**Roles**

**Scrum Team  
Owns the software**

Cross-functional consists of 5-9 people  
No set project roles within the team  
Defines tasks and assignments  
Self-organizing and self-managing  
Maintains the Sprint Backlog  
Conducts the Sprint Review

**Product Owner (PO)  
Owns the Product Backlog**

Accountable for product success  
Defines all product features  
Responsible for prioritizing product features  
Maintains the Product Backlog  
Insures team working on highest valued features

**Scrum Master (SM)  
Owns the Scrum process**

Holds daily 15 minute team meeting (daily Scrum)  
Removes obstacles  
Shields the team from external interference  
Maintains the Sprint Burn-down Chart  
Conducts Sprint Retrospective at the end of a Sprint  
Is a facilitator not a manager

**FAQ**

**Who decides when a Release happens?**

* At the end of any given Sprint the PO can initiate a Release.

**Who is responsible for managing the teams?**

* The teams are responsible for managing themselves

**What is the length of a task?**

* Tasks should take no longer than 16 hours. If longer then the task should be broken down further.

**Who manages obstacles?**

* Primary responsibility is on the SM. However, teams must learn to resolve their own issues. If not able then escalated to SM.

**What are two of the biggest challenges in Scrum?**

* Teams not self-managing. SM managing not leading.

**What happens to stories not completed in a Sprint?**

* They are put back in the Product Backlog and compete with all other stories for the next Sprint.

**Tools**

**Task Board**

White Board containing teams Sprint goals, backlog items, tasks, tasks in progress, ‘DONE’ items and the daily Sprint, Burn-down chart.  
Scrum meeting best held around task board  
Visible to everyone

**Product Backlog (PB)**

List of all desired product features  
List of all desired product features  
List can contain bugs and non-functional items  
Product Owner responsible for prioritizing  
Items can be added by anyone at any time  
Each item should have a business value assigned  
Maintained by the PO

**Sprint Backlog (SB)**

To-do list (also known as Backlog item) for the Sprint  
Created by the Scrum Team  
Product Owner has defined as highest priority  
Work is never assigned, but pulled out of the backlog by the individuals.  
Items not completed in a Sprint are not moved to the next Sprint, but are returned into the Product Backlog instead.

**Burn-down Chart (BC)**

Chart showing remaining work in a Sprint  
Calculated in hours remaining  
Maintained by the SM Daily

**Burn-up Chart**

Line chart trending upwards from 0% to 100% work completed on the y axis, and from the Sprint start date to the Sprint end date on the x axis.  
Ideally, Sprints should end with the work completed at 100%. It it’s not, this may indicate that the team members need to improve estimates.

**Meetings**

**Sprint Planning – First Half  
Commit the deliverables to the PO**

Product Backlog prepared prior to meeting (PO)  
Teams selects items committing to complete  
Additional discussion of PB occurs during actual Sprint

**Sprint Planning – Second Half**

PO available for questions  
Team solely responsible for deciding how to build  
Tasks create/assigned – Sprint Backlog produced

**Daily Scrum  
Inspect and Adapt the progress**

Held every day during a Sprint  
Lasts 15 minutes  
Team members report to each other not SM  
Asks questions during meeting

* What have you done since last daily scrum?
* What will you do before the next daily scrum?
* What obstacles are impeding your work?

Opportunity for team members to synchronize their work

**Sprint Review**Demonstrate the achievements

Team presents ‘done’ code to PO and stakeholders  
Functionality not ‘done’ is not shown  
Feedback generated – PB may be reprioritized.  
SM sets the next sprint Review

**Sprint Retrospective**Maintain the good, get rid of the bad

Attendees – SM and Team. PO is optional  
Questions – What went well and what can be improved?  
SM helps team in discovery – not provide answers

**Estimating**

**User Stories**

A very high level definition of what the customer wants the system to do

Captured as a separate item on the Product Backlog

User stories are NOT dependent on other stories

Story Template

As a <User> I want <function> So that <result>

**Story Points**

A simple way to initially estimate level of effort expected to develop

Story points are a relative measure of feature difficulty

Usually scored on a Fibonacci scale (0, .5, 1, 2, 3, 5, 8, 13, 20, 40, 100, ?)

**Business Value**

Each User Story in the Product Backlog should have a corresponding business value assigned

Typically assignments (L,M,H)

PO prioritizes Backlog items with the highest value

**Estimate Team Capacity**

Capacity = # Teammates \* Productive Hrs (6 hrs/day) \* # of days

**Velocity**

The rate at which team convers items to ‘DONE’ in a single Sprint.