Software Development Unit 33, 3.2

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# I can reflect on the efficiency of project management techniques

In previous units, I’ve discussed the project management techniques and such as Waterfall and Agile and its effectiveness (Unit 33, 3.1). In this unit, I am going to compare the efficiency of Waterfall VS Agile using SCRUM. I’m going to use a couple of project examples to

## Building a house

Waterfall is a very linear, step by step project method. This is an effective method when the requirements of the project are confirmed at the very start of the project. This would be an effective method when building a house. Before the houses are built, a lot of planning goes into it. The developers will need to consider and plan in advance the plumbing and electricity supply, the type of materials to be used, the contractors to be used, regulatory requirements, the cost of the project and many more. Using the waterfall method will make it possible for the project to plan within their budget, adhere to all the requirements and have a set deadline.

If this project was conducted using Agile, it wouldn’t be efficient since Agile doesn’t have the requirements at the start, and works to improve its product based on the ongoing feedback from the project owner. It wouldn’t be cost effective to demolish the house if the project realises it has missed a requirement.

## Developing Software

When developing software, it can be more efficient to use the SCRUM method. In SCRUM, it is the aim is to create a basic working software and to improve on it until it is final and completed. Since software is made of coding, it can easily be amended if needed. For instance, it is easier to change the font and style of a software than it is to rebuild a house. Saying that, if the software project has a lot of requirements and regulations to adhere to, it may be worth considering if SCRUM is the best way forward since it might be possible to miss important requirements without having them considered from the onset.

## Critical path analysis

If a project has a set timeline, it may be efficient to consider Critical path analysis. To do this, a list of all the tasks for the project and their estimated timescales are noted. Following this, a plan is created with which tasks can be done parallel to each other but still keeping the integrity of the project at the same time. The path continues as planned if there are no issues until the project is completed. This can be applied alongside with the Waterfall method and even SCRUM, although it may be more challenging with its flexible approach.