

# Scrum

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# Speaker

## Agenda

- Scrum
- Elements
- Roles
- Meetings
- Artifacts

In this session we will talk about the Scrum methodology and the corresponding elements, team members distribution, meetings and corresponding documents (artifacts).



**SCRUM** is a technique to develop products with the objective of maximising product and project value.

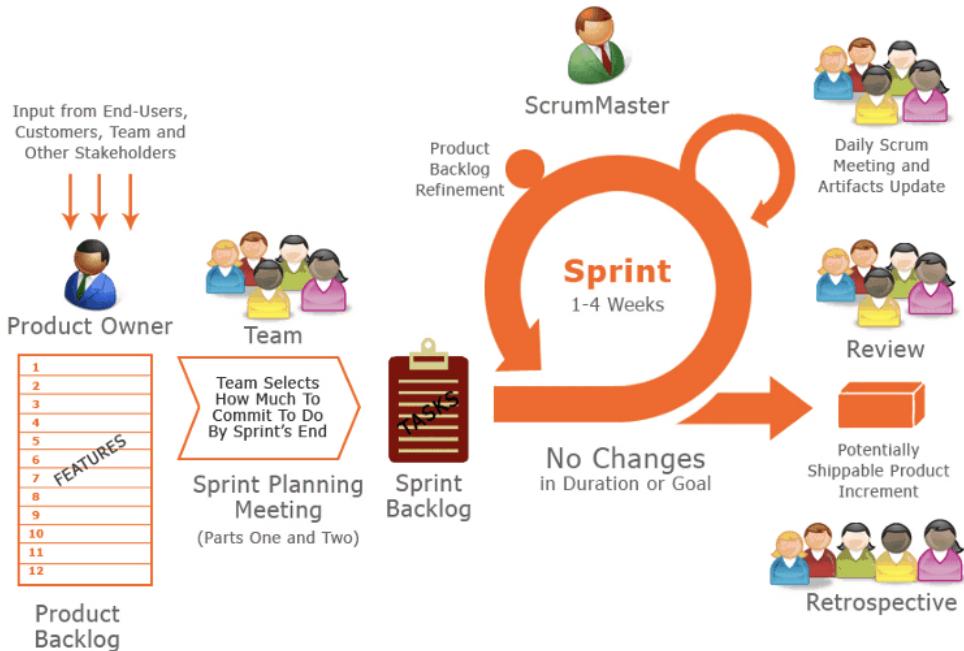
— SCRUM

SCRUM definition refers to an agile technique to **maximise the product and project value**. SCRUM starts with those aspects that we know or we have seen. After that, we adapt and track the progress as necessary (Iteratively).

Principal advantages of implementing SCRUM could be summarising as:

- **Decrement of the development time:** Products that satisfies with most of the decided functionalities and expertise.
- **Anytime a product could be launch:** Functional prototypes will enable to launch a product at the end of each sprint (project stage).
- **Agility and Flexibility:** Adaptability to the newer requirements and demanded modifications.

