

Making the whole product agile A product owners perspective

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Abstract. This experience report is from the viewpoint of the product owner and covers how a successful product was created by trying to be Agile throughout all aspects of product development and how other processes were incorporated with Scrum¹, including Prince 2² (a generalised project management process), a User Centred Design³ process and an Innovation process. The report also covers how different disciplines were involved with the agile process to create a product.

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1. Introduction

The Product Owner of this project noticed a distinct lack of focus in the agile literature of how to be a good product owner working within a multi-disciplinary team. Most texts seemed to start from a prioritised backlog of user stories and most examples tended to focus on the software development aspect. So what the product owner wrestled with was how to build and develop a good product and how to keep to the philosophies of Agile throughout, while incorporating or working with other processes where necessary. The rest of this report describes the processes and how they were used on this project.

1.1. Project Background

The product is the BBC s primary Social Media software platform. A managed service, it allows multiple community and user generated content propositions to be developed and launched quickly and provides enterprise level moderation and user management tools to ensure that the quality of content is maintained. It was the first

project within the BBC to use Scrum (over 4 years now) and is in continual development with a team of 8 software engineers, 2 Client Side Developers and Designer. It runs on SQL Server 2005 with a C# and C++ application layer and uses very complex XSLT templates for the presentation layer.

1.2. Prince 2 and Scrum

While using Scrum the product owner found that it did not give sufficient answers for the complete cycle of product development, for example project initiation and project end were not comprehensively described. It was found that incorporating Prince 2 with its concept of stages was extremely useful. Prince 2 is a complete general project management process that has many different stages and describes key roles that need to be filled.

Describing the process, before user stories were identified they had a 1 page document where clients or sponsors were asked to describe what they wanted and what the expected benefit was and how it could be measured. It was found that this alone filtered out many features which the team might have otherwise spent time on. The process also used the key Prince 2 roles like the executive, senior user and senior supplier (normally the product owner) and made sure they were identified before progressing.

After this stage high level requirements were captured from all stakeholders and converted into user stories and these formed the initial product backlog. They aimed for no more than 50 regardless of the project complexity. Depending on the feature they would initiate a research phase including competitor analysis and ethnographic research.

The product owner's aim was to ensure that the feature that was developed had potential value outside of the single client (in order to maximise value), fitted into the product's overall vision and was focused on doing one thing well. This formed the second stage of the process where work could stop or be given permission to continue by the project board.

For the next stage they conducted a risks brainstorm and represented these risks and their associated mitigation tasks as user stories and added them to the product backlog. The backlog was then prioritised, estimated at a high level and divided into sprints to give a rough indication of how long the work would take. At this point the

product owner worked hard to identify the core stories that delivered the feature and that anything else had a lower priority.

Key members from all disciplines then sat down together to work out a conceptual model for the system. Most of this work was very quick (maximum a week) but was important as some thinking had to occur before development and architecture decisions took place, even if they were working within an agile process.

Scrum sprints were then used to deliver the project and at the end of each sprint the product could (and often would) change direction or in more severe circumstances the project could be stopped.

At the end of a particular project they had an end of project review.

1.3. Scrum and User Centred Design

On previous projects the team had used Scrum for the developers but the product features were defined outside of Scrum in a separate User Centred Design Process (UCD) and run by the design team. The idea of UCD is to put the user at the heart of the process. Involving such techniques such as persona development, user research and validating ideas with user testing.

Working in this way the team seemed to naturally fall into a waterfall development process, with large wireframe documents for requirements and a separation of disciplines causing the projects to overrun and to not be successful.

Below are key parts of the current unified process which has been far more successful:

- **Combine both processes and teams completely.** Designers and developers are part of the same team.
- **User Stories are the requirements.** Our requirements are always expressed as user stories and are personalised by developing personas for each role.
- **Solve integration issues early.** This ensured that communication between teams and software components were solved very early on.
- **Have a few clear Sprint Goals for the whole team.** Each sprint had 1 or 2 clear goals the stories into tasks generated by all disciplines. A UCD task might be to

create a simple wireframe, user testing, or visual design work. Prototyping was encouraged throughout the process as wireframes were often insufficient.

- **Prototyping and user testing flowed into development tasks for a story.** It was found that of the 2 goals in a sprint, some tasks would be for production work and other tasks would be for prototyping, conceptual work and user testing. The key idea was that the team were working in the same sprint which ensured good communication and teams were not separated into prototyping and production work.
- **User testing was part of the sprint.** User testing was planned towards the end of a sprint so that this could inform the product owner whether to reprioritise the product backlog.
- **Be sensitive to the needs of different disciplines.** Different disciplines still struggled with daily meetings and sprint planning especially where the tasks were irrelevant to them. The product owner had to be very sensitive to this and sometimes allowed team members to not attend. They kept daily meetings short and tight to help the situation.
- **Launch with the minimum and iterate.** The product owner always tried to launch early with less features as it was difficult to predict how the product would actually be used.

1.4. Innovation and Scrum

Innovation was and is critical to ensuring that the product remains useful. The product owner also wanted the team (who have been working on the product for years) to feel that they could make the product their own and give them additional motivation and a sense of play. Following is how they added innovation to their development process.

1.4.1. Innovation planning meetings

The innovation planning meeting is where the team brainstorm ideas (6 months to 2 years out max). The product owner kept the concepts loosely around the product area as it was important to show that the ideas could add value to the business. Clients could also add ideas but these would have to be backed by the team. These ideas formed an innovation backlog managed by the product owner. The product owner would also seek to stimulate the teams thinking by organising events, bringing in speakers or showcasing what their competitors were doing.

1.4.2. Research Questions

The innovation backlog consisted of Research Questions rather than User Stories. This was to encourage exploration rather than producing work ready to be released. The team were encouraged to produce working prototypes rather than written reports.

Once the tasks were identified they put 20% of their time into the sprint planning sessions as normal, however, innovation time was time-boxed to this 20%. All tasks in a sprint were given a priority from 1 to 3 and innovation tasks were given a priority of 2 to ensure that business critical work was done first. The product owner would ensure that where possible priority 1 tasks accounted for only 60% of a sprint.

1.4.3. Innovation Reviews

In the same cycle as the sprints, but not on the same day, the team had an innovation review. This was a formalised point where team members show what they have learnt and built and where new ideas could be discussed and then reprioritised in the innovation planning meetings.

Every quarter they had a special review where clients were invited to use the prototypes. This alone provided a certain amount of pressure to the team, however, the team were also given a night out if they thought that they had made good use of the time.

3. Lessons Learned

The product owners role is key to a successful product. They must have a strong understanding of all the processes that the team uses when they work. By getting everyone to work off the same backlog and having the daily meetings, the product owner ensured that communication and understanding between the disciplines was high.

The product owner found that it took the team a few sprints to get used to doing innovation work. However, after a few sprints the motivation and energy of the team was greatly increased and quality prototypes were produced.

The product owner had to experiment around the principles of Agile to ensure that you the team were building the right product.

With Scrum there was a danger that the team lost sight of the product, especially if they are working on it for many years. They came to meetings, they got stories and tasks, they completed the tasks and then moved on. In this routine the product owner had to come up with ways to get them more involved in the product shaping. They had regular points where they thought about where the product could go. The product owner invited the team to meet clients and to go to user testing sessions. The team wrote a team manifesto⁴. This alone made a big difference to the team feeling as a single unit.

By adapting different process and combining them with Agile the product owner was able to produce a successful product with a happy productive team.

References

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