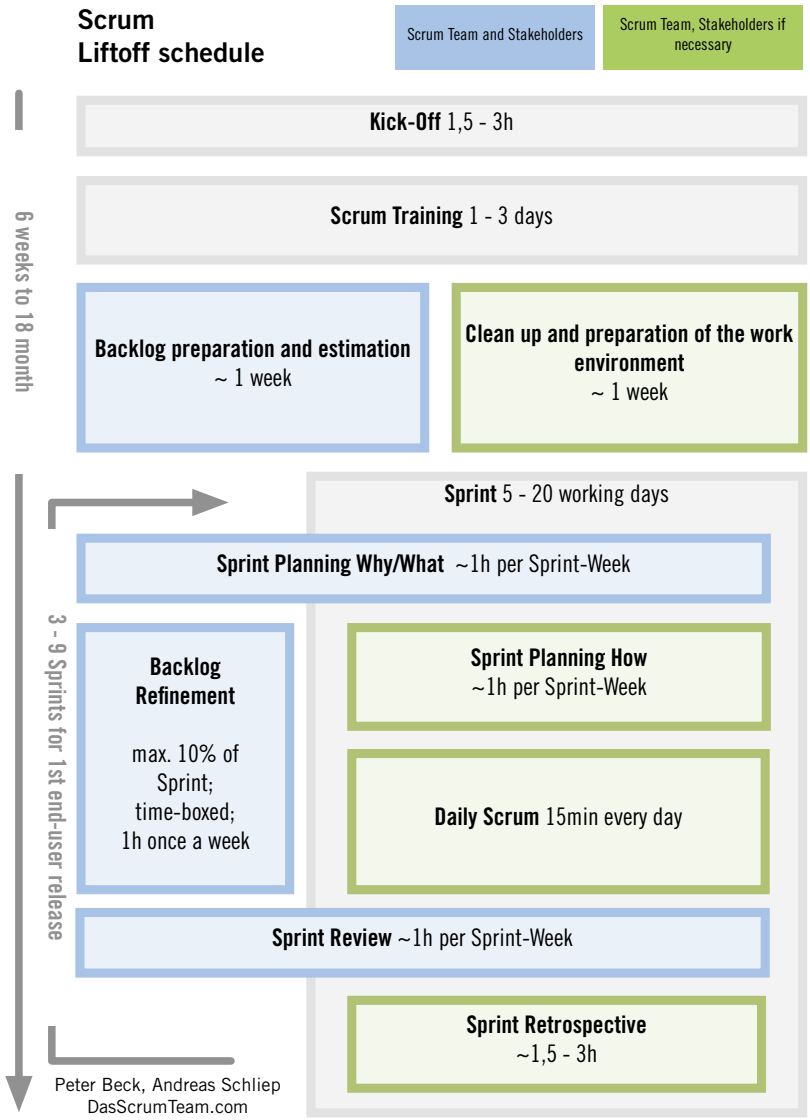
The Scrum Reader

Reading Material and References to Start With Scrum


Scrum
Liftoff schedule
Scrum Team and Stakeholders
Scrum Team, Stakeholders if necessary
Kick-Off 1,5 - 3h
Scrum Training 1 - 3 days
6 weeks to 18 month
Backlog preparation and estimation
~ 1 week
Clean up and preparation of the work environment
~ 1 week
Sprint 5 - 20 working days
Sprint Planning Why/What ~1h per Sprint-Week
3 - 9 Sprints for 1st end-user release
Backlog Refinement
max. 10% of Sprint;
time-boxed;
1h once a week
Sprint Planning How
~1h per Sprint-Week
Daily Scrum 15min every day
Sprint Review ~1h per Sprint-Week
Sprint Retrospective
~1,5 - 3h
Peter Beck, Andreas Schliep
DasScrumTeam.com

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1 The 2020 Scrum Guide

Ken Schwaber, Jeff SUtherland

Purpose of the Scrum Guide

We developed Scrum in the early 1990s. We wrote the first version of the Scrum Guide in 2010 to help people worldwide understand Scrum. We have evolved the Guide since then through small, functional updates. Together, we stand behind it.

The Scrum Guide contains the definition of Scrum. Each element of the framework serves a specific purpose that is essential to the overall value and results realized with Scrum. Changing the core design or ideas of Scrum, leaving out elements, or not following the rules of Scrum, covers up problems and limits the benefits of Scrum, potentially even rendering it useless.

We follow the growing use of Scrum within an ever-growing complex world. We are humbled to see Scrum being adopted in many domains holding essentially complex work, beyond software product development where Scrum has its roots. As Scrum's use spreads, developers, researchers, analysts, scientists, and other specialists do the work. We use the word "developers" in Scrum not to exclude, but to simplify. If you get value from Scrum, consider yourself included.

As Scrum is being used, patterns, processes, and insights that fit the Scrum framework as described in this document, may be found, applied and devised. Their description is beyond the purpose of the Scrum Guide because they are context sensitive and differ widely between Scrum uses. Such tactics for using within the Scrum framework vary widely and are described elsewhere.

Scrum Definition

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

In a nutshell, Scrum requires a Scrum Master to foster an environment where:

1. A Product Owner orders the work for a complex problem into a Product Backlog.
2. The Scrum Team turns a selection of the work into an Increment of value during a Sprint.
3. The Scrum Team and its stakeholders inspect the results and adjust for the next Sprint.
4. *Repeat*

Scrum is simple. Try it as is and determine if its philosophy, theory, and structure help to achieve goals and create value. The Scrum framework is purposefully incomplete, only defining the parts required to implement Scrum theory. Scrum is built upon by the collective intelligence of the people using it. Rather than provide people with detailed instructions, the rules of Scrum guide their relationships and interactions.

Various processes, techniques and methods can be employed within the framework. Scrum wraps around existing practices or renders them unnecessary. Scrum makes visible the relative efficacy of current management, environment, and work techniques, so that improvements can be made.

Scrum Theory

Scrum is founded on empiricism and lean thinking. Empiricism asserts that knowledge comes from experience and making decisions based on what is observed. Lean thinking reduces waste and focuses on the essentials.

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

Transparency

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. Artifacts that have low transparency can lead to decisions that diminish value and increase risk.

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

Inspection

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.

Adaptation

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 becomes more difficult when the people involved are not empowered or self-managing. A Scrum Team is expected to adapt the moment it learns anything new through inspection.

Scrum Values

Successful use of Scrum depends on people becoming more proficient in living five values:

Commitment, Focus, Openness, Respect, and Courage

The Scrum Team commits to achieving its goals and to supporting each other. Their primary focus is on the work of the Sprint to make the best possible progress toward these goals. The Scrum Team and its stakeholders are open about the work and the challenges. Scrum Team members respect each other to be capable, independent people, and are respected as such by the people with whom they work. The Scrum Team members have the courage to do the right thing, to work on tough problems.

These values give direction to the Scrum Team with regard to their work, actions, and behavior. The decisions that are made, the steps taken, and the way Scrum is used should reinforce these values, not diminish or undermine them. The Scrum Team members learn and explore the values as they work with the Scrum events and artifacts. When these values are embodied by the Scrum Team and the people they work with, the empirical Scrum pillars of transparency, inspection, and adaptation come to life building trust.

