Digital Twin –
Use Cases und Erfahrungsberichte aus der Swiss Smart Factory

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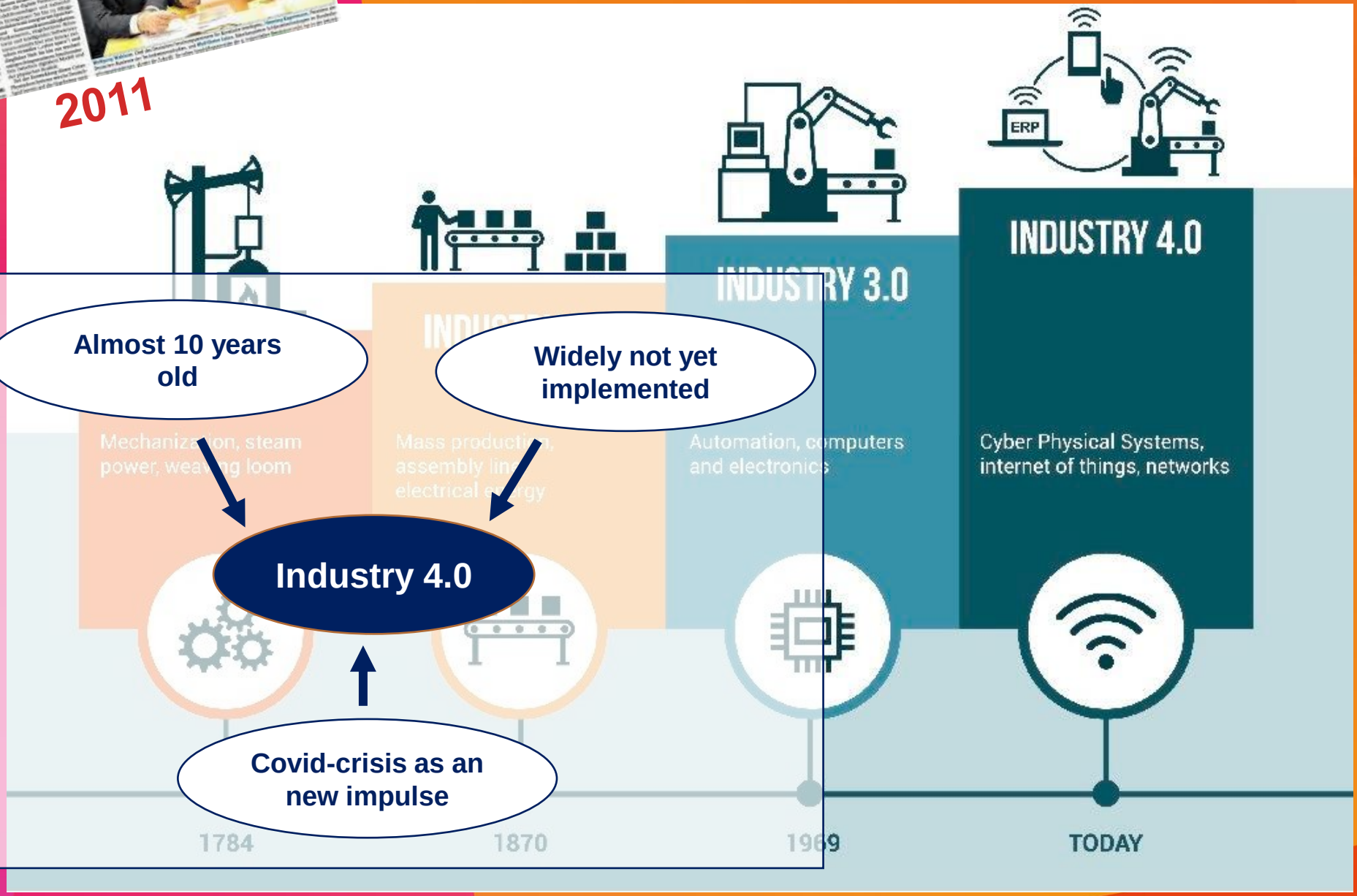
Park Biel/Bienne

Industry 4.0

Industrie 4.0: Mit dem Internet der Dinge auf dem Weg zur 4. industriellen Revolution

