Taking The Hype Out Of Agile – Realizing/Exploiting The True Potentials Of Agility In The Automotive Industry

Automotive Agile PEP
Berlin
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Prof. Dr. Ayelt Komus

- Professor of Organizational Design and Information Systems

- 20+ high-profile studies, 50+ publications, 100+ keynotes/lectures, 150+ interviews/media reports

- Co-Initiator of „Modellfabrik Koblenz“ (Model factory Koblenz)

- Scientific director of data center - University of appl. Sc. Koblenz

- Certified Scrum Master (3 organizations)

- Scientific advisory board Heupel Consultants

- Scientific advisory board member „Projektmagazin“

Further information www.komus.de
»Nicht der Wind, die Segel bestimmen den Kurs«


»Das Beste aus den beiden Welten: Agile Methoden mit bewährten Verlagen.«

Aktuell stehen viele Unternehmen vor der Herausforderung, die Chancen agile Methoden zu erschließen. Die Frage ist dabei nicht mehr, ob agile Methoden ins Projektmethodenportfolio aufgenommen werden sollen, sondern vielmehr, wie eine mögliche Umsetzung aussehen könnte. Dabei gibt es geeignete Wege zum agilen Unternehmen aufzeigen, die zur Organisation passen und diese nicht überfordern.

Diese Seite soll einen Ausschnitt meiner Aktivitäten und Inhalte in Lehre, Forschung, Beratung, Trainings, Workshops und Vorträgen vermitteln. Links und Downloads sollen Konzepte verständlich und Anstoß für neue Ideen sein.


Aktuelles

Study reports
www.process-and-project.net/studien

Keynotes
www.komus.de/vortrag
Agenda

- Welcome to the VUCA-World
- Finding The Sweet Spots Of Agile
- Empirical Results - Status Quo Agile -
- From Projects To Ecosystems
- The New Role Of Management
Welcome to the VUCA-World
Yes, It’s A VUCA-World

- Uber - the world’s largest taxi company - owns no cars
- Airbnb - the world’s largest accommodation provider - owns no property
- Facebook - the world’s most popular media company - creates no content

Apple’s Market Cap Briefly Passes $900 Billion

- Apple 7 times bigger than Siemens
- Tesla beats Ford

Lisa & Lena (15 years old) have 12 million followers on Instagram

Nov. 13, 2017: First Digital Pill

The FDA has approved the first digital pill
VUCA

V – Volatility
U – Uncertainty
C – Complexity
A – Ambiguity
Deutsche Post DHL‘s Streetscooter – Success Factor: Agile

“The first prototype was made up of 30% 3D-printed components.”

“Including the future users was a crucial piece of the puzzle for the success”

“[…] development time halved & cost reductions of up to 90%“

“The first electric vehicle could be presented after less than 18 months of development time.”

“A team of 50 people (average age of 29 years) used the Scrum process, the development process known from software development, for vehicle development.”
Finding The Sweet Spots Of Agile
Complicated Versus Complex – Stacey Matrix

- Simple
  - Low Clarity/Agreement
  - Under control
  - Far from Certainty
- Complicated
  - Extensive Clarity/Agreement
  - Under control
- Complex
  - Extensive Clarity/Agreement
  - Far from Certainty
  - Chaos
- Technology/Method

Requirements
Complex Versus Complicated

According to: Ralph D. Stacey: Strategic Management And Organisational Dynamic: The Challenge of Complexity
Examples Complex Vs. Complicated - Automotive Industry

According to: Ralph D. Stacey: Strategic Management And Organisational Dynamic: The Challenge of Complexity
Empirical Results
- Status Quo Agile -
Improvement Of Results And Efficiency

Did the usage of agile methods lead to improved results and efficiency?

- Yes: 73%
- No: 12%
- Not specified: 15%

(n=733)

(Responses from the categories “Consistently agile”, “Hybrid” and “Selective” – single choice)

Again, the vast majority of respondents see improvements through agile methods.

Source: Status Quo Agile 2016/2017

www.status-quo-agile.net
Success Rates Agile Versus Classic PM

*Sum of the "very good" and "good" ratings*

Scrum  Kanban  Design Thinking  Extreme Programming  DevOps  Lean  Feature Driven Development  Classic Project Management

*Responses from the categories “Consistently agile”, “Hybrid”, “Selective” and “Consistently classic project management” – single choice*

Agile methods are also clearly superior regarding Quality of results, Customer satisfaction, and Accuracy of evaluation of progress

Source: Status Quo Agile 2016/2017

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Scrum And IT-Kanban Most Popular

How important are the following methods for your area?

- Scrum
- Kanban ("IT-Kanban")
- Lean
- DevOps
- Design Thinking
- Extreme Programming (XP)*
- Feature Driven Development
- Lean Startup
- Agile Moedling
- Usability Driven Development
- Adaptive Software Development
- Unified Process (incl. RUP, AUP, OUP)
- Dynamic System Development Method
- Crystal

* (incl. Test Driven Development and Pair Programming)

(Responses from the categories “Consistently agile”, “Hybrid” and "Selective“ – single choice)

Scrum is still the most common method.
DevOps is gaining in importance.

Source: Status Quo Agile 2016/2017

www.status-quo-agile.net
Why did your organization decide to work with agile methods?

- Improve time to market: 61%
- Improve Quality: 47%
- Reduce project Risk: 42%
- Improve team morale: 40%
- Improve value of products: 35%
- Improve Predictability: 31%
- Improve creativity: 28%
- Frustrated with classical project management activities: 27%
- Demand by customer: 16%
- Everyone does it: 14%
- Other: 8%
- Not sure: 4%
- Demand by supplier: 3%
- Demand by market partners: 3%
- Compliance reasons: 2%

(Responses from the categories “Consistently agile”, “Hybrid” and “Selective” – multiple choice)

Quality, Risk minimization and Predictability are often the motives for using agile methods

Source: Status Quo Agile 2016/2017
Fields Of Application And Usage

In which areas do you use agile methods/ project management?

