**Final Project**

Tiffany Thai

CS 250 Software Development Lifecycle

Professor Deron Dantzler

June 18, 2023

This Sprint Review and Retrospective analysis provides an overview of the SNHU Travel project, which was developed using a Scrum-agile approach. Our goal as the pilot team was to assess the overall effectiveness of Scrum and its impact on the project's success. This overview highlights the contributions of each team member, how the Scrum-agile approach facilitated the completion of user stories, the tools the team utilized during development. The insights gained from this pilot project will provide valuable information for ChadaTech in determining the suitability of such approach for future software development endeavors.

Throughout the project, each role on the team played a crucial part in its success. Starting with the Product Owner, they were responsible for setting the project vision and prioritizing user stories. They effectively communicated with stakeholders to gather requirements and provided clear acceptance criteria for each user story. During Sprint Planning meetings, the Product Owner ensured that user stories related to core functionality were given the highest priority, which allowed the team to deliver a minimum viable product.

As the Scrum Master, I facilitated the Scrum events and ensured that the team adhered to agile principles and the Scrum framework. I created an environment that fostered collaboration, provided coaching to team members when needed, and removed any impediments that hindered progress. For instance, when a team member faced a technical challenge, I helped organize a knowledge-sharing session where another team member with relevant expertise provided guidance. As a Scrum Master, I tried my best to empower the team to work efficiently, overcome challenges, and consistently deliver value.

The development team consisted of skilled individuals with diverse expertise, such as developers and quality assurance engineers. The developers' contribution to the project was crucial. They utilized their technical expertise to implement features, adapt to changes, and collaborate with the team. Their skills in writing clean code, participating in code reviews, and resolving bugs ensured the application's reliability. They communicated progress in daily stand-ups and provided valuable insights during retrospectives.

As for the tester, they made valuable contributions through their diligent quality assurance efforts, early detection of bugs, test planning, and effective communication. They meticulously tested each user story, ensuring that implemented features met acceptance criteria. By actively collaborating with the developers, they identified and reported defects early on. They provided clear and detailed bug reports, speeding up the debugging process immensely.

The Scrum-agile approach to the Software Development Life Cycle (SDLC) played a pivotal role in ensuring the successful completion of each user story within the project. By leveraging the iterative and collaborative nature of Scrum, the team was able to deliver value incrementally and respond effectively to changing requirements.

The use of user stories as a primary artifact in Scrum facilitated a clear understanding of the features required by the project. Each user story was broken down into manageable tasks. For instance, when working on the user story "As a user, I want to be able to see the top five destinations on the homepage, so that I can choose from popular travel options", we identified specific tasks such as designing the list interface and implementing each slide to include the destination's details. The granularity in task breakdown allowed the team to track progress and ensure each aspect of the user story was addressed.

The short time frames of Sprints, typically two weeks, helped maintain focus and create a sense of urgency within the team. This timeboxing aspect of Scrum encouraged the team to prioritize tasks and deliver tangible results regularly. Setting a clear goal for the Sprint also helped the team complete the necessary development and conduct testing promptly.

The Daily Stand-up meetings played a crucial role in promoting transparency, coordination, and issue resolution. During these short daily meetings, each team member shared progress updates, identified any impediments and dependencies, and sought support from the team. This open communication helped address any roadblocks and kept everyone aligned with the project's goals.

The Scrum-agile approach proved especially beneficial in supporting the completion of the project even when unexpected interruptions and changes in directions occurred. One notable instance was when the Product Owner requested a major change to the application: the focus of the travel booking tool to be detox and wellness travel. This change required adjustments to the existing roadmap since the feature had already been worked on. However, due to the flexibility inherent in the Scrum framework, we were able to adapt to the change effectively.

The flexibility of the Scrum framework lies in its iterative nature, adaptive planning, continuous feedback loops, and emphasis on collaboration. It enabled us to adapt quickly, reprioritize user stories, and adjust the Sprint backlog to accommodate the new requirements. Specifically, the daily stand-up meetings facilitated coordination and collaboration, which allowed us to refine a solution incrementally. Ultimately, the Scrum-agile approach proved to be effective in navigating unexpected changes and ensuring the successful completion of the project.

Communication within the team was effective because it was clear and proactive. By keeping team members informed, addressing potential challenges, and inviting open dialogue, everyone felt supported and empowered to contribute their ideas and insights. This facilitated collaboration, knowledge sharing, and problem-solving, leading to a more cohesive and productive team dynamic.

A dependency between the travel booking feature and the payment integration was identified. To ensure smooth progress, I reached out to the developer responsible for the booking feature as well as the developer from the payment team and scheduled a quick sync-up this afternoon. Then, I updated the team at the stand-up meeting. By proactively addressing a dependency that could potentially hinder progress, I ensured that everyone was aware of the situation. This approach fostered a collaborative environment where team members felt comfortable sharing their challenges and seeking support, leading to timely issue resolution and smoother progress.

The use of organizational tools such as the sprint backlog and burndown chart provided us with clear visibility into project requirements, tasks, and progress. These tools facilitated effective prioritization and allocation of work, ensuring that the team stayed focused on delivering value. In addition to organizational tools, management tools like Jira and Trello also greatly contributed to the team's success. Jira's robust features enabled the team to effectively plan, track, and manage work. The team utilized these tools to create and prioritize user stories, assign tasks to team members, and track progress throughout each sprint.

Scrum principles played a crucial role in the team's success. The principles of transparency, inspection, and adaptation fostered a collaborative and iterative approach that helped us navigate the project's complexities effectively. By emphasizing transparency, we ensured that all team members had a clear understanding of project goals. Regular inspection allowed us to continuously evaluate our work, identify issues early on, and make necessary adjustments to stay on track. The principle of adaptation enabled us to be responsive to changes in requirements. The focus on delivering value incrementally and embracing feedback allowed us to build a product that met the expectations of stakeholders and delivered tangible business value. Overall, the Scrum principles provided us with a solid foundation for collaboration, flexibility, and continuous improvement, enabling our team to achieve success in the project.

In conclusion, the Scrum-agile approach proved to be highly effective for the SNHU Travel project, offering numerous advantages while presenting a few challenges along the way. One of the notable benefits was the iterative and incremental nature of Scrum, allowing us to deliver value to the client in shorter cycles. The regular Scrum events, such as Sprint Planning, Daily Stand-ups, and Retrospectives, fostered transparency, communication, and continuous improvement. By embracing the Scrum-agile principles of adaptation and inspection, we were able to address emerging risks, adjust our approach, and deliver a product that met the evolving needs of the client.

However, it is important to acknowledge that the Scrum-agile approach also presented a few challenges. Adapting to the self-organizing nature of Scrum required a shift in mindset and the need for effective collaboration and decision-making within the team. Additionally, ensuring clear communication and alignment with stakeholders throughout the project required active involvement and participation from the Product Owner.

Considering the overall outcomes, it can be concluded that the Scrum-agile approach was the best fit for the SNHU Travel project. Its emphasis on iterative development, flexibility, and continuous feedback enabled us to effectively manage evolving requirements, embrace changes, and deliver a valuable product. The collaborative nature of Scrum facilitated effective teamwork, transparency, and adaptability, leading to successful project completion. While there were challenges, the benefits of the Scrum-agile approach outweighed them, making it the most suitable and effective approach for the SNHU Travel project.