SCRUM - I

Chapter 6: SCRUM - I

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Course Materials

Online Course Material

Please select a subtopic to view its contents.

Additional Materials

There are no additional materials available at this time.

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Software Engineering Project Management

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Introduction

Agile and SCRUM

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Agile

- A framework for delivering products quickly and efficiently.
- It encompasses set of exciting new practices and techniques that make product development more cyclical (or iterative).
- It relies on lean governance (management) as opposed to more traditional techniques that rely on heavyweight governance.
- Agile is all about empowering the team and getting closer to what the customer wants.
- Agiles hallmark features is that it drives the decision-making process lower in an organization, making that organization more responsive and adaptive.
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Why Agile was created?

- It was a reaction against the rigid and big upfront planning approach that many software developers and business analysts thought stifled the development process and contact with the customer, emphasizing the plan rather than the product and customer need.
- Agile wasn't a simple software developer's revolt. While Agile became popular with software developers because it freed time for creativity and drove the decision-making process lower, the principles also made sense from a business perspective.
- As opposed to the standard requirements-gathering, plan-driven project development, the customer is continually involved in Agile.
- The principles of Agile were in the air for a long time when they were finally put to paper in the Manifesto for Agile Software Development (aka, Agile Manifesto) in 2001 by its 17 cosigners at The Lodge at the Snowbird ski resort in the Wasatch Range of mountains in Utah.
- The Manifesto cosigners weren't a group of cowboy programmers bent on maintaining their wild and wooly ways.
    - Much of Agile has to do with internalising the control patterns that were formerly externally governed and internalizing discipline in the team itself.

