

∴ csem next

Von der Vision zur Umsetzung
Eine Digitalisierungsreise

Technopark Graubünden, Landquart · 6. Juni 2023

A photograph of a modern, multi-story building with a white facade and a large glass section. The building is identified by the 'csem' logo on its upper left corner. The scene is set outdoors on a clear day with a blue sky. A young tree is visible in the foreground on the left, and a paved area with white markings is in the lower foreground. A decorative pattern of light blue circles is visible in the top right corner of the image.

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TECHNOLOGY TRANSFER TO INDUSTRY

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FACING THE CHALLENGES OF OUR TIME



Stephan Kraus
Partner & Market Lead Zürich

:: csem



Philipp Schmid
Head Industry 4.0 & Machine Learning



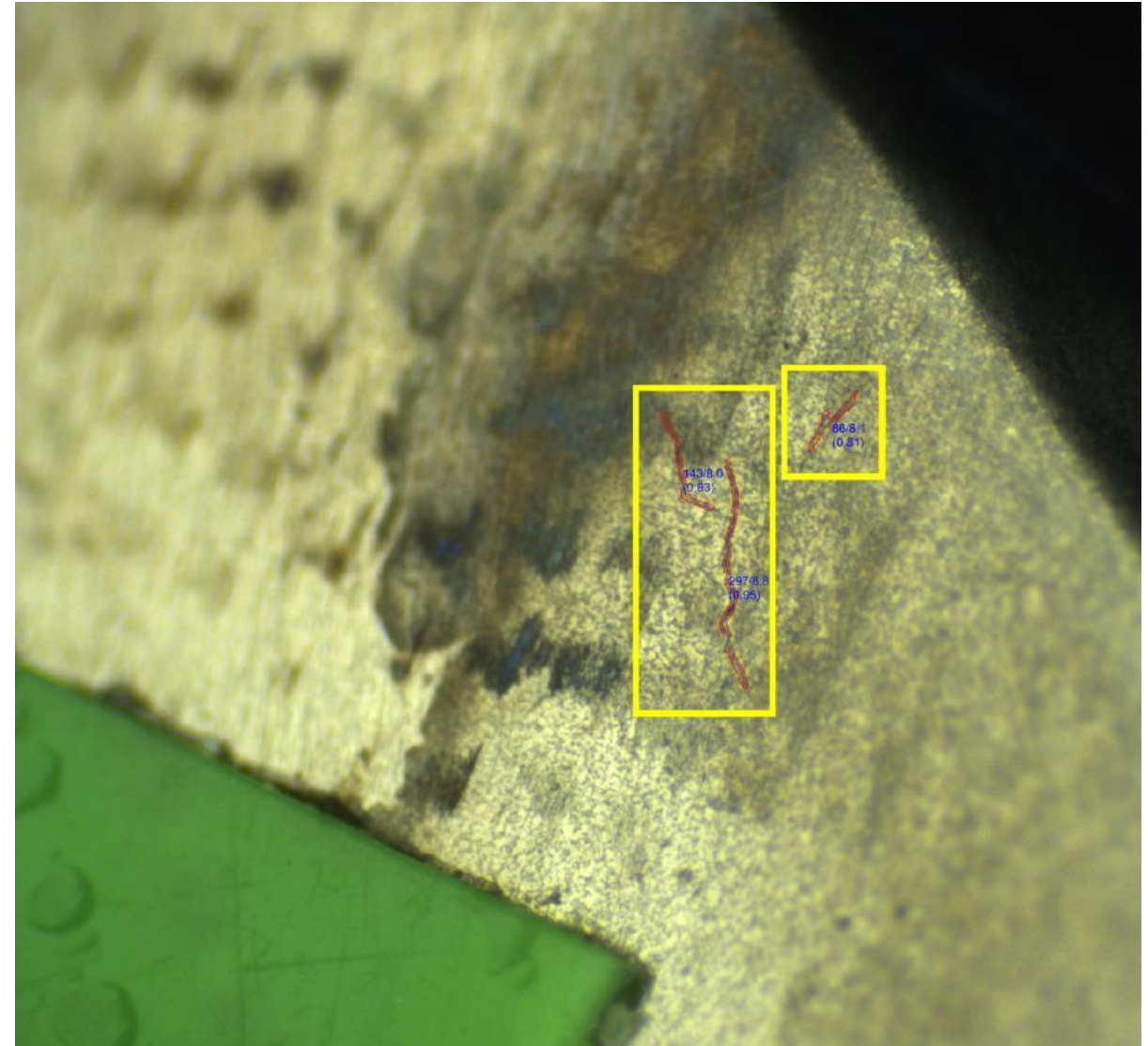
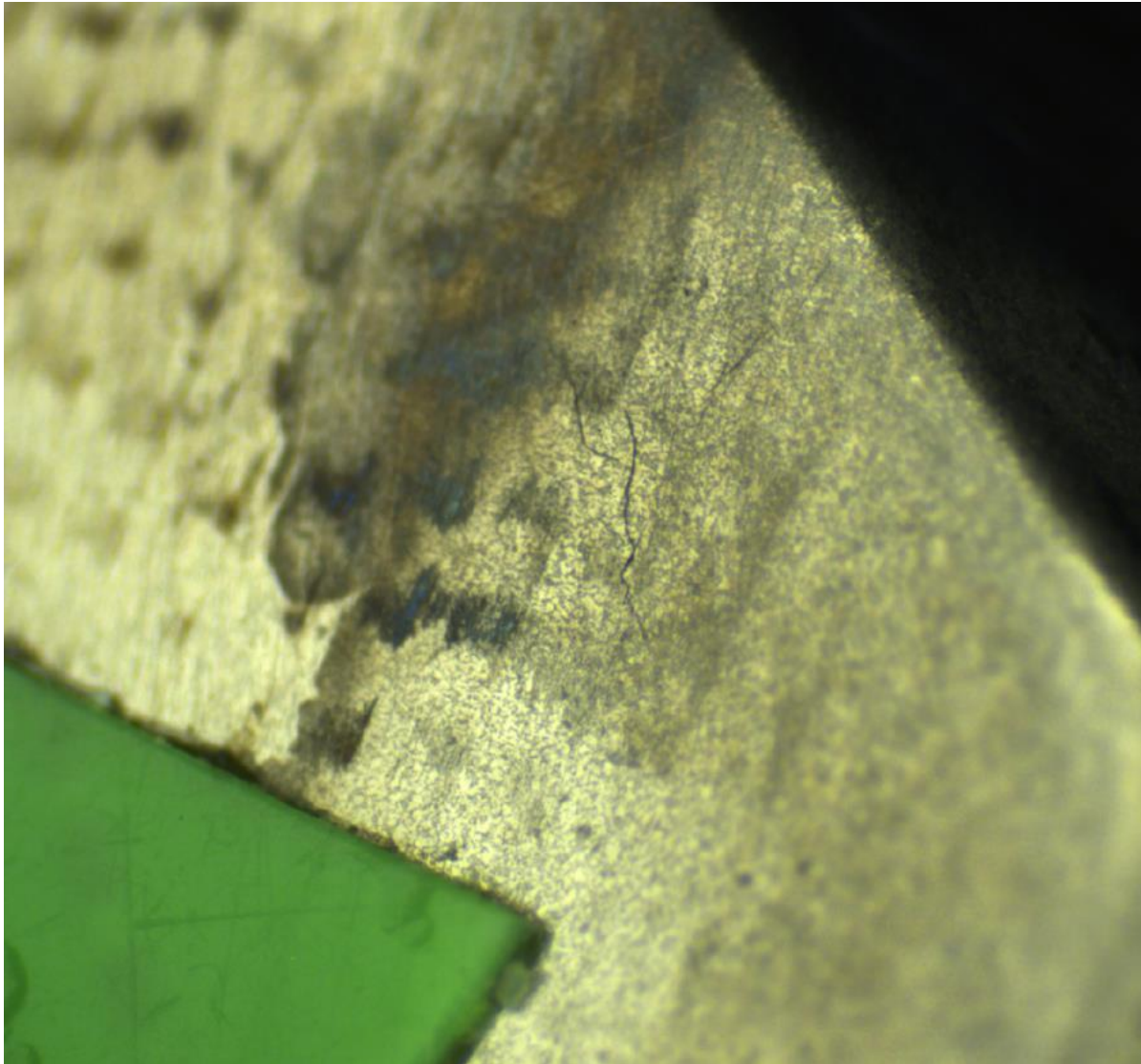
Von der Vision zur Umsetzung

