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2026

REPORT

# AI in *industrial* goods & services

# Table of contents



> Just as electricity once revolutionised the world, industry is shifting towards elements where AI powers products, factories, buildings, grids, and transportation. Industrial AI is no longer a feature; it's a force that will reshape the next century [...] we're scaling intelligence across the physical world, so businesses realise speed, quality, and efficiency all at once."

Roland Busch, President and CEO, Siemens AG

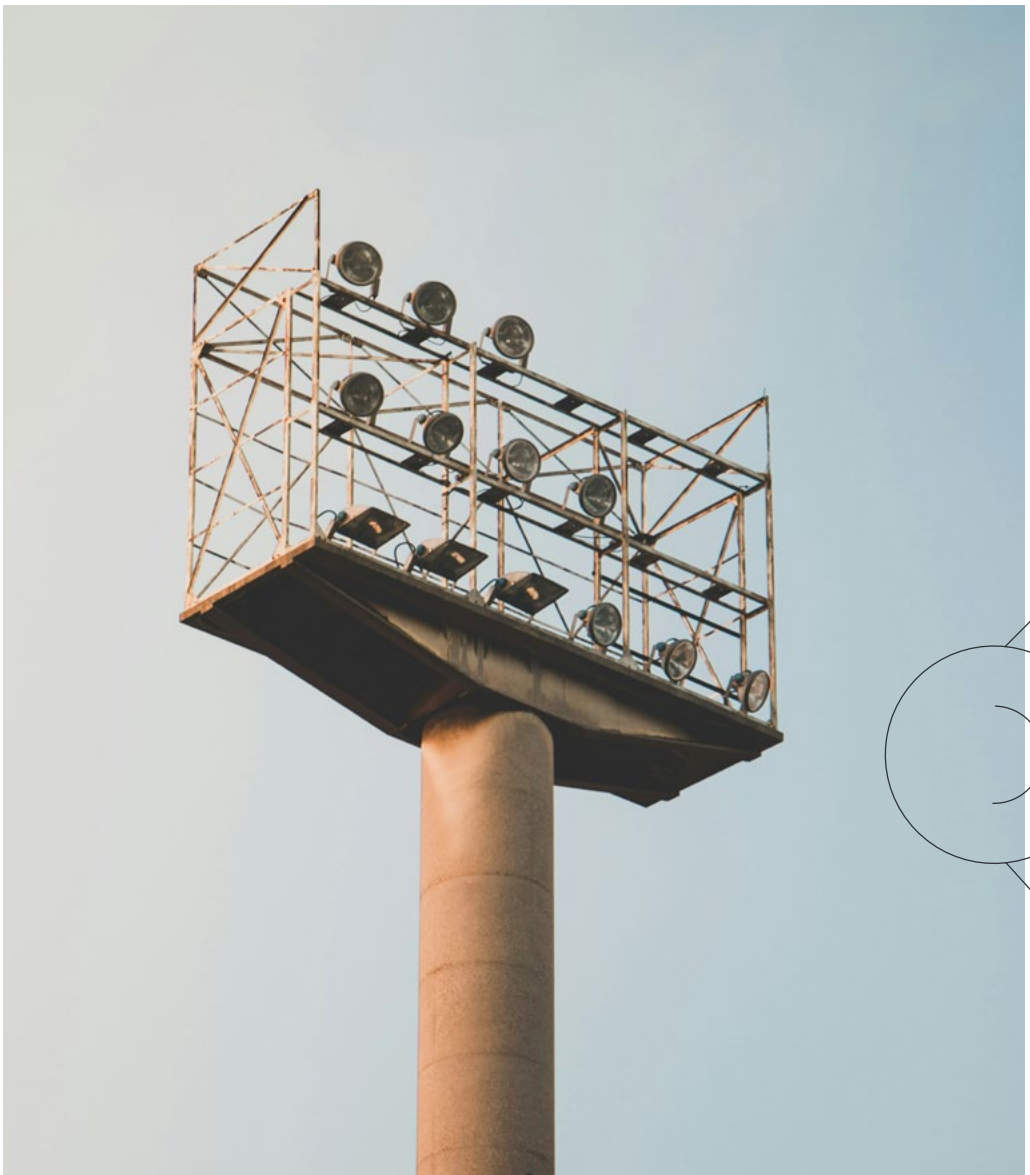
Source: Siemens at CES 2026: Industrial AI takes center stage (2026)

# The AI landscape: traditional, generative, and agentic AI

**Traditional artificial intelligence (AI)** refers to machine learning and statistical models that operate on structured data to automate, predict, and optimise decision-making processes. These systems are designed to identify patterns and improve outcomes in areas such as forecasting, risk management, and operational efficiency.