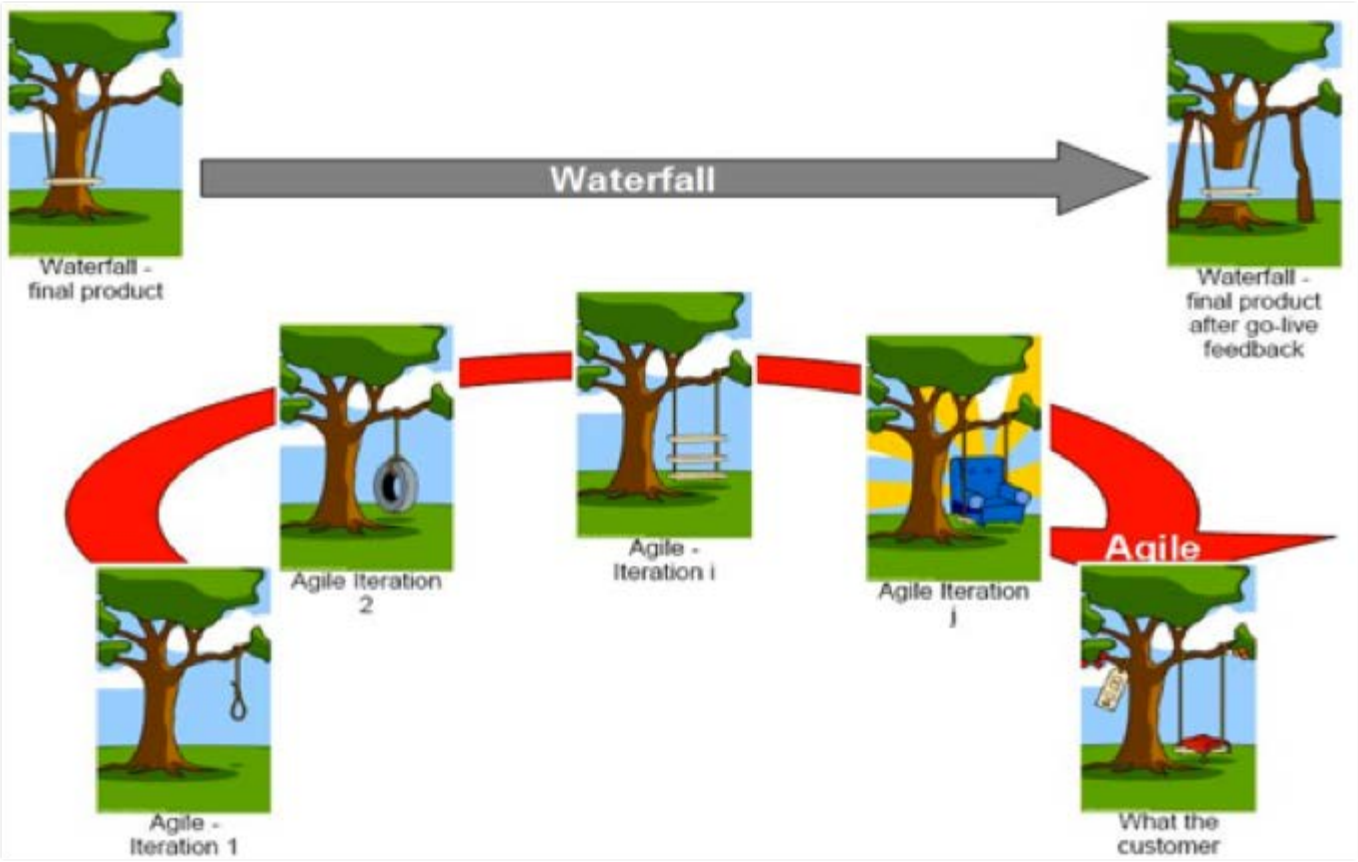
Agile Manifesto

1. The highest priority is to satisfy the customer through early and continuous delivery of product.
2. Changes are welcome, even late in development.
3. Deliver working product frequently, typically on the order of weeks.
4. Build projects around motivated individuals.
5. Emphasize face-to-face conversation.
6. Working product is the primary measure of progress.
7. Continuous attention to technical excellence is a must.
8. Simplicity is a great virtue.
9. The best designs emerge from self-organizing teams.

How to think agile?

- Think self-empowered
- Think small
- Think business value
- Think continuous
- Think collaboration
- Think discipline
- Think small teams consisting of motivated, seasoned people
- Think lean governance
- Think customer involvement

Agile Delivers



RUP Gantt Chart

- We looked at RUP in the previous week i.e. week 5
- RUP is an agile methodology
- Have you ever wondered what would Gantt chart look like if RUP was applied to the project management lifecycle?
- Let us now look at a detailed Gantt chart for a project from its inception till the very end
- This chart uses RUP as the underlying methodology.

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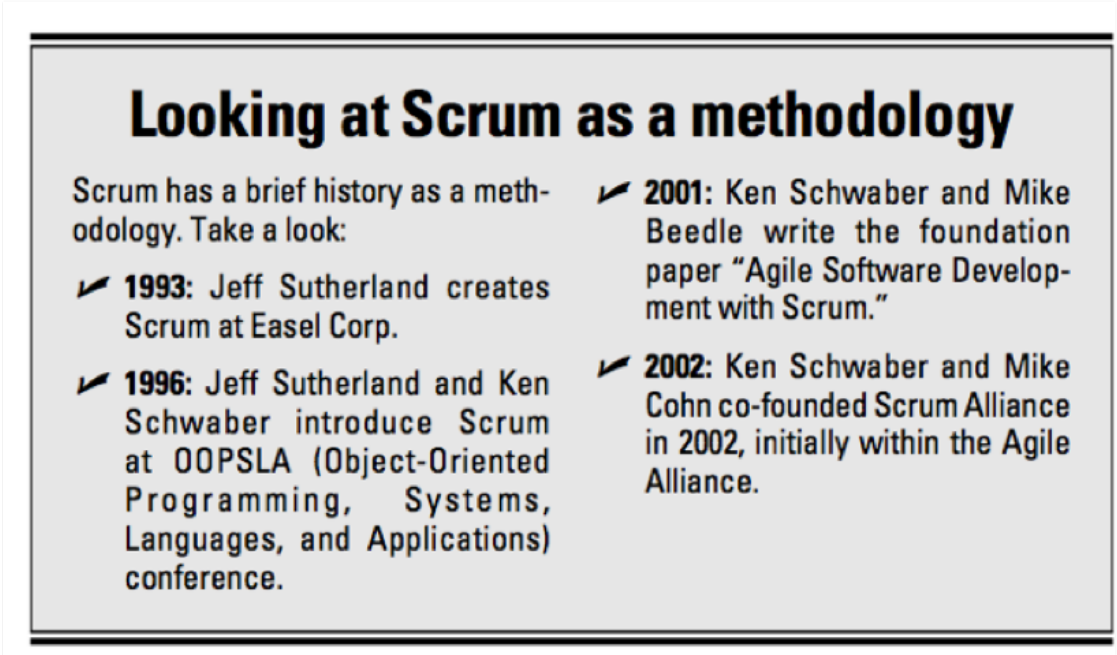
Scrum I

Another Agile technique - SCRUM - are they related?

- Agile may give you the basic orientation, but Scrum lets you bring Agile to your organisation and make it work.
- While Agile suggests a need for good communication, Scrum sets up rules for stand- up meetings and how they should be conducted.
- Where Agile discusses the need for iterative and incremental development, Scrum brings those terms into focus with well-defined sprints that represent a specific iteration.
- Where Agile suggests you track tasks to be performed with lists, Scrum has specific techniques in place for doing exactly that.
- Scrum is a particular variant of Agile and the most popular variant today. While Agile is more a set of principles, Scrum puts principles into effect with well- designed practices and techniques.
- Scrum is a team-based iterative and incremental Agile methodology for tackling projects. It has its own components, such as the Scrum Team, backlogs, and sprints etc.

