

# SCRUM FOR ANYONE

## Intro

Business leaders are always looking for better, faster, and cheaper ways to deliver products and services to customers. Software organizations use Agile methods to do this. Scrum is the simplest Agile framework.

## Scrum Basics

Any project can use Scrum. Work is done in short cycles called Sprints. In a Sprint, the Team takes work from a prioritized list of items called a Backlog. The items developed first are of highest value to the customer. Basic Scrum is composed of: three roles, three activities, and three artifacts.

### The 3 Roles

**Product Owner:** the customer or a customer rep

**Scrum Master:** the facilitator or coordinator

**Scrum Team:** the workers with Product Owner and Scrum Master included

### The 3 Activities

**Sprint Planning:** a session at the start of each sprint to identify, estimate, prioritize, & allocate the Sprint Backlog

**Daily Scrums:** very short daily meetings to review progress, take-on tasks, and identify issues

**Sprint Review:** a 2 part session at end of each sprint to review progress; the Demo - where the Team presents to customer(s) & gets feedback on their work product; and the Retrospective - where the Team reviews its process and gives feedback to each other to improve the next sprint

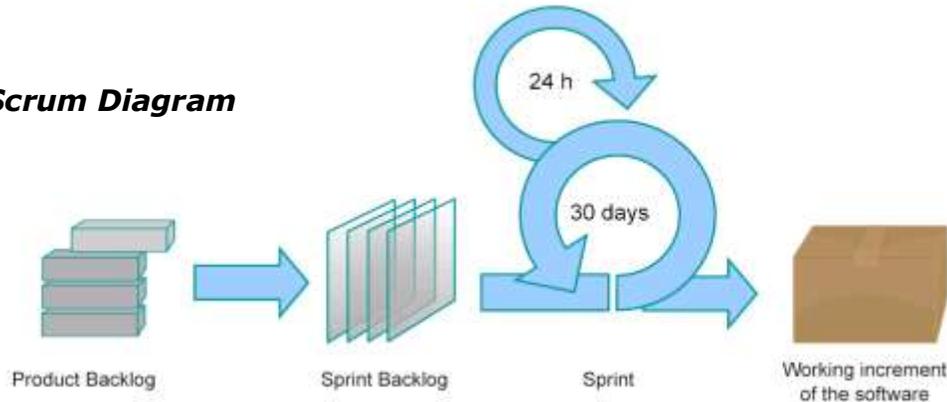
### The 3 Artifacts

**Product Backlog:** list of ALL project items and the work to be done

**Sprint Backlog:** subset of items and their tasks targeted for current sprint

**Burndown Charts:** charts tracking work progress on Project & Sprint

## Scrum Diagram



## Scrum Extensions

Due to its agile nature, within Scrum there are many extensions, additions, variations, alternatives, etc. Here are some of the more common ones.

**Scrum Questions** 3 basic questions answered by each person at the Daily Scrum:  
1. What did I do yesterday?  
2. What will I do today?  
3. What issues do I face?

**Impediment** Another name for "issue"; i.e. anything preventing the team or member from performing work, e.g. as efficiently as possible.

**Sprint** The preset time period when work occurs on the set of backlog items to which the Team has committed; typically 2 to 4 weeks, but may be as short as 1 week or as long as a month.

**Work Increment** The actual part of the working end-product (software, manuals, configuration, process, etc. ); at the end of each sprint the team plans to deliver a concise deliverable (or set of deliverables) that will be usable by the customer; aka. "Sprint Goal".

**Scrum Board** A location (physical or electronic) where all project information is kept and managed.

**Velocity** Measure/estimate of amount of product backlog effort a team can handle in one sprint: e.g. items per sprint, tasks per sprint, points per sprint.

**Abnormal Termination** The team can cancel a Sprint if they feel they are completely unable to meet the Sprint Goal. Management can cancel a Sprint if external circumstances negate the value of the Sprint Goal. If a Sprint is abnormally terminated, the next step is to conduct a new Sprint planning meeting, where the reason for the termination is reviewed and steps are taken to prevent reoccurrence.

**Guidelines** Once a Scrum Team is comfortable with their progress and agile mindset, it is customary and encouraged to improve, adapt, and change their particular practices as needed. Only the Scrum Basics need to remain unchanged - 3 roles, 3 activities, and 3 artifacts.

## Scrum Background

Jeff Sutherland created the scrum process in 1993. He borrowed the term "scrum" from an analogy put forth in a 1986 study by Takeuchi and Nonaka, published in the Harvard Business Review. In that study, Takeuchi and Nonaka compare high-performing, cross-functional teams to the scrum formation used by Rugby teams. Ken Schwaber formalized the process for the worldwide software industry in the first published paper on Scrum at OOPSLA 1995. Since then, Scrum has become one of the leading agile development methodologies, used globally by fortune 500 companies.

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## **Scrum Example – Moving from one home to another**

**Project:** Family moving from one home to another in less than 5 months – they must be efficient, effective, within timeframe and a fixed budget.