eine Digitalisierungsreise

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owt 
A Swisscom Company

GENERIC CRACK DETECTION

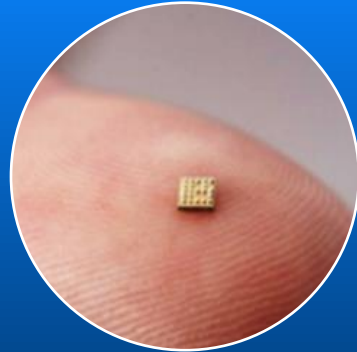


FULL STACK ?



Sensor

Monolithic /
on silicon



Component

System-on-chip
(SoC)



Device

System,
Electronics



Transport

Communication,
Edge processing

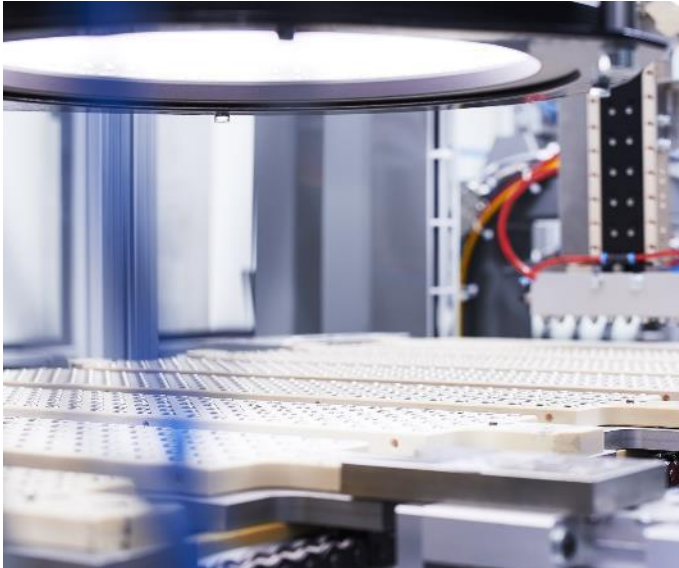


Cloud

Processing
AI

From raw data to actionable information

