

FILL TECHNOLOGY PARK IN GURTEN





YOUR FUTURE

CLOSING THE ENGINEERING LOOP



- **FILL**
- **INDUSTRIAL TRANSFORMATION**
- **SIMULATION**
- **DIGITAL ENGINEERING**
- **DATA MANAGEMENT**

- **FILL**
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- Founded 1966
- 920 employees
- 169 million Euros sales 2019
- Competence Centres
 - Automotive
 - Aerospace
 - Sports
 - Construction and housing
 - Renewable energies
 - Specialist machine engineering

From the idea to the solution

- Fill turns you into the very best in your industry.
- We are supported in the concept phase by real-time system simulations
- Safety is firmly anchored in Fill's corporate values. We build safe machines and create a safe working environment.
- Fill develops tailor-made production systems.
- Attention to detail in workmanship ensures success.
- Solutions from Fill serve man and machine.
- Adherence to deadlines is a yardstick for Fill quality.
- Short reaction times ensure your success.
- Professional production analysis for sustainable increase in productivity.



> PROCESS ENGINEERING & SIMULATION

25%

of countries world-wide have production taking place on Fill systems

PUEBLA / MEXICO

GURTEN / AUSTRIA

SHANGHAI / CHINA



90%

of Fill machines and systems are exported

80%

of European vehicles run on Fill technology



10%

