Agile, lean and collaborative EAM
29.06.2016, Prof. Dr. Florian Matthes

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Fakultät für Informatik
Technische Universität München

wwwmatthes.in.tum.de
1. Agile, lean and collaborative EAM
Motivation – Most frequent EA challenges

1. Ad hoc EAM demands
2. Unclear business goals
3. Hard to find experienced enterprise architects
4. EA demands unclear for EAM team
5. Enterprise environment changes too quickly

Classification of systems based on their complexity

- predictable systems
- chaotic systems
- complex dynamic systems

- dynamicity of the system environment
- complexity of the system structure
The system management approach has to fit the system complexity at hand.

- **specialize & automate (Taylorism)**
- **experiment & learn (MVP)**

- **Agile, collaborative management (emergent structures)**

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- **dynamicy of the system environment**
  - **low**
  - **high**

- **complexity of the system structure**
  - **low**
  - **high**
Agile EA management principles

Individuals and interactions over formal processes and tools

- Ensure top management support
- Maintain a good relationship to people from other management areas
Agile EA management principles
Focus on demands of top stakeholders and speak their languages

- A single number or picture is more helpful than 1000 reports
- Communicate, communicate, communicate
- Avoid waste
- Benefit from existing model management processes

Top management
Strategy office
Business owners
Application owners
IT operations
Purchasing

Top management
Business stakeholders
Software development
IT operations

Business and IT strategy
Business and org. constraints
Individual architecture aspects

Architecture blueprints
Architecture approval and requirements
Architecture changes

Metrics
Visualizations
Reports

Communicate
Explain
Involve
Support
Get feedback

Model
Collect
Motivate

EA Team

Stakeholder-specific architecture views

Project managers
Software architects
Software developers

IT Project 1
IT Project 2
IT Project 3
Agile EA management principles
Reflect behavior and adapt to changes

- Iterative and Incremental (one cycle ~12 months)
- Use building blocks and patterns
- Request 360° feedback
- Adapt models and processes
- Continuous collaboration
## Adoption of EA management principles

Survey among European enterprise architects (Q4 2013, n=105)

<table>
<thead>
<tr>
<th>Principle</th>
<th>Agree</th>
<th>Neither</th>
<th>Disagree</th>
<th>No response</th>
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<td>Operates cross-functional increments and iterates</td>
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<td>Satisfied with its work</td>
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<td>Valuation of time over completeness</td>
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<td>Embrace of changes</td>
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<td>Actually used by stakeholders</td>
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<td>Agreed level of done</td>
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<td>Advancement with a indefinite &amp; constant pace</td>
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<td>28</td>
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<tr>
<td>Application of the pull-principle</td>
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<td>Adherence to the one-piece flow</td>
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<td>52</td>
<td>31</td>
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<td>Exactly respond to the stakeholders' demands</td>
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<td>38</td>
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<td>7</td>
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<tr>
<td>Valuation of time over quality</td>
<td>28</td>
<td>40</td>
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*Agile Enterprise Architecture management: Empirical analysis on the application of agile principles [to appear 2014]*
Related approaches: Lean management

1. Specify value from the standpoint of the **end customer** by product family.

2. Identify all the steps in the value stream for each product family, eliminating whenever possible those steps that do not **create value**.

3. Make the value-creating steps occur in **tight sequence** so the product will flow smoothly toward the customer.

4. As flow is introduced, let customers **pull value** from the next upstream activity.

5. Begin the process again and continue it until a **state of perfection** is reached in which perfect value is created with **no waste**.

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**Risk:** Over-fitting of EA function to current demands
**Wiki4EAM Community (since 2010)**
- Allianz SE
- Accenture GmbH
- act! consulting GmbH
- Bundesministerium des Innern
- Capgemini
- Computacenter
- Cirquent GmbH
- FZI Forschungszentrum Informatik an der Universität Karlsruhe
- GAD eG
- Max-Planck-Gesellschaft
- Niedersächsisches Ministerium für Inneres und Sport
- Nokia Siemens Networks
- SCHUFA Holding AG
- Siemens Financial Services
- Steria Mummert Consulting
- UGIS - UniCredit Group
- Wacker Chemie AG
- WHU Otto Beisheim School of Management

**Projects of TU München (2012)**
- Adidas
- E.ON
- HUK Coburg
- Itelligence
- Iteratec
- Siemens Financial Services
- Volkswagen AG

**Tricia (since 2011)**
- BMI
- B.Beschaffungsamt
- Fortiss
- ECHORD
- ITv
- KVB
- Layer 8
- Konsit
- MHP
- Microsoft
- SIEMENS
- Trevira
- TUHH
- TUM
- UGIS
- Westfleisch, …

Visit [http://www.matthes.in.tum.de](http://www.matthes.in.tum.de) for more information on Wiki4EAM and Hybrid Wikis.
Die Vision Enterprise 2.0: Das Mitmach-Web
Unternehmensweites Informationsmanagement

Zusammenarbeit und Zugriffskontrolle
Integration, Strukturierung und Vernetzung

Wenig strukturiert
Unternehmensrelevante Informationen
Hoch strukturiert

Teams  Projekte  Abteilungen  Communities  Kunden  Partner

Bilder  Texte  Aufgaben  Blog Posts  Office-  Datentabellen  Datenbanken  Wissens-
Videos  E-Mails  Wiki Pages  Dokumente  Datensätze

© sebis
Die InfoAsset Leitprinzipien

- Biete **eine** Plattform basierend auf etablierten Internet-Standards.
- Steigere unmittelbar die **Produktivität** von Personen und Teams.
- Stärke die Gestaltungsmöglichkeiten von **Geschäftsexperten** und ermöglich sie so **emergente Strukturen und Prozesse** orientiert am aktuellen Geschäft.

