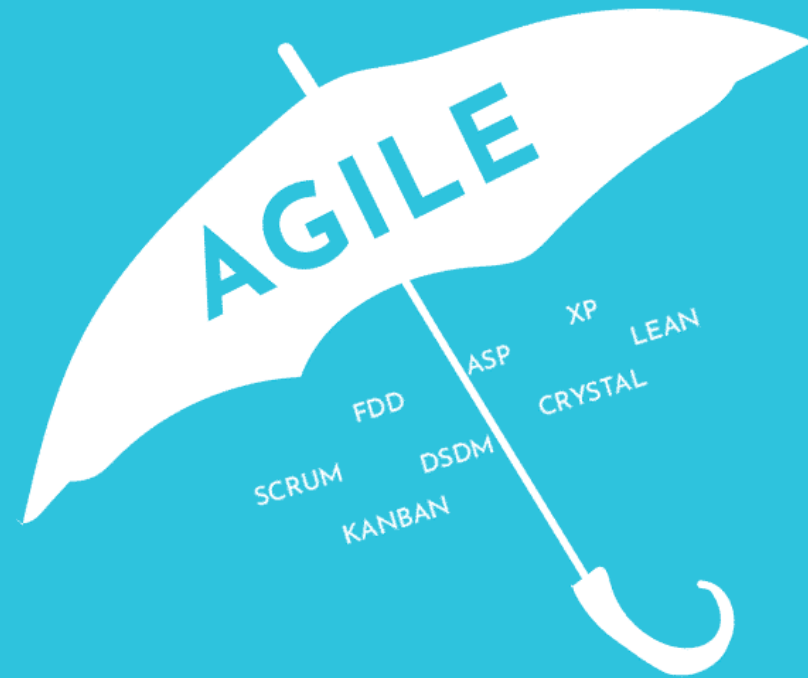


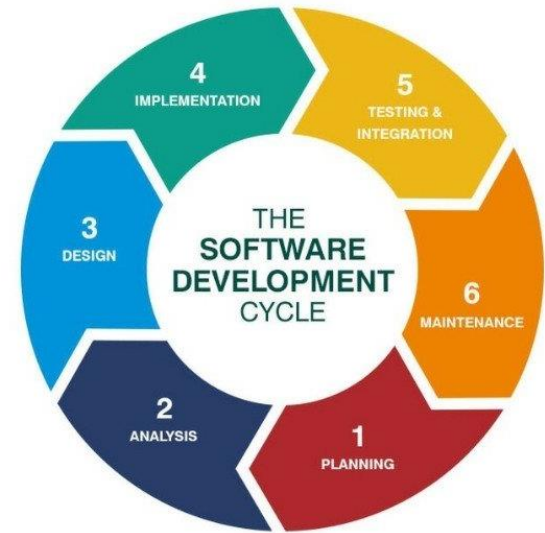
Agile

By Owain Mahoney, Matthew Wisden, Pawel Kaczmarczyk & Jake Watkins-Brown



What is AGILE?

- Some people think that agile means very little project management but its project managers giving more autonomy, but this is not considered a hands-off approach



