

Scrum

Definition of Scrum

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

Rather than provide people with detailed instructions, the rules of Scrum guide their relationships and interactions.

Scrum makes visible the relative efficacy of current management, environment, and work techniques, so that improvements can be made.

Simple to understand

Difficult to master

Theory

Scrum is founded on empiricism and lean thinking.

Scrum employs an iterative, incremental approach to optimize predictability and to control risk.

Scrum engages groups of people who collectively have all the skills and expertise to do the work and share or acquire such skills as needed.

Scrum combines four formal events for inspection and adaptation within a containing event, the Sprint.

Empiricism — Empiricism asserts that knowledge comes from experience and making decisions based on what is observed.

Lean thinking — Lean thinking reduces waste and focuses on the essentials.

These events work because they implement the empirical Scrum pillars of transparency, inspection, and adaptation.

Team (3)

The fundamental unit of Scrum is a small team of people, a Scrum Team. The Scrum Team consists of one Product Owner, one Product Owner, and Developers. Within a Scrum Team, there are no sub-teams or hierarchies. It is a cohesive unit of professionals focused on one objective at a time, the Product Goal.

Product Owner

The Product Owner is one person, not a committee. The Product Owner may represent the needs of many stakeholders in the Product Backlog.

The Product Owner is accountable for maximizing the value of the product resulting from the work of the Scrum Team.

The Product Owner is also accountable for effective Product Backlog management. The Product Owner may do it or may delegate the responsibility to others. Regardless, the Product Owner remains accountable.

Those wanting to change the Product Backlog can do so by trying to convince the Product Owner.

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

The self-managing group of professionals who do the work of delivering one or more Done Increments each Sprint.

Developers are always accountable for:

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

Scrum Master

The Scrum Master is accountable for establishing Scrum as defined in the Scrum Guide. They do this by helping everyone understand Scrum theory and practice, both within the Scrum Team and the organization.

The Scrum Master serves the Scrum Team in several ways:

- Coaching the team members in self-management and cross-functionality;
- Helping the Scrum Team focus on creating high-value Increments that meet the Definition of Done;
- Causing the removal of impediments to the Scrum Team's progress;
- Ensuring that all Scrum events take place and are positive, productive, and kept within the timebox;
- Helping find techniques for effective Product Goal definition and Product Backlog management;
- Helping the Scrum Team understand the need for clear and concise Product Backlog items;
- Helping establish empirical product planning for a complex environment;
- Facilitating stakeholder collaboration as requested or needed;
- Leading, training, and coaching the organization in its Scrum adoption;
- Planning and advising Scrum implementations within the organization;
- Helping employees and stakeholders understand and enact an empirical approach for complex work;
- Removing barriers between stakeholders and Scrum Teams.

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Events (5)

The Sprint is a container for all other events. Each event in Scrum is a formal opportunity to inspect and adapt Scrum artifacts. These events are specifically designed to enable the transparency required.

Sprint

Sprints are the heartbeat of Scrum, where ideas are turned into value.

They are fixed length events of one month or less to create consistency. A new Sprint starts immediately after the conclusion of the previous Sprint.

All the work necessary to achieve the Product Goal, including Sprint Planning, Daily Scrums, Sprint Review, and Sprint Retrospective, happen within Sprints.

No changes are made that would endanger the Sprint Goal.

Quality does not decrease.

The Product Backlog is refined as needed.

Scope may be clarified and renegotiated with the Product Owner as more is learned.

A Sprint could be cancelled if the Sprint Goal becomes obsolete. Only the Product Owner has the authority to cancel the Sprint.

Sprint Planning

Sprint Planning initiates the Sprint by laying out the work to be performed for the Sprint.

The Product Owner proposes how the product could increase its value and utility in the current Sprint.

The Sprint Goal must be finalized prior to the end of Sprint Planning.

Through discussion with the Product Owner, the Developers select items from the Product Backlog to include in the current Sprint.

For each selected Product Backlog item, the Developers plan the work necessary to create an Increment that meets the Definition of Done. This is often done by decomposing Product Backlog items into smaller work items of one day or less.

Daily Scrum

The purpose of the Daily Scrum is to inspect progress toward the Sprint Goal and adapt the Sprint Backlog as necessary, adjusting the upcoming planned work.

The Daily Scrum is a 15-minute event for the Developers of the Scrum Team.

Daily Scrums improve communications, identify impediments, promote quick decision-making, and consequently eliminate the need for other meetings.

Sprint Review

The purpose of the Sprint Review is to inspect the outcome of the Sprint and determine future adaptations. The Scrum Team presents the results of their work to key stakeholders and progress toward the Product Goal is discussed.

The Sprint Review is the second to last event of the Sprint and is timeboxed to a maximum of four hours for a one-month Sprint.