2011



Almost 10 years old

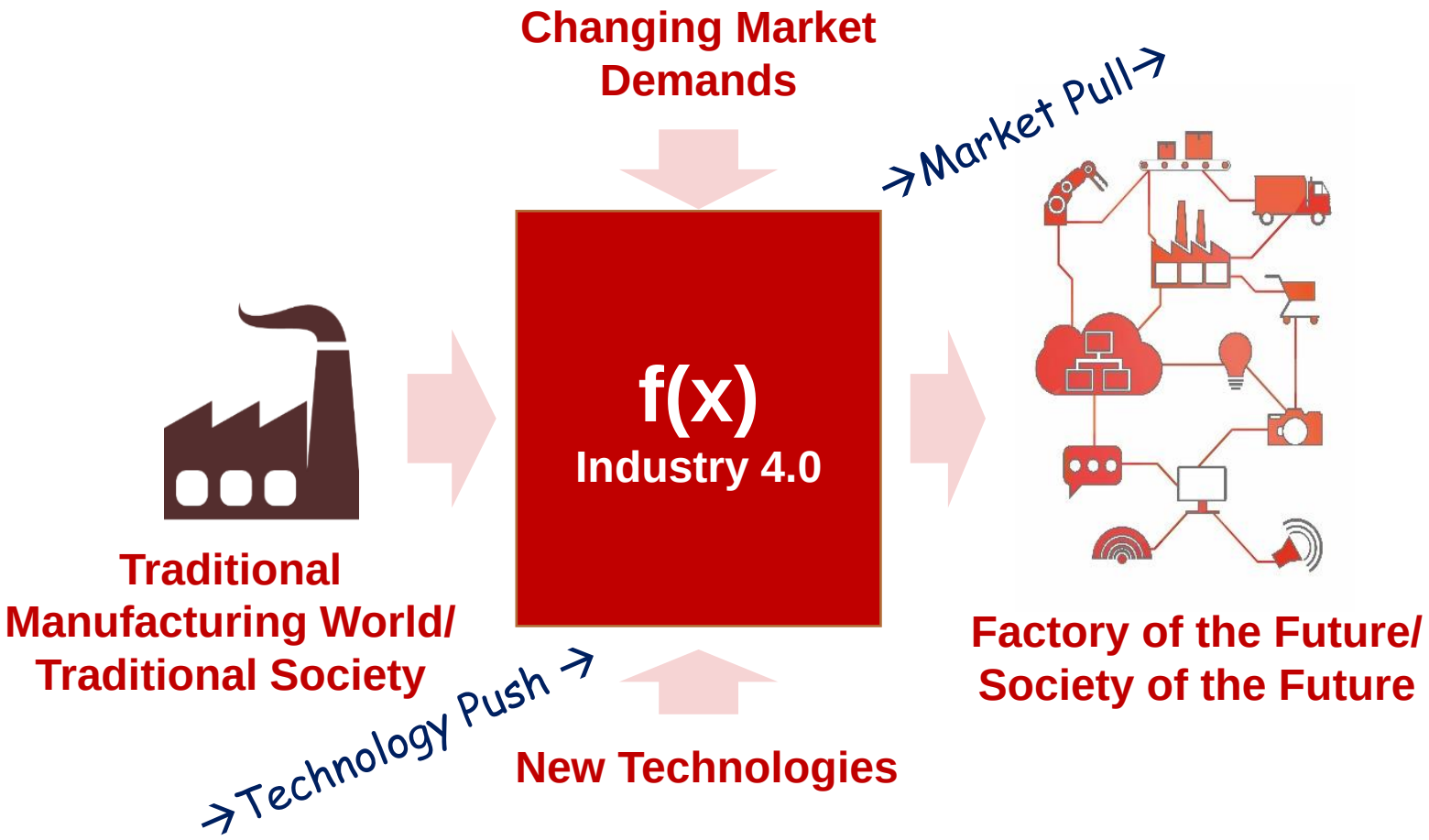
Widely not yet implemented

Industry 4.0

Covid-crisis as an new impulse

Industry 4.0

…as a Transformation Process



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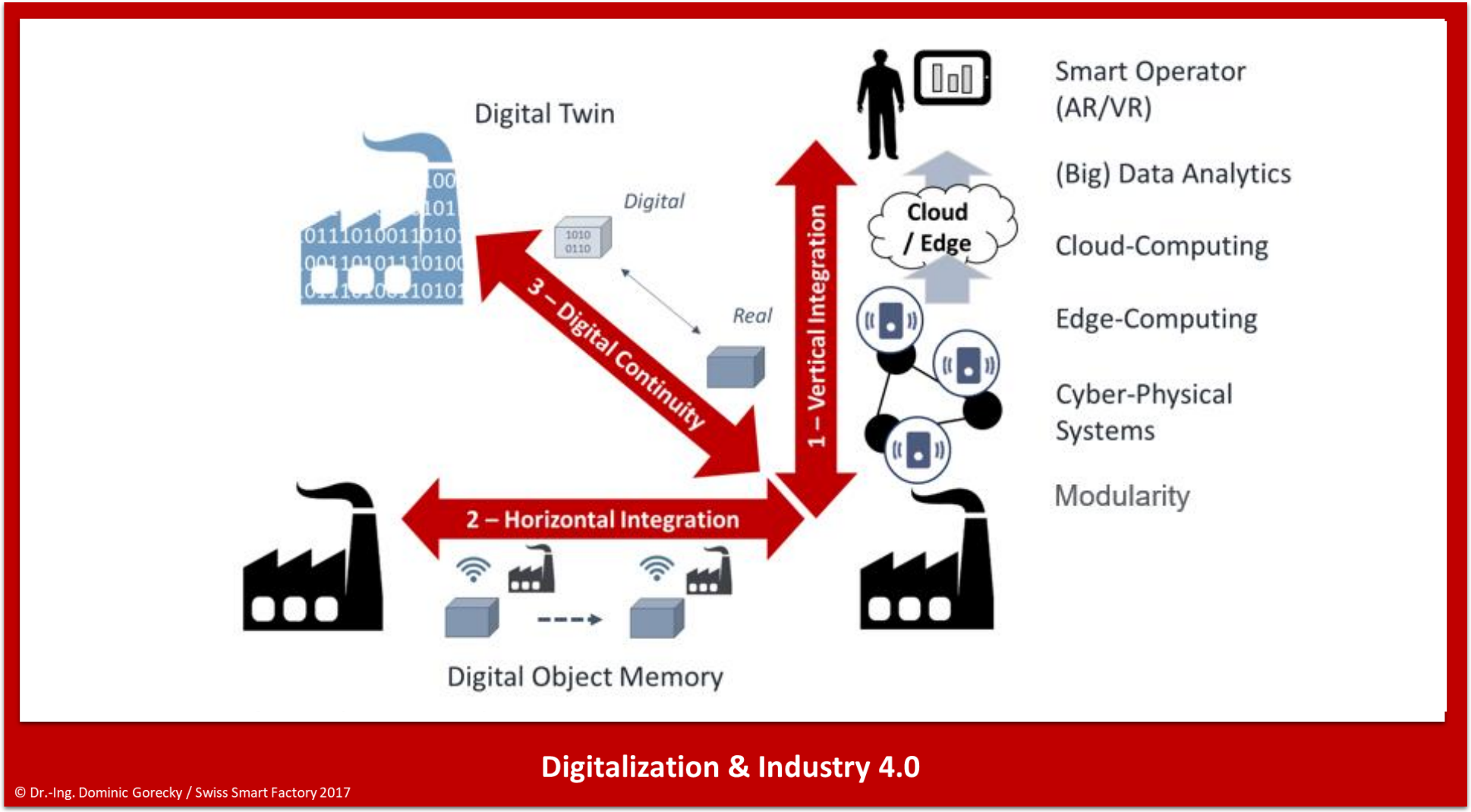
Industry 4.0

