

# Introduction to Scrum - Part I

## Key Concepts, Roles, Artifacts and Rules

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# Agile Software Development

- In the late 1990s, several new software development methodologies emerged
- Emphasized close collaboration between development team and business stakeholders
- Focused on frequent delivery of business value

# Agile Software Development

- The term “Agile” appeared for the first time in 2001 when the *Agile Manifesto* was published

# Agile Manifesto

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

# Scrum Framework

## Definition

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### Key Characteristics:

- Simple
- Purposefully incomplete
- Built upon by the collective intelligence of the people using it
- Follows an iterative, incremental approach to *optimize predictability & control risk*
- Makes visible the relative efficacy of current management, environment and work techniques, so that *improvements* can be made

# Scrum Framework

## Main concept

A Scrum Master creates an environment where:

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

# Scrum Framework

Scrum is founded on:

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Knowledge comes from experience and making decisions based on what is observed



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Knowledge comes from experience and making decisions based on what is observed

- **Lean thinking**

Reduce waste (non-value added activities) and focus on the essentials

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Make the emergent process and work visible to those performing the work as well as those receiving the work

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- **Inspection**

Frequently inspect the Scrum artifacts and progress toward agreed goals to detect potentially undesirable variances or problems

- **Adaption**

If any aspects of a process deviate outside acceptable limits or if the resulting product is unacceptable adjustments must be made *as soon as possible* to minimize further deviation

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- A Scrum Master

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Qualities:

- Focused on one objective at a time, the *Product Goal*
- Accountable for creating a valueable, useful Increment every Sprint

# The Scrum Team

## Characteristics:

- Typically 10 or fewer people
- No sub-teams or hierarchies
- *Self-managing*
- *Cross-functional*

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### Definition

*Self-managing teams internally decide who does what, when and how.*

### Definition

*Cross-functional teams have all the skills necessary to create value each Sprint.*



# Developers

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



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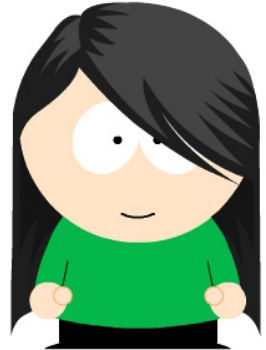
Accountable for:

- Creating a plan for the Sprint (the Sprint Backlog)
- Instilling quality by adhering to the Definition of Done
- Adapting their plan each day toward the Sprint Goal
- Holding each other accountable as professionals



# The Product Owner

- Accountable for maximizing the value of the product resulting from the work of the Scrum Team
- Accountable for effective Product Backlog management
- **One person**, not a committee



# The Product Owner

- The Product Owner's decisions are visible in the content and ordering of the Product Backlog and through the inspectable Increment at the Sprint Review
- The *entire organization* must respect their decisions
- The Product Owner may manage the Product Backlog themselves or may delegate the responsibility to others. They, however, remain **accountable**

# The Scrum Master

- Accountable for establishing Scrum as defined in the Scrum Guide
- Helps everyone understand Scrum theory, practices and rules
- Guides and coaches the Scrum Team to improve its practices within the Scrum framework



# The Scrum Master

- Accountable for the Scrum Team's effectiveness
- *Leader* that serves the Scrum Team and the larger organization



# Scrum Events

Scrum prescribes five formal events:

- 1 The Sprint
- 2 Sprint Planning
- 3 Daily Scrum
- 4 Sprint Review
- 5 Sprint Retrospective

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- 1 The Sprint
- 2 Sprint Planning
- 3 Daily Scrum
- 4 Sprint Review
- 5 Sprint Retrospective

## Key Characteristics

- Enable the transparency required
- Create regularity
- Minimize the need for meetings not defined in Scrum
- Each event is a formal opportunity to inspect and adapt Scrum artifacts



# The Sprint

- Acts as a container for all other events
- Duration: One month or less (consistency is important)
- A new sprint starts immediately after the conclusion of the previous Sprint
- Sprints enable predictability by ensuring inspection and adaptation of progress toward a Product Goal *at least* every calendar month

# The Sprint

## During The Sprint:

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

# The Sprint

Cancelling a Sprint:

