



**EUROPEAN
4.0 TRANSFORMATION
CENTER**



E40TC

Realize Digital Transformation: Jobs and Skills throughout the Value Chain

Manufacturing Performance Days, Tampere, June 6, 2019

Just to make a long story short: Become more holistic and more agile

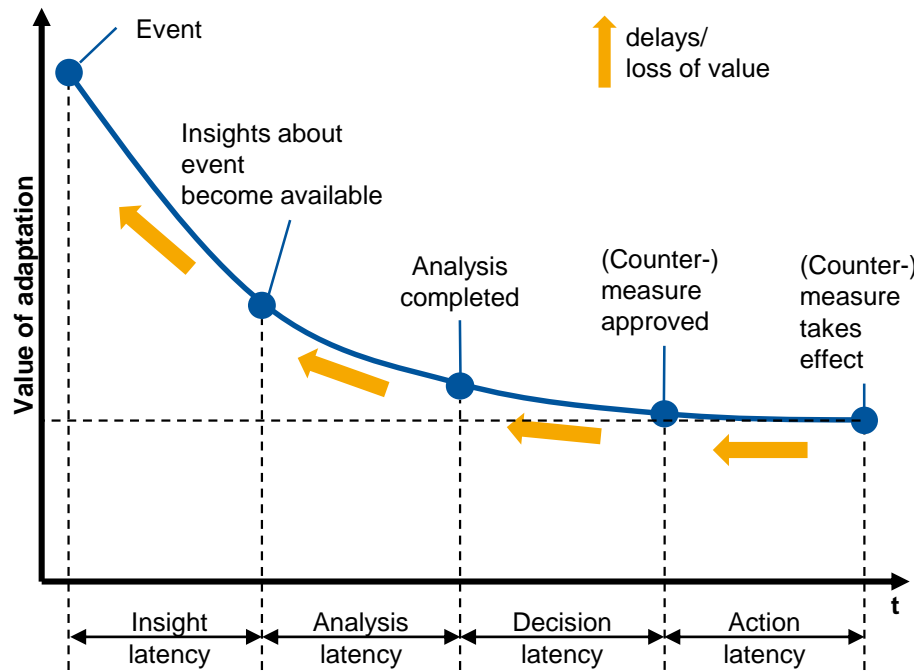


- This presentation refers to transformation of processes (not products or business models)
- The Internet of Production, and the Realize Digital Transformation Roadmap show the value of 4.0 Transformation lies in
 - Faster management cycles
 - Enterprise wide understanding, as opposed to silo thinking
 - Significant amounts of cross-skilling between departmental knowledge bases, as well as “physical“ and “digital“
 - New approaches to corporate product/process/IT architecture, IT operations, agility, with the right kinds of skills and mindsets
- You are going to need
 - C-Level / Investment Board Member education to bridge the gap between knowledge and money/power
 - Internet of Production Master Architect as CIO (not just a staff function figue leaf) and Enterprise Masterminds
 - Domain system owners to follow and understand
 - Lean and agile deployment of classic standard software applications – kill the customization mindset
 - Other domain systems in the company and respective connections in the Internet of Production
 - IoT data mining, business logic and analytics, connectivity and modular app team(s)
 - Operational people cross-skilled into “digital“ beyond their local shadow IT
- We configure your agile roadmap – visit European 4.0 Transformation Center (in Aachen, Germany, or on e4tc.de)

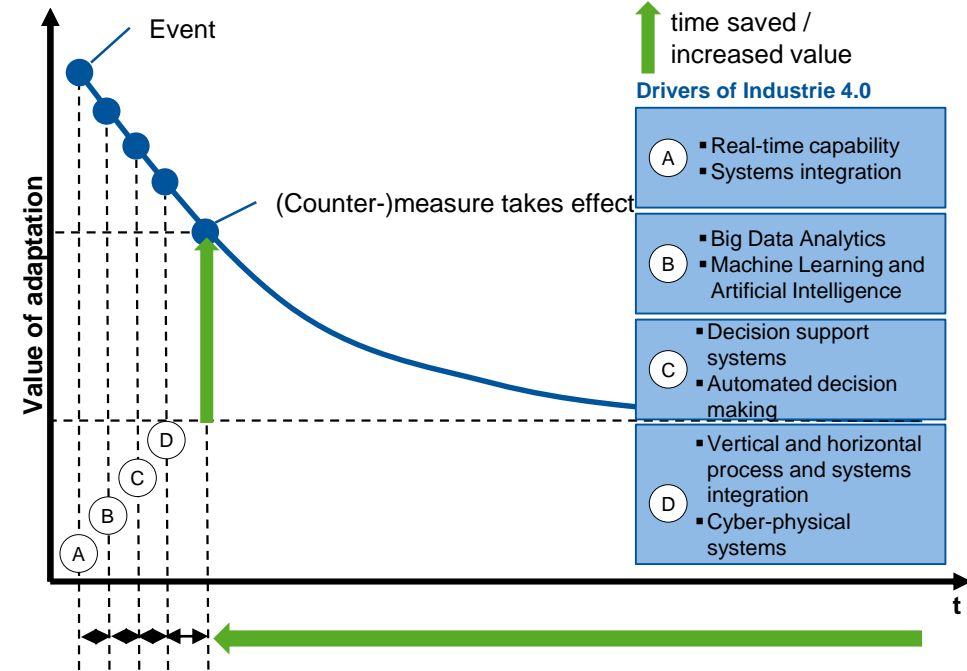
acatech Industrie 4.0 Maturity Index: Less latency helps improve faster



