

Sprint Retrospective



German name Sprint Retrospektive, Retrospektive

Brief description In the Sprint Retrospective the scrum master reflects on and analyses aspects such as interdependencies, processes, tools and skills from the previous sprint, together with all the members of the scrum team. In doing so, the participants are able to develop strategies from both the positive and negative experiences of the previous sprint. These measures will facilitate an increase in productivity of the development team and a smooth collaboration with the other stakeholders for the following sprint.

Fields of application

- A Sprint Retrospective takes place at the end of each sprint of a project managed after the **Scrum** principle. This facilitates a constant improvement in the project management.
- The Sprint Retrospective offers the possibility to perform changes to the **Definition of Done** in order to improve the quality of the developed software.
- You can apply the Sprint Retrospective not only in Scrum, but also in other approaches, as a tool for periodic feedback of the project team.

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| Advantages | <ul style="list-style-type: none">+ The feedback and the organisation of improvement strategies are an essential part of the project execution due to this well-defined event.+ The following sprint will be optimised due to the identification of positive experiences and the implementation of improvement suggestions. |
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| Drawbacks / risks / boundaries | <ul style="list-style-type: none">- Improvement measures and adjustments should be done in a sprint as well, and not be “procrastinated” until the Sprint Retrospective.- A Sprint Retrospective is decisive only if all roles attend the event. For example: if the product owner doesn’t attend the Retrospective, the Definition of Done cannot be modified. |
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| Requirements | <ul style="list-style-type: none">• A Retrospective requires a previous sprint as object of analysis.• The entire team should be clearly aware of the relevance of the Sprint Retrospective. The team should generally agree with applying and following improvement strategies and treat the Retrospective with necessary seriousness. |
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| Qualification | <ul style="list-style-type: none">• Team members: explicit knowledge of the method.• Moderator: it is recommended to have a qualification as a scrum master; as well as presentation skills, particularly conflict management skills. |
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| Required information | <p>There is no explicit project documentation needed for the Sprint Retrospective. The information and the documents listed here serve as a reminder of the purpose, operation and particular events from the previous sprint.</p> <ul style="list-style-type: none">• Overview of the previous sprint, for example: a presentation of the last sprint backlog (full or excerpts).• Personal notes of the participants on the previous sprint (physical notes or thoughts)• Optionally: Notes on particular events, artefacts or moods, which were collected by the participants during the sprint (e.g.: complaint box, feedback wall or consultations)• The current Definition of Done. |
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| Output | <ul style="list-style-type: none">• A list of potential measures for improving the team performance in the following sprint. The measures can be prioritised if necessary, for example due to their high number.• If necessary: naming the persons in charge of carrying out the measures.• Formal resolution on implementing these measures.• If necessary, updated Definition of Done. |
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- Required tools
- Flip board, whiteboard or moderation board
 - Moderation kit and / or sticky notes for presenting the introduced aspects and results
 - Private working space, sufficiently large for holding the Sprint Retrospective with the entire team
 - If necessary video projector for group work.

Additionally / alternatively for distributed teams:

- Software for digitalising the contributions and results (e.g. word processing software, moderation software)
- IT equipment for communicating and presenting at the particular work stations.

Execution

The Sprint Retrospective takes place at the end of each sprint (c.f. image 1). It takes the form of a workshop with a limited time duration. If the sprint stretches over a period of four weeks, the time box (=duration of the meeting) will have three hours, according to the Scrum Guide. In case of sprints that last a shorter period of time, you can also shorten the duration of the meeting accordingly.

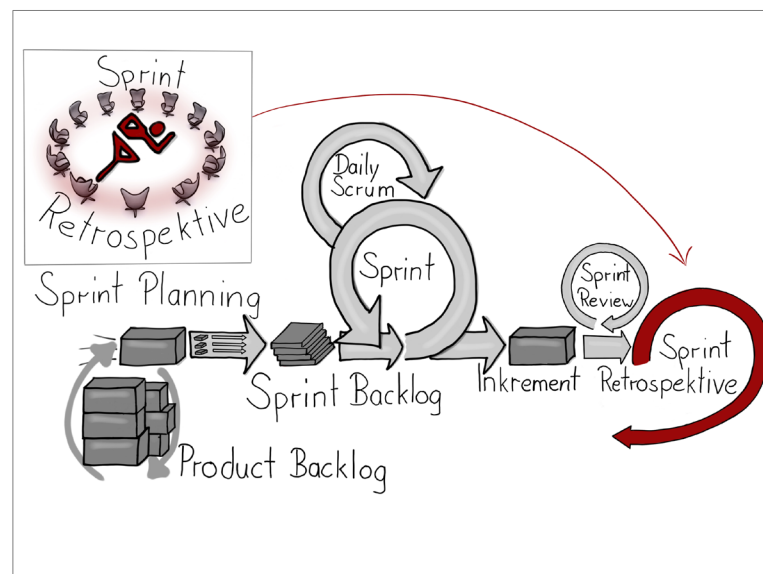


Image 1: Visualisation of the Sprint Retrospektive during the Scrum process.

