

Introduction to Scrum - Part I

Key Concepts, Roles, Artifacts and Rules

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Agile Software Development

- In the late 1990s, several new software development methodologies emerged
- Emphasized close collaboration between development team and business stakeholders
- Focused on frequent delivery of business value

Agile Software Development

- The term “Agile” appeared for the first time in 2001 when the *Agile Manifesto* was published

Agile Manifesto

- **Individuals and interactions** over processes and tools
- **Working software** over comprehensive documentation
- **Customer collaboration** over contract negotiation
- **Responding to change** over following a plan

Scrum Framework

Definition

Scrum: A lightweight framework that helps people, teams and organizations generate value through adaptive solutions for complex problems.

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Key Characteristics:

- Simple
- Purposefully incomplete
- Built upon by the collective intelligence of the people using it
- Follows an iterative, incremental approach to *optimize predictability & control risk*
- Makes visible the relative efficacy of current management, environment and work techniques, so that *improvements* can be made

Scrum Framework

Main concept

A Scrum Master creates an environment where:

- A Product Owner orders the work for a complex problem into a Product Backlog
- The Scrum Team turns a selection of the work into an Increment of value during a Sprint
- The Scrum Team and its stakeholders inspect the results and adjust for the next Sprint
- *Repeat*

Scrum Framework

Scrum is founded on:

- **Empiricism**

Knowledge comes from experience and making decisions based on what is observed

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- **Lean thinking**

Reduce waste (non-value added activities) and focus on the essentials

Scrum Framework

Three pillars uphold every implementation of Scrum:

- **Transparency**

Make the emergent process and work visible to those performing the work as well as those receiving the work

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- **Inspection**

Frequently inspect the Scrum artifacts and progress toward agreed goals to detect potentially undesirable variances or problems

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- **Adaption**

If any aspects of a process deviate outside acceptable limits or if the resulting product is unacceptable adjustments must be made *as soon as possible* to minimize further deviation

The Scrum Team

The Scrum Team consists of:

- Developers
- The Product Owner
- A Scrum Master

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Qualities:

- Focused on one objective at a time, the *Product Goal*
- Accountable for creating a valueable, useful Increment every Sprint

The Scrum Team

Characteristics:

- Typically 10 or fewer people
- No sub-teams or hierarchies
- *Self-managing*
- *Cross-functional*

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Definition

Self-managing teams internally decide who does what, when and how.

Definition

Cross-functional teams have all the skills necessary to create value each Sprint.

Developers

The people in the Scrum Team that are committed to creating any aspect of a *usable* Increment each Sprint.



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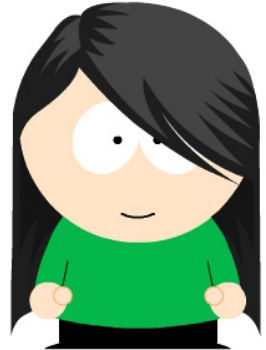
Accountable for:

- Creating a plan for the Sprint (the Sprint Backlog)
- Instilling quality by adhering to the Definition of Done
- Adapting their plan each day toward the Sprint Goal
- Holding each other accountable as professionals



The Product Owner

- Accountable for maximizing the value of the product resulting from the work of the Scrum Team
- Accountable for effective Product Backlog management
- **One person**, not a committee



The Product Owner

- The Product Owner's decisions are visible in the content and ordering of the Product Backlog and through the inspectable Increment at the Sprint Review
- The *entire organization* must respect their decisions
- The Product Owner may manage the Product Backlog themselves or may delegate the responsibility to others. They, however, remain **accountable**

The Scrum Master

- Accountable for establishing Scrum as defined in the Scrum Guide
- Helps everyone understand Scrum theory, practices and rules
- Guides and coaches the Scrum Team to improve its practices within the Scrum framework



The Scrum Master

- Accountable for the Scrum Team's effectiveness
- *Leader* that serves the Scrum Team and the larger organization



Scrum Events

Scrum prescribes five formal events:

- 1 The Sprint
- 2 Sprint Planning
- 3 Daily Scrum
- 4 Sprint Review
- 5 Sprint Retrospective

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- 1 The Sprint
- 2 Sprint Planning
- 3 Daily Scrum
- 4 Sprint Review
- 5 Sprint Retrospective

Key Characteristics

- Create regularity
- Minimize the need for meetings not defined in Scrum
- Time-boxed
- Each event is an opportunity to inspect and adapt something

The Sprint

- Acts as a container for all other events
- Duration: One month or less (consistency is important)
- A new sprint starts immediately after the conclusion of the previous Sprint
- A “Done”, potentially releasable product increment is created

The Sprint

During The Sprint:

- No changes that would endanger the Sprint Goal
- Quality goals do not decrease
- Scope may be clarified and re-negotiated between the Product Owner and the Development Team as more is learned

