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**Multi-tiered Software Development 2020-2021**

**Business Specification Rules - Scrum meetings management**

**Introduction:**

SCRUM is an agile, lightweight project management process that can be used to manage and control software and product development using iterative, incremental practices. As applied to software development, it refers to the organization and management technique used to successfully deliver software in a chaotic environment.

SCRUM is founded upon two basic principles:

1) Iterative Development. The project management deliverables are built over several iterative development cycles, each adding additional features, and each resulting in demonstrable results: working code, written documentation, viewable designs, etc.

2) Team Empowerment. The project team is divided into self-managing multi-function units called Sprint Teams consisting of up to seven or eight people. The team is empowered to use whatever development methods or tools they think best to prepare their deliverables.

**Roles:**

* The product owner owns the definition of success. They direct the product, sprint by sprint, to provide the greatest ROI and value to the organization. They also manage ROI through prioritization and release plans and are the sole owner of the product backlog. They set development schedule by prioritizing backlog. One person in this role ensures that only one set of requirements drives development.
* One person takes on the role of Scrum Master to facilitate the team on a day to day basis. The Scrum Master is responsible for making sure a Scrum team lives by the values and practices of Scrum. The Scrum Master shields the team from aggressive customers by making sure they do not overcommit themselves to what they can achieve during a sprint. The Scrum Master facilitates the daily scrum and becomes responsible for removing any obstacles that are brought up by the team during those project management meetings. The Scrum Master role is typically filled by a project manager or a technical team leader but can be anyone within the project management team.
* The Sprint is a fixed period to develop a deliverable product increment. It is strictly time boxed: it’s more important to fall short than to slip the date. The Sprint includes design, coding, testing, and documentation. Once a Sprint has started only the Scrum Team can add or remove items in Sprint backlog.
* The Sprint planning meeting is when the product Owner describes highest priority features to the team, and the team then decides what they can commit to delivering in the Sprint. This occurs within two consecutive meetings (4 hours each) where the goal is set and the team plans tasks to create the Sprint Backlog.
* The daily Scrum is a daily 15 minute status meeting held in typically the same place and time every day for consistency. Logistically, the Scrum team sits in a circle facing each other and each team member will address the following three questions.

1. What have you done since the last Scrum?

2. What will you do between now and the next Scrum?

3. What got in your way of doing work?

* 6. During the Sprint review meeting the Scrum team demonstrates what they completed during the sprint phase. Typically this takes the form of a demo of the new features. Participants in the sprint review meeting include but are not limited to the Product Owner, the Scrum team, the Scrum Master, management, customers, and engineers from other projects. During this meeting the project is compared against the sprint goal determined during the Sprint planning meeting.
* 7. A Product Backlog is a prioritized list of project requirements with time estimates for completion and implementation. Estimates are in days and are more precise the higher the item is in the Product Backlog queue.
* 8. The sprint backlog is the collection of tasks that the Scrum team is committing that they will complete in the current sprint. Sprint backlog items are drawn from the Product Backlog, by the team based on the priorities set by the Product Owner and the team’s perception of the time it will take to complete the various features.

**Steps:**

1. ​Initial Meeting

​​In the Initial Meeting, the Product Owner explains the product vision. The team thinks about the Architecture needed​ and how long they will need to come up with an estimate​.

2. Backlog Construction

The next step is Backlog Construction, also known as a Specification Review. The team proposes a high-level software architecture and a to-do list called the Product Backlog. The required features are broken down into Product Backlog Items, or PBIs for short. These PBIs are estimated and, before a dollar figure is presented, a buffer is added for generic tasks such as DevOps, Testing, Bug Fixes, Project Management, etc. A quick note, there are only 3 roles in Scrum, The Product Owner (the boss), the Scrum Master (a kind of project manager), and the Team (who do the work).

3. ​Sprint Planning​

The Sprint Planning session is for the Team to focus on the subset of the Product Backlog that they think they can complete in the next Sprint, (which is most commonly a 2-week time-box). The Product Owner puts the PBIs into priority order and makes sure the top ones have enough detail to be worked on. The Development Team then pulls PBIs from the top of the Backlog and commits to delivering as much as they forecast they can, in the coming Sprint.

4. ​Sprint​​​​​

The Development Team works on features in priority order, having done a Daily Scrum and sending 'Done' emails once the 'Definition of Done' is met. A task board is often used. During this process, the team also refines items in the Product Backlog to ensure they conform to the ​'Definition of Ready'.

5. Product Increment​

Each Sprint is a potentially shippable Product Increment, and with good DevOps, including automation of deployment and testing, this can be done on a PBI by PBI basis. This means each feature worked on can be in production as soon as it’s finished.​

6. ​Product Feedback

​Product Feedback will then come in. Some will be bugs, and some will be small changes that can be added to the​​ current Sprint. Other suggestions should be approved by the Product Owner and then added to the Product Backlog.

7. Sprint Review​​​

At the end of the Sprint, there is a Sprint Review, where the Development Team demos or plays done videos of the completed PBIs. The goal is for the Product Owner to understand the increment and to discuss the feedback to make the product better. This is the real measure of the success of the Sprint.

8. ​Sprint Retrospective

​​Lastly, there is the Sprint Retrospective, and this is the best part! The Scrum Team discusses what went well, what didn't, and what to improve, always inspecting and adapting.