

DAT257

Lecture 6: Agile and waterfall comparison

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*A few slides to explain what this course
was about, and what it was not about*

Values

Agile

Waterfall

People come first, before product and process	Process comes first, before product and people
Adaptation	Make early commitments
Early and frequent value delivery	Get it right the first time
Customer collaboration	Deliver on time and on budget



People

Beliefs

Agile

People are seen according to “Theory Y” i.e. competent, motivated, trusted and supported people will do well

Use self-managing, collaborative teams

Waterfall

People are viewed as resources and are interchangeable as long as they have the right skills. If they work overtime they produce additional valuable results.

Managers determine what the workers do

Organize the people for focused performance and minimal expenditure. If each function such as analysis, design and construction performs competently, the end result will satisfy the customers

Principles

Agile

People: Respect, Transparency, Trust, Personal safety, Focus, Sustainable pace, Self-organizing teams, Collaboration, Communication, Consensus, Servant-Leadership

Waterfall

People are resources i.e. successful execution requires solely technical skills

Entrust certain people with optimizing work allocation and coordinating workers' activities. Keep each worker maximally busy



The customer

Beliefs

Agile

The customer can't pinpoint future needs and wants. The sensible thing to do is to focus intently on what the customer needs now, and not commit too far into the future

Waterfall

The customer – Upfront customer requirement gathering is possible, i.e. the customer knows what she wants



The work

Beliefs

Agile

The **work** is complex

Emergence, rather than planning, is an appropriate response to complexity. The short feedback loop is an enabler for adaptation, i.e. to adapt as we learn more

The cost of change *can remain low*

Waterfall

The **work** – Planning is an appropriate response to complex work

Big bang verification and user acceptance testing at the end *should not* uncover too many critical faults

Work is standardized, and an effective and efficient process can be determined up front and kept static

Principles

The work: Outcome, Effective, Defer decisions, Simplicity, Experiment, Cadence, Reliability, Cost of change, Shippable, Quality, Time-box, Results, Feedback, Learning, Improvement, Value

Work is sequential. Work in function-based teams according to the sequence of stages and have them communicate through managers and leads

Have a single person take responsibility for the entire work; additional individuals may take responsibility for intermediate stages

Manage constraints according to the iron triangle (cost, schedule, scope). Nail down two and vary the third

Use sign-offs. No need to revisit past work

Plan the work, work the plan

Have specialists carry out the plan's tasks

Limit changes to the plan

Key
takeaways
from the
course



Agile done right beats
competition





Key takeaway, 2 of 3

Think in small pieces

Do a prototype early

Deliver often

Get feedback

Improve

Key takeaways, 3 of 3

Working in a good team is very rewarding, but it takes time and hard work







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