3.1 I can assess the effectiveness of different project management techniques

Waterfall and Agile project management both have pros and cons in terms of effectiveness when managing projects. Agile is most suited to software development whilst Waterfall suited to large projects such as building projects. Below are the pros and cons of Waterfall vs Agile in terms of software development;

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| **Pros** | |
| **Waterfall** | **Agile** |
| It has a clear and easy to follow structure which can be suitable for smaller software development projects | The structure is easy to follow |
| The end goal is clearly determined and has a clear end date. This means that you won’t be delayed by continuous changes to requirements | The requirements can be vague at the start of the project rather pre-determined, meaning that it is significantly easier and quicker to implement change during the project |
| The Waterfall method requires stringent documentation which can be beneficial in terms of quality control during each transition phase | There is a focus on continuous improvement rather than just meeting the original requirements, allowing you to focus on producing top quality software |
| Progress can be easily measured against the baseline | Issues can be identified and fixed in the early stages of development saving time and money |

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| **Cons** | |
| **Waterfall** | **Agile** |
| Changes are hard to implement as the project requirements are clearly defined and it would require significant change control and costs to implement any changes | If requirements keep changing as the product owner is unclear about what they want then it could mean that the project is significantly delayed and costly |
| The product owner does not get to see the final product until the end of the project and therefore will not be able to give input and feedback during the process even if their requirements change | It is difficult to ascertain the costs and time required for the project as the requirements of the end product are not clearly defined |
| The project must be strictly monitored which requires extra resources and time | There is no clear timeframe for getting the project completed |
| Not subjecting your product until the late stages of the project is risky as it could be costly and timely to fix and there is a possibility the end product is not even viable | There is no baseline to the project meaning it is hard to measure progress |
| Tasks are reliant on each phase being completed, work cannot start until other work is completed which could cause significant delays |  |