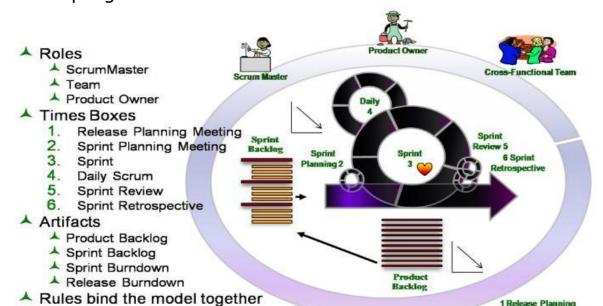
SCRUM [10,11]

- Scrum is an iterative, incremental framework for project management often seen in agile software development
- It defines a set of activities that can help your team deliver more value to your customers faster.
- These activities provide your customers with the opportunity to review, guide and influence your team's work as it progresses.
- This approach does not attempt to define everything at the start of a project. Instead, your team works in short iterations (also called sprints) and refines the plan as the team makes progress.



Scrum Roles

- Scrum Master
- Team
- Product Owner

The SCRUM Master [3,5]

- In the Scrum process, Scrum Master has a role of coach, fixer and gatekeeper
- The job of the scrum master is to make sure that the project is progressing smoothly
- He sets the meetings, monitors the work and facilitates release planning
 - Two important task of scrum master are:
 - Protecting the team from outside disturbance
 - Clears the ways for the team by helping them to solve their problems





The SCRUM Team [4]

- In Scrum, an ideal team would include seven members, plus or minus two. Usually, teams are comprised of cross-functional members, including software engineers, architects, programmers, analysts, QA experts, testers, UI designers, etc. It is recommended all team members be located in the same room, called the team room.
- The team has the autonomy to determine how and when to complete its work. As long as the team finishes its work by the deadline and under budget, it is entirely up to the team to determine how that happens.







(Team)

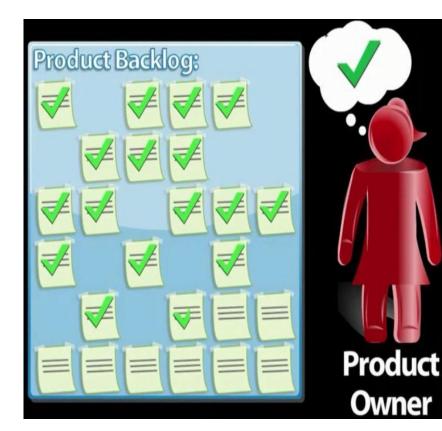


There are three phases in Scrum.

- 1. The initial phase is an outline planning phase where you establish the general objectives for the project and design the software architecture.
- 2. This is followed by a series of sprint cycles, where each cycle develops an increment of the system.
- 3. The project closure phase wraps up the project, completes required documentation such as system help frames and user manuals and assesses the lessons learned from the project

The Product Owner [6]

- In Scrum, the Product Owner is the one person responsible for a project"s success.
- The Product Owner outlines the work in Product backlog
- Product Owner makes sure that right features to be included in the product backlog
- Of course, he or she must also consider the stakeholders and the team



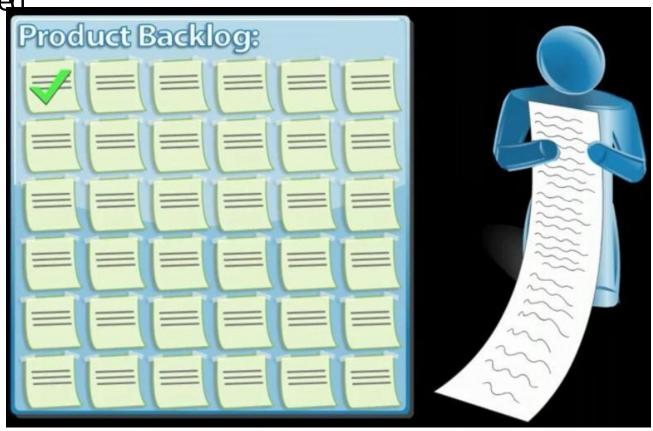
- Product Backlog
- Sprint Backlog
- Sprint
- Burn down Chart

