGILE Guide

Agile methodology is a project management framework that breaks projects down into several dynamic phases, commonly known as sprints. The Agile framework is an iterative methodology. After every sprint, teams reflect and look back to see if there was anything that could be improved so they can adjust their strategy for the next sprint.

4 Pillars of Agile

- Individuals over processes and tools
- Working software over comprehensive documentation
- Customer collaboration over contract negotiation
- Responding to change over following a plan

12 Agile Principles

From the 4 values of Agile methodology, these 12 principles are developed:

1. Satisfy customers through early, continuous improvement and delivery
2. Welcome changing requirements, even late in the project
3. Deliver value frequently
4. Break the silos of your projects
5. Build projects around motivated individuals
6. The most effective way to communicate is face-to-face
7. Working software is the primary measure of progress
8. Maintain a sustainable working pace
9. Continuous excellence enhances agility
10. Simplicity is essential
11. Self-organizing teams generate the most value
12. Regularly reflect and adjust your way of work to boost effectiveness

Normally, the softwares is constantly changing and evolving and the needs of the product have to change with it, because of this, linear management methods like the waterfall are less effective compared to Agile. Agile methods are very beneficial in these types of projects because Agile methods are adaptable, Agile fosters collaborative teamwork, and Agile methods focus on customer needs.

Agile Methodologies

Kanban. Tasks are represented by cards on a board, and stages are represented in columns. As team members work on tasks, they move cards from the backlog column to the column that represents the stage the task is in.

Scrum. Scrum is an empirical process, where decisions are based on observation, experience and experimentation. Scrum has three pillars: transparency, inspection and adaptation. This supports the concept of working iteratively. Think of Empiricism as working through small experiments, learning from that work and adapting both what you are doing and how you are doing it as needed.

Extreme Programming(XP). Is an Agile framework that outlines values that will allow your team to work together more effectively. The five values of XP include: Communication, Simplicity, Feedback, Courage, Respect. XP is quite similar to daily Scrum stand ups but it focuses more on "how" things will get done.

Adaptive Project Framework (APF). This technique is mainly used for IT projects where more traditional project management techniques don't apply. This framework is based on the idea that project resources can change at any time.

Extreme Project Management (XPM). This type of project management is often used for very complex projects with a high level of uncertainty. This approach involves constantly adapting processes until they lead to the desired result. XPM requires a lot of flexibility. This is one of the reasons why each sprint is short—only a few weeks maximum. This methodology allows for frequent changes, trial-and-error approaches to problems, and many iterations of self-correction.

Adaptive Software Development (ASD). This methodology enables teams to quickly adapt to changing requirements. The main focus of this process is continuous adaptation. The phases of this project-type: speculate, collaborate, and learn – allow for continuous learning as the project progresses.

Dynamic Systems Development Method (DSDM). Is an Agile method that focuses on a full project lifecycle. DSDM has a more rigorous structure and foundation, unlike other Agile methods.

Feature Driven Development(FDD). Feature Driven Development blends different Agile best practices. While still an iterative method of project management, this model focuses more on the exact features of a software that the team is working to develop. This model also allows teams to update projects frequently.