Human Centric Agile Transformation
Towards Agile Manufacturing Systems

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President, Orgalime
The European Technology Industries
OUR INDUSTRY: KEY FIGURES

2,171 billion
Forecast turnover for Europe's technology industries in 2018

similar to
GDP of France
In 2017, the GDP of France was €2,279 billion EUR

11.2 million
Employed by Europe's technology industries in 2018

30% of total industry
European industry provided 36 million direct jobs in 2016

€567 billion
EU technology industry exports (2016)

1/3 of manufactured exports
EU manufactured exports totalled €1744 billion in 2016
Leading automation system provider for machining shops around the world

"We are bringing manufacturing into the future."
Facts and figures

- **Open integrator**
  - 4,000 installed systems

- **Market leader**
  - 1982 first system installation – it’s still running

- **Solution provider**
  - 24/7 worldwide technical support
  - 8,200 record of customer’s annual spindle hours
What you see...
...is not what it is.
Solution elements

Automation Hardware + Manufacturing Management Software + Lifecycle Services

= Fastems automation solution
Imagine The Drivers and Impact...

Technical automation potential is concentrated in countries with the largest populations and/or high wages.

Potential impact due to automation, adapting currently demonstrated technology (46 countries)

<table>
<thead>
<tr>
<th>Wages associated with technically automatable activities</th>
<th>Labor associated with technically automatable activities</th>
<th>Automation potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ trillion</td>
<td>Million FTE</td>
<td>%</td>
</tr>
</tbody>
</table>

- **Remaining countries**: $4.7 trillion of $14.6 trillion
- **Japan**: 367 million FTE
- **India**: 61 million FTE
- **United States**: 62 million FTE
- **Europe Big 5**: 235 million FTE
- **China**: 395 million FTE

**Automation potential %**:

- **Japan**: 56%
- **India**: 52%
- **China**: 51%
- **Europe Big 5**: 47%
- **United States**: 46%
- **Remaining countries**: 50%

Where Automation Hits

Time spent on activities that can be automated by adapting currently demonstrated technology

<table>
<thead>
<tr>
<th>Time spent in all US occupations %</th>
<th>Collect data</th>
<th>Process data</th>
<th>Predictable physical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage¹ Expertise² Interface³ Unpredictable physical⁴</td>
<td>17</td>
<td>16</td>
<td>18</td>
</tr>
<tr>
<td>Total wages in US, 2014 $ billion</td>
<td>1,030</td>
<td>931</td>
<td>766</td>
</tr>
</tbody>
</table>

Most susceptible activities $2.7 trillion in wages

51% of total working hours

The adoption and impact of digitalization

1. Operational Efficiency
   - Asset utilization
   - Operational cost reduction
   - Worker productivity

2. New Products & Services
   - Pay-per-use
   - Software-based services
   - Data monetization

3. Outcome Economy
   - Pay-per-outcome
   - New connected ecosystems
   - Platform-enabled marketplace

4. Autonomous, Pull Economy
   - Continuous demand-sensing
   - End-to-end automation
   - Resource optimization & waste reduction

Approach and actions

CASE FASTEMS
The Mind-Set Shift

- Continuous learning throughout organisation
- Cultural change needed to develop workforce of the future
- Strong shift towards cross-functional collaboration and team-based work
- Traditional hierarchies are for stability vs.
  - Agile organizations are for stability and dynamism
  - Rapid learning and fast decision-making

Based on McKinsey survey
FASTEMS COMMITMENT
 Principles of Our Culture

Backbone
Sharing = Caring
Water is water. Rock is rock.
Concrete, tangible, understandable, executable, inspiring, committing
Backbone is doing your work so that both you and your colleagues can be proud of it. It’s learning from mistakes, being honest and fair, and creating solutions instead of problems.
Sharing = Caring is all about the importance of communication. It’s about listening, asking and understanding so that our work runs more smoothly and effectively. But it’s also about treating one another with trust and respect.
Water is water. Rock is rock means solving things as simply as possible, which is one of the keys to achieving perfection. We’re focusing on what’s truly important, being accurate, and recognizing that our satisfaction comes from satisfying our customers.
FASTEMS LEADERSHIP – Delight and Deliver

Principles

- Enable others to succeed
- Take time to understand the big picture
- Create and maintain a sense of urgency

Manners

- Build on trust. Invest in daring. Feed forward.
- Challenge assumptions. Bring the outside in. Explain the Why.
- Focus on the essential. Remove obstacles. Follow through.
Measure and follow-up

- Survey with whole personnel twice per year
- Results discussed in the teams
- Improvement actions initiated
- Impact measured

Survey indicators

**Communication and implementation**
- I understand the strategy and work accordingly to reach our targets

**Collaboration**
- Collaboration between teams is successful

**Personal coaching and support**
- My manager feeds me forward

**Follow through**
- We follow up systematically the implementation of agreed actions

**Closer to customer**
- We have developed our operations to be more customer-oriented

**Less complicated**
- We have reduced unnecessary complexity
The transformation is not (just) about technology & business models

Technology & Business models

Culture

Performance management

Leadership
“8760 is the key to your success.”