The Sprint

Cancelling a Sprint:

- **Only** the Product Owner has the authority to cancel a Sprint
- The Sprint is cancelled if the Sprint Goal becomes obsolete

Sprint Planning

Key Concept

During Sprint Planning, the Scrum Team collaborates and creates a plan for the next Sprint

- What can be delivered in the Increment resulting from the upcoming Sprint?
- How will the work needed to deliver the Increment be achieved?
- Max duration: 8 hours for a one-month Sprint
- Attendees: All Scrum Team members

Sprint Planning

- The number of items selected from the Product Backlog for the Sprint is **solely** up to the Development Team
- The Product Owner can help to clarify selected Product Backlog Items and make trade-offs
- The Development Team may renegotiate selected Product Backlog Items with the Product Owner

Sprint Planning

- The Development Team may invite other people to attend to provide technical or domain advice
- Output of Sprint Planning: *Sprint Backlog* and *Sprint Goal*

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Sprint Backlog

A set of Product Backlog Items selected for this Sprint plus, a plan for delivering them

Sprint Goal

An objective that will be met within the Sprint through the implementation of the selected Product Backlog Items

Daily Scrum

Key Concept

During the Daily Scrum, the Development Team plans work for the next 24 hours

- Held every day of the Sprint at the same place and time
- Max duration: 15 minutes
- Attendees: All Development Team members

Daily Scrum

- The Daily Scrum is an internal meeting for the Development Team. If others are present, the Scrum Master ensures they **do not disrupt** the meeting
- The Development Team or team members often meet immediately after the Daily Scrum for related discussions

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Important

The Scrum Master ensures that the Development Team has the meeting but the Development Team is responsible for conducting the Daily Scrum

Daily Scrum

Benefits

- Improve communications
- Eliminate other meetings
- Identify impediments to development for removal
- Highlight and promote quick decision-making
- Improve the Development Team's level of knowledge

Sprint Review

Key Concept

- Inspect the Increment and adapt the Product Backlog if needed
 - Collaborate on the next things that could be done to optimize value
-
- Held at the end of each Sprint
 - Max duration: 4 hours for a one-month Sprint
 - Attendees: All Scrum Team members and Stakeholders (Invited by the Product Owner)

Sprint Review

- The Sprint Review is **not** a demo
- The presentation of the Increment is intended to elicit feedback and foster collaboration
- Result: A revised Product Backlog that defines the *probable* Product Backlog Items for the next Sprint

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Important

The Sprint Review is an informal meeting, not a status meeting

Sprint Retrospective

Key Concept

- Identify how the last Sprint went with regards to people, relationships, processes and tools
 - Identify improvements and create a plan for implementing them
-
- Occurs after the Sprint Review and prior to the next Sprint Planning
 - Max duration: 3 hours for a one-month Sprint
 - Attendees: All Scrum Team members

Sprint Retrospective

- The Scrum Master participates as peer team member from the accountability over the Scrum process
- By the end of the Retrospective the Scrum Team should have identified improvements that it will implement in the next Sprint

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Important

The Scrum Master ensures that the meeting is positive and productive

Scrum Artifacts

Scrum uses the following Artifacts to provide transparency and opportunities for inspection and adaption:

- 1 Product Backlog
- 2 Sprint Backlog
- 3 Increment

Product Backlog

- Ordered list of everything that is known to be needed in the Product
- Single source of requirements for any changes to be made to the Product
- It is dynamic
- It is never complete

Product Backlog Refinement

Key Concept

The act of adding **detail**, **estimates** and **order** to items in the Product Backlog

- The Product Owner and the Development Team cooperate during refinement
- The Scrum Team decides *how* and *when* refinement is done
- Usually consumes no more than 10% of the team's capacity

Sprint Backlog

- The set of Product Backlog Items to selected for the Sprint
- A plan for delivering the Increment and realizing the Sprint Goal
- Includes at least one high priority process improvement identified in the previous Retrospective meeting

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Important

The Sprint Backlog belongs solely to the Development Team and only they can change it during a Sprint

Increment

- The sum of all Product Backlog Items completed during a Sprint and the value of Increments of all previous Sprints
- A step towards a vision or a goal
- Must be in usable condition regardless of whether the Product Owner decides to release it

Resources

- 1 The Agile Manifesto
<https://agilemanifesto.org/>
- 2 The Scrum Guide
<https://www.scrumguides.org>
- 3 Scrum: What It Is, What It's Not, & Why It's Awesome - Atlassian
<https://www.atlassian.com/agile/scrum>
- 4 Scrum Pocket Guide Book - Not free
<https://www.amazon.com/Scrum-Pocket-Guide-Practice-Publishing-ebook/dp/B00GY6WRTG>

End of Presentation

Questions?