What is Scrum: An Introduction to the Scrum Framework

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Improving the Profession of Software Delivery
Scrum.org: The Home of Scrum

90% Agile Teams Use Scrum

2,250,000+ Assessments Taken

212 Professional Scrum Trainers

162,000+ Level I Professional Scrum Credential Holders

Over 100,000 Taught

2,600+ Level II Professional Scrum Credential Holders

Americas, Europe, Africa, Oceania & Asia

500+ Level III Professional Scrum Credential Holders
Agenda

• Why Scrum and What is it?
• Scrum Values
• Scrum Framework
  • Roles
  • Artifacts
  • Events
  • Other Items
• Summary
Quick Survey Question

Do you use Scrum?
History

• Waterfall was standard, but there are issues. Why?

• Introduced at OOPLSA 1995 by Ken Schwaber and Jeff Sutherland

• Created as a framework for developing and sustaining complex products
Situation Dictates The Type of Process

**PREDICTIVE**

- Given a well-defined set of inputs, the same outputs are generated every time
- Follow the pre-determined steps to get known results

**EMPIRICAL**

- Frequent inspection and adaptation occurs as work proceeds
- Outputs are often unpredictable and unrepeatable
The Body of Knowledge of Scrum as written by Scrum’s creators

A framework within which people can address complex adaptive problems, while productively and creatively delivering products of the highest possible value

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Scrum for complex work

• Not just for software!
  • Research and identify markets
  • Hardware
  • Government
  • Process development
  • Managing organizational operations
  • Marketing

• Release products and enhancements, as frequently as many times per day

• Support the entire product, through its entire lifecycle
Scrum Implements the Empirical Process

- **Transparency**: We all know what is going on.
- **Adaptation**: OK to change tactical direction.
- **Inspection**: Look at what we do and how we do it.
Scrum Values

COURAGE
Scrum Team members have courage to do the right thing and work on tough problems

FOCUS
Everyone focuses on the work of the Sprint and the goals of the Scrum Team

COMMITMENT
People personally commit to achieving the goals of the Scrum Team

RESPECT
Scrum Team members respect each other to be capable, independent people

OPENNESS
The Scrum Team and its stakeholders agree to be open about all the work and the challenges with performing the work

Scrum Values © 2017 Scrum.org
Empirical Processes Require Courage

- Trust & Courage
- Transparency
- Inspection & Adaptation

Goal

Comic strip:

1. How’s your project coming along?
2. It’s a steaming pile of failure.
3. It’s like fifteen drunken monkeys with a jigsaw puzzle.
4. How’s your project coming along?

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Roles, Artifacts and Events in the Scrum Framework

Roles
- Product Owner
- Development Team
- Scrum Master

Artifacts
- Product Backlog
- Sprint Backlog
- Increment

Events
- Sprint
- Sprint Planning
- Daily Scrum
- Sprint Review
- Sprint Retrospective
Scrum Roles
Roles: Each One Has A Specific Accountability

- **Product Owner**
  - Maximizing the value of the Product
  - Managing the Product Backlog

- **Development Team**
  - Creating “Done” Increments
  - Quality of the Increment

- **Scrum Master**
  - Promote and support Scrum
  - Removing impediments
Ideally Product Owners have Profit & Loss accountability for the product.

Product Owner

• Maximizes the value of the Product
• Manages the Product Backlog
• Chooses what and when to release
• Represents stakeholders and customers to the Development Team
Scrum Master

• Promotes and supports Scrum as defined in the Scrum Guide
• Helps everyone understand Scrum theory, values, practices, and rules
• Provides guidance and support for the Scrum Team and organization

Personifies agility and professionalism
Self-organizing rarely means self-managing

The Development Team

- Creates the product Increment
- Operates in a series of Sprints
- Organizes itself and its work
- Collaborates with Product Owner to maximize value
2 Scrum Artifacts
Artifacts: Each One Contains Specific Information

- **Product Backlog**: Holds the requirements for the product, Managed by the Product Owner
- **Sprint Backlog**: Holds all work for the Sprint Goal, Managed by the Development Team
- **Increment**: Working addition to the product, Potentially releasable
Valid Product Backlog Items

- Feature Definitions
- Constraints
- Behaviors
- User Actions or Stories
- Bugs / Defects
- Use Cases
- Desirements
- Non-functional Requirements
Product Backlog Item (PBI)

• Transparent unit of deliverable work
• Contains clear acceptance criteria
  • Criteria for successful completion
  • Answering what will be true when this works
• May reference other artifacts like:
  • Specifications, Mockups, Architecture Models
• Sized appropriately
  • May be completed within a single Sprint
  • Typically with a few other PBIs
Sprint Backlog Holds the Plan for the Current Sprint

- Progress within the Sprint must be transparent
- Owned and managed by the Development Team
  - Process improvements may affect the whole Scrum Team and should be jointly owned
- Adapted by the Development Team throughout the Sprint when work emerges
What Goes in a Sprint Backlog?

