Scrum Basics Explained

Content

1. Introduction to agile project management

Basic idea

The guiding principle of agile project management is based on the concept of high flexibility and adaptability. Instead of detailed up-front planning, to be found in traditional project management, the approach here is iterative, i.e. step by step. The project team organizes itself for the most part, while the project manager does not exist in the traditional sense. Thus, the project manager takes on more of a facilitator role. Flat hierarchies therefore prevail, but a high degree of self-motivation is required as a result. These principles are anchored in the "Agile Manifesto", a manifesto that first put the basic ideas of agile software development on paper.

Advantages

The independent approach in agile projects means transparency: roles are clearly defined, everyone has their area of responsibility, information is exchanged very easily, and progress can be measured by completed work packages. In addition, in most projects not all requirements are known at the beginning, or new ones arise during the course of the project. The principle of agility can address this problem, whereas in classic project management, there has to be clarity in advance. In addition, agile methods require a high level of coordination and thus promote daily communication within the

project team and with the client. As a result, they avoid an important pitfall in project management - the lack of communication.

Agile versus classic

Which approach is better, agile or classic? There is no blanket answer to this question - depending on the project, a different method makes sense. It also depends on the management culture: for hierarchical companies, the classic model is more obvious, as agile project management requires a lot of self-organization.
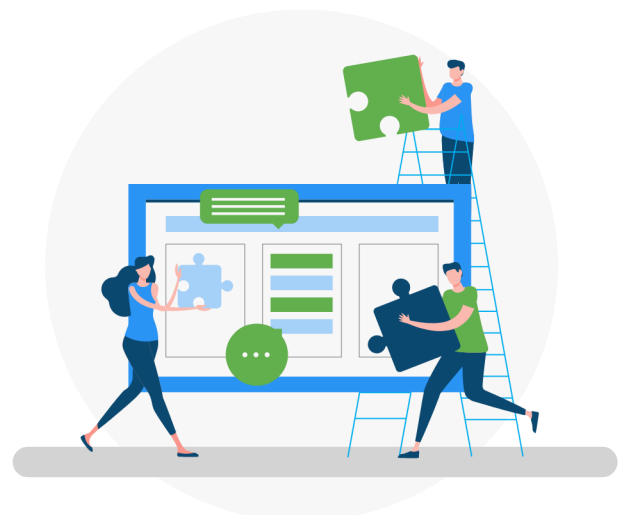
2. Introduction to scrum

Basic idea

Scrum is a widely used agile project management method. Scrum is defined and described in The Scrum Guide, which was published by Ken Schwaber and Jeff Sutherland in 1995 and is continuously updated. You can read more about the most recent update in chapter 6. Schwaber and Sutherland define scrum, as follows:

A framework within which people can tackle complex adaptive tasks, enabling them to productively and creatively deliver products with the highest possible value.

- Schwaber, Ken; Sutherland Jeff: The Scrum Guide.
Definition of Scrum
(www.scrumguides.org)

Scrum refers to a particular approach used primarily in software development projects. This approach and its tools have been transferred to project management and other development projects. The term scrum originally comes from the sport rugby. Here scrum stands for a certain play. Transferred to projects, this image is mainly meant to reflect the prevailing flexibility and dynamics of the playing field.

The basic idea of scrum is not to plan a project strictly, but to execute it step by step in so-called sprints. This approach has the advantage that it is possible to react immediately to last-minute changes and issues.

Thus, the main focus of scrum is on self-organization and self-motivation. There are only a few rules, which are limited to three artifacts, three central roles and five activities. With the help of these rules, the process takes place step by step in repetitive stages.

Scrum artifacts

Scrum artifacts are process documents that map the results of activities in the scrum process. Thus, they serve as orientation and as links between the different activities.

> **Product backlog:** In the product backlog, all requirements for the product are collected and organized and further developed by the product owner.

> **Sprint backlog:** For each sprint, a selection of requirements is made from the entire catalog of requirements in the product backlog. These are processed within the corresponding sprint.