Scrum Team

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

Scrum Teams are cross-functional, meaning the members have all the skills necessary to create value each Sprint. They are also self-managing, meaning they internally decide who does what, when, and how.

The Scrum Team is small enough to remain nimble and large enough to complete significant work within a Sprint, typically 10 or fewer people. In general, we have found that smaller teams communicate better and are more productive. If Scrum Teams become too large, they should consider reorganizing into multiple cohesive Scrum Teams, each focused on the same product. Therefore, they should share the same Product Goal, Product Backlog, and Product Owner.

The Scrum Team is responsible for all product-related activities from stakeholder collaboration, verification, maintenance, operation, experimentation, research and development, and anything else that might be required. They are structured and empowered by the organization to manage their own work. Working in Sprints at a sustainable pace improves the Scrum Team's focus and consistency.

The entire Scrum Team is accountable for creating a valuable, useful Increment every Sprint. Scrum defines three specific accountabilities within the Scrum Team: the Developers, the Product Owner, and the Scrum Master.

Developers

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

The specific skills needed by the Developers are often broad and will vary with the domain of work. However, the 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; and,
- Holding each other accountable as professionals.

Product Owner

The Product Owner is accountable for maximizing the value of the product resulting from the work of the Scrum Team. How this is done may vary widely across organizations, Scrum Teams, and individuals.

The Product Owner is also accountable for effective Product Backlog management, which includes:

- Developing and explicitly communicating the Product Goal;
- Creating and clearly communicating Product Backlog items;
- Ordering Product Backlog items; and,
- Ensuring that the Product Backlog is transparent, visible and understood.

The Product Owner may do the above work or may delegate the responsibility to others. Regardless, the Product Owner remains accountable.

For Product Owners to succeed, the entire organization must respect their decisions. These decisions are visible in the content and ordering of the Product Backlog, and through the inspectable Increment at the Sprint Review.

The Product Owner is one person, not a committee. The Product Owner may represent the needs of many stakeholders in the Product Backlog. Those wanting to change the Product Backlog can do so by trying to convince the Product Owner.

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 is accountable for the Scrum Team's effectiveness. They do this by enabling the Scrum Team to improve its practices, within the Scrum framework.

Scrum Masters are true leaders who serve the Scrum Team and the larger organization.

The Scrum Master serves the Scrum Team in several ways, including:

- 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; and,
- Ensuring that all Scrum events take place and are positive, productive, and kept within the timebox.

The Scrum Master serves the Product Owner in several ways, including:

- 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; and,
- Facilitating stakeholder collaboration as requested or needed.

The Scrum Master serves the organization in several ways, including:

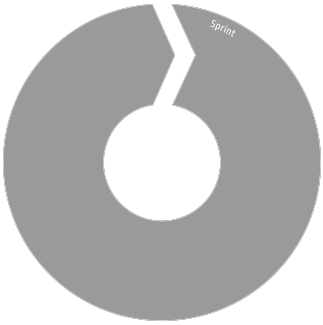
- Leading, training, and coaching the organization in its Scrum adoption;
- Planning and advising Scrum implementations within the organization;
- Helping employees and stakeholders understand and enact an empirical approach for complex work; and,
- Removing barriers between stakeholders and Scrum Teams.

Scrum Events

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. Failure to operate any events as prescribed results in lost opportunities to inspect and adapt. Events are used in Scrum to create regularity and to minimize the need for meetings not defined in Scrum.

Optimally, all events are held at the same time and place to reduce complexity.

The 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.

During the Sprint:

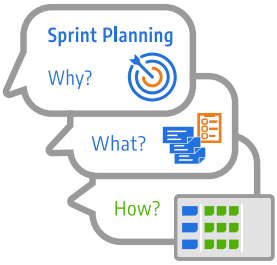
- No changes are made that would endanger the Sprint Goal;
- Quality does not decrease;
- The Product Backlog is refined as needed; and,
- Scope may be clarified and renegotiated with the Product Owner as more is learned.

Sprints enable predictability by ensuring inspection and adaptation of progress toward a Product Goal at least every calendar month. When a Sprint's horizon is too long the Sprint Goal may become invalid, complexity may rise, and risk may increase. Shorter Sprints can be employed to generate more learning cycles and limit risk of cost and effort to a smaller time frame. Each Sprint may be considered a short project.

Various practices exist to forecast progress, like burn-downs, burn-ups, or cumulative flows. While proven useful, these do not replace the importance of empiricism. In complex environments, what will happen is unknown. Only what has already happened may be used for forward-looking decision making.

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. This resulting plan is created by the collaborative work of the entire Scrum Team.

The Product Owner ensures that attendees are prepared to discuss the most important Product Backlog items and how they map to the Product Goal. The Scrum Team may also invite other people to attend Sprint Planning to provide advice.

Sprint Planning addresses the following topics:

Topic One: Why is this Sprint valuable? The Product Owner proposes how the product could increase its value and utility in the current Sprint. The whole Scrum Team then collaborates to define a Sprint Goal that communicates why the Sprint is valuable to stakeholders. The Sprint Goal must be finalized prior to the end of Sprint Planning.

Topic Two: What can be Done this Sprint? Through discussion with the Product Owner, the Developers select items from the Product Backlog to include in the current Sprint. The Scrum Team may refine these items during this process, which increases understanding and confidence.

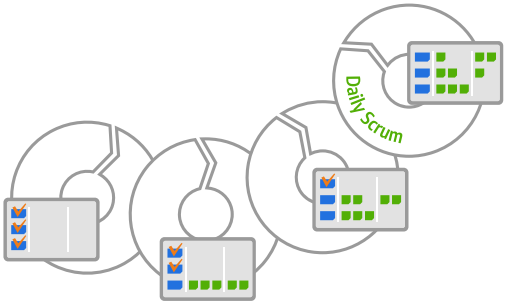
Selecting how much can be completed within a Sprint may be challenging. However, the more the Developers know about their past performance, their upcoming capacity, and their Definition of Done, the more confident they will be in their Sprint forecasts.

Topic Three: How will the chosen work get done? 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. How this is done is at the sole discretion of the Developers. No one else tells them how to turn Product Backlog items into Increments of value.

The Sprint Goal, the Product Backlog items selected for the Sprint, plus the plan for delivering them are together referred to as the Sprint Backlog.

Sprint Planning is timeboxed to a maximum of eight hours for a one-month Sprint. For shorter Sprints, the event is usually shorter.

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. To reduce complexity, it is held at the same time and place every working day of the Sprint. If the Product Owner or Scrum Master are actively working on items in the Sprint Backlog, they participate as Developers.

The Developers can select whatever structure and techniques they want, as long as their Daily Scrum focuses on progress toward the Sprint Goal

and produces an actionable plan for the next day of work. This creates focus and improves self-management.

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

The Daily Scrum is not the only time Developers are allowed to adjust their plan. They often meet throughout the day for more detailed discussions about adapting or re-planning the rest of the Sprint's work.