**Generative AI (GenAI)** extends these capabilities by using large language models (LLMs) and other generative architectures that are built to handle general inputs and outputs. GenAI can analyse and create content from unstructured data such as text, images, or audio, enabling more interactive and context-aware use of information. An assistant (sometimes used interchangeably with agent) is an LLM configured to perform a specific task through prompt engineering and data access.

**Agentic AI systems** equip LLMs with a level of autonomy and access to a predefined toolbox allowing models to perform complex tasks such as writing code, drafting slides, querying databases, and accessing systems.



# State of AI

In this write-up, we focus on machinery and equipment, a subset of the broader industrial goods sector. It is a diverse set of engineering-led businesses that build, install, and service physical products worldwide. The firms are typically large and globally orientated with strong local autonomy, a build-and-own engineering culture, conservative distribution structure, and little binding AI regulation.

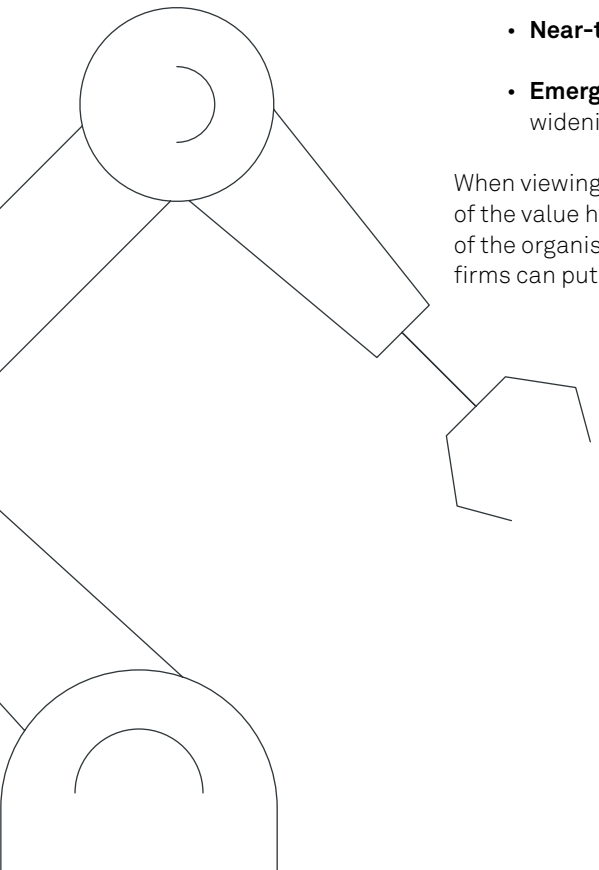
These companies are no strangers to automation. For decades, their factories have used equipment designed to perform specific physical tasks. However, these systems are primarily mechanical and deterministic, built to repeat a known physical task. AI is a different muscle: data-driven, probabilistic, and aimed at decisions rather than motions. Despite decades of excellence in automating physical production, the sector is only beginning the monumental shift towards treating data as an asset as critical as its production equipment. Making that shift will require sustained investment in data creation and governance.AI is becoming a real strategic focus, even if it stays less business-critical than in the most AI-native sectors, and the reason is structural. The more of a company's value sits in information a model can act on directly, the more central AI becomes. Here, value is created in the physical product, so AI works one layer away from what the customer pays for: it helps the people and processes around the machine. Data is also fragmented across sensors, drawings, service logs, and sites, while limited regulatory pressure creates little external urgency.

Adoption is slow compared with more information-intensive sectors. The reasons are organisational rather than technical. The traits that make these firms strong make them hard to change: physical products, production spread across global sites, and a wide span of offerings makes the organisation genuinely hard to navigate, while value buried in physical processes makes the business case hard to prove. Data is uneven, AI talent is scarce, and an experienced frontline is wary of tools that second-guess its judgement.

Despite fewer obviously high-impact use cases than in information-heavy sectors, the rising quality of AI keeps opening new ones. The gains cluster in two places:

- **Near-term:** administrative work that can be automated now
- **Emerging:** larger gains in operations, R&D and production; widening as the technology matures

When viewing the industry through the lens of AI, it is clear that the runway is long and most of the value here is still untapped. The technology is no longer the limiting factor; the readiness of the organisation is. And the question is no longer whether AI pays but how quickly these firms can put it to work.



