



# ScrumMaster Certification Workshop: Preparatory Reading

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## Greetings, Potential Certified ScrumMaster!

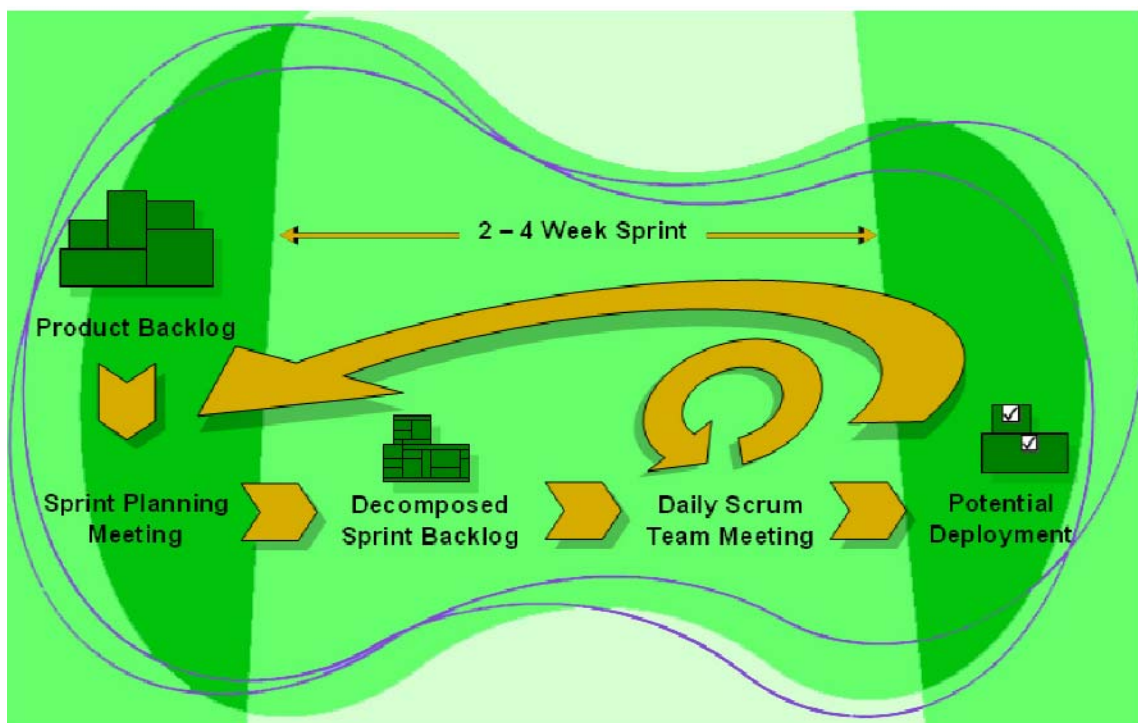
You have enrolled in the two-day Certification session that will provide you with detailed insight into the workings of Scrum and the expectations of a Scrum Master. Regardless of your experience with Scrum, we want to make sure all participants have at least a basic understanding of Scrum concepts before coming to the class. There are many sources of information about Scrum, but a great introductory read is *Agile Software Development With Scrum*, written by Ken Schwaber and Mike Beedle. In case you can't get to that before the class, please read the following notes on Scrum.

## What is Scrum?

Even projects that have solid, well-defined project plans encounter some degree of change. Shifting market conditions, budget cuts, staff restructuring, or any number of influences will disrupt the best plan. Projects that begin with changing or unclear requirements make it sometimes difficult to even establish basic project expectations.

Scrum is the agile development process that allows teams to deliver usable software periodically throughout the life of the project, absorbing change and new requirements as the project proceeds.

Here's a high level picture of how Scrum works, also referred to as the Scrum Framework:



## The Product Backlog

The starting point of a Scrum project is the **Product Backlog**. This is simply a list of features and functions that we expect to be developed during the project. Compared with a more traditional method, we might say these are the Business Requirements.

item#	description	low	high	priority
D-001	build credit interface to ABC processor	200	250	1
D-004	accept credit cards on purchase page	150	175	2
D-005	add AVS mismatch processing	150	200	3
D-007	database change for zip+4	40	50	4
D-008	update card creation app for zip+4	80	100	5
D-009	batch update application	60	75	6
D-010	Financial Recon report 1	30	40	7
D-011	Financial Recon report 2	35	40	8

Please note that this **Product Backlog** is a list where each entry has an item# that's used as a reference, a brief description of the feature or function we desire for this project, a low and high estimate of effort required (represented in hours for this example), and a priority. There are variations of how this can be represented, but if you have these basic items, you have a healthy **Product Backlog**.