> **Product increment:** Each sprint ends with a functional intermediate product (product increment).

Scrum roles

In project management with scrum, three central roles are important: Product owner, scrum master and scrum team. The individual roles are briefly introduced and described below.

Product owner

The product owner is responsible for the creation of a specific product version. In addition, they set technical requirements for the project and prioritize them. They are responsible for the business success of the project, are in regular contact with the client and provide feedback to the team.

Scrum master

The scrum master acts as a facilitator in the project team. They are not the project manager, but much more responsible for ensuring that scrum works and that the rules of agile project management are adhered to. Successful communication within the team, moderation of meetings and shielding the team from external disturbances fall within their scope of duties.

Scrum team

The scrum team (development team) develops the product. The team organizes itself independently and delivers the product features, in the order specified by the product owner.
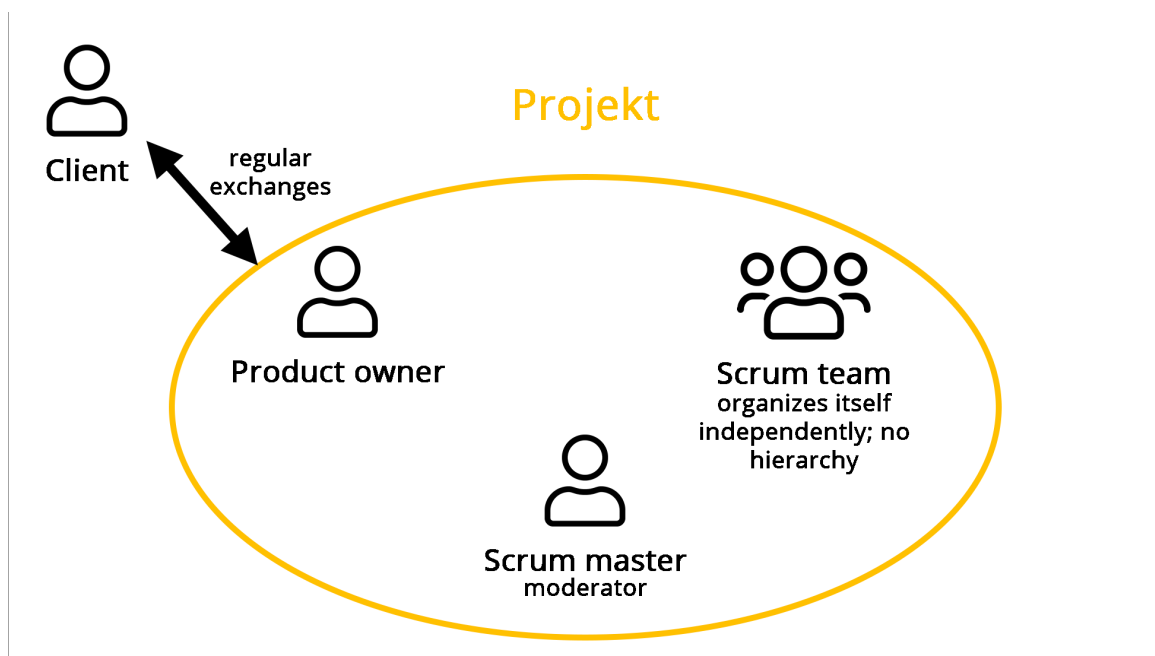
Scrum activities

In scrum, the term activities stands for different types of meetings:

Sprint planning

In sprint planning, the next project stage (Sprint) is always planned. For this purpose, the requirements from the product backlog are divided into tasks that can be completed within one day. The completed tasks of a sprint/project phase then end up in the sprint backlog.

Daily scrum

The daily scrum takes place daily, usually in the morning. This is a meeting with all team members. This meeting should not take longer than 15 minutes.