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.

During the event, the Scrum Team and stakeholders review what was accomplished in the Sprint and what has changed in their environment. Based on this information, attendees collaborate on what to do next. The Product Backlog may also be adjusted to meet new opportunities. The Sprint Review is a working session and the Scrum Team should avoid limiting it to a presentation.

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. For shorter Sprints, the event is usually shorter.

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. Inspected elements often vary with the domain of work. Assumptions that led them astray are identified and their origins explored. The Scrum Team discusses what went well during the Sprint, what problems it encountered, and how those problems were (or were not) solved.

The Scrum Team identifies the most helpful changes to improve its effectiveness. The most impactful improvements are addressed as soon as possible. They may even be added to the Sprint Backlog for the next Sprint.

The Sprint Retrospective concludes the Sprint. It is timeboxed to a maximum of three hours for a one-month Sprint. For shorter Sprints, the event is usually shorter.

Scrum Artifacts

Scrum's artifacts represent work or value. They are designed to maximize transparency of key information. Thus, everyone inspecting them has the same basis for adaptation.

Each artifact contains a commitment to ensure it provides information that enhances transparency and focus against which progress can be measured:

- For the Product Backlog it is the Product Goal.
- For the Sprint Backlog it is the Sprint Goal.
- For the Increment it is the Definition of Done.

These commitments exist to reinforce empiricism and the Scrum values for the Scrum Team and their stakeholders.

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 items that can be Done by the Scrum Team within one Sprint are deemed ready for selection in a Sprint Planning event. They usually acquire this degree of transparency after refining activities. Product Backlog refinement is the act of breaking down and further defining Product Backlog items into smaller more precise items. This is an ongoing activity to add details, such as a description, order, and size. Attributes often vary with the domain of work.

The Developers who will be doing the work are responsible for the sizing. The Product Owner may influence the Developers by helping them understand and select trade-offs.

Commitment: Product Goal

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 rest of the Product Backlog emerges to define "what" will fulfill the Product Goal.

> *A product is a vehicle to deliver value. It has a clear boundary, known stakeholders, well-defined users or customers. A*

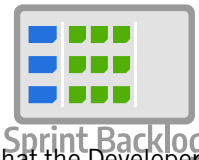
product could be a service, a physical product, or something more abstract.

The Product Goal is the long-term objective for the Scrum Team. They must fulfill (or abandon) one objective before taking on the next.

Sprint Backlog

Sprint 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).



The Sprint Backlog is a plan by and for the Developers. It is a highly visible, real-time picture of the work that the Developers plan to accomplish during the Sprint in order to achieve the Sprint Goal. Consequently, the Sprint Backlog is updated throughout the Sprint as more is learned. It should have enough detail that they can inspect their progress in the Daily Scrum.

Commitment: Sprint Goal

The Sprint Goal is the single objective for the Sprint. Although the Sprint Goal is a commitment by the Developers, it provides flexibility in terms of the exact work needed to achieve it. The Sprint Goal also creates coherence and focus, encouraging the Scrum Team to work together rather than on separate initiatives.

The Sprint Goal is created during the Sprint Planning event and then added to the Sprint Backlog. As the Developers work during the Sprint,

they keep the Sprint Goal in mind. If the work turns out to be different than they expected, they collaborate with the Product Owner to negotiate the scope of the Sprint Backlog within the Sprint without affecting the Sprint Goal.

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. The sum of the Increments is presented at the Sprint Review thus supporting empiricism. However, an Increment may be delivered to stakeholders prior to the end of the Sprint. The Sprint Review should never be considered a gate to releasing value.

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

Commitment: 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.

The moment a Product Backlog item meets the Definition of Done, an Increment is born.

The Definition of Done creates transparency by providing everyone a shared understanding of what work was completed as part of the Increment. 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.

If the Definition of Done for an increment is part of the standards of the organization, all Scrum Teams must follow it as a minimum. If it is not an organizational standard, the Scrum Team must create a Definition of Done appropriate for the product.

The Developers are required to conform to the Definition of Done. If there are multiple Scrum Teams working together on a product, they must mutually define and comply with the same Definition of Done.

End Note

Scrum is free and offered in this Guide. The Scrum framework, as outlined herein, is immutable. While implementing only parts of Scrum is possible, the result is not Scrum. Scrum exists only in its entirety and functions well as a container for other techniques, methodologies, and practices.

Acknowledgements

People

Of the thousands of people who have contributed to Scrum, we should single out those who were instrumental at the start: Jeff Sutherland worked with Jeff McKenna and John Scumniotales, and Ken Schwaber worked with Mike Smith and Chris Martin, and all of them worked together. Many others contributed in the ensuing years and without their help Scrum would not be refined as it is today.

Scrum Guide History

Ken Schwaber and Jeff Sutherland first co-presented Scrum at the OOPSLA Conference in 1995. It essentially documented the learning that Ken and Jeff gained over the previous few years and made public the first formal definition of Scrum.

The Scrum Guide documents Scrum as developed, evolved, and sustained for 30-plus years by Jeff Sutherland and Ken Schwaber. Other sources provide patterns, processes, and insights that complement the Scrum framework. These may increase productivity, value, creativity, and satisfaction with the results.

The complete history of Scrum is described elsewhere. To honor the first places where it was tried and proven, we recognize Individual Inc., Newspage, Fidelity Investments, and IDX (now GE Medical).

2 Seven Practices for the Effective Implementation of Scrum

Peter Beck

In this text you learn about: Why Scrum provides the best principles for effective change management // How Scrum challenges the organization // The most important success factors for implementing Scrum // There is a huge difference between knowing things and being able to do them. You may understand Scrum quite well and have perhaps recently finished your first Scrum project successfully. Now you ask yourself, "How should I implement Scrum in my organization?"

*This article is published on the online platform for agile management, P–A–M (**www.p-a-m.org**)*

Every organization is different and you never will find a 'one-size-fits-all' solution. You need to adapt your Scrum implementation approach to the specific needs of your organization. Fortunately, there is now a huge body of knowledge about and experience with Scrum implementations, and it looks like some practices are more essential than others in order to have the implementations be effective and successful.

The 7 practices for an effective Scrum implementation will still not give you the silver bullet. Some of these are more important for your organization than others. Practices specific to and important for your organization might be missing. But this should give you a jumpstart for the first Scrum principle: Deliver early and regularly. Know how to inspect and adapt the right approach. Figure out which of these practices are useful and give value to your organization. You will skip some of the practices while expanding on others, or create more effective ones.

Follow the principles

The best fundament on which to develop Scrum is Scrum itself. All the measures you need to carry out Scrum in your organization should follow the Scrum principles:

- Deliver early and regularly
- Inspect and adapt
- Have empowered, cross-functional teams
- Be transparent and open
- Be time-boxed

Scrum is designed to help complex systems develop. Organizations are complex, and implementing Scrum in traditional organizations is even more complex. Planning and executing organizational change by using the Scrum framework guarantees that you continuously deliver. You gain trust in your organization because the new approach shows results. Furthermore, you send the right signals to your organization; "We trust and use the new approach and can see it is working."

Start with an urgent and very important project

We do not Scrum just because of Scrum. We do Scrum in order to deliver a better product in a more efficient way. Scrum should help us reach project goals in less time and with lesser costs. The question is not what we can do for Scrum, but what can Scrum do for us. What is lacking, where does failure hurt most, where is the value we gain for the organization at its highest? These are the questions you should ask when looking for a project on which to apply Scrum. The Scrum implementation and the project will benefit from each other. If the project is important enough, it will be much easier to make necessry organizational

changes possible. It is the project that gains in value, not the new approach. You may now be asking about risks. What if we fail? Sure, every project has risks and to ignore them is dangerous. But Scrum is helpful in this respect. It will continuously help you make risks visible. You will surely figure out soon enough whether your project will fail, and this will not affect your trust in Scrum. It will be apparent if the project goal is not within timely reach or within the budget. The basic truth is sometimes hard. Simply take care that nobody misinterprets this fact and tries to use Scrum as a scapegoat.

Have the right people – get the pioneers

It is not a secret that having the right people on board is a major success factor for any project. Especially in the case of your first Scrum projects, you should take care to have Agile pioneers on board who are:

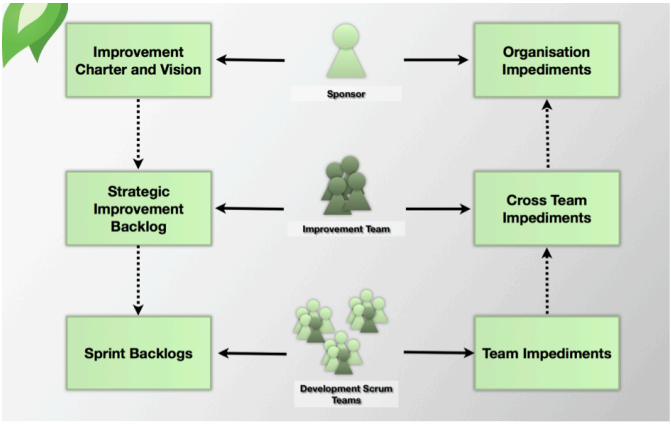
- Willing to un-learn old habits
- Willing to learn and use new techniques
- Willing to break rules
- Enthusiastic about Scrum and Agile
- 100% dedicated to the team

Of course your chosen team member needs to have the best domain knowledge possible. This includes technical as well as business know-how. However, most of this knowledge is useless for complex projects – otherwise they would not be complex. So do not overrate them. Your team has to go through areas which have never been explored before. Plus the fact that they are now in the spotlight. Will Scrum and your team lose or win? You have to play on many layers at once. There are difficulties inherent in your project and hidden forces working against your new approach. Do not play this game without the best. A very good approach used to finding the best is to let them find you and your

project. Simply advertise the new approach and state that you are looking for pioneers. Run a 4-hour Scrum introduction workshop, for example, making sure everyone in the organization is free to join in. Ask at the end: Who would like to start tomorrow with this approach? You will soon have your candidates. When your first Scrum project is over your pioneers are still needed. They should transfer their knowledge to the rest of the organization. Maybe some of them joined a Scrum implementation or improvement Team with the intention of rolling out Scum in the whole organization or carrying out difficult organizational changes. Others will join the next new Scrum teams.

Have a Sponsor

The success of every Scrum implementation will finally find its master in its Sponsor. The Sponsor is someone who is strongly connected with the organization, has huge decision-making power and influences the leading strategy. Most often this is the CEO or CTO, or someone who is very close. Some organizations may not start with such a powerful sponsor. However, Scrum will challenge the C-Level very soon after the first Scrum Teams have gotten started. In case you are not in a powerful position, try to find a good person for this and prepare him to sponsor the Scrum implementation. This Sponsor is responsible for prioritizing and deciding on necessry improvements and difficult changes. It is good practice to make this Sponsor the Product Owner of a Scrum implementation or improvement Team. This team commits itself to carrying out the changes in the organization with the full support of the sponsor, following the Scrum framework. Together with the sponsor, this team creates a strategy for the Scrum implementation in the organization. A Scrum implementation and improvement architecture, tailored to the needs of the organization, should be created. The following picture reduces such a structure to a single picture. But remember: every organization is different. Therefore, every organization needs its own specific set-up. And do not forget to inspect and adapt your approach.



Involve the middle management

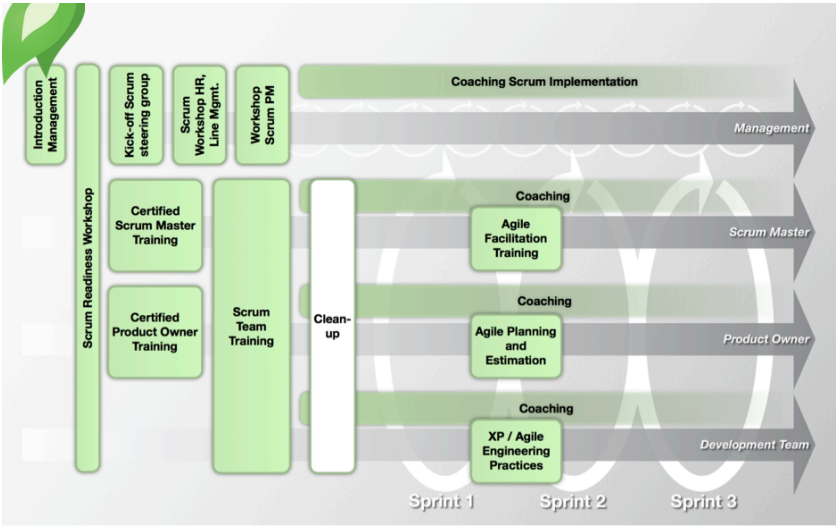
Typically, the largest resistance to Scrum comes from middle management. Most often, this group fears loss the most, and they are right, because Scrum tends to flatten the hierarchy. People in middle management end up having to change their duties, responsibilities and management practices radically. By involving this group in the process of becoming a highly efficient Scrum organization, you can turn resistance into support. But again, ask yourself who is involved in the process and who needs to get out of the way. Flattening the hierarchy does not necessrily mean reducing the head count, but it is true that some people will leave the organization and others will come. Prepare your organization, as every change is an opportunity in itself, even for those leaving the organization.

Train the people and offer support

We know it from sports. Without training we should not go to the match. The same is true for this new game, Scrum. We need to train muscles and reflexes which have seldom or never been used before. However, other muscles are already well developed and hinder us in acting according to the new game rules. Explain the new rules to people before they start implementing Scrum. Expand on best practices so that the right muscles and reflexes are ready for the first Sprint. It is important that every stakeholder is at least familiar with the Scrum rules. Otherwise you can be sure that someone will break the rules. However, specialist training for the specific roles is less important and can be offered later. In Scrum we deliver early. After a brief training we should be ready to start. But many things are still unclear and the real big questions will appear during the first Sprints. You should offer your teams support and help. Guidance by an experienced Scrum practitioner or coach increases the confidence necessry to start with Scrum, and lets the team focus on the real challenge: the project. Yes – you know it already: every organization is different. Every organization needs a specific training plan. And yes: you have to adapt this plan, too. But you can find an example here:

Right marketing

Scrum helps you create great products. Good products are the best advertisement you can have. But if your potential customers do not understand that you have a good product, no one will buy anything. Therefore, you need good marketing, too. The same logic applies to your Scrum implementation. Being successful is the best advertisement. But you also need to think about how to sell you success within the organization. You need to overcome resistance and fear, but not only through arguments. You also need to think about how to present and place your arguments at the right time, using the right language, and to the right people. Transparency and openness do not mean that you should tell



everyone everything indiscriminately. Think about who 'consumes' your messge. Think about what his comfort zone is and how you can challenge him without creating a blockade. Here is a simple technique, borrowed from marketing professionals, for turning impediments into accepted solutions:

- Find the specific situation in which the impediment was observed (nobody can deny the fact)
- Make an interpretation (this means that you could be wrong, but fact is fact)
- Offer solutions A or B (the magic trick is that you can either buy A or B, but not nothing)

3 Nine Exercises for Successful Retrospectives

Andreas Schliep

This article is about the special importance of the retrospective // some exercises to try and modify // ways to improve the team's collaboration // monotony antidotes

*This article is based on materials for the work study program for ScrumMasters –**www.scrummaster-ausbildung.de***

Mastering the retrospective is a essential responsibility of the Scrum Master. While the other Scrum Team members don't need much guidance during plannings, coordinations, or reviews, the retrospective needs a prepared facilitation. The exercises presented here are battle-tested in multiple team line-ups and situations during our practice as Scrum Master and Coach. Of course there are many more exercises to discover. We suggest the following readings:

- Esther Derby and Diana Larsen: Agile Retrospectives
- Marc Löffler: Retrospektiven in der Praxis
- Corinna Baldauf: Retr-O-Mat – www.plans-for-retrospectives.com

Use of the Exercises

Most of the exercises can be done as small self-contained retrospectives. Of course they can also be used as parts in a larger retrospective. To help you decide which exercise fits where you can use this mapping between the exercises and the retrospective steps by Derby and Larsen:

Exercise	Setting the stage	Gathering data	Generate insight	Deciding what to do	Closing
What went well...			X	X	
Timeline					
Starfish		X	X	X	
Emotions Seismograph	X	X			
ESVP	X				
Satisfaction Histogram	X	X			
Team Radar		X	X	X	
Appreciations	X				X
Helped, hindered...		X	X	X	

Exercise: What went well / what could be improved

Source: Ken Schwaber: Agile Project Management with Scrum
Duration: 20–60 minutes

Materials

- Flip chart or pin board
- Post-Its or facilitation cards
- Facilitation markers

Preparation

The Scrum Master prepares a meeting room and supplies the team with the flip chart or the pin board. The chart is divided into two sections. One is titled "What went well", the other "what could be improved". Some Scum Masters use smileys instead.

Each participant gets a stack of post-its or facilitation cards and a facilitation marker.

Steps

1. The participants should remember the latest sprint.
2. For each post-it or facilitation card the participants should note one thing that went well or could be improved from the latest sprint.
3. The post-its or cards are collected on the chart. They are sorted into the corresponding section.
4. Use another flip chart to note what should be improved.

Variants

- At first the participants only collect the things that went well. These are then fixed on the chart. After that another brainstorming follows in which the things to be improved are collected.
- Each participants presents his own cards during pinning them to the chart.
- The facilitator can choose more than two categories, for example: “try”, “keep”, and “drop” (Exercise: Starfish)
- After collecting the cards the topics to improve are prioritised by the participants via dot-voting.

Keep in mind

This exercise brings results fastly but can only be used a few times. You can use this exercise during a longer exercise after examining the time-line.

Excercise: Retrospective Timeline

Source: Norman Kerth, Project Retrospectives
Duration: 45 minutes

Material:

- Flip chart, pin board, or large poster
- Post-Its or facilitation cards
- facilitation markers

Preparation

The Scrum Master prepares a meeting room and supplies the team with the flip chart or the pin board. A horizontal arrow is drawn on the chart. The beginning of the arrow is labeled with the sprint start or another singificant date. The end of the arrow is labeled with the sprint review respectively.

Steps

1. The participants should remember the latest sprint.

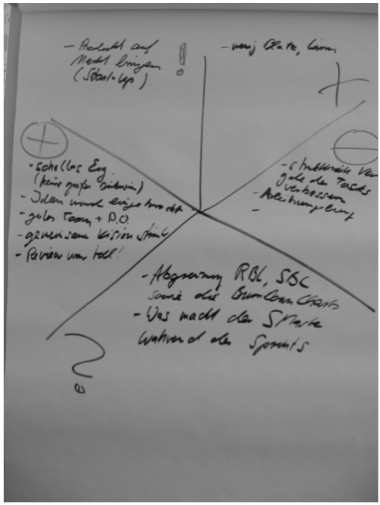
2. For each post-it or facilitation card the participants should note one event of the latest sprint. The event should be of importance for the team member or the whole team. These cards should be written judgement-free.
3. After each participant has collected her events, all participants collect the events on the timeline. Each participant explains their cards shortly.
4. During the presentation the Scrum Master collects things to improve, puzzles, but also usable approaches seperately.

Variants

- The timeline is drawn in the middle of the chart. Positive events are collected above, negative events below. This creates an emotional seismograph of the elapsed sprint.
- The participants don't explain their cards but only pin them on the chart. Afterwards the facilitator takes event by event chronologically and asks the participants for their assessment of the observations.

Exercise: Retrospetive Starfish

Source: Patrick Kua, Blog
Duration: 45 minutes



Materials

- Flip chart or pin board
- Post-Its or facilitation cards
- Facilitation markers

Preparation

The Scrum Master prepares a meeting room and supplies the team with the flip chart or the pin board. A “starfish” (see figure) is drawn on it.

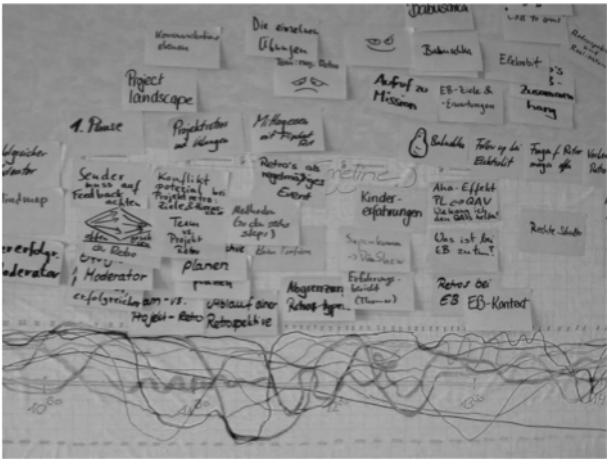
The segments are labeled with “more of”, “less of”, “start doing”, “stop doing”, and “puzzles?”.

Steps

1. The participants should remember the latest sprint.
2. The participants should think about things that they want “more of”/“less of”, things they want to “start doing” or “stop doing”, and things that puzzle them.
3. Each thing is written on a post-it/card. The cards are collected on their corresponding fields on the chart.
4. Let the participants vote -- for example via dot-voting -- for the topics to deal with first.

Exercise: Emotions Seismograph

Source: Norman Kerth, Project Retrospectives
Duration: 10 minutes



Materials

- Flip chart or pin board
- Facilitation markers, best in different colours

Preparation

The Scrum Master prepares a meeting room and supplies the team with the flip chart or the pin board. As with the timeline an arrow is drawn on the chart which is labeled with start and end of the elapsed sprint. After that the arrow is divided into weeks or work days to get a better overview. Above and below the arrow should be room for drawing.

Steps

1. The participants should remember the latest sprint.
2. Each participant gets a faciliation marker.
3. The participants should draw their emotional state during the sprint, if they felt good or bad.
4. After all participants drew their individual line you draw the trend of the sprint with a special labeled line.
5. Review the course of the sprint. Some data points are particularly interesting:
    a. low points, where most lines meet in the lower area.
    b. peaks, where most lines meet in the top area.
    c. antagonisms, where the participants' assesments diverge considerably.

Variants

- The Emotions Seismograph can be combined with the Timeline exercise.

Exercise: ESVP – Explorer, Shopper, Vacationer, Prisoner

Source: Esther Derby, Diana Larsen: Agile Retrospectives
Duration: 10–15 minutes

Materials

- Flip chart
- Post-Its or facilitation cards for the coordination
- Facilitation markers

Preparation

The Scrum Master prepares a meeting room and supplies the team with the flip chart or the pin board.

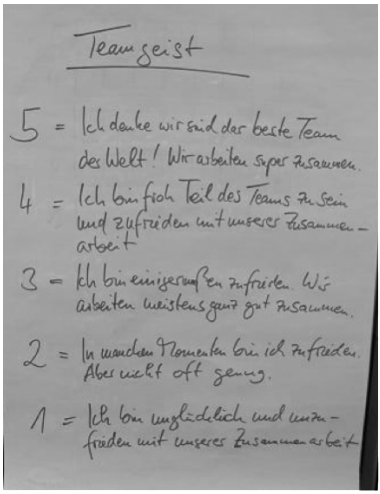
Steps

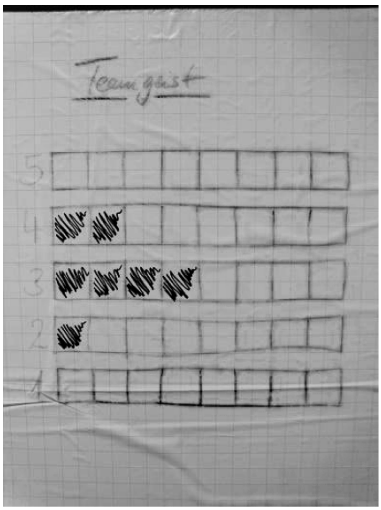
1. Explain the following steps.
2. Show the flip chart with the 4 terms and define them:
    - **Explorers** want do discover all kinds of new ideas and insights.
    - **Shoppers** take a look at the whole existing information and are excited about a new useful idea.
    - **Vacationers** don't care about the Retrospective but are happy about the pause of their daily routine.
    - **Prisoners** feel like they are forced to the retrospective and would like to do something different.

3. Distribute the “ballot papers” and let each participant write one of the letters E, S, V, or P on it.
4. Share the results with the participants. Be careful that no one can identify which card is from whom.
5. Ask the group: “What do you think about the result?” Lead a short discussion about how these attitudes can influence the retrospective's result.
6. Ask in the end: “Do these categories fit our attitude towards our daily work?”

Exercise: Satisfaction Histogram

Source: Esther Derby, Diana Larsen: Agile Retrospectives
Duration: 20 minutes





Materials

- Flip chart for a histogram
- Prepared flip chart with the 5 levels
- Post-Its or facilitation cards for the vote
- Facilitation markers

Preparation

The Scrum Master prepares a meeting room and supplies the team with the flip chart or the pin board with the five levels.

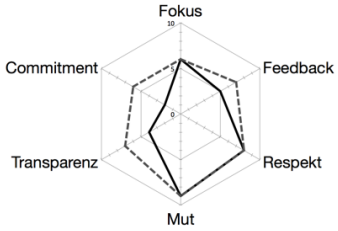
5. I think we're the best team on the planet! We work great together.
4. I am glad I'm a part of the team and satisfied with how our team works together.
3. I'm fairly satisfied. We work well together most of the time.
2. I have some moments of satisfaction, but not enough.
1. I'm unhappy and dissatisfied with our level of teamwork.

Steps

1. Explain the following steps.
2. In order to get a vote to the question "How satisfied are you with your performance as team?" you explain the 5 levels using the prepard flip chart.
3. Collect the ballot papers with the numbers of the participants. Be careful that no one can identify which card is from whom.
4. Facilitate the discussion about the results.

Exercise: Team Radar

Source: Esther Derby, Diana Larsen: Agile Retrospectives
Duration: 15–20 minutes



Overview

This exercise helps the team to understand how well they perform in specific topics, e.g. loyality to their team values, development practices, or communication.

Materials

- Flip chart or pin board with an empty radar chart -- the axes can be labeled
- Post-Its or facilitation cards
- Faciliation markers

Preparation

The Scrum Master prepares a meeting room and supplies the team with the flip chart or the pin board.

Steps

1. Explain the steps using the words: “We agree that these values are important for our work. Let's find out how good we are on a scale from zero to ten. Zero means 'not at all' and ten means 'as good as it gets'”.
2. Each team member should come to the flip chart and put a glue dot on the value of one axis.
3. Moderate a short discussion about how these values influence the daily work.
4. Keep the finished diagram. Do the same exercise again a few iterations later and compare the different results together with the team.

Variants

- To avoid the team members influencing each other while placing the dots, the values can be written on cards. The facilitator only writes the averages on the chart.
- For a larger set of axes you distribute a questionaire and evaluate the results with Excel. The result will be topic of the next retrospective.

Exercise: (Offer) Appreciations

Source: Norman Kerth: Project Retrospectives
Esther Derby, Diana Larsen: Agile Retrospectives
Duration: 5–30 minutes

Overview

Allow all participants of the retrospective to thank the group or individuals. This leads to an end of the retrospective with a positive mood.

Materials

- nothing

Vorbereitung

The group is seated in a chair circle or stands in a circle without table (or other obstacles) in the middle.

Steps

1. Introduce the activity with a sentence like “Now that we come to an end we use the opportunity to observe how other contributed to this Retrospective's success and thank them for it.”
2. Demonstrate the format with a team member. Although this is a demonstration choose a team member, whom you are truly thankful. Say their name and then “I thank you for ...” Fill the gap with something about the person or something they did. An example could be: “Andreas, I thank you for your help to understand how valueable good internal quality is for our product.”

3. Sit down again. Wait. Someone will be the next to thank someone. When the intervals between the thanks get longer, wait. Allow the silence. Some people need to time to jolt.
4. End the exercise when more than one minute elapses without someone saying anything.

Variants

- The exercise can be amended with further queries. We use this exchange as "Temperature Reading":
  - Appreciations
  - Puzzles
  - Complaints with Recommendations
  - New Information
  - Hopes & Wishes

Exercise: Helped, Hindered, Hypothesis

Source: Esther Derby, Diana Larsen: Agile Retrospectives
Duration: 5–-10 minutes

Overview

The Retrospective facilitator collects feedback from the participants. The goal is to find out what was more helpful and what was less helpful for learning. The results are new ideas for following retrospectives.

Materials

- 3 prepared flip charts with headings: “Helped”, “Hindered”, “Hypothesis”
- Post-Its
- Facilitation markers

Vorbereitung

Hang up the three flip charts.

Ablauf

1. Show the three flip charts and explain: “Please help me to become a better Retrospective facilitator. Provide feedback for this Retrospective to me. These three flip charts are for things which helped or hindered you during your learning process, the third one is for ideas what I could do differently to make the next retrospective more effective for you. Please use the Post-its to write down your feedback. If you want you can put your initials in the corner in case I have a question.”
2. Wait some time for the group to write and hang the Post-Its.

3. Thank the group to end the exercise.

Keep in mind

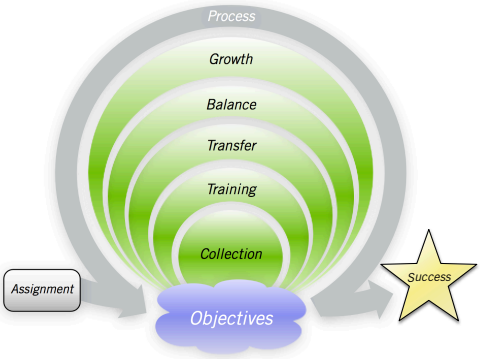
In addition to the improvement for you and your retrospectives this exercise is useful to reveal the (different?) goals and visions of each team member and provides reflection to the team.

4 Scrum Coaching

Peter Beck and Andreas Schliep

Scrum draws its power from its simplicity. This simplicity sometimes obscures the actual challenges of an adoption. The fundamental principles of Scrum are designed to cause frequent und continuous changes in the organization. These might be quite complex, especially in the beginning. Responsibilities are shifted, teams re-form themselves, practices are adapted and leadership tasks have to be reconsidered. Some people focus on the optimism, some focus on concerns and reservations. Both streams are necessary to change a working organization. They have to be understood and utilized.

The complexity of a Scrum introduction requires a broad range of differentiated measures — all of which we have been practicing successfully. We observed that these measures can be assigned to several layers, that are built on top of each other. The layers are not strictly separated — but the model helps to understand and organise the measures.



Process

A Scrum adoption is a complex venture. This is exactly the domain of Scrum. So it comes quite natural, that we employ Scrum to introduce Scrum. We collaborate with our clients to prioritize the appropriate next actions according to the situation, needs and necessities. The actions are planned, executed and verified in regular iterations. In addition, this process is reviewed and improved using frequent retrospectives. We recommend a cross-functional team consisting of external trainers, coaches and employees of the client organization to support the Scrum introduction.

We are very concerned about the relationship between sponsor and coaches. We believe this to be a core success factor of a successful coaching engagement. Clear, measurable objectives from the start, adjustment to the actual needs and a predefined exit scenario guarantee, that the organization takes responsibility for the improvements, pursuing them successfully in the future.

Collection

There are many motivations to introduce Scrum. We open the broad arc of wishes, expectations, hopes and concerns during the collection, to incorporate them into the process. We define common objectives, that are used as reality checks during the evaluation. Lectures, workshops or one-on-one conversations are used to obtain a realistic picture of the current situation, an understanding about the potential for change and shared objectives.

Training

Scrum trainings create a shared knowledge base within the teams, and support understanding the roles of ScrumMaster, Product Owner and Team. New methods and practices are introduced and internalised. Old habits are disbanded und unlearned successfully. The Scrum Team Training is a solid foundation for the whole new Scrum Team. We can also provide Certified ScrumMaster or Certified Product Owner targeted courses. Extended education, both general and role specific, build upon the basic qualification.

Transfer

Our coaches support the transfer of new knowledge and skills into the daily practice. We guide your teams with a mixture of systemic mindset, professional consulting and training elements. Our objective is, that the employees take charge of the transfer. This ensures that the agreed changes really come into life. Some typical transfer steps are a “Scrum here” workshop, or the foundation and support of a ScrumMaster group.

Balance

Scrum introductions expose some gaps in organization, that can’t be closed “from inside”. We think it is very important, that these gaps are not just compensated “implicitly”. This would hide issues and impede the learning process. At the same time, the gaps need to be leveled out by qualified ScrumMasters, facilitators and team members, in order to build trust for the new approach. Celebrate success and permit fertilisation through new ideas from the outside. Balancing takes place in mentoring- or interims-functions. These are offered explicitly. We take over the task in the first step, transfer more and more responsibility to

the internal candidate in the second step, and become supporters and consultants in the third step.

Growth

Scrum benefits an organization most, if the entire organization plays along. This change needs to be addressed from the start of the introduction process. We do this by creating multiplier groups and offering internal informational events. Concerns and resistances can be mitigated at an early stage. The growth process needs to be established in the top management. We are starting this with the foundation of a steering or support group.

5 ScALeD – Scaled Agile and Lean Development

Peter Beck, Markus Gärtner, Christoph Mathis, Stefan Roock, Andreas Schliep

ScALeD Principles

Agile methods are becoming ever more popular, and a growing number of companies has adopted agile practices on a large scale. But successfully scaling agility is challenging. As companies, projects and teams differ, there is no silver bullet solution to large-scale agile development. We believe that not a new method or an additional framework is required to successfully apply agile practices at scale but rather a set of guiding principles, which we have described below. The principles are not genuinely new. We have rather taken existing ideas and reworded them to address the scale challenges. Feel free to reuse the text below but please reference **http://scaledprinciples.org**.

Excited Customers

Excited customers enable sustained business growth. The task of product development is to create the basis for this growth.

Define Value and how it is Created

A shared understanding of the product's value proposition is especially important in a scaled organisation. Product goals help to achieve the strategic objectives, and shared values provide guidance for all project members

Produce small, deliverable increments

Increments build on each other while presevering the functionality of the previous increments. They help create and measure value. A deliverable product increment can be released while additional features can still be added. An increment ideally provides value for the customer. But even if that is not possible, small, deliverable increments provide the basis for the continuous growth of the product; they minimize risks and reduce complexity.

Happy and Productive Employees

In product development the employees offer the greatest improvement potential, and satisfied employees achieve a higher productivity. It is therefore important to create a work environment that results in motivated employees.

Create Independent, Cross-functional Teams

Teams are the most effective way to accomplish complex work. How people interact within one team and be extended to the interactions between several teams: Teams should be able to communicate with each other independently and without artificial barriers. The company's job is to provide the right goals, structures, environment and support.