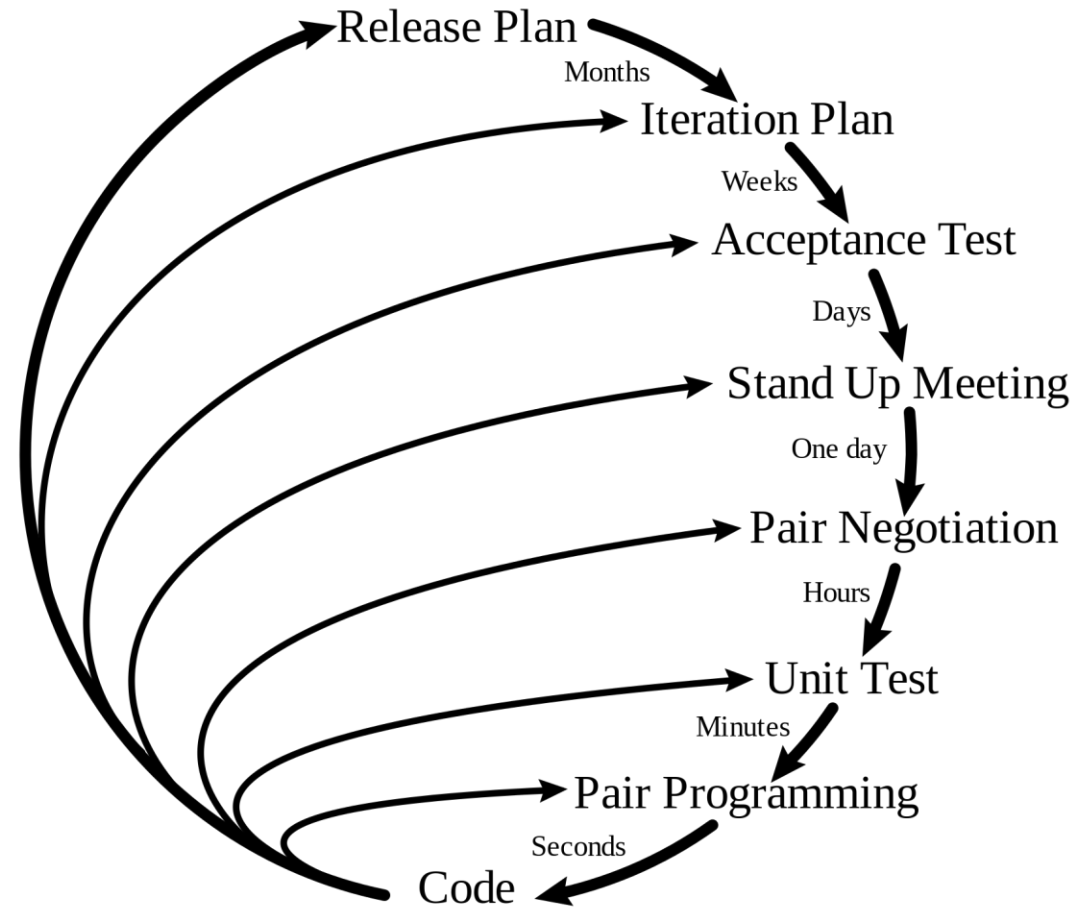
Roles used in an AGILE based development

- Product Owner – product owners handle's the projects goals, they handle the trade-off for schedule to scope they manage adapting the project requirements and they set priorities in the project for product features.
- Scrum Master – Scrum masters helps prioritise tasks for the team and helps removes issues that may arise for the team that may hinder them from meeting their goals.
- Team members – They create the product while also making daily reports on details, progress and quality for the product.

Extreme Programming (XP)

Extreme programming is a type of agile software development methodology which advocates frequent releases in short development cycles. The purpose of this is to improve productivity and introduce checkpoints at which new customer requirements can be adopted.

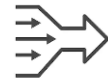
Planning/Feedback Loops



Extreme Programming (XP)

Other elements of extreme programming include:

- Programming in pairs
- Unit testing of all code
- Avoiding programming features until they are needed
- Code simplification
- Frequent communication with the customer



Extreme Programming (XP)

This methodology takes its name from the idea that the beneficial elements of traditional software engineering practices are taken to "extreme" levels. As an example, code reviews are considered a beneficial practice; taken to the extreme, code can be reviewed continuously such as the practice of pair programming.

Scrum

Scrum is a way to complete projects; this is done in many small sprints with achievable goals in small increments of time rather than one large objective done in all one go.



Benefits of Scrum

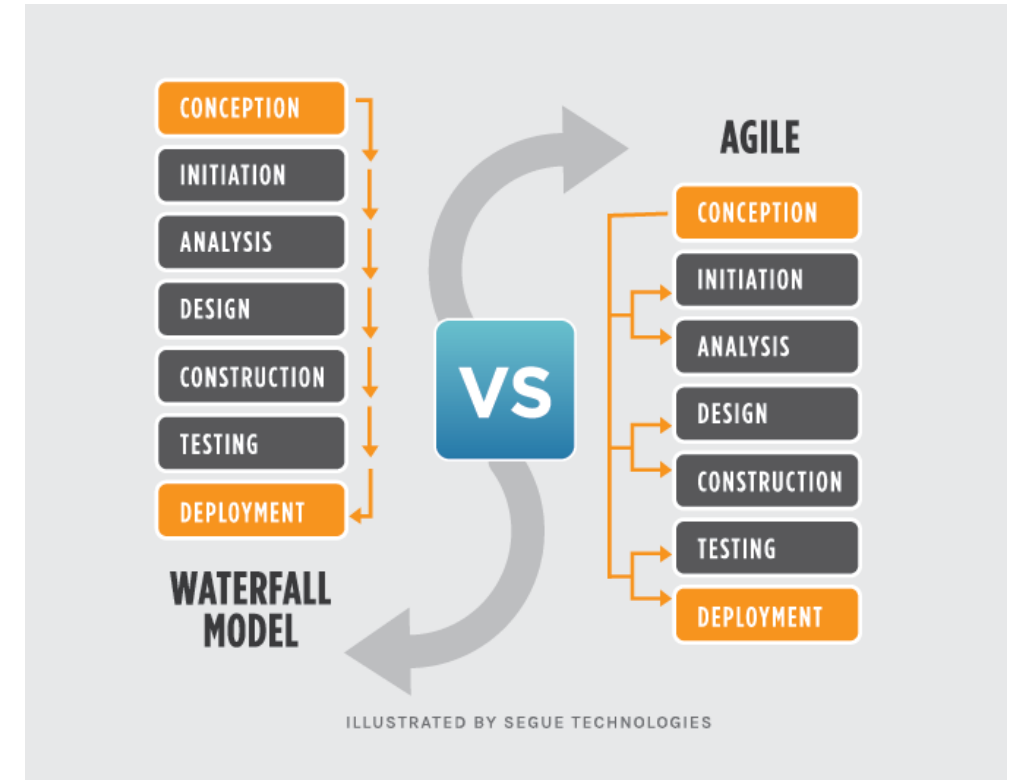
- Higher productivity
- Higher quality products
- Stakeholder satisfaction is improved
- Reduced times for product to reach the consumers
- Team dynamics is better

