The move to Scrum-Agile was an overall benefit for both SNHU Travel and its users. Agile is centered on implementing user-oriented features as fast as responsibly possible and reacting to feedback to create an ideal experience for users. Scrum roles are essential to this process, as with everyone completing the specific tasks that their role requires and allows the team to move at a break-neck pace throughout the development process. Starting with the product owner, their role is to effectively translate the vision for the overall product into working tasks and ensure the underlying scrum team has all the tools and knowledge to complete the work at hand. They are a buffer between the users and stakeholders, translating feedback and conversations with users into user stories. Naturally, the product owner is also responsible for creating and grooming the product backlog, adding user stories to it as appropriate. The scrum master is a servant leader, responsible for leading the development team, taking tasks from the product backlog to assign them as sprint tasks, and working to mitigate any problems the development team may encounter while working. Focusing on scrum events that relate to sprints, such as sprint planning and reviews, the scrum master helps to set the pace of the sprints while maintaining transparency through their duration acting as the development team's point of contact for any questions that arise during the sprint. Pivoting to the internal stakeholders of the project, the development team is responsible for doing the work. Unlike the waterfall model, testers and developers are seen as one unit, with testing integrated directly alongside the development work so thoroughly tested and working module are delivered at the end of each sprint, rather than passing the work over the proverbial wall to the testing team. Developers are responsible for shipping a clean, tested, and working product at the end of each sprint.

User stories are the primary vehicle of development, driving progress by laying out user feedback concisely. From my experience, the user stories gave detailed criteria for success, and specific testing steps to ensure everything is functioning as expected. This is invaluable to the workflow, as having to pause to debate over what an item is or how it should be implemented stops progress dead in its tracks. The stories provided for SNHU Travel followed this template, as they contained the specific features to implement, and exact steps that a tester should follow to verify if development was successful. Scrum-Agile utilizes each scrum role to take a need from the user, and develop it into a deliverable product, tasking the product owner with interacting with users and creating the user story, passing it to the scrum master to slot into a sprint and clarify any points the team might have questions on, and then finally to the developers for implementation and testing.

As the developers work through the sprint, keeping their workload as clear as possible is an ongoing challenge. Agile methodology employs tactics to ensure that the developers can carry on with as little interruptions as possible. Scrum events such as sprint planning and daily scrum meetings attempt to mitigate interruptions via planning, Sprint planning lays a roadmap for the work ahead, and planning buffer time into the sprint before it begins gives the team some wiggle room for problems that arise through the course of the sprint. Daily scrum meetings hold everyone accountable and give opportunities for team members to alert the team to any difficulties or problems they have encountered, so that they can get the tools or help they need to overcome them. The product owner takes responsibility for mitigating interruptions, filtering requests to keep the team focused on the tasks at hand. Interruptions should only be considered if an urgent matter arises, if a problem is not an immediate issue, the product owner should add it to the backlog and account for it in future sprints. The team relies on agile roles to maintain focus on the project, and field only relevant tasks to interrupt the plan for the current sprint.

Collaboration is at the forefront of agile methodology, communication begets collaborative efforts, and as such is also an essential skill that a scrum team needs to account for. Scrum events help to coordinate team-wide communication, with planning periods and daily scrum meetings giving the team a high-level overview of the project. We utilized a discussion board for our agile adoption, aggregating opinions on which practices would suit the team well. This discussion allowed us to determine what would work best for SNHU Travel, stating how our personal and professional values would come into play, and creating a space where the input of every team member was valued. We also utilized user stories and sent a few emails for clarification regarding the stories, staying connected with one another and the users through these methods. A sample email concerning clarification of a user story is provided below.

*Good afternoon, Cindy, I am reaching out to you to clarify a few points surrounding recommendations. To implement this system, I wanted to ask a few questions surrounding how the users would like to engage with a recommendation system. Do users want only recommendations based on prior travel, or would they prefer to set a trip category and average pricing for their recommended list? Would users prefer an opt-in to recommendations, or should an enroll in such a system come standard when creating an account? Finally, this is a large task, can you poll some other potential users and see how important this system is? It might best be left to a future sprint, as these features do not neatly piggyback on planned infrastructure. Please get back to me when you have the opportunity, and thank you for your time.* (Adler, 2024).

Scrum events and tools have helped to keep things on track. The adoption of JIRA to standardize ticket processing and error logging has been instrumental in keeping the workflow smooth and uninterrupted. Allowing the product owner to field through these tickets to decide if a matter is pressing enough to qualify for sprint buffer time keeps the team working through sprint items. A scrum board acts as an information radiator for our team, everyone has quick access to current and upcoming events. While daily scrums and retrospectives are valuable tools for our team and its communication, these organizational keep everyone up to date and ensure that handling any problems through the ticketing system do not hamper the pace of the sprint.   
 The move to agile was a success for SNHU Travel. We have encountered some difficulties, getting everyone up to speed on using JIRA was a challenge, and gaining accurate estimations for projects is still something we are working out. Integrating testing alongside development was an adjustment for established developers, and our development team is still working on how best to collaborate to ensure that all code that is produced comes with built-in and passing tests. The benefits of switching practices far outweigh the few speedbumps the team has encountered so far. We no longer have islands of work, and utilizing every team member’s time effectively encourages collaboration and makes them feel valued to the company. Workplace morale is far better as a result. Scrum events give the team a clear outline of the work that is expected, and user stories allow them to cater this work to the users, with clean and tested code to back features that users have indicated they want to see from the website. Non-technical executives are also pleased with the change, as they now have a clear roadmap for the work ahead, and a dedicated point of contact in the product owner to bridge the gap between executives and the development team.

**References**

Adler R. (2024). CS250 Module 4 Journal [Unpublished Paper]. Southern New Hampshire University.