A multifaceted and interdisciplinary challenge



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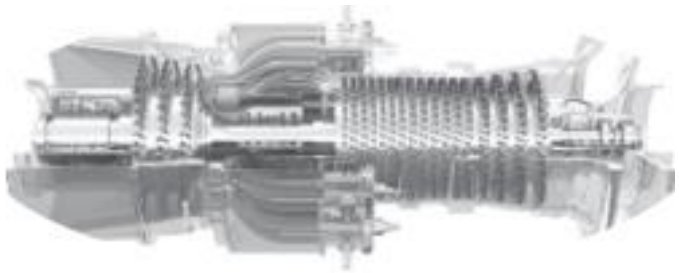
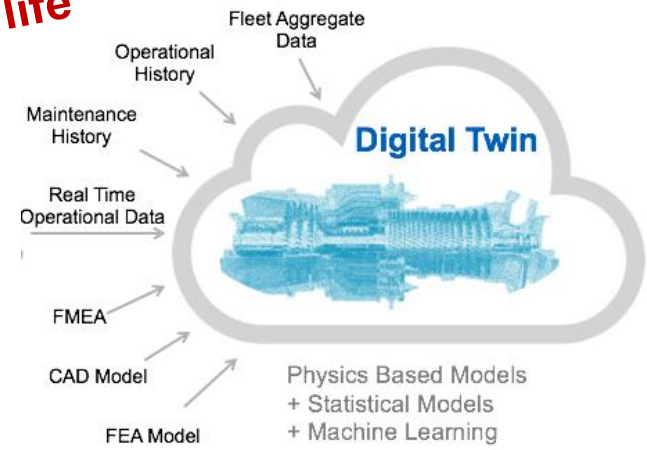
Introduction: Digital Continuity

born-digital



Physical Asset

digital life

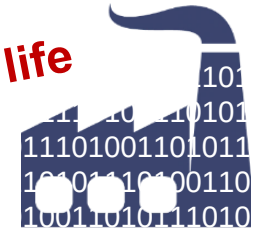


Digital Asset / Digital Twin

born-digital

Real Factory

digital life



Digital Factory / Digital Twin

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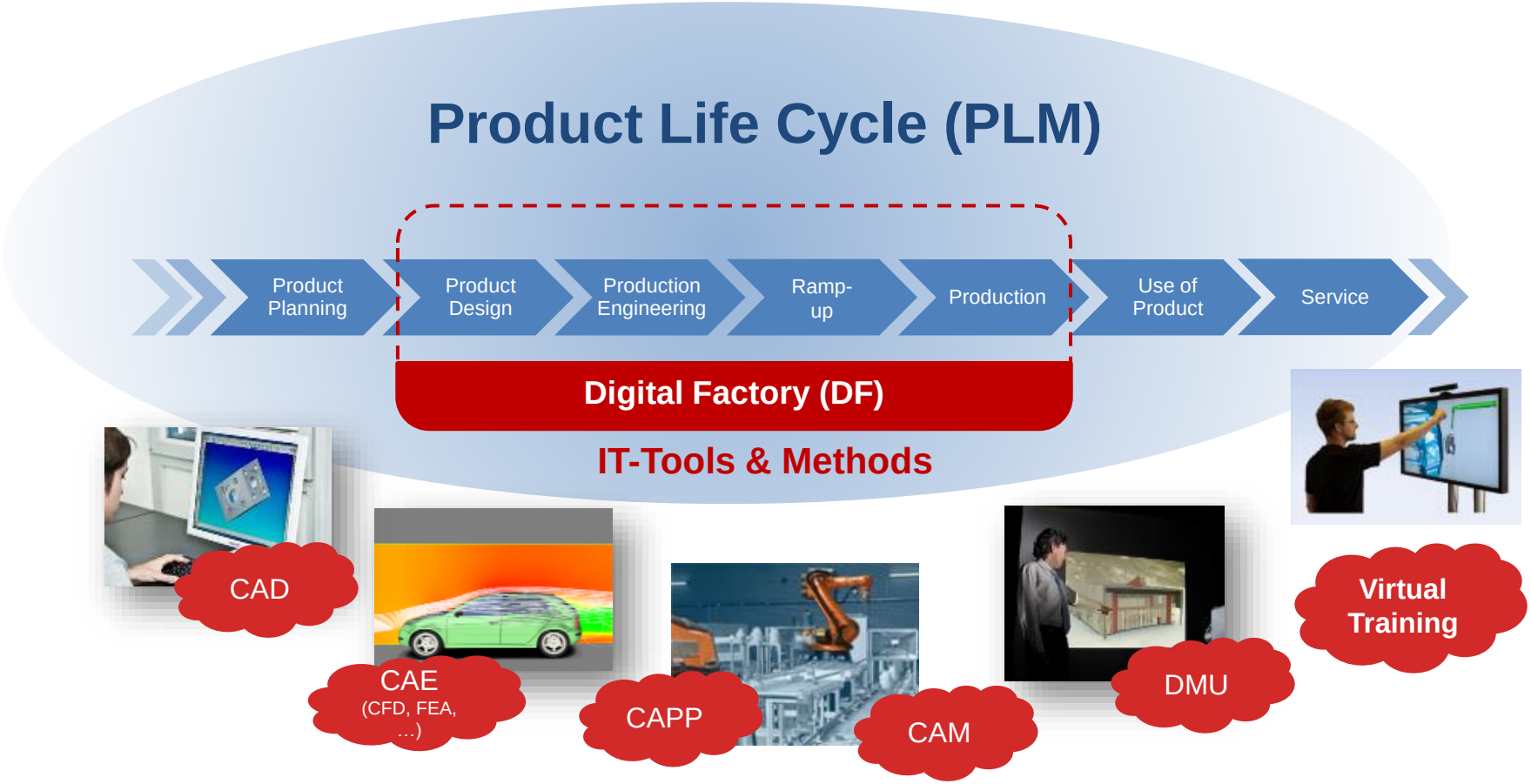
Introduction: PLM / Digital Factory
VDI-Guideline VDI 4499



