


Scrum

in five minutes

SCRUM AND AGILE METHODS ARE HOT TOPICS THESE DAYS

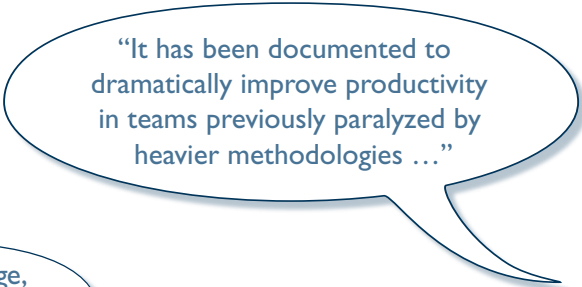


“A simple method for the management of complex projects ...”


“Older methods focus on staying on track; Scrum is aimed at delivering business value all the time ...”

“The market is changing more rapidly, external factors are becoming increasingly more complex – and Scrum makes it possible to adapt...”

“... a hyper-productivity tool!”



“It has been documented to dramatically improve productivity in teams previously paralyzed by heavier methodologies ...”



“Embrace change, release creativity, increase productivity”

“Scrum is steered toward the people in the project, not the technology...”

“A smart combination of tried-and-tested methods – that’s Scrum in a nutshell!”

ASK YOURSELF THE FOLLOWING QUESTIONS

1

Do you want to handle changing requirements more efficiently, boost your designers' motivation and improve communication between customer and project?

2

Are you ready to introduce a new leadership culture that means altered roles and a new way of working as well as transferring some of the responsibility from the managers to the project team?

3

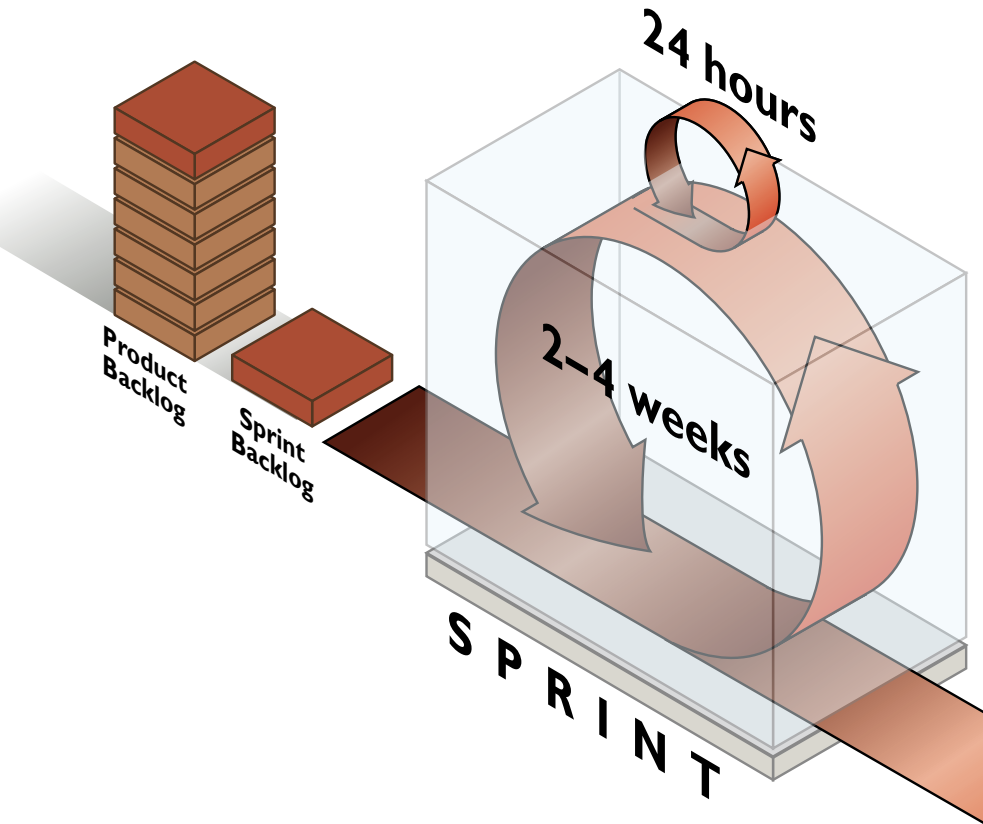
Are you willing to follow in the footsteps of companies like IBM, Microsoft and Xerox, and successfully address the failings of your software development process?