Step 1: Introduce the Sprint Retrospektive to the participants!

As a moderator, you should present the aim of the Sprint Retrospektive within five to ten minutes. Minor deviations from the meeting's objective can gradually sneak in during the regular meetings. For example, the Retrospektive can easily degenerate into a "complaint meeting". This is why you should present the objectives of the Sprint Retrospektive explicitly at the beginning of the meeting:

- The Sprint Retrospective serves as a retrospection of the previous sprint and gives an answer to the question how we can achieve improvements for the following aspects: product, tools, processes, interdependencies and involved persons.
- Positive aspects or events from the following sprint will also be listed and put in a chronological order.
- The target of the Sprint Retrospective is to come to an agreement and mutually establish the listed aspects in order to improve the working method of the entire team.

You should present the sequence and the schedule of the Sprint Retrospective and point out the organisational aspects (e.g. breaks, method of documentation). If necessary you should introduce new team members to the audience or give them the opportunity to do this. If the Sprint Retrospective takes place with distributed teams, you should call up each participant, so that the participants get familiar with each other. At the same time, you should verify if the technology is functional (e.g. when participants use video telephony)

You should establish fundamental communication rules with the participants, in order to achieve an efficient and constructive Retrospective, such as:

- We will allow other participants to finish speaking and won't interrupt them.
- We will approve every opinion without commenting on it.
- Each person will report from his or her own point of view.
- We will treat each other with respect and avoid pejorative comments.
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Step 2: Bring together all the data!

In this step you will gather feedback. Even if this is the main part of the Sprint Retrospective, it should not stretch over more than a half of the meeting. The team will present positive aspects in a chaired discussion and gather suggestions for improving the collaboration and the product quality. Please make sure that each team member contributes to this discussion or gets a chance to speak. There are some helpful key questions, which you can use in order to promote target-objected discussions regarding the Sprint Retrospective. These are for example:

- How did you feel about this sprint?
- What helped you in this sprint?
- What can we do in order to work together more efficiently?
- Which adjustment do we have to make in order to....?
- What can we do in order to improve the product quality?

Where appropriate you can also precisely ask: How did you feel about executing the User Story XYZ?

Record the feedback and present it to the entire team using your moderation board, pin board or other appropriate tool you have at your disposal.

It is up to you to decide how you will organise the session, or depending on the participants. If the sprint team has the recommended group size (3-9 persons according to the Scrum Guide), a group discussion would probably be the most common option. It is also possible to collect individual feedback given in turn, to use brainstorming or other methods for collecting feedback. You can also use a Visual Map (c.f. [Die visuelle Landkarte – den Projektfortschritt stets im Blick](#), Projekt Magazin 22/2015) as a moderation method.

Make sure that each team member gets a chance to speak regardless of the method used!

It is also essential to cut on long comments and focus on the main arguments. However, the participants should be encouraged to ask questions of understanding. You should not allow participants to express criticism on their colleagues' opinions. If necessary, you should adjourn the issue to the next step.

Step 3: Instruct the team to work out strategies!

In the third step you will have to mutually choose and work out strategies for improving the team performance or product quality. You should make clear that a solution-oriented approach is essential for developing efficient improvement measures.

It usually turns out that the list with positive aspects and improvement strategies collected in step 2 is relatively long. This is why it is important to prioritise the list. There are several techniques to do this. The most widely spread technique is the one in which individual team members assign points or numerical values.

At the end of this step you will have concrete actions, which will be implemented in the next Sprint. The proposals you elaborated should comply with the **SMART** criteria.

The suggestions regarding the quality of the product will be recorded in the acceptance criteria of the Definition of Done.

If the "impediments" you identified cannot be processed within the team, then the scrum master is responsible for resolving them.

An example of prioritisation

The aspects and improvement strategies have been attached to a pin board with moderation cards in step 2. In this step each team member will receive three stickers and will have to distribute them freely on the moderation cards. As soon as all stickers are distributed, you will have to count the points on each moderation card and note them down on the card. The aspects / improvement strategies that were most highly rated will be applied in the following sprint.