## The Product Owner

The **Product Backlog** is owned and represented by the **Product Owner**, who has authority guarding this list and its priorities. There may be many interested stakeholders for this project, but the Product Owner is the one voice who has final say over the content of the product Backlog. Here are some of the characteristics of a **Product Owner**:

- Typically the internal or external client, and can be a delegate, but is only one person even if there are many interested stakeholders
- Responsible for the **Product Backlog**, but may need to call on others for help in establishing estimates or understanding technical requirements
- Establishes and promotes the vision of the product so the development team can make decisions as they proceed with their work
- Responsible for the ROI (return on investment) by prioritizing the work
- Monitors progress against goals
- Makes decisions regarding implementations

## The Scrum Team

Before we can start a **Scrum** project, we need a **Scrum Team**: a cross-functional group of developers. The word "developer" is used here in a generic sense: anyone who has committed to and is contributing to the development of the project, which would include application developers, testers, DBAs, etc. Here are some of the basic characteristics of a Scrum Team:

- Typically 3-7 people, cross-functional, & "full time," meaning they are not working on multiple projects simultaneously.

- Responsible for the **Sprint Backlog** (see below) and ensuring work is decomposed into tasks that fall in the range of 2-16 hour of effort
- Manages their own work and self-organizes around how to reach their commitments within the limits of established standards and procedures
- Creates Ground Rules for expected behaviors
- Responsible for the actual doing of the work required to accomplish the commitments, with some ability to outsource to other departments if the team does not possess the needed skill
- Demos their work at the close of the **Sprint** (see below)

### The Sprint

Each iteration of work for our project is called a **Sprint**. **The Sprint** is a repeatable, fixed period of time, typically 2 to 4 weeks, dedicated to the delivery of pieces of functionality of the project.

### The Sprint Planning Meeting

Once we have a healthy **Product Backlog** and a **Scrum Team** of developers who can work on the project, we can enter into the Scrum framework. The Scrum framework, represented by the first graphic above, provides us with the guidance needed to deliver features and functions incrementally as the project progresses.

The entry point to this cyclical delivery method is **The Sprint Planning Meeting**. **The Sprint Planning Meeting** is a time boxed event that officially marks the beginning of the **Sprint**. This meeting is broken into two parts: 1) the team determines what features and functions will be worked on during the next **Sprint**, and 2) the team decomposes those features and functions into small, manageable tasks. Typically we allocate a full day for this meeting even if we do not consume all the time allocated.

The **Product Owner** and the **Scrum Team** join together during the Sprint Planning Meeting to review the **Product Backlog**. They also invite whoever else is needed to properly plan out the work opportunity ahead of them. They review which features and functions have the highest priority to ensure the **Scrum Team** has a good understanding of what's expected. They also determine which of the highest priority items can be worked on during the next **Sprint**. They do this by understanding their capacity for work during the coming **Sprint**.

### The Sprint Backlog

The items selected for work during the Sprint Planning Meeting are moved from the **Product Backlog** to the **Sprint Backlog**. We then move to the second part of the **Sprint**

**Planning Meeting**, where the selected **Product Backlog** items are broken down into smaller, manageable pieces of work.

In this sample we've included an item # that simply refers back to the original **Product Backlog** item, a description of tasks necessary to complete the

**Product Backlog** feature, and an estimate that is small enough to be managed in a day or two, but not so small that we spend an inordinate amount of time in decomposition.

item#	description	estimate
<b>D-015</b>		<b>40</b>
D-015.10	enhance 0100 msg as per spec (new bit)	8
D-015.20	c_cred table for logging transactions	12
D-015.25	logging of 0100 msgs	4
D-015.40	script to pre-populate c_cred w/test data	16
<b>D-014</b>		<b>150</b>
D-014.10	new integration test parameters	4
D-014.20	verification code against card types	7

### The Daily Scrum Meeting

Once we have agreed upon the **Sprint Backlog** content and have committed to the work therein, the **Sprint Planning Meeting** is complete. For the length of the **Sprint** we will not discuss changes in **Product Backlog** priority, but instead focus in those items selected for delivery of that **Sprint**. The **Scrum Team** will use the **Sprint Backlog** to guide them through the new iteration, and they are now ready to begin working on the development of the project.