- The selected Product Backlog items (“forecast”) for the Sprint by the Development Team in collaboration with the Product Owner
- A plan, often a list of tasks, to deliver the Product Backlog items against the Sprint Goal
- At least one high priority process improvement identified in the previous Retrospective
Increment

• The Increment is the sum of all the Product Backlog items completed during the Sprint
• The product is the sum of all Increments
• Is usable and it works
• Is potentially releasable
• Can be made up of items delivered throughout the Sprint
• Must be DONE
  • As per Scrum Team standards
  • With no work remaining
Scrum Events
Events: Each One Has a Specific Purpose

- **Sprint Planning**
  - From: Product Backlog
  - To: Forecast, Sprint Goal, Sprint Backlog

- **Daily Scrum**
  - From: Daily Progress
  - To: Updated Daily Plan

- **Sprint Review**
  - From: Sprint, Increment
  - To: Updated Product Backlog

- **Sprint Retrospective**
  - From: Past Sprint
  - Improvements For Next Sprint

- **Sprint**
  - Container Event
  - 30 Days, or less, in duration
Sprint

• A container for all activities and the other Scrum events
• Focus is on developing activities
• Starts with Sprint Planning
• Ends with Sprint Retrospective
• 30 days or less to enable regular feedback
Sprint Planning

• Product Backlog is inspected
• A Sprint Goal is created (*Why*)
• Sprint Backlog is created (*What and How*)
• The entire Scrum Team attends
## Sprint Goal

### An objective to be met in the Sprint

- Through the implementation of the PBI selected in Sprint Planning
- Providing guidance to the Development Team

### Allows flexibility in delivering the Increment

- Allows wiggle room for exact implementation of PBIs

### Is fixed throughout the Sprint

- As the Development Team works, it keeps this goal in mind
- The Development Team inspects and adapts their plan to meet the Sprint Goal in every Daily Scrum
By the Development Team, for the Development Team

Daily Scrum

• An opportunity for the Development Team to:
  • Inspect progress toward the Sprint Goal
  • Inspect how progress is trending toward completing work in the Sprint Backlog
  • Create a plan for the next 24 hours
  • Optimize collaboration and performance

• 15 minute daily meeting
• Same time and place
Why a Daily Scrum?

- Share commitments
- Identify impediments
- Create focus
- Increase and maintain situational awareness

Development Teams may have many ways of conducting a Daily Scrum to increase collaboration

A Daily Scrum in Microsoft Patterns and Practices
Sprint Review

• The product Increment is inspected with the stakeholders (customer, marketing, sales, ...)
• Stakeholders are encouraged to provide feedback and to collaborate
• The Product Backlog is updated upon the new insights
## Mechanics of Sprint Review

<table>
<thead>
<tr>
<th>Product Owner Shares</th>
<th>Development Team Shares</th>
<th>Everyone</th>
</tr>
</thead>
<tbody>
<tr>
<td>• What was done</td>
<td>• The actual Increment of software</td>
<td>• Provides and hears feedback</td>
</tr>
<tr>
<td>• What wasn’t done</td>
<td>• What happened in the Sprint</td>
<td></td>
</tr>
<tr>
<td>• State of the Product Backlog</td>
<td>• How problems were addressed and the effect on the Increment</td>
<td></td>
</tr>
<tr>
<td>• Projections of likely release targets</td>
<td></td>
<td><strong>This is not an excuse for self-congratulations</strong></td>
</tr>
</tbody>
</table>

This *is* an inspect and adapt opportunity
Sprint Retrospective

• The Scrum Team discusses
  • What went well in the Sprint
  • What could be improved
  • What will we commit to improve in the next Sprint

• After every Sprint Review

• Full Scrum Team participates
  • Scrum Master
  • Product Owner
  • Development Team

• A discussion of:
  • The Scrum process
  • Scrum Team member behaviors
  • Tools used and needed
  • Expanding the definition of “Done”

• To find actionable improvements
  • The Scrum Team can enact next Sprint
  • To adapt common practices and techniques
  • To increase the DoD
## Scrum Event Time-boxes (at most)

<table>
<thead>
<tr>
<th>Event</th>
<th>30 Days</th>
<th>3 Weeks</th>
<th>2 Weeks</th>
<th>1 Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sprint Planning</td>
<td>8 hours</td>
<td>Less than 8 hours (~6 hours)</td>
<td>Less than 8 hours (~4 hours)</td>
<td>Less than 8 hours (~2 hours)</td>
</tr>
<tr>
<td>Daily Scrum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>15 minutes</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sprint Review</td>
<td>4 hours</td>
<td>Less than 4 hours (~3 hours)</td>
<td>Less than 4 hours (~2 hours)</td>
<td>Less than 4 hours (~1 hour)</td>
</tr>
<tr>
<td>Sprint Retrospective</td>
<td>3 hours</td>
<td>Less than 3 hours (~2 hours 15 mins)</td>
<td>Less than 3 hours (~1 hour 30 mins)</td>
<td>Less than 3 hours (~45 mins)</td>
</tr>
</tbody>
</table>
Other Items
Product Backlog Refinement

• Refining means
  • Planning the PBL to an actionable level of detail
  • Maintaining a Rolling Backlog Projection

• Plan 10% of the Sprint capacity of the Development Team to be spent on refining the Product Backlog

• Top ordered Product Backlog items are well understood and easily selected in Sprint Planning
  ➔ They are ‘Ready’
Definition of the Definition of Done (DoD)

• The definition of “Done” is a shared understanding of completeness
• Must be universally understood and agreed upon for transparency
• The common denominator of quality for the product
• Scrum implements empiricism in software development
• Every Scrum role (3) has a clear accountability
• The Scrum artifacts (3) provide transparent information
• All Scrum events (5) serve inspection, adaptation and transparency
Questions?
Thank you