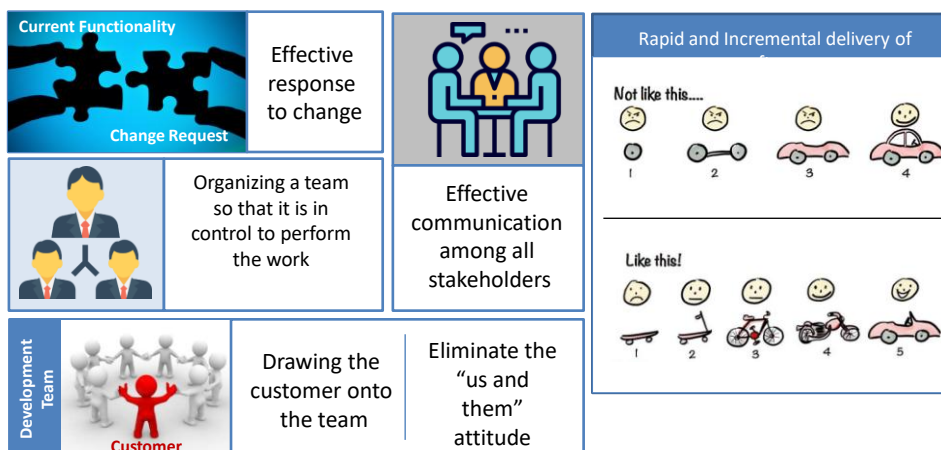


Agile Model

- To overcome the shortcomings of the waterfall model of development.
- Agile: Easily moved, light, nimble, active software processes
- How agility achieved?
 - Fitting the process to the project
 - Avoidance of things that waste time
- **Agile Model** : The Agile paradigm was created with the goal of swiftly incorporating change requests. Requirements are split into little components that may be created progressively under this methodology. However, the Agile model's core premise is to provide an increment to the client after each Timebox. An iteration's end date is set and cannot be changed. This agility is attained by eliminating time and effort-consuming tasks.

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What is Agility?



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17 software Gurus

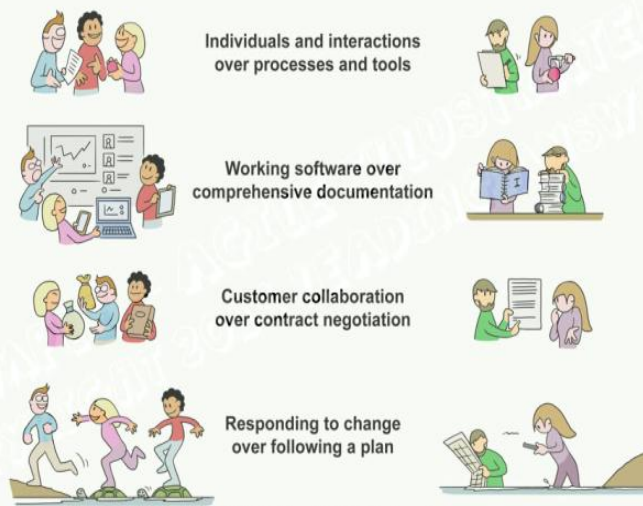


Agile manifesto was formally produced by 17 developers during an outing on February 11-13, 2001, at The Lodge at Snowbird ski resort in Utah.

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Agile Manifesto

The Agile Manifesto



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Agile Process Models /Methodologies

- Extreme Programming (XP)
- Adaptive Software Development (ASD)
- Dynamic Systems Development Method (DSDM)
- Feature Driven Development (FDD)
- Crystal
- Agile Modelling (AM)



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Agile Model: Principal Techniques

- **User stories:** Simpler than use cases.
- **Metaphors:** Based on user stories, developers propose a common vision of what is required.
- **Spike:** Simple program to explore potential solutions.
- **Refactor:** Restructure code without affecting behavior, improve efficiency, structure, etc.
- **At a time, only one increment is planned, developed, deployed at the customer site.**
 - No long-term plans are made.
- **An iteration may not add significant functionality,**
 - But still a new release is invariably made at the end of each iteration
 - Delivered to the customer for regular use.

