Agile project management with Scrum

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Based on the book “Agile Project Management with Scrum”

Overview of the Scrum process

• Scrum is one of the most popular agile (management) processes
• The overview is taken from the book “Agile Project Management with Scrum”
• The book was written in 2004 by Ken Schwaber, who developed Scrum together with Jeff Sutherland
What is Scrum?

- A simple process for **managing** complex projects
- Scrum does not include software engineering practices such as unit testing, refactoring, and continuous integration (As opposed to Extreme Programming, XP)
- Process skeleton is iterative and incremental – the output of each iteration is an increment of a product

Scrum defines 3 roles, a relatively simple workflow, with few yet essential artifacts

Scrum roles

- The Product Owner (PO)
- The Team
- The Scrum Master (SM)

All management responsibilities in a project are divided among these roles
The Product Owner

• Is responsible for representing the interests of everyone with a stake in the project and its resulting system
• Is responsible for using the Product Backlog to ensure that the most valuable functionality is produced first
  • This means frequently prioritizing the Product Backlog

In Scrum, the list of requirements is called the Product Backlog

The Team

• Is responsible for developing functionality
• They are responsible to figure out how to turn Product Backlog into an increment of functionality within an iteration, and managing their own work to do so
• Team members are collectively responsible for the success of each iteration and of the project as a whole
The Scrum Master

- Is responsible for the Scrum process
- Is responsible for teaching Scrum for everyone involved in the project
- Is responsible for ensuring that everyone follows Scrum rules and practices
- Is responsible for implementing Scrum so that it fits within an organization’s culture and still delivers the expected benefits

Why a Scrum Master?
If the rules aren’t enforced, people waste time figuring out what to do. If the rules are disputed, time is lost while everyone waits for a resolution.

Scrum pigs and chickens

- The people who fill the 3 roles are those who are committed to the project
- The rules of Scrum make a clear distinction between committed and interested (involved)
- They are called “pigs” and “chickens” respectively (based on an old joke)
Could the Scrum rules be changed?

- Scrum rules have been successfully applied in thousands of projects, however...
- If someone wants to change the Scrum rules, the *Sprint retrospective* is the forum to raise that
- Rule changes should originate from the Team and not from the management
- Changes should be approved by the Scrum Master only after he is convinced that the Team thoroughly understands how Scrum works

Scrum Flow
A Scrum project starts with a vision

• The vision might be vague at first
• Perhaps stated in market terms rather than system terms
• The vision will become clearer as the project moves forward
• The Product Owner is responsible to those funding the project for delivering the vision while maximizing their ROI

Formulating the Product Backlog

• The Product Backlog is a list of functional and non-functional requirements
• When turned into functionality, will deliver the vision
• The Product Backlog is formulated by the Product Owner, prioritized, and divided into proposed releases
• It is a starting point. Product Backlog’s content, priorities, and groupings will change during the project
All work is done in Sprints

• Each Sprint is an iteration of 30 consecutive calendar days
• During a Sprint, no one can provide advice or instructions to the Team. The Team is self-managing

Sprint planning

• A Sprint starts with a **Sprint Planning** meeting
• During the Sprint Planning, Product Owner and Team get together to decide what will be done for the next Sprint
• Sprint Planning meeting cannot last longer than 8 hours
• The Sprint Planning meeting has **2 parts**
Sprint Planning #1 – Commit to Product Backlog

• The first 4 hours are spent with the Product Owner (PO)
• Based on highest priority Product Backlog (PB) items, the PO tells the Team what is desired
• The Team asks questions about the content, purpose, meaning, and intentions of the PB
• The Team selects as much PB items it believes it can turn into functionality by the end of the Sprint
• The Team commits to the PO that it will do its best

Sprint Planning #2 – Create Sprint backlog

• During the second 4 hours, the Team plans out the Sprint
• The Team works on a tentative plan to start the Sprint
• The tasks that compose this plan are placed in a **Sprint Backlog**
  • These tasks emerge as the Sprint evolves
• In fact, at the start of this 4-hours part the Sprint has already started