of sales revenue is invested in the development of new Fill products



100%

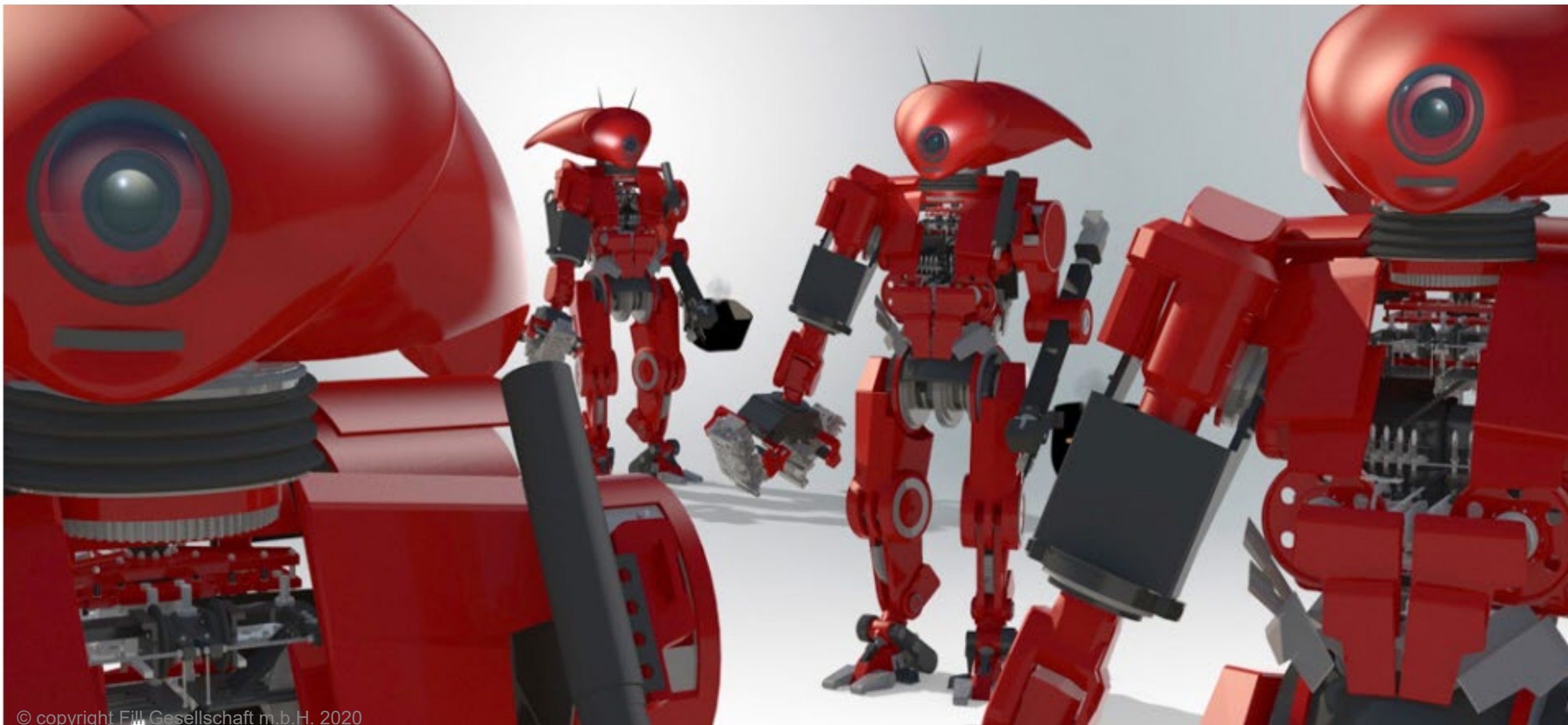
family-owned



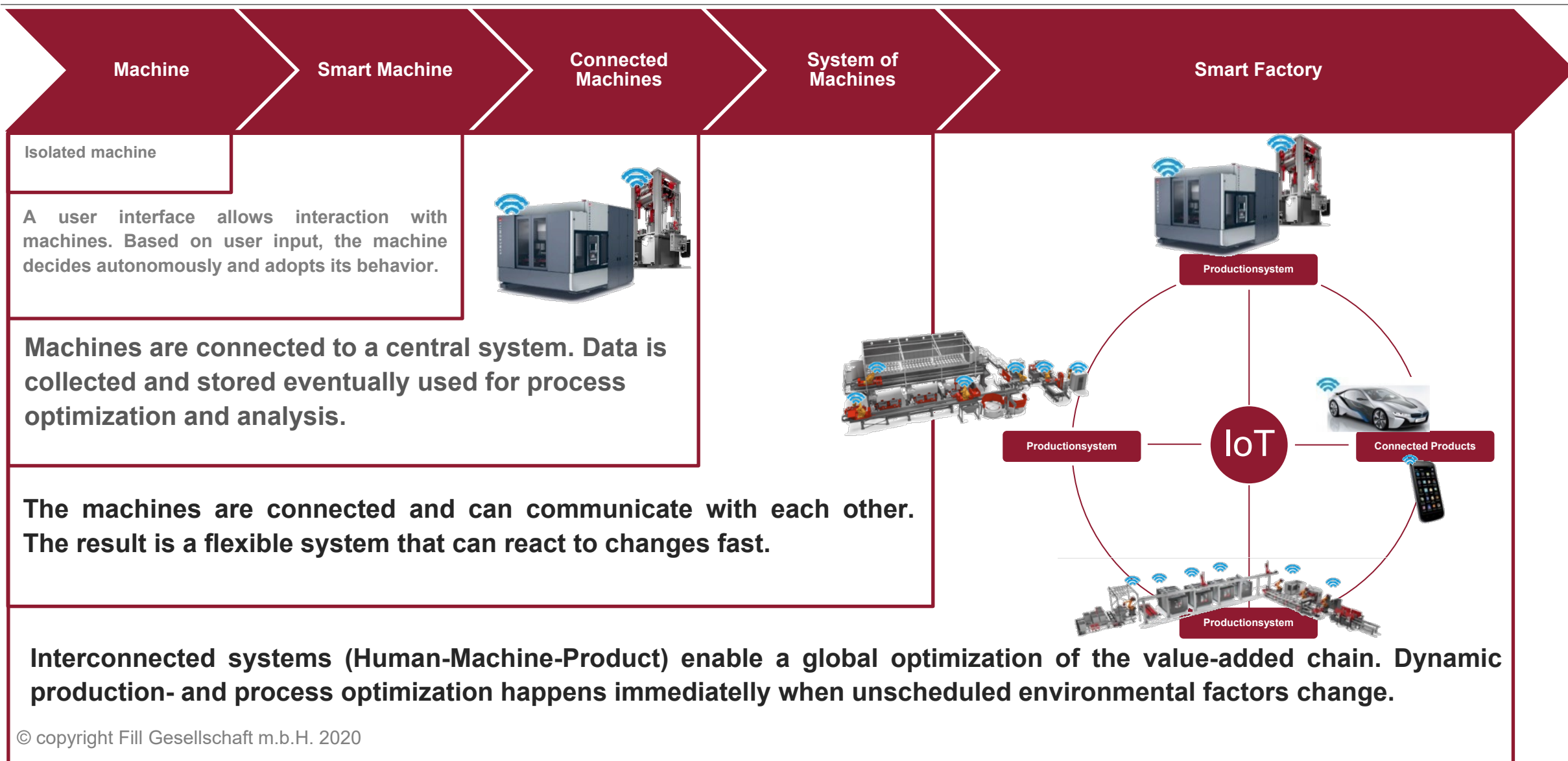


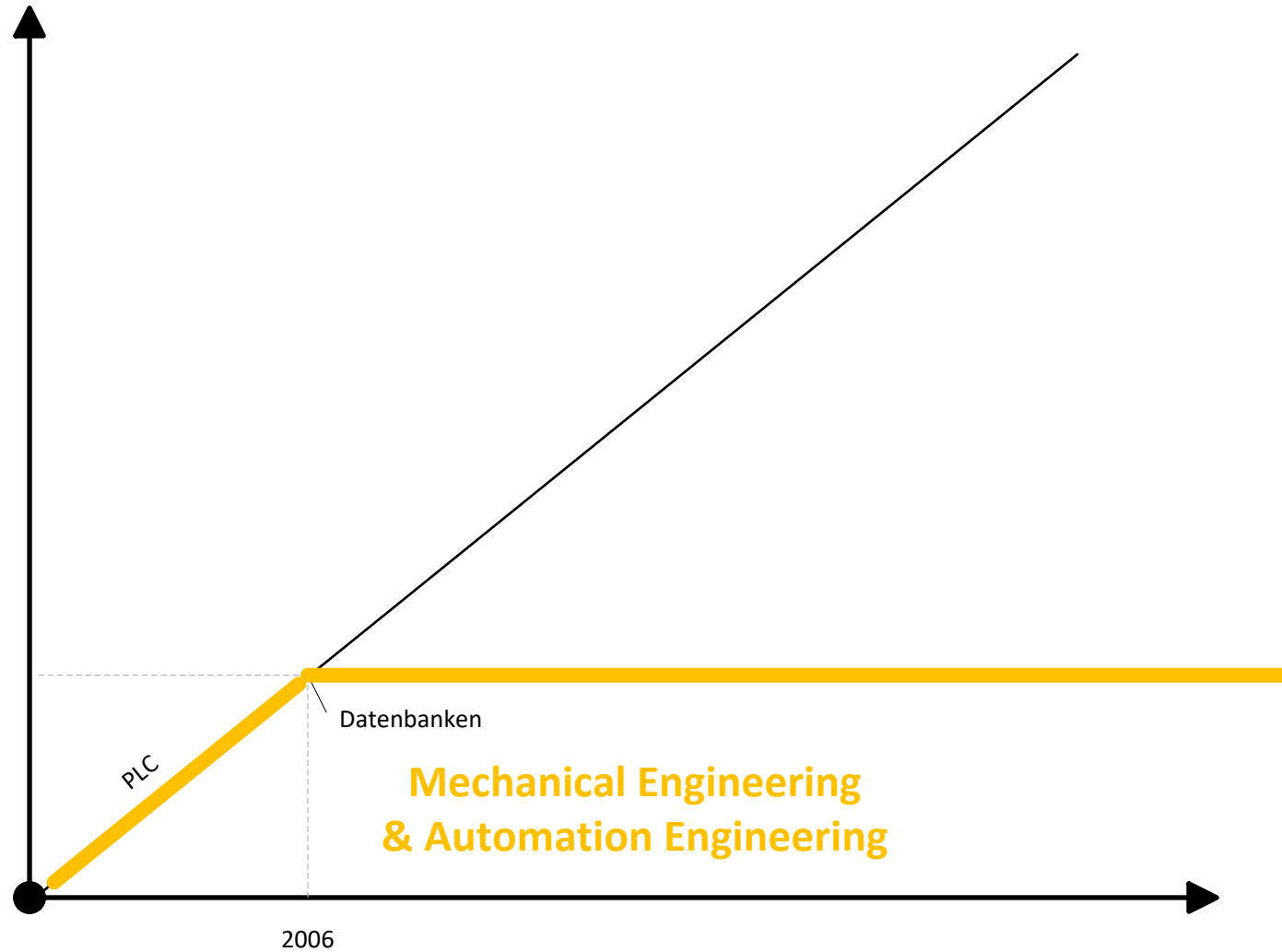
YOUR FUTURE

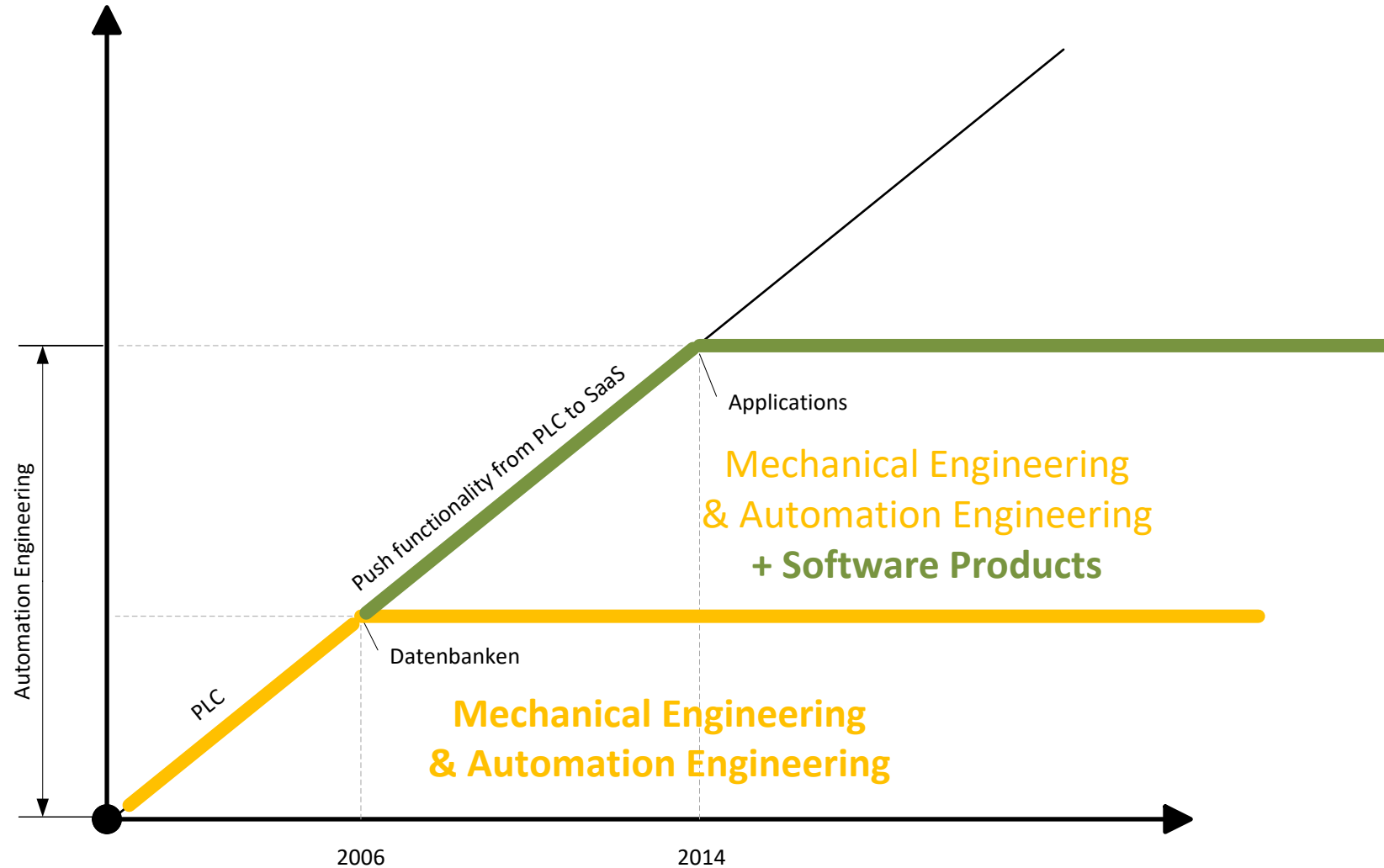
CLOSING THE ENGINEERING LOOP

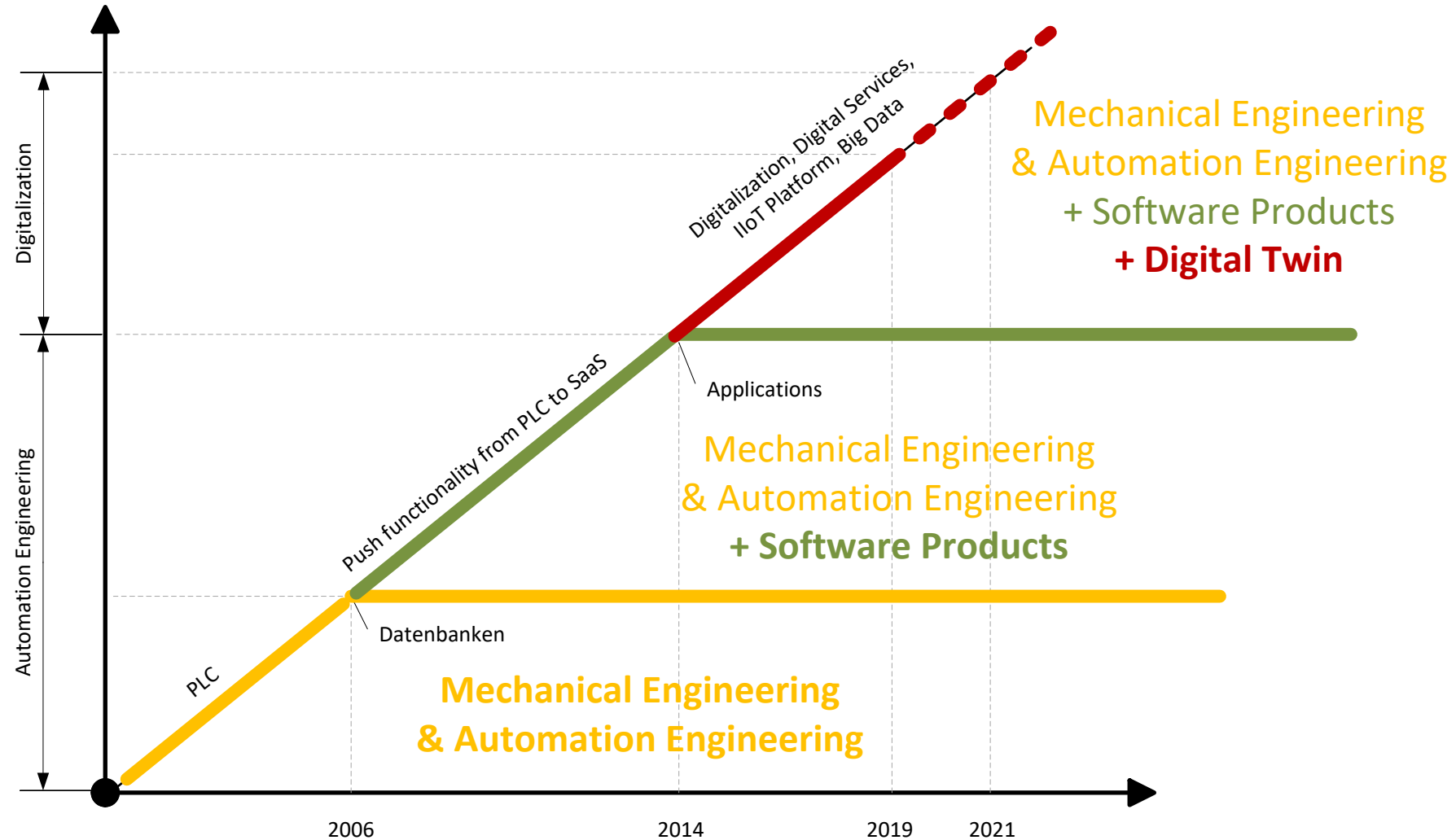


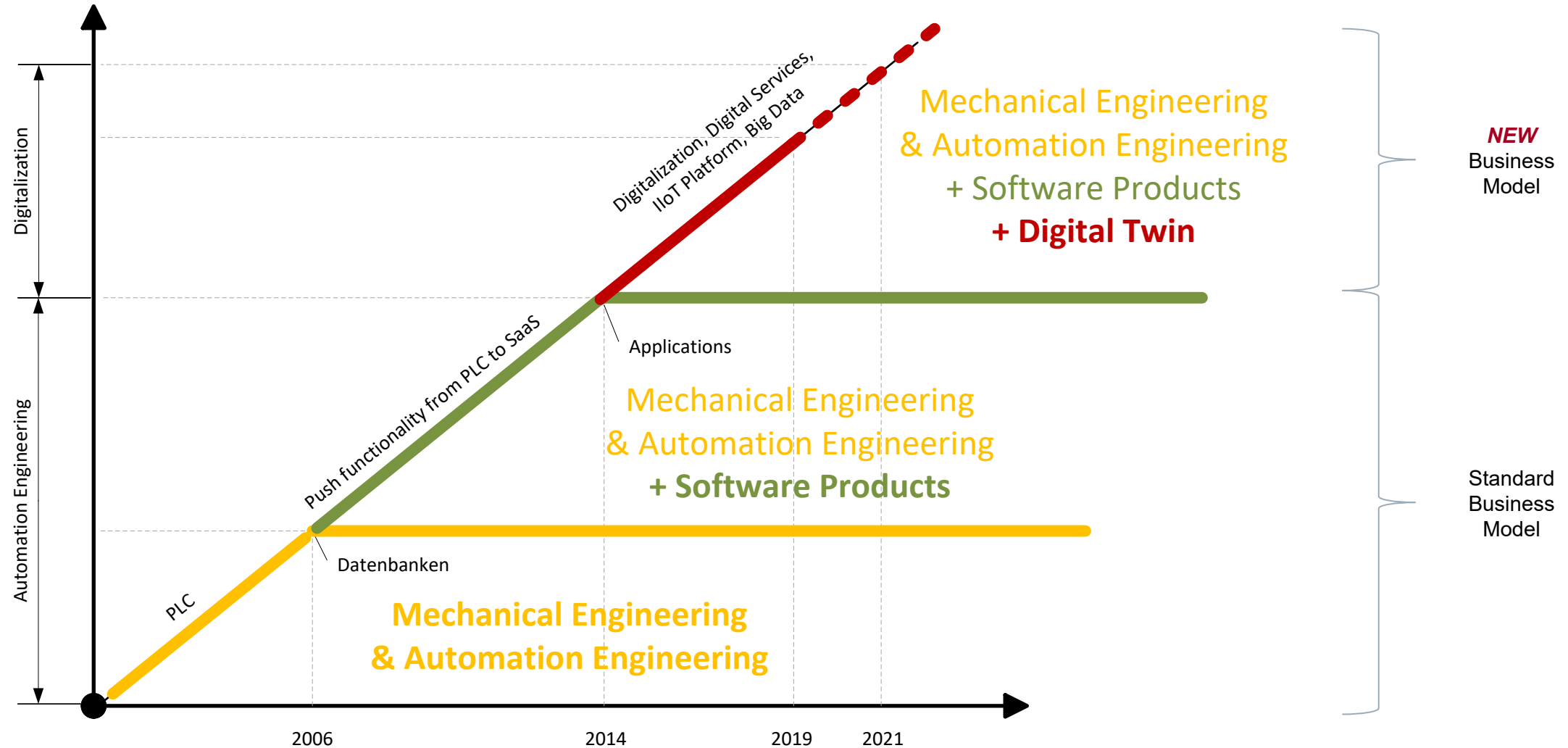
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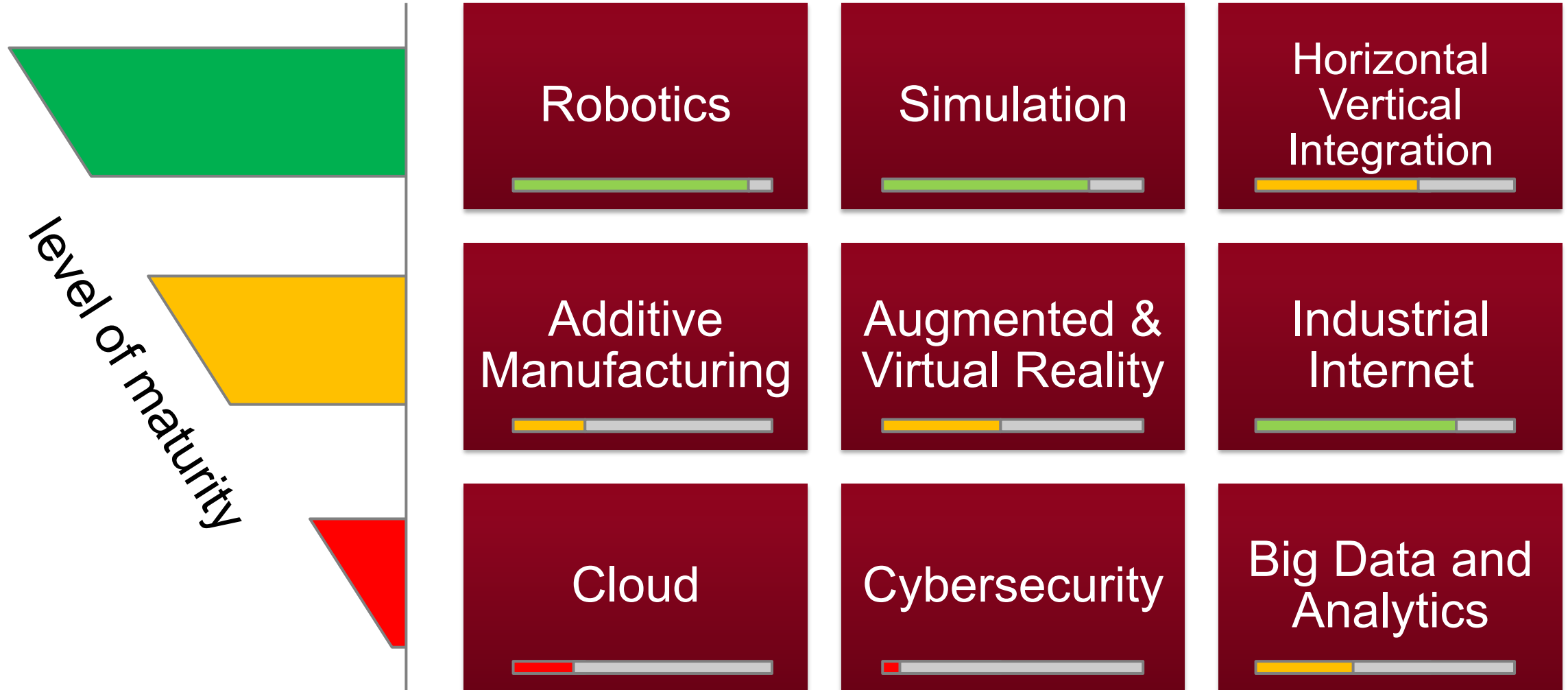






