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Integrating Design Practices into Scrum

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In developing new products, good design is a key to better outcomes. It results in a better user experience, enhanced product benefits and stronger financial results. Good design involves an understanding of product user needs and enables timely product adjustment as those needs change. This adaptive ability naturally complements the Scrum development framework, which encompasses adaptive methods for solving complex issues.

In this article, we discuss the opportunity to better fine-tune Scrum to create synergy between design and other Scrum activities.

Designers often are part of a typical Scrum cross-functional team (Figure 1). The objective of a Scrum team is to bring different skillsets together and to work collaboratively to develop and deliver a new product. However, one issue often raised by Scrum teams is whether to complete the design beforehand or during the development process. If there is no pre-design at all, design consistency and product integration can be a challenge. However, completing the design in detail beforehand may result in a loss of a product's flexibility to adapt. How do you achieve the right balance?

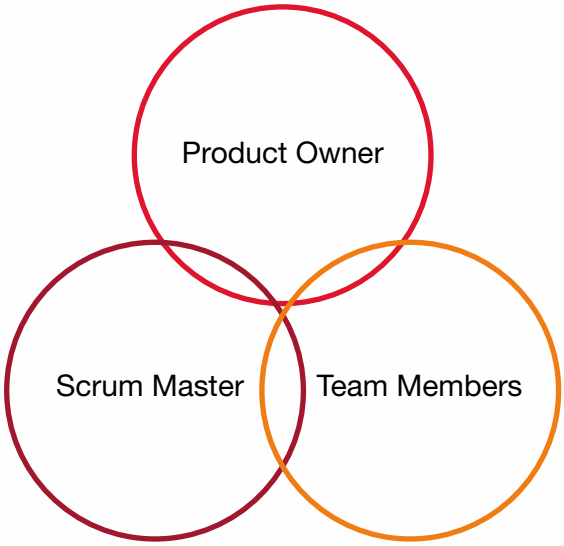

Figure 1: Scrum team cross-functional structure

Evolution of a user story

Before we discuss how much design beforehand is good for a Scrum team, let's consider the evolution of a user story. Figure 2 below illustrates how knowledge of a user story increases over time. At an early stage, a user story begins to emerge based on high-level plans or just simple feedback from stakeholders. The Scrum team does not know much about the user story at this point. However, as the product owner continues to communicate with stakeholders, more and more details about the user story unfold, as illustrated by the curve shown in Figure 2.

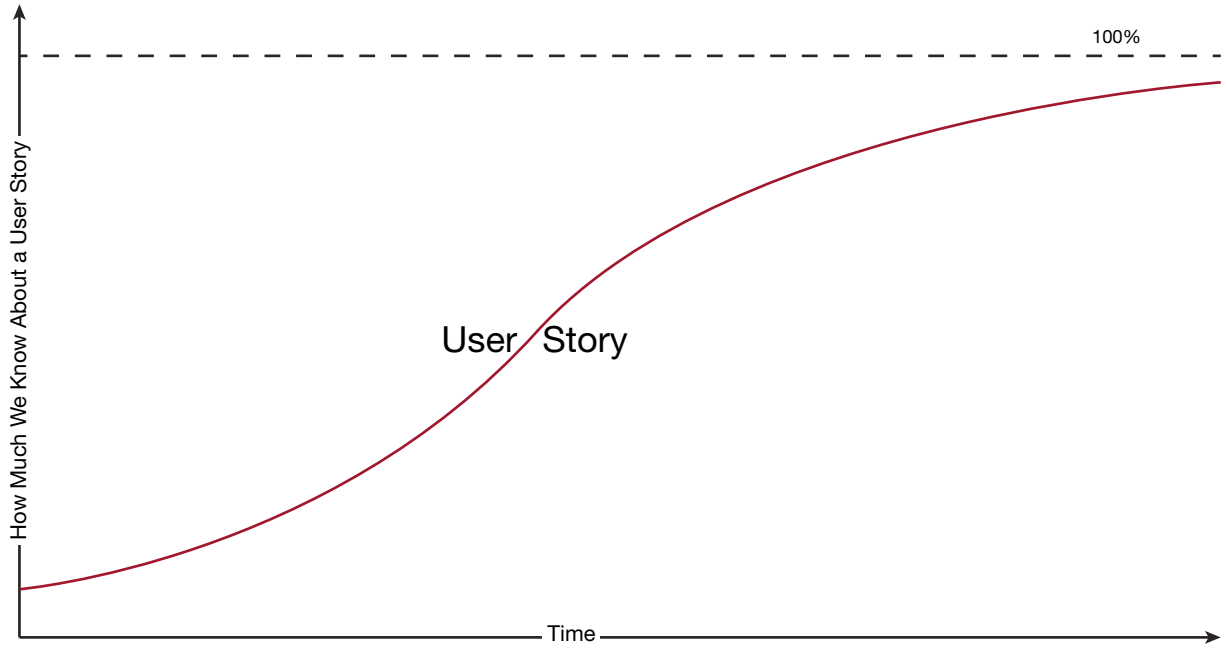

Figure 2: How we know about a user story over time

We recommend aligning the user story with Scrum events—pre-grooming, grooming, planning and sprint.

