

Von der Manufaktur in die Serie – bedarfsgerechte Industrial IoT Lösungen!

Dr. Uwe Wieland, 05.06.18, München

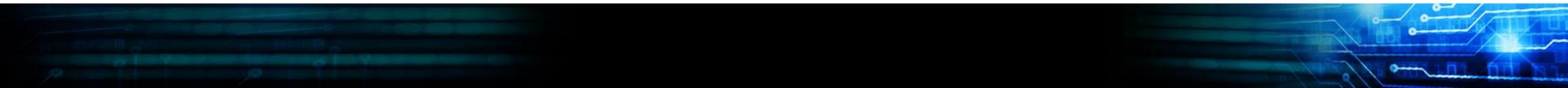
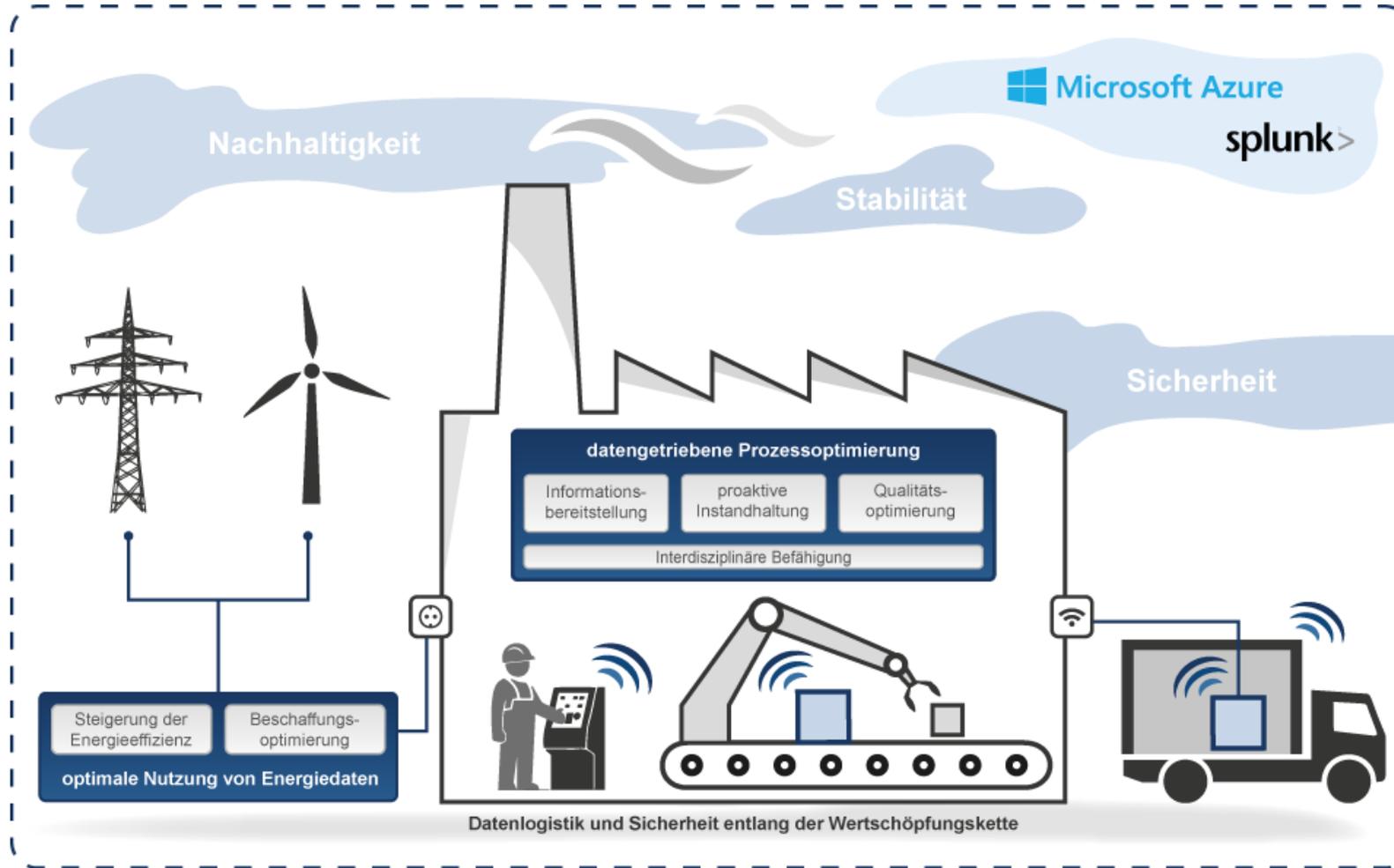