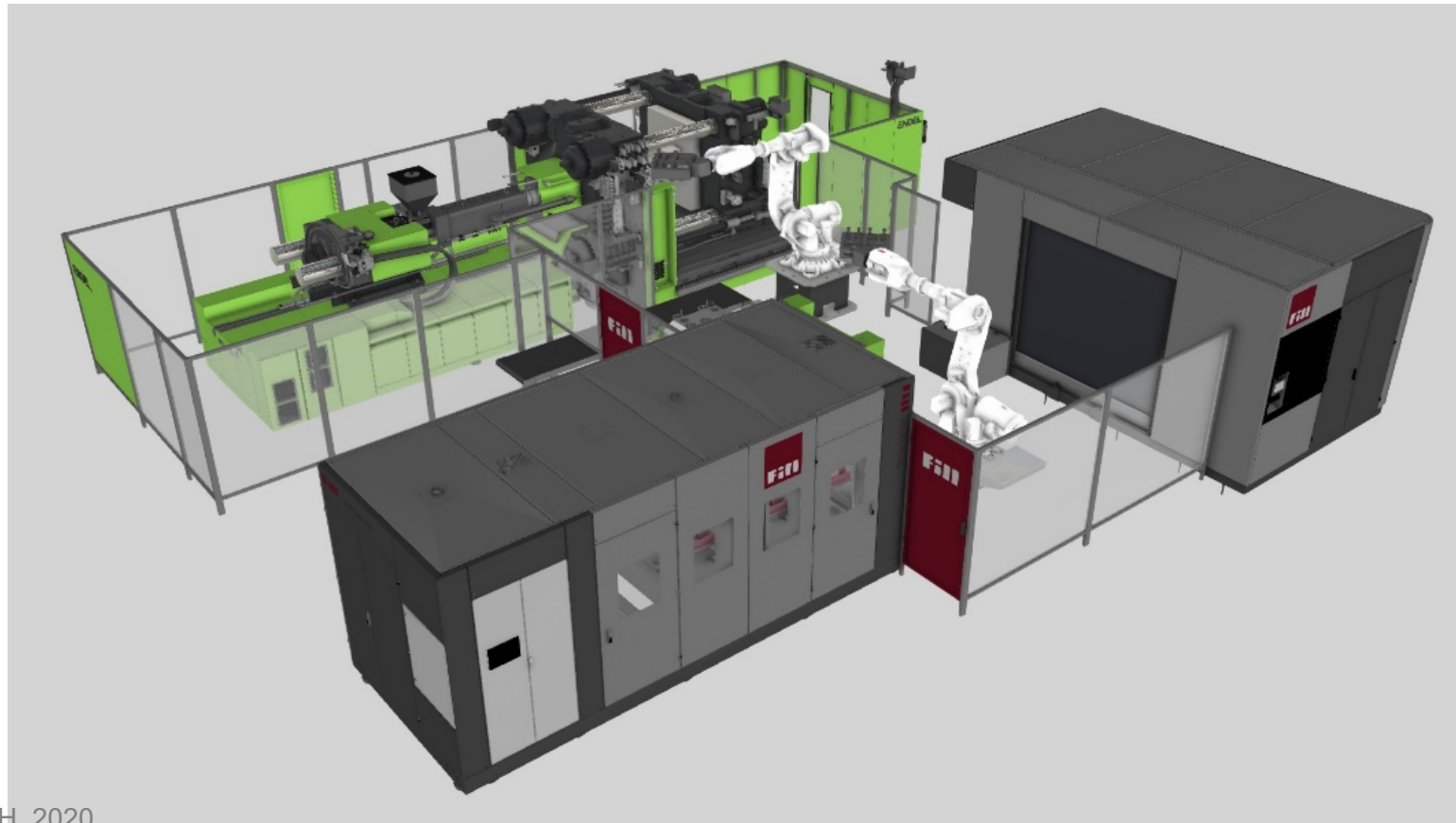




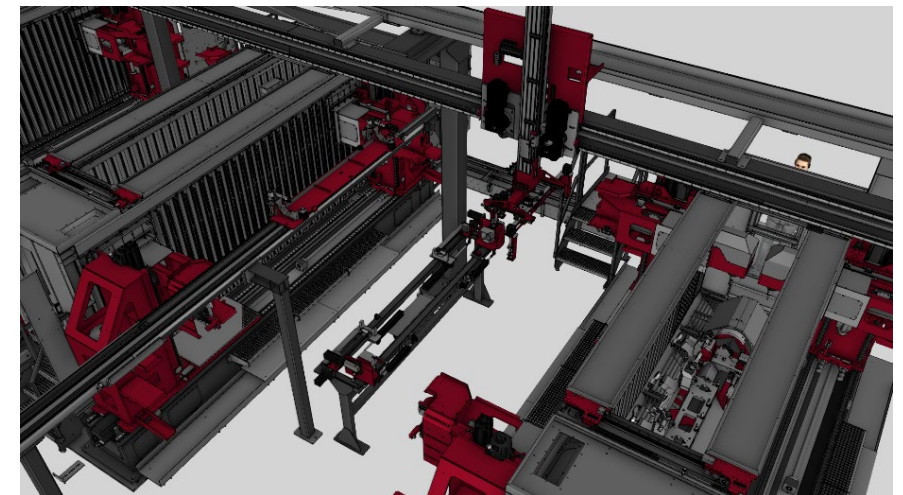


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- Illustration of different production processes
- Helps with complex processes when conventional calculation methods reach their limits by visual representation
- Saves costs and additional work, alternative control sequences can be tested without problems



- Sales:
 - Simulation with standard components if no 3D-CAD model is available
 - With 3D-CAD models: simulation of the system and robots and export to web-report or VR model. processes and functions of the plant can be discussed together with the customer
- Project engineering:
 - Checking whether the concept meets requirements in a given cycle time
- Software:
 - Process description for the software engineer, these processes are displayed in a Gant-diagram



- Usage of data



stationary solution



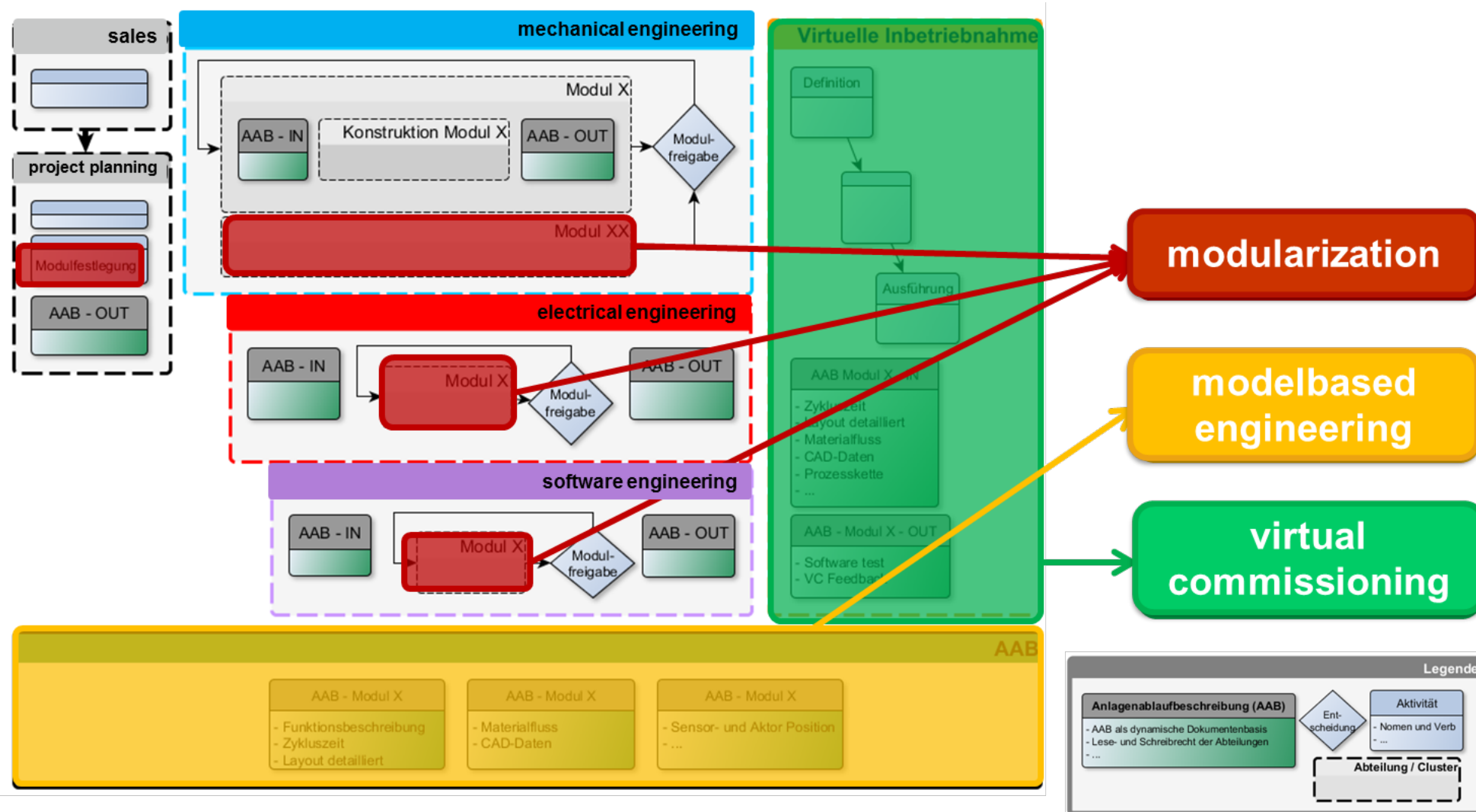
mobile solution



YOUR FUTURE

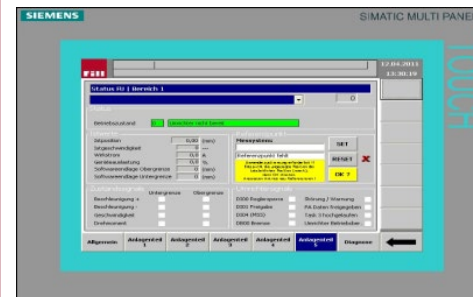
AGENDA

- FILL
- INDUSTRIAL TRANSFORMATION
- SIMULATION
- **DIGITAL ENGINEERING**
- DATA MANAGEMENT



- virtual commissioning
 - during commissioning
 - during ramp up of the plant
 - during production