Typical reaction of traditional companies to unplanned event



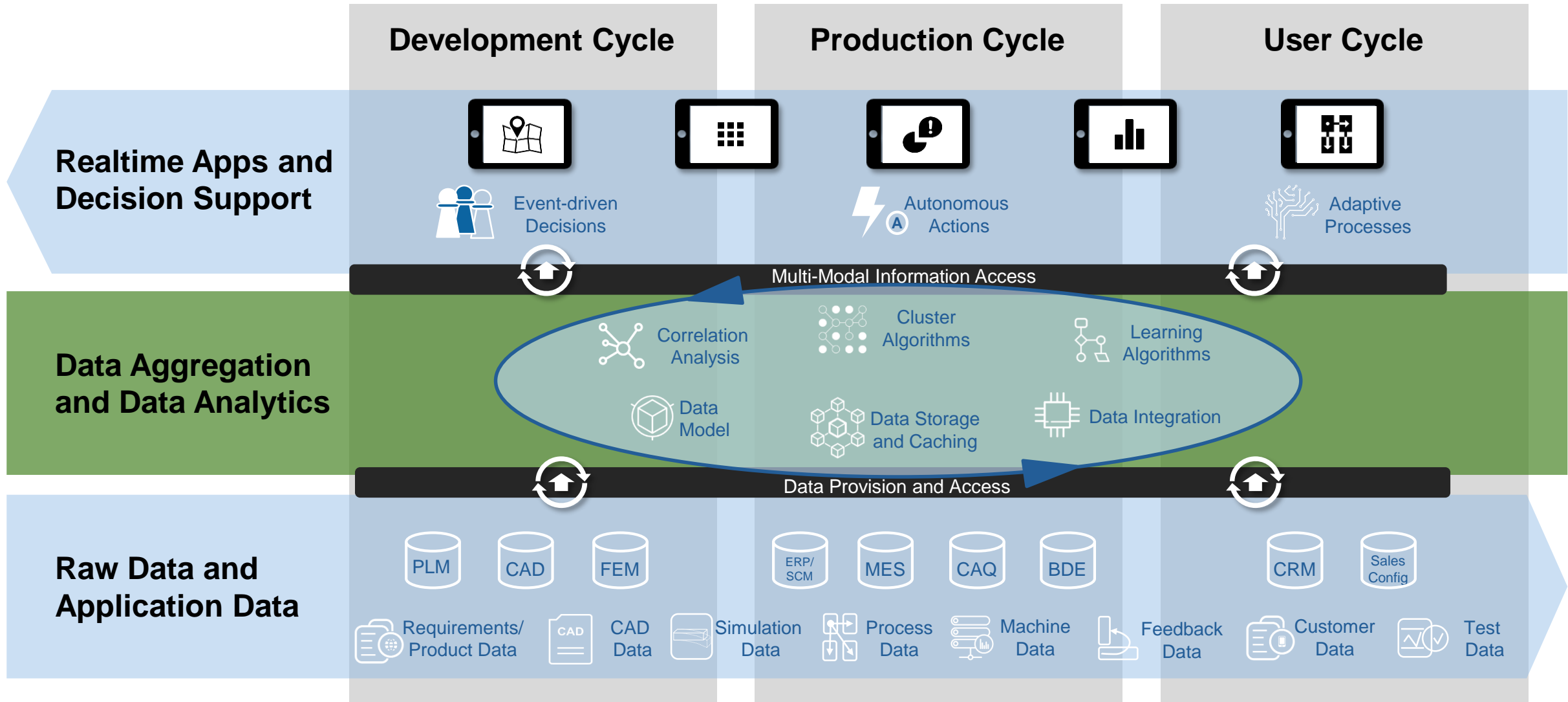
Typical reaction of agile companies to unplanned event