DEEP LEARNING FÜR DIE INDUSTRIE



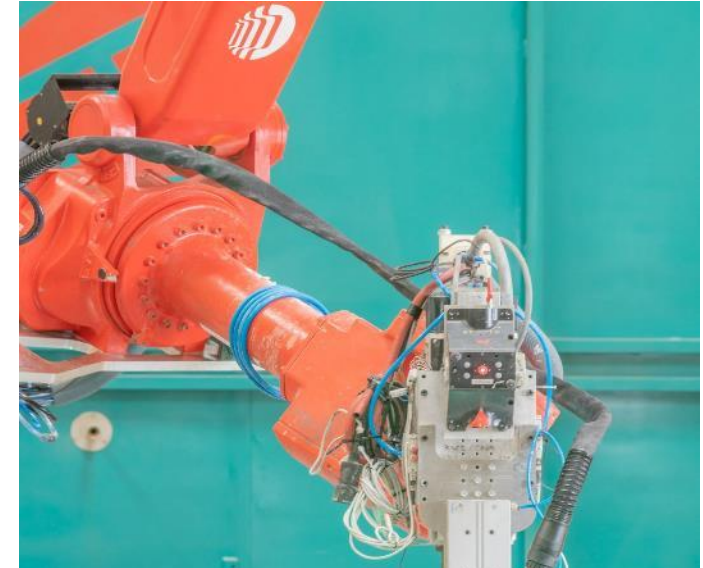
Quality & Process Control

- 2D/3D inline inspection
- Multimodal data
- Data driven optimization



Predictive Analytics

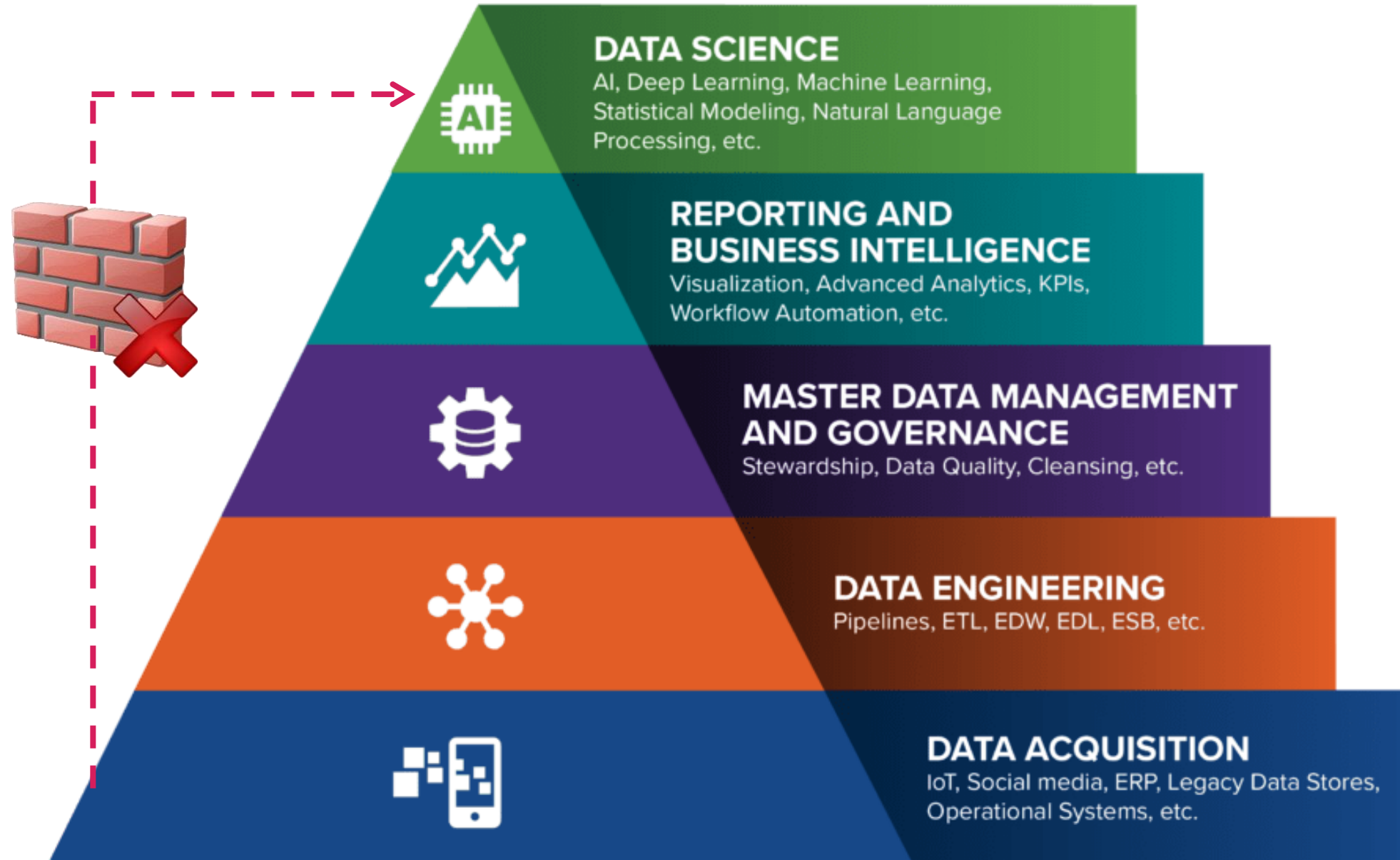
- Machine health monitoring
- Predictive quality
- Complex system modelling



Cognitive Robotics

- Smart human-robot interaction
- From sensing to awareness
- Agile, customized production

