Kevin Zhang

**Module 5 Assignment**

Throughout my project experiences, I have very limited opportunities to connect my project experiences to Scrum. The only time where my project experiences utilize Scrum is in my professional career which began in October 4th last year and continues up to today. Besides my career at Raytheon Technologies, I have not had any other opportunities to utilize Scrum because prior to that it was all school projects and school projects are mostly just independent work or simple teamwork instead of doing any real project management. As I mentioned before in my previous essay, the company project that I do involving the gap box does indeed involve scrum methods, but we do not utilize all the methods and sometimes we don't even stick to any method at all if we are in a rush to get stuff done. However, in my secret opinion of my company project, I feel that Scrum has very little real benefit to this project that we are doing. This is mostly because our company project is a contract for the US military that does not involve any commercial customers. Unlike in the commercial world, when you are a defense contractor, everything is pretty well defined and there is very little room for innovation. This is not because the US military does not want to innovate its weapons, it's because every single component in a weapon system has been proven to work and therefore if you want to make a change to any small component to make it better and more advanced, it will require a lot of paperwork and a lot of testing in order to prove that it will work with the rest of the missile before the change can be made. This is not cost-effective and therefore you don't really innovate in a weapon system unless you are designing a new weapon. But that is far above my level.

One way my project experiences at Raytheon connect to scrum is through the use of product backlogs that my team uses. Sadly, as I've mentioned in my previous essay, I am not the product owner of the project so I generally have very little control over the product backlog. Nevertheless, we always get the chance to review and update the product backlog every time we hold a Sprint meeting. A product backlog is a list of what is needed to improve the product we are working on. In my opinion, there is nothing much to improve for the project that I'm doing because all project requirements are already well-defined. I feel that the real reason why my company is doing Scrum for this project is because they want to instill a working spirit in our employees and improve their reputation. Nevertheless, product backlog does indeed have some degree of benefit and usefulness for the gap box project. Using the product backlog, we can keep track of all the items that need to be completed and what's already completed. We can also order the items based on the level of high priority so that we can focus on the high-priority items first. For my project, it is actually not really necessary to order the tasks based on priority because everything is required in the end for the government contract. The only situation where a task would be higher priority is if not finishing it would delay us on getting started on other tasks. For example, for the gap box, we need to do the safe-to-turn-on-task to make sure that the UUT can be safely loaded onto the gap box without getting burned from a high voltage. If the safe-to-turn-on-task is not done, we cannot do any work that involves a unit and that can hold up a lot of work. Therefore, you can say that safe-to-turn-on is one of the higher priority tasks in my project. Regarding product backlog refinement where we can break down the items into smaller and more precise items, that may be applicable, but only to a very limited degree. Most of the work for the project is already pretty straightforward and well-defined so the only situation where we need to refine the items for product backlog would be if we are troubleshooting something that is not working and therefore in that case we would have to break down the troubleshooting task into smaller tasks to try to figure out what the issue is.

We also do Sprint review meetings at my company projects which is another way that Scrum is connected. Those are bi-weekly meetings that only happen once every two weeks. In my opinion, those meetings are also pretty much unnecessary. The only thing we do during the Sprint review is review and update the product backlog and engage in small talk about topics that are not work-related. We don't usually use the product backlog for our day-to-day operations, we mostly just rely on a group chat that we have in order to communicate to each other on the day-to-day issues that we are facing with the gap box. We have not had those bi-weekly Sprint review meetings recently because we are in a rush to get this project done and because, as mentioned earlier, the Scrum meetings don't really contribute a lot to the productivity of our project anyway. It's basically just like a regular meeting where the only benefit that we get is a more formal and more disciplined opportunity to collaborate with each other on the issues that we are having for the project. Usually, to prepare for the meeting I would always bring the hardware drawings and any other crucial paperwork that is necessary to increase the effectiveness of our collaboration regarding the gap box issues. However, I would never bring any materials that involve product backlog or anything related to Scrum. Therefore, the bi-weekly meetings are pretty much Sprint review meetings mostly only by name but in practice they are just regular meetings.

To be honest, even though technically this project falls under the Scrum method, I feel like we are actually using the waterfall method more. The only reason why we do Sprint meetings at all is that since this is a project under ESSM that is officially an agile program, we are kind of required to implement the same project management method whether we like it or not. Besides the Sprint meetings and the product backlog, we pretty much do not implement any other Scrum methods in the gap box project. There are many many reasons why I think the waterfall model is a more practical and better methodology for this project. The waterfall method involves using a linear project management approach where all of the customer requirements are defined at the beginning of the project. This makes a lot of sense for defense contractor work because of how it works for defense contracts, everything is defined and negotiated in the beginning. At the start, the work requirements are all defined, the completion requirements are also defined, and the amount of money that will be paid for the completion of the contract is also defined. Think of it like signing a lease to rent an apartment, and you can get the idea of how it works for government contracts and how it is completely different from typical work at a commercial company where you are looking to market yourself to customers and boost sales and revenue. Another way that the waterfall model is connected to our project is through the phases. We define the requirements, we implement the requirements for the gap box, and then we verify that the requirements are met. We, however, do not design or do maintenance since the design was already created a long time ago and the production team will be doing the maintenance once we are done, not us. So I guess even if we are using the waterfall method, that does not mean that we are using everything in the waterfall model, although we will be using a whole lot more in waterfall than we are for Scrum.

To tie it all together, we only use the product backlog and the Sprint reviews for the company project that I am working on. Scrum has very little use for the work that I am doing because that's just how it works with government contracts. We are pretty much pretending to do Scrum just to improve the reputation of the ESSM missile program. It kind of makes sense though, because ESSM is a missile that is sold internationally to a lot of countries all over the world. Customers that are buying our missiles include all NATO countries, Japan, South Korea, Australia, and pretty much every other country that the US is allied with. ESSM is a missile interceptor that is meant to protect warships against incoming threats, not to destroy, so it has a far better reputation than other weapons systems that people see as a weapon of destruction to kill people. Therefore, since ESSM earns more popularity than other missiles, it is also more important for Raytheon Technologies to protect that popularity by pretending to use Scrum, as it is a trending methodology.

“Waterfall Model.” *ProjectManager*, 11 July 2023, www.projectmanager.com/guides/waterfall-methodology.

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“What Is a Sprint Review? Template + Tips: Aha! Software.” *What Is a Sprint Review?*, Aha!, 9 May 2022, www.aha.io/roadmapping/guide/agile/sprint-review.