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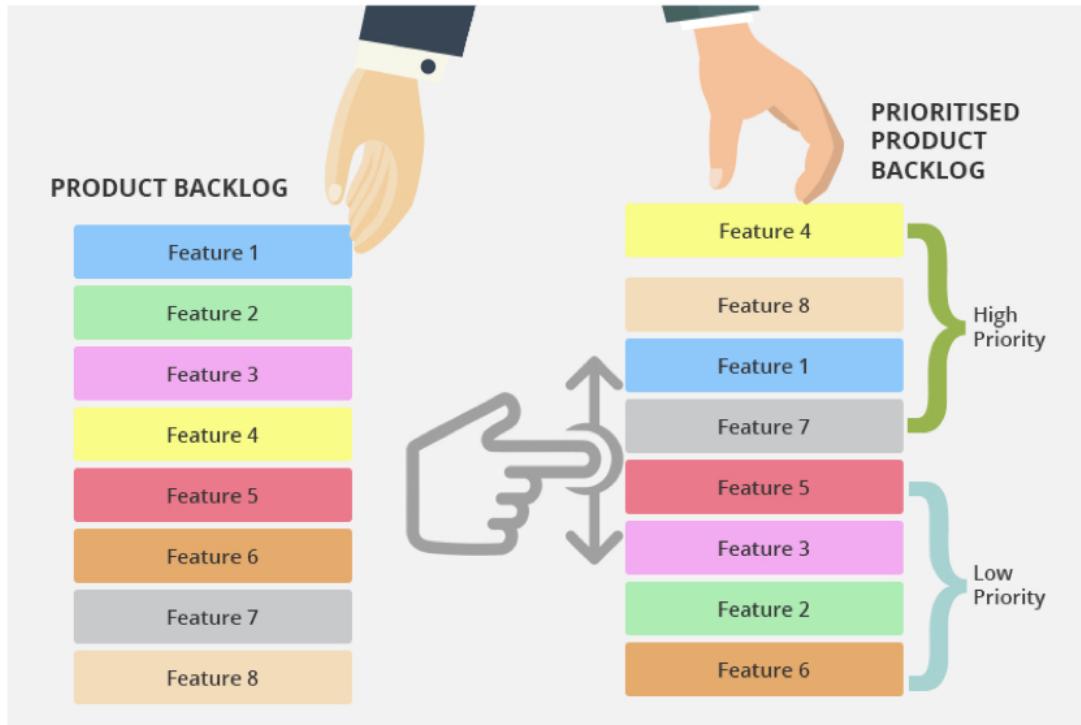


SCRUM methodology will start with the interviews between the customers and the product owner (client voice in our company). Resulting from these interviews, the product owner elaborates an initial **Product Backlog**. The product backlog list of the main functionalities of the application that could change over time (sprints). From product-backlog and in each sprint, the development team schedule the number of commits and functionalities they will develop (**sprint planning meeting**). As a result from the sprint planning, the sprint backlog will store the number of issues and the time required for elaborating them. At this moment, the sprint starts and the development team is focused on performing the functional prototype. In this stage, the SCRUM master is the person in charge of revising the work and ensuring correct development times according to the plan. Each day of the sprint, the **daily scrum meetings** ensures to avoid bottlenecks and problems during the development. These meetings correspond to small meetings where main problems and issues are discussed. At the end of the sprint, a **review** of the product functionalities with the client is performed. In this meeting, the functionalities are validated and newer requirements could appear. Finally, the development team and the scrum-master elaborate an **sprint review** just to evaluate the sprint and how we could improve for the next one.

Within the next slides, we will enter in depth to this process describing the team members and roles, the artifacts (documents to be elaborated), and the meetings to be performed.

# SCRUM Elements

## Product Backlog



The main parts of the SCRUM technique is the product backlog which defines requirements the application must meet in order to be successful. The product backlog contains a list of requirements that are jointly prepared between the client and the product owner. Commonly, the requirements are expressed in form of user stories.

## User Stories

**As a <Role>**  
**I Want to <function-description>**  
**So I can: <value-statement>**

User stories (or just “stories”) are short statements identifying the type of person, the functionality they need to perform in their own terms, and the value they expect to achieve from it. These are intentionally expressed in common language. Keeping stories short is important because it ensures the requirements are fine-grained.

## User Story #1

I am a registered user  
I want to change my password  
to personalise it and better remember it

As a registered user,  
I want to change my password,  
so I can to personalise it and better  
remember it.

Once defined all user-stories, a list of all functionalities should be stored in a document in form of table or just text. The product backlog could be modified during the project by removing elements, priority change, new requirements, etc. For that, we need to keep this list accessible and in a framework that enables modifications easily.

