Enterprise 4.0“
Research on
Digital Business Transformation

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Workshop on Linked Data in Industry 4.0
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A competitive Enterprise 4.0 design goes beyond application of technology

Enterprise 4.0

- New business models and value chains, new industrial networks, new digital products (global by nature), …
- Digital technologies change business processes and top-down and bottom-up organisational structures (people, markets, processes, leadership) –
- Digital transformation is an entrepreneurial challenge (rather „manage the unpredictable“ than deterministic planning)

Digital transformation goes beyond changes in the technological environment – it involves the nature of a company. Surviving in a digitalised economy is an entrepreneurial challenge!

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How can a sustainable competitive enterprise be designed so as to survive digital transformation?

&

What are the key capabilities and competences and what are „first mover“ advantages?...

Source and © by Kormann, Schilling
## "Enterprise 4.0," Matrix

<table>
<thead>
<tr>
<th>Potential areas of action and research</th>
<th>Companies</th>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td><a href="https://example.com">New emerging business models (new product offerings, new markets, ...)</a></td>
<td>Test-Fuchs</td>
<td>X</td>
<td>X</td>
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<tr>
<td><a href="https://example.com">New Internationalisation approaches and processes</a></td>
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<tr>
<td><a href="https://example.com">Digital sales and delivery models</a></td>
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<tr>
<td><a href="https://example.com">Digitalisation of production and business processes</a></td>
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<td><a href="https://example.com">Digital sourcing and logistics</a></td>
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<td><a href="https://example.com">New financing concepts (such as crowdfunding)</a></td>
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<tr>
<td><a href="https://example.com">Digital Entrepreneurship, Leadership and Management</a></td>
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</tbody>
</table>

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Test Equipment for Aerospace

USE - CASE Example
Meeting your requirements - is our passion

We design, manufacture and support tailor-made test equipment for our customers.

Customers benefit from our many years experience in aviation and space technology (military and civil)
Employees: 400
Export: 95%
Annual turnover: €45 Mio.

Company locations
Worldwide network of representatives
Products worldwide
Use-Case Example
Test-Fuchs

New Technology

Sensors & Hardware
Digitalisation (machine2 machine)
Integrated data management
Business organisation, tools and development

Digitalised business processes and models

Enterprise 4.0

> Vision

Identify products

(customer benefits (internal + external)

> Evaluation of the code with a smartphone

> Information of the product / parts list is provided on Smartphone

> e.g. Equip products with a code

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**Use-Case Example**

**Test-Fuchs**

New Technology

- **Sensors & Hardware**
- **Digitalisation (machine2 machine)**
- **Integrated data management**
- **Business organisation, tools and development**

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**Enterprise 4.0**

**Objectives– TEST-FUCHS Use Case**

- To increase data quality
  - Integrated data management
  - Change and configuration management
- To improve process efficiency
  - Reduction of search times (product data)
  - Enhancement of spare parts business
- To enabling new business models
  - New product, service and maintenance related product offerings
  - Co-creation with key suppliers

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Use-Case Example
Test-Fuchs

Digitalised business processes and models

New Technology

Sensors & Hardware
Digitalisation (machine2 machine)
Integrated data management
Business organisation, tools and development

> Challenges
Product systems of top provider from TEST-FUCHS

> Various systems
  - App
  - Punch-out catalogue
  - oProcuroment system

> Business models
  - Open models
  - Closed models

> Different approaches of industries
  - Electronics / Hydraulics / measuring equipment etc.

> Technical integration of various systems of key suppliers (apps, punch-out catalogues, eProcurement systems)
> Tackling the issue of different data sharing strategies (from open models to closed systems)
> Creating and designing win-win strategy with key suppliers

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Use-Case Example - Test-Fuchs
Industrial context: Compelling events by Airbus and other key players in the Aerospace industry -

“Today’s aerospace factory floor is nothing like the hectic, noisy production facility of the past...
And what of tomorrow? Exploring a new aircraft in virtual reality and using advanced digital technologies on the shop floor; production lines where computer-suited personnel and robots work side by side; 3D printers producing prototypes and series components – Airbus Group is making huge inroads in this area, turning ideas into reality... **Airbus is going to optimise its industrial system by 2020.**”

Use-Case Example - Test-Fuchs
Test-Fuchs, a key partner for our research, is a supplier for Airbus

What are the implications for an Airbus supplier of the digital transformation phenomenon in the aerospace industry? What impact factors are relevant here?

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Enterprise 4.0 research:

e. g. Kormann (2015) identified 33 impact factors of digital transformation on business models

E.g.

• Virtualisation of territory (Death of distance)
• Level of psychic distance (technological similarity)
• Level of international market orientation
• Level of collaboration acitivities (co-creation, user & supplier participation)
• Etc.

The fundamental question is: Will digital transformation become a game changer for companies AND the way we do research?

Source: Kormann, 2015
If you want to join our Enterprise 4.0 Jouney – Contact us!
We address companies, researchers and consultants to work on Digital Business Transformation

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