- **Pre-grooming:** Before the grooming meeting, a user story often is only a simple idea based on input from users without any additional information. However, both the product owner and designers can work with users during this meeting to obtain more information.
- **Grooming:** When a user story is ready for grooming, it already consists of basic information that team members can rely on in their first round of conversation. During grooming sessions, team members will ask more clarifying questions to understand better the scope of the user story. Based on these questions, the product owner and designers may realize there are gaps to fill. Ideally, the team is able to address all questions before implementation of the user story begins.

For designers, this also is a time to receive feasibility feedback from developers and the quality assurance team (QAs). Feasibility feedback helps designers adjust the design. In practice, CGI conducts two grooming sessions per sprint. This gives team members the opportunity to address any issues raised during the first grooming session before the next grooming session begins.

- **Planning:** After several rounds of grooming, the Scrum team should have a good understanding of the user story. It is now time for the team and product owner to work together to nail down what can be done in the next sprint. The user story is broken down into small tasks. These planning sessions also help to increase the team's understanding of the user story, as shown in the increasing curve in Figure 3 below.
- **Sprint:** By the time a sprint kicks off, there should be few unanswered questions. However, you may notice the curve in Figure 3 below does not reach 100%. This acknowledges that, during a sprint, the team may still run into minor issues that require adjustments. This gap will continue until the sprint is finished.

The evolution of user stories at the product backlog stage follows the pattern shared above as well. User stories at the top are better defined and broken into smaller workable pieces. If you were to tilt a product backlog on its side, it would be like Figure 3, with the least known items on the left and the more defined items on the right.

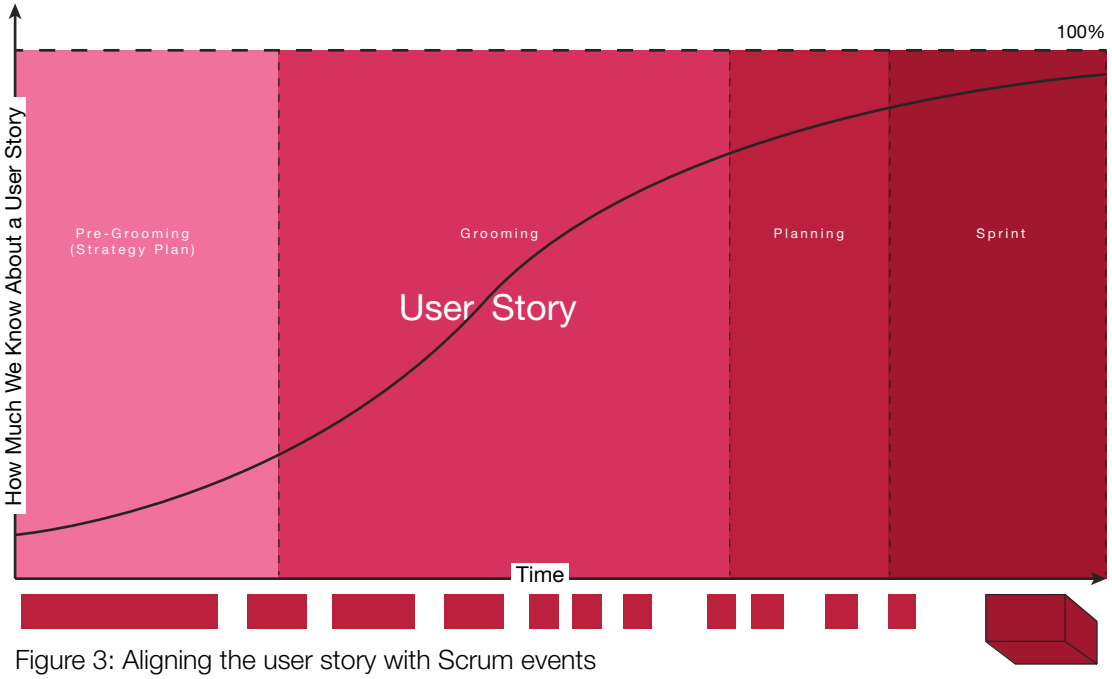

Figure 3: Aligning the user story with Scrum events

How do we work together?

As a user story evolves, we see that the Scrum grooming and planning processes involve information gathering, design discussions and implementation preparedness. Designers should be regularly involved with the product owner and all other team members in each Scrum event. They provide essential design skills to the entire team. If we look back to Figure 3, designers also should be involved in the pre-grooming meeting with the product owner.

Considering a healthy Scrum backlog often consists of two sprints of well-groomed work, a Scrum team could have two sprints of work designed in advance and maintained in the product backlog. Should designers have their own “design sprint”? Should there be two design sprints before work transfers to the developers and QAs? Is there a danger of creating a mini-waterfall?

If we change the vertical axis of Figure 2 or Figure 3 to the percentage of time spent on a user story for each user role, we then see that product owners, designers, developers and QAs are on the two sides of the curve. However, they still need to work together. The only difference is the percentage of the time. (see Figure 4).