An example for applying the SMART criteria

The team has to assess the previous report including the test results via email immediately after each test and then decide to implement it in the future, if this is the case. When formulating the report, please consider the five SMART points:

- **Specific:** starting with the following sprint we will automatize all test results from the unit tests and send them after finishing the individual test per email to the development team.
- **Measurable:** the members of the development team are informed that they will receive an email with the results and can also verify this.
- **Achievable:** the implementation is easy to apply, as you will only have to adjust the settings in the test tool.
- **Relevant:** the developers ranked this measure as important during the prioritisation process.
- **Timely:** you will have to choose a person in charge, who will have to adjust the settings in the test tool until the beginning of the next sprint.

An example for making changes to the Definition of Done

Several participants claim that the quality of the Sprint Review decreases due to the fact that there is not a further documentation of particular increment results apart from the technical one. As a measure to this, you will decide to compulsorily create a description of the submitted results for presenting it in the Sprint Review. The description of the results, its length and the tool used will be documented in the Definition of Done as quality criteria.

Step 4: Finalise the Sprint Retrospective!

As a moderator, you are responsible for documenting the results. Choose an appropriate method for documenting them, for example for the cards described in step 3. Make sure that you depict the events comprehensibly using keywords or brief and objective texts.

Make sure that you conclude the meeting in a positive way, especially if emotional issues were dealt with during the Sprint Retrospective. You should carry out a feedback session at the end of the Sprint Retrospective. In the introductory statement you should praise explicitly noticeable events and actions such as the commitment for dealing with high workloads or the open atmosphere of the session. You should give every person the chance to express himself/herself. It is essential that the participants leave this event with a positive impression and maintain it in the following Sprint Retrospectives.

The last step should not exceed 30 minutes. If the time is not sufficient you should do the some extra work to do the remaining documentation.

Subsequently, you should make sure that you provide the information accordingly. On the one hand, in order to provide the persons not attending with the results (for example from the development team), and on the other hand to document the aspects which were discussed.

Practical tips

- The steps 2 and 3 of the Sprint Retrospective empirically offer the highest amount of “fuel” for conflicts. As a moderator, you should always make clear that step 2 is the “collecting” stage. You should also encourage the participants to express their criticism as improvement proposals in step 3. If the discussion becomes too personal, you will have to check with the persons involved afterwards. In case of emergency, you should cancel the retrospective before a conflict escalates.
- The scrum master is usually in charge for moderating the Sprint Retrospective. In some cases it could be useful to have a person from the outside moderate the event. This especially applies if the scrum master was involved in conflicts during previously failed Sprint Retrospectives.
- Besides particular processes and tools, interpersonal relations are also on the agenda of the Sprint Retrospective. You should make sure that the participants comply with the agreed rules of communication especially in case of conflicts.
- If the Definition of Done applies to different scrum teams, then you should discuss the proposed amendments in Scrum of Scrum or pass them on to the competent authority for a decision, using an appropriate escalation management.
- The Sprint Retrospective facilitates an autonomous improvement of productivity and the quality of the results for the entire team. Additionally you can make changes to the Sprint Retrospective as well (e.g. rescheduling, particular presentation approaches). The team autonomy supports this method as long as the core ideas of the Sprint Retrospective do not get lost (cf. Application, step 1).
- You should give your team the opportunity to analyse even the Sprint Retrospective. You can do this in the last step. You can actively ask for ways of improvement or ideas concerning a better organisation of the meeting.

Further reading
(German
language)

Projektretrospektiven. Teil 1: Nutzen und Vorbereitung

article – edition 19/2009 – by Chris Rupp and Alexander N. Steiner

Change-Projekte mit Retrospektiven steuern. Teil 2: Retrospektiven effektiv einsetzen

article – edition 13/2014 – by Marc Löffler

Die visuelle Landkarte – den Projektfortschritt stets im Blick

tip – edition 22/2015 – by Christian Botta and Daniel Reinold

Origin The Sprint Retrospective is one of the four Scrum events. Ken Sutherland and Ken Schwaber implemented the "Scrum" in the early 1990s (published under the name: "SCRUM Software Development Process"). The idea behind is based on the "**New Product Development Game**" publication, in which Hirotaka Takeuchi and Ikujiro Nonaka described the development of a common objective through iterations in the year 1986. In doing so, they mainly focused on speed and flexibility. The Scrum version that is now currently available is documented in the so-called "Scrum Guide", which is available for download in a number of languages on the website www.scrumguides.org.

Complementary **Workshop** – The Sprint Retrospective can be organised as a workshop
methods **Sprint Planning** – Measure implementation
(hyperlinks to
German version)

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Click here for the online version (German language):

www.projektmagazin.de/methoden/sprint-retrospektive

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- Complete list of our publications of Projekt Magazin on methods
- Further service information on software, books, services, courses and events