Project management 101 *by Zavanak*

11. ORGANISATION AND APPROACHES

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11.3 Which project approach to take?

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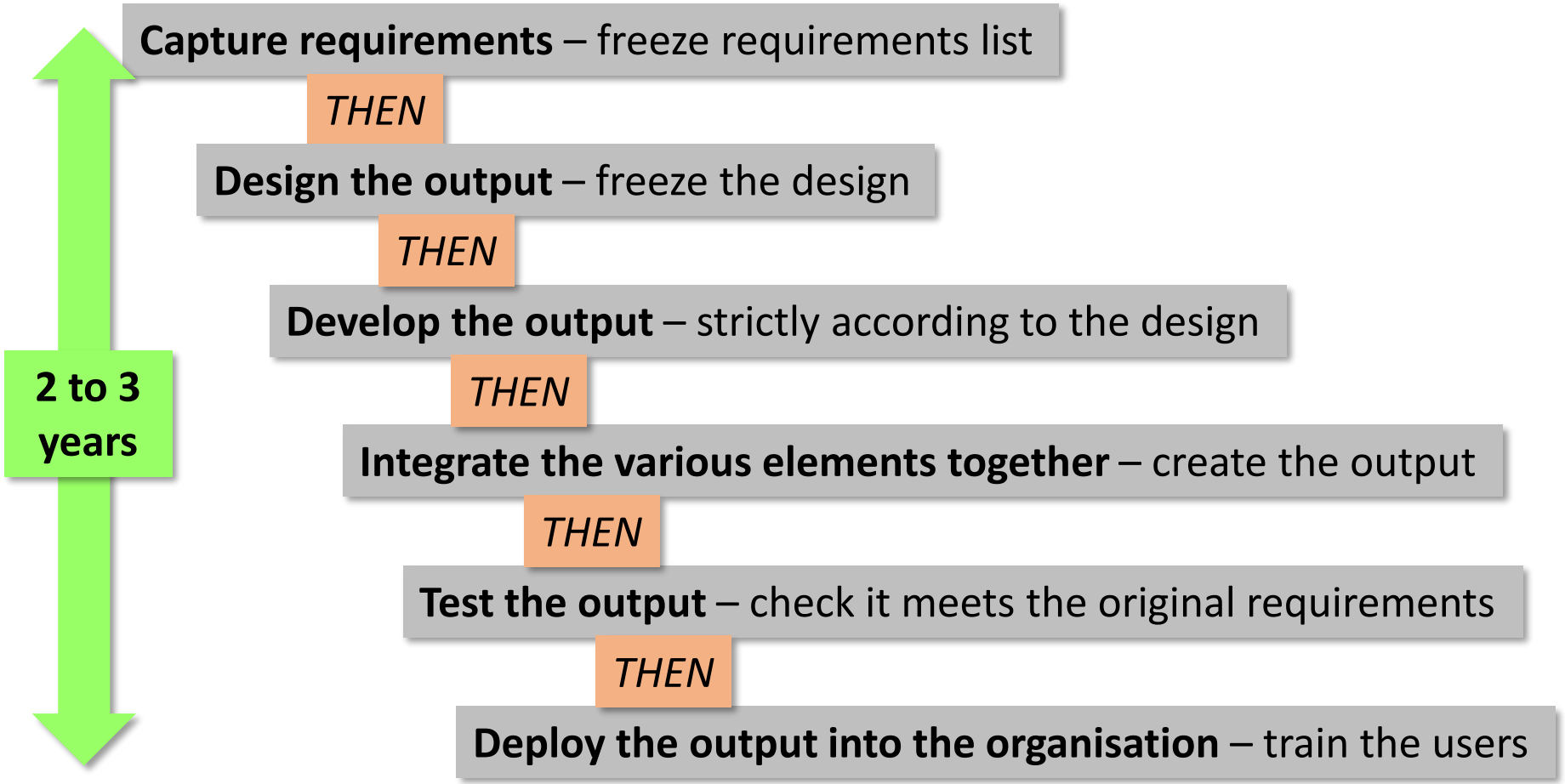
The waterfall approach



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Problems with the waterfall approach

- **A lot of energy goes into generating firm requirements at the start**
- Requirements are frozen too early
- **The system has too many features – just in case**
- Users may not be properly involved
- **Evolving technology may render the design obsolete at project completion**
- Market conditions may change ahead of project completion
- **The alignment of project and strategy may diverge**
- There is a large amount of redundant documentation
- **There is plenty of room for misunderstandings, conflict and disappointment**

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Manifesto for Agile Software Development

Devised by a group of American software developers in 2001

The approach is driven by giving features higher or lower priority and focusing on what is achievable, ***NOT*** on conforming to a fixed scope and process no matter what.

We are uncovering better ways of developing software by doing it and helping others to 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 *these items* we value **these items** more.

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Agile emphasis

- Create and deliver usable output in short bursts
- **Components can be accepted, modified or discarded**
- Incorporate changes to requirements as you go
- **Rely on a highly-skilled and motivated team**
- Project people and customer people work together
- **Minimal meetings, documentation and processes**
- Emphasize informal communication
- **Stay focused on what benefits the client wants**
- Produce documentation to support use in service

Product owner
The expert on the customer's business needs and the IT products. Nurtures final acceptance by the customer.

Scrum master
The buffer between the project team and other distractions. Agile expert, facilitator and coach.

Sprint
An effort, bounded by time and cost, to address as much of an element of the requirements as possible.

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Pros and cons

	Traditional approach	Radical approach
PROS	• Highly structured, auditable processes • **Everyone has clear roles, work can be packaged up** • Collaborative and international projects are easier to plan and run	• Meets customer needs at time of delivery • **Stays constantly focused on current customer requirements** • Lower project overheads • **High customer involvement**
CONS	• Requirements may be redundant when final delivery occurs • **Higher project overheads** • Lots of effort goes into freezing a specification early on • **Testing happens near the end, when faults are expensive to correct**	• Requires highly motivated team who stay together full time • **Documentation and audit trails may be inadequate** • Working with partners, internationally or across sites will be complex

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Choosing the right approach

Project type	**Breakthrough**	**Platform**	**Derivative**
Characteristics	**Invention**. Brand new concepts and ideas. Research and development. Entirely novel product or service.	**Innovation**. Significant change to product or service. Major step forward. Basis for different versions.	**Improvement**. Updates with additional features. Refreshed design. Adaptations for different markets.
Approach	**Agile, special project unit**	**Hybrid**	**Waterfall**

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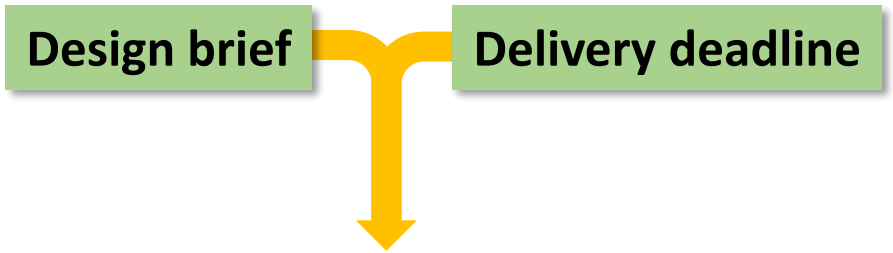
How the hybrid approach can work



Prototype development

Detailed design

Production set-up

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