



COURSE NAME : 19CST201-Agile Software Engineering



II YEAR/III SEMESTER

Topic: Introduction to Scrum

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SCRUM



- Scrum is an agile process most commonly used for product development, especially software development.
- Scrum is a project management framework that is applicable to any project with aggressive deadlines, complex requirements and a degree of uniqueness.
- In Scrum, projects move forward via a series of iterations called sprints.
- Each sprint is typically two to four weeks long.



SCRUM



Scrum Terms :

- **Scrum team** - between five and nine people, does not include any of the traditional software engineering roles such as programmer, designer, tester or architect.
- **Product owner** - product owner is the project's key stakeholder and represents users, customers and others in the process.
- **Scrum Master** - Scrum Master is responsible for making sure the team is as productive as possible by using the scrum process.
- **Product backlog** - prioritized features list containing every desired feature or change to the product.
- **Sprint planning meeting** - At the start of each sprint, a sprint planning meeting is held, during which the product owner presents the top items on the product backlog to the team. The Scrum team selects the work they can complete during the coming sprint. That work is then moved from the product backlog to a sprint backlog, which is the list of tasks needed to complete the product backlog items the team has committed to complete in the sprint.



SCRUM



Scrum Terms :

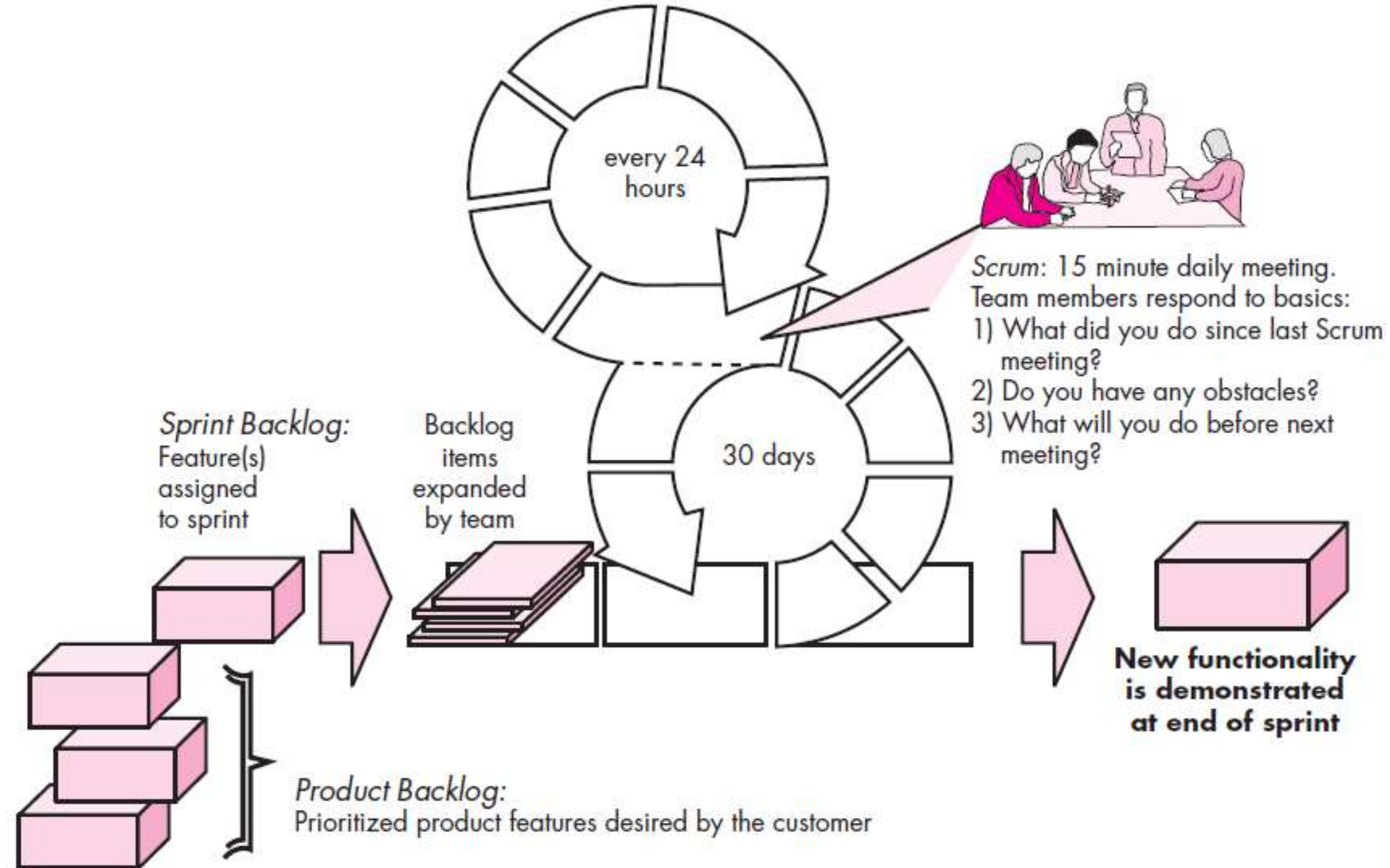
- **Daily Scrum** - Each day during the sprint, a brief meeting called the daily scrum is conducted. This meeting helps set the context for each day's work and helps the team stay on track. All team members are required to attend the daily scrum.
- **Sprint review meeting** - At the end of each sprint, the team demonstrates the completed functionality at a sprint review meeting, during which, the team shows what they accomplished during the sprint.
- **Sprint retrospective** - Also at the end of each sprint, the team conducts a sprint retrospective, which is a meeting during which the team (including its ScrumMaster and product owner) reflect on how well Scrum is working for them and what changes they may wish to make for it to work even better.