Companies become faster and more agile with Industrie 4.0

Less time per improvement yields more improvements over time

Internet of Production



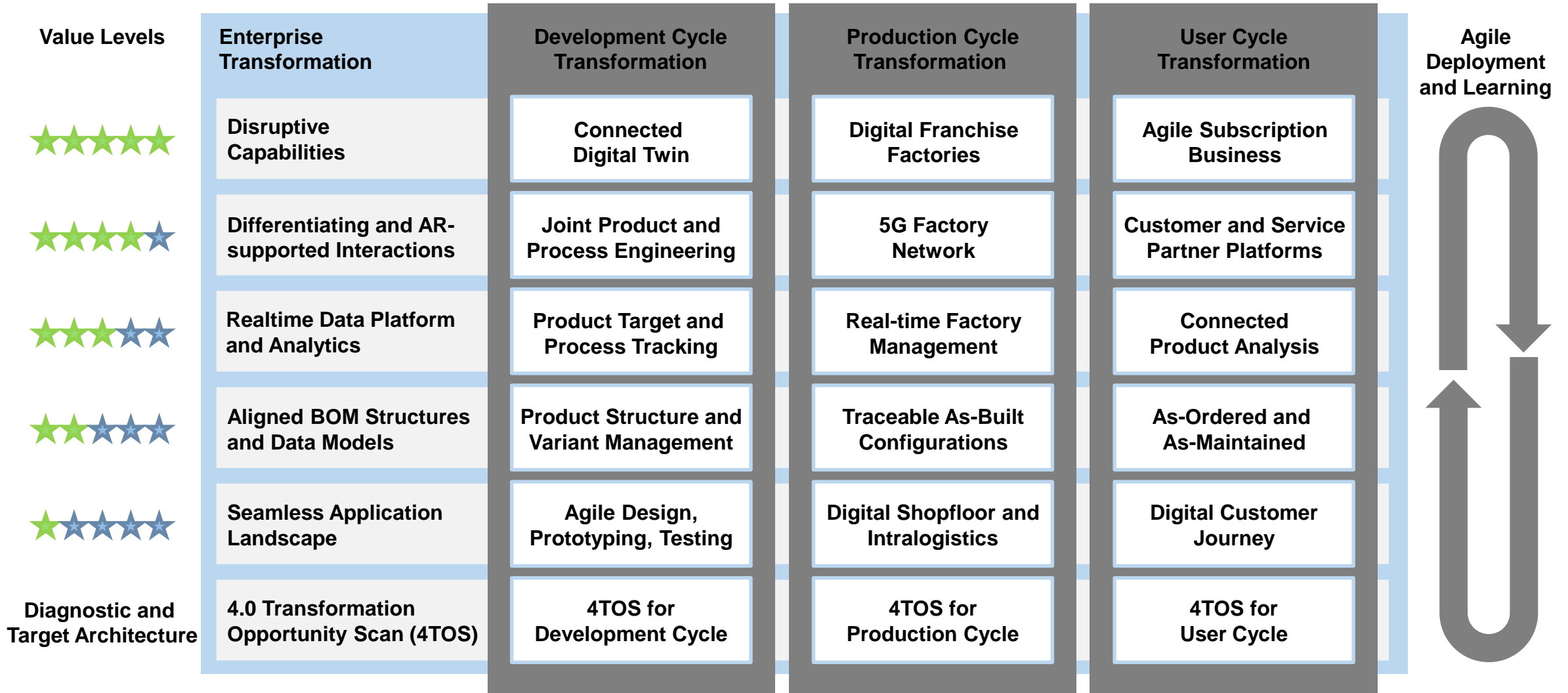
Internet of Production at e.GO and E4TC in Aachen