Sprint Retrospective

The purpose of the Sprint Retrospective is to plan ways to increase quality and effectiveness.

The Scrum Team inspects how the last Sprint went with regards to individuals, interactions, processes, tools, and their Definition of Done.

The Scrum Team discusses what went well during the Sprint, what problems it encountered, and how those problems were (or were not) solved.

The Sprint Retrospective concludes the Sprint. It is timeboxed to a maximum of three hours for a one-month Sprint.

Values (5)

Cross-functional teams have all competencies needed to accomplish the work without depending on others not part of the team.

Self-organizing teams choose how best to accomplish their work, rather than being directed by others outside the team.

Smaller Development Teams may encounter skill constraints during the Sprint, causing the Development Team to be unable to deliver a potentially releasable Increment.

Having more than nine members requires too much coordination.

The Product Owner and Scrum Master roles are not included in this unit unless they are also executing the work of the Sprint Backlog.

Commitment

The Scrum Team commits to achieving its goals and to supporting each other.

Focus

Their primary focus is on the work of the Sprint to make the best possible progress toward these goals.

Openness

The Scrum Team and its stakeholders are open about the work and the challenges.

Respect

Scrum Team members respect each other to be capable, independent people, and are respected as such by the people with whom they work.

Courage

The Scrum Team members have the courage to do the right thing, to work on tough problems.

Pillar (3)

The emergent process and work must be visible to those performing the work as well as those receiving the work.

With Scrum, important decisions are based on the perceived state of its three formal artifacts.

Low transparency can lead to decisions that diminish value and increase risk.

Transparency enables inspection. Inspection without transparency is misleading and wasteful.

The Scrum artifacts and the progress toward agreed goals must be inspected frequently and diligently to detect potentially undesirable variances or problems.

To help with inspection, Scrum provides cadence in the form of its five events.

Inspection enables adaptation. Inspection without adaptation is considered pointless. Scrum events are designed to provoke change.

If any aspects of a process deviate outside acceptable limits or if the resulting product is unacceptable, the process being applied or the materials being produced must be adjusted.

The adjustment must be made as soon as possible to minimize further deviation.

Adaptation is best enabled by self-management.

Artifacts (3)

Scrum's artifacts represent work or value. They are designed to maximize transparency of key information.

Product Backlog

The Product Backlog is an emergent, ordered list of what is needed to improve the product. It is the single source of work undertaken by the Scrum Team.

Product Backlog refinement is the act of breaking down and further defining Product Backlog items into smaller more precise items.

The Product Goal describes a future state of the product which can serve as a target for the Scrum Team to plan against. The Product Goal is in the Product Backlog.

The Sprint Backlog is composed of the Sprint Goal (why), the set of Product Backlog items selected for the Sprint (what), as well as an actionable plan for delivering the Increment (how).

Consequently, the Sprint Backlog is updated throughout the Sprint as more is learned.

The Sprint Goal is the single objective for the Sprint.

The Sprint Goal is created during the Sprint Planning event and then added to the Sprint Backlog.

Increment

An Increment is a concrete stepping stone toward the Product Goal. Each Increment is additive to all prior Increments and thoroughly verified, ensuring that all Increments work together. In order to provide value, the Increment must be usable.

Multiple Increments may be created within a Sprint. An Increment may be delivered to stakeholders prior to the end of the Sprint.

Work cannot be considered part of an Increment unless it meets the Definition of Done.

The Definition of Done is a formal description of the state of the Increment when it meets the quality measures required for the product.

If a Product Backlog item does not meet the Definition of Done, it cannot be released or even presented at the Sprint Review. Instead, it returns to the Product Backlog for future consideration.

Product Backlog Item

User Story

One of the most popular ways of expressing Product Backlog items worldwide.

Elements - 4C

- Card — The Card on which the story is written
- Conversation — The Conversation required to achieve a collective understanding of the story
- Confirmation — The Confirmation that provides a Definition of Done for the story
- Context — The Context within which the story, or the Increment that it will become, exists

Levels — Vision - Epics - User Story - Fine-grained

Stories at different levels are often given different labels. In Scrum terms, whatever their label these are simply Product Goals and Product Backlog Items expressed at different levels of granularity within the Product Backlog.

Estimate of effort expressed as a multiple of that of a low effort, ideally known, job (something that has already been done) or a low effort job that is well understood.

Comparative estimating (consensus-based)

- Poker Planning
- Affinity
- Fibonacci-like series of values

A non-linear scale is used because as estimates get larger, they typically get less precise because of an increase in uncertainty.

Commitment based

If Story Points and Velocity are not being used then Commitment Based Planning is a good default technique.

Velocity is the number of story points associated with 'Done' User Stories from the previous Sprint.