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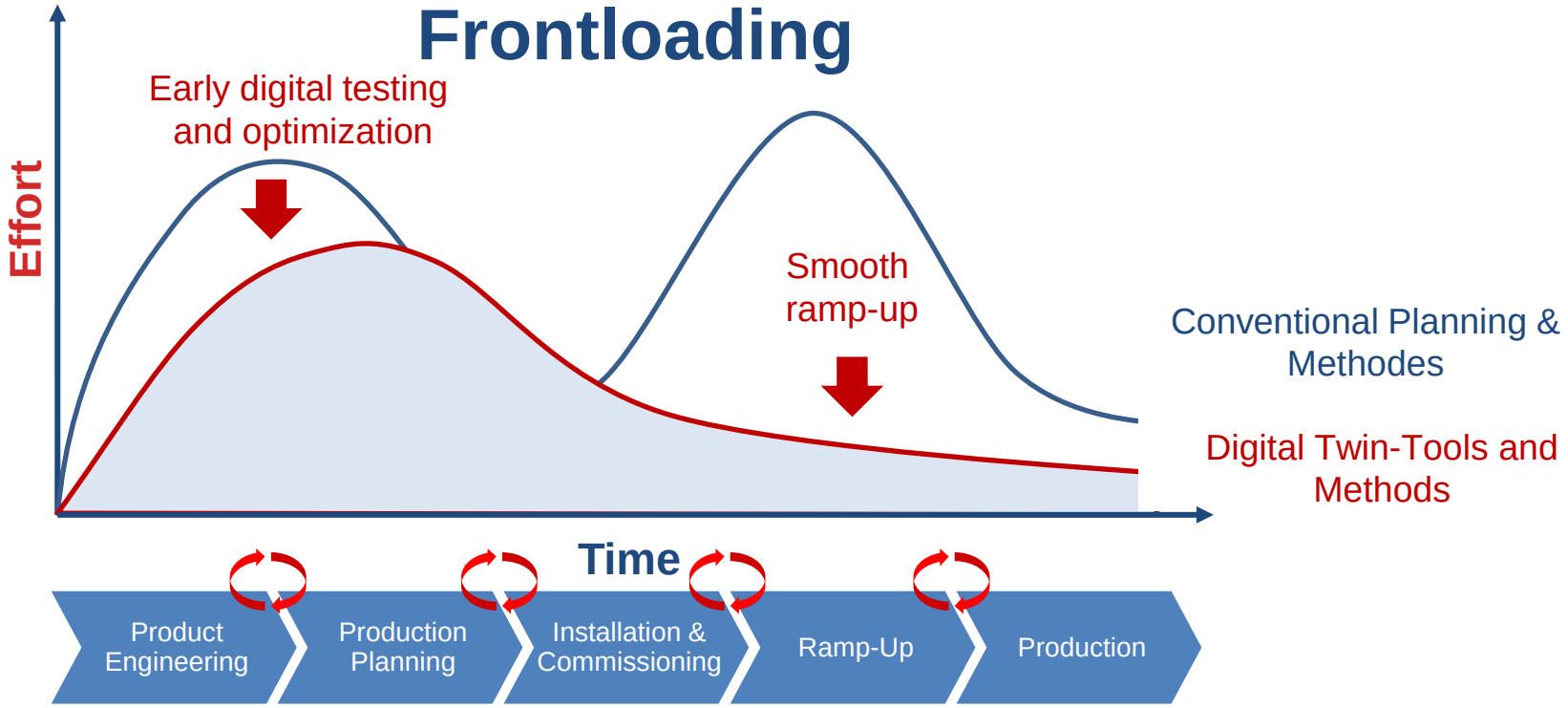
Digital Frontloading



- **Secure ramp-up and production phase (less errors, shorter time-to-production)**
- **Reduction of physical hardware and protoyping**

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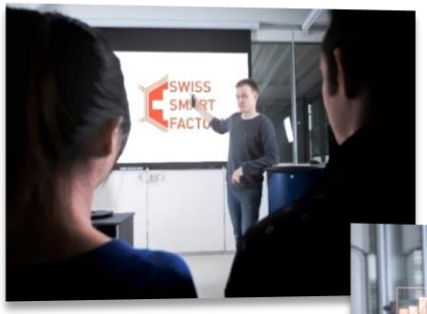
SWISS SMART FACTORY –
FIRST PLATFORM FOR INDUSTRY 4.0 IN SWITZERLAND

SWISS SMART FACTORY

Smart Factory Hub



Development – Test – Demonstration – Transfer – Education & Training

SWISS SMART FACTORY

Membership Programme – started March 2018

- Big Players
- SME
- Startups
- National / International

• National / International

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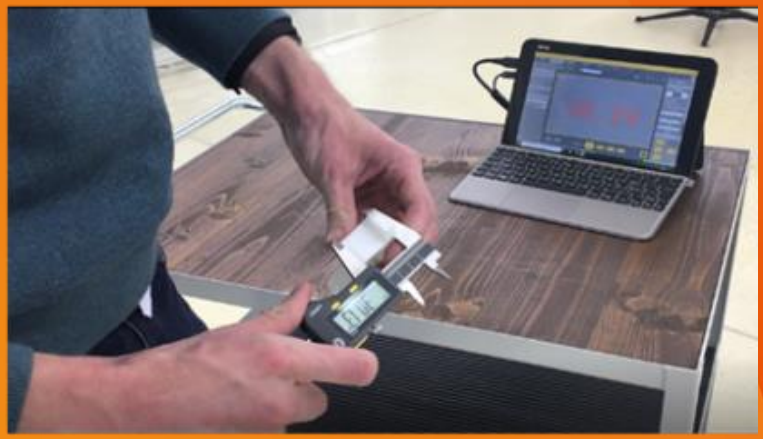
YASKAWA

SWISS
SMART
FACTORY
ES 3521

Jellix



SWISS
SMART
FACTORY
7: Load new filament
Description:
Press the control knob and enter the "Change Filament" menu item again. Turn the control knob to the option "Load Filament" and press the control knob to select.
Files:
Previous Step
Next Step

SWISS SMART FACTORY

Activities

1. “Inspire & Demonstrate”

Demo-Center

2. “Develop, Test & Transfer”

Research. Innovation & Transfer Projects

3. “Train & Support”

Training-Center

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Lighthouse Project Industry 4.0