control technology

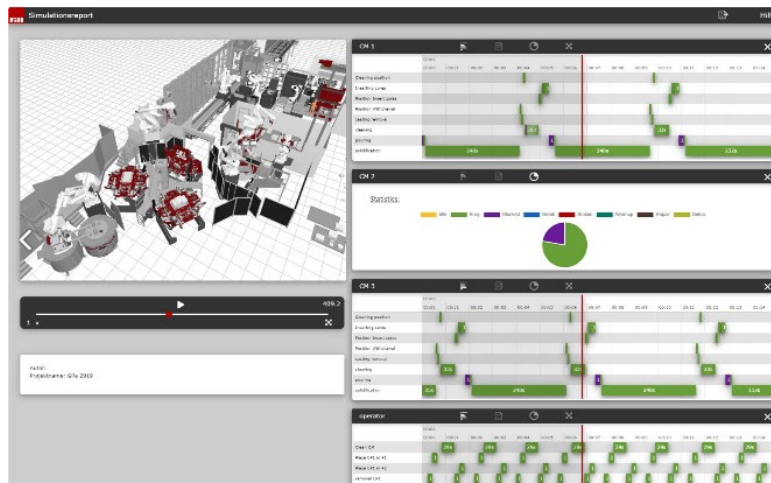
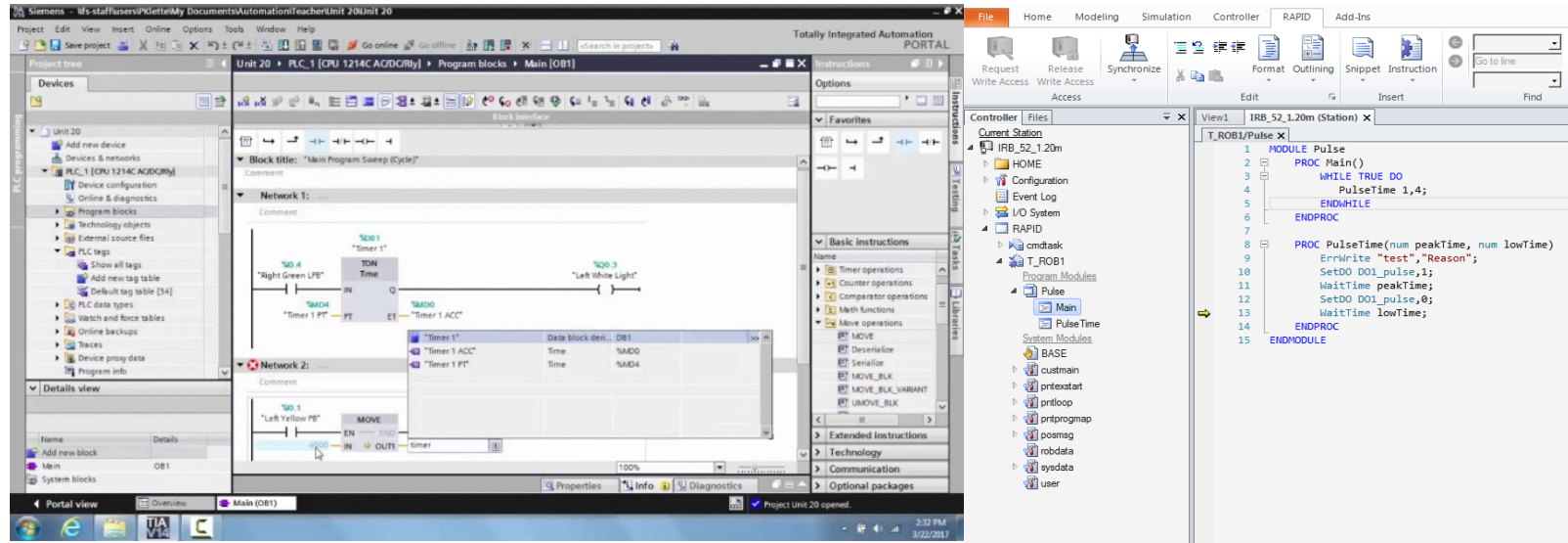


virtual plant



real plant





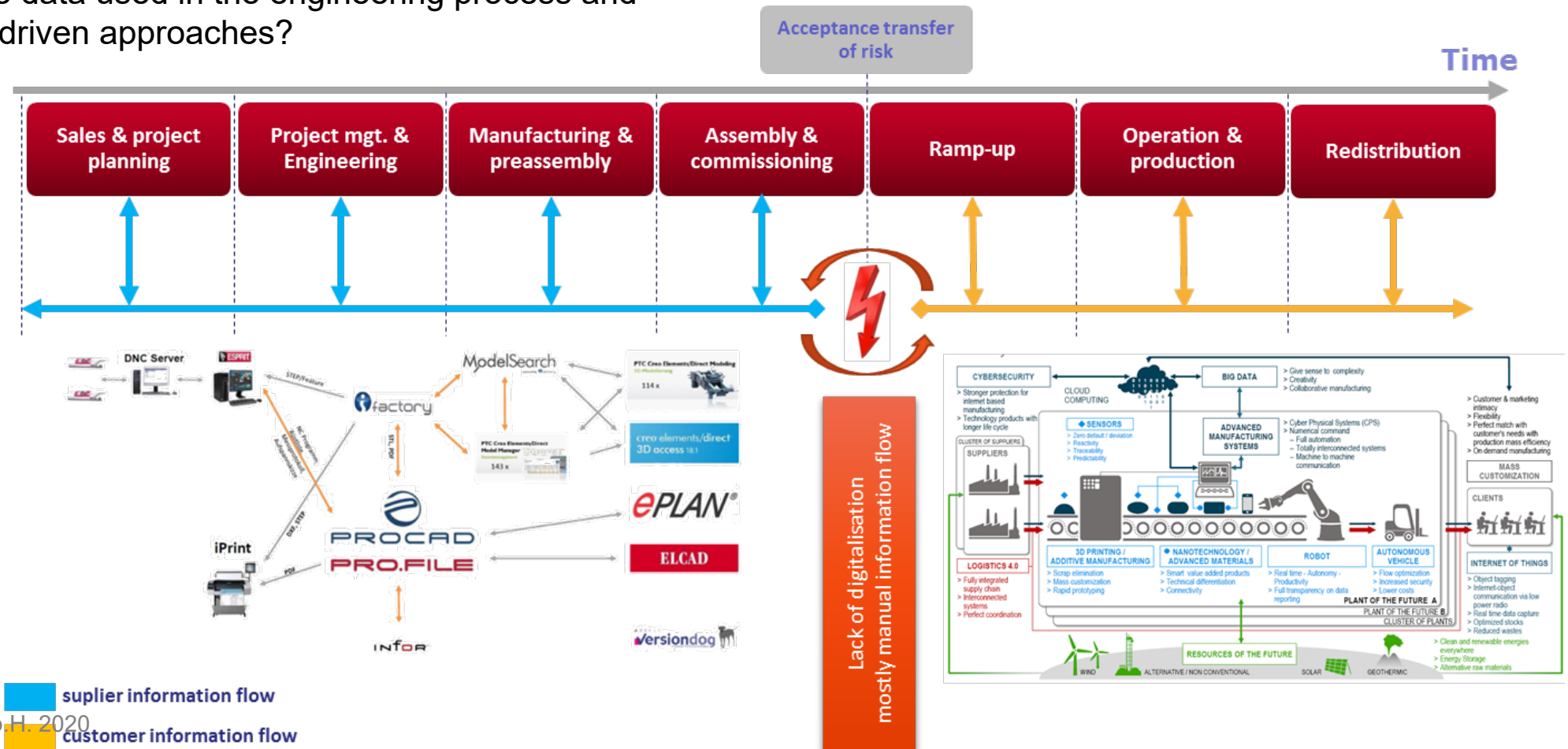
generate code parts /
code templates



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the smart digital engineering process uses "smart industrial data" - data from the production environment

How are real and large data used in the engineering process and combined with model-driven approaches?



