7-1 Final Project

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Roles in all industries are essential, and using the agile method in product production provides a great baseline for the industry. Agile roles ease communication, streamline production, and devise strategy. The roles consist of the product owner, the scrum master(s), developers, and testers. When it comes to product owners, there is one per product, as that will allow a product to be prioritized by a single individual in contact with the customer to prevent a conflict of interest. The product owner represents the customer and defines the deliverables of the project. The SNHU (Southern New Hampshire University) travel project is a good example, as the customer decided they want to feature the top 5 detox/wellness vacations over the top 10 destinations in the form of a slideshow instead of a list. The product owner received this information and promptly notified the team to update the project's priorities. As for the scrum master, a team has one scrum master, but a scrum master may be part of multiple teams. The scrum master serves as the team's servant leader, meaning they help the team, organize the team and host meetings such as the daily stand-up and sprint planning meetings. During these meetings, the scrum master handles interruptions, impediments, and changes as needed. When it comes to the developers, there are often multiple developers, but it can depend on the project’s scope, even so there is always at least one. The developers build the product and have responsibilities that typically are in the line of programming and debugging the product. Testers also consist of multiple people who have this role in most cases, depending on the scope of the project. The testers focus on testing the product to find bugs and flaws, as well as help the developers debug. Testers also will work with product owners to define acceptance criteria.

User stories as a tool are valuable in the agile process. User stories create the outline of the project to make said project more manageable by devising it into short parts, called stories. Each story should be short, and only take 1 day on average, 2 days max to complete. They create the backlog of the project and can be added/removed as required. The team determines what percentage of the entire story that can be completed within the sprint. Each story has a set number of points set to it when it is added to the backlog. Every day, there is a stand-up meeting to update the backlog as needed, such as adding new user stories or updating on the progress of completing the user stories. As such, if an issue arises it can be discussed in this meeting. After discussion, the user stories can be adjusted, as necessary. Scrum software can also be used to complete this, but it is best to communicate face-to-face to declare your intents as clearly as possible, to prevent confusion. During the sprint, the requirements may change, as this is a part of the agile process. This may change the priority of the user stories and the stories themselves. Designing the stories to be completed in a short amount of time allows flexibility to prioritize completing specific parts of the project during the sprint. A good example of flexibility also comes from the updated requirement to feature the top 5 detox/wellness vacations in the form of a slideshow. The team was able to quickly adjust the design to feature these types of vacations and switched from a list to a slideshow quickly.

A change in direction is often unavoidable, and an interruption is almost guaranteed to happen during the spring process. The agile method is designed to handle this change in direction as well as interruptions effectively and excels at accomplishing this feat. The scrum master has the role of handling interruptions but the methods of handling them can vary per team and per person. They can designate specific user stories to have a higher priority and help the team designate which story goes to which member(s) in the case there are several developers. Speaking of this, the scrum master can also help pair up developers to accomplish this more efficiently and make up one another’s weak points if the developers lack familiarity with each other or need assistance with this. The daily stand-up is the time this would be handled, as well as when the user stories are updated as needed to due to the interruption and announce interruptions and reprioritizations. Agile is the best method for allowing the customer to get the product they want and changes in as needed. The product owner handles the communications between the team and the customer, explaining the processes used and priorities made at a high level, listening to the customers' requests, then conversing with the scrum master on clarity if it is not a substantial change, or the entire team in some cases if it may be substantial. Even with all these methods in place, interruptions may still have negative consequences as it can increase the pressure on the development team. A biproduct of the changes may be an increase in creativity due to a less monotonous workload, due to fast paced changes in the product itself. Interruptions had in the SNHU travel project include the type of vacations to be focused on release, and the change from a list to a slideshow. The daily stand-up is the solution used to update the user stories needed to due to the interruption and announce interruptions and reprioritizations, and it is highly effective at doing so.

Communication is essential in all forms of industries, and there are many different communication methods used. The best of the methods in the case of product development is face-to-face communication. Following this, emails and over-the-phone/video meetings are also important and highly utilized in the agile method. Face-to-face communication has been proven as the most effective method as a situation can quickly be explained and fewer misunderstandings will happen. Transparency is also improved with the team as body language allows a better understanding of one another, even when someone may not have strong skills at understanding another's body language. It can allow a person to understand more than just words said, resulting in clarity on something that may be confusing just by seeing the another’s actions or reactions to words spoken. This also allows for a timely response rather than the delay that may be caused due to an email chain and allows a higher level of focus on the conversation to get a deeper understanding. Emails are effective at reiterating a meeting or condensing meetings, allowing team members to get a grasp or a reminder of the situation. It is also effective for asking questions in a more formatted way, such as when the development team emailed the product owner in the SNHU travel project to clarify user stories and ask questions to ensure that the customer is satisfied with the stories.

The tools used in agile are essential, as they streamline organization, prioritization, and reporting completion of parts and timeline of the project. One of the primary tools used is the product backlog, which can be used through a suite such as Microsoft Azure or Jira. The backlog contains the blueprint of the project and is typically created in a sprint planning meeting. It also contains the data regarding the stories such as priority, completion, and current working status. The sprint planning meeting is a tool that gives the team the chance to decide the sprint's scope, create the initial backlog, and assign user story points. The backlog can also be adjusted during this, if necessary, as items may be moved to completed, added, or adjusted. The daily stand-up meetings are also another useful tool as what was accomplished the prior day, what is planned to be accomplished on the current day, and what impediments have been encountered are all discussed in a timely manner. The daily stand-up can also have time allotted to adjust the backlog, as necessary. During a daily stand-up for the SNHU travel, the backlog was updated to prioritize the changes made by the customer, such as the change from a list to a slideshow and the change to detox/wellness vacations.

The effectiveness of the scrum-agile approach is mostly positive, but there are some negatives of the approach. In the case of the SNHU project, the scope of was small enough where it would be the most effective methodology to take. Each part was not large individually, accompanied by the fact there were few parts in total. This allowed scrum-agile to be the superior method due to changes needed to be made at a substantial rate. The drawbacks to the scum-agile approach are that the Development process usually drags on longer than the original date estimated to the customer. The benefits often outweigh this, as the customer gets the exact product they want in the end. Even if the timeline is delayed, the waterfall method would often end up needing updates and not be the product the customer needed, causing a delay in deployment for the customer. Continuous improvement is prioritized over a definitive deadline as fixing a project later can often result in a less maintainable project with more issues once deployed. Features in scrum-agile can be added, changed, or removed as needed, and the team works on more manageable pieces of the project at a time. This allows for a more complete project to be deployed once complete.