Agenda

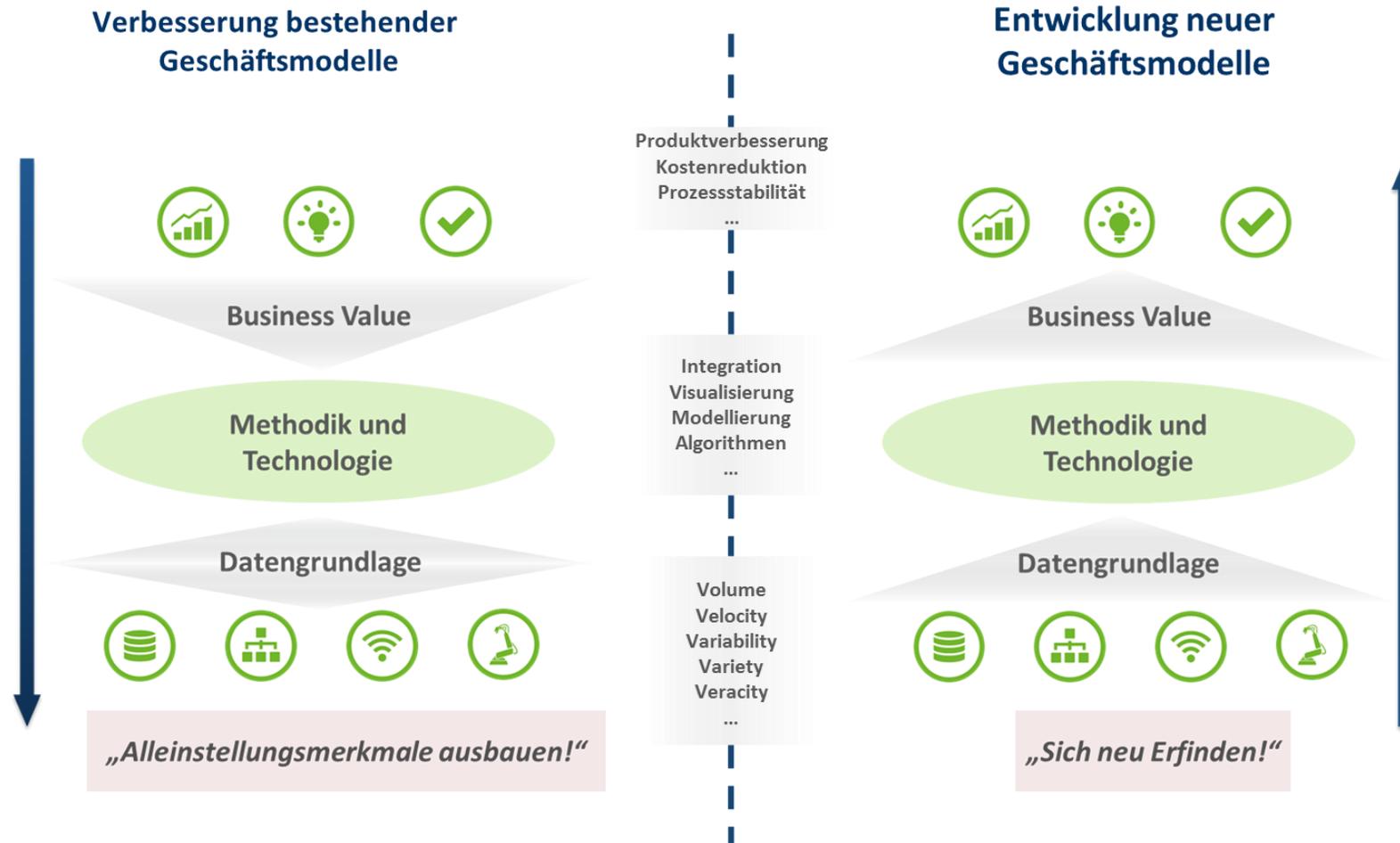
- Robotron – The Industrial IoT Company.
- RoboGate – ein Industrial IoT Fieldgateway und Azure.
- Robotron RCV – Mixed Reality und AI in der Produktion.
- Robotron IIoT Training – Industrial IoT Test Bed.



Ihr Partner für nachhaltige, stabile und sichere Prozesse!



Was machen wir für Sie innerhalb der Themen?





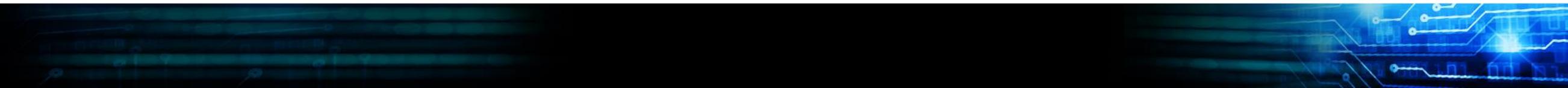
Voice of Customer – vom konkreten Problem und Leuchtturmprojekt...

"As shop floor responsible I need a secured, scalable and connected hybrid environment to cover different types of data and use cases"

"As equipment engineer I want to be able to online calculate KPIs such as OEE and statistical process control in order to ensure process stability."

"As maintenance technician I want to rate my technical equipment within a defined state to assess the condition in order to increase the overall availability."

"As an quality engineer I want automatically check the completeness of parts and get recommendations during assembly process."



... zur Entwicklung einer Strategie!

Human & organization

- global digitization strategy
- IIoT and industry 4.0 awareness
- continuous competence development and training
- efficient operations and system support
- agile and interdisciplinary project organization

Technology

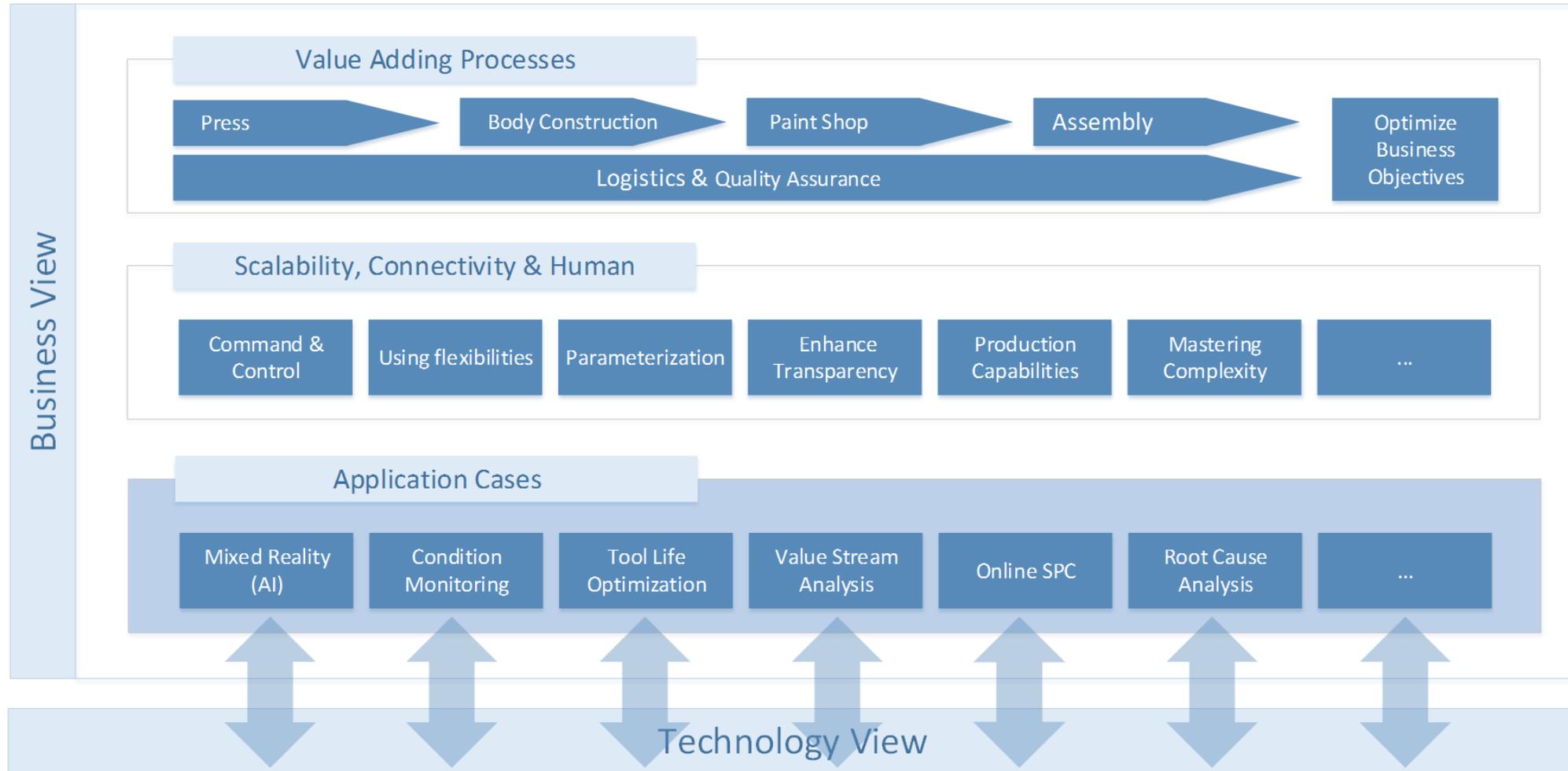
- track and trace & process transparency
- real-time capable KPI systems
- condition based maintenance
- integrated object recognition
- intelligent plant & tool management
- intelligent assistance systems
- virtual asset commissioning
- matrix production & additive manufacturing
- intelligent autonomous transport systems
- augmented reality systems

