

Agile methodologies

The software crisis

Software projects were:

- Overbudget
- Late
- Didn't meet the requirements
- Canceled

Response to the crisis

The phase-based approaches:

- Define the requirements
- Design
- Implement
- Test After each phase, everything would be carefully documented, reviewed, and signed off.

The Agile Manifesto

Agile is three things: the name, the values and the principles. It's a *philosophy*

The values:

1. **Individuals and interactions** over process and tools
2. **Working software** over comprehensive documentation
3. **Customer collaboration** over contract negotiation
4. **Responding to change** over following a plan

Agile Development is adaptive rather than predictive; people-oriented rather than process-oriented. - Martin Fowler

The principles:

- The highest priority is to satisfy the customer through early and continuous delivery of valuable software.
- Welcome changing requirements, even late in development.
- Deliver working software frequently, from a couple of weeks to a couple of months.
- Business people and developers must work together daily throughout the project.
- Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
- The most efficient and effective method of conveying information to and within a development team is face to face conversation.
- Working software is the primary measure of progress.
- Agile process promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
- Continuous attention to technical excellence and good design enhances agility.

- Simplicity, the art of maximizing the amount of work done, is essential.
- The best architectures, requirements, and designs emerge from self-organizing teams.
- At regular intervals, the team reflects on how become more effective, then tunes and adjust its behavior accordingly.

Adaptive rather than predictive

- **Success** The project is completed on-time and on-budget, with all features and functions as originally specified.
- **Challenged** The project is completed and operational but over-budget, over the time estimate, and offers fewer features and functions than originally specified.
- **Impaired** The project is canceled at some point during the development cycle.

If you dont adapt to the change and adjust to a plan, your product might not add much value to the business.