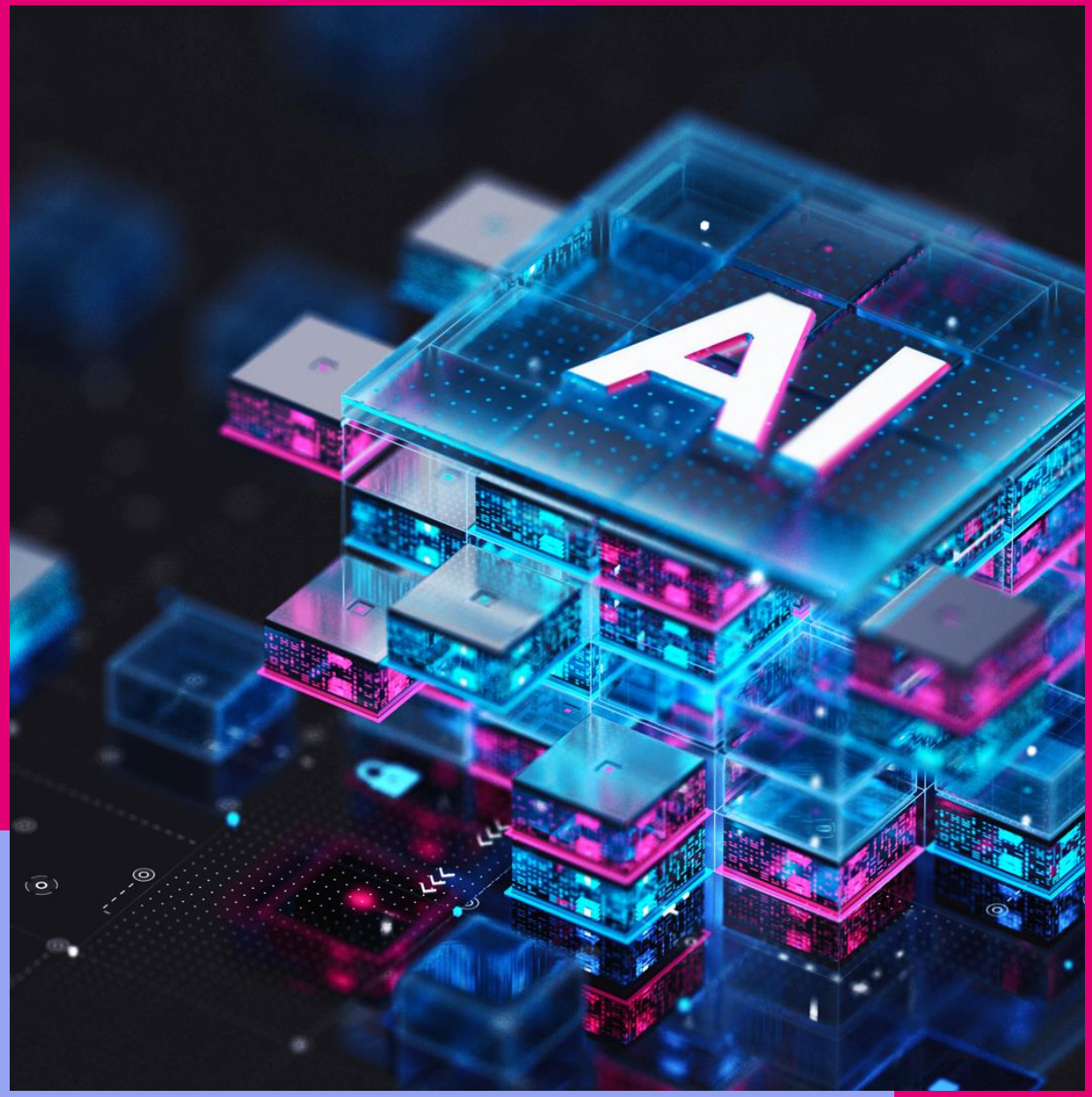
AI strategy in industrial companies

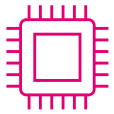
Webinar

Christopher Günther I November 2025



Detecon

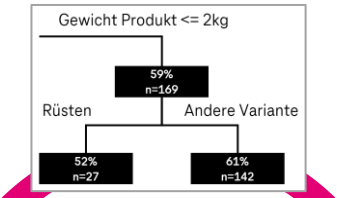
AI is driving significant efficiency and performance improvements across industries