Cross-cutting/ hygiene factors

- machine networking M2M communication
- uniform communication standards
- digital twins
- integrated (microservice)-oriented platform
- central app store
- cloud-based platform
- audit-proof data exchange



IIoT regulatory framework – als strategischer Ordnungsrahmen.

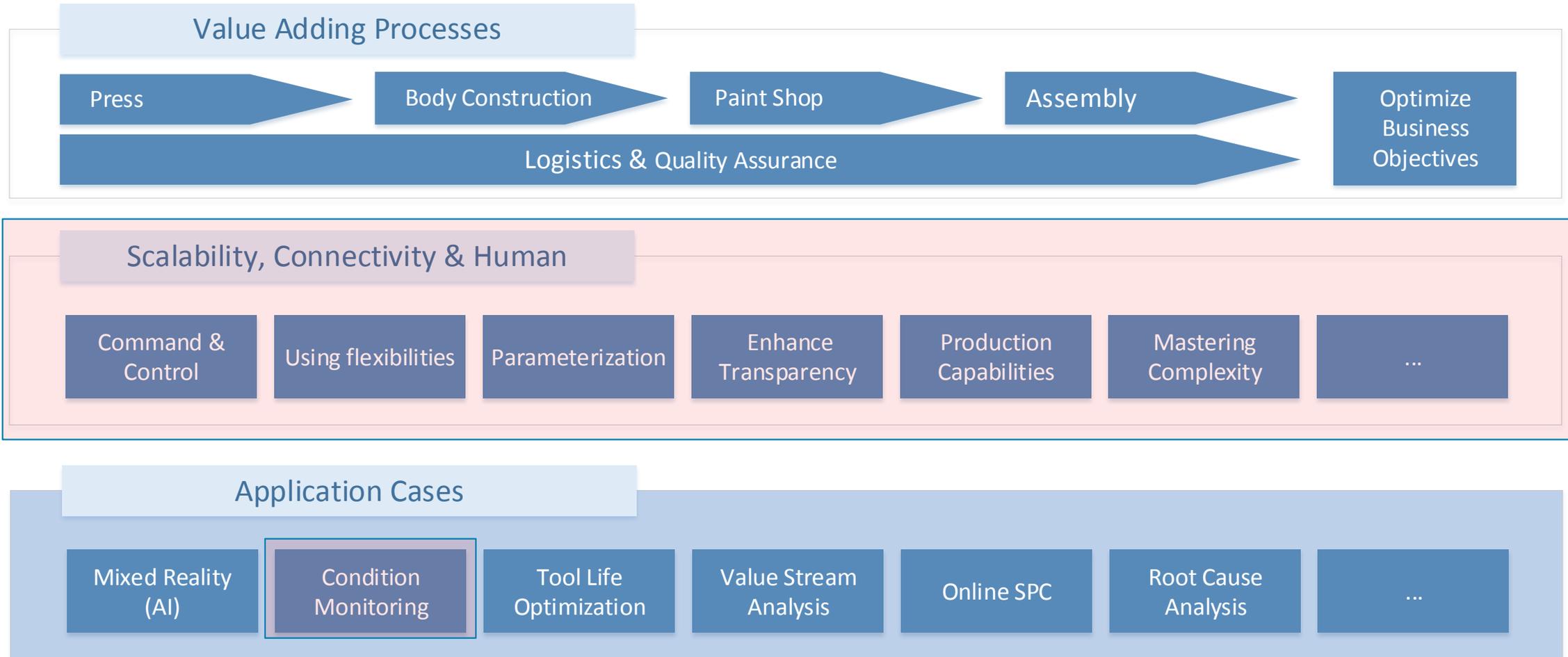