- **Product Owner:** The entire family will benefit and use the new home, but they need one person to “own” it. So the family chooses the Mother.
- **Scrum Master:** They also need one person, a different one, to lead all work. So they choose the eldest daughter (she’s a Business Major).  
*Side note – on this project these roles are somewhat arbitrary.*
- **Scrum Team:** The entire Family is the Team -- whoever is moving.
- **Product Backlog:** The overall Backlog must include ALL the items of the Move. To simplify organization they setup four main groupings:
  1. Prep & Organize
  2. Buy new Home
  3. Sell old Home
  4. Move from old to new

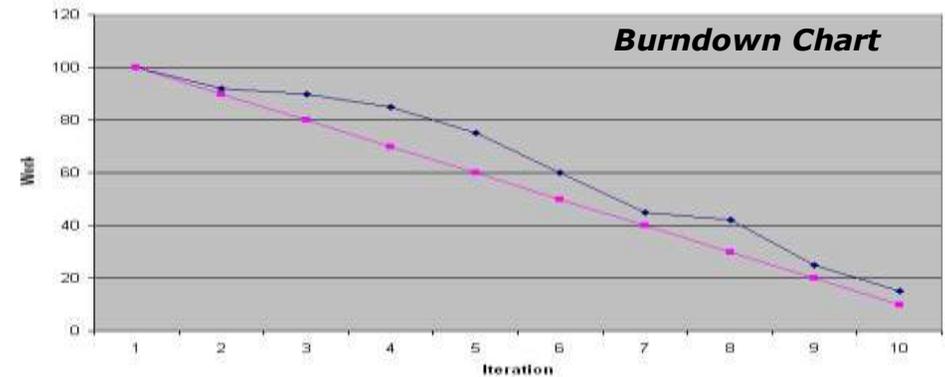
**Items:** Under each Grouping they list all major activities and deliverables – these are some **examples only**:

1. Prep & Organize
  - a. Subject matter research
  - b. Options: use Movers, sell-by-owner, buy without Realtor...
  - c. Move Budget
2. Buy new Home
  - d. Realtor
  - e. Criteria – Location, Price, Type, Size, etc.
  - f. Search & Visits
  - g. Loan
3. Sell old Home
  - h. Realtor (same vs. Diff)
  - i. Prep - Fix-up, Upgrade, & Clean
  - j. Showcase – Advertise, Open-house, Present, ...
4. Move from old to new
  - k. Movers
  - l. Pack
  - m. Transport

**Sprints:** For our example, the Family must move in less than 5 months. They set 10 Sprints at 2 weeks each. The initial sprint is “Sprint-1”.

- **Sprint Backlog:** For each Sprint they select a subset of Items. Since the Sprints are short they select only 2 or 3 at a time. But they must finish these in the designated Sprint! Each item is decomposed into simple, short tasks; for example for the “Options” item the Tasks are:
  - 1) Identify Options for Buying
  - 2) Identify Options for Selling
  - 3) Identify Options for Moving
  - 4) Estimate, compare, & choose best options

- **Sprint Planning:** Before Sprint-1 Planning the Family identifies the Product Backlog, Items, Sprints, Roles ... all the items presented in this Example but at a deeper level of detail and more thoroughly. In each Sprint Planning session they estimate, prioritize, and allocate the Items to the Sprint, with the most risky and most important ones first.
- **Daily Scrums:** The family dedicates the set time for the Daily Scrums every morning at breakfast when all of them are available. There they ask the 3 basic Scrum Questions of each person:
  1. **What did you do yesterday?**
  2. **What will you do today?**
  3. **What issues do you face?**Tasks are taken-on by each member appropriate to her/his capabilities. The Scrum Master records progress on the Burndown Chart.
- **Burndown Chart:** the Team (Family) decides to estimate and track all work in terms of “Tasks”. They estimate a total of a 100 tasks, this means they must finish 10 tasks on each Sprint. Their overall Project Burndown Chart has two lines: 1<sup>st</sup> the estimated Burndown (pink below) and 2<sup>nd</sup> the actual Burndown (blue below).



- **Sprint Review:** since no one but the Family needs to see how they do, the Sprint Reviews are simple Retrospectives – reviews of each item and its tasks and decisions how to improve on the next Sprint.

## **About the Author**

Paul I. Pazderski formed Software Process Consultant Inc. to consult, support, and work with clients on products, systems, and processes related to computers, software, and information systems. His portfolio covers small programming firms of 12 engineers, and fortune 500 companies. He built his skills at Motorola and his education an MS from IIT in E/CS. His certifications include: Certified Software Quality Analyst from QAI, Certified Organizational Change Manager from Benedictine University, Certified Scrum Master and Certified Scrum Practitioner from Scrum Alliance. This year he is working on becoming a Certified Scrum Coach. He is a member of the Scrum Alliance (<http://www.scrumalliance.org/>).