Evolution of Agile SCRUM



Looking at Scrum as a methodology

Scrum has a brief history as a methodology. Take a look:

- **1993:** Jeff Sutherland creates Scrum at Easel Corp.
- **1996:** Jeff Sutherland and Ken Schwaber introduce Scrum at OOPSLA (Object-Oriented Programming, Systems, Languages, and Applications) conference.
- **2001:** Ken Schwaber and Mike Beedle write the foundation paper "Agile Software Development with Scrum."
- **2002:** Ken Schwaber and Mike Cohn co-founded Scrum Alliance in 2002, initially within the Agile Alliance.

People in Scrum

Activity	Owner	Responsibilities
Manage the vision	**Product Owner**	The Product Owner establishes, nurtures and communicates the product vision. He achieves initial and on-going funding for the project by creating initial release plans and the initial Product Backlog.
Manage the ROI	**Product Owner**	The Product Owner monitors the project against its ROI goals and an investment vision. He updates and prioritizes the Product Backlog to ensure that the most valuable functionality is produced first and built upon. He prioritizes and refines the Product Backlog and measures success against expenses.
Manage the develop ment iteration	**Team**	During an iteration the team selects and develops the highest-priority features on the Product Backlog. Collectively, the team expands Product Backlog items into more explicit tasks on a Sprint Backlog and then manages its own work and self-organizes around how it desires to complete the iteration. The team manages itself to its commitments.
Manage the process	**Scrum Master**	The Scrum Master is responsible for setting the team up for success by ensuring the project and organizational culture are optimized for meeting the ROI goals of the project. This involves organizing a Sprint Planning Meeting (during which the team expands Product Backlog into Sprint Backlog), a Sprint Review Meeting (during which the newly developed functionality is demonstrated), shielding the team from outside disturbances, holding brief Daily Scrum meetings, and removing obstacles to progress.
Manage the release	**Product Owner**	The Product Owner makes decisions about when to create an official release. For a variety of reasons it may not be desirable to release at the conclusion of every increment. Similarly, if an official release is planned for after the fifth increment it may be released (with fewer features) after the fourth increment in order to respond to competitive moves or capture early market share. The Product Owner makes these decisions in a manner consistent with the investment vision that has been established for the project.

Scrum training video

Scrum training video

What is involved?

- The customer tells the Scrum Team what's needed through requirements. In Scrum, requirements are called stories.
  - A story is a high-level definition of a requirement, containing just enough information so the developers can produce a reasonable estimate of the effort to implement it.
- The Scrum Team takes the supplied stories and breaks them down into specific tasks, each of which is given a time estimate, either in story points (recommended) or in days/hours. These tasks are then kept track of in the sprint backlog.

Backlogs

- The *product backlog* represents the larger picture and lists epics and stories for a product.
- A *sprint backlog* is concerned with the stories and tasks that are to be undertaken within a sprint. The items in sprint backlogs come from the product backlog during sprint planning.
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- Note: There is another term used at times called Epic - a larger requirement or composite user story that needs to be broken down into small segments during software development.

Sprints

- A *sprint* is a development iteration. In Scrum, you execute projects in successive iterations known as sprints.
- In a sprint planning session, items are taken from the product backlog and moved to the sprint backlog, based on the priority set by the Product Owner, and given an estimate.
- Sprints are intended to be 2-to-4-week work iterations. At the end of the sprint, a potentially shippable product is delivered to the Product Owner for review.
- For the Product Owner's part, no changes should be made to the requirements during a sprint (changes can be introduced at the next sprint planning session).
- Sprints typically start with a planning session during which the sprint backlog is created from a prioritized product backlog, and end with an end-of-sprint review, as well as delivering a product to the product owner.

Daily Scrum

- A primary feature of Scrum development is Daily Stand-ups, called the daily scrum. This is a mandatory meeting of the Scrum Team that takes about 15 minutes at the start of the day.
- The main attendees are the Scrum Master and the Scrum Team, although the Product Owner may also attend. The meeting is usually held with all people standing up to emphasize the brevity of the meeting, which gives the meeting another commonly used name- the Daily Stand-up.

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What is expected at daily scrum?

- At the meeting, each participant is expected to answer three questions:
  - What did you do since the last Scrum?
  - What will you do until the next Scrum?
  - Do you have any roadblocks preventing you from doing your work?

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