IF YOU ANSWER "YES" YOU SHOULD DEFINITELY KEEP READING!

SCRUM

– AN INTRODUCTION

Scrum is based on what is called a **Sprint** – a focused effort for a 30-day period toward fixed goals.



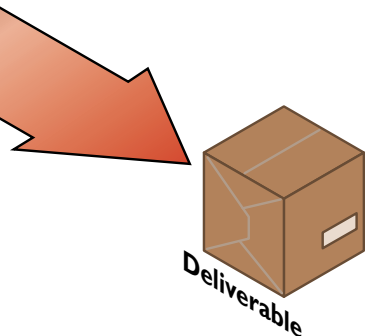
A **Product Owner** compiles all the changes planned for the product and prioritizes the possible functionalities.

The result of the Product Owner's work is a **Product Backlog** – a to-do list that is constantly reprioritized. Before each Sprint, the highest prioritized goals are transferred to a **Sprint Backlog**.

Together with a user, the project members form a **Scrum Team** consisting of 5–9 people. During discussions with the Product Owner, the goal of the Sprint is determined and the prioritized functionality is broken down into detailed tasks. The team is self-organized and the members have a joint responsibility for the results.

The Scrum Master coaches the development team, removes any possible impediments and constantly works to ensure that the team has the best possible circumstances for realizing the goals fixed for the Sprint.

Each Sprint enhances the product's market value and adds new functions and improvements that can be delivered to the customer.

