7-1 Final Project: Sprint Review and Retrospective

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Abstract

This paper provides an overview of the CS-250 SNHU Development Travel Project that was completed for the fictional company named ChadaTech. Following the storyline of the project, the Team’s application of roles, developing user stories, handling of interruptions, communications, organizational tools, and evaluating the Agile process is reviewed from the vantage point of the Scrum Master. Based on the advantages of the method during the project and the pitfalls of the Waterfall method, the SDLC methodology that is most suited for the project is determined to be Scrum-Agile, and then a recommendation is given for ChadaTech to reconsider the types of projects it handles in order to help aid the company with its decision of whether to fully adopt an Agile development environment.

*Keywords*: SDLC, Agile, Scrum

7-1 Final Project: Sprint Review and Retrospective

This paper is the Sprint Review and Retrospective for the SNHU Travel project that was completed for the CS-250 Software Development Lifecycle (SDLC) course, and it is written from the perspective of the Scrum Master role. The project was mainly focused on exploring the different stages of the SDLC through the theoretical switching of a fictional company, ChadaTech, from a Waterfall development environment to an Agile development environment by using one team to test out the Agile process by developing an application for SNHU Travel, a mock travel agency desiring new booking tools in order to expand their client base, and the following is the summarization, analysis, and conclusions of the work completed for the project.

**SNHU Travel Project**

The team assigned to the SNHU Travel Project built a Scrum-Agile development environment throughout the construction of the project, and the Scrum Master for the SNHU Travel Project determined the examination of the Team’s success at applying roles, completing user stories, handling interruptions, communication, organizational tools, and evaluating Agile process would provide the best way to showcase the progress the Team made on the product and assess the benefits of using the Scrum-Agile SDLC methodology.

**Applying Roles**

As was documented in the Team Charter, the Scrum-Agile product development Team roles for the SNHU Travel project consisted of a Client, a Product Owner, a Scrum Master, a Tester, and a Developer. The Client role was fulfilled by the president of SNHU Travel, Amanda, who initially met with the Product Owner and the Scrum Master to effectively communicate the desires of the company to expand its customer base with niche booking tools. The Product Owner role, played by Christy, affably led the discussions with the Client and was also the main point of contact for all of the other stakeholders, as evidenced by her providing the informative update to the Team on the SNHU Travel management’s desire for a change of direction during the project. The Product Owner was also responsible for developing user stories during the project and the grooming of the backlog, which in this case, included removing old user stories, such as the initial Top Five Destination List and expertly reprioritizing the rest of the stories to make time for the change in requirements. The Scrum Master role, managed by Ron, helped to plan and guide the Scrum Events, which included Sprint Planning, Daily Standup, Backlog Refinement, Sprint Review, and Sprint Retrospective, and by attending all of the meetings as a mentor, ensuring the stakeholders and customer understood the Scrum and product development processes, supporting the Product Owner in backlog management, and being available to aid the Team for any training, the Scrum Master was able to remove all of the developmental impediments in order to guarantee that the Team had all the tools necessary to complete the project efficiently. The Tester role, enacted by Brian, was then left free to carefully construct test cases using test-driven development methods by examining the user stories in detail, and he was able to thoroughly revise the test cases as needed when additional scenarios were needed to remove ambiguity. The Developer role, performed by Nicole, was also able to focus entirely on defining tasks and completing each Sprint’s work to develop the features of the product, so she was not only able to produce a working version of the product based on the initial parameters, but she was able to quickly fulfill the management’s change in the requirements.

**Completing User Stories**

The SDLC of a Scrum-Agile approach, which includes a cycle containing the phases planning, designing, developing, testing, deployment, reviewing, and launching (SNHU, n.d.), helped each of the user stories to come to completion over the life of the project by aligning the function of the Team’s roles with the development process of the stories during the Sprints. The Product Owner, with the help of the Scrum Master, did the planning and designing of the user stories for the project, as well as the management of the backlog for the Sprints, which helped to prioritize the stories for an upcoming Sprint, such as when the Top Five Destination List was chosen to be completed. The Product Owner and the Team also did the Sprint Planning, which determined, by estimation, the stories to be completed during the following Sprint, and it allowed the Developer to set the tasks for the Sprint. The Tester wrote the tests for the user stories that were chosen for the particular Sprint, which can be seen in how there was a specific test case developed for every user story for the project, and the Developer developed the features of the product using the user stories and test cases. Both the acceptance of the features by the Product Owner of the product developed from the user stories for deployment, which can be seen when the Top Five Destination List was not deployed, and the review conducted by the entire Team of how the user stories were handled, which led to better management of the stories in the following Sprint, were accomplished during Sprint Review.

**Handling Interruptions**

By using a Scrum-Agile cyclic approach to the SDLC, the Team was able to complete each of the user stories incrementally by priority, and this allowed it to change the product during its development. The Product Owner was able reprioritize the user stories to make room for the new requirements to take precedence over less important features for the product. Since there was not extensive documentation in place for the original design and the Team was not too far along into the development of the project, the Team was able to switch directions without having to spend a lot of time correcting previous work. This can be seen with how the Top Five Destination List being changed to the Top Five Wellness Destination Slide Show was a simple matter of altering the code and including different pictures. Besides the Product Owner’s backlog grooming then, it was just an issue of adjusting the user stories to the new requirements and revising the tests for them, and the Team was able to seamlessly insert them back into the next Sprint.