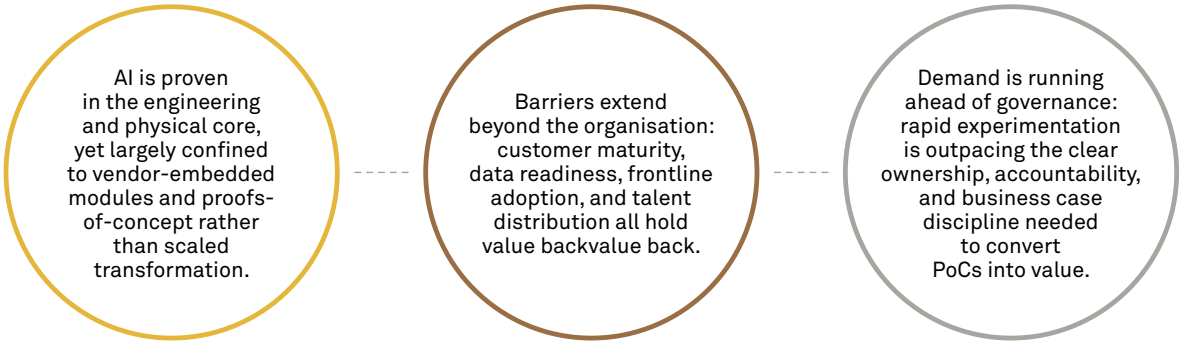
## AI delivers value in the engineering core, but scaling depends on organisational readiness and customer adoption

**Current state of AI in the industrial goods industry...**
Most larger manufacturers use AI where data is captured and tasks are well defined. Adoption is furthest along in the engineering and physical core: computer vision quality control, digital twins, and predictive maintenance. It is extending into service and commercial work through field-service copilots, spare-parts forecasting and configure, price, and quote processes built on harmonised ERP data. Meanwhile, demand is also starting to come from the outside: customers of these companies are themselves under pressure to optimise and increasingly ask their equipment and service providers how AI can improve their operations.

The newer frontier is R&D and administration, where models surface engineering knowledge and automate routine document and finance work. Customer demand is growing too: industrial buyers increasingly ask how AI can improve uptime, productivity, quality, and total cost of ownership. Yet their digital and data readiness varies, so the strongest propositions embed AI in familiar products, services, and workflows rather than presenting it as stand-alone technology.

**... but what is hindering widespread adoption?**
The hardest barriers are organisational, sharpened by the structure of these businesses. Physical products, globally distributed production, and diverse offerings make organisations difficult to navigate. Conventional business cases fit AI poorly: value is hard to isolate in physical processes, and decentralised costs dilute short-term P&L impact.

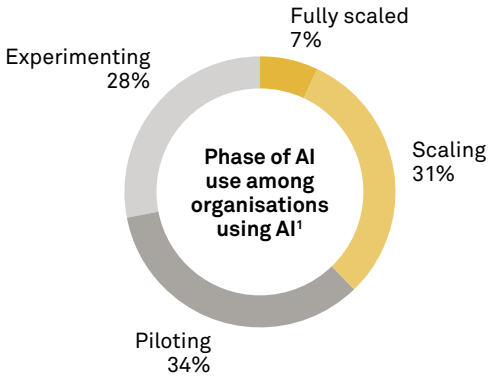
Foundations and people also lag behind the ambition. Legacy systems, uneven data readiness, scarce talent, and dispersed IT teams slow progress, while experienced frontlines can resist tools that second-guess their judgement. Customer interest does not automatically mean adoption: many buyers have limited capacity to change established ways of working. Suppliers must pair AI-enabled offerings with education, implementation support, and clear evidence of operational value.