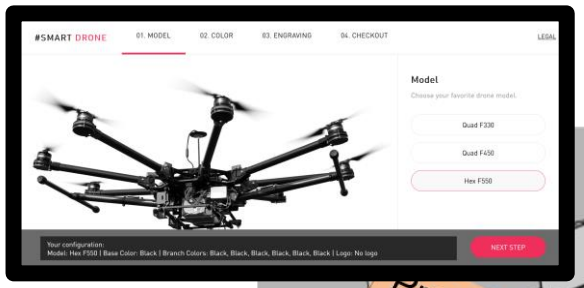
Customized Product

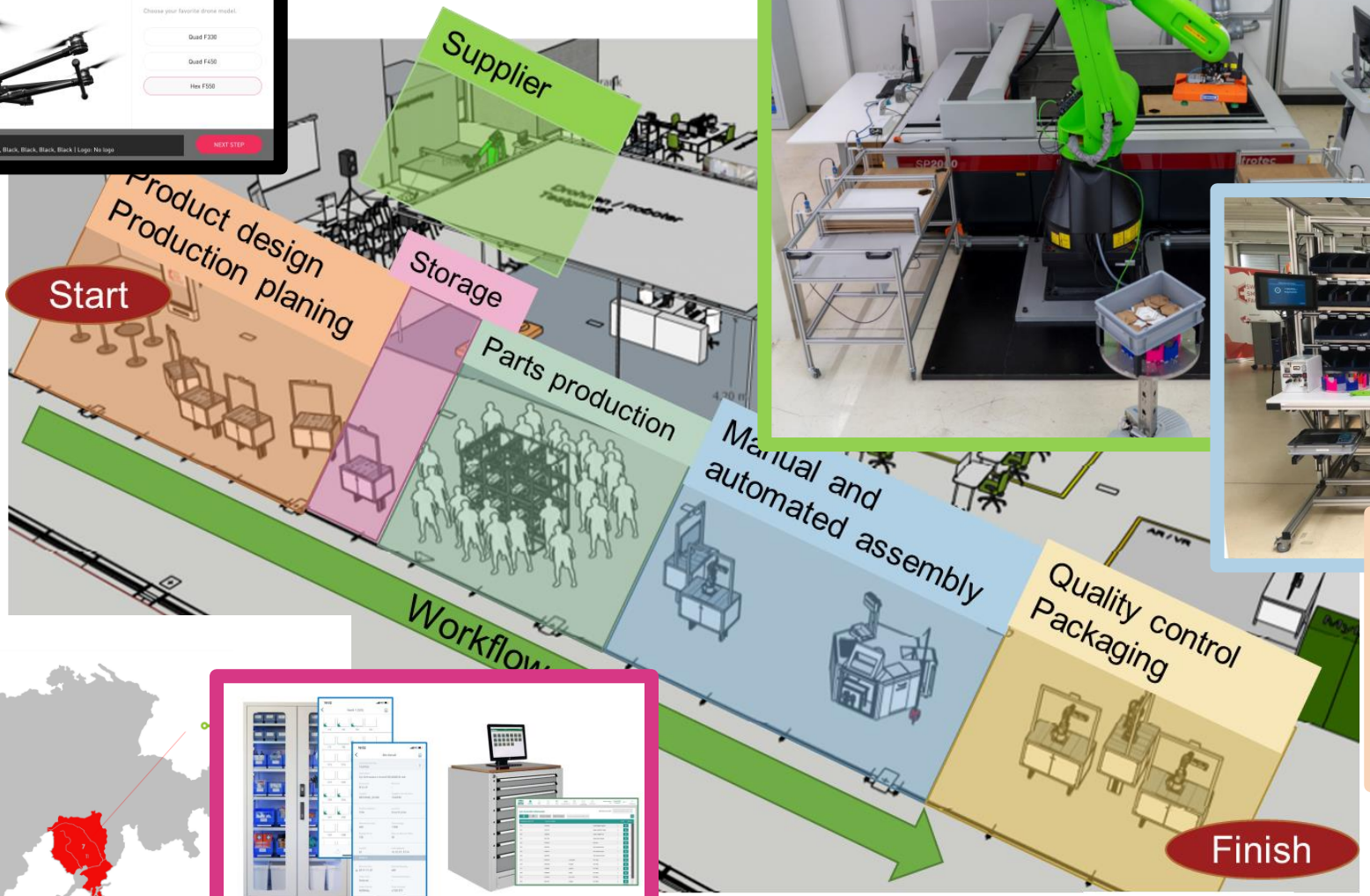
SWISS SMART FACTORY

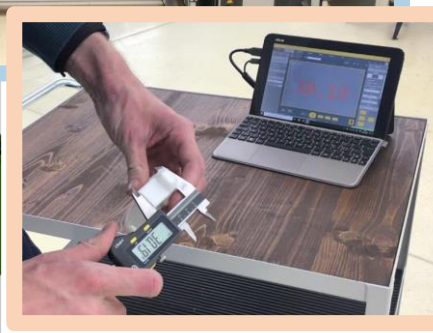
End-to-End I4.0 Scenario

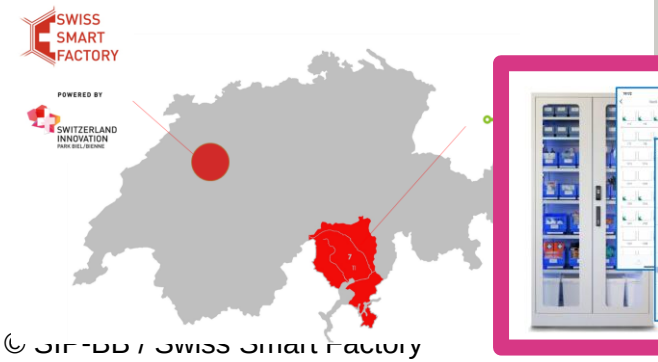
Lighthouse Project Industry 4.0

Overview









Swiss Smart Factory

Unique Selling Points (USP)