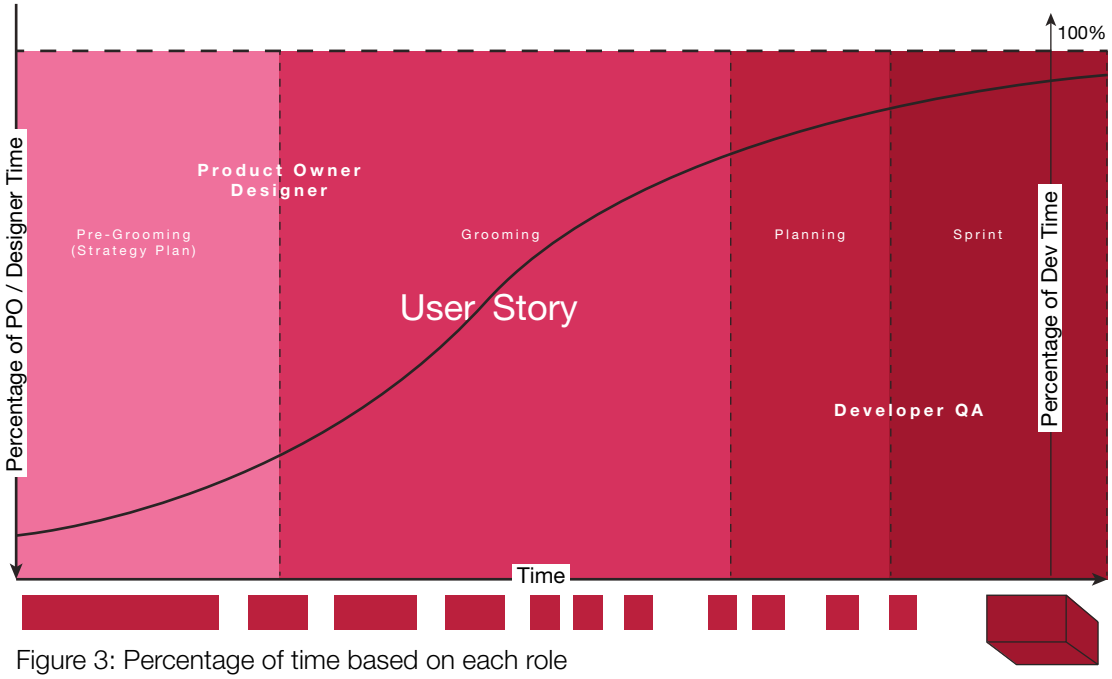

Figure 3: Percentage of time based on each role

At an early stage, when a user story is just a preliminary idea, the product owner and designers need to spend most of their time on ideation. During this time, there will likely be a need for developers and QAs to answer feasibility questions. Sometimes those questions can be very simple, requiring yes or no responses. Many articles discuss this early stage of collaboration (see references at the end of this paper). Figure 4 provides a more straightforward visual explanation.

As the user story moves through the grooming and planning, questions and further discussion will continue. For a two-week sprint, the total dedicated grooming and planning time can be as much as six hours. Each skill of a cross-functional Scrum team is critical during this time. All team members need to participate in the grooming and planning sessions—not just a subset of the team. With a mature Scrum team, cross-functionalism is deeply ingrained. Team members tend to contribute based on their skills, instead of their job titles.

Finally, when a user story goes into a sprint, the team has completed most of the ideation and design work. However, developers and QAs still need designers. Designers can answer questions or review in-progress results. If we look back to Figure 4, this aligns with the tail of the user story curve.

By following this approach, we prevent the traditional “hand over” in a waterfall environment. All team members collaborate with each other at every stage of user story’s evolution. The only difference is the level of involvement. With this model, designer, developers and QAs always work together (but may slightly focus on different aspects of the user story). There will be no “infeasible” design or “surprising” implementatio.

Conclusion

With an understanding of how user stories evolve within a Scrum framework, we can ensure a more collaborative way of integrating design practices. Designers work closely with product owners and other Scrum team members. Preliminary design work should relate to how many sprints of well-groomed work the Scrum team desires within the product backlog.

Additionally, preliminary design should be a team activity that involves everyone on a Scrum team. The percentage of designer time spent on a user story could decrease when the user story is closer to full implementation. However, no matter how low the percentage is, designers are always with the team and have time to answer questions or conduct a quick review, even when the work is in progress.

We hope the insight in this article can help Scrum teams better understand the Scrum framework and collaborate more effectively with designers.

References

- [1] UX Design in the Agile Environment: https://blog.prototypr.io/design-in-agile-2204c5943580
- [2] Doing UX in Agile World https://www.nngroup.com/articles/doing-ux-agile-world/

About the author

Jason Shi is an agile consultant and agile team builder with a passion for creating trusting and encouraging environments that help people unleash their potential. He has transitioned people from working groups to high-performance, cross-functional teams in a manner of weeks. In addition, he has built teams in a variety of work situations—from a single Scrum team to distributed Scrum teams with members from third-party vendors located in multiple countries. He has also worked with many Scrum teams within the areas of leadership, technology and people management. He loves being the driving force for agile transitions at small and large organizations with complex technical and business requirements.

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