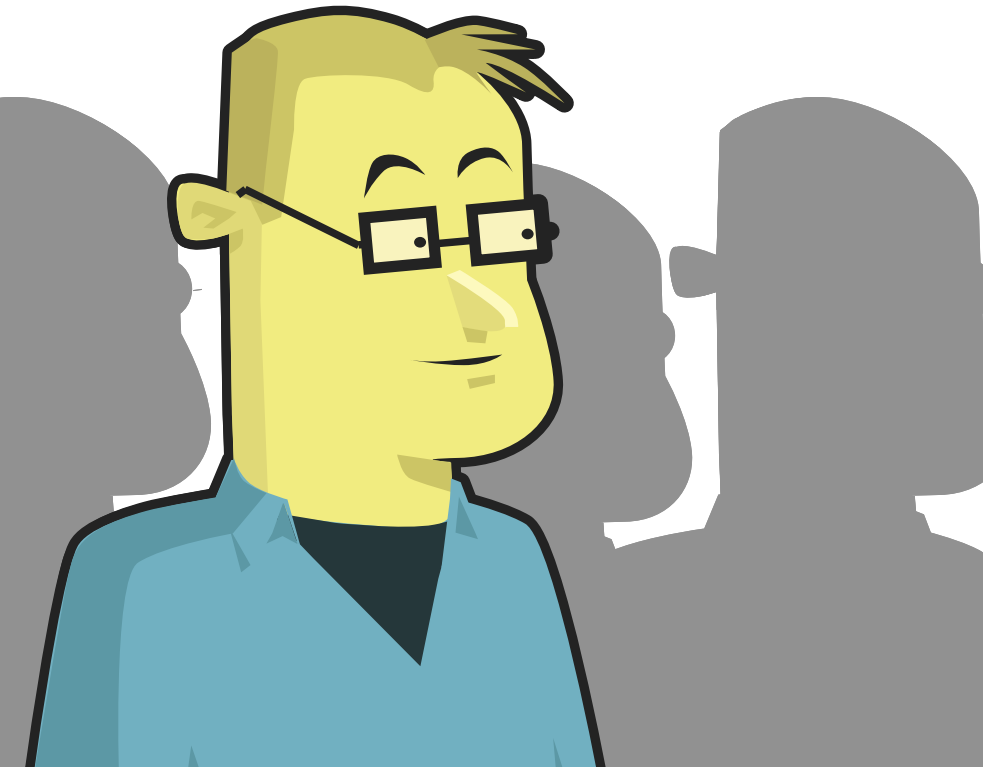


ROLES

THE SCRUM TEAM

... performs the actual work of problem solvers and designers. The team normally consists of 5-9 people – a group size that experience and research has shown to be best for this type of work.

The team members decide how the work is arranged and how assignments are distributed. There are no set project roles – everyone should be able to swap tasks with another member. Naturally, this does not prevent individual members from being experts in a field.



PRODUCT OWNER

...represents the voice of the customer and ensures that the Scrum Team works with the right things from a business perspective. The Product Owner administers a Product Backlog – a current to-do list where all the specifications for a product are listed according to how profitable they are deemed to be. The document is visible to the entire organization so that everyone is aware of what to expect in future releases of the product.

The Product Owner is often a customer, but can also be part of the internal organization. The task requires comprehensive knowledge about engineering, marketing and business processes.



SCRUM MASTER

...is a combination of coach, fixer and gate-keeper. The Scrum Master meets with the team every day in brief meetings, Daily Scrums. When someone outside the project has an important issue to discuss with the team, the Scrum Master tries to ensure that the designers are disturbed as little as possible in their work.

The Scrum Master always adopts a here-and-now perspective to the work. The focus is always on providing the team with the best possible circumstances for realizing the goals fixed for the Sprint.

After each Sprint, the Scrum Master holds an Evaluation Meeting with the Scrum team – a Sprint Retrospective – during which experiences and conclusions are reviewed. The purpose is to elevate the team's level of knowledge and heighten motivation prior to the next Sprint.



PROCESS

CREATING A BACKLOG

The Product Owner compiles all the requests and specifications that are the basis of the changes of the product, such as new functions and bug fixes. After the goals have been defined, the entirety is broken down into segments. Each such segment should in part create business value and in part be sub-deliverable.

A prioritized list is made at the same time – the Product Owner personally makes the decisions at this point. In what order should the changes be made and delivered? The result is a to-do list arranged according to how the market's demands and customer's requests change over time. When it is time to start a new Sprint, the Product Owner “freezes” the foremost items on the to-do list and summons the Scrum Team to a meeting.

THE SPRINT PHASE

Of the Sprint's 30 calendar days, the first are set aside to create a *Sprint Backlog*. When the tasks and required time has been determined, the Product Owner lets go.

As of now the Scrum Team works under its own responsibility. If the group has been properly composed, the work will be self organizing.

DAILY SCRUM

Every day, at the same time, the Scrum Master and the Scrum Team have a brief meeting. The purpose is to eliminate all speed impediments for the group. Each of the participants should in some way answer three questions:

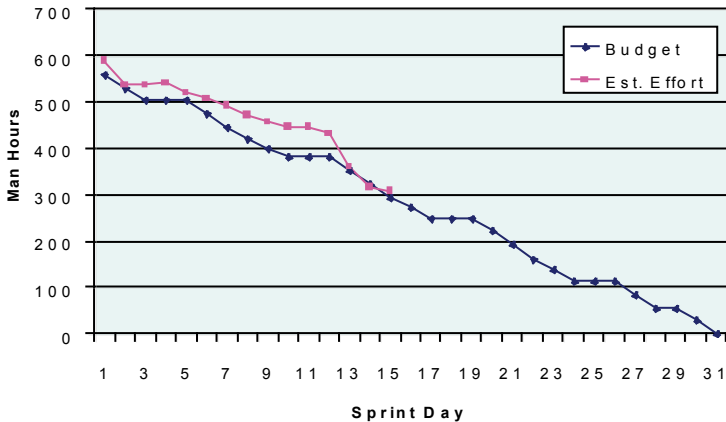
- What have you done since the last meeting?
- What will you do between now and the next meeting?
- Is there anything preventing you from doing what you have planned?