„Test before Invest“

Technology Supermarket

Development Partnership

Expert Network

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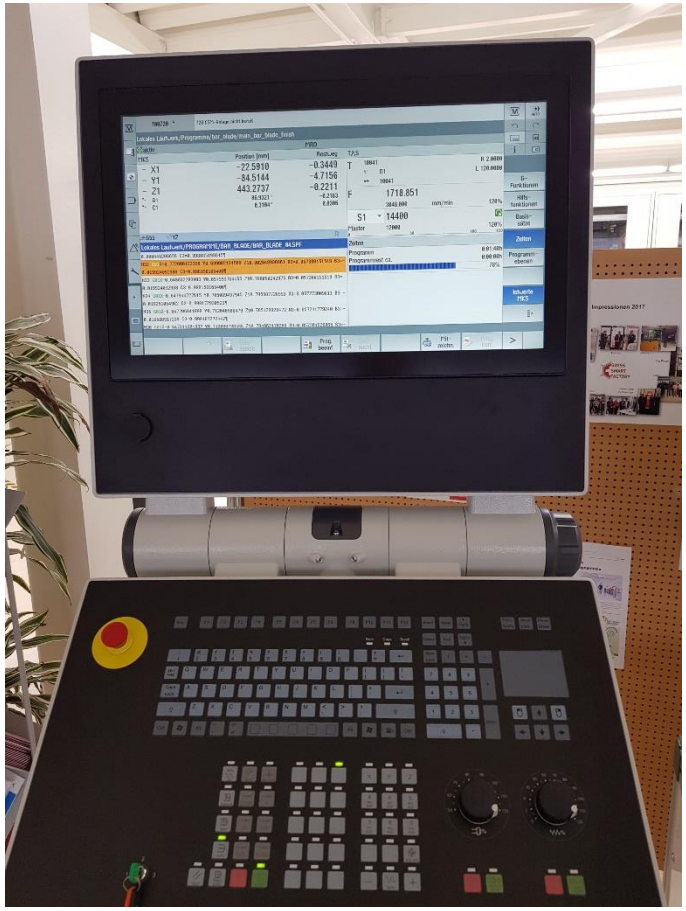
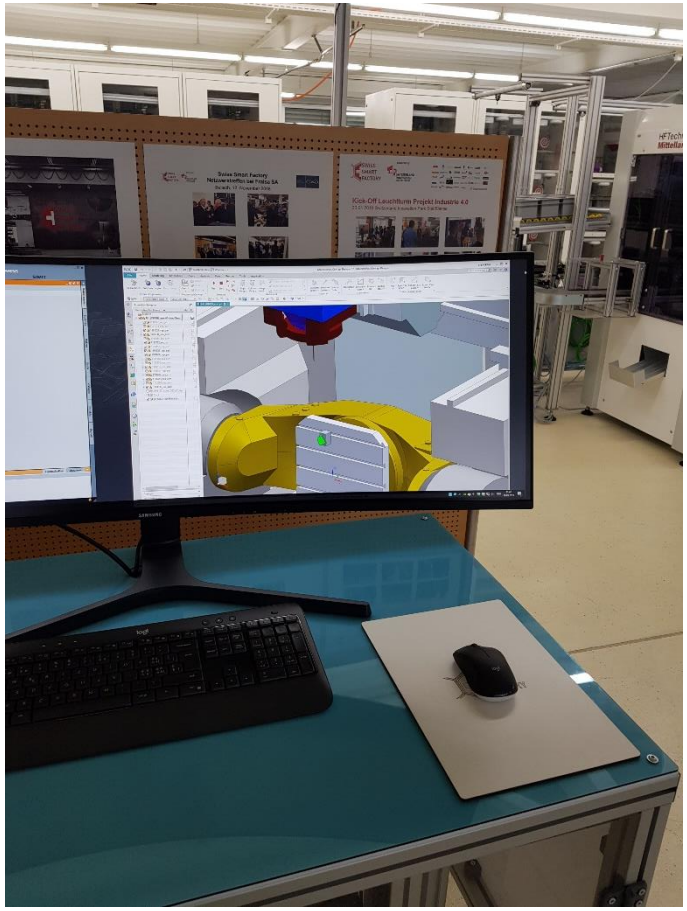
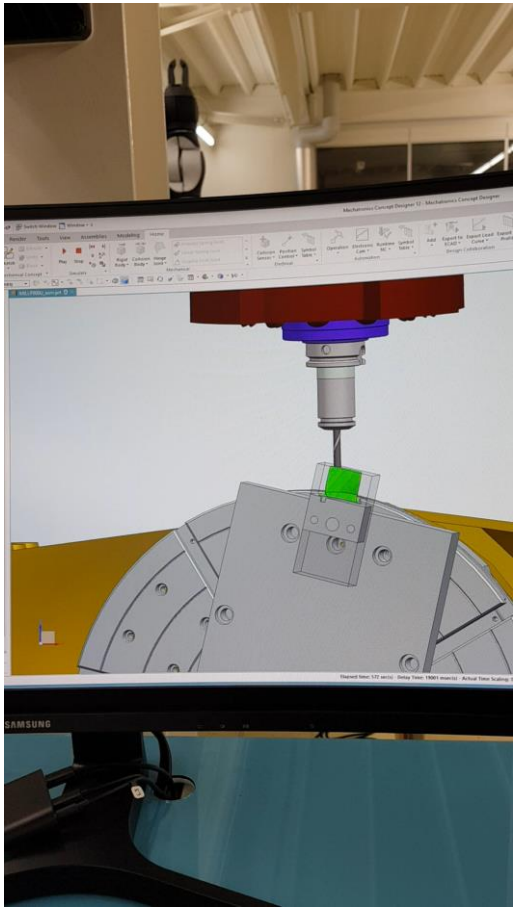
Tool Machine of the Future
Concept







