**How Agile Could Be Used To**

**Enhance The Development**

**Of Our Project**

**BHSC 2**

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The project that our team worked on was to develop a small racing car tournament which takes place within the online world of Minecraft. The team collaborated well on the project but the process that we used could have been much better. First, we held a team meeting at the beginning of the project where we outlined the work and tasks that needed to be done. Then we divided up the workload into different segments that each of us could work on. We set up a WhatsApp messaging group so that the team could easily communicate with each other and have any questions answered quickly. Then each member of the team worked on their segment until it was completed. At the end of the process we combined each of our respective segments together and corrected any errors or problems. This method did work, and we did manage to get the project completed, but looking back at the process with hindsight, we could have used a much more efficient methodology.

The Agile methodology is a form of project management process, primarily used for software development, where demands and solutions develop through the cooperative effort of self-organizing and cross-functional teams and their clients. The Agile methodology builds upon the values and principles of the Agile Manifesto. It was created to provide an alternative to the inefficiencies of traditional development approaches such as the Waterfall method. There are several frameworks associated with Agile project management that can be used to develop and deliver a product or service. One of the most popular frameworks that support the Agile development life cycle is Scrum. Scrum is an Agile framework that is used to implement the ideas behind Agile software development. It was conceived by Jeff Sutherland and Ken Schwaber who were also part of the team created the Agile manifesto. Scrum is made up of these five values - commitment, courage, focus, openness, and respect. Its purpose is to develop, deliver, and sustain complex products through collaboration, accountability, and iterative progress.

The principles of the Agile development process could be used to enhance the development of our project in several ways. One of the principles of Agile is to provide customer satisfaction through early and continuous delivery of valuable software. Lisa Crispen and Janet Gregory describe the agile process as delivering value in small releases that describe exactly the functionality that the customer has most recently prioritized (Crispen & Gregory 2014). This means that instead of taking our separate segments and then going off and working on them until completion, we would be able to provide smaller working versions of the project on a more regular basis. This would help us to get a much greater understanding of the requirements and needs of customers and stakeholders. The fact that the working versions of the project would be produced on a continuous basis means that we could get consistent up-to-date feedback and could constantly fine tune the product to meet the customers needs.

Another Agile principal is that business people and developers should work together daily throughout the project. This would provide us with even more opportunity to engage with stakeholders in addition to just showing them the prototype and working versions at regular intervals. This principal would also insure that the project is constantly kept on track from the business perspective and not just the development perspective. This was not the case with the approach that we used when we worked on our project. By just dividing up the project between us and not involving anybody else until completion of the project we were unable to take the views of business people onboard until much later on. By this stage it would have be much more difficult and also expensive to make any alterations to cater for different views or opinions.

The Agile methodology also promotes and encourages collaboration and teamwork especially when combined with a sub methodology like Scrum. One of the Agile principles recommends building projects around motivated individuals and giving them the environment and support they need and trusting them to get the job done. Lisa Crispen highlights the importance of the team by saying the team is more than just individual members. Agile values and principles promote a focus on the people involved in a project and how they interact and communicate (Crispen & Gregory 2014). Although our team did have an initial planning meeting also divided the tasks into separate segments to be worked on by each member of the team we never created a product backlog list. This is a list that contains all of the functionality items to be implemented in the project. This list is owned by the owner of the product or the product manager.

We could have also used another Agile technique called sprints. We could have held daily Scrum meetings to monitor progress. We could then agree on a timeframe (Sprint) to work within before the next meeting and set targets or goals to be achieved before then. We would then be able to review the work that we had done during the previous sprint and then put any incomplete tasks on to the sprint backlog list. The team would also be able to have a visual representation of their progress by using a sprint burndown chart. This would be a great motivational tool and would also help with team morale.

Another Agile principle is that the best architectures, requirements, and designs emerge from self-organizing teams. This is a big area of focus within the Agile software development community. The fact that these teams are described as self-organised does not mean that they do not require a manager or management. It means that those teams are cross-functional. The teams do not have to have precise roles but when you assemble the team together, you make sure that you have all the required skill sets between the team to be able to work on all of the tasks that may be required throughout the duration of the project..

It is up to the manager to make sure team members have, or can acquire, the right skill sets. Managers provide the environment that allows the team to be successful. Managers mostly step back and let their team figure out how they are going to deliver products, but they step in when the teams try but are unable to resolve problems. So rather than having no manager, it means that teams have the ability to figure out how they're going to approach things on their own (Agile Alliance 2019). This approach would have greatly enhanced how we went about our project. Instead of taking separate segments of work to complete on our own it would have allowed for a far less isolated approach. The freedom of self-organisation along with the cross-functional aspect in this approach would work much better and much more efficiently than the method that we chose of working separately. Given team members the freedom wo work across a variety of different roles instead of being confined to the one role is also a much more efficient way of working and is certainly something that would have enhanced our project.

So, in conclusion the Agile methodology along with sub-methodology such as Scrum provides a much more light-weight approach to software development than many of the traditional approaches like the one that we used on our project. Agile methodologies feature self-organized teams that are driven to achieve precise business objectives. Agile methodologies focus on rapid and frequent deliverables of fractional solutions that can be assessed and used to determine subsequent steps. Using this method, solutions are created in an iterative and incremental style. The agile development process allows for requirements even in the later stages. It would also ensure that when it is finally delivered that the end product would be closely aligned with the most recent stakeholder requirements. Agile methodologies have been proven to deliver higher quality products in less time, resulting in improved customer satisfaction.

**Bibliography**

**Agile Alliance -** [**https://www.agilealliance.org/agile101/**](https://www.agilealliance.org/agile101/)

**Crispin, L. and Gregory, J**. (2014). *Agile testing*. 1st ed. Upper Saddle River, N.J: Addison-Wesley, p21.