Sprint review

Each sprint is concluded with a sprint review by the development team. In the sprint review, the intermediate product is reviewed and then, if necessary, the product backlog is adjusted. In addition, feedback is obtained from the product owner and stakeholders and the next steps are discussed.

Sprint retrospective

Here, the focus is not on the product, as in the sprint review, but on the workflow of the development team. This should be continuously improved over the next sprints.

Product backlog refinement

In this activity, the product owner organizes and updates the product backlog.

Agile project management with scrum offers a variety of advantages. Above all, the high level of flexibility and the pronounced team spirit speak in favor of this method. But also the continuous improvement process through individual sprints is considered one of the greatest advantages of scrum. Nevertheless, this method does not protect against dead ends in projects, but you will usually recognize them earlier. Scrum is especially suitable for projects where you are still facing many question marks at the beginning, because there are already adjustments planned in the course of the project.

Produkt-Backlog   Sprint-Backlog   Sprint   funktionsfähiges Zwischenprodukt
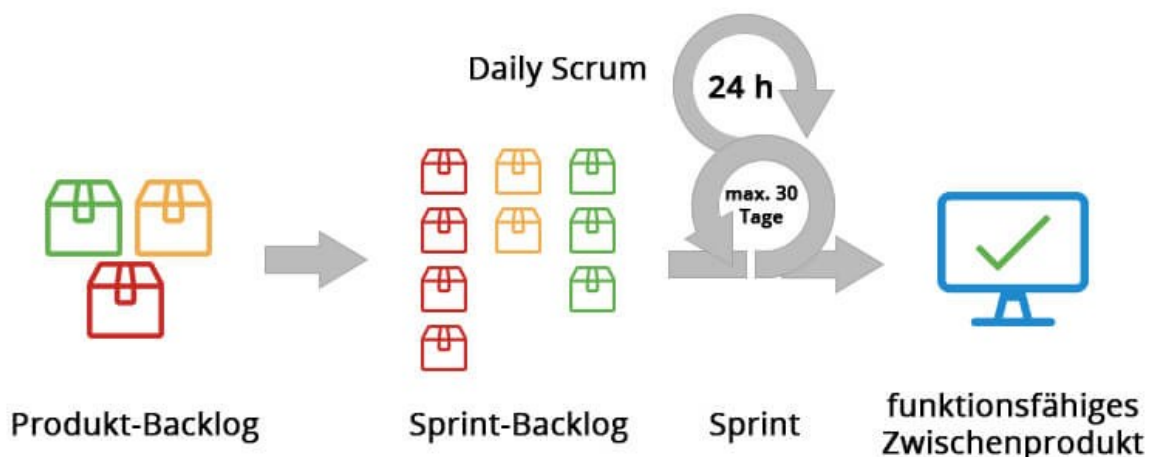
3. The sprint in detail

Basic facts about the sprint

Scrum is characterized primarily by regular and repeatable work cycles. These cycles are usually called iteration or sprint and are limited in time. Originally, sprints in agile software development were scheduled for 30 days. Nowadays, the trend is increasingly moving towards one- or two-week sprints.

The goal of each sprint is to develop a functional intermediate product, also called a product increment. Since the duration of a sprint is limited, the scrum team can only focus on the further development of the basic features of the intermediate product and on short-term goals. This also motivates the product owner to limit themselves to the most important features of the intermediate product.

The individual sprints always build upon each other, with developments from previous sprints very often being replaced or discarded again as "lessons learned".