Industry	Exemplary AI use cases	Improvements
 **IT equipment**	AI-powered automated assembly and testing workshop	↑ 42% Overall equipment effectiveness (OEE)
	AI-enabled warehouse and logistic scheduling	↓ 44% Line changeover time
 **Basic materials**	Intelligent equipment maintenance and scheduling	↓ 35% Unplanned downtime
	AI control and optimization for key cement production processes	↓ 11% Coal consumption per ton of product
 **Electronics production**	Automated energy efficiency management	↓ 33% Building energy consumption
	AI-enhanced resource recycling	↓ 60% Material waste from cartons

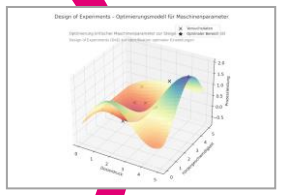
Source: WEF (12/2023)

An einer komplexen Multiproduktlinie wurde ein Potential von 50% identifiziert, wovon bereits die Hälfte in 10 Wochen realisiert wurde

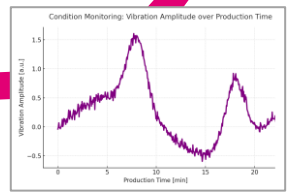
1. Batch-Analyse Modell



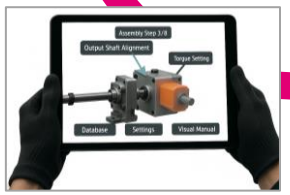
2. Design of Experiments Optimierungsmodell



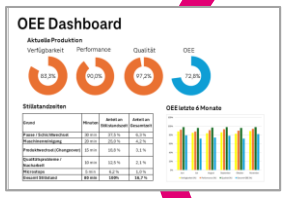
3. Condition Monitoring Modell



4. Augmented Reality für Rüstwechsel



5. Digital Performance Management



Predictive Maintenance

Vorausschauende Wartung in der Vorproduktion von Halbleitern.

Herausforderung

- Keine Transparenz über Zustand von produktionskritischen Anlagen (Reinwasserventile)
- Nicht planbare Wartungszyklen sorgen für kostspielige Produktions-unterbrechungen

Lösung

- Akustisches Überwachen der Ventile mit einer hochintegrierten Edge-Sensor-plattform
- Echtzeit-Ermittlung des Gesundheits-zustandes mittels Machine Learning
- Visualisierung auf einem Dashboard

Kundennutzen

- Transparenz über aktuellen Zustand der Reinwasserventile
- Planbare Wartungszyklen für Ventile
- Minimierung von Produktions-unterbrechungen
- Sicherheit in der Produktion durch Früherkennung

Automobile company: Dynamic pricing for spare parts

T-Systems has created a data-driven platform to manage spare parts prices.

Customer pain points

- Original Equipment Manufacturer (OEM) sets the prices for spare parts used in the aftersales process.
- The process of determining prices is highly manual and is conducted by price experts, which is time-consuming.
- The process is heavily reliant on the expertise of the price experts.
- Difficult to transfer knowledge because there is a lot of specialized knowledge involved

Business impact

- Reduced manual effort for price managers
- Demand-driven pricing through AI-generated suggestions
- Enable data-driven strategies previously not feasible

Reference project

Leser: Process automation through AI-supported text analysis

Customer pain points

- Orders by e-mail with individual customer requirements as unstructured message text with attachments in the form of PDF and Word documents
- To process the orders, the specific product properties, technical sizes with associated units, and order sizes need to be entered into the product configurator of the SAP
  ERP system
- Data entry was previously carried out manually by employees in the order entry department