**Communication**

Collaboration is an essential quality of a Scrum-Agile approach, and effective communication is vital to ensuring the timely progression of the project. While face-to-face communication is the preferred method for Agile, any form of communication, such as video chats, conference calls, and emails, can be an appropriate method depending upon the team. For this project, it was determined, due to extenuating circumstances, that emails were the best method of contact outside of the scheduled meetings. One sample email that was written by the Tester to the Product Owner included a message about how the user stories could be improved, as displayed here:

To: Christy

Subject: User Story Clarifications

Dear Christy,

**CS 250 Module Four Tester Email**

While reviewing the user stories being used to develop the test cases for the product, I found that there were multiple details lacking in each story. Would you please provide me with further clarification on the following points:

**User Story One**

* + Would you like a heading for the list?
  + Are we going to provide other filter options in the sidebar?
  + Should the list be expandable or fixed?

**User Story Three**

* + Should all of the destinations be listed on the homepage, or would a slideshow be preferable? If a slideshow is wanted, how many destinations should appear on the page at one time?
  + Will the list be for a particular type of vacation or for all types?
  + Will there be a way for a user to alter what the list is based on?
  + What length would you like the descriptions of the destinations to be?

**User Story Five**

* + Do you want to include every customization option the site offers in the settings?
  + Will we also offer a filter based on user ratings?
  + When will the customizations be applied?
  + Will the customizations be applied to both the homepage lists and the vacation packages display pages?

Thank you,

Brian

This email shows how the Product Owner and the Tester productively used the communication method in order to collaborate on improving both the user stories and the test cases. Since the rest of the Team was not involved in the topics of the email, discussing the issues at a scheduled meeting would have caused too much of a diversion, but as the problems did need to be addressed, the email served both to unite the two roles in the phases of the process and to limit the amount of time spent doing so. These simplifications may also be achieved by sending emails to several members of the Team, as can be seen in another example of an email, which was written by the Developer to the Product Owner and the Tester:

To: Christy

Brian

Subject: User Story Clarifications

Dear Christy and Brian,

**SNHU Travel Update Development Requests**

Before I am able to start working on making the changes to the product, I will need for Christy to provide me with the updated user stories, and afterwards, for Brian to give me the revised test cases. When considering the information that I will need in order to update the code to reflect the changes that were requested by the SNHU travel management team, I determined I will need the following points to be considered for the user stories:

**User Story Five**

* + Should people be present in the photos doing wellness activities?
  + Can multiple images be used in one photo to display the intent?
  + Should the wellness/detox vacation theme be easily changed?
  + Should the photos be reusable throughout the site?
  + Are the features going to be included in the profile case?

Please let me know if you need any clarification on these questions or if my perceptions about the overall direction of the product with this feature included appears to be off in any way.

Thank you,

Nicole

Again, while a scheduled meeting would have been unnecessarily time-consuming, the communication of the status of the particular team members involved after the project’s course was altered helped them to be able to collaborate on the author’s concerns to make the next cycle run more smoothly.

**Organizational Tools**

While email was one worthwhile communication tool that was utilized in the project, other more effectual tools, such as the Daily Standup meetings at 9:00 a.m. and the task board, which was updated daily, were also constructively maintained over the life of the project. The Daily Standup meetings allowed the Team to deliver face-to-face updates on the project information, which followed the recommendation provided by the sixth Agile principle, and the task board, which was updated daily, helped the Team to adhere to the eighth Agile principle by maintaining their rate of progress (Agile Alliance, 2022). The product owner also used the tool of a Focus Group and a face-to-face meeting with management in order to gather information to create and revise user stories for use in the Sprint Planning events, which displayed both the willingness of the Team to change the requirements, as the second Agile principle advocates, and to guarantee the first Agile principle of customer satisfaction above all else (Agile Alliance, 2022).

**Evaluating Agile Process**

Accordingly, there were several positive aspects of using an incremental Scrum-Agile approach for the project, which included an increase in Team collaboration and product testing, but there were a few negative concerns, as well, such as an inability to fix the timeline and the budget of the project. These are certainly aspects that would need to be taken into consideration when determining which approach to take for future projects. However, the main benefit of using the Scrum-agile approach during the project was that it allowed the Team to easily change the direction of the product when the management wanted to add a Wellness/Detox theme to the booking tools. In a Waterfall approach, the extensive documentation of the requirements and the design work completed prior to the development phase would ensure that making the alterations was an unobtainable goal given the supported release date of the initial version of the product. The cost of making the changes would have also exceeded the budget set if a waterfall method had been used since the project would have had to be restarted. More overly, the customer probably would have not been involved enough in the project to recognize her desire for a different version, and consequently, the realization would have likely occurred after the full release of the product, which would have caused the company to miss the goal of having the booking tools in time for the vacation season. As a result, the Scrum-agile approach was the best approach for the SNHU Travel development project to take in order to be able to achieve the Client's aims.

**Conclusion and Recommendation**

After the evaluation of the progress of the SNHU Travel project and the determination of the appropriateness of the Scrum-Agile methodology for it, it can be seen that while the success of this particular project was contingent on factors that were best addressed by an Agile method, the effects of this report suggest that there may be circumstances where a different approach may be warranted. While Agile was better in this case, it would not always be the preferable approach, since as it was previously alluded to, the Waterfall method could be useful when innovation and customer involvement would not majorly influence a project's success. Therefore, based on these results, the company would be well advised to reconsider the entire range of its future projects to gauge the suitability of moving forward with a strictly Scrum-Agile development environment.

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