The process of a sprint
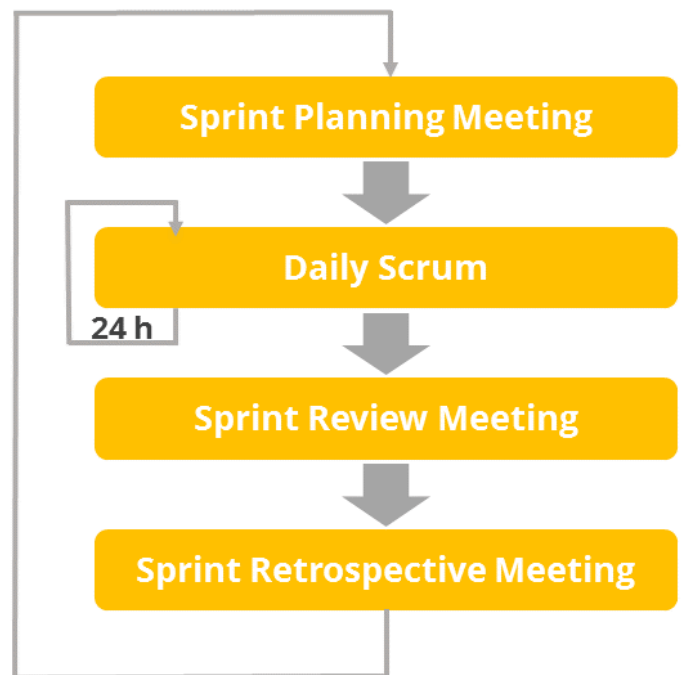
Before the sprint

Each sprint begins with the sprint planning meeting, in which the next project phase, i.e. the next sprint, is planned. In the sprint planning meeting, it is decided which requirements from the product backlog are to be completed in the sprint. After the requirements have been selected, they are recorded in the respective sprint backlog and divided into tasks that can be completed within a day. It should be noted here that the product owner alone decides which

requirements are to be worked on in the sprint. The scrum team, in turn, independently determines how it will complete these requirements.

After the scope of a sprint has been defined in the sprint planning meeting, the product owner cannot add any further tasks. This ensures continuity and concentrated work. Only due to decisive changes in the project environment, such as a sudden change in requirements by the client, can a sprint be aborted by the product owner or scrum master. However, this situation should only occur in exceptional cases.

During the sprint

Another important activity during a sprint is the daily scrum meeting (daily scrum). The scrum meeting takes place every day at the same time and place. The meeting is often held standing up so that it does not drag on unnecessarily. Basically, the daily scrum should not last longer than 15 minutes. The daily scrum is a team meeting within the scrum team, which is moderated by the scrum master. While the product owner plays an important role in all other meetings (activities), their presence in the daily scrum is not mandatory. The scrum team

decides if it is necessary for the product owner to participate in the daily scrum or not. In the daily scrum, each team member gives personal feedback on the same three questions:

> > What did I accomplish yesterday, that is, since the last daily scrum meeting?

> > What will I work on until tomorrow, i.e. the next daily scrum meeting?

> > What obstacles are standing in the way of my progress?

The main purpose of this is to determine how far the scrum team is with working on the requirements of the sprint backlog. The individual team members report on their progress and take on new tasks. In addition, a list of all items that come up during the daily scrum that are not on the agenda is often kept. These items can be discussed after the daily scrum.

After the sprint

After a sprint has been completed, the so-called sprint review meeting takes place. In the sprint review meeting, the intermediate product is presented to the product owner and, if applicable, other interested stakeholders. Subsequently, the product owner will check which requirements of the sprint backlog have been fulfilled. Requirements that were not met will be added back to the product backlog. Finally, stakeholders present can provide their feedback on the product increment. This may result in new requirements that the product owner adds to the product backlog and prioritizes.

In addition, a sprint retrospective meeting is held by the scrum team at the end of each sprint. In this meeting, the focus is not on the product, as in the sprint review, but on the way the

development team works. The sprint retrospective meeting therefore discusses what worked well in the sprint, what didn't and how it can be done better in the next sprint. As a result, the team can improve its workflows and processes from sprint to sprint.

After the sprint is before the sprint

After a sprint has been completed with the sprint review meeting and the sprint retrospective meeting, the next sprint is already on the agenda. There will be as many iterations as described above until the final product is ready.

4. The backlog

Basic facts about the backlog

A backlog describes a backlog of work that has accumulated over a certain period of time. Transferred to agile project management, a backlog stands for project-related tasks that need to be completed. In scrum, we generally distinguish between the product backlog and the sprint backlog.