Business impact

- Process optimization and increased efficiency thanks to the Semasuite® text analysis platform
- Significant time and cost savings by replacing manual order processing
- Elimination of transmission errors in order data

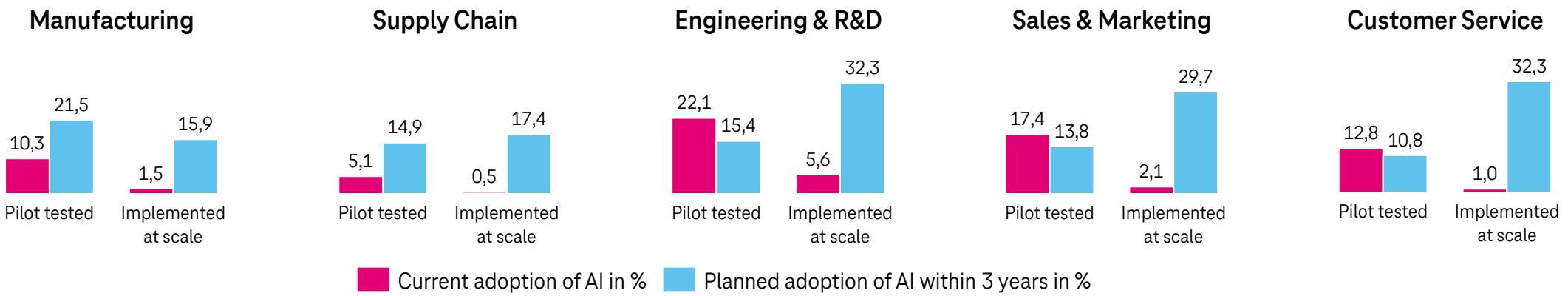
By using the Semasuite® text analysis platform from Telekom MMS, we save the costs and effort of internal software development and can now still use an individual solution that is optimally adapted to our ordering process. The decision to use the Semasuite® solution was easy for us, as the high degree of prefabrication and standardized Semasuite® components meant that we had a very low implementation risk and therefore the necessary cost transparency right from the start.

Volker Kapune,
Head of IT,
LESER GmbH & Co. KG

Reference project:

LESER
The-Safety-Valve.com

Manufacturing companies recognize the value of AI across all domains



Use Cases

Quality Assurance	Demand Forecasting	Generative Design	Dynamic Pricing	AI Assistant
Predictive Maintenance	Supplier Evaluation	AI-Assisted Programming	Personalized Content Creation	Dynamic Pricing Spare Part
Process Optimization	Inventory Control	Virtual Prototyping	Customer Segmentation	Predictive Maintenance

ETH Zürich; The state of AI in the Swiss tech industry, 2024, N=209

But how to start? – Best is with a clear AI strategy

An AI strategy defines how an organization will use artificial intelligence to achieve its business goals.

Dedicated AI Strategy

A formal framework that directs how an organization uses AI to achieve its business objectives.

Use Case Portfolio Management

The structured process of evaluating and prioritizing AI use cases to ensure the optimal allocation of resources to high-value initiatives.

Data Strategy

A formal framework that governs how an organization manages and uses data to support its business objectives and enable scalable, high-quality data initiatives.

ROI and Impact measurement

The processes and metrics used to evaluate the business value, effectiveness, and strategic contribution of AI initiatives.

Business Commitment & Capital Allocation

The alignment of leadership support and financial resources to strategically fund and sustain AI initiatives across the organization.

Guiding Questions:

- How clearly defined is the organization's strategy for AI, and to what extent does it align with the overall business objectives and long-term vision?
- How has the implementation of the AI strategy directly influenced key business outcomes, (e.g. revenue growth, operational efficiency, customer satisfaction, or competitive advantage)?
- What resources (e.g., budget, personnel, technology) are allocated to support AI and data initiatives?