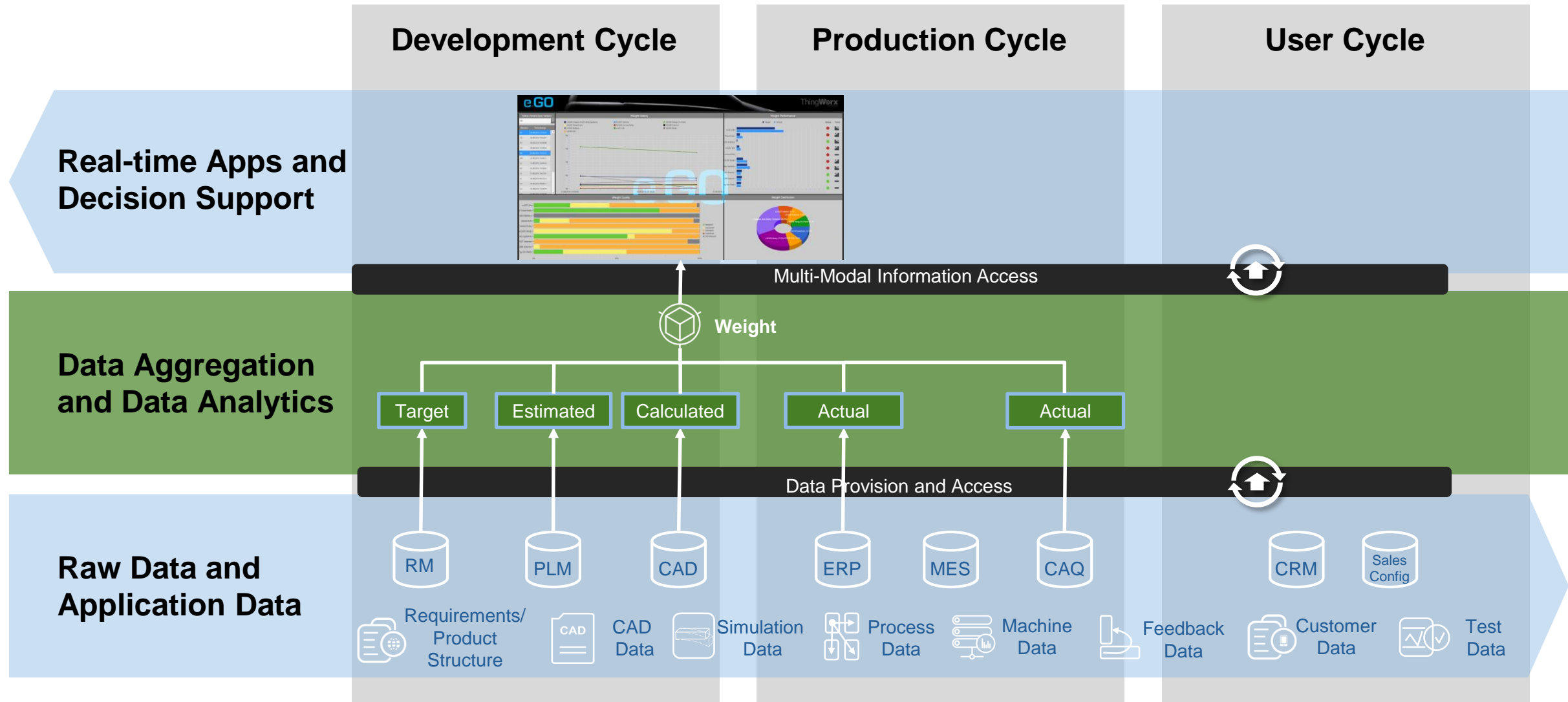
e.GO Plant 1 (out of 4) in Aachen, Germany, and its representation in Elisa Smart Factory