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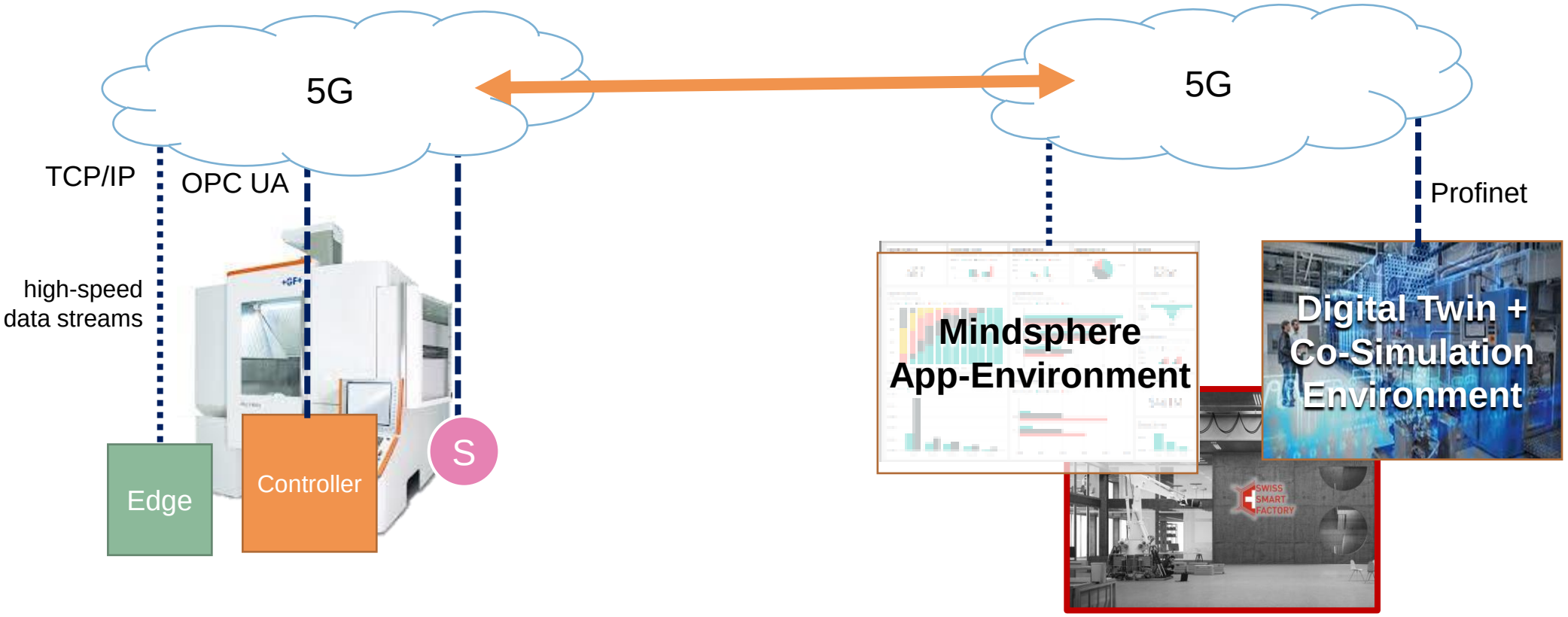
Tool Machine of the Future
Concept



GF, Biel Stadium

SSF, Biel Station

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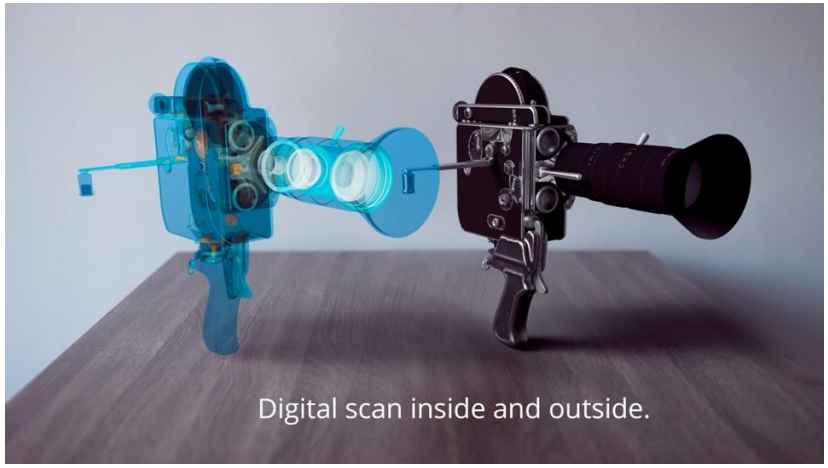
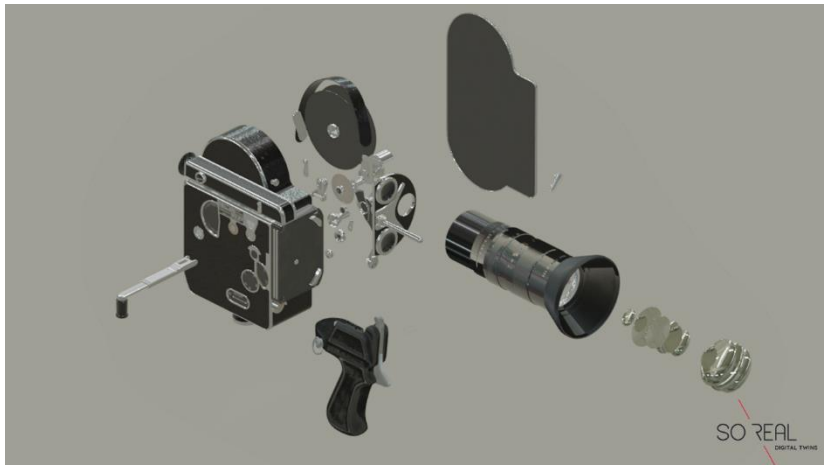
SSF-Partner SO REAL
Mass-Production of Digital Twins

Patented (pending) scanning and conversion technology

- Automates the production of digital twins of 3D objects
- using X-Ray Technology for inside and outside

Mass-production of cinematic-quality, game- / XR-ready 3D assets for use in games, films, and XR experiences





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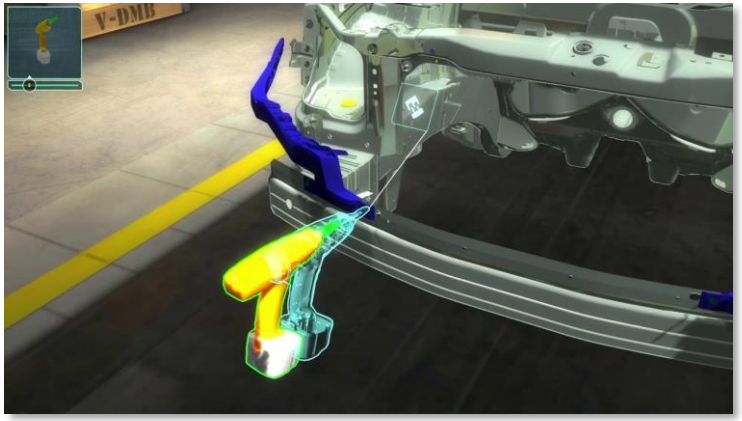
SSF-Partner Sentio

