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 Project: Development and implementation of a Single Assessment Process
This project is an example of app. 10 projects that I carried out over the past year, each with similar approach, goals, teams and size.

- Purpose – The involved local council and health trust need to be able to assess client service requests by accessing data from multiple databases, displaying an integral view on a client on a secure website.
- Length – 4 calendar months
- Cost – Budgeted costs: 120 man-days @ £ 850, realization 110 days at the same rate.
- Value – The benefits were not measured by the client.
- Size – There were 4 developers (2 client developers, 2 consultants), 2 practitioners (sr. nurses), 2 managers, 4 trainers, 1 Scrum Master.
- Teams – Cross functional: yes, consultants have taken on all required tasks (analysis, design, development, testing, implementation, go-live support). They were self-organizing, but due to the small size of the team this is hardly surprising. The main concerns were around the developers from the client organization, who took some time to find their feed and start asking questions. The teams were not in the same room, usually some 200 miles apart. The main means of conversation took place via phones messenger and e-mails, with weekly client visits.
- Initiation – The project was initiated by a kick-off and planning session. The client team members were not aware of Scrum, or its practices. The accepted methodology in the client organization (Prince2) does not permit to run with other methodologies. Training took place on-the-job, by introducing methods and tools during the project. A good example is the use of burndown charts to replace Gantt charts.
- Reporting – Reporting was done through a combination of burndown charts, issues list, decisions list and risk list. This material is available for other CSMs upon request.
- Change – the main issue with Scrum that needed a resolution was the use of the method in a very small team. The bulk of the development work was carried out by 1 consultant, assisted when needed by specialists. The consultant took naturally to an agile approach and quickly trusted the use of burndown charts and 30 day sprints. What was not found useful was the daily stand-up meeting. This was replaced by ad-hoc check ins and a weekly review with the developer.
- Management – The scrum master (myself) is project manager for the consultancy company. The role of product owner was taken on by two IT managers from the customer, each representing one organization in the partnership. They were both successful, resolved issues quickly, made decisions quickly and managed the political spectrum on behalf of the team.
- Engineering – Software engineering practices remained largely unchanged. The

delivery in sprints and the sign-off after every sprint were new to the team. The team experienced this as a logical way to approach a project. The deliverables in each sprint hung logically together (sprint 1: user interface, sprint 2: data processing, sprint 3: BizTalk implementation). The customer has experienced this as a logical way to deliver and approve the software. Training preparation could start early, and user feedback (which was particularly important due to the number of visually impaired users) was enabled at an early stage of the project.

- Stabilization – The results from sprint 1 (user interface) took minor changes during sprint 2/3 to make it fully meet the specific user needs. Sprint 2 and 3 results were immediately stable. The stabilization took place through early release of the software in a separate environment, with changes delivered throughout sprint 2/3 (not necessarily at the end, as speed of feedback was essential).
- Success – The project was delivered on time, on spec and under budget. Scrum has largely contributed in the areas of flexibility and early availability of the results. Through the use of Scrum we were also able to find a work-around for problem areas. E.g. the networking environment was not available until very late in the project, which was solved by the team by implementing a dual test environment.
- Scrum Process
    - Release planning: was fully implemented and used. The tasks were produced as the result of a scoping exercise which was carried out before the sale of the project to the customer. The availability of this detailed knowledge of the user requirements has been beneficial to estimate tasks and group tasks into sprints.
    - Sprint planning: these were carried out by the book. During release planning the team obtained a rough idea about the sprint contents. These ideas were reviewed at the start of a sprint and amended where needed.
    - Sprint – daily meetings: as mentioned earlier, these meetings weren't daily due to the small team size. Weekly meetings with the developers and stakeholders took place. When needed the developers and customers work in pairs to achieve results quickly.
    - Post Sprint Review: this task was consistently carried out, to great appreciation of the whole team and stakeholders. Per meeting the necessary attendees were invited others could attend if interested. Software developed during the sprint was always made available to all users after the review in a training environment. The client was not used to either the review or this early availability and has greatly appreciated this.

2a How do you cause the accuracy of Product Backlog estimates to improve?
In my experience this is more a growth factor in the team then anything else. Over a number of sprints and projects the team members become more familiar with the tasks involved, their experience, and with other factors that influence the estimation accuracy.

2b To what degree does their accuracy matter?
In this project the accuracy was reasonable (app. 20% over estimation of a task) which is always easier then an under estimation. The accuracy matters greatly, as the project is carried out on a fixed price basis, therefore the learning of team members and scrum master is important.

3 How do you cause the accuracy of what a team commits to for a Sprint to what the team actually delivers?
This was done on the basis of the scoping document which was produced in the sales phase. This document contained the agreed deliverables with sufficient detail. Through early feedback and pairing with the stakeholders any problems were ironed out early.

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 burndown chart contained the weekly estimates for the remaining tasks; this is no change from and out-the-box chart. Separately the hours worked on the project were recorded for billing purposes. These hours worked contained no level of detail (e.g. work on design, or work on development). The use of burndown charts is new to both the consultancy company and the client organization; both have appreciated the simplicity and usability.

5 What type of training, resources, or tools would best help you successfully employ Scrum in the future?
In these types of small projects I am sticking with the out-of-the box tools, with additions to the spreadsheet used for the burndown charting. Additions cover areas like risk management, issue management and decision documentation.

6 (Optional) Scrum and Extreme Programming are sometimes used together. What must be considered when this is done?
I have not used XP.