

CSM Practicing Certification Renewal Assessment

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Scrum depends on the inspect and adapt mechanisms of process control to manage the complexity of projects. For inspection to work, everyone must know what is being made visible. To implement the Scrum process, such regulating mechanisms as defined roles, involvement versus commitment, time-boxes, and regular cycles are used.

1. Describe one project on which you have used Scrum over the last twelve months. Describe:

- **Purpose - what business goal was the project intended to deliver?**

Deliver system to enable the bid to order process for projects, bringing the process online and automating where possible.

- **Length - what was the duration of the project?**

9 months

- **Cost - what were the budgeted and actual costs?**

Budget = £300,000. Actual = £275,000

- **Value - what were the projected benefits and actual (if measured) actual benefits?**

Projected benefits were to free up a large section (6-8 people) from the project office enabling them to work on higher-value work. It would also save project managers and customers, on average 5-10 days admin work each per project

A large part of the project office's tedious, manual efforts were automated and, although organisational changes meant further work was rendered obsolete "losses" were kept to a minimum and a positive ROI was still achieved.

- **Size - how many people were on the project team(s), how were they organized into teams?**

Initially there was a development team of 6 and a customer/tester team of 5. This was streamlined into one team of 8 when scrum was adopted.

- **Teams - were the teams cross-functional and self-organizing? Were the teams collocated in an open space? Were the teams physically separated within one location, or located in more than one physical location?**

Initially they were not, there were separate customer, development and testing teams but once Scrum was adopted, the teams were rationalised into one cross-functional team. The geographical spread was also reduced but not eliminated. However, the new team was collocated for a short while to begin with.

Even the members of the team in the same location were spread across the building until we adopted Scrum and re-organised the working environment. There were still limitations in that there was no Scrum room available so "whiteboards on wheels" were brought into the office space and online collaborative tools were employed also.

- **Initiation - how was the project initiated? How was the team trained to use the Scrum process?**

The project was initiated as a customer:client relationship but, 3 months into the project, I presented an alternative way of working (Scrum) to all project participants and requested a trial run of one sprint. The fundamentals of agile development and, in particular, the principles and practices Scrum were presented to all and, after questions and discussion asked for commitment for one sprint to gauge its effectiveness. The benefits to each stakeholder group were identified and used as the "soft" measurements of success.

- **Reporting - how did you report progress to management and the customers?**

Customers were invited to listen in on daily scrums and, to begin with, had twice-weekly calls with the Scrum Master for formal updates and clarifications. Management were shown reports on features delivered and bugs found and trends thereon. Publication of the sprint retrospectives.

- **Change - what difficulties were surfaced by Scrum that had to be resolved? How were these resolved?**

The lack of clarification in the original requirements was highlighted. Customers believed they were very explicit but developers didn't know what they meant, the context in which they were to be applied nor when they would be considered delivered.

Customers going directly to developers for new “urgent” work or “quick” fixes. This was highlighted as adversely affecting the sprint goals and was mutually agreed needed to stop. The inability to consistently stick to a set of requirements meant a lot of work was wasted up front but Scrum enabled the project to commit to a small subset of the functionality at a time and thus some value was being delivered along with a new reference point.

From a developer’s point of view, the responsibility of not being told what to do for the first time was daunting to begin with but by reinforcing a no-blame culture, they soon grew to relish this.

- **Management - what was the previous role of the ScrumMaster? Who took on the role of Product Owner? To what degree were they successful in fulfilling their roles?**

The previous role of the ScrumMaster was project manager. However, after the project was running smoothly in Scrum, one of the developers was coached up to take over. The main, central customer was convinced to take on the role of Product Owner. After a keen first sprint but PO and SM had the required attitude to make their roles a success.

- **Engineering - what software engineering practices or environment had to be changed?**

Pair programming was a foreign concept to the developers and also to the people paying for the project. It was viewed as paying double for the same work but it was crucial in knowledge-sharing, better functioning code and team-building.

Refactoring was also a practice that was commonly omitted in the past but added huge value to the project.

The concept of product backlog items was a new one and the time-boxed planning and review sessions were different to the normal, hand-off procedures.

- **Stabilization - for how long did the software have to be stabilized before it could be released? How did you structure this stabilization process?**

There were 3 sprints before product was released to the masses and upgrades followed every 30 days after for 3 sprints.

- **Success - to what degree was the project successful? To what degree was the Scrum process instrumental in the success of the project?**

A project that was floundering with analysis paralysis was able to move forward and deliver working, valuable software thanks to the changes introduced by the Scrum process – product backlog, 30 day iterations, cross-functional team etc.

One of the two aims of the project was met with great success and, although organisational changes meant further work was rendered obsolete “losses” were kept to a minimum and a positive ROI was still achieved.

- **Scrum Process - to what degree was the Scrum process implemented "out of the box?" To what degree did you have to modify the Scrum process for this project? For each modification, how did you formulate the modification so that the basic inspect/adapt mechanisms continued to function? What parts of Scrum couldn't be implemented, or failed, and why?**

The Scrum process could not be used entirely out of the box. For one the process was on trial and so didn't have full buy-in to begin with. As the project progressed and succeeded, more and more practices were “bolted on”. Also, there were a lot of changes to be implemented by all parties and, so long as the fundamental principles were being applied with the most crucial practices, we would see benefit without overloading the team(s).

Collocation (lack of) was a big factor and did add lag to the development but the team suggested innovative use of online collaborative tools to get around this (Instant Messenger, LiveMeeting etc)

I wouldn't say any of the processes failed although the developers did take a few sprints to get their estimates consistent. This caused anxiety from the customers but progress was still good.

2. How do you cause the accuracy of Product Backlog estimates to improve? To what degree does their accuracy matter?

This was really down to striking a balance between confidence and pragmatism coupled with consistent types of requirements. Once the team felt they were confident in their estimating technique, the type of requirements needing estimation would change and they would take a

small step back.

To me the accuracy wasn't as important as the principle behind the people effectively setting the dates. By letting the people with the most knowledge and influence over the time set the estimates, it provided a much better environment than having an arbitrary date set by management.

At the end of the day, they are only estimates (hence the name) and were useful in highlighting potential issues by changes in velocity. The practice encouraged communication and collaboration.

3. How do you cause the accuracy of what a team commits to for a Sprint to what the team actually delivers?

By obtaining the priorities of the backlog items from the customers at the planning stage, it is made known that the developers will commit to the highest priority work available in the time-box. There are a number of reasons why there may be a discrepancy between the commitment and the delivery e.g. inaccurate estimation, inaccurate information about backlog items, "distractions" etc and by identifying what happened, the process itself can be inspected and adapted.

The main thing to manage here is expectations and this is handled by frequent feedback on progress and an honest, collaborative environment is crucial to this.

4. What metrics do you use to track the development process? Which metrics have been changed, removed, or newly implemented as a result of using Scrum?

The project plan is no longer heavily relied upon. A new (mainly excel based) backlog was used to rank and assign backlog items into the sprint backlog. Developers owned sprint backlog spreadsheet and, as well as conferring on the daily scrums, IM etc, updated this between them to give a progress check.

A simple burndown chart was automatically produced to visually display progress against estimate but as much of the tracking guideline came from gauging the feeling within the team as much as graphs or reports.

5. What type of training, resources, or tools would best help you successfully employ Scrum in the future?

Most of the skills necessary to employ Scrum are soft skills – facilitation, communication and relationship-building. The technical skills, such as developing effective backlog items, up-front acceptance criteria and estimation tend to come with experience.

6. (Optional) Scrum and Extreme Programming are sometimes used together. What must be considered when this is done?