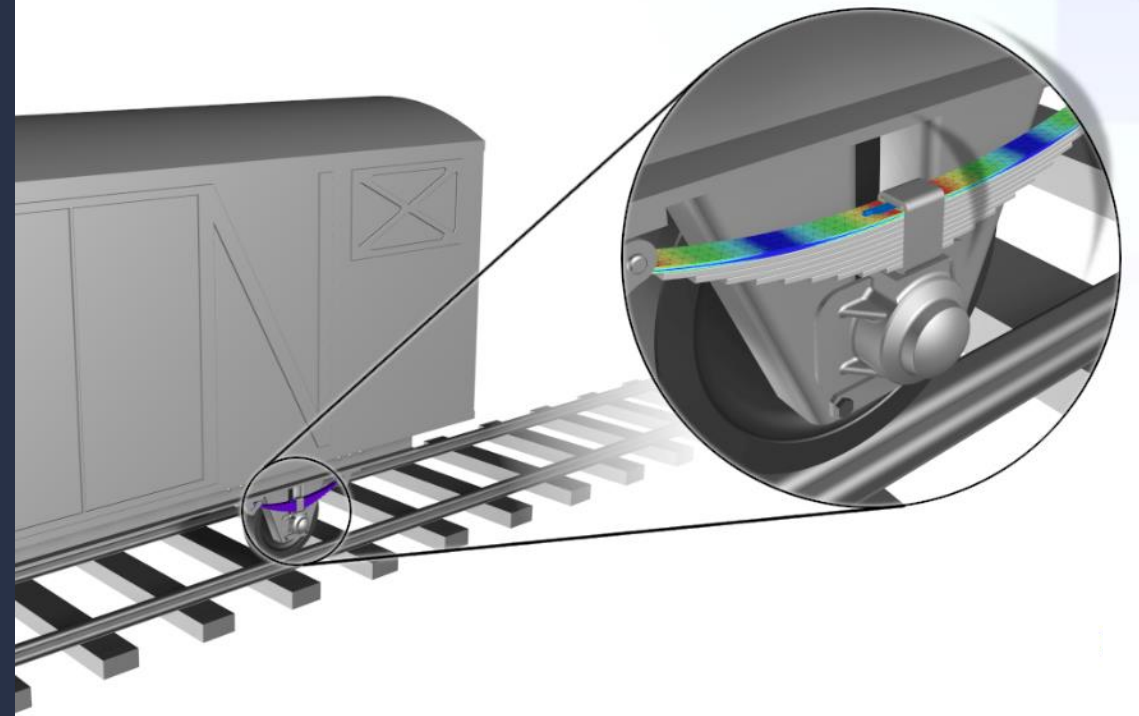
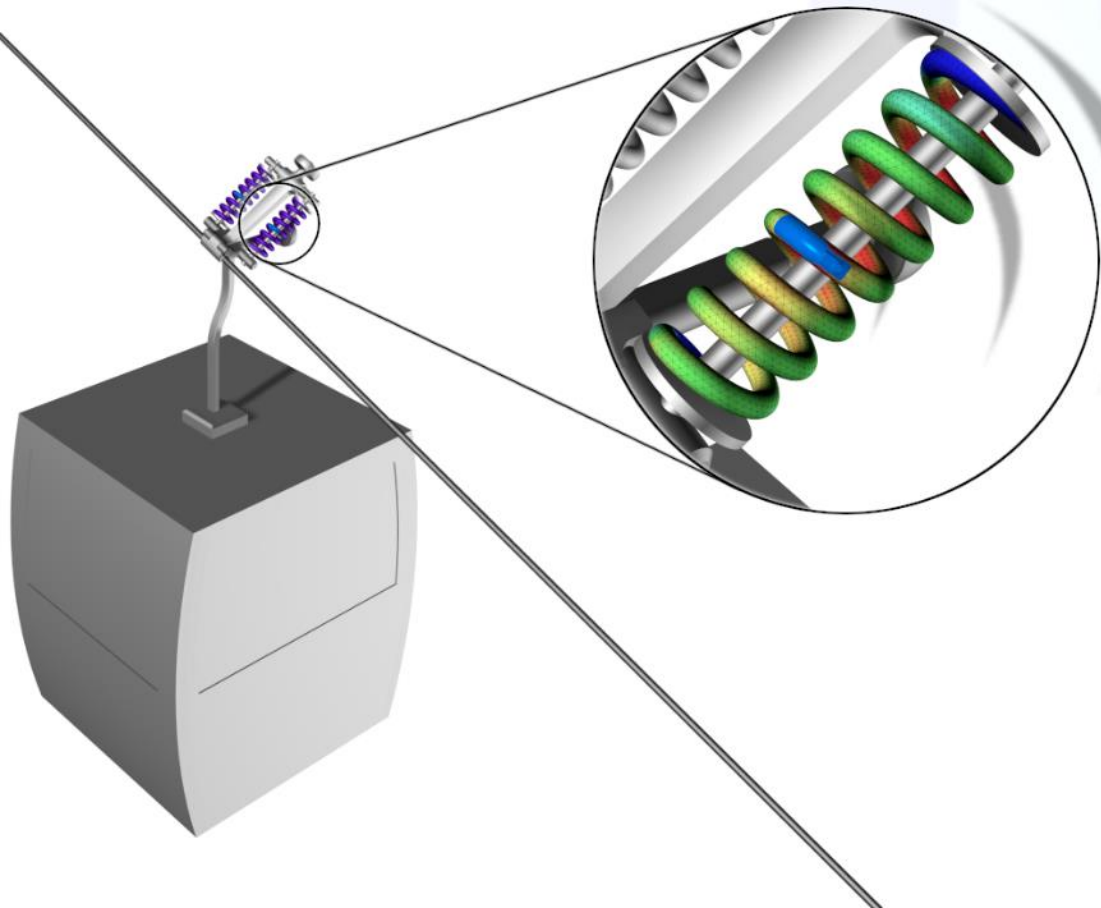
THE DATA SCIENCE PYRAMID



