

Project Management

- The development of software for a business, the construction of building, sales expansion or relief effort after a natural process—these are all examples of projects. Now to do these type of tasks or project we need proper management of resources as well as maintain efficiency at the same time, deliver project of high quality within stipulated time this is project management come into picture.
- Project Management is the use of specific knowledge, skills, tools and techniques to deliver something of value to people.

There are many project management methodologies out of which two popular methodologies are:

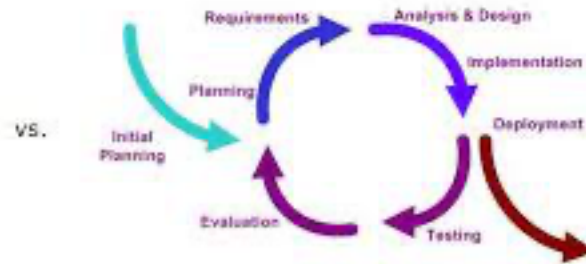
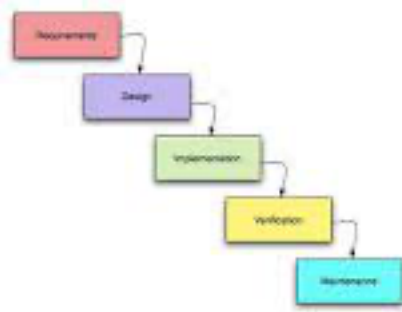
1. Waterfall Methodology.
2. Agile Methodology.

Waterfall Methodology:

Waterfall methodology is a process in which the phases of project flow downward. Project moves forward only if previous phase has been successfully completed.

Requirements >> Design >> Development >> Testing >> Development >> Maintenance.

- Waterfall model is not an ideal model to develop a large scale project size.
- The requirements in the waterfall model should be clear cut at the beginning time; otherwise, it may lead to a less effective method.
- In the waterfall model, it is hard to move back in order to make changes in the previous phase.
- The testing process in the waterfall model starts after the completion of development. So, there is a high chance of bugs to be found later in the project development.



When to use :

- It is used when project is highly structured and to change anything after the fact is very expensive.
- The Waterfall Methodology is great for manufacturing and construction projects.

CONS:

- ☐ Any changes in the requirements are costly.
- ☐ Rigid requirements definitions inhibit creativity.
- ☐ Requirements can be misinterpreted because the developers interact less with stakeholders.
- ☐ Excessive documentation is required to create detailed definitions of the deliverables, timelines and milestones prior to the beginning of the project.

Agile Methodology:

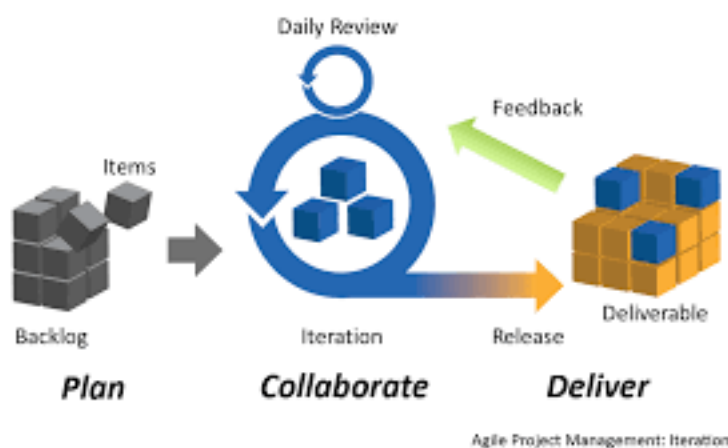
- The Agile Methodology offers project teams a very dynamic way to work and collaborate and that's why it is very popular project management methodology.
- It is an evolving and collaborative way to self-organize across teams.
- It is fast and flexible unlike waterfall project management.

The agile team practices to continuous development and continuous integration using technology that automates steps to speed up the release and use of products.

The presence and participation of the project manager are not required in agile project management. Although the presence of the project manager is essential for success under the traditional (waterfall model) project delivery. The role of the project manager is to distribute task among team members. However, the project manager is not

obsolete in agile project management, and many organizations use them in a large, more complex project. The organization mostly places them in the project coordinator role.

Agile Project Management demands that team members know how to work in this new agile methodology. The team member must be able to coordinate with each other, as well as with users.



When to Use It:

The practice originated in software development and works well in that culture. How do you know if agile is for you? It has been applied to non-software products that seek to drive forward with innovation and have a level of uncertainty, such as computers, motor vehicles, medical devices, food, clothing, music and more; and it's also being used in other types of projects that need a more responsive and fast-paced production schedule, such as marketing.

CONS:

- ☐ Deliverables, timelines and milestones are less predictable.
- ☐ Stakeholders need to invest a lot of time throughout the project.
- ☐ Documentation is not created, which could be a problem for regulated industries.
- ☐ Since the requirements change all the time, re-work will be inevitable.

Difference :

Agile	Waterfall
It follows the incremental approach.	Waterfall model follows a sequential design process.
The measurement of progress is in terms of developed and delivered functionalities.	The measurement of success is in terms of completed and reviewed artifacts.
Agile model is flexible as there is a possibility of changing the requirements even after starting the development process.	On the other hand, the waterfall model is rigid as it does not allow to modify the requirements once the development process starts.
It has a small team size.	In the waterfall model, the team may consist more members.