The product backlog

The product backlog contains all the requirements for the product, such as the requirements for new software in software engineering. The quality of the product backlog is crucial for the successful completion of a project.

The product backlog is the responsibility of the product owner, who constantly develops and maintains it. In addition, they arrange and prioritize the requirements it contains. Since the product owner continuously develops the list of requirements, the product backlog is not a requirements specification in the traditional sense, but a dynamic list.

The product backlog is maintained throughout the duration of the project. The requirements are processed step by step in sprints. In the sprint planning meeting, it is decided which requirements from the product backlog are to be

processed in the respective sprint. After the requirements have been selected, they are recorded in the sprint backlog. After the sprint, the product owner checks in the sprint review meeting which requirements of the sprint backlog have been fulfilled. Requirements that were not fulfilled are added back to the product backlog.

Entries in the Product backlog

In the product backlog you will find different types of entries. These are also called product backlog items. Basically, you can assume that the higher the priority of a product backlog item, the more precisely it has been specified. The probability that it will be completed in the next sprint also depends on the level of priority. Common product backlog items are, for example:

> Quality requirements

> Functional requirements

> User Stories

> Errors (bugs) that still need to be fixed

> Improvements

Each item in the product backlog contains a description, a priority, an effort estimate and a value statement. However, the official Scrum Guide does not regulate the form or content of the product backlog items.

Characteristics of the product backlog

A product backlog can be described in terms of five basic characteristics:

> **Prioritized:** The list items in the product backlog are prioritized from top to bottom based on an order determined by the product owner.

> **Varying in detail:** A product backlog item is more detailed and more elaborate the higher up it is on the list.

> **Estimated:** An effort estimate is performed for each product backlog item. The higher up it is on the list, the more precise this estimate is.

> **Evaluated:** The corresponding customer value of a product backlog item also affects its priority.

> **Dynamic:** Due to the continuous development and refinement of the product backlog, new product backlog items can be added and existing ones can be removed.

The sprint backlog

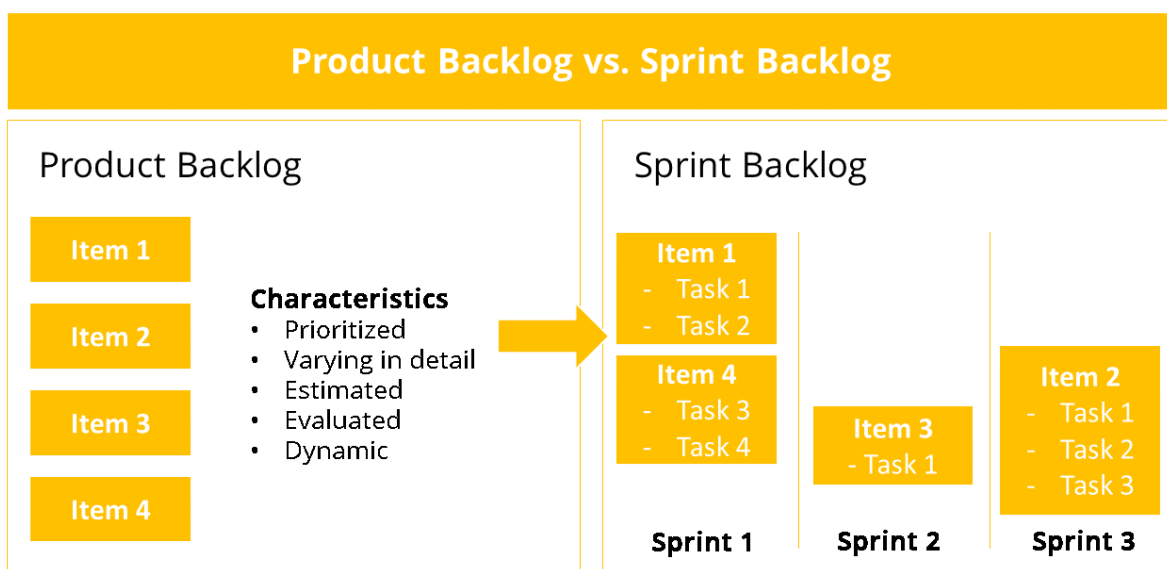A functional intermediate product should be developed in each sprint. Therefore, it is decided in advance in the sprint planning meeting which items from the product backlog are to be completed in the next sprint. The sprint planning meeting is held at the beginning of each sprint to plan this phase of the project.