AIMRI enables companies to systematically implement and roll out the AI strategy

AI adaption poses many challenges for manufacturers

Lack of **transparency of key improvement** areas

Coordinating the **foundations for AI adaption**

Navigating **complexity and interdependencies** of AI systems

Lack of **measurable impact of AI** initiatives

Inconsistent AI **scaling across plants**

AIMRI represents the first step in addressing these challenges

Holistic assessment across organizational, technological and strategic dimensions

Structured foundation to identify gaps and opportunities for improvement

Clear prioritization of improvement and focus areas, based on your current AI readiness, business objectives and costs

Comparison with industry best practices

Basis for facilitating communication with stakeholders within the organization

AIMRI is a holistic industrial AI assessment, which delivers detailed insights and recommendations on how to improve

AIMRI Framework

Building Blocks	Pillars	Dimensions		
AI Purpose	**Strategy**	**AI Strategy**	Ecosystem & Innovation	
	Organization	AI Operating Model	Workforce Transformation	
	Ethical & Eco-efficient AI	Ethics & Responsibility	Eco-efficient AI	
	Risk & Governance	Risk Management	Compliance & Governance	
Technology & Data Foundation	**Infrastructure & Data Management**	AI Infrastructure	Data Lifecycle	AI-ready data
	Model Management	Model Capabilities	Model Performance	AI Lifecycle
Intelligent Enterprise	**AI Process Adaptation**	Operations Management	Supply Chain Management	Product Lifecycle Management
	AI Augmentation & Collaboration			

AIMRI Deliverables

AIMRI Report: Part 1

AI maturity assessment with best practice benchmark

Maturity is evaluated per dimension and compared to best-practice benchmark.

