

WHAT IS SCRUM?

Scrum is a framework for the delivery of software that is characterised by incremental, iterative development delivered in time-boxed periods known as *Sprints*, which are typically 1-4 weeks in duration (usually 2 weeks.)

It relies on the customer prioritising their requirements to ensure that the development undertaken at any point in time adds the appropriate value to the business at that time.

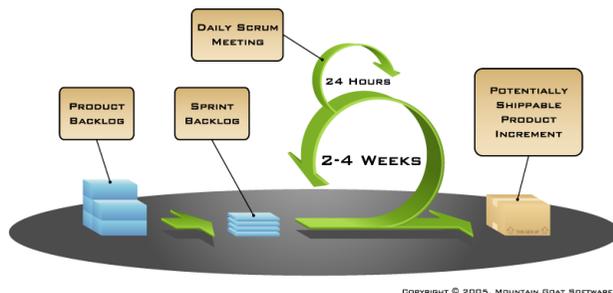
Scrum is supported by 3 pillars of **Empirical Process Control**:

- *Transparency* – the work undertaken, the business reasons behind the work and any problems are transparent to all
- *Inspection* – work products and processes are regularly inspected with a view to continuous improvement
- *Adaption* – processes are adapted based on the results of inspection

Scrum values:

- Openness
- Courage
- Focus
- Commitment
- Respect

The Scrum flow can be depicted as follows (Source: Mountain Goat Software):



ROLES

Product Owner

The Product Owner is the representative of the business and is the single decision maker on functionality to be delivered.

The Product Owner is responsible for prioritising the order in which requirements are worked on.

Scrum Master

The Scrum Master is responsible for coaching the development team in Scrum and enforcing the Scrum framework.

The Scrum Master is the point of contact for escalation of any impediments.

Team

The development team includes developers, testers, analysts and any other resource needed to deliver the product increment.

Team size is typically 7 +/- 2

The team is Self-Organising.

ARTIFACTS

Product Backlog

The Product Backlog is a prioritised list of business requirements developed by the Product Owner that represent the functionality desired and the value it will deliver.

Product Backlog Items (PBIs) are usually described as *User Stories*.

User Stories:

User Stories are a high level description of the functionality required along with acceptance criteria that will be used to validate the quality of the product once developed.

They are written from the customer's point of view in business language and describe the WHO? WHAT? And WHY? Of the requirement

They are usually written in the form:

AS A <ROLE>
I WANT <BUSINESS NEED>
SO THAT <VALUE>

Acceptance Criteria can be written in the form:

GIVEN <SITUATION>
WHEN <EVENT>
THEN <ACTION>

User Stories are sized based on Relative Estimation using Story Points represented by the Fibonacci sequence:

1, 2, 3, 5, 8, 13, 21 etc.

The total of all Story Points delivered for a Sprint is the Team's *Velocity*.

Sprint Backlog

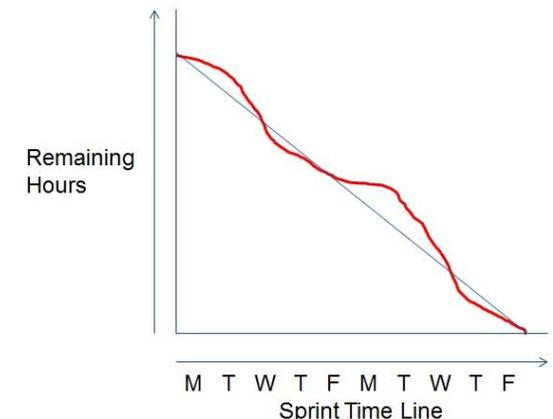
The Sprint Backlog is produced from the Sprint Planning meeting and is a subset of User Stories from the Product Backlog that have been broken down into estimated tasks and committed to by the Team to deliver in the Sprint.

Product Increment

The Product Increment is the working software that is produced as a result of the Sprint and demoed to the Product Owner at the Sprint Review meeting.

Sprint Burndown

The Sprint Burndown is a graphical representation of the amount of work remaining during the current Sprint and illustrates where there is deviation from the ideal amount of work being delivered. An example is given below:



CEREMONIES

Sprint Planning

The Sprint Planning meeting allows the Product Owner to describe the functionality that they require (in the form of User Stories) and for the development team to decompose those User Stories into tasks and estimate those tasks in hours.

The process is collaborative and the Team commits to the tasks that they can deliver during a Sprint.

The Stories are validated that they conform to the Definition of Ready i.e. are fully formed stories with acceptance criteria and relatively estimated.

The Definition of Done is reviewed to ensure that the Team understand what will be required of the delivered software i.e. that the criteria for development (set locally – can vary) will be adhered to e.g. 'Checked into Source Code Control.

Daily Stand Up

The Daily Stand Up (or Scrum) is the daily mechanism by which the Team report to each other (not to the Scrum Master!) the progress that they've made delivering the Sprint.

They answer the following 3 questions:

- What did I do yesterday?
- What am I doing today?
- Is there anything blocking me?

Stand Ups should not last for more than 15 minutes, should be held standing up, and should involve the whole team.

If using a Scrum Board (visual representation of the task progress in a Sprint – physical or electronic), then it is acceptable to have the tasks 'report' the above 3 questions i.e. the meeting is task focused and not people focused.

Sprint Review

The Sprint Review meeting is the venue where the team demonstrates the functionality developed in the Sprint to the Product Owner. This is usually in the form of a demo, although it is valid to describe functionality if a demo is not possible e.g. for back end database work.

The Product Owner decides whether to Accept or Reject the User Stories demoed – if accepted then they are marked as

'Done' and the Story Points associated with the story count towards the Team's Velocity for that Sprint. If they are rejected then the story gets returned to the Backlog where it is potentially re-prioritised by the Product Owner for a subsequent Sprint (usually the next).

In order to determine whether a story is 'Done' the Acceptance Criteria are referred to along with the Definition of Done.

Backlog Refinement

The Backlog Refinement (or Grooming) meeting is held usually 2-3 days before Sprint Planning and is to ensure that all stories anticipated to be included in the next Sprint are fully understood from both a business and technical perspective. It is also usual for refinement to be a continuous process between the Team and the Product Owner culminating in a validation of this by the Team at the Backlog Grooming meeting.

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Scrum Quick Reference

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