### Mitarbeiter
- sofort nützlich
- dynamisch anpassbar
- privat bis öffentlich

### Teams
- an **einem** Ort
- vernetzt
- bedarfsgerecht strukturiert

### Unternehmen
- web-basiert
- sicher
- integriert, offen und integrierbar
Eine lebendige Community ist ein wesentlicher Erfolgsfaktor.
Example: ABN AMRO

How to become “buddies of war” with stakeholders?

*How to convince and co-operate?*

- Tell me and I will forget
- Show me and I will remember
- Involve me and I will understand
- (Enforce me and I will resist)
A transformation unit
A transformation network
Jede BU durchläuft den EAM-Prozess in ihrer individuellen Detailtiefe und Geschwindigkeit. Grund: Die BUs haben einen unterschiedlichen Reifegrad in Bezug auf EAM.
Für die einzelnen Organisationseinheiten wurde ein Evonik-spezifisches Reifegrad-Modell definiert (2/2)

Stufen des EAM-Reifegradmodells und ihre Kriterien

**Observer**
- Fokus: Governance und Wissen aufbauen

**Beginner**
- Vorraussetzung: Bereichsarchitekten benannt
- Fokus: Ist-Kartierung durchführen

**Observer:**
- EAM als notwendig erkannt
- Interessen an EAM-Viewer-Schulung bekundet
  ➔ beobachtend

**Beginner:**
- grundsätzliche Bereitschaft zum EAM-Aktivitäten vorhanden
- Bereichsarchitekten benannt
- Mitarbeiter in EAM-# geschult
- Ist-Landschaft wird kartiert
  ➔ Bereitschaft zur Aktivität

**Professional**
- Vorraussetzung: Soll-Kartierung abgeschlossen
- Fokus: Soll-Kartierung durchführen

**Expert:**
- Zielbebauung wird flächendeckend betrieben
- jährlicher Review/EAM-Prozess ist etabliert
  ➔ Verantwortung für Aktivitäten übernommen und regelmäßig auszuführen
Incorporating Lean, Agile, and Enterprise 2.0 in Enterprise Architecture Management

- **Lean**
  - Establish a lean set of processes and rules…
    - …instead of overloading the stakeholders with bureaucratic processes and unsolicited artifacts

- **Agile**
  - Adopt evolutionary problem solving…
    - …instead of blueprinting the whole future rigidly on a drawing board

- **Enterprise 2.0**
  - Foster and moderate open participation…
    - …instead of relying only on experts and top-down wisdom

Adoption of agile management principles
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Empirical data set for this research (n=105)

Industry sector of the companies (n %)

- IT Consulting: 25%
- Other: 21%
- Health: 2%
- Transportation: 3%
- Management consulting: 4%
- Education: 6%
- Telecommunications: 8%
- Manufacturing: 6%
- Public Service: 6%
- Finance: 19%

Job title of the participants (n %)

- Enterprise Architect: 61%
- IT Architect: 15%
- Consultant: 12%
- Business Architect: 6%
- CXO: 6%
- IT Operations: 3%
- Software Engineer: 1%
- Other: 8%
Architecture management has to be integrated with other management functions.

Architectural changes are performed through a coherent set of projects.

Example of a mature IT organization
Influence factors for EAM

Enterprise Context
Organizational Context
EAM Goals
EAM Questions

Influence factors changing over time
Maturity of other (IT) management functions

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A page contains structured and unstructured information.

Title of the page

Tags help to find the page using the full text search

Text with embedded images, tables, links, expressions, data widgets, …

Attributes

References to other pages

What links to this page?

Ad-hoc definition of additional attributes (name, values/references)
A page can contain subpages and files.

- Subpages and files inherit the permissions of their parent page and are included during copying, moving and deleting.
Incorporating Lean, Agile, and Enterprise 2.0 in Enterprise Architecture Management

Establish a lean set of processes and rules…

…instead of overloading the stakeholders with bureaucratic processes and unsolicited artifacts

Adopt evolutionary problem solving…

…instead of blueprinting the whole future rigidly on a drawing board

Foster and moderate open participation…

…instead of relying only on experts and top-down wisdom

Discussion

1. Which tool(s) do you use for EAM today?
2. How well do they support agile, lean and collaborative EAM?
3. What should be improved?
1. Increasing business complexity and environmental volatility create a demand for \textit{holistic optimization} and \textit{coherent transformation}.

2. \textbf{Business capabilities} and business capability maps provide (black-box) abstractions beneficial and accessible for many stakeholders and enterprises of various sizes.

   They provide a \textbf{stable architectural reference} for strategic modeling tasks in turbulent environments.

3. Enterprise (business, domain, IT, software, …) architects should
   \begin{itemize}
   \item \textbf{adapt their management approach} to the dynamicity and complexity of the problems at hand
   \item apply \textbf{agile principles}
   \item utilize practice-proven \textbf{patterns and building blocks}
   \end{itemize}
Thank you for your attention. Questions?