Waterfall Methodology Vs AGILE

Key differences between the Waterfall Methodology and AGILE:

- AGILE is a continuous iteration of testing and development within the development process. However, Waterfall method is used to complete a development cycle by a step by step process.
- AGILE is very flexible whereas Waterfall method is not.
- Testing and software development are performed simultaneously but Waterfall method has a testing stage after the build phase. Testing isn't done during the build phase.

<https://www.gurugg.com/waterfall-vs-agile.html>

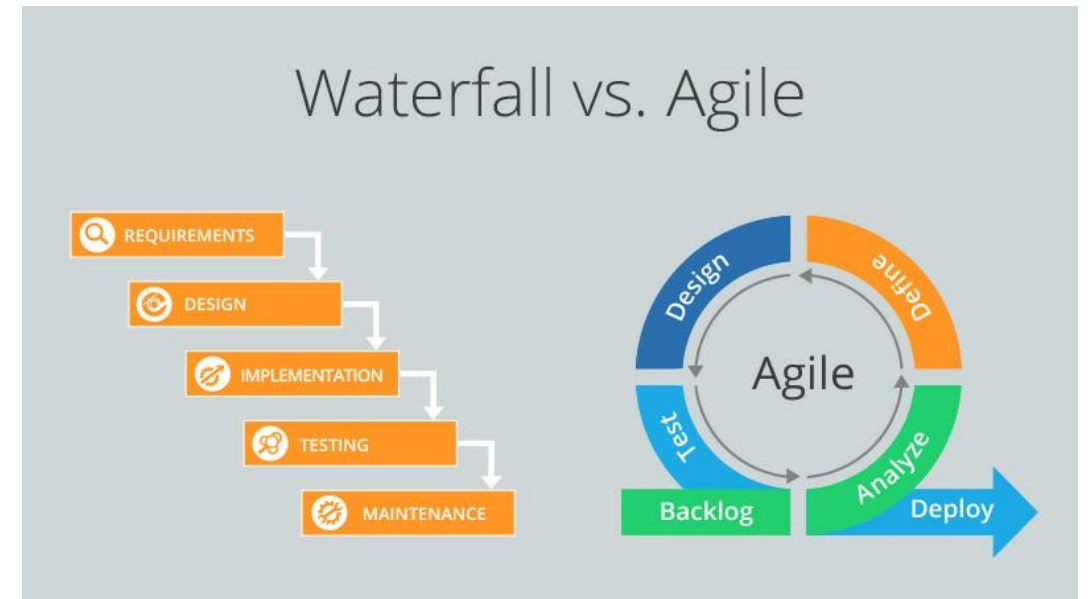


<https://www.seguetech.com/waterfall-vs-agile-methodology/>

Waterfall Methodology Vs AGILE Part 2

Key differences between the Waterfall Methodology and AGILE:

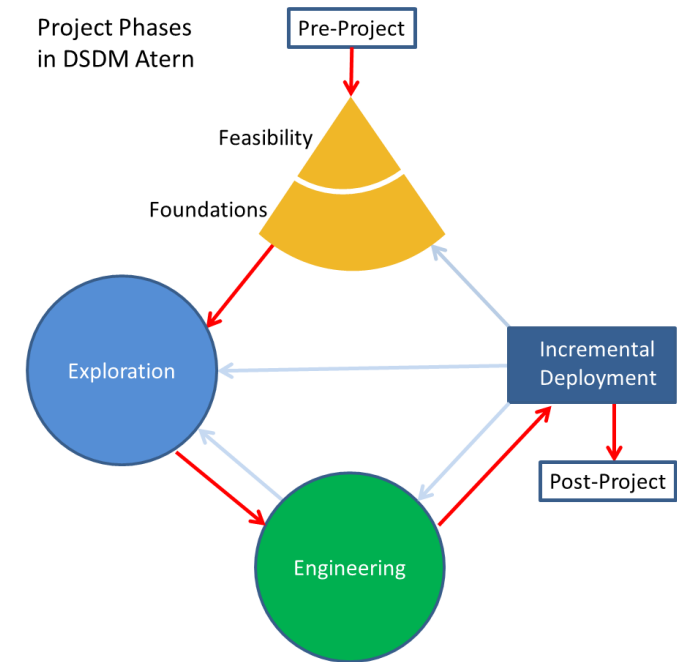
- AGILE can allow changes during development whereas waterfall has not got a step that allows for changes during development.
- Waterfall has a sequential approach to the development process.



<https://www.digite.com/blog/waterfall-to-agile-with-kanban/>

Dynamic Systems Development Method (DSDM)

The Dynamic Systems Development Method is an agile framework that addresses the entire project lifecycle and its impact on the business. This framework explicitly states, “any project must be aligned to clearly defined strategic goals and focus upon early deliver of real benefits to the business.”



Dynamic Systems Development Method (DSDM)

The framework is built on four principles: feasibility and business study, functional model and prototype iteration, design and build iteration, and implementation.

Strengths and Weakness of DSDM

Strengths

- Basic product functionality can be delivered rapidly
- Developers have easy access to end-users
- Projects are reliably completed on time

Weaknesses

- Can represent a dramatic and disruptive change in company culture
- Costly to implement
- Not ideal for small organizations

Crystal Methodology

- Crystal method is an agile software development approach that focuses primarily on people and their interactions when working on a project rather than on processes and tools

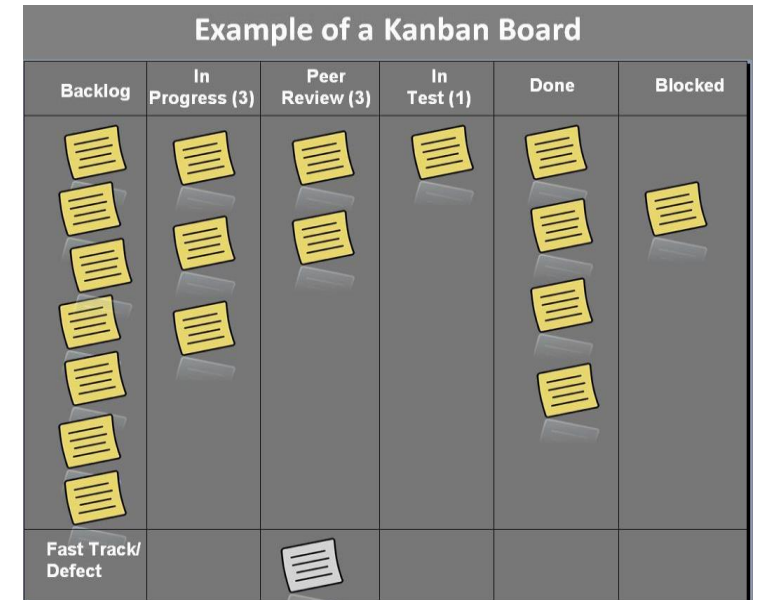
Crystal Meth part 2



- Teams can streamline their processes as their work and become a more optimised team
- Projects are unique and dynamic and require specific methods
- The project properties changed depending on the number of the people involved in the project and the level of criticality of the project at hand.

Kanban

- **Kanban** is all about visualising your work, limiting work in progress, and maximizing efficiency(or flow). Kanban teams focus on reducing the time it takes to take a project from start to finish. They do this by using a Kanban board and continuously improving their flow of work.



https://en.wikipedia.org/wiki/Kanban_board

Benefits of Kanban

Benefits:

- Shorter cycle times can deliver features faster.
- Better Responsiveness to Change.
- When priorities change very frequently, Kanban is ideal.
- Balancing demand against throughput guarantees that most the customer-centric features are always being worked.
- Requires fewer organisation / room set-up changes to get started.
- Reducing waste and removing activities that don't add value to the team/department/organisation.
- Rapid feedback loops improve the chances of more motivated, empowered and higher-performing team members.

Any
Questions?