After the items have been selected, they are recorded in the respective sprint backlog. Ultimately, the product owner alone decides which items will be completed in the next sprint and thus end up in the sprint backlog. The product owner takes one of the three central roles in scrum (product owner, scrum master, scrum team). They are responsible for the creation of a specific product version. For this purpose, they set technical requirements for the project, prioritize them and are in regular contact with the client.

In summary, the sprint backlog contains the project tasks that are to be completed in the respective sprint. The project tasks are supplemented by further details that the scrum team needs in order to achieve the sprint goal.

Product Backlog vs. Sprint Backlog

The 5 most frequently asked questions about the sprint backlog

What are sprint backlog tasks?

After the items for the next sprint are selected by the product owner, they are divided into tasks that can be completed within a day. That's why we call the components of the sprint backlog " sprint backlog tasks". Just like in the product backlog, an effort estimate is applied to each sprint backlog item.

Who is responsible for the sprint backlog?

The scrum team independently determines how it wants to work on the previously identified tasks. The scrum team is the development team. The team organizes itself independently and delivers the product features, in the order specified by the product owner.

Additionally, it is the scrum team's responsibility to maintain and update the sprint backlog. Often new tasks or requirements are uncovered during a sprint and the sprint backlog needs to be adjusted. The scrum team adds the new tasks to the sprint backlog or modifies already existing tasks.

How is the sprint backlog processed?

A task in the backlog is either already assigned to a resource or is still free without resource assignment. Once a team member has completed the task that they are currently working on, they select a new task to work on either from their personal backlog or from the scrum team's backlog. The status of the task then changes to "In Progress" until the team member marks the task as "Completed". This process continues until all tasks from the sprint backlog are completed.

Why is the sprint backlog considered a controlling tool?

Because the scrum team often needs to adjust the sprint backlog, the scrum master should always keep an eye on what types of tasks are added or adjusted and what scope of work is added. This is because a sprint is basically designed to run for a certain duration and the amount of work should not exceed the original amount of work defined in the sprint planning meeting by an unusual amount.

The scrum master acts as a facilitator in the project team. They are not the project manager, but rather responsible for ensuring that scrum works and that the rules of agile project management are adhered to. If the scrum master notices during a sprint that more and more items are being added, they should discuss with the scrum team whether some of them would not be better dealt with in the next sprint. This would mean that these new requirements would end up in the product backlog instead of the sprint backlog. The Scrum Master therefore has the authority to intervene in a controlling manner so that the sprint goal is achieved.

To what extent does the sprint backlog support the daily scrum?

Optimally, the sprint backlog gives the scrum team an overview of completed tasks and which ones still need to be worked on. Thus, the sprint backlog forms the basis for the daily scrum meeting (daily scrum), in which it is decided which sprint backlog tasks will be completed next.

5. How to find the best people for the scrum roles

The scrum master

Tasks of the scrum master

The following tasks fall within the scope of the scrum master's job:

> Responsible for the scrum process and compliance with the rules

> Moderation of scrum meetings

> Ensures communication between product owner and scrum team

> Eliminates obstacles and disturbances

> Has an overview of the status of the scrum artifacts (product backlog, sprint backlog, product increment)

> Strives for benefit maximization and optimization

> Conflict management

> Team coaching and individual coaching

Important skills of a scrum master

Due to their wide range of responsibilities, a good scrum master needs a variety of skills. We can roughly divide these into two different areas: Methodical competence and soft skills.