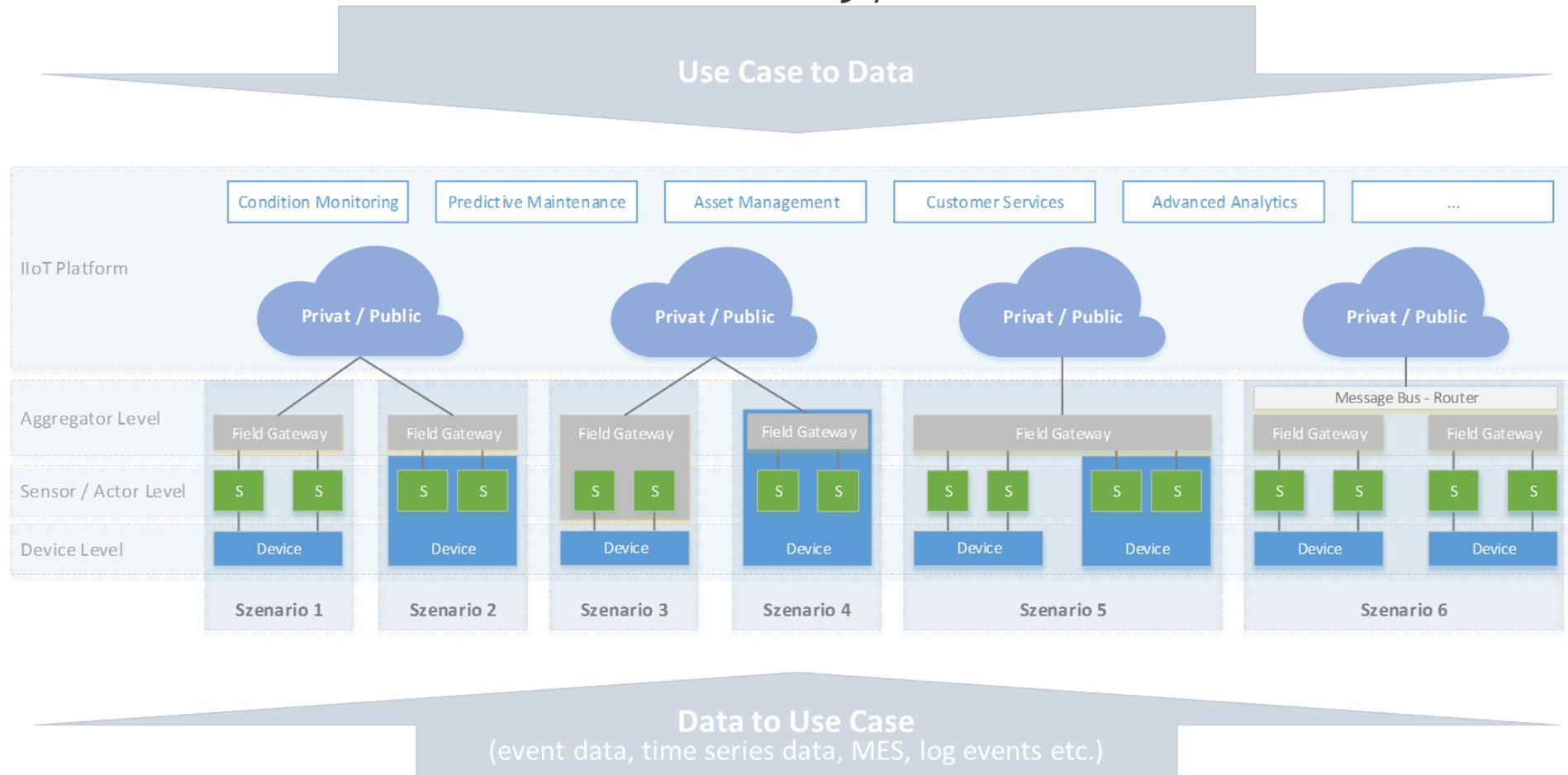
RoboGate – Industrial IoT Fieldgateway und Azure.



Condition Based Maintenance need Connectivity!

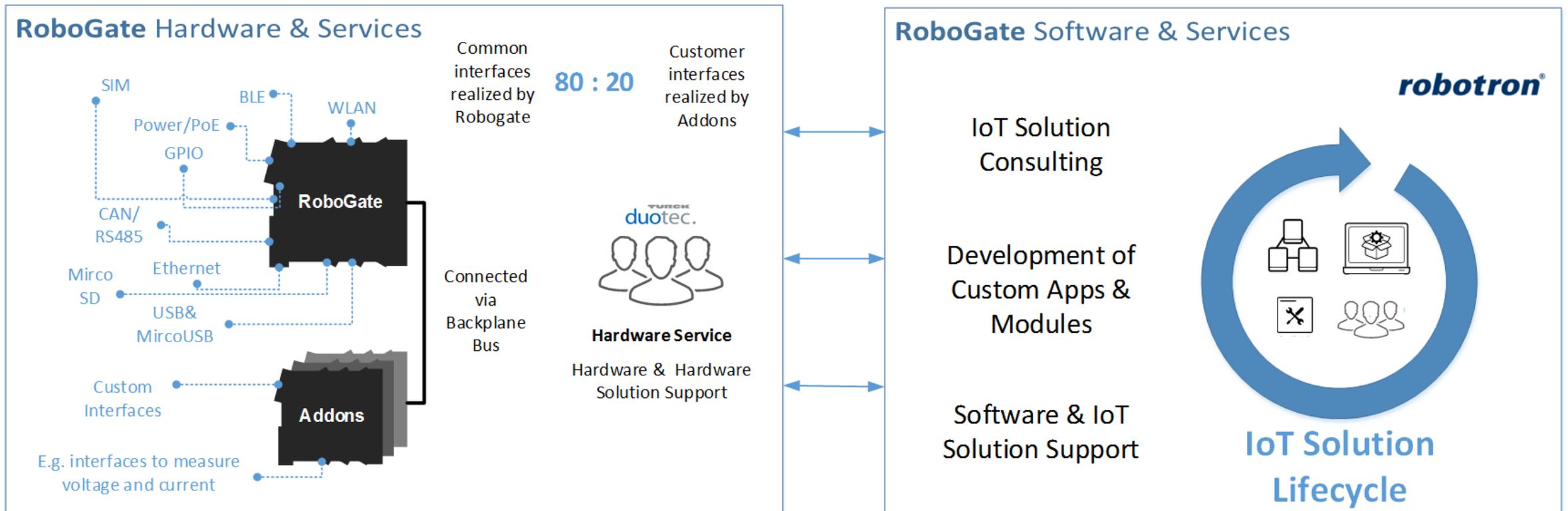


„As shop floor responsible I need a secured, scalable and connected hybrid environment to cover different types of data and use cases“

