

Topic 1

What is Agile and Why it matters







Meet Your Tutor

Professional Scrum Master and Agile Coach with technical background in IT infrastructure and datacenter with more than 10 experiences in higher education, telecommunication, and banking industry. A kanban and DevOps practitioner who also enthusiast in IoT and unmanned system.



Outline





Introduction to VUCA



History behind VUCA

- First used in 1987
- Based on leadership theories of Warren Bennis and Burt Nanus
- As response of the collapse of the USSR by the end of cold war







Volatility Uncertainty Complexity Ambiguity



Volatility

Behavior

- Unstable and constantly changing
- Not necessarily hard to understand
- Knowledge often available Response
- Prepare, reserve, threshold





Uncertainty

Behavior

- Unexpected events
- Difficult to anticipate or predict
- Historical forecasts & past experiences losing relevance

Response

Collect information, interpret & share





Complexity

Behavior

- Multiple changes and events happened simultaneusly
- Certain cause trigger interconnected multi layered reaction, parts and variables
- Overwhelming to process
 Response
- Inspect & Adapt





Ambiguity

Behavior

- Right or wrong completely unclear
- Whole new unknown environment & definition

Response

Experimenting









Further Readings

- https://hbr.org/2014/01/what-vuca-really-means-for-you
- https://www.vuca-world.org/



Outline





The Agile Manifesto



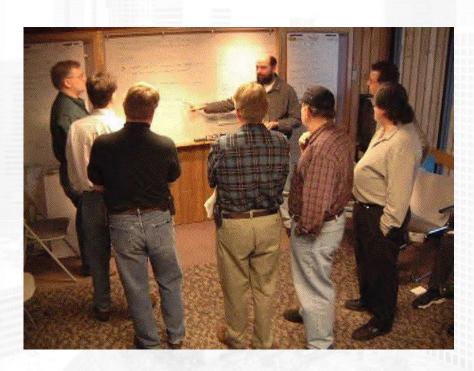
History Behind The Agile Manifesto

- 17 software development practitioner gather at a ski resort in 2001
- Shares common obstacles in delivering valuable software
- First called as lightweight process / framework for more effective software development





Problematic Background

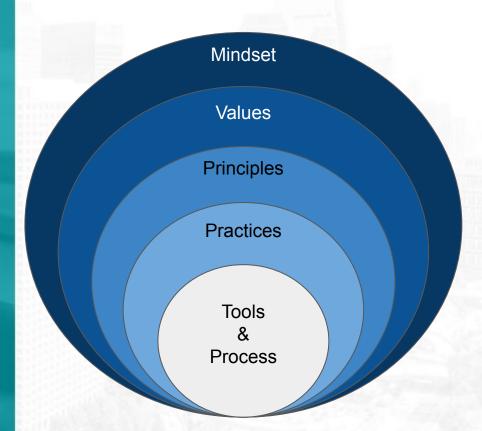


Common problems of software development back then:

- Overcomplicated workflow and process
- Wasteful documents and meetings
- Unpredictable business demand
- Rigid development process
- Resulting in a manifesto with 4 values and 12 principles.



Agile in a nutshell





Further Readings

- https://agilemanifesto.org/history.html
- https://www.agilealliance.org/agile101/the-agile-manifesto/



Outline





4 Agile Values



Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.



Individual and Interaction over Processes and Tools

- Value or waste emerge as the result of individual action within the team and their interactions
- Established processes and acquired tools serves as the impact multiplier





Working Software over Comprehensive Documentations



The most important thing is what value we brings to the customer

Best way to measure value is to put our product in customer's hand



Customer Collaboration over Contract Negotiation

Healthy relationship between developers and customer helps promote productive feedback Frequent collaboration helps narrowing the gap between development result and expectation



Responding to Change over Following a Plan

- What make sense back then might not so relevant now, remember VUCA
- Embrace unexpected changes and adjust plan accordingly





Further Readings

- https://agilemanifesto.org
- https://www.agilealliance.org
- https://www.scrum.org/resources/blog/how-live-4-values-agile-manifesto



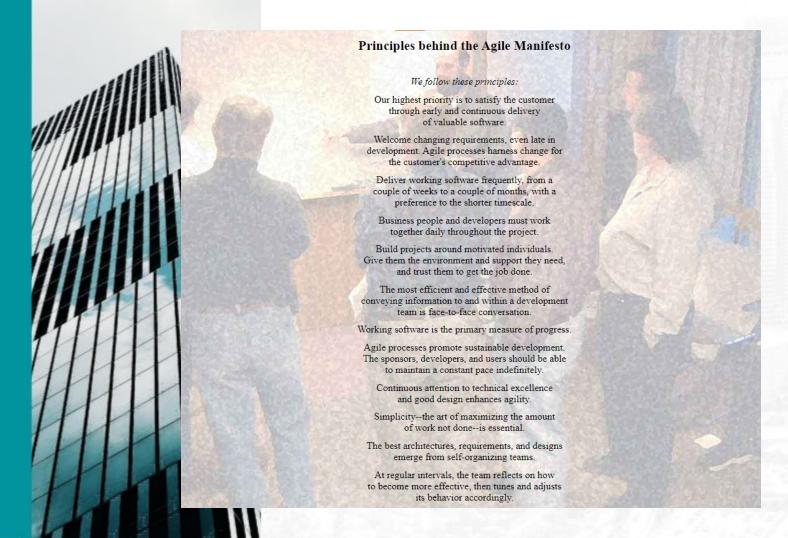
Outline





12 Agile Principles







Customer Centric

- Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
 - Customer first mindset, avoid taking assumption
 - Break down work into smallest valuable piece of functionality and deliver value continuously

- Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter
 - Deliver small increment frequently
 - Establish shorter feedback cycle
 - Fail fast and cheap

- Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
 - · Validate hypothesis, changes plan accordingly
 - Focus on maximizing the value for the customer





Promote Collaboration

- Business people and developers must work together daily throughout the project.
 - Cross-functional team allows development flexibility and independence
 - Team alignment is the key to achieve effective product development and faster problem discovery
- The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
 - Nonverbal communication transfer more information compared to verbal communication
 - In-person communication help increases trust and collaboration among team

- Build projects around motivated individuals. Give them the environment and support they need and trust them to get the job done.
 - Organization support help maximize team's productivity
 - Safe environment promote innovation enabling effective and efficient development





Deliver Value

- Working software is the primary measure of progress.
 - Measure on outcomes not output, the value not the volume nor velocity
 - While other metric might be helpful for the team internal improvement
- Continuous attention to technical excellence and good design enhances agility.
 - Agile focus on both functionality and usability
 - Better quality prevent rework allowing the developers spent more effort on value generating activities

Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

- We prefer steady and sustainable development rather than fast but brittle ones
 All stakeholder should have the same vision towards the product goal
- Simplicity the art of maximizing the amount of work not done is essential.
- Reduce wasteful development, processes, events, meetings, documentations as much as possible
- Do the easiest, simplest, the most straightforward approach as possible



Unleash Team's Maximum Potential

The best architectures, requirements, and designs emerge from self-organizing teams

 Agile empower people by promoting self-organized team

 Important decision should be made by the person doing it At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

 Periodically do reflection to discover any chances of improvement

 Committed to take improvement action even small ones but continuously



Further Readings

- https://agilemanifesto.org
- https://www.agilealliance.org



Outline