## Product Backlog Priorization

User Story	Level	Hours	Value	Priority
Story A	Medium	100	300	
Story B	High	30	200	
Story C	Medium	50	100	
Story D	Low	60	50	

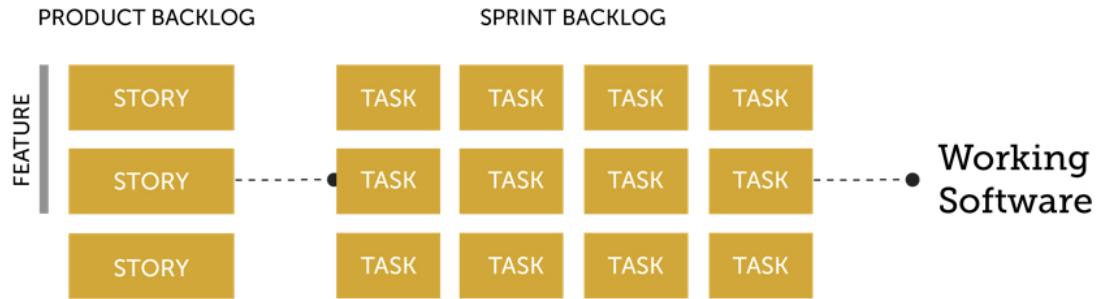
Imagine that we have the followig list of stories complemented with the customer prioritization. how we can plan the development?

## Product Backlog Priorization (Solution)

User Story	Level	Hours	Value	Priority
Story A	Medium	100	300	2
Story B	High	30	200	1
Story C	Medium	50	100	3
Story D	Low	60	50	4

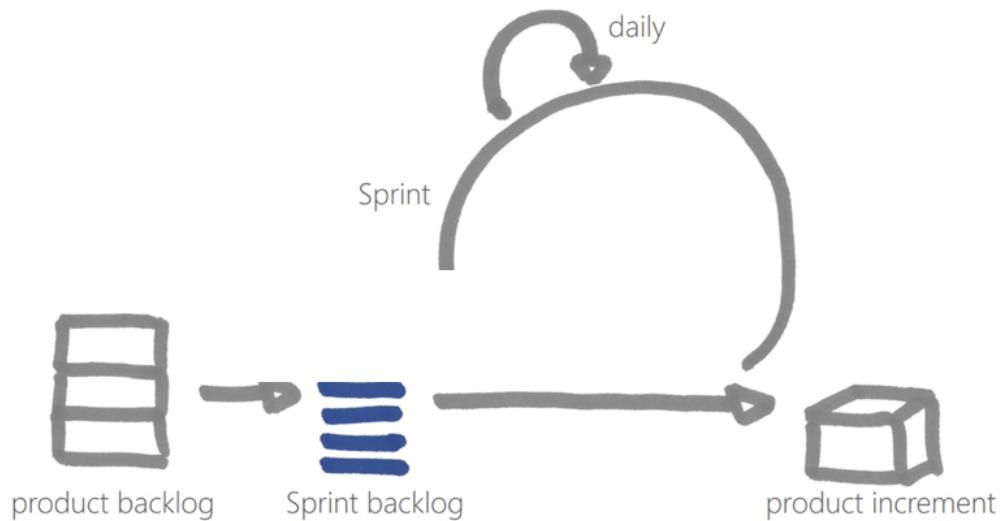
Considering this list, we start to order from high priority to low one. If the priority is the same, we check the required time (lower time at maximum cost is prioritised).

## Sprint Backlog



The sprint backlog consists of a list of tasks derived from selecting high to lower functionalities from the product backlog. Thus, each functionality in the product backlog is split into specific tasks. Therefore, the sum of the time required for elaborating the tasks should be the same as the one determined in the product backlog.

# Sprint



The sprints are the core part of SCRUM. The sprints refers to the development cicles (project iterations). Commonly, this iterations should cover 1-4 weeks. Each sprint shold have a clear objective just to clarify the functional prototype to be delivered. An important thing is that the work performed inside an sprint do not change during their execution.

