

SCRUM process introduction

Version 1.0

WHITEPAPER



1.

What is Agile Methodology?

Agile methodology is a project management method based on breaking its deliverables into several phases. Incremental delivery is achieved by cooperation with stakeholders and continuous improvement at every iteration. Requirements are constantly evolving throughout that process, making frequent inspection and adaptation inherent elements of the process.

Agile mindset encompasses four main values:

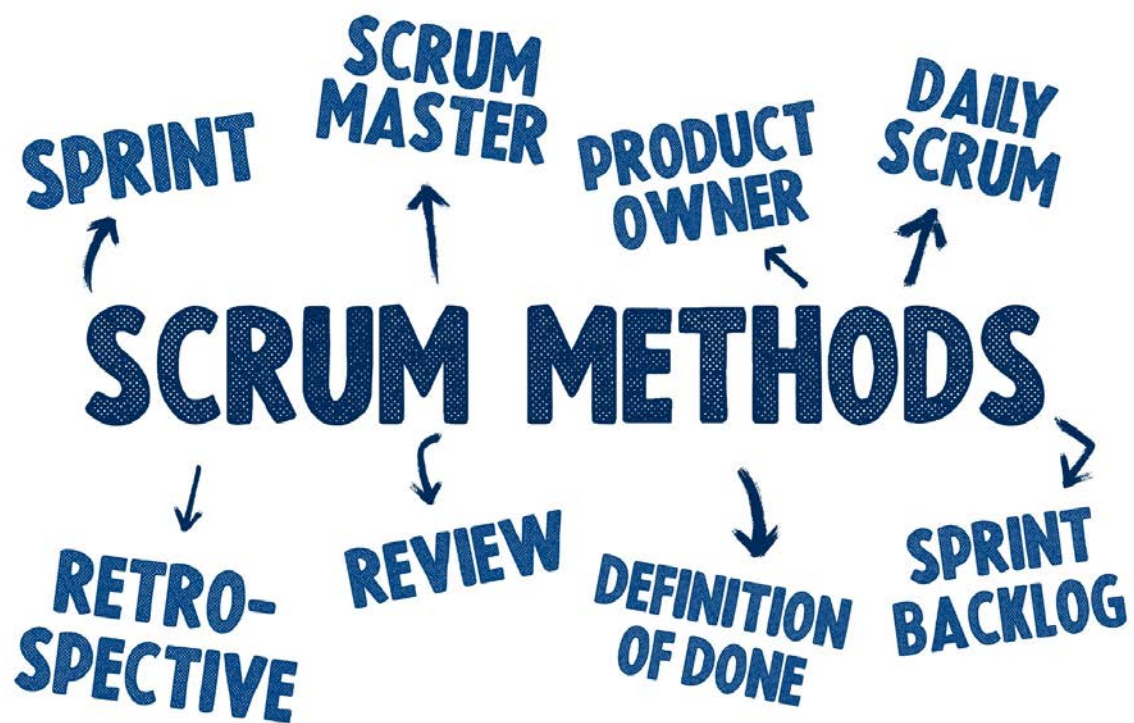
- ✓ **Individuals and interactions** over processes and tools
- ✓ **Working software** over comprehensive documentation
- ✓ **Customer collaboration** over contract negotiation
- ✓ **Responding to change** over following a plan



2.

What is Scrum?

Scrum is a lightweight process framework - a set of practices - that need to be followed for agile development. It relies heavily on empiricism (knowledge comes from experience) and lean thinking (focus on benefits and reducing waste)



3.

Scrum approach to project management

Scrum principles, non negotiable:

- **Empirical process control** achieved by transparency, inspection and adaptation.
Transparency of the process enables inspection, which in turn enables adaptaion if the process needs to be adjusted.
- **Self-organization**, instead of command and control
- **Collaboration** of all the roles involved in the creation process
- **Value based prioritization**
- **Time boxing** for effective project planning and execution
- **Iterative development** to address potential project refinement needs

Scrum aspects:

- **Organization** - to identify core and non-core roles (see point 4 below)
- **Business justification** - where the organization performs business assessment before a project starts
- **Quality** - deliverables meeting acceptance criteria and achieving the expected business value by continuous improvement
- **Change** - embrace change by using iterative sprints
- **Risk** - risk management done proactively, iteratively through the project's life cycle



4. Scrum Roles

Core roles - directly involved in the project:



PRODUCT OWNER (Scrum team member)

- ✓ Responsible for achieving maximum business value
- ✓ Represents the voice of the customer - customer requirements



SCRUM MASTER (Scrum team member)

- ✓ A servant-leader for the Scrum Team, accountable for its effectiveness
- ✓ A facilitator who ensures appropriate environment for the Team
- ✓ Guides and teaches Scrum practices, making sure the processes are followed



DEVELOPERS (Scrum team member(s))

- ✓ Create the projects deliverables
- ✓ Accountable for:
 - ↳ Creating a plan for each Sprint (Sprint Backlog)
 - ↳ Adapting their plan each day towards Sprint Goal