(Responses from the categories “Consistently agile”, “Hybrid” and “Selective” – multiple choice)

- **Software-Development**: 90% (2014) - 82% (2016)
- **Other IT-related topics (for example SAP-projects)**: 21% (2014) - 40% (2016)
- **Activities without specific references to IT**: 27% (2014) - 34% (2016)

*Agile methods are no longer used only in software development*

Source: Status Quo Agile 2016/2017

[www.status-quo-agile.net](http://www.status-quo-agile.net)
...how do you evaluate the improvement compared to the effort of the implementation and usage of agile methods?

Improvements higher in comparison to the efforts
Even higher for participants without IT background

Source: Status Quo Agile 2016/2017
From Agile Projects
To
Ecosystems
Understanding The Starting Situation

- Speed Boat
- Supertanker
- Burning Platform
- Pilot
- Lighthouse Project
Starting (Specific) Agile Projects

<table>
<thead>
<tr>
<th>Module</th>
<th>Objective</th>
<th>Scheduling</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Analysis</td>
<td>▶ Baseline study&lt;br&gt;▶ “Readiness“ - check</td>
<td>1 week</td>
</tr>
<tr>
<td>2. Configuration</td>
<td>▶ Development of agile approach&lt;br&gt;▶ Selection of pilot project&lt;br&gt;▶ Planning, instruction and coaching</td>
<td>1 week</td>
</tr>
<tr>
<td>3. Ramp-Up</td>
<td>▶ Development of initial Backlog&lt;br&gt;▶ Training and provisioning of good practice&lt;br&gt;▶ Intensive backing at the beginning</td>
<td>2 months</td>
</tr>
<tr>
<td>4. Project</td>
<td>▶ Ensuring of agile approach by context specific advice (Shadow PO / Shadow Scrum Master)&lt;br&gt;▶ Inspect and adapt methodology</td>
<td>10 months</td>
</tr>
</tbody>
</table>
Managing Change

Lap 1
- Process XY
- E-2-E
- Agile Capabilities

Evaluation
Lap 2
- ...
- ...
- ...

Evaluation
Lap 3
- ...
- ...
- ...

Evaluation
Lap n
- ...
- ...
- ...

Vision
permanent evolution

Source: Komus/Heupel Consultants
Connection Agile ↔ Classic – Practical Examples

Source: Heupel Consultants
Understanding, Measuring, Positioning
Agile Culture – How Does My Organization Perform?

Agile Assessment - Status Quo in Relation to the Agile Manifesto

Individuals and Interactions…

Working Products…

Agile Mindset - In General

Responding to Change…

Customer Collaboration…

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

This is not a detailed process for software development.

The ideas above have worked for us; you may need to adapt them for your own situation.

Kent Beck, Christof Koehler, Martin Fowler, Jimmy Cannon, Alistair Cockburn, Jim Highsmith, Dave Thomas, Rob C. Martin, Jim McCarthy, Ivar不甘心,꽁 signup, 빗 구석에, 33번 단지

Customer:

Quelle: http://agilemanifesto.org/ (11.11.11)
myAgile: Understanding Company Specific Challenges
myAgile – Development Of The Framework Conditions

Within six months, the evaluation of the given framework conditions has improved significantly.
Using Scaled Agile-Approaches In Hybrid Portfolios
Agile Scaling Approaches

**SAFe**

© Leffingwell – Scaled Agile Framework

**LeSS**

Source: http://less.works

**Nexus**

Source: Master-Thesis L. Bell on the basis of Nexus (Schwaber et. al.)

**Scrum@Scale**

Source: Master-Thesis L. Bell on the basis of Scrum@Scale (Sutherland et al.)

**Spotify Model**

Source: Henrik Kniberg

(https://labs.spotify.com/2014/03/27/spotify-engineering-culture-part-1/)

**Team of Teams**

On the basis of: S. McChrystal: Team of Teams
Project Portfolio Management – Synchronized „Heartbeat“

Operative Planning

Strategic Planning (2/year)

Tactical Planning (4/year)

Retro

March

September

Based on Felchlin, Basler-Versicherungen
Inspired by SAFe and Heupel Consultants
Simplicity, Simple Visualization, Haptics

Henrik Kniberg & Lars Roost

The New Role Of Management
- Agilizing The Organization -
# From Management to Leadership

<table>
<thead>
<tr>
<th>Management</th>
<th>(Servant) Leadership</th>
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<tr>
<td>How and When</td>
<td>What and Why</td>
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<td>Command and Control</td>
<td>Guidance and Support</td>
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<td>Micro-Management</td>
<td>Provide Vision</td>
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<tr>
<td>Carrot and Stick</td>
<td>Empower and Inspire Trust</td>
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<tr>
<td>Manage Subordinates</td>
<td>Leadership</td>
</tr>
<tr>
<td><strong>Bonuses, Rules, Specs</strong></td>
<td><strong>Purpose, Autonomy, Mastery</strong></td>
</tr>
</tbody>
</table>
Understanding My New Role

"Product Owner"

"Agile Coach"

"Servant Administration"

"Team"

Source: Heupel Consultants; Idee S. Waschk
Experience Leadership and Team: „Rope Game“, Ballpoint, …
Nothing is certain in a VUCA-World, but…

… not changing at all
will not be a successful strategy

… change just for the sake of change
won’t help, either

Find your northern star and
your process of change
And, don‘t forget…

Change

… also stands for vast opportunities and potentially for *fun*
Let’s connect!

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