SCRUM



Scrum :





SCRUM



- Initially ,the product backlog, which has been prioritized by the product owner and contains everything desired in the product that's known at the time. The 30 days sprints are shown by a circle.
- At the start of each sprint, the team selects some amount of work from the product backlog and commits to completing that work during the sprint. Part of figuring out how much they can commit to is creating the sprint backlog, which is the list of tasks (and an estimate of how long each will take) needed to deliver the selected set of product backlog items to be completed in the sprint.
- At the end of each sprint, the team produces a potentially shippable product increment — i.e. working, high-quality software. Each day during the sprint, team members meet to discuss their progress and any impediments to completing the work for that sprint. This is known as the daily scrum, and is shown a circle above.



SCRUM ROLES



SCRUM ROLES :

- SCRUM MASTER
- PRODUCT OWNER
- SCRUM TEAM





SCRUM ROLES



Benefits of Scrum Methodology :

- **Easily Scalable:** Scrum processes are iterative and are handled within specific work periods, which makes it easier for the team to focus on definite functionalities for each period.
- **Compliance of expectations:** The client establishes their expectations indicating the value that each requirement/ history of the project brings, the team estimates them and with this information the Product Owner establishes its priority.
- **Flexible to changes:** Quick reaction to changes in requirements generated by customer needs or market developments.
- **Time to Market reduction:** The client can start using the most important functionalities of the project before the product is completely ready.



SCRUM ROLES



Benefits of Scrum Methodology :

- Higher software quality: The working method and the need to obtain a functional version after each iteration, helps to obtain a higher quality software.
- Timely Prediction: Using this methodology, we know the average speed of the team by sprint (story points), with which, consequently, it is possible to estimate when a certain functionality that is still in the backlog will be available.
- Reduction of risks: The fact of carrying out the most valuable functionalities in the first place and of knowing the speed with which the team advances in the project, allows to clear risks effectively in advance.



SCRUM ARTIFACTS



Three artifacts of Scrum :

Scrum has three main artifacts, which are:

1. Product Backlog
2. Sprint Backlog
3. Increments



SCRUM VALUES



5 SCRUM VALUES :

A team's success with Scrum depends on how well they reflect the Five Values of Scrum, which are:

1. Commitment
2. Courage
3. Openness
4. Focus
5. Respect.



SCRUM PRINCIPLES



SIX SCRUM PRINCIPLES :

The Six Scrum Principles are:

1. Control over the empirical process
2. Self-organization
3. Collaboration
4. Value-based prioritization
5. Time-boxing
6. Iterative development