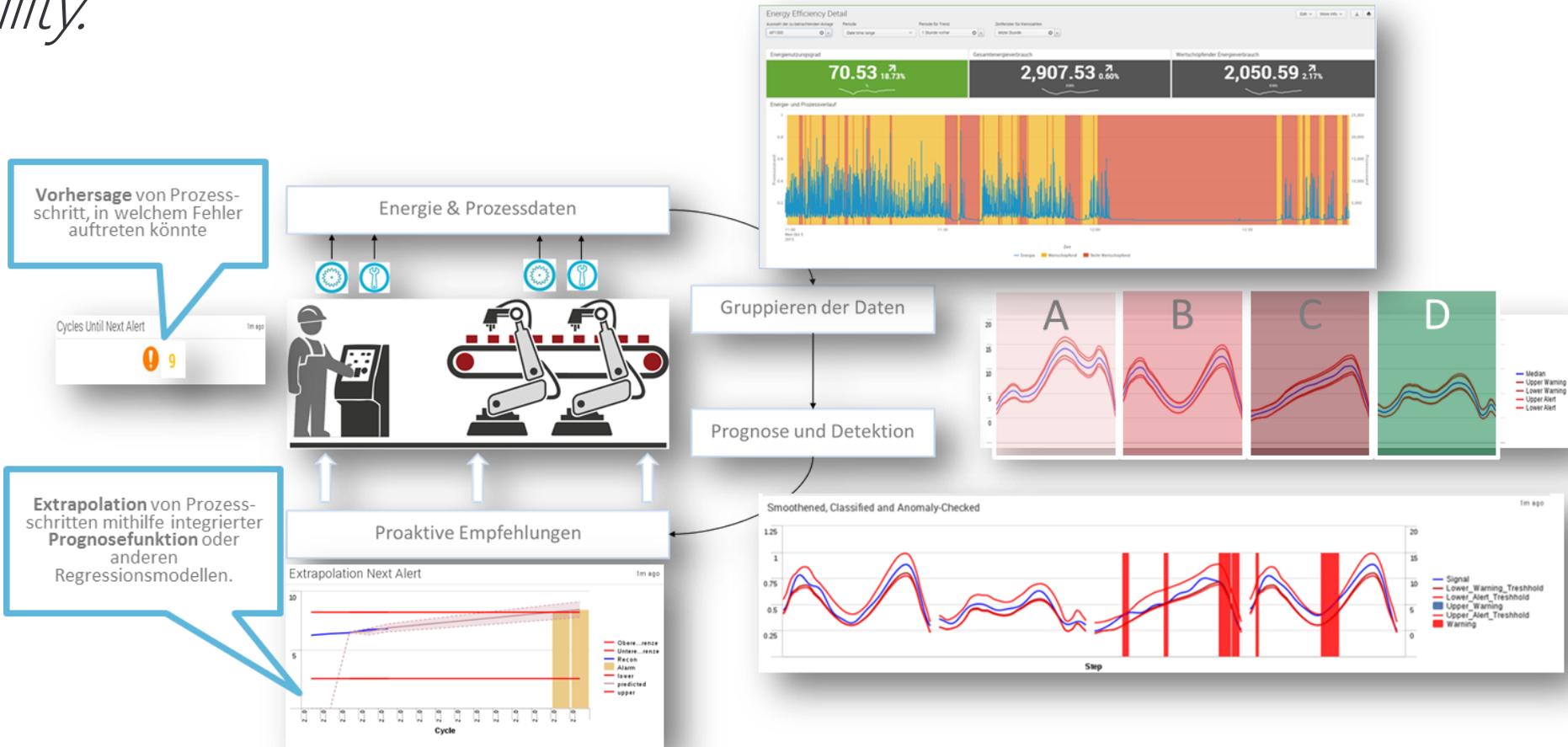


„As shop floor responsible I need a secured, scalable and connected hybrid environment to cover different types of data and use cases“

RoboGate IoT Field Gateway Solution



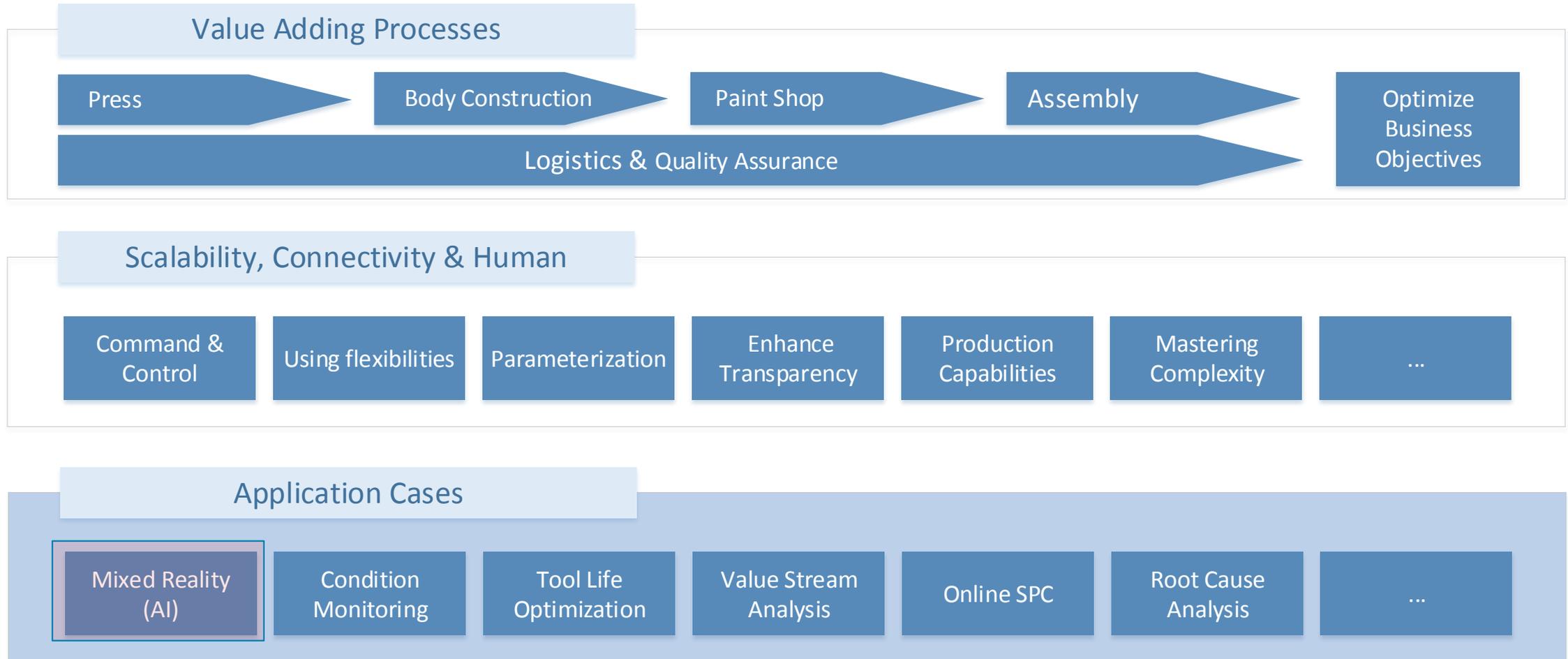
"As maintenance technician I want to rate my technical equipment within a defined state to assess the condition in order to increase the overall availability."



Robotron RCV – Mixed Reality und AI in der Produktion.



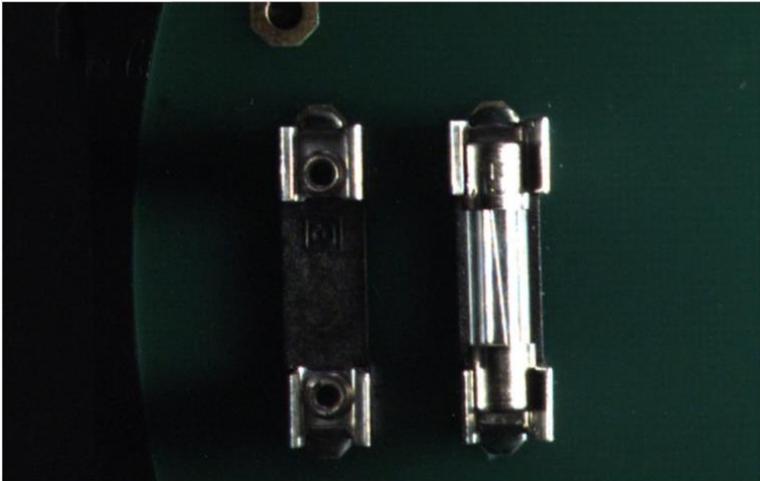
Mixed Reality and Artificial Intelligence (AI) in der Produktion



"As an quality engineer I want automatically check the completeness of parts and get recommendations during assembly process."