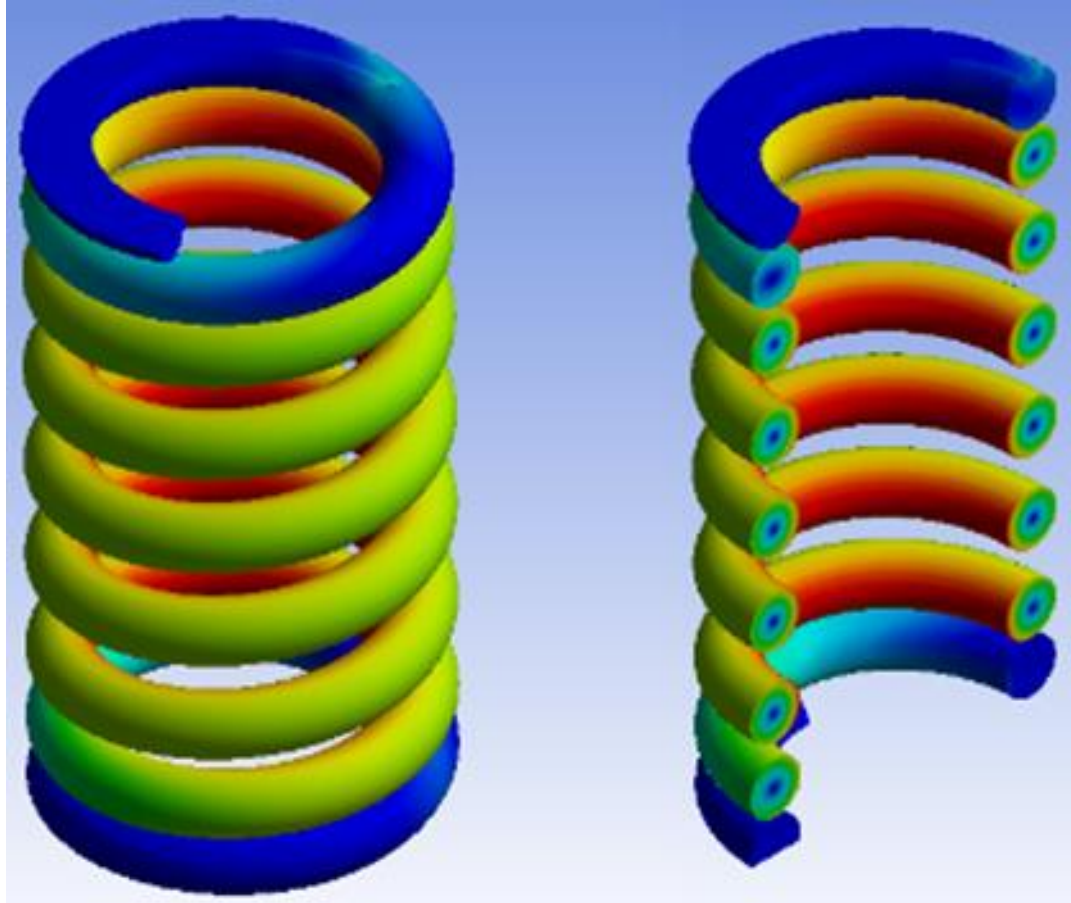




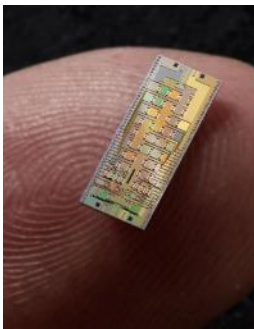
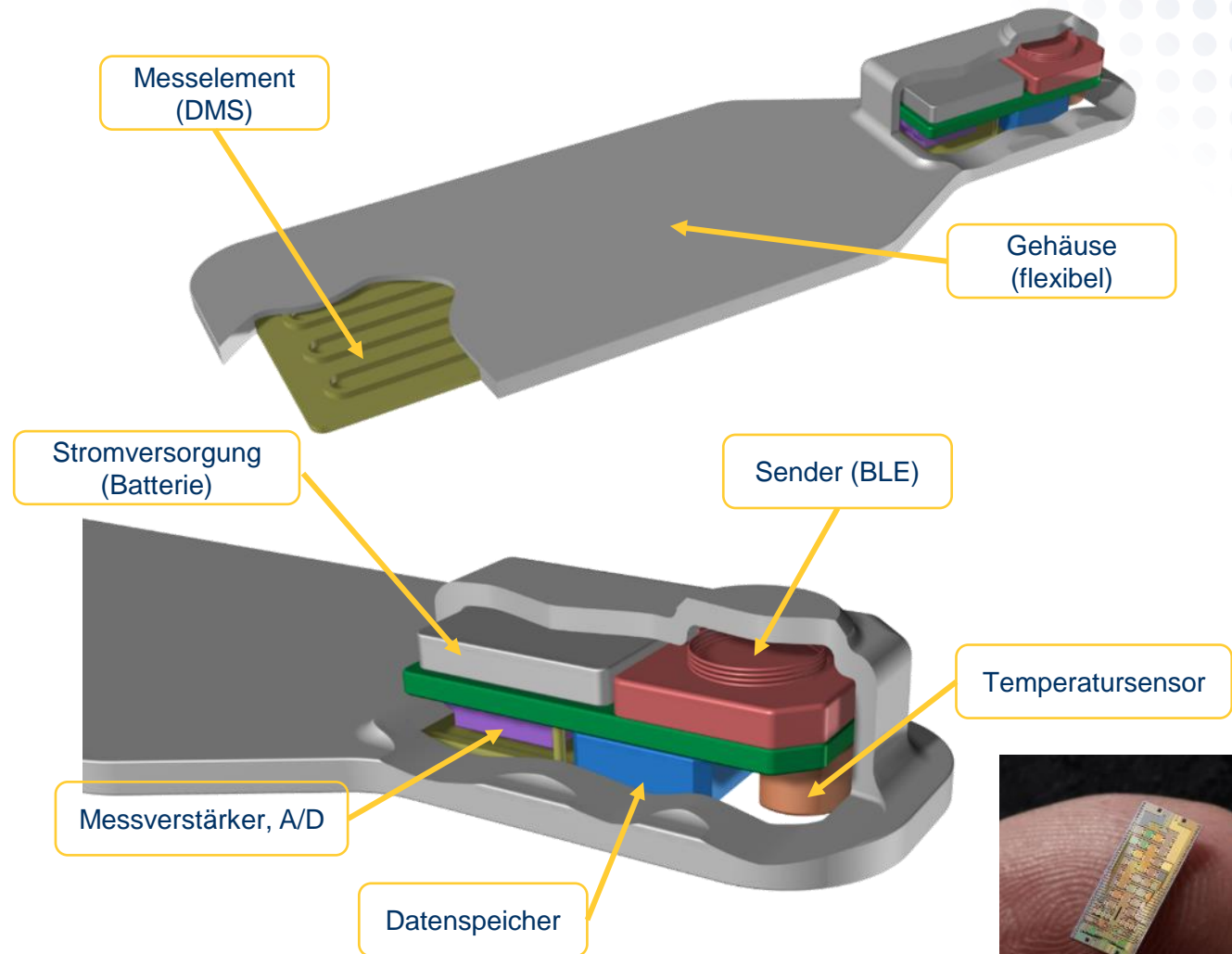
SmartSpring
die intelligente Feder