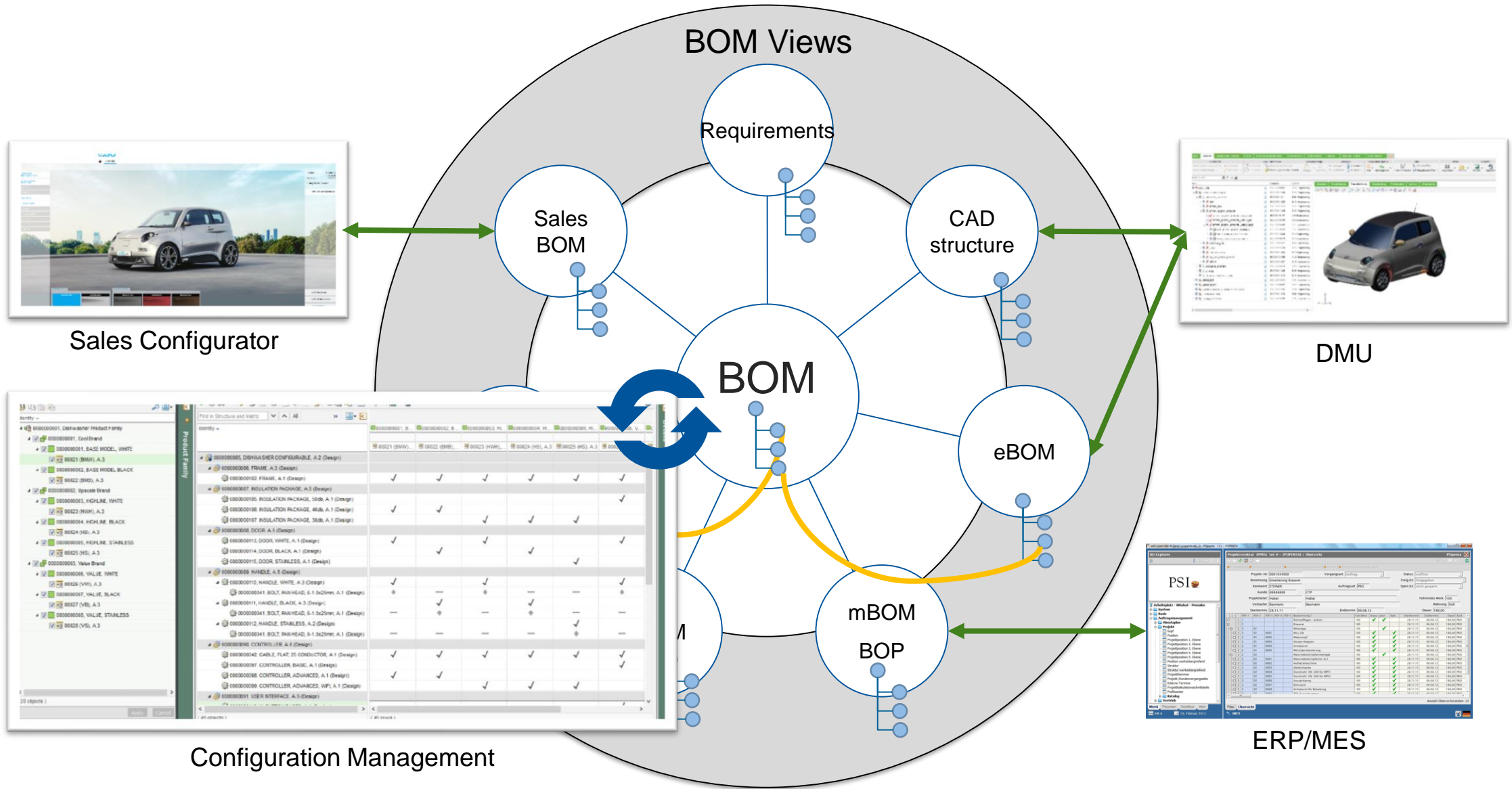
4.0 Transformation Modules towards Internet of Production



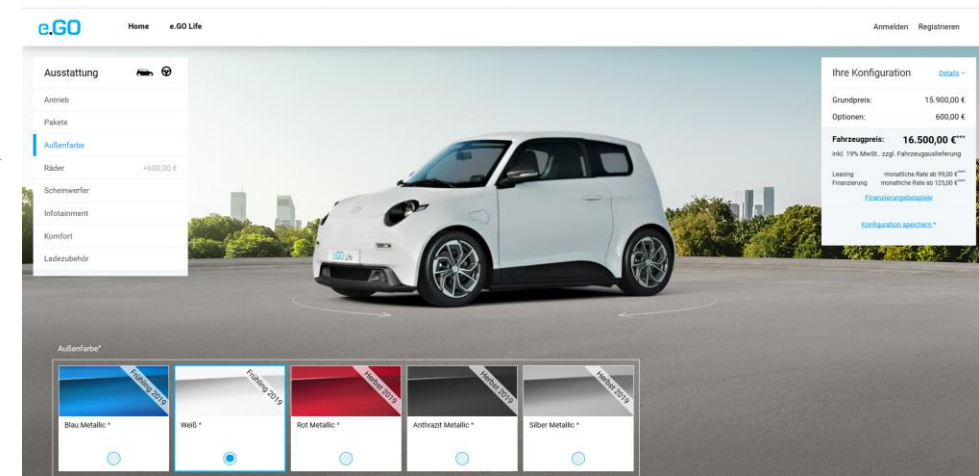
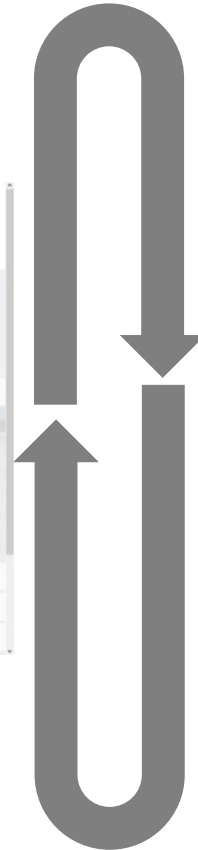
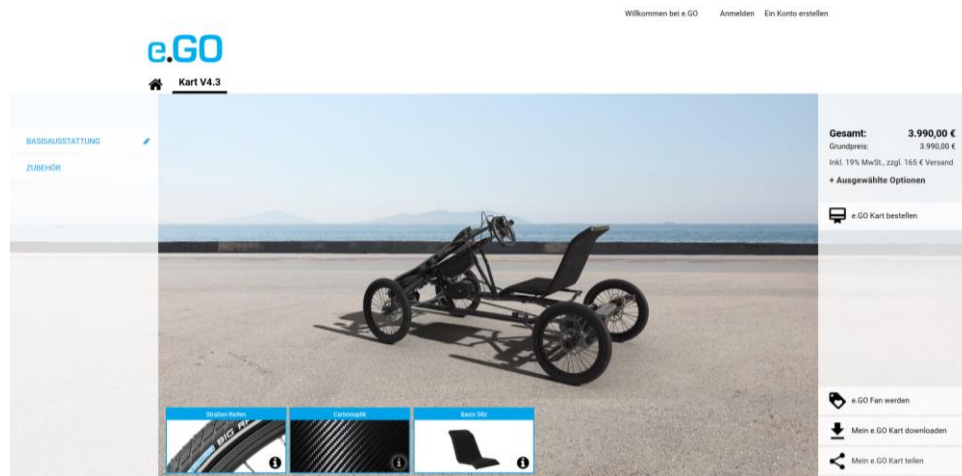
Weight management example: From PLM only to multi-source



