Scrum

Scrum is an Agile management framework which contains the following constituent instruments and practices [Schwaber01]:

• Sprint: Scrum divides a project into iterations (called sprints) of fixed length (usually two to four weeks).

• Product Increment: Each sprint results in a potentially releasable/shippable product (called an increment).

• Product Backlog: The product owner manages a prioritized list of planned product items (called the product backlog). The product backlog evolves from sprint to sprint (called backlog refinement).

• Sprint Backlog: At the start of each sprint, the Scrum team selects a set of highest priority items (called the sprint backlog) from the product backlog. Since the Scrum team, not the product owner, selects the items to be realized within the sprint, the selection is referred to as being on the pull principle rather than the push principle.

• Definition of Done: To make sure that there is a potentially releasable product at each sprint’s end, the Scrum team discusses and defines appropriate criteria for sprint completion. The discussion deepens the team’s understanding of the backlog items and the product requirements

. • Timeboxing: Only those tasks, requirements, or features that the team expects to finish within the sprint are part of the sprint backlog. If the development team cannot finish a task within a sprint, the associated product features are removed from the sprint and the task is moved back into the product backlog.

Timeboxing applies not only to tasks, but in other situations (e.g., enforcing meeting start and end times).

• Transparency: The development team reports and updates sprint status on a daily basis at a meeting called the daily scrum. This makes the content and progress of the current sprint, including test results, visible to the team, management, and all interested parties. For example, the development team can show sprint status on a whiteboard. Scrum defines three roles:

• Scrum Master: ensures that Scrum practices and rules are implemented and followed, and resolves any violations, resource issues, or other impediments that could prevent the team from following the practices and rules. This person is not the team lead, but a coach.

• Product Owner: represents the customer, and generates, maintains, and prioritizes the product backlog. This person is not the team lead.

• Development Team: develop and test the product. The team is self-organized: There is no team lead, so the team makes the decisions. The team is also cross-functional.

Scrum (as opposed to XP) does not dictate specific software development techniques (e.g., test first programming). In addition, Scrum does not provide guidance on how testing has to be done in a Scrum project.