5. Scrum Events



SPRINT

– A fixed length, recurring event covering all the work necessary to achieve the Product Goal

- A new Sprint starts immediately after the previous Sprint is concluded - consistency is key
- Lasts usually from 2 weeks to 1 month, depending on a project's complexity
- During the Sprint no changes are to be made, to avoid impacting the Sprint Goal
- Quality should not decrease
- Product Backlog is refined as needed
- Scope may be clarified and renegotiated with the Product Owner, as more information transpire
- Sprints enable predictability by constant inspection and adaptation of progress
- Progress forecast can be by practices like burn-downs, burn-ups, cumulative flows
- Empiricism remains key in forward looking decision making
- A Sprint can be canceled only by the Product Owner if the Sprint Goal is no longer valid.
- Usually timeboxed to a maximum of 8 hours for a one-month Sprint.



SPRINT PLANNING – Initiates the Sprint by defining the amount of work to be completed in Sprint. The resulting plan is the outcome of the collaborative work of the Scrum Team

- Topics addressed in the planning session:
 - ↳ Why is the Sprint valuable? = Define the Sprint goal
 - ↳ What can be done this Sprint? = Select items from Product Backlog for progression + refine them during the process.
 - ↳ How will the chosen work get done? = Plan the work to meet the Definition of Done (the Developers decide on how to turn Product Backlog items into value.)



DAILY SCRUM – A brief 15-minute session aimed for the Developers of the Scrum Team to inspect progress towards the print Goal and adjust the upcoming planned work.

- It is held daily, at the same time
- The Product Owner and/or Scrum Master are welcome to join to address impediments, promote quick decision making and eliminate the need for other team meetings

5. Scrum Events *cont.*



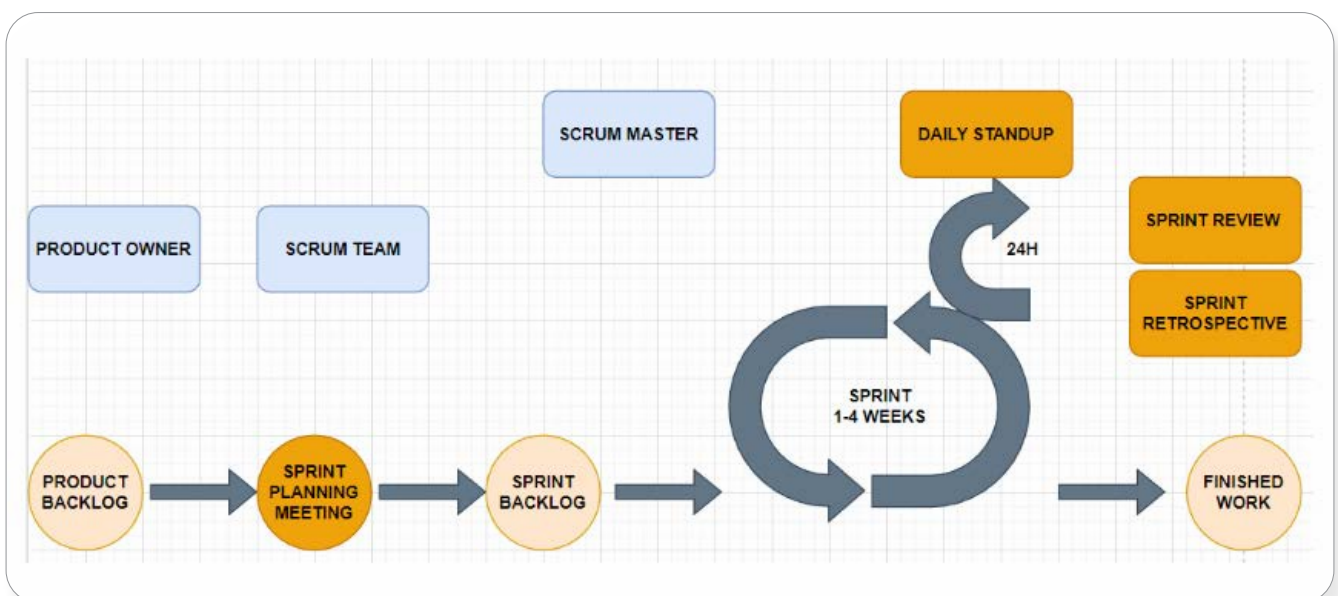
SPRINT REVIEW - The purpose of this session is to inspect the outcome of the Sprint and determine future steps. The Scrum Team shares the results of their work with key stakeholders and progress made towards the Product Goal.

- Review what was accomplished in the Sprint
- Product Backlog may be adjusted to meet new opportunities
- Usually timeboxed to a maximum of 4 hours for a one-month Sprint



SPRINT RETROSPECTIVE - The purpose of this session is to plan ways to increase quality and effectiveness. The Scrum Team inspects how the last Sprint went in regards to participants, interactions, processes, tools and the Definition of Done.