xBOM and Configuration Management compatible across the enterprise



Agility example – from e.GO Kart Configurator and Webshop to e.GO Life



You are going to need



Development Cycle

Production Cycle

User Cycle

Realtime Apps and Decision Support

Data Aggregation and Data Analytics

Raw Data and Application Data



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Requirements/
Product Data



CAD
Data



Simulation
Data



Process
Data



Machine
Data



Feedback
Data



Customer
Data



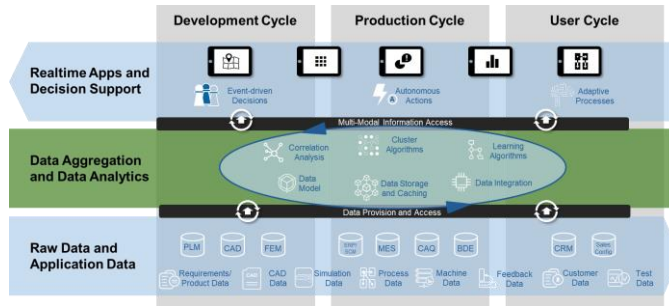
Test
Data

The European 4.0 Transformation Center (E4TC) in a nutshell



Digital Transformation

Internet of Production (IoP) – Our common framework



4.0 Transformation Modules towards Internet of Production

Value Levels	Enterprise Transformation	Development Cycle Transformation	Production Cycle Transformation	User Cycle Transformation	Agile Deployment and Learning
★★★★★	Disruptive Capabilities	Connected Digital Twin	Digital Franchise Factories	Agile Subscription Business	
★★★★☆	Differentiating and AR-supported Interactions	Joint Product and Process Engineering	5G Factory Network	Customer and Service Partner Platforms	
★★★★☆	Realtime Data Platform and Analytics	Product Target and Process Tracking	Real-time Factory Management	Connected Product Analysis	
★★★★☆	Aligned BOM Structures and Data Models	Product Structure and Variant Management	Traceable As-Built Configurations	As-Ordered and As-Maintained	
★★★★☆	Seamless Application Landscape	Agile Design, Prototyping, Testing	Digital Shopfloor and Intralogistics	Digital Customer Journey	
Diagnostic and Target Architecture	4.0 Transformation Opportunity Scan (4TOS)	4TOS for Development Cycle	4TOS for Production Cycle	4TOS for User Cycle	