The first two questions give the meeting participants full insight into how the project is progressing. The third question provides a basis for problem solving – ranging from a new computer mouse to organizational changes at the company.

Anyone may attend and listen at the meeting, but only the Scrum Master and the team members may speak.

DEMONSTRATION AND EVALUATION

Each Sprint finishes with a demonstration during which functioning software is run before a larger group consisting of, besides the Product Owner, users and representatives for corporate management, for example. This is the basis for an Evaluation Meeting that in turn is the starting block for the next Sprint.



A burn-down chart is used to mark day-by-day how much remains of the scheduled work. The diagram clearly illustrates the rate the remaining hours of a Sprint are “burned down”.

AGILE DEVELOPMENT METHODS

Scrum is classed as what is called **agile development** – a set of work methods and tool boxes aimed at

- improving the ability to respond quickly to needs and requests from the market
- cutting down waste and waiting periods
- reducing employee stress while simultaneously increasing productivity.

Those who adhere to the agile methods in their work are highly enthusiastic. It is no exaggeration to say that the entire global IT industry is experiencing an agile wave. The philosophy is summarized in the following table:

Important

- processes and tools
- detailed documentation
- contract negotiations
- following a plan

More important

- individuals and interaction
- functioning software
- collaboration with the customer
- adapting to changes

(Source: Manifesto for Agile Software Development <http://agilemanifesto.org/>)

The agile methods are a reaction to the processes that look good in theory but that do not hold up in practice. The agile methods are therefore described as empirical – they are based entirely on practical experiences and work methods that are proven to work.

A central concept for agile methods is adaptation to changing external factors. Where older methods are predictive and attempt to foresee future needs, the agile methods are adaptive and quickly adapt to new demands, adhering to the “Embrace change!” motto. The only measurement of success is functioning products.

Another important principle is simplicity and lean thinking. According to the agile thinking concept, large-scale projects for example are not in themselves desirable. Instead, it is more preferable to maximize the amount of work that does not need to be done. This includes for instance not spending time writing unnecessary documentation – the project form creates good conditions for fast mouth-to-mouth communication.

Other agile methods

Extreme Programming (XP) is the most known agile method alongside Scrum. XP has a different approach - it is more a method that deals with *how* to work in the project. The basis consists of twelve practices, where pair programming and test case production before coding are two examples.

Another agile method is Lean Development, which stems from the manufacturing industry's Just-In-Time and Lean Production concepts. Lean Development deals more with how to organize the entire company's development activities at management level.

These agile methods can therefore be considered complementary, where

- Lean Development deals with which comprehensive principles should apply for the entire development organization
- Scrum deals with how the project is organized and planned
- XP deals with how to work with programming.

COMMON QUESTIONS ABOUT SCRUM AND AGILE

Isn't there a significant risk that Scrum runs wild with everyone doing as they like?

Experience from a multitude of various projects shows that this does not happen. The reason is that the principles are easy to understand and the team has visible deliveries every 30 days. The shared responsibility for all parts of the code also makes the Scrum Team's members more motivated to adhere to set routines and rules.

Can Scrum only be used for smaller projects?

No, the method can be up-scaled by putting together several smaller projects to form one larger. A so-called Scrum of Scrums can include hundred of programmers, organized in dozens of Scrum Teams.

How do you start?

A common way of starting is to send one or more people on a course to become a certified Scrum Master. Many companies offer these types of courses nowadays.

