**Sprint Review and Retrospective**

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Through my examination of the various Scrum-agile roles during the past several weeks, I learned how each of the roles on the team contributes to the success of the team. Each role that is part of the Scrum team has specific responsibilities to ensure the success of the project. For example, the product owner is responsible for creating and refining the product backlog. The tester is responsible for defining test cases that the product backlog items define, which are known as user stories. The developer uses these test cases as guidelines to ensure what they are developing meets the project’s definition of done and can pass the test-cases defined by the tester. The Scrum Master also has the vital role of facilitating the various scrum events. The Scrum master also ensures that the team has what it needs to perform their various jobs while ensuring that the team is communicating with each other. Each of the roles on a Scrum team is important and has a part in delivering quality products. In the SNHU (Southern New Hampshire University) Travel project, the Scum master attended all the meetings and acted as the role of facilitator.

The Scrum-agile approach we used for the SNHU Travel project helped each of the user stores on the product backlog come to completion. The user stories for this project were created based on feedback from potential end-users of the new product. The agile methodology provided the framework that allowed the product owner to evaluate information from end-users and then turn those feedback items into user stories that the developers can begin working on. The emphasis on communication and the fact that everyone had a specific role to play in the definition and eventual creation of user stories allowed everyone on the team to know what their role was throughout the software development life cycle and to ask questions of each other if there was any uncertainty as to what the user story is supposed to accomplish. Each user story was as simple as explaining from the user's point of view what the user would expect to see or what features they would expect to be present on the final product. For example, initially the product owner did not specify how they wanted the destinations displayed on the new application. Originally the developers were not sure if the product owner wanted the results displayed on the same page or if they should be displayed in a unique way. To resolve this issue, the tester crafted an email to the product owner with specific questions pertaining to how the destinations should be displayed and learned that the product owner preferred a slideshow format over listing multiple results on the same page. Because of the open communication between team members and various roles, the team was quickly able to clarify what the product owner expected, and the developers were able to implement the desired format in the product.

Agile supported the SNHU Travel project’s completion when the project was interrupted and changed direction. After the development team was finalizing the slideshow format that displayed the top five destinations, Christy, the product owner reached out to the team and informed us that the focus of the application would now be exclusively wellness and detox retreat destinations because of changes in market conditions. Since we were using an agile approach for this project, the team was able to hold a meeting where we discussed the new request from the product owner and the team was able to ask questions and establish how the change would affect the project. The tester was able to use this information to update the test cases to ensure the final product meets this new requirement. The developer was able to use the new test case to implement the changes to the product. In a traditional plan-driven or waterfall approach, making a major change like this late in the development cycle would have been a costly and time-consuming process that would have affected the quality of the final product. Scrum-agile's focus on effective communication and embracing changes provided the team with the resources to make the product stronger without losing much of the progress that was already made.

Communication is central to a successful agile approach. Having the ability to communicate clearly and concisely is critical to any role on the Scrum team. When communicating with the team, it is important to clearly state any questions you have in addition to any points that need clarity. Below are two sample pieces of communication that I sent while I was transitioning through the various roles on the Scrum team:

Example 1 – Email I sent in the role of tester to the product owner.

Dear Christy,

I finished reviewing the user stories and I am beginning to work on creating some test cases. I have a few questions and points I was hoping you could clarify to help me develop test cases. Any specific information you can provide will help make sure the test cases are well defined and understood by the team. Are you able to assist by answering a few questions?

User Story One:

• Should the vacation types be listed as hyperlinks, or should they be listed in a drop-down box?

• Should we allow the user to further filter the search results by specifying other factors such as secondarily sorting the results by destination popularity?

• Should the picture be the main focus?

◦ Is there a suggested size for the pictures that are displayed?

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Thanks,

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Example 2 - Reply I wrote to Sam, the Scrum Master in this example:

Good afternoon! I really like the idea of having Daniel, our product owner, join in for the daily Scrum and our various Scrum events. Even if Daniel is spectating our meetings, it will hopefully provide him with a clear line if sight into the progression of development throughout our sprints in addition to allowing him to provide the team with any valuable feedback he has. I am already in communication with Nick and other members of the team to make sure the developers and I are on the same page and are working together to make the best product possible for our product owner. I honestly believe the lack of communication under the traditional plan-driven method we are moving away from hindered our ability to stay on top of changes as the development process progresses.

In the first example, my goal was to keep the communication brief, while still clearly stating any questions I had regarding the user interface of the SNHU Travel site the team was developing. In the second example, I informed the Scrum master that I had been working closely with Nick and the other members of the development team to ensure that we were communicating effectively and working together as a team.

Effective communication skills, having a small team, and having a message board to communicate with the team helped the team’s success in the SNHU Travel project. The various Scrum events like the daily Scrum and the sprint planning sessions combined with the ability to communicate over the internet with the rest of the team was a key factor in the team's ability to complete the project. Without the Scrum events, the team would have worked more independently and would have been more hesitant to utilize communication tools such as our discussion boards. Every member of the team brings a unique perspective to the project. Without effective communication, the Scrum team’s growth will be slowed because the team will not share their experiences with one another. For example, if one person on the team makes a mistake that cost them time during a sprint, sharing this experience with the rest of the team could prevent another team member from repeating the same mistake. One more agile principle that allowed the team to be successful was that all the meetings for the SNHU Travel project were face-to-face meetings. Face-to-face meetings promote collaboration and increase team engagement.

Before making a conclusion of the effectiveness of the Scrum-agile approach for the SNHU Travel project, I want to quickly highlight the pros and cons of agile versus waterfall. A waterfall approach is a plan-driven approach. Using waterfall, the early planning phases of the project is much larger, and many details of the project are defined during early planning. Waterfall works well in projects with minimal uncertainty. Since many details are planned, changes are not welcome in waterfall because they can cause a significant amount of work which means lost time and increased project cost. In contrast, Agile is best used when a project has a higher level of uncertainty. Since changes are welcomed and supported by the agile framework, handling uncertain aspects of the project is no longer an issue and decreases the amount of initial planning needed when beginning a new project. (Cobb, 2015)

Considering the benefits and disadvantages of using an agile or waterfall-based approach, the agile approach used for the SNHU Travel project was effective. Agile was the best choice for this project. If the project used a waterfall approach, the team would not have been able to implement the changes the product owner requested after the development process was well underway as quickly or fluidly as we were able to by using Scrum-agile. The scrum events and communication tools we used during this project allowed the team to communicate with each other quickly and effectively. This allowed the team to complete the requested changes without sacrificing the progress that had already been completed. The developer and tester worked together to update the test cases and eventually the final product to meet the new directives given by the product owner. In a waterfall approach, this change would have required the team to re-evaluate the entire plan and to potentially require re-writing the entire plan and potentially throw away what has already been developed if it could not be easily changed to meet the new direction of the project. Agile provided the entire team with the framework and the tools needed to deliver the best possible product for our client.

**References**

Charles G. Cobb. (2015). *The Project Manager’s Guide to Mastering Agile: Principles and Practices for an Adaptive Approach*. Wiley.