Center



Living Demonstrator



Opportunities



Membership



Research



Community

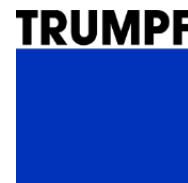
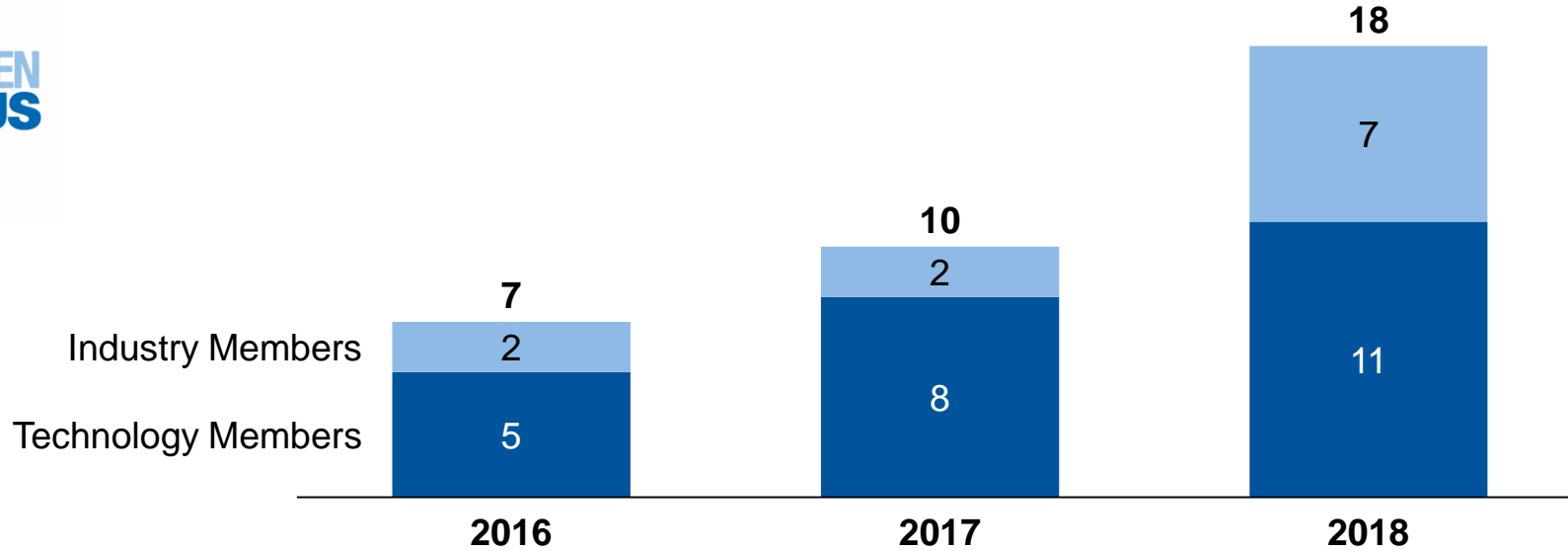