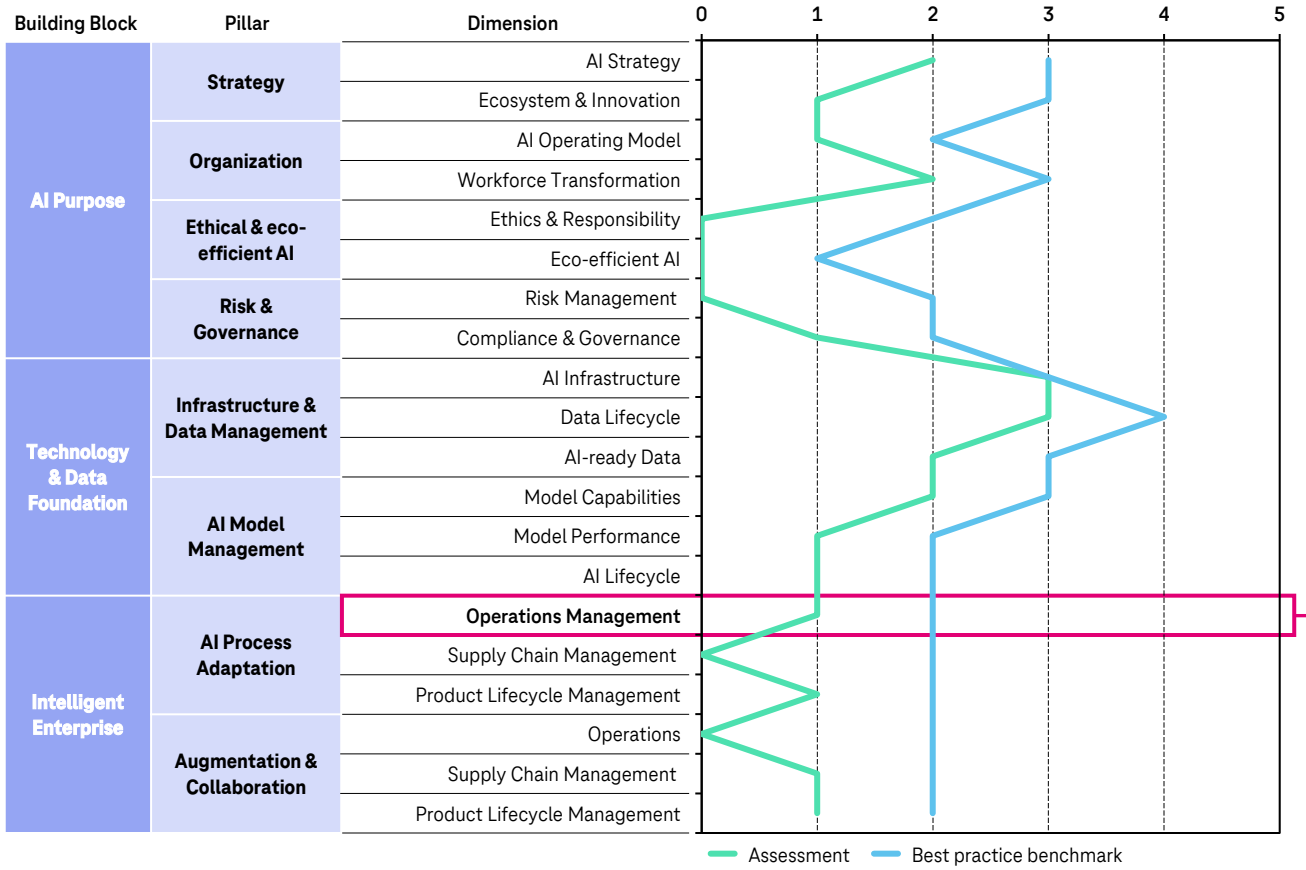
AIMRI Report: Part 2

Prioritized dimensions and initiatives

Identification of the most relevant dimension per building block plus the next most relevant dimension overall. Definition of suggested goals and initiatives per prioritized dimension including assessor notes.

AIMRI will deliver a detailed maturity report with best-practice comparisons and assessor notes

Output example: Overview across 20 dimensions



Exemplary and simplified output: Description of dimensions

Dimension:
Operations Mgmt. (AI Process Adaptation)

Level: 1
AI Observant

Current level description

Data provides transparency but remains siloed, with processes still reactive and operator-driven.

Assessor Notes

Current State

- *Dashboards track machine utilization rates, but no proactive actions are taken*
- *Digitally integrated systems collect quality data and link it to specific batches or parts to enable traceability*

Pain points

- *Operators notice underutilization of a machine but address it only during the next shift*
- *No analysis of historical quality data and tracing of deviations back to specific processes or equipment, to identify patterns and root causes*

Based on the goals, AIMRI will deliver prioritized dimensions with proposed initiatives to improve the factory's AI maturity

Output example: Prioritized dimensions

Workforce transformation
AI Purpose Building Block

AI-ready data
Data & Tech Foundation Building Block

Operations (AI process adaptation)
Intelligent Enterprise Building Block

AI infrastructure
Next relevant dimension

Exemplary and simplified output: Prioritization details

Suggested goal for the next 12 months
AI Maturity Level 1 (AI Observant) → AI Maturity Level 2 (AI-Enhanced Diagnostic)

Suggested initiatives to reach next level

- Predictive Quality: Use AI to forecast quality issues, identifying risks based on production parameters
- Diagnostic AI for OEE: Use AI to suggest actions to improve utilization, based on equipment data
- Lay the foundation for AI-enhanced process control to support operational optimization

Example initiative: Predictive quality

Roadmap

1. **Data Integration:** Collect and integrate process, machine and quality data (historical and real-time).
2. **Data Analysis:** Identify patterns and correlations between process, machine parameters and quality data
3. **Define and validate AI/ML Approach:** Select, train and validate AI model (e.g., supervised, unsupervised)
4. **Deploy AI Model into Pilot Phase:** Integrate model into Dashboards

Impact potential

- **Minimize rework and scrap** by 10–15%, enhancing overall production efficiency.
- **Improve production throughput** by 10–20% with AI-driven adjustments.

Kontaktieren Sie mich, wenn Sie mehr erfahren möchten

Christopher Günther
Senior Manager
Digital Manufacturing und Operational Excellence Experte
+41 79 727 75 47
christopher.guenther@detecon.com

Think. *Do*.
Transform.

Detecon