Another alternative is to start a pilot project and let someone with experience from a previous Scrum project serve as mentor for the Team, Scrum Master and Product Owner.

What happens if you don't finish on time?

Scrum does not allow a delivery date to be altered! If you are behind, you delete items in the Scrum Team's Sprint Backlog and if you are ahead you can ask the Product Owner for more tasks.

Does a Sprint have to be 30 days?

Not necessarily, but it should be the same length throughout the entire project. Plus, experience shows that 30 days (about 1,000 effective hours for an experienced group) is a good compromise between a comfortable work pace and adaptability.

What's happened to the project manager?

Scrum has no role with that title. A project manager that leans toward administration is commonly found in the role of Product Owner. Those best suited to coaching will probably be more comfortable as a Scrum Master.

How does Scrum and CM mix?

Well functioning CM routines are needed in a Scrum project, but normally there is no dedicated CM role. The operative CM process is handled by the self-organized development team. To slim the CM process, continuous integration and automatic tests are used to automate as much as possible.

Is Scrum a method just for software development?

Not at all! The method can be adapted for all different types of projects – for instance newspaper production or medical engineering development.

Where does the word Scrum come from?

Scrum is a rugby term for the close-knit shoulder-to-shoulder formation a rugby team forms to jointly move the ball forward.

The word was first used by Takeuchi and Nonaka in a famous article published in the Harvard Business Review in which they described the most successful product development projects in Japan.

GLOSSARY

Adaptive, adjustable – in this context, that project goals or schedules are adjusted in line with how the external factors change.

Burn-down Chart, a diagram that monitors how much work remains to implement a segment of the software being developed during a Sprint.

Daily Scrum, brief, daily meetings (about 15 min) between the Scrum Master and the Scrum Team. The purpose is to keep work flowing smoothly and eliminate any impediments.

Empirical, based on experience.

Agile development, a methodology for software development which emphasizes, among other things, adaptability, short paths between ideas and implementation, and simplified forms of collaboration. Examples of agile methods include Extreme Programming (XP) and Scrum.

Sprint Retrospective, meeting (about 3 hours) held after each Sprint. The Scrum Master and the Scrum Team review both what went well and what should be improved in the next Sprint.

Predictive, foresighted – in this context, project goals and schedules based on a prognosis of external factors made at the beginning of the project.

Product Backlog, current “to-do list” that contains the project’s goals and priorities. Managed by *the Product Owner*.

Product Owner, the person responsible for the product’s *Product Backlog* and that the project is working with the right things from a business perspective.

Release Backlog, the same as a *Product Backlog*, but restricted to a release of the product.

Scrum Master, “the team leader” for the Scrum Team.

Scrum Team, "the work force" – in this case, software designers – in a Scrum project. Organizes its work itself and lacks a formal group manager.

Sprint, the iteration comprised (normally) of thirty days during which the Scrum Team concentrates on realizing the goals defined by the project's current Sprint Backlog.

Sprint Backlog, a to-do list for a Sprint. Consists of the assignments that the Product Owner has defined as having the highest priority. Is given its final structure during the Sprint's first day at a meeting between the Product Owner and the Scrum Team.

Sprint Review, an informal meeting (about 4 hours) at the end of a Sprint during which the team presents (and demonstrates, if relevant) for management, customers and the Product Owner what has been created during the Sprint.

Timebox, a period during which something is to be carried out. A Sprint is a result of timebox thinking. Deadlines may not be exceeded – parts of the assignment are deleted instead.

SCRUM – SMARTER PROJECT MANAGEMENT

Scrum is a method for project management that is becoming increasingly more common in the software industry. Small teams consisting of a maximum 6-8 people divide their work into “mini projects” that have a duration of about one month during which a limited number of detailed tasks are solved.

Where traditional methods focus on staying on track, Scrum is aimed at – like other agile methods - delivering business value.