Education

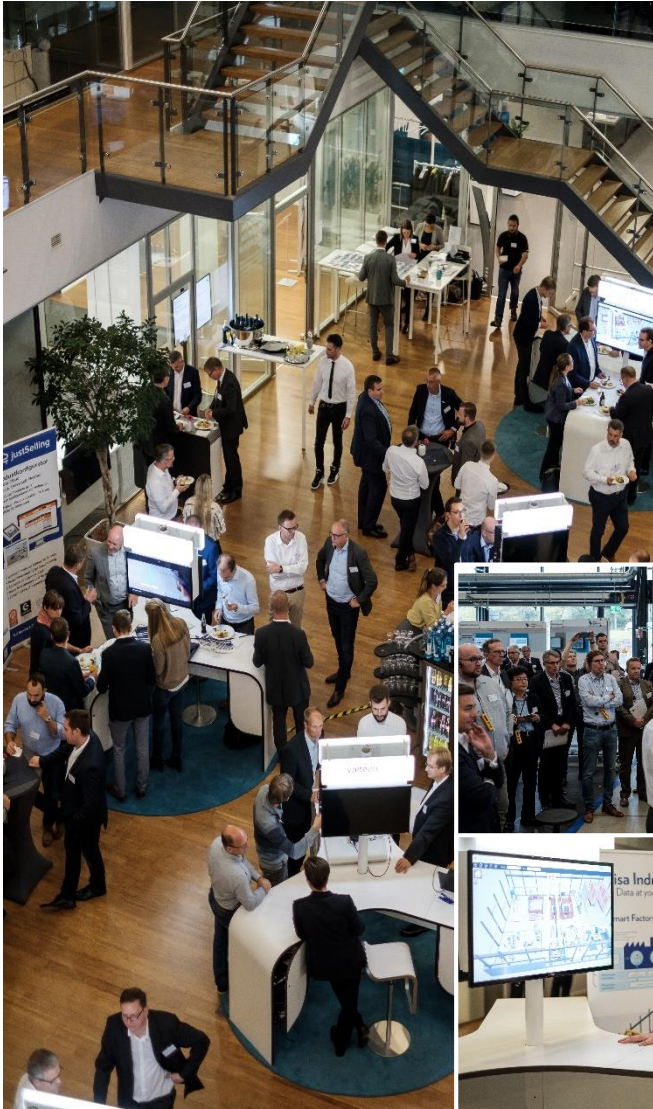


Consultancy

E4TC Member Companies



4th Practice Forum – Realize Digital Transformation in September 25/26, 2019



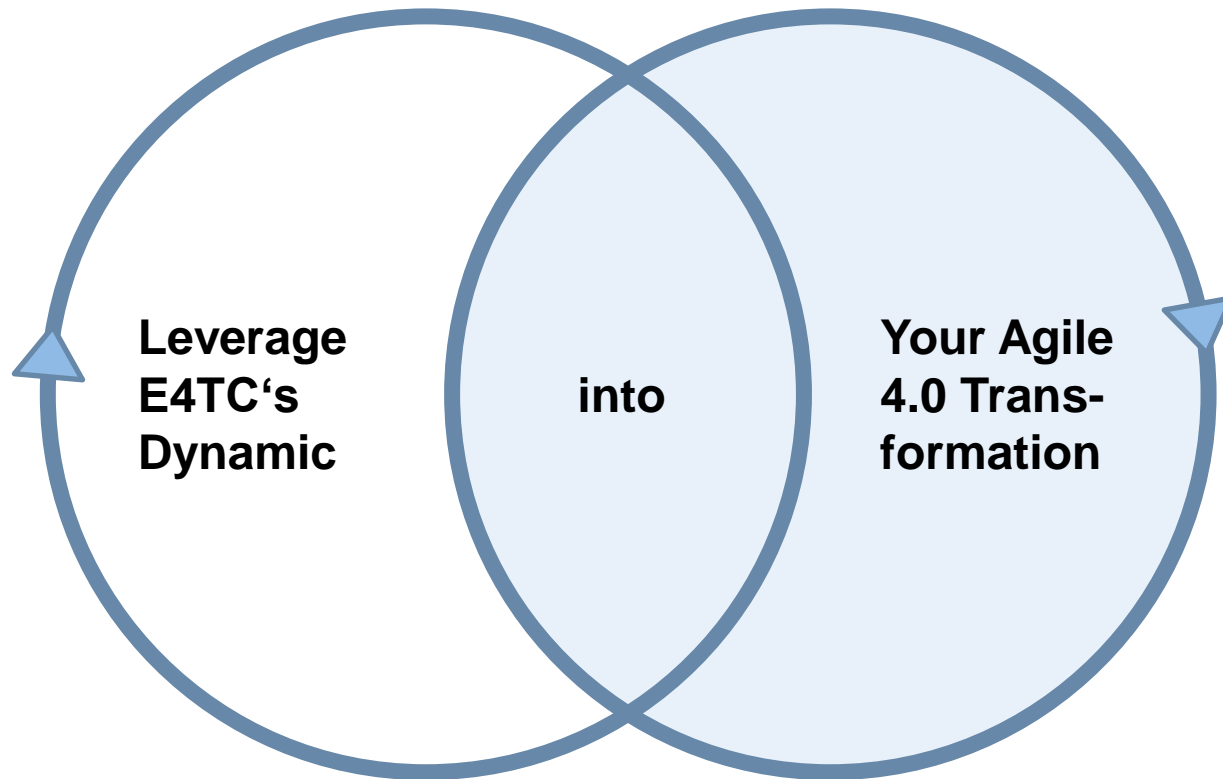
- RWTH Aachen Campus **Cluster Smart Logistics** (Atrium and DFA)
- September 25, 06.30 pm:
 - Arrivals, reception, and dinner
 - Opening of exhibition with sponsor introductions
- September 26, 08.00 am – 04.00 pm:
 - Keynotes
 - Parallel tracks for flexible individual attendance:
 - **Expert Forum** in Atrium and DFA
 - » Sponsor exhibition booths
 - » E4TC/IoP discussion booths
 - **e.GO Life testing** tours around Campus
 - Site visit to **e.GO Plants** in Aachen Rothe Erde

Full program and registration at <https://praxisforum.e4tc.de/en/>

2018 E4TC Visitor Examples



Leverage E4TC into Your Agile 4.0 Transformation



- 1 Visit us with your (big) boss to define the subject onsite**
- 2 Create a true Mission Statement for your 4.0 Transformation**
- 3 Define your 4.0 Transformation business value drivers**
- 4 Define business and IT playing field for agile realization**
- 5 Define, execute and validate initial implementation sprints**
- 6 Transform yourself to 4.0 Transformation governance**

Many thanks for your attention – see you at coffee break



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