- **Only** the Product Owner has the authority to cancel a Sprint
- The Sprint is cancelled if the Sprint Goal becomes obsolete

# Sprint Planning

## Key Concept

Sprint Planning initiates the Sprint by laying out the work to be performed

- Why is this Sprint valuable?
- What can be Done this Sprint?
- How will the chosen work get done?
- Max duration: 8 hours for a one-month Sprint
- Attendees: All Scrum Team members

# Sprint Planning

- 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 refine Product Backlog items during Sprint Planning to increase its understanding and confidence
- Developers will become more confident in their Sprint forecasts as they learn more about their performance, upcoming capacity and the Definition of Done

# Sprint Planning

- The Scrum Team may invite other people to attend the Sprint Planning to provide advice
- It is solely up to the Developers to plan how to turn Product Backlog items to an Increment that meets the Definition of Done
- Output of Sprint Planning: *Sprint Backlog*

# Sprint Planning

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## Sprint Backlog

- The Sprint Goal  
(communicates why the Sprint is valuable to stakeholders)
- The Product Backlog items selected for the Sprint
- A plan for delivering them

# Daily Scrum

## Key Concept

Inspect progress toward the Sprint Goal and adapt the Sprint Backlog as necessary

- Held every working day of the Sprint at the same place and time
- Max duration: 15 minutes
- Attendees: All Developers



# Daily Scrum

- If the Product Owner or Scrum Master are actively working on items in the Sprint Backlog, they participate as Developers
- 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

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## Important

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

# Daily Scrum

## Benefits

- Improve communication
- Identify impediments
- Promote quick decision-making
- Eliminate the need for other meetings

# Sprint Review

## Key Concept

Inspect the outcome of the Sprint and determine future adaptations

- Held at the end of the Sprint, before the Sprint Retrospective
- Max duration: 4 hours for a one-month Sprint
- Attendees: All Scrum Team members and Stakeholders

# Sprint Review

- The Sprint Review is a *working session* and the Scrum Team should avoid limiting it to a presentation
- The Product Backlog may be adjusted following the Sprint Review to meet new opportunities

# Sprint Retrospective

## Key Concept

- Inspect how the last Sprint went with regards to individuals, interactions, processes, tools and the Definition of Done
  - Identify the most helpful changes and *address* them as soon as possible
- 
- Last event of the Sprint
  - Max duration: 3 hours for a one-month Sprint
  - Attendees: All Scrum Team members

# Scrum Artifacts

Scrum uses the following Artifacts to provide transparency and opportunities for inspection and adaption:

- 1 Product Backlog
- 2 Sprint Backlog
- 3 Increment

# Product Backlog

- Ordered list of everything that is known to be needed in the Product
- Single source of requirements for any changes to be made to the Product
- It is dynamic
- It is never complete



# Product Backlog Refinement

## Key Concept

The act of adding **detail**, **estimates** and **order** to items in the Product Backlog

- The Product Owner and the Development Team cooperate during refinement
- The Scrum Team decides *how* and *when* refinement is done
- Usually consumes no more than 10% of the team's capacity

# Sprint Backlog

- The set of Product Backlog Items to selected for the Sprint
- A plan for delivering the Increment and realizing the Sprint Goal
- Includes at least one high priority process improvement identified in the previous Retrospective meeting

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## Important

The Sprint Backlog belongs solely to the Development Team and only they can change it during a Sprint

# Increment

- The sum of all Product Backlog Items completed during a Sprint and the value of Increments of all previous Sprints
- A step towards a vision or a goal
- Must be in usable condition regardless of whether the Product Owner decides to release it

# Resources

- 1 The Agile Manifesto  
<https://agilemanifesto.org/>
- 2 The Scrum Guide  
<https://www.scrumguides.org>
- 3 Scrum: What It Is, What It's Not, & Why It's Awesome - Atlassian  
<https://www.atlassian.com/agile/scrum>
- 4 Scrum Pocket Guide Book - Not free  
<https://www.amazon.com/Scrum-Pocket-Guide-Practice-Publishing-ebook/dp/B00GY6WRTG>

# End of Presentation

Questions?