ERP, MES, ...

Production planning and administration

Order management
Bad parts management
Mobile Devices
...

Internal Information System

Information and management

Data view
Production part status
Custom Analysis
...

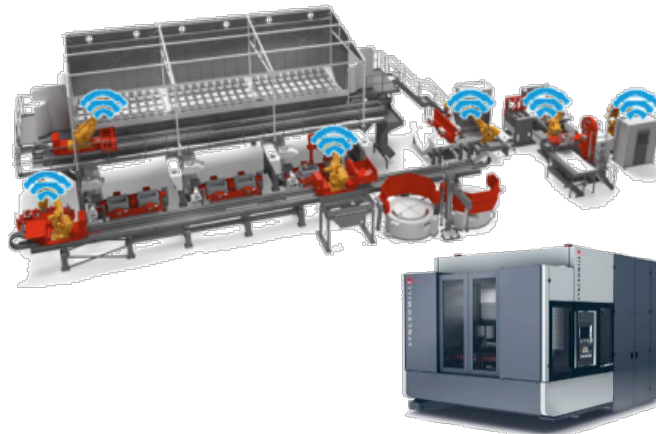


cybernetics

Automatic recording and control

Machine and Process

Machining
Density test
Heat treatment
Machine vision
...

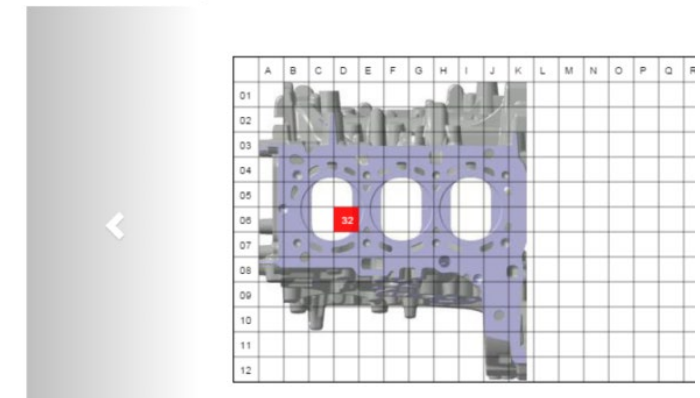


Assistance system manual recording

Manual processes and testing

Production part inspection
Grid Catalog
Goods receipt, goods issue
...

