

Final Sprint Review & Retrospective

I changed the SNHU Travel App Top 5 Destinations page format from a simple list to a slide show one and switched the focus of travel to that of detox and wellness. All images were switched out with royalty-free (free-to-use) images obtained through Wikimedia Commons at: <https://commons.wikimedia.org/w/index.php?search=&title=Special:MediaSearch&go=Go&type=image>. The program runs without any detectable error and loops back to the beginning once the end is reached. A black and gray color-scheme is used in the text descriptions of each location. All sprint goals and objectives have been reached and are considered “done”. Now, feedback from shareholders may be gathered and used in the Product Backlog (if necessary) and will be utilized in the following Sprint Retrospective.

This project used the agile methodology (Agile Manifesto) and the Scrum framework for its software development lifecycle (SDLC), instead of the existing waterfall approach. As the Scrum Master, I facilitated communication and collaboration with daily standups, Sprint Planning, Sprint Reviews, and Sprint Retrospectives, and acted as coach and mentor to the entire team to ensure everyone follows Agile-Scrum principles and practices appropriately and that no barriers remain in the way.

The Product Owner creates and communicates with the team so that they understand the Product Backlog Items (PBIs) of business requirements and how they can be broken down into appropriate user stories. The Product Owner is also responsible for Product Backlog Grooming (facilitated by the Scrum Master), which must be done before Sprint Planning by the team.

Backlog grooming includes creating, splitting, removing, prioritizing, and sizing user stories, and assigning estimates based on story points and team velocity.

The development team is responsible for creating a usable product. The team created an Agile Team Charter to describe the high-level vision, description, names/roles, communications (Scrum events), success criteria, rules, risks, business vision (value to attain), and mission statement (result to accomplish). A software design document (SDD) was created and included an executive summary, requirements, design constraints (technical and business), system architecture, domain model, evaluation, and recommendations.

Along with these, a design doc (tech spec) was created to describe the technical implementation of the software features and get feedback prior to implementation. This includes not only contact information and dates, but goals, measurable milestones, solutions (existing and otherwise), questions, scoping (work required), and diagrams. Although the Product Owner defines the functional requirements, the development team defines non-functional requirements and design details, such as physical system design, performance, security, cultural and political).

The development team was responsible for estimating the effort required (scope) to complete the PBIs and for creating a Sprint Backlog to outline the work to be done during each Sprint. User stories are broken down into individual tasks to be completed by the developers. Testers use a User Acceptance Test at the end of each Sprint, based on the Acceptance Criteria and Definition of Done (DoD), which they also take advantage of during development with the team. During each daily stand-up, the members must each answer the questions: What did I do? What will I do? What impedes me?

The Agile-Scrum approach to SDLC helped the team stay focused on features that brought the most value to the shareholders and end users. Development was quick and iterative, delivering value and satisfaction to the customers on a regular basis. Communication and collaboration helped make sure everyone was on the same page in practically real-time, which resulted in less waste any time there was an interruption or change to the project. Through meeting with shareholders and users, it was apparent that the SNHU Travel app had an extremely high demand for a “Top Destinations” link. One particular change involved switching from single page to slideshow format in the SNHU Travel app. Instead of wasting time with any more unnecessary development, the focus was easily switched to accommodate the newly requested format.

Communications were made via meetings, project management tools, and email. Developers communicate with testers to inquire about tests (including edge cases) that define “pass” and “fail” scenarios. As a software developer, communication like this was seen in the project when emailing Christy (Product Owner) and Brian (tester) in a development request. In the email, each recipient was specifically addressed for information that was needed, using a numbered point format. A clear ‘Subject’, along with implicitly naming each recipient (inside the body of the email as well) made sure communication was clear and would lead to a proper response from each recipient. The product tester sent a similar email to the Product Owner using a clear subject of ‘User Story Template (suggestion)’ and implicitly stated “I look forward to hearing back from you, soon!” to provoke a response from the recipient.

During Sprint Planning, a team can use a project management tool such as Atlassian Jira (<https://www.atlassian.com/software/jira>) to track issues and progress updates in real time and provides tools for online reporting, such as a Kanban board for visualizing work or even a Scrum board. Some other tools that can be utilized are velocity and burn down/up charts (typically at

the end of each Sprint). Velocity is calculated by adding up story points (amount of effort) completed in each Sprint. This would allow forecasting schedule and budget (revised each iteration) and agile estimation using methods such as planning poker and affinity grouping (grouping items of similar size).

These practices and their achieved results throughout this SDLC of the SNHU Travel app were products of using the Scrum framework (Schwaber & Sutherland, 2020) with the agile values found in the Agile Manifesto (Beck, 2001):

Scrum Empirical Pillars

- Transparency, Inspection, Adaptation

Scrum Values

- Commitment, Focus, Openness, Respect, Courage

Agile Values

- individuals and interactions over processes and tools
- working software over comprehensive documentation
- customer collaboration over contract negotiation
- responding to change over following a plan

Aside from the aforementioned benefits of the Scrum-agile approach, disadvantages may arise if not all members of the team are fully committed, as this approach relies heavily on communication and collaboration. I personally believe this was the best approach to use for development of the SNHU Travel app, because it allowed changing the graphical user interface (GUI) at any given moment, without any major disruption to the development process. This

minimizes waste and increases customer satisfaction, due to the higher frequency of valuable deliverables. A waterfall (traditional project management) framework isn't optimized for changes and adaptation in the way that Scrum is designed. Scrum also allowed for transparency, inspection, and much flexibility!

Matthew Pool

Scrum Master