

# 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

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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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- **Inspection**

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- **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

# The Scrum Team

The Scrum Team consists of:

- A Product Owner
- The Development Team
- A Scrum Master

# The Scrum Team

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- *Self-organizing*
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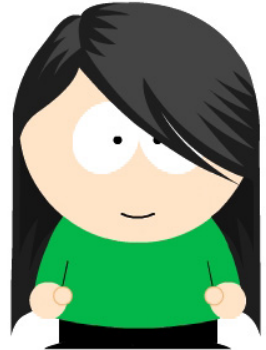
*Self-organizing teams choose how best to accomplish their work, rather than being directed by others outside the team.*

### Definition

*Cross-functional teams have all competencies needed to accomplish the work without depending on others not part of the team.*

# The Product Owner

- Responsible for maximizing the value of the product resulting from work of the development team
- The **only** person responsible for managing the *Product Backlog*
- **One person**, not a committee





# The Product Owner

- The Product Owner's decisions are visible in the content and ordering of the Product Backlog
- They may have someone else manage the Product Backlog however, they remain **accountable**

# The Development Team

- Consists of professionals who do the work of delivering a *potentially releasable* Increment of "Done" product at the end of each Sprint
- Size: 3 to 9 members



# The Development Team

## Key Characteristics:

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- Scrum recognizes no titles for Development Team members
- Scrum recognizes no sub-teams in the Development Team

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## Important

Accountability belongs to the team as a whole

# The Scrum Master

- Promotes and supports Scrum
- Helps everyone understand Scrum theory, practices and rules
- Helps those outside the Scrum Team understand which interactions are helpful and which aren't
- Acts as a *Servant-Leader* for the Scrum Team



# 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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## Key Characteristics

- Create regularity
- Minimize the need for meetings not defined in Scrum
- Time-boxed
- Each event is an opportunity to inspect and adapt something

# 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
- A “Done”, potentially releasable product increment is created



# The Sprint

During The Sprint:

- No changes that would endanger the Sprint Goal
- Quality goals do not decrease
- Scope may be clarified and re-negotiated between the Product Owner and the Development Team 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

During Sprint Planning, the Scrum Team collaborates and creates a plan for the next Sprint

- What can be delivered in the Increment resulting from the upcoming Sprint?
- How will the work needed to deliver the Increment be achieved?
- Max duration: 8 hours for a one-month Sprint
- Attendees: All Scrum Team members

# Sprint Planning

- The number of items selected from the Product Backlog for the Sprint is **solely** up to the Development Team
- The Product Owner can help to clarify selected Product Backlog Items and make trade-offs
- The Development Team may renegotiate selected Product Backlog Items with the Product Owner

# Sprint Planning

- The Development Team may invite other people to attend to provide technical or domain advice
- Output of Sprint Planning: *Sprint Backlog* and *Sprint Goal*

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## Sprint Backlog

A set of Product Backlog Items selected for this Sprint plus, a plan for delivering them

## Sprint Goal

An objective that will be met within the Sprint through the implementation of the selected Product Backlog Items

# Daily Scrum

## Key Concept

During the Daily Scrum, the Development Team plans work for the next 24 hours

- Held every day of the Sprint at the same place and time
- Max duration: 15 minutes
- Attendees: All Development Team members

# Daily Scrum

- The Daily Scrum is an internal meeting for the Development Team. If others are present, the Scrum Master ensures they **do not disrupt** the meeting
- The Development Team or team members often meet immediately after the Daily Scrum for related discussions



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## Important

The Scrum Master ensures that the Development Team has the meeting but the Development Team is responsible for conducting the Daily Scrum

# Daily Scrum

## Benefits

- Improve communications
- Eliminate other meetings
- Identify impediments to development for removal
- Highlight and promote quick decision-making
- Improve the Development Team's level of knowledge

# Sprint Review

## Key Concept

- Inspect the Increment and adapt the Product Backlog if needed
  - Collaborate on the next things that could be done to optimize value
- 
- Held at the end of each Sprint
  - Max duration: 4 hours for a one-month Sprint
  - Attendees: All Scrum Team members and Stakeholders (Invited by the Product Owner)

# Sprint Review

- The Sprint Review is **not** a demo
- The presentation of the Increment is intended to elicit feedback and foster collaboration
- Result: A revised Product Backlog that defines the *probable* Product Backlog Items for the next Sprint

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## Important

The Sprint Review is an informal meeting, not a status meeting

# Sprint Retrospective

## Key Concept

- Identify how the last Sprint went with regards to people, relationships, processes and tools
  - Identify improvements and create a plan for implementing them
- 
- Occurs after the Sprint Review and prior to the next Sprint Planning
  - Max duration: 3 hours for a one-month Sprint
  - Attendees: All Scrum Team members

# Sprint Retrospective

- The Scrum Master participates as peer team member from the accountability over the Scrum process
- By the end of the Retrospective the Scrum Team should have identified improvements that it will implement in the next Sprint

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## Important

The Scrum Master ensures that the meeting is positive and productive



# 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?