84% of business leaders believe that AI will have a significant impact on their business[1]

78% of organisations report using AI in at least one business function[1]

*However, only 7% of the organisations using AI have fully scaled it, whereas the others are either piloting, scaling, or experimenting.*




**Sources:** 1) Implement Analysis (2026), Rand (2024), Stanford HAI AI Index Report (2025), MIT CISR Enterprise AI Maturity Model (2024)

## Future look of AI across the industrial goods and services value chain

**USE CASES**

| | Use case | Description | Industry adoption[1] Emerging | Low | Medium | High |
|---|---|---|---|---|---|---|
| 01. R&D / product development | AI-augmented product design | Using AI to generate and v alidate product designs within the engineering loop | ○ | ○ | ● | ○ |
| | Digital twin & data-driven engineering planning | Virtual models of products and factories used to simulate, plan, and optimise engineering decisions | ○ | ● | ○ | ○ |
| 02. Sourcing | Supplier risk & resilience monitoring | Continuous AI-driven surveillance of supplier health, responsiveness, and sub-tier risk | ○ | ○ | ● | ○ |
| | Should-cost & spend intelligence | AI analytics applied to procurement spend, cost modelling, and category management to identify savings | ○ | ● | ○ | ○ |
| 03. Production & assembly | Agentic S&OP / SIOP | Autonomous AI agents coordinating sales and operations planning across demand, supply, and capacity | ● | ○ | ○ | ○ |
| | Visual inspection and quality control | Computer vision systems detecting defects and quality deviations on the production line | ○ | ○ | ○ | ● |
| 04. Sales and pricing | Customer value-calculation with AI | AI agent that quantifies and communicates the actual value created for individual customers | ● | ○ | ○ | ○ |
| | Agentic technical key account management | AI agent supporting or orchestrating technical sales interactions and account management tasks | ● | ○ | ○ | ○ |
| 05. Distribution | AI for warehouse automation & forecasting | AI-driven demand forecasting and automated warehouse operations to improve fulfilment and reduce inventory | ○ | ○ | ● | ○ |
| | Logistics orchestration | Autonomous agents dynamically optimising transport routing, mode selection, and distribution network decisions | ● | ○ | ○ | ○ |
| 06. After sales service | Predictive maintenance | AI monitoring of equipment health to predict failures and schedule maintenance before breakdown | ○ | ○ | ● | ○ |
| | AI-embedded solutions and services | Embed AI to enhance the solutions and services with intelligence for clients post-sales | ○ | ● | ○ | ○ |

## Highlighted future AI use cases in industrial goods and services

The next wave of AI in industrial goods carries the dual promise of unlocking operational efficiency and enhancing resilience across increasingly complex value chains.

**USE CASES – Deep dives**

| | | |
|---|---|---|
| 01. Digital twin & data-driven engineering planning | Why: | Building and testing products or whole factories physically is slow and expensive. A digital twin is a live virtual model you can simulate, plan, and tweak before committing steel, so engineers can try many designs and catch problems early. State-of-the-art AI allows for much more realistic representation within simulation environments. |
| | Examples: | Rolls-Royce builds twins of its jet engines to test and plan maintenance. BMW and Mercedes-Benz run virtual factories before reconfiguring real lines. Siemens models hundreds of live production scenarios daily. Bosch, ZF, Samsung, and Foxconn use factory twins on NVIDIA Omniverse. |
| | Impact: | Faster time to market, fewer physical prototypes, and smoother factory reconfiguration. PwC reports digital twin adoption in manufacturing has grown sharply since 2020, and analysts increasingly treat the capability as table stakes rather than experimental. |
| 02. Supplier risk & resilience monitoring | Why: | Most manufacturers rely on a few critical suppliers and can't see below Tier 1, where most disruptions start. AI watches supplier health and risk signals continuously, so problems show up weeks early instead of when the line stops. |
| | Examples: | General Motors built its own AI risk tools after the chip shortage. Schneider Electric runs AI-enabled control towers. Bosch, Siemens, and BMW use AI to map sub-tier suppliers and flag bottlenecks. |
| | Impact: | Disruptions get caught earlier, hidden sub-tier risks become visible, and teams shift from firefighting to prevention. Supply continuity, tariffs, and compliance are key external factors to monitor. |
| 03. Agentic S&OP | Why: | S&OP means lining up demand, supply, and capacity, which is slow, manual, cross-team work. The idea is AI agents that watch for changes and replan continuously instead of monthly. It's the least mature of the four, so say so. |
| | Examples: | Real production use is rare; most is pilots. Unilever is building multi-agent procurement on Google Cloud. Coca-Cola Beverages Africa runs autonomous planning on Dynamics 365. AstraZeneca, Nestlé, and J&J are early users of OMP's agentic planning.* |
| | Impact: | Faster, more continuous planning and less manual data work. Automating parts of S&OP has the opportunity to drive efficiency across several functions and bring much faster decision-making. However, it's found that nearly two-thirds of firms have tried agents and fewer than one in ten have scaled them, with data being the main blocker. ** |
| 04. AI for spare-parts optimisation | Why: | