What are the differences between a requirements document written with a traditional Waterfall project management approach and one written using Agile? When is the use of each appropriate?

Hello Class,

In Waterfall, requirements are typically acquired at the outset of the project and thoroughly documented before development begins. Waterfall requirements documents are often lengthy and complete, with full specs and designs. Once documented, waterfall requirements are often set and less adaptable. Changes to requirements typically necessitate formal change control methods. Waterfall requirements documents are frequently formal and structured, adhering to a predefined template or format. Before development begins in Waterfall, requirements are validated through formal assessments and approvals. Waterfall requirements frequently feature little or no customer or end-user input in the early phases, with a greater emphasis on internal stakeholders.

In Agile throughout the project's lifecycle, requirements are obtained iteratively and gradually. Agile requirements documents are typically lighter in weight, focused on high-level user stories or features that are simple to understand and implement. Agile requirements, on the other hand, are more adaptable and can be refined as the project moves forward. Changes are to be expected and can be easily implemented. Agile requirements documentation is more informal, with user story cards, product backlogs, and other agile artifacts serving as the primary repository. During regular product increments or iterations, requirements are validated and verified iteratively in Agile. Throughout the project's life cycle, agile requirements place a strong emphasis on client involvement and input.

The Waterfall approach is appropriate when the projects needs are well-defined and consistent, there is a firm grasp on the desired end result, and the project’s timetable and budget are set.

The Agile approach is suitable when the projects requirements will most certainly evolve or change, the project calls for difficult or novel solutions, and customer collaboration and input are required regularly.

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