## Increments

[Increment] | *increment.gif*

The increments corresponds with the result of each sprint. It is very important that at the end of the sprint we deliver a functional product that will be enhanced during the sprints.

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# Table of Sprints

**01**

## Android navigation definition

- Login
- DashBoards

**02**

## Web application

- Database
- Web application
  - Login
  - Navigation
  - Data management

**03**

## Android UI and WS

- Bluetooth control
- Web services definition and implementation
- Android WS integration
- Android location services

**04**

## Final sprint

- Push notifications
- News
- Geofencing

## SCRUM Roles

### Product Owner



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The **Product Owner** is the authorised person to be the "voice" of the client inside the company. Their principal mission is to maximise the product value according to the client directives.

Considering their role:

- Responsible of the product backlog.
- Discover the requirements and make petitions to the client to discover newer functionalities or resolve potential doubts.

## Development Team



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The **Development Team** is the group of professionals in charge of producing the product. As mentioned previously, principal features are:

- Multidisciplinary team.
- Self-management teams.
- High Communication and transparency.

# Scrum Master



The **Scrum Master** is the responsible of ensuring the correct application of the methodology. Moreover, this person actuates as a lider, ensuring the correct timing and product quality. Moreover, this person is in charge of dealing with the problems abstracting the team for them.

## SCRUM Meetings

### Sprint Planning



The **sprint planning meeting** is made at the begining of each sprint. This meeting requires for 1-2 h and the main objective is to evaluate, select and plan the coming weeks (entire sprint).

In this meeting participates the entire developemnt team, the scrum master and the product owner. Thus, the product owner following the advices of the development team, is the one of selecting the functionalities and tasks to be included in each sprint.

## Daily Meeting



The **daily meeting** as the name says is a daily meeiting of 15-20 minutes. In this meetings only participates the scrum master and the development team. In this meetings, only is considered the work to be performed inmediatly (same day) and the specific issues happened.

## Sprint Review



The **sprint review** corresponds to the presentation of the product in each sprint. In this meeting the product increment is evaluated. The client validate or reject the planned work. In this meeting the complete team should be present.

## Sprint Retrospective



The **sprint retrospective** is an internal validation of the team and this meeting is performed after sprint review. In this meetins the correct documentation of the meetings is assessed. This meetings serves not only evaluate the technology and result but also to talk about the interactions, conflicts and other personal matters. This meetings will serve as a improvement point for the rest of the sprints.

