Managing Enterprise Architecture in Agile Environments

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Agenda

• Introduction
• Research Motivation
• Design Principles
• Next Steps
• Q&A
What is Enterprise Architecture (EA) and how does it relate to project management?

Enterprise Architect [1]

- Plans transitions from current to future state
- Ensures compliance during design and implementation
- Is highly involved in project planning and execution
Research Motivation

Mainstream adoption of agile practices [2]

**HOW MANY?**

The percentage of respondents’ organizations that practice agile development methods:

97%

**Percentage of Teams Using Agile**

52% of respondents stated that more than half of teams in their organizations are using agile practices.

**Benefits of Adopting Agile**

By implementing agile, respondents cited seeing improvements in the following areas:

- Ability to manage changing priorities: 71%
- Project visibility: 66%
- Business/IT alignment: 65%
- Delivery speed/time to market: 62%
- Increased team productivity: 61%
- Team morale: 61%
- Project predictability: 49%
- Software quality: 47%
- Project risk reduction: 47%
Research Problem

EA methodologies have not evolved to cope with agile practices

EA is still organized to deliver this…

Cologne Cathedral, took 640 years to complete

… when the business really wants lots of these …

2015 RIBA house of the year nomination, built from four shipping containers
Research Focus

This work focuses explicitly on EA

- Architects differ in terms of focus, strategy vs. technology
- EA has the highest strategy focus and works on the highest level of abstraction
- Existing research focuses on technical architecture [3]
- This work focuses explicitly on EA
Research Question

Current and future state of Enterprise Architecture

Main Research Question:
How can Enterprise Architecture be practiced effectively in agile environments?

Research Approach:
Understanding the Role of EA in Agile Environments

EA constrains, gets corrected and fed with ideas
Building Blocks of „Agile“ EA

Focus on methodology in this presentation

- Tools to support EA
- Methodology to manage EA
- Adaptive architecture results
- Organization to run EA

Tools
Methodology
Content
Competency
**Design Principles for EA in Agile Environments**

1. In agile organizations, a **decentral EA methodology** is more effective than a central one.

2. A decentral EA methodology requires a **centralized EA practice** which ensures alignment among the architects.

3. Applying **peer-to-peer concepts** in EA helps to accelerate decision making while maintaining alignment.
1. Centralization vs. Decentralization

In agile organizations, a decentral EA methodology is more effective [5]

- **Centralization** of authority means the power of planning and decision making are exclusively in the hands of a central authority.

- **Decentralization** refers to the dissemination of powers by the central authority to teams.

- Traditionally EA was organized in a centralized manner.

- In agile organizations, a **decentral EA methodology** is more effective than a central one.

Image source: https://keydifferences.com/wp-content/uploads/2015/05/Centralization-Vs-Decentralization.jpg
2. Decentralization Requires Alignment

A decentral EA methodology requires a centralized EA practice [5]

- EA has the goal to achieve enterprise-wide alignment
- Without alignment among decentral architects no enterprise-wide alignment can be achieved
- → A decentral EA methodology requires a **centralized EA practice** which ensures alignment among the architects
3. Peer-to-Peer Concepts in EA

Applying peer-to-peer concepts in EA helps to accelerate decision making [6]

• In traditional EA setups a central architecture board is overseeing important architecture decisions

• As an alternative, peer-to-peer approaches can be used to validate and oversee architectural decisions

• Applying peer-to-peer concepts in EA helps to accelerate decision making while maintaining alignment

Next Steps

• Formulate design principles for all areas: Methodology, Competency, Content, Tools
• Discuss applicability of design principles in a series of expert interviews
• Develop reference model for EA agile environments
Questions and Answers
Bibliography


Thank you