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datenbank-software

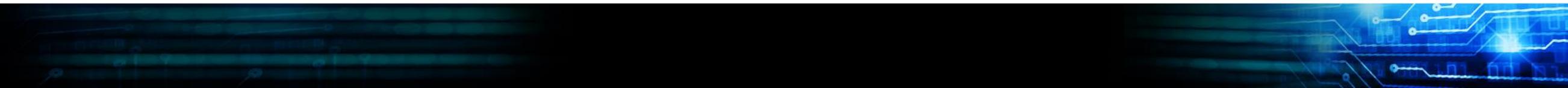
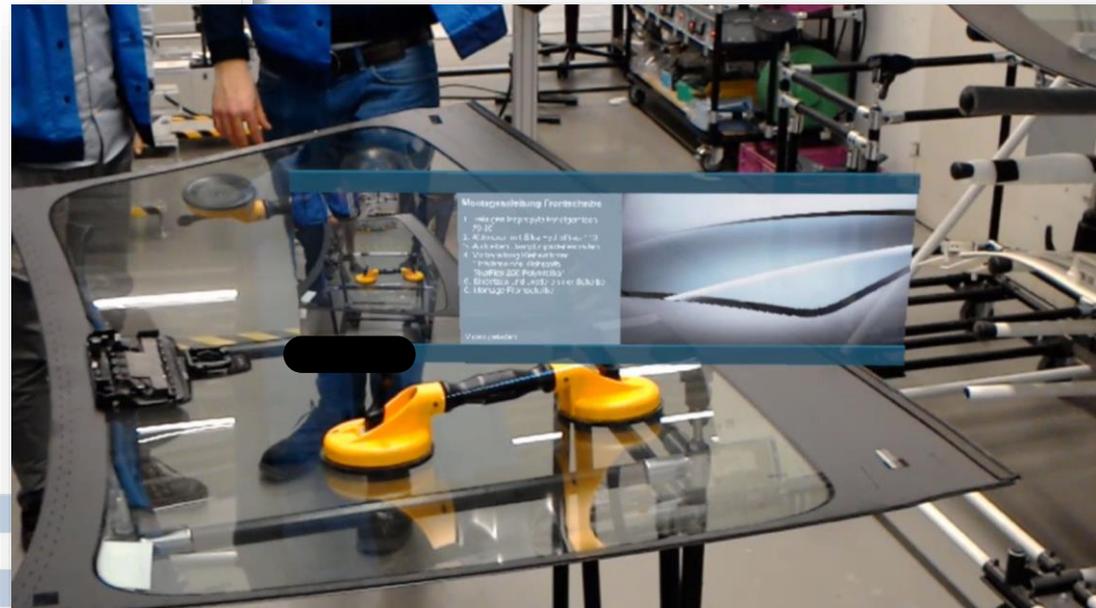
image classification object detection



Label	Prediction
rechts	0.9999395
links	0.0101702232
beide	2.21933789e-7
keine	2.51981245e-8

Service: irissowcase ▾
Model: Diplomarbeit_neu_ohneException ▲

What's this?
I want to input url...
I want to upload file...
Observe filesystem...





Anwendungsfälle aus der Realität

„Augmented Assembly“

Virtuelle Anzeige von Montageanleitungen auf Basis erkannter Objekte

„Visual Object Recognition“

Optische Endmontageprüfung mittels Android-App

Automatische Erstellung von Prüflisten basierend auf den Ausstattungsmerkmalen der Fahrzeuge

„Griff in die Kiste“ (Work in Progress)

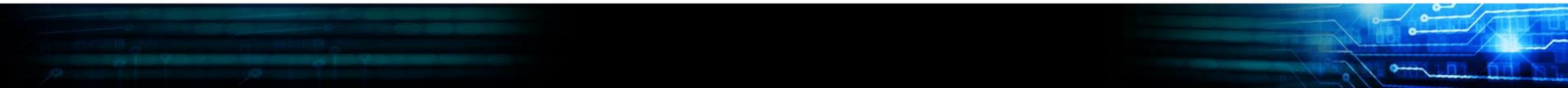
Automatisierte Kommissionierung

Steuerung einer Roboterarmes für den gezielten Griff eines Bauteiles auf Basis von Bildern einer handelsüblichen 2D-Kamera

Besonderheit: Trainingsmaterial besteht aus synthetisch generierten Bildern der 3D-Modelle der Bauteile mit beliebigen Hintergründen



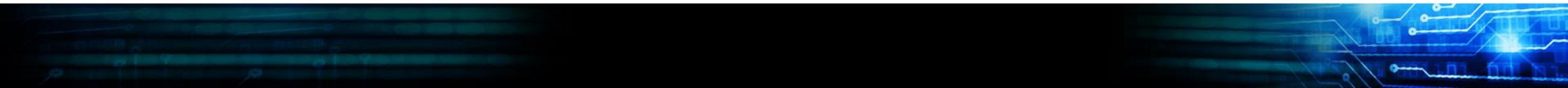
Virtuelle Anzeige von Montageanleitungen auf Basis erkanntener Objekte



