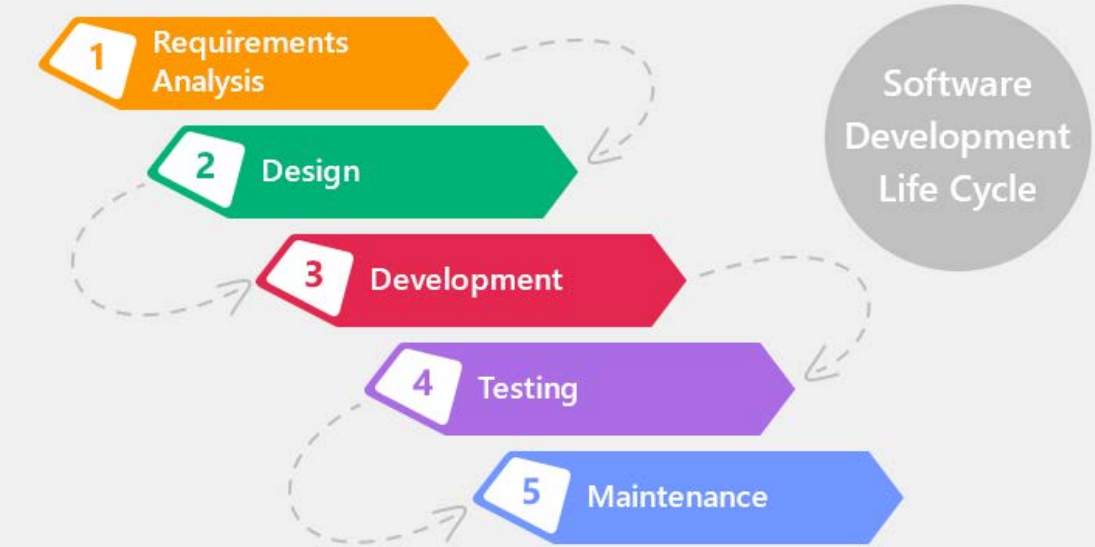
Working agile

Puck Mulders

Embedded Motion Control - 2019

Software development

How do you plan a software project?

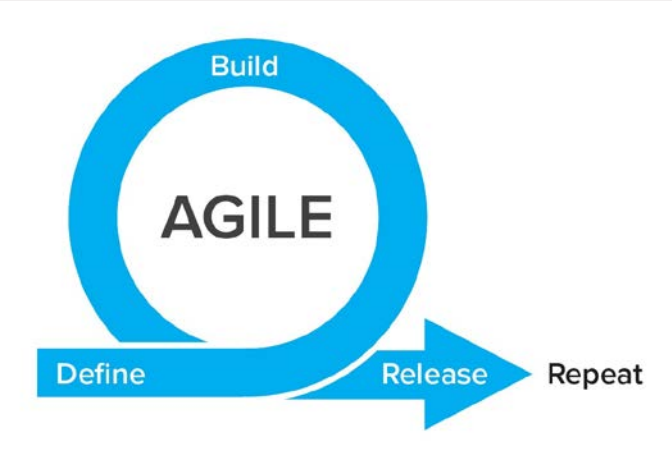


Problems with that approach

“Big Upfront Anything”

- Requirements cannot be captured at the beginning of the project
- Building a perfect design upfront is a waste of time

- So, what now?



What is agile?

- Iterative, time-boxed development
  - Working in sprints
  - Return of Investment: what can we do *now* to achieve our goal?
- Limited, negotiated functionality
  - If not all functionality can be delivered by the deadline, it is the functionality that goes and the deadline that stays
- Focus on quality

Agile principles

- Put the customer at the center
- Let the team self-organize
- Work at a sustainable pace
- Develop minimal software
    - Produce minimal functionality
    - Produce only the product requested
    - Develop only code and tests
- Accept change
- Develop iteratively
- Treat tests as a key resource
- Express requirements through scenarios

How to apply agile working in EMC?

Organizational: scrum!

1. Consider your week as time-boxed development period
    - ➞ A total of 5 people x 13 hours per week = 65 hours
    - ➞ Return of Investment
2. Self-organize as a team
    - ➞ Define tasks
    - ➞ Play planning poker!

How to apply agile working in EMC?

Organizational

- ➞ Daily meetings
- ➞ Scrum board
- ➞ Continuous integration
- ➞ Retrospective
- ➞ Shared code ownership

How to apply agile working in EMC?

Technical

- ➞ Test-driven development
- ➞ Refactoring
- ➞ Pair programming
- ➞ Simplest solution that can possibly work
- ➞ Coding standards

Questions?

Agile! The good, the bad and the ugly

Meyer, B. (2014). The Ugly, the Hype and the Good: an assessment of the agile approach. In *Agile!* (pp. 149-154). Springer, Cham.