Methodical competence

Since the scrum master is responsible, among other things, for the entire scrum process and the adherence to the scrum rules, they should already have practical scrum experience.

Another criteria would be the successful completion of an introductory scrum course. With these two criteria you make sure that they have both practical and theoretical knowledge in scrum.

Soft skills

A very important task of the scrum master is the facilitator role. To fully fill this role, the person of your choice should have empathy and assertiveness. Since the scrum master is supposed to protect the scrum team from disturbances and to remove obstacles, a high conflict resolution ability, readiness to make decisions, and the ability to deal with resistance are also necessary. An excellent scrum master is also characterized by persuasiveness and analytical skills.

Choosing a scrum master

When selecting a suitable scrum master, it is important to consider other aspects in addition to skills. To avoid conflicts, the scrum master should not be selected from an existing team. However, make sure that the scrum master is respected and accepted by both the scrum team and the product owner. In addition, they should not be tempted to work as a team member or to take over tasks, because conflicts can quickly arise through the assumption of dual functions.

The product owner

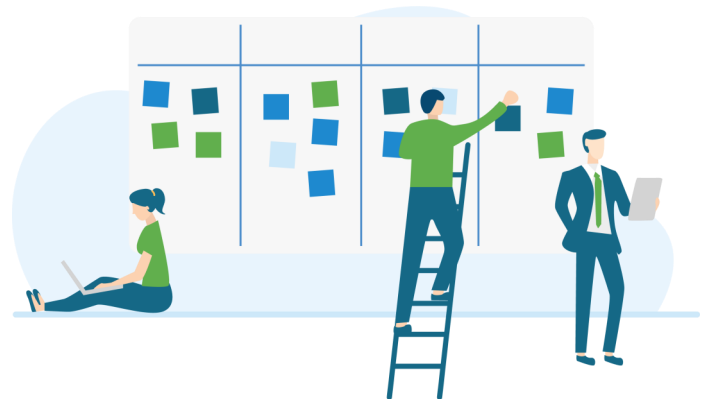## Tasks of the product owner

The product owner is responsible for the creation of a specific product version. In addition, they set technical requirements for the project and prioritize them. They are responsible for the business success of the project, they are in regular contact with the client and give feedback to the team.

> Responsible for the creation of a specific product version

> Sets business requirements for the project

> Prioritizes the business requirements

> Is responsible for the commercial success of the project

> Is responsible for the achievement of the project goal

> Is in regular contact with the client

> Provides feedback from the client to the scrum team

> Manages the stakeholders and understands their needs

Important skills of a product owner

Above all, a product owner needs communication skills and the power of persuasion. They must convince both the team and the client that they are making the right decisions and that they have the success of the project in mind. In addition, a good product owner needs the necessary expertise, as they are constantly making product-related decisions.A product owner should also have a number of soft skills. These include the ability to work in a team, empathy for customers and users, motivational skills and presentation skills.

Another important characteristic of this role is to have a clear vision of the finished product and to be able to inspire people with this vision. In addition, a product owner should have the ability to mediate between the customer and the scrum team. This is very important, for example, in the area of software development, as misunderstandings because of miscommunication often occur.

Choosing a product owner

Since the role of the product owner involves a lot of responsibility, you should be extremely careful when selecting one. The most important aspect here is that the product owner is 100% a team player. They should work closely with the scrum team and are responsible for the joint achievement of the project goal. In order for them to be respected by the scrum team and the scrum master, you should make sure that they are also selected on the basis of the necessary technical, professional and subject matter knowledge.

6. Bonus: The new scrum guide 2020

The creators of scrum, Ken Schwaber and Jeff Sutherland, developed the concept in the early 1990s. In 2010, they published the first Scrum Guide, a guide to the method with the intention of providing people, teams and organizations with a framework to master complex tasks and create products with the highest possible value. A lot has happened since the first release, which is why the two inventors are constantly working on their concept and regularly publish updated editions of the Scrum Guide - the last one in 2017. In this blog post we will show you what changes have been made in the latest version of November 2020 with the title *Scrum Guide 2020 - The Definitive Guide to Scrum The Rules of the Game*.