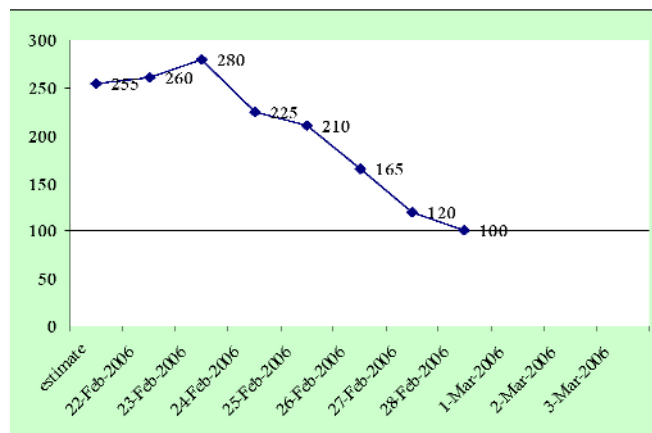
To help the team and others understand progress while providing an opportunity to evaluate objectives, the **Scrum Team** meets daily during the **Sprint** at the **Daily Scrum Meeting**.

During this daily meeting, which is time boxed at 15 minutes, each team member is responsible to communicate answers to the following three questions:

- 1 – what did I work on since our last Daily Scrum Meeting?
- 2 – what am I planning on working on next?
- 3 – what obstacles are hindering my productivity?

**The Daily Scrum Meeting** is the first great opportunity to “inspect and adapt” on a regular basis, allowing the team to consider ways to improve performance and ensure delivery of the **Sprint** objectives.

We have seen two Scrum artifacts so far: the **Product Backlog** and the **Sprint Backlog**. The third artifact is the Burndown Chart. This chart is used by the team during the **Daily Scrum Meeting** to understand how much work is remaining in the **Sprint**, day by day.



You will see that the X-axis represents time in terms of days of the **Sprint**, and the Y-axis represents effort estimated for the Sprint. Each day the team “burns down” remaining effort as they work towards the end of the Sprint, completing tasks as they seek to have as close to zero remaining effort as possible at the end of the allotted time. The **Burndown** chart not only serves as a progress indicator for the team, but is externally available to all interested stakeholders so they may also track progress.

### **The Sprint Review Meeting**

At the end of the **Sprint**, the **Scrum Team** meets with the **Product Owner** at the **Sprint Review Meeting** to review the work that was completed. Other stakeholders are invited as well. The team reiterates the goal of the **Sprint**, then proceeds with an informal demonstration of the work delivered. Decisions are made during this meeting regarding potential deployment of what has been developed so far.

This is the second great “inspect and adapt” opportunity, allowing the team and the **Product Owner** to consider ways to improve the value of the project by reevaluating the **Product Backlog** for new items, changes to items, or reprioritization.

### **The Retrospective**

The Scrum Team also holds a **Sprint Retrospective**. This is the third great “inspect and adapt” opportunity, allowing the team to consider ways to improve their overall performance above and beyond the project itself, while addressing ongoing obstacles to productivity. What's going well? What could be better? Answers to these and other questions are logged for reference and future action if necessary.

We then loop back to the next **Sprint Planning** meeting where we identify and select items to work during the next **Sprint**.

### **The ScrumMaster**

Who oversees this framework and helps ensure that participants are following **Scrum** principles? That would be the **ScrumMaster**. Some of the basic characteristics of a **ScrumMaster** include:

- Responsible for **Scrum** values and practices
- Encourages open communication, teamwork, and collaboration
- Responsible for ensuring the **Scrum Team** has what they need to be successful
- Seeks ways to increase productivity, removes obstacles to productivity
- Establishes the key, few **Scrum** meetings:
  - **Sprint Planning**
  - **Daily Scrum**
  - **Sprint Demo**
  - **Retrospective**

- Protects the **Scrum Team** from interruptions
- Assists with record keeping for **Burndowns** and other artifacts

In addition to the process details we've just outlined, **Scrum** creates an environment that expects and promotes self-managed teams, iterative processing, empirical thinking, and a high degree of visibility into the project and the organization. Implementing Scrum is much more than changing a process: it is changing the way we think about our work. We look to the **ScrumMaster** to be the change agent in helping others maneuver through these difference ways of thinking. This is a very difficult job, but can be some of the most rewarding work on the project.

Bring your questions to class! There's much more detail behind this overview that we'll explore during our two days together, and I'm looking forward to an exciting time of learning and sharing.

*Sincerely,*

*Peter Borsella, Certified Scrum Trainer*