INNOVATION – SMARTSPRING



Druckfeder theoretisch nach DIN EN 13906-1 ausgelegt



ALLES KLAR?

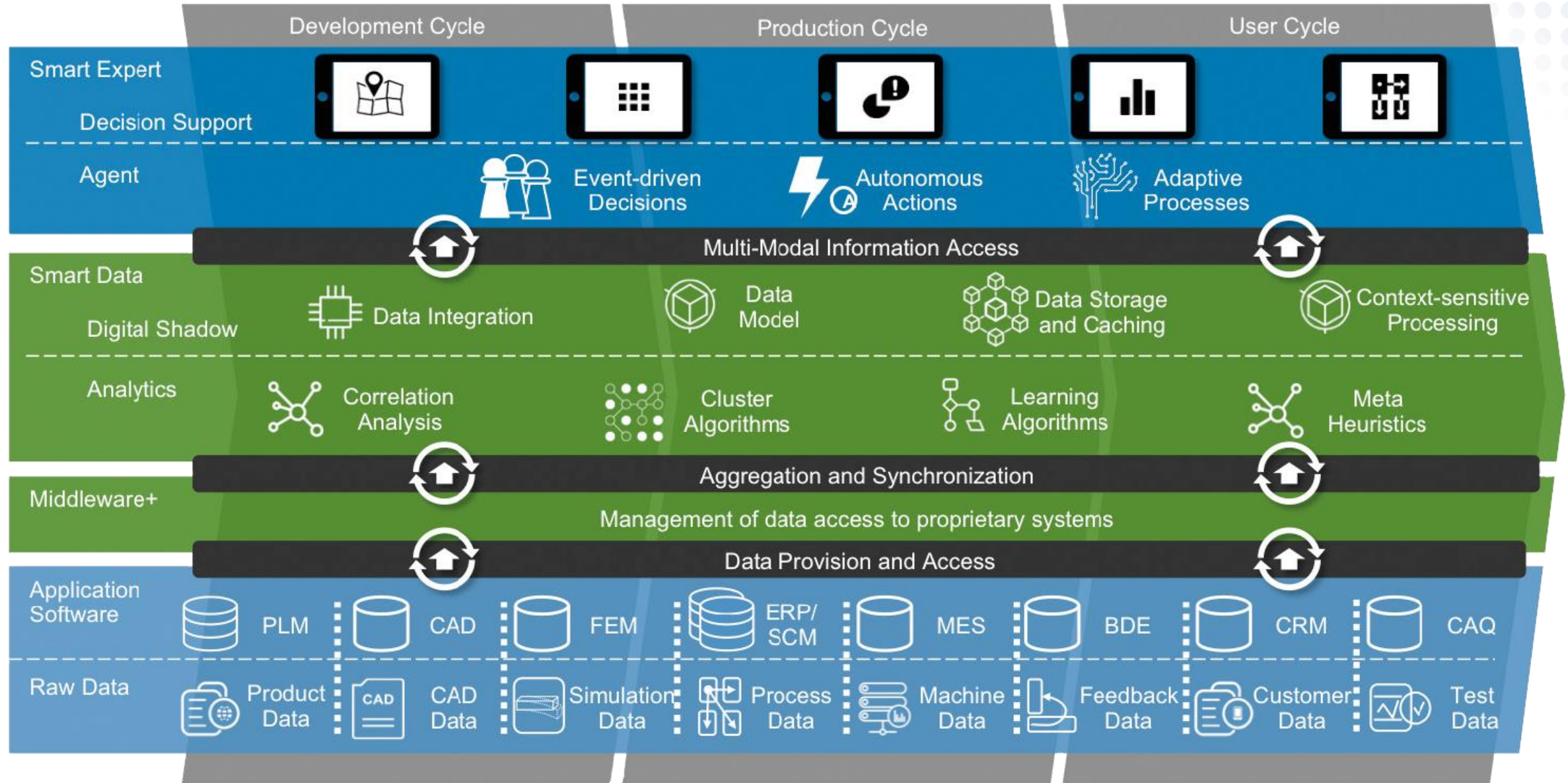
- Geschäftsmodell?
- Welche der 3'000 Federn?
- Datenanbindung?
- Endkunde des Dienstes?
- Digitaler Service?
- Inhouse <-> Extern?
- IT-Partner?
- ... ?