## SCRUM Artifacts

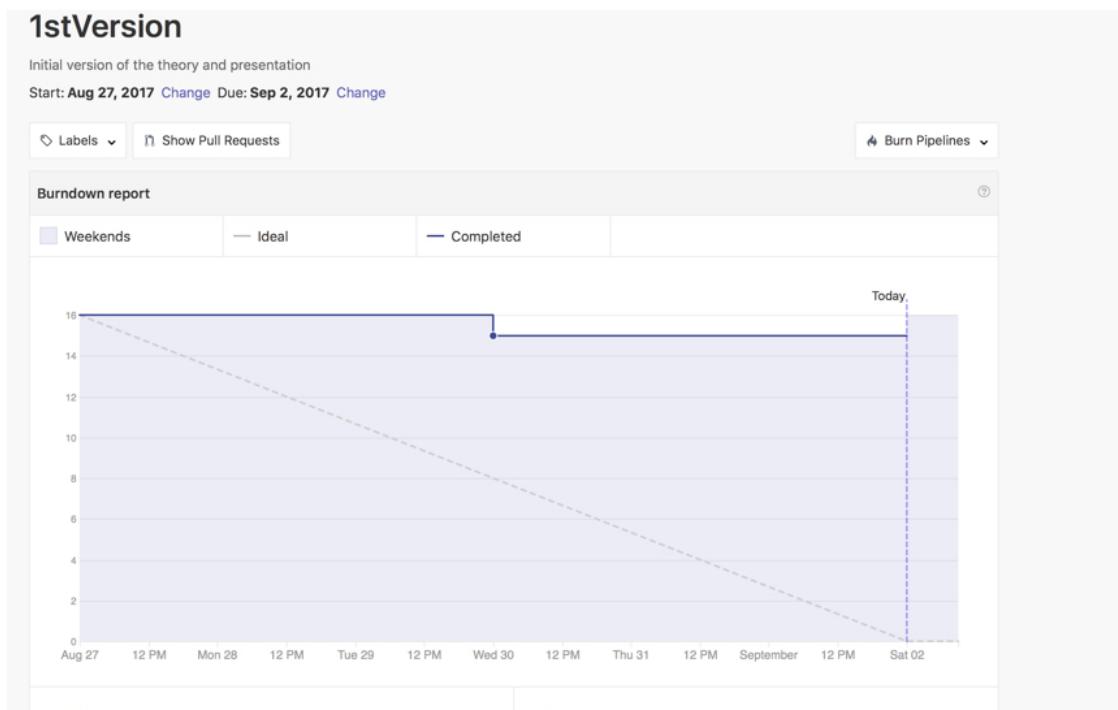
### Kanban

Development Author Assignee Milestone Labels Filter by name... Add list Add issues

Project Backlog	Doing	Peer Review	In Test
Modify the features of a book #4	Create a Book #1		
Delete all books #5	Get all Books #2		
Delete one book #6	Get one book #3		
Assign a book to the store #7			

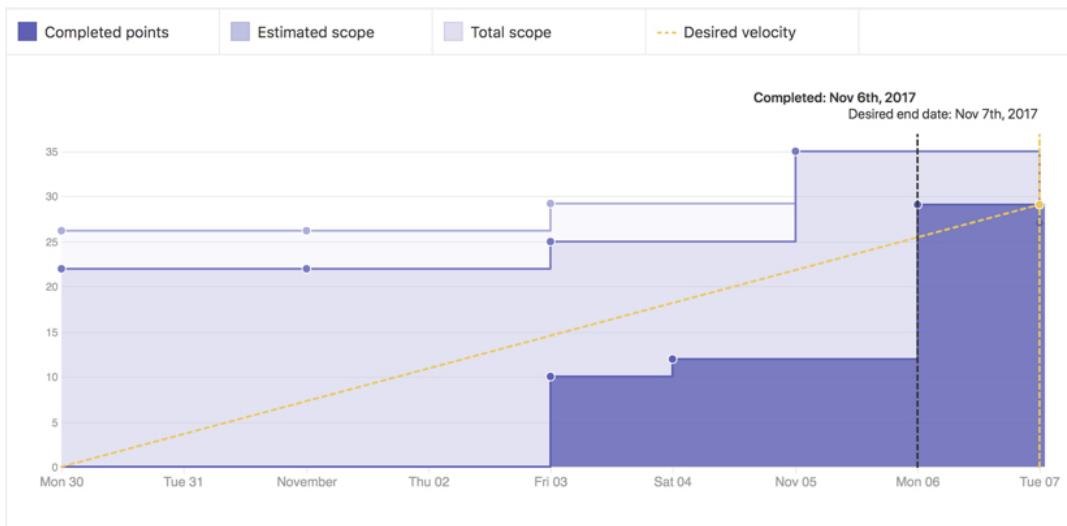
The model kanban is a graphical board to overall manage the features to be developed, prioritize it and give a global vision of the project state.

## Burnup



The Burnup measures the average rate that stories are completed across sprints. The basic method is to divide the number of story points completed by the total number in the product backlog. Over time velocity is a measure of the work that can be expected to be completed in a sprint and it is used to ensure that the team doesn't overcommit the number of story points to be completed in a given sprint.

## Burndown



The burndown chart is used to provide a graphical view of the number of stories in the backlog that have been completed against the total number remaining across sprints.

## Hands on SCRUM

