Shaping the Digital Transformation

Dr. Thomas Lange

Indo-German Symposium “The Future of Work”

New Delhi, March 19, 2019
acatech provides top-level expertise from science and business for political decision-making processes.
acatech HR Working Group
C-Level Executives (CHROs)
It’s all about **people**
– less about technology
You should be comfortable with uncertainty – for sure
You need less experts
– and more fast learners
The Digital Transformation

1. Hyperconnectivity
2. Autonomous Systems
3. Human-Machine Interaction
4. Data-driven Business Models
5. Platform Markets
6. Digital Ecosystems

Disrupt!
Germany – a stranded whale?

Germans […] are more afraid of the gig economy […] than they are of an all-controlling state. They are also too dependent on big, outdated systems.

Adaptation becomes the ONE critical success factor

From cascaded development… …to constant adaptation
Figure 2: Example of agile working day for knowledge worker (Source: BMW AG, slightly adapted) / acatech (2017)
## Lifelong learning—individualized training

### Trends
- Flexible learning
- Participatory learning
- Learning in networks

### Range
- On the job
- On demand
- Digital content

### Learning fitness
- Learning fitness is a matter of training – not of age
- Supporting employees’ self-efficacy (mastery experience)
- Individual learning accompaniment
Manager

Martin – works in the automotive industry

Age: 51
Job: engineer
Professional experience: 25 years
Training: qualified mechanical engineering

“I can achieve all my career goals - even without wasting my valuable time on seminars.”

Approaches
- Frequent learning impulses
- Job rotation
- Immersive learning journeys

Practical examples
- Exchange initiative
- Learning on campus
- Program AI-Manager

11 | Dr. Thomas Lange, March 19, 2019
Joséf – works at an insurance company

Age: 39
Job: Client Advisor
Professional experience: 16 years
Training: insurance salesman

“I enjoy my job as customer service advisor. But I’m worried about my future because a lot of jobs at our company are currently being replaced by standard IT solutions.”

Approaches
▪ Systematic early identification of individual needs
▪ Digital learning nuggets, MOOCs
▪ Mobile/flexible learning

Practical examples
▪ Web-tool „development paths“
▪ E-learning for everyone
▪ Siemens Learning World
Céline – IT developer

Age: 32  
Job: Application engineer  
Professional experience: 8 years  
Training: BA in Information Technology

“I enjoy analysing all kinds of data streams and always discovering something new. I couldn’t bear to be stuck always doing the same old thing.”

Approaches
- Freedom to use agile working methods
- Competitions / achievement awards
- Learning in networks

Practical example
- Innovation Lab
- Digital Booster
- LevelUP!
Shaping the future of work – TOGETHER

Companies gain...

Adaptability ↔ Agility ↔ Flexibility

Innovation ↔ Lifelong learning ↔ Employability

Flexibility ↔ Co-determination ↔ Stability

Employees gain...

Win-win
Human-AI symbiosis

Source: Kai-Fu Lee, AI Superpowers (2018)
Human-AI symbiosis

- **Social**
  - Human
  - Human + AI
- **Asocial**
  - AI
  - Human + AI

- **Optimization-based**
  - Low dexterity, structured environment
- **Creativity-/strategy-based**
  - High dexterity, unstructured environment

The missing middle

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<tr>
<th>Lead</th>
<th>Emphasize</th>
<th>Create</th>
<th>Judge</th>
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Human-only activity

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<th>Transact</th>
<th>Iterate</th>
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Machine-only activity

Source: Daugherty/Wilson, Human + Machine (2018)
## The missing middle

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- **Human-only activity**
  - Humans complement machines
  - Human and machine hybrid activities
  - AI gives humans superpowers

- **Machine-only activity**

Source: Daugherty/Wilson, Human + Machine (2018)
# Digital Work Design

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<thead>
<tr>
<th>#</th>
<th>Big 5 for work, leadership, organisation</th>
<th>Upshot: Micro level</th>
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<tr>
<td>1</td>
<td>Dealing with VUCA becomes core competence</td>
<td>Ambidexterity</td>
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<td>Constant learning</td>
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<td>No disruption without teamwork</td>
<td>Open-mindedness</td>
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<td></td>
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<td>Exchange</td>
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<td>More democratic organizational structures</td>
<td>Empowerment</td>
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<td>Participation</td>
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<td>Importance of relationships</td>
<td>Esteem</td>
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<td>Networking</td>
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<td>5</td>
<td>Focus on health</td>
<td>Balance</td>
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<td>Ressources</td>
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Upshot: Macro level

Need for…

- Business model innovation
- Transformation management
- National skills monitoring
- Reform of the education system
- Ambidextrous structures
- Opportunity-oriented communication

Strengthening knowledge transfer – Excellence for implementation
Demanding and promoting flexibility – Turning employees into change agents
Anticipating requirements faster – personnel planning for Germany
Improving adaptability – promoting instead of selecting
Use existing strengths – explore new structures in parallel
Making changes visible – creating a positive basic mood
It’s all about **people**

– less about technology
You should be comfortable with **uncertainty** – for sure
You need less experts – and more fast learners
And…

"Germany should learn how to make life a little more chaotic and therefore more interesting."

Source: GIZ, Germany in the Eyes of the World
Thank you.

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