Authorize and Empower your Employees

Employees working on a large-scale agile project require not only the right technical skills. They have to take on ownership for their work and support each other. Only then can teams do a great job for the organisation and the customer. Teams have to be empowered to own and manage their work and to make the necessary decisions.

Global Optimization

When scaling a modular, loosely coupled product architecture is essential. But focussing only on individual components can quickly lead to sub-optimisation. It is therefore necessary to consider the entire value chain and to integrate modules and components frequently.

Create Transparency in all Directions

To make the right decisions, employees require the right information particularly the objectives, constraints, agreements and the current status. It is not enough to store this information. Encourage an active exchange of relevant information to foster continuous improvement.

Prefer Direct Communication

Personal and direct communication promotes the exchange of knowledge, skills, goals, needs, concerns. Tacit information is often only available when people communicate directly. Personal contact is important not only within a team but also between teams and with the rest of the organisation.

Create Flow and Rhythm

Flow and rhythm throughout the entire value chain are important enablers for high-performance teams alongside clear objectives, frequent synchronisation and fast (or no) handovers.

Supportive Leadership

Managers play an important role as teachers and enablers in an agile environment. As leaders they serve the company and the employees and they do their best to support creation of value.

Set Objectives and Provide Support

Managers set goals and provide support. They remove bureaucratic hurdles, dissolve rigid structures and successively empower the employees. As a leader, you serve the company and the employees by doing the best to help create a successful product in a healthy, sustainable way.

Decentralize Control Structures

Self-organisation does not only take place within a development team, but also across the teams. Long decision-making processes consume valuable development time. Most of the decisions should hence be made by those carrying out the work. For the coordination of multiple teams hierarchical control authority is not necessary. Follow the principles of transparency, direct communication, inspection and adaption, and global optimisation instead.

Cultivate the Change and Change the Culture.

During an agile enterprise transition, all the parties involved should understand the values, the objectives and their own role in the change process. Senior management should lead the way and actively help to make the necessary changes.

Continuous Improvement

Continuous improvement – at all levels of the organisation – is an important agile practice. It is facilitated by repeated inspection and adaption. Inspection should be based on direct observation and communication; adaption should happen without any delays.

Inspect and Adapt the Product

Frequently inspecting the entire product and adapting any plans allows the creation of a product that does a great job at meeting the customer needs. This is particularly crucial in a scaled environment.

Inspect and Adapt the Development Process

Just as the process within a team should be owned by team members, the process involving several teams should be owned by those teams. The teams reflect together. They identify strengths and weaknesses, define appropriate improvements and implement them.

Inspect and Adapt the Organisation

Improvement in an agile organisation is not a straightforward change, but an iterative process: inspection and adaption steps take place regularly. The current organisation is investigated, new opportunities and challenges are identified, improvements are derived and prioritized.

6 Imprint

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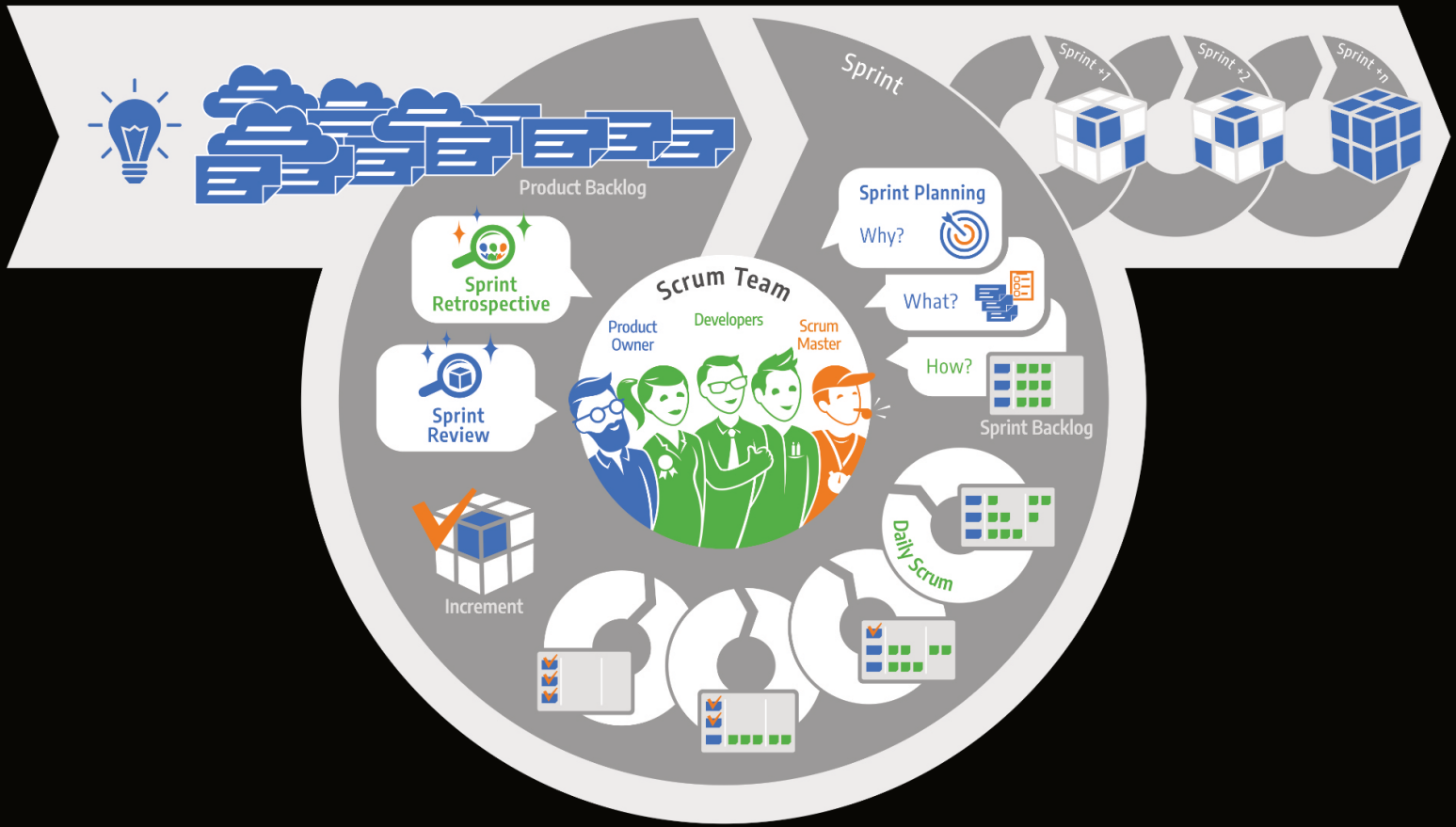
Product Backlog
Sprint
Sprint +1
Sprint +2
Sprint +n
Sprint Planning
Why?
What?
How?
Sprint Backlog
Scrum Team
Product Owner
Developers
Scrum Master
Sprint Retrospective
Sprint Review
Increment
Daily Scrum