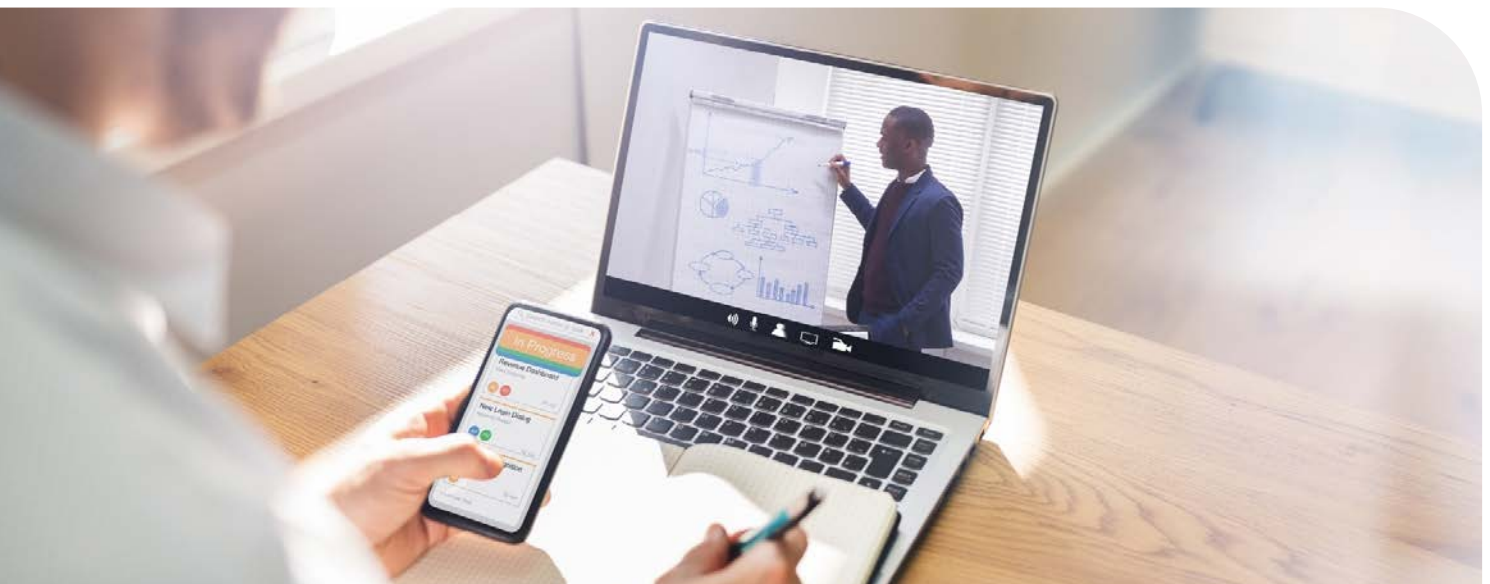
- The Scrum Team identifies the most helpful ways to improve its effectiveness
- Usually timeboxed to a maximum of 3 hours for a one-month Sprint



6. Scrum Artifacts

Scrum Artifacts refer to information that Stakeholders and the Scrum Team use to describe a product that is being developed.

- ★ **Product Vision** - the long term goal of a project/product with defined goals/directions
- ★ **Product Backlog** - a list of everything that needs to be achieved on a project; a list of stories, tasks and bugs that evolves over time
- ★ **Sprint Goal** - what a Scrum Team comes up with for a given iteration of development work; provides guidance and justifies time, money and effort investment in a Sprint
- ★ **Sprint Backlog** - the part of the Product Backlog; the list of items that the Scrum Team is planning to work on during a Sprint
- ★ **Definition of Done** - acceptance criteria common to every single user Story; a checklist ensuring common understanding for the Scrum Team of what “done” means
- ★ **Product Increment** - all the Product Backlog items that have been completed during a Sprint and meet the Definition of Done
- ★ **Burndown Chart** - a graphic that shows how fast the team is completing the user stories or items on the product backlog; illustrates the total effort against the amount of work for a sprint



7. Scrum project management vs traditional project management

	SCRUM	TRADITIONAL
EMPHASIS	People	<i>Processes</i>
SIZE	Small to Large	<i>Large</i>
DOMAIN	Unpredictable/Exploratory	<i>Predictable</i>
DOCUMENTATION	Minimal	<i>Comprehensive</i>
PROCESS STYLE	Iterative	<i>Linear</i>
UPFRONT PLANNING	Low	<i>High</i>
PERSPECTIVE TO CHANGE	Adaptability	<i>Sustainability</i>
MANAGEMENT STYLE	Decentralized	<i>Autocratic</i>
LEADERSHIP	Collaborative	<i>Command and Control</i>
PERFORMANCE MEASUREMENT	Business Value	<i>Plan conformity</i>
RETURNS ON INVESTMENT	Early/Through project life	<i>End of project life</i>

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