

Dear Perpetual Motion Members,

Thank you in advance for taking the time to read through my written definition assignment on the subject of Agile Software Development. The objective of this exercise is to concisely explain a relatively complex term in our discipline to a non-technical audience using parenthetical, sentence and expanded definitions. The assignment is designed to evaluate our ability to define a specific term for a given non-technical audience. Specifically, please ensure that you include the following items in your writing:

- use of four or more expansion strategies
- use of one or more visual expansion strategies
- use of three or more outside reference.
- use of MLA or APA style to cite each reference.

I hope you find my definition insightful and enjoyable.

Thanks Again,

Kyo Tang

Fellow Perpetual Motion Team Member

Term Defined: Agile Software Development.

Parenthetical Definition

Agile software development (a software development strategy) helps software engineers plan and collaborate to develop software effectively.

Sentence Definition

Agile software development is a process used to depict methodologies for incremental software development. The process, unlike traditional project management, focuses on empowering people to work together to make team decisions and to encourage continuous planning, testing and integration.

Expanded Definition

Historical

During the 1990s, as PC computing began to proliferate in large corporate enterprises, software industry ran into a development crisis. Existing software development practice could not develop fast enough to meet the ever-changing requirements of corporate companies. An

aerospace engineer named John Kern became frustrated with the existing practice that has long lead times and inflexible plans. Seventeen other software thought leaders and he started meeting informally and eventually came up with a simpler software development process that could deliver the product on time (Varhol, 2015).

Operating Principle

The general principles of the Agile process includes the following criteria:

- Changes in requirements are embraced for the clients' competitive advantage
- Focus on frequent delivery of working software. Delivery preference will be based on the shortest possible time period.
- Developers and business people must work together throughout the entire project.
- In person communication is the best approach to communicate information between a team.
- Working software is the key measurement of progress.
- Pre-determine interval team meeting to reflect how to become more productive and effective

Visual

The illustration below provides a visual representation of the steps involved in Agile development.

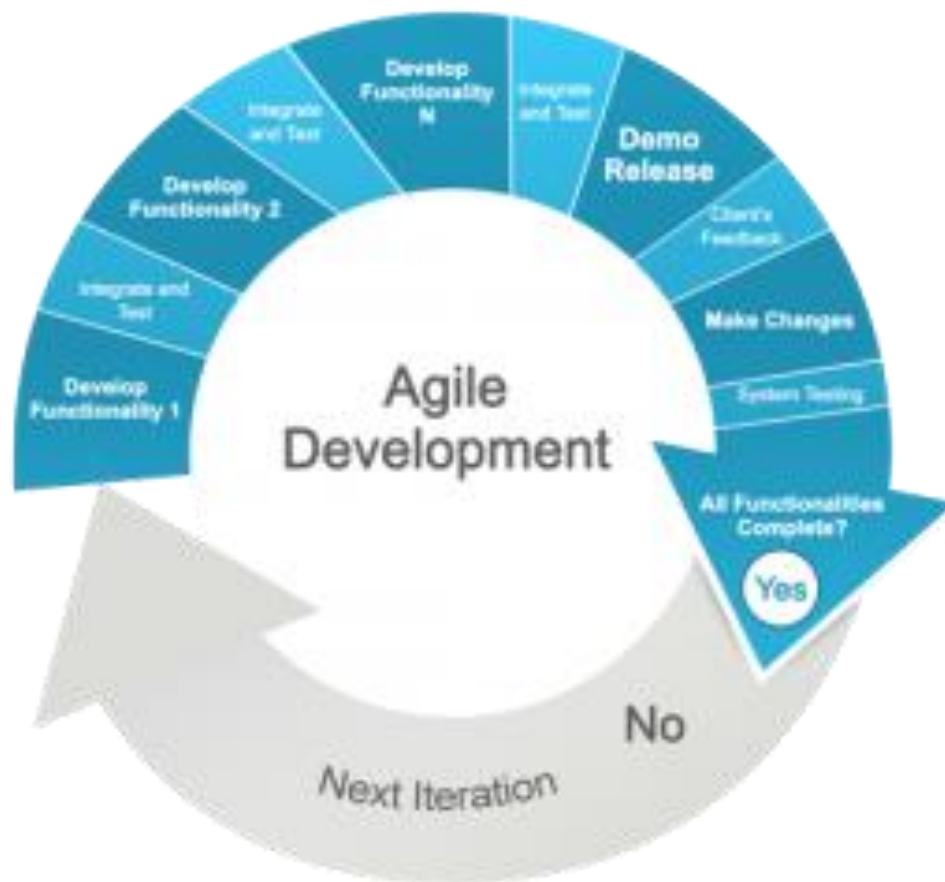


Figure 1 Description of Agile Development

Source: Clarey, Tony, "Agile Development vs Having Specs", Arborseed

This picture shows that the practice is circular in nature. The process consists of several components in each iteration. Each iteration usually lasts 2 to 3 weeks. Each functionality is developed and tested concurrently. After several functionalities are integrated and tested, a demonstration will be scheduled at a predetermined time with the clients. Changes will be made using the client's feedback during the demonstration. Functionalities that are not fully developed can be extended to the work load of the next iteration. (Clarey, 2015)

Comparison and Contrast



Figure 2 Description of The Waterfall Model

Source: Clarey, Tony, "The Waterfall Model", Arborseed

Unlike Agile Development, the traditional Waterfall model follows a systematic approach where every step happens in a sequential order. First, requirements from the business owners will be analyzed to come up with a design for the system. Then the design will be turned into code. However during this time, business owners may have additional requirements. This approach can not accommodate that as design and code have already been manufactured. Lastly, testing and maintenance will be conducted to ensure the stability of the system. As each phase of a project depends on its predecessor, untested complete project will inevitably have problems. Since each component is thoroughly tested before proceeding to the next phase, Agile process helps software company avoid unnecessary expenses on fixing problems from previous modules. (Mashimo, 2008)

References

Mashimo. (2008). The Problem with the WaterFall software development model. Retrieved September 26, 2018 From <https://mashimo.wordpress.com/2008/06/20/the-problem-with-the-waterfall-software-development-model/>

Tony, Clarey. Agile Development versus Having Specs. Retrieved September 26, 2018 From <https://arborseed.com/agile-versus-specs/>

Peter Varhol. To agility and beyond: The history - and legacy - of agile development. Retrieved September 26, 2018 From <https://techbeacon.com/agility-beyond-history%E2%80%94legacy%E2%80%94agile-development>