Less prescriptive

Scrum itself describes the development of the Scrum Guide in recent years as rather strict. This has been changed and scrum is going back to the roots of the original concept. The new version makes scrum a very minimalistically formulated framework that is suitable for a wide range of people and applications. This is why a large part of the prescribed language has been changed or removed to minimize the original reference to IT or product development terms. Examples of this:

> Daily Scrum questions were removed

> simplified language around PBI attributes and retro positions in the sprint backlog

> Shortened paragraph for sprint cancellation

> and much more

With this step, Schwaber and Sutherland solve the discussion about the possible fields of application of scrum and simplify the applicability outside the software development environment.

One team, one product

This change mainly eliminated the concept of the teams within the team, which regularly led to confusion among users. The danger of promoting a contrary "us-versus-them" mentality within the team was considered too risky. From now on there is only one Scrum team that focuses on one goal. With the end of the strict distribution of roles there will be no more formal hierarchies within the team. However, three accountabilities must always be clearly assigned: Product owner, scrum master and developer.

New: The product goal

The latest version of the Scrum Guide introduces the product goal for the first time. This is a new or additional objective formulation for the future state of the product. This new concept helps

teams focus on a larger and more valuable goal. With each sprint, the product should come closer to the overall product goal. To support the teams in formulating the product goal, the Scrum Guide 2020 provides the Product Goal Canvas as a tool.

Commitments for artifacts

The scrum inventors themselves state that they have always had a hard time explaining why, for example, the definition of done or the sprint goal are not artifacts. In order to create a better classification and understanding of the roles, the term commitment has now been introduced. This new assignment provides more transparency and focus on the progress of each artifact. These three commitments are assigned to the three artifacts:

Artefakt	Commitment	Anmerkung
Product backlog	Product goal	The new product goal helps to determine what is included in the product backlog.
Sprint backlog	Sprint goal	The sprint goal helps to prioritize and select the most important items for the sprint backlog.
Increment	Definition of done	The definition of done serves as a checklist whether an increment was created or not.

Self-management instead of self-organisation

Earlier guides defined scrum teams as self-organizing and that they determine who and

what work should be done. In the new edition the term has changed a bit: Self-organization becomes self-management. This goes hand in hand with the new responsibility of the teams for the execution, monitoring and management of their own work. However, the self-managing Scrum team doesn't have to worry about the organizational tasks such as team composition or the general direction of the company.

Third topic for sprint planning

From now on, a third question is new in sprint planning. In addition to the topics "what" and "how", a short "why" discussion should now also take place. This gives more importance to the existing sprint goal.

General simplification of the language

As already mentioned in the beginning, one of the major goals of this year's edition was to reach a wide audience through a simplified language. The main focus was on softening complex expressions and formulations, as well as sorting out established terms from the IT sector. This way the creators of Scrum hope to continue to establish the agile concept in industries outside of software development.

About InLoox

InLoox was founded in 1999 and develops project management software integrated in Microsoft Outlook that simplifies and accelerates business processes. The convenient Outlook integration makes InLoox the central platform for project and day-to-day business. The product portfolio currently consists of the two product lines InLoox PM for the installation in your own network and the cloud solution InLoox now!. Our core business is selling software licenses and services, which include consulting, training, implementation and support for our software solutions. InLoox, Inc. is based in San Francisco, USA. The company operates worldwide and is represented, on a regional level, by the InLoox Partner Network. InLoox enables customers in a multitude of industries based in over 60 countries worldwide. InLoox customers include AVIS, CHRIST Wash Systems, German Red Cross, LIEBHERR, Novartis, Pentax Europe, STOR-Opack, SEAT, Siemens, US Airways, Verizon and many more.

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