High-Speed 3D in Industry



INTERNET OF PRODUCTION



DATEN HAB ICH, UND JETZT...

- Qualität?
- Wertschöpfung?
- Finanzen?
- Interne Prozesse?
- Garantiestreitigkeiten?
- Voll vernetzte Produktion?
- ... ?

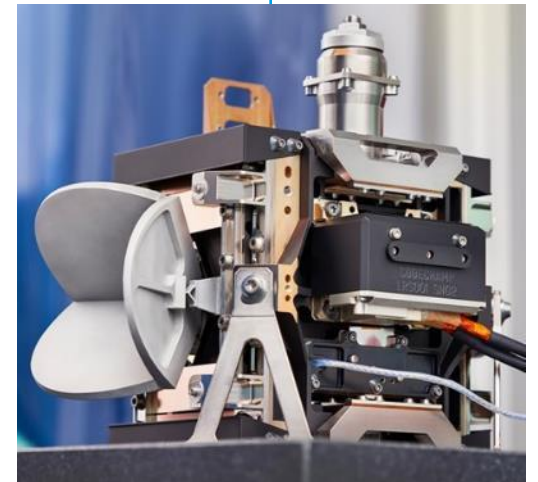
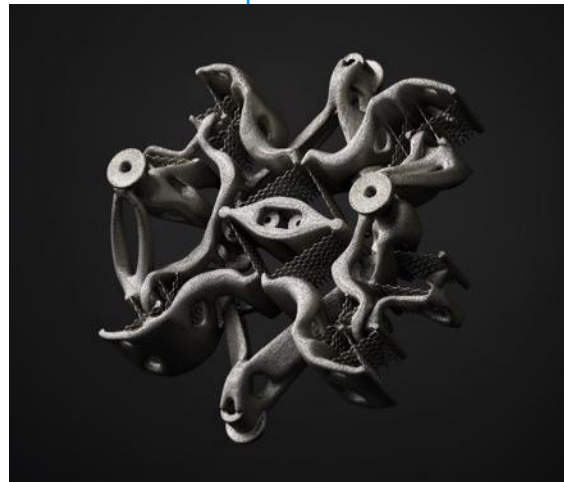
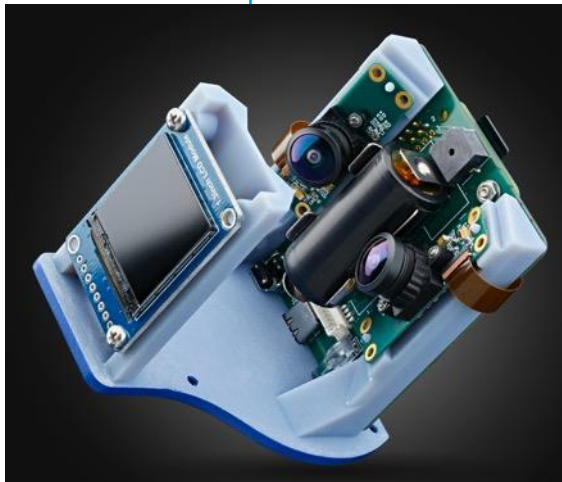
UNSERE DNA

Small & precise

Complex

Ultra-low power

Multidisciplinary





550

passionate
Engineers at
CSEM

LOSLEGEN!

 **csem**



 **GRdigital**



Innosuisse

 **inos** INNOVATIONS
NETZWERK
OSTSCHWEIZ