Interactive Virtual Training



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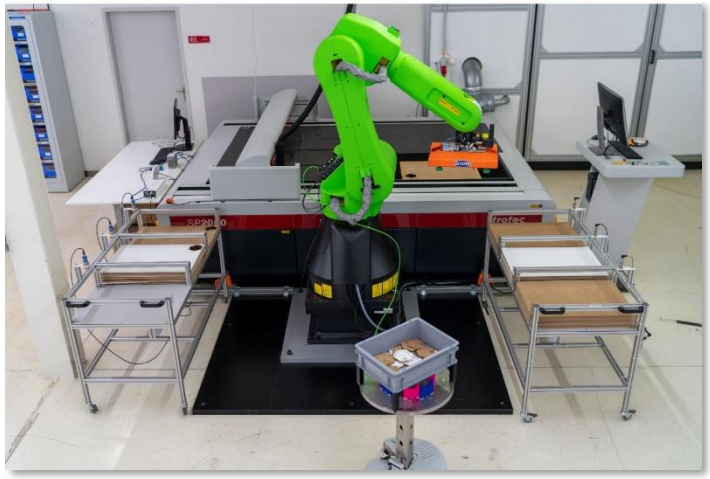
SSF-Partner SideEffects

Digital Twin Visualisation

vSTAGE is your editor & player for interactive realtime projects. Control a free moving camera and create interactive projects from your 3D digital twin, media and information.



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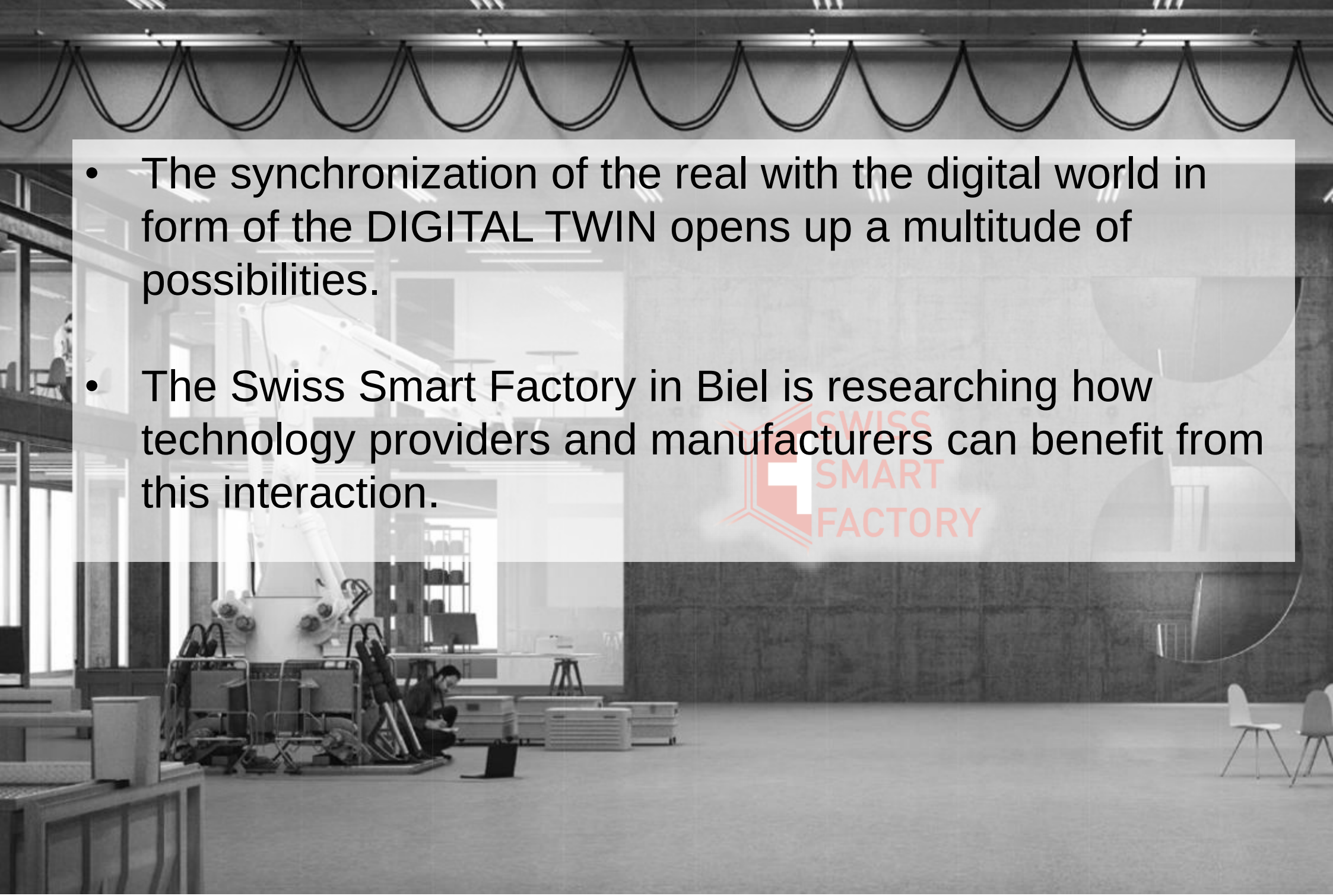

- The synchronization of the real with the digital world in form of the DIGITAL TWIN opens up a multitude of possibilities.
- The Swiss Smart Factory in Biel is researching how technology providers and manufacturers can benefit from this interaction.

SWITZERLAND INNOVATION
PARK BIEL/BIENNE

SWISS SMART FACTORY

THANK YOU
FOR YOUR ATTENTION

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