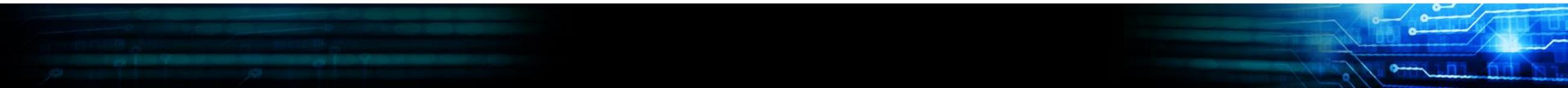
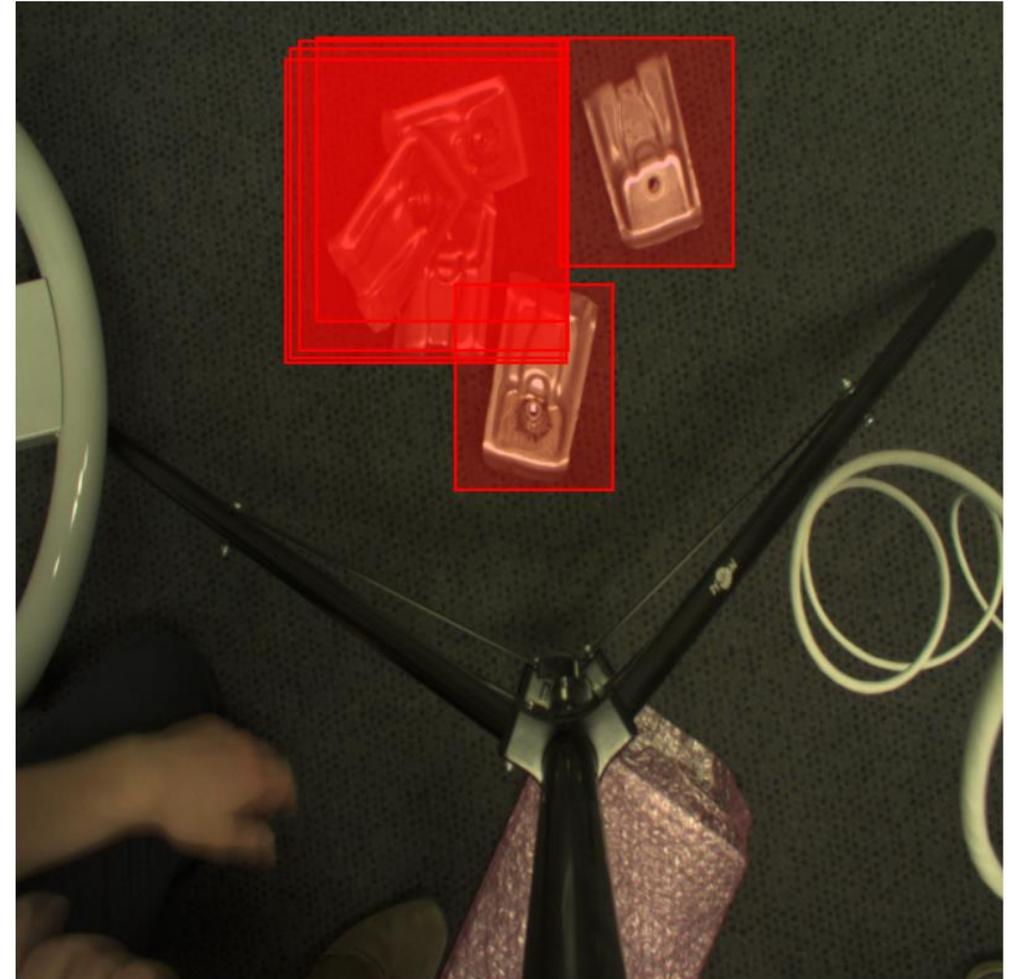
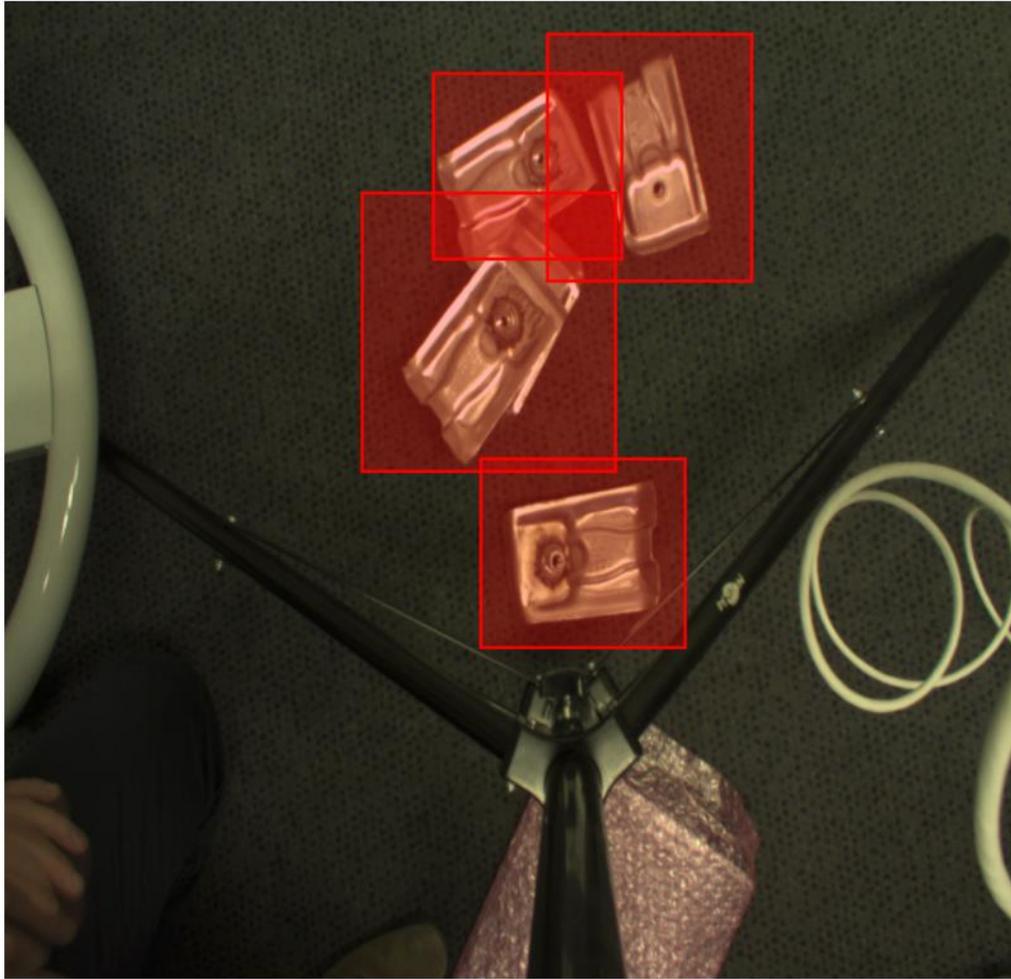
Optische Endmontageprüfung



Automatisierte Kommissionierung (Work in Progress)



Automatisierte Kommissionierung (Work in Progress)