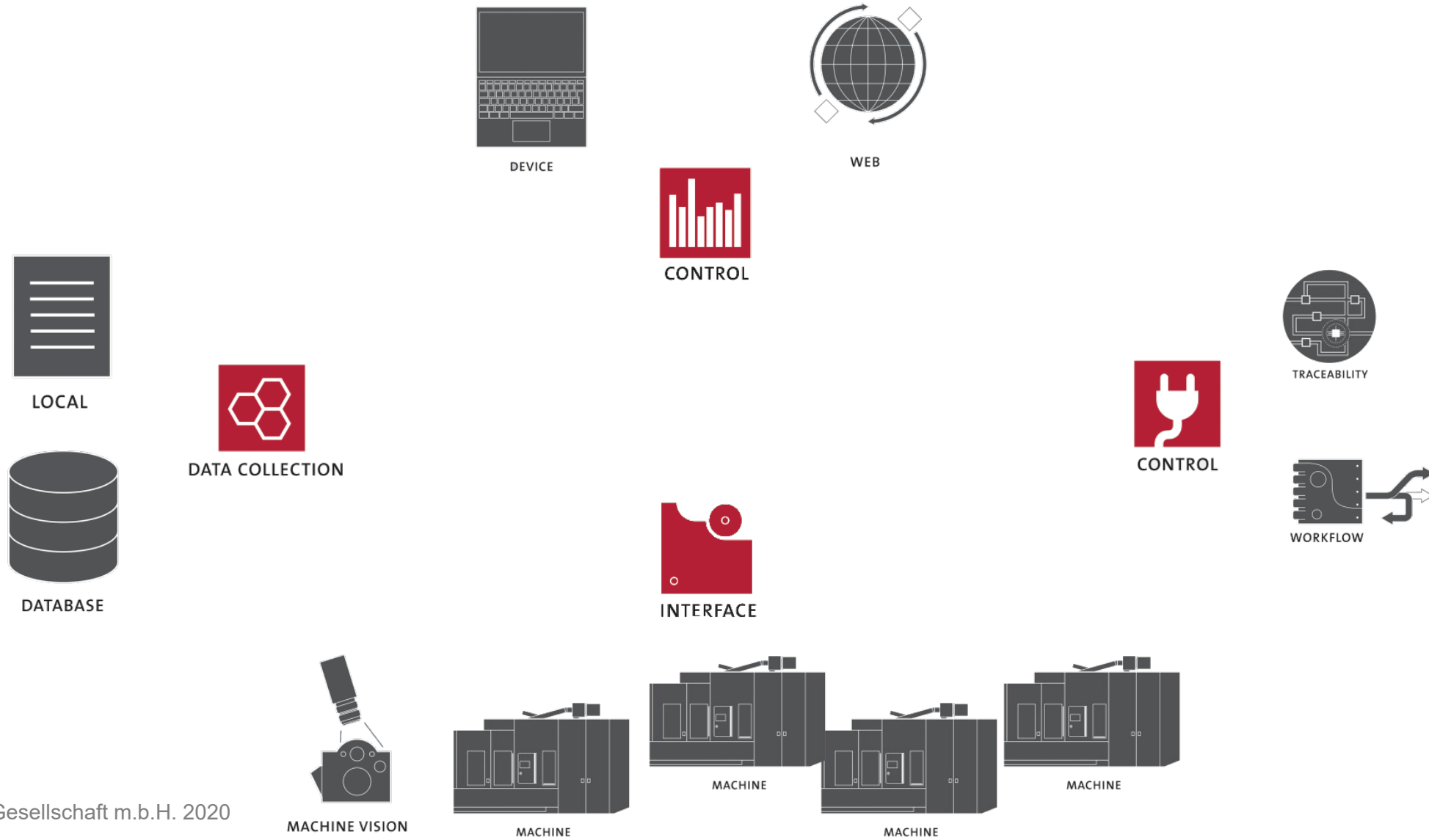
Rasterkatalog





YOUR FUTURE

DATA MANAGEMENT



part data

process data
quality data



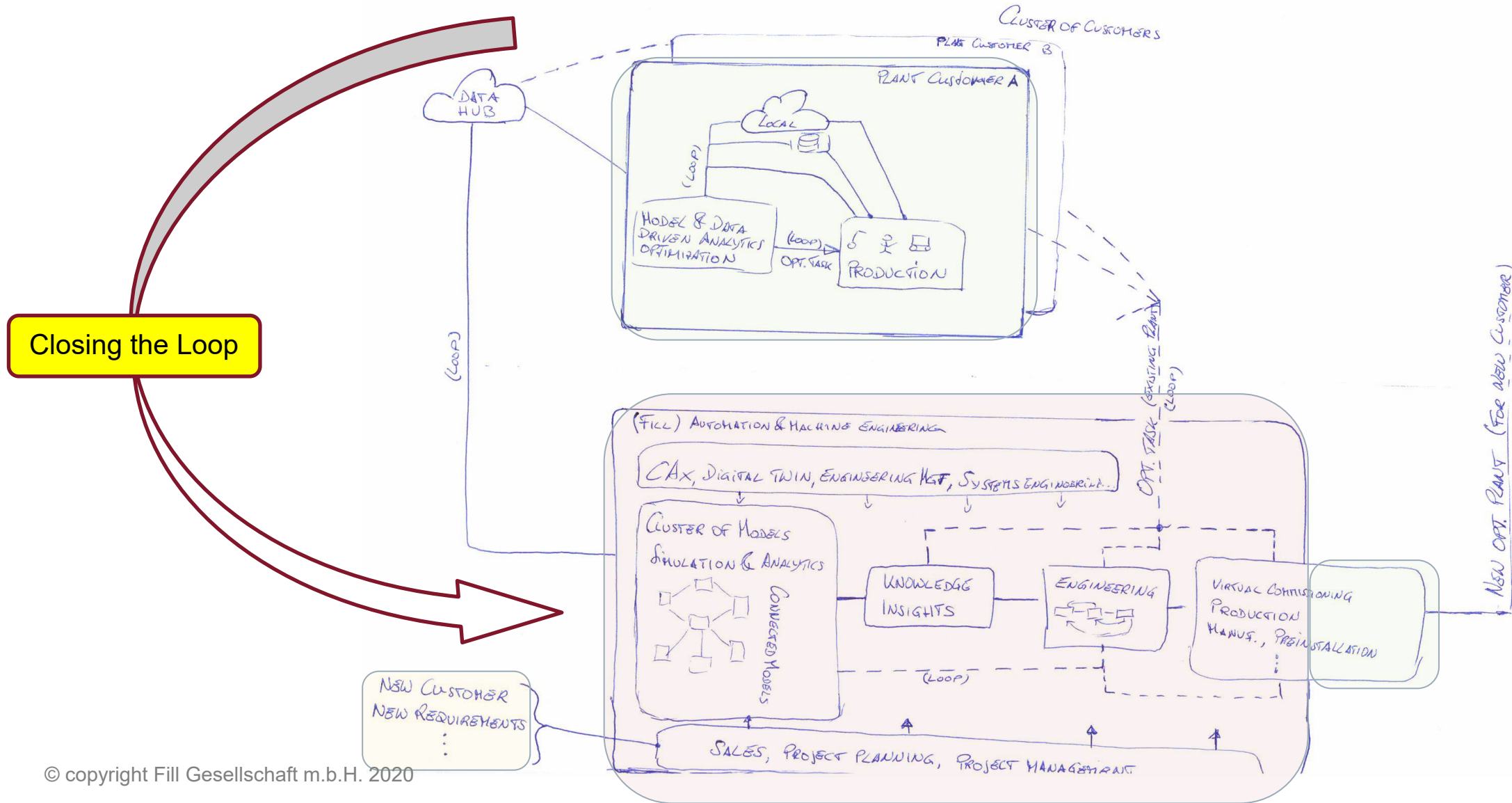
CYBERNETICS Produce

machine data

parameter data
condition data



CYBERNETICS Analyze





YOUR FUTURE

DATA MANAGEMENT

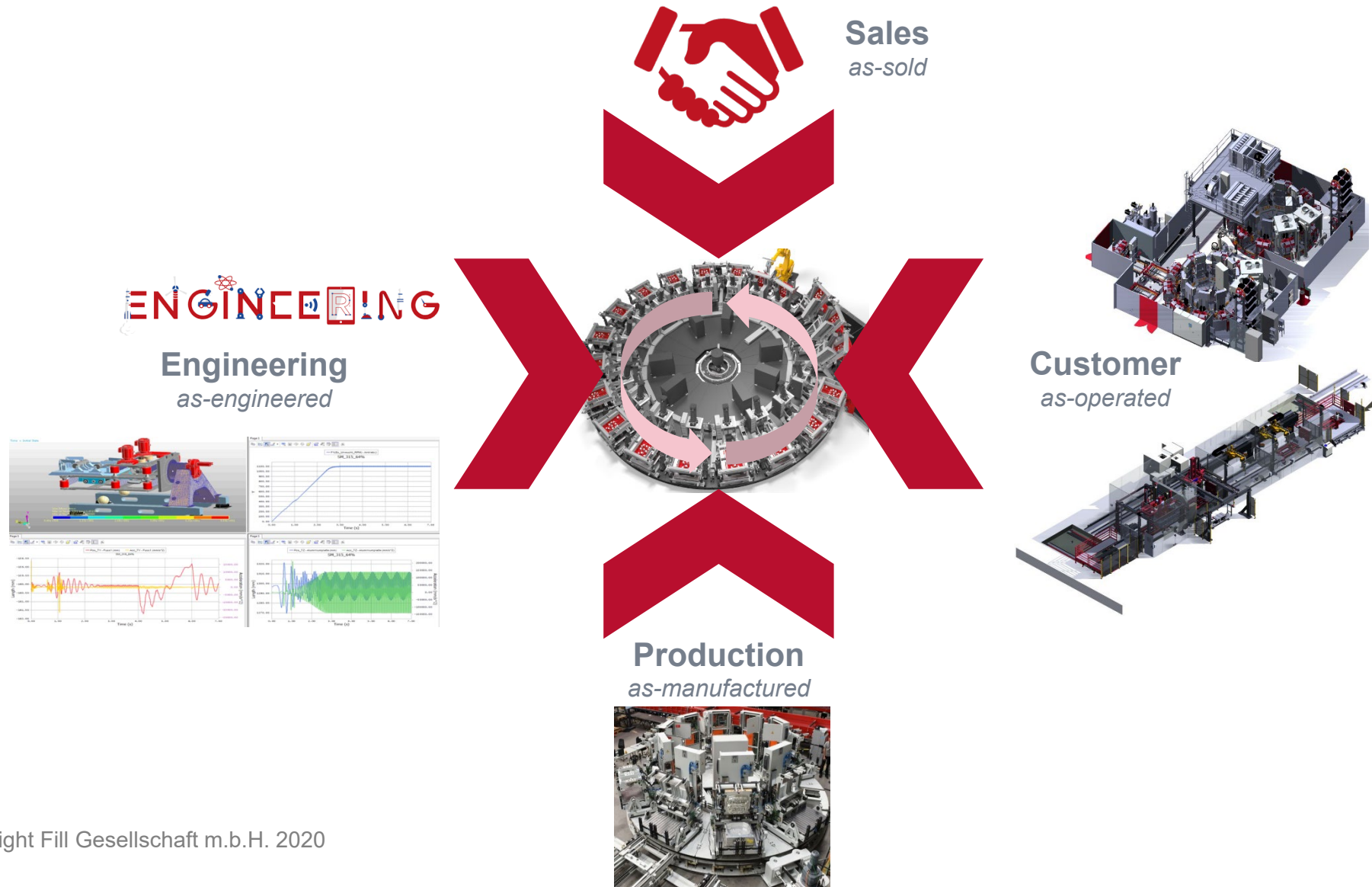
PLANT DESIGN | PRODUCTION
| OPTIMIZATION | ANALYZE





YOUR FUTURE

CLOSING THE LOOP





YOUR FUTURE

WER DIE BESTE LÖSUNG SUCHT, ENTWICKELT GEMEINSAM MIT FILL SEINE ZUKUNFT.
IF YOU ARE SEEKING THE BEST SOLUTION, SHAPE YOUR FUTURE WITH FILL.