Product Backlog

Contains all the currently known requirements for a product

Is managed by the Product Owner and can change as

needed



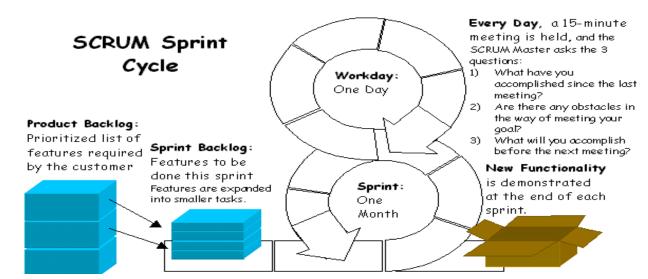
Sprint Backlog

 Contains the set of prioritized Product Backlog items that are currently being worked on



Sprint [7]

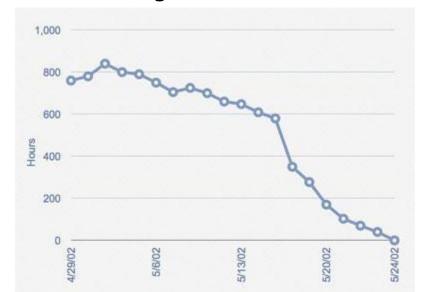
- The product is developed in a series of 1-to-4-week iterations, or sprints.
- The sprint has 4 major steps:
 - Develop the product further.
 - Wrap up the work get it ready to be evaluated and integrated.
 - Review the work done in this sprint.
 - Adjust for any changes in requirements or plans.
- Results in an incremental delivery of usable product



Sprint Burn down Chart [9]

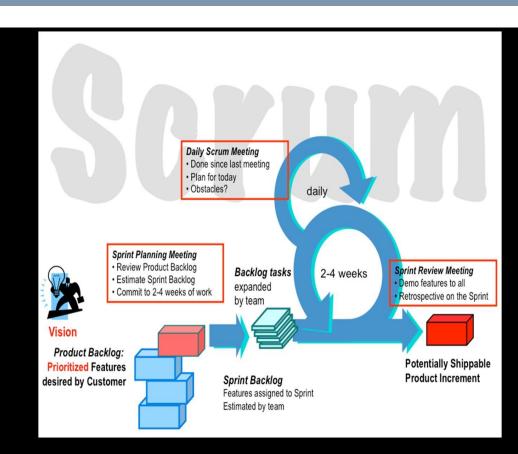
- The estimated work remaining in the sprint is calculated daily and graphed, resulting in a Sprint Burn down Chart
- The vertical axis displays the hours of effort remaining for the Sprint.
- The horizontal axis displays the days of the Sprint.
- The burn down is supposed to be shown by the line of descent from the start of the Sprint with the starting hours, down to the end of the Sprint with no hours remaining.





Scrum Meetings

- Release Planning Meeting
- Sprint Planning Meeting
- Sprint Review Meeting
- Sprint Retrospective Meeting
- Daily Scrum Meeting



Release Planning







Release Planning



Sprint Planning Meeting

- A meeting at the beginning of a sprint where the sprint is planned.
- Items from the Product Backlog are selected to be completed in the sprint, based on the priorities set by the Product Owner. Eight hour time limit
 - (1st four hours) Product Owner + Team: dialog for prioritizing the Product Backlog
 - (2nd four hours) Team only: plan for the Sprint, resulting in the Sprint Backlog



Sprint Review Meeting [7]

- Review the work that was completed and not completed
- Present the completed work to the stakeholders (a.k.a. "the demo")
- Four hour time limit





Sprint Retrospective Meeting [8]

- The sprint retrospective meeting is time boxed to 3 hours.
- It is attended only by the team, the scrum master and the product owner. The product owner is optional.
- Make continuous process improvements
- Start the meeting by having all team members answer two questions;
 - What went well during the sprint?
 - What could be improved in the next sprint?



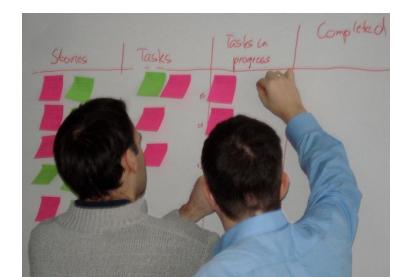


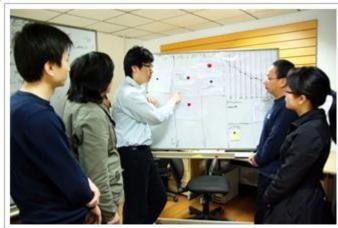
Daily SCRUM Meeting

Brief "Stand-up" meeting each morning with
SCRUM Team only

SCRUM Team only

- Duration is 15 min
- Three questions are asked
 - What value did you add yesterday?
 - What value will you add today?
 - What will stop you making progress?





Team members in the scrum meeting