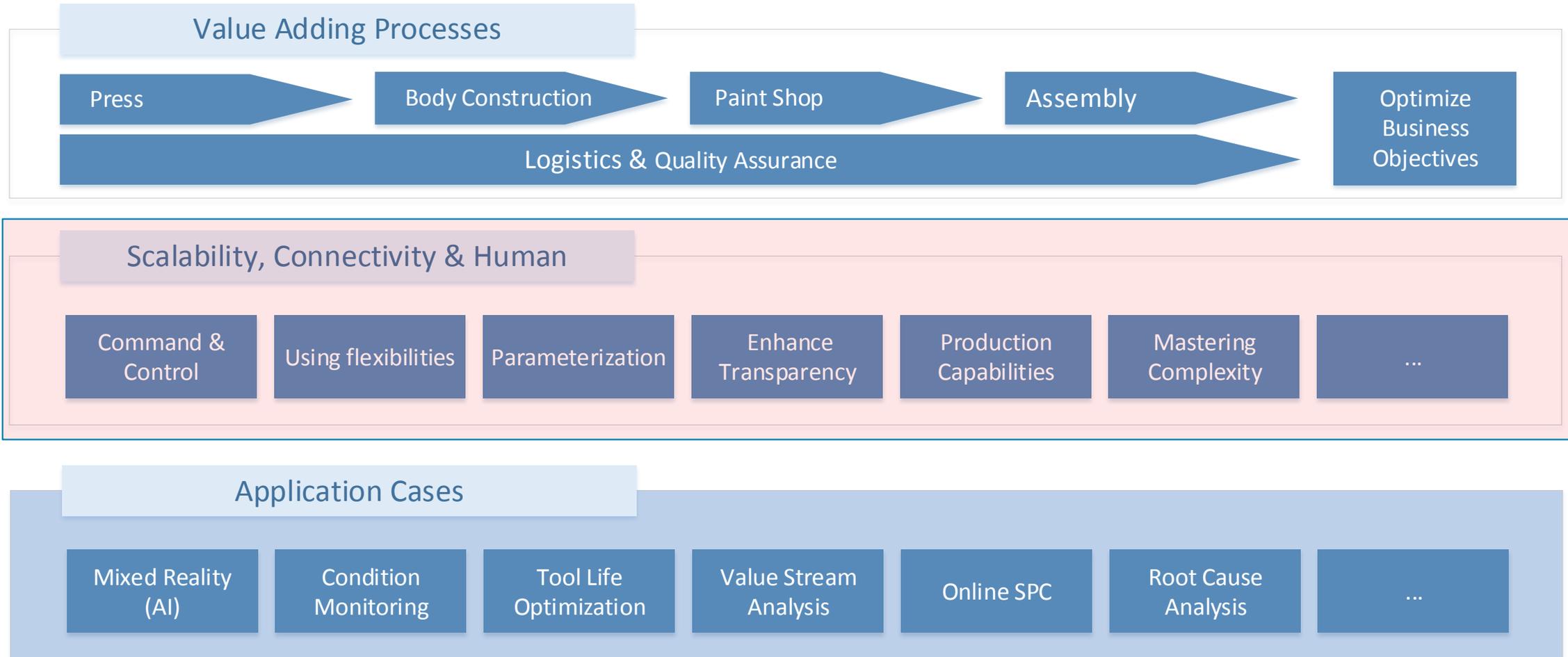




Robotron IIoT Training – Industrial IoT Test Bed.



Industrial IoT needs more than a technology approach!



Robotron IIoT Training - Industrial IoT am Testbed der HTW Dresden

Bearbeiten Sie im Team einen IIoT End-to-End-UseCase an einer echten Industrieanlage

Binden Sie mit uns die Daten einer Fräsmaschine mit einer Siemenssteuerung an die Azure-IoT-Plattform an



Lösen Sie analytische Fragestellungen und visualisieren Sie die Ergebnisse mit modernen Werkzeugen

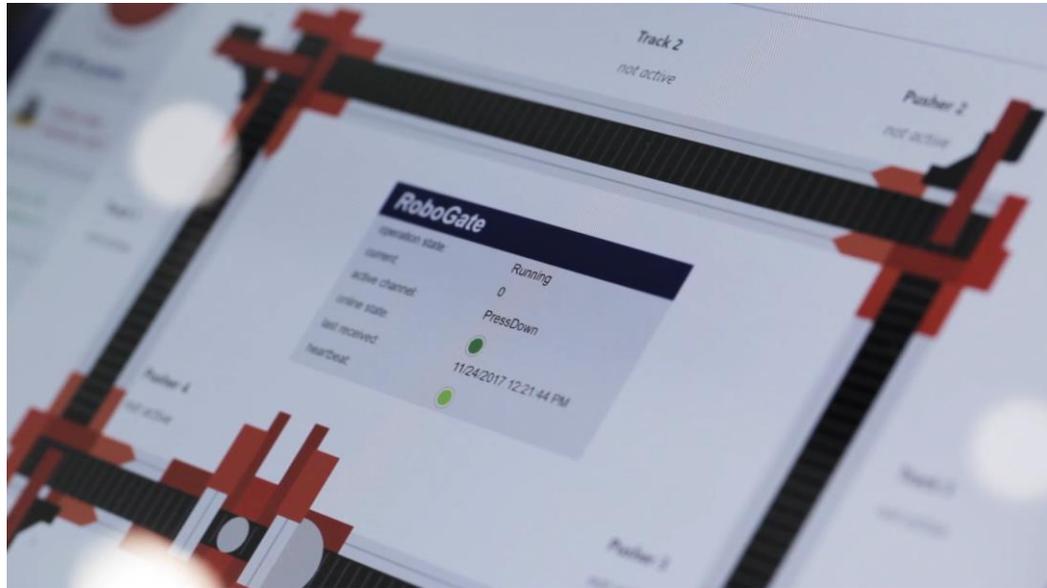
Lassen Sie sich bei Abweichungen benachrichtigen und erforschen Sie die Ursachen mit den Anlagentechnikern und Datenanalysten vor Ort



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Robotron IIoT Training – Microsoft Technologie Center & Youtube



The screenshot shows the YouTube channel page for Robotron Datenbank-Software GmbH. The channel banner features the text "Die Datenbank-Spezialisten." and a network diagram. The channel name is "Robotron Datenbank-Software GmbH" with 20 subscribers. The "Uploads" section lists four recent videos:

- Virtual Data Science Conference: Azure IoT in Action (Robotron)** (49:41) - 178 Aufrufe • vor 1 Jahr
- Robotron - Kaffee Kochen 4.0 mit Azure IoT** (45:31) - 263 Aufrufe • vor 1 Jahr
- Virtual Data Science Conference: Data Science – Ist es mehr als nur Statistik?** (50:18) - 208 Aufrufe • vor 1 Jahr
- Robotron - Webinar Industry Data Insight mit Azure IoT** (50:03) - 185 Aufrufe • vor 1 Jahr





Kontaktieren Sie uns!

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