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Agile Method Benefits

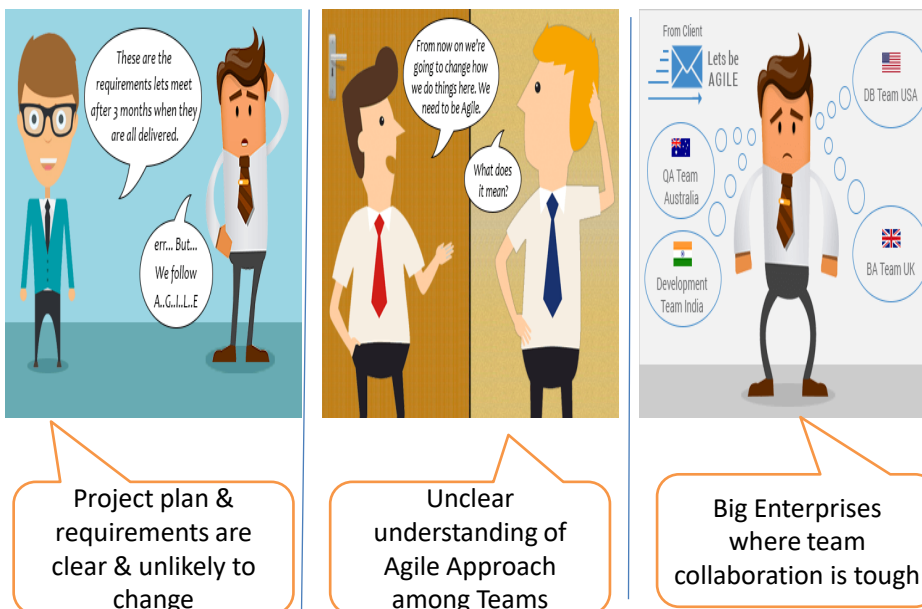
- Continual Delivery
- Communication with customers on a one-on-one basis.
- Design that is both efficient and meets the needs of the company.
- Changes may be made at any moment.
- It cuts down on overall development time.

Agile Method Drawbacks

- Due to a lack of formal records, there is a misunderstanding, and important choices made at various stages might be misconstrued by different team members at any moment.
- Maintenance of the completed project might become challenging due to a lack of sufficient documentation after the project is completed and the developers are assigned to another project.

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Where Agile methodology not work



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Difference between Agile & Waterfall Methodology

Waterfall Methodology	Agile Methodology
Waterfall involves a large team size where coordination among teams decreases.	Agile intends a smaller team size for higher coordination.
The customer intervenes only after completing the development process.	Continuous feedback is taken from the customer to deliver robust and high-quality products.
Its methodology is quite sequential.	Agile methodology is incremental and iterative.
None of the testing or development levels overlap each other.	The testing and development levels often overlap each other

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Extreme Programming

- The most widely used approach to agile software development
- A variant of XP called **Industrial XP (IXP)** has been proposed to target process for large organizations
- It uses **object oriented approach** as its preferred development model



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What is Scrum?

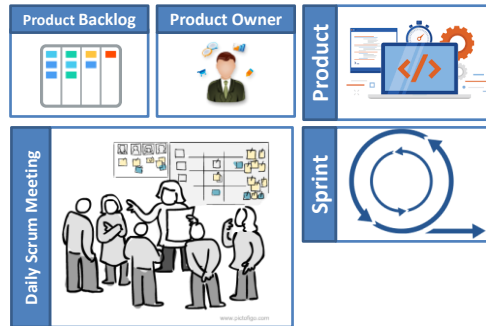
Scrum is an agile process model which is used for **developing** the **complex software** systems.



A scrum is a method of restarting play in rugby that involves players packing closely together with their heads down and attempting to gain possession of the ball.

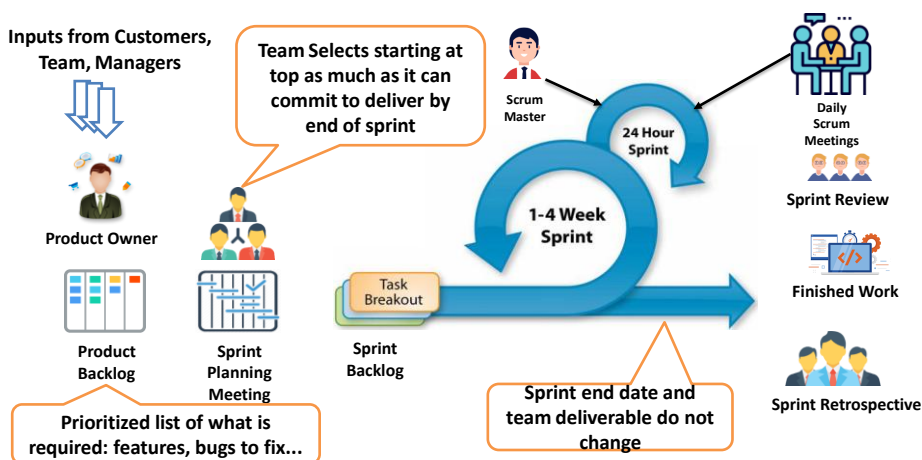
It is a **lightweight process framework**.

Lightweight means the **overhead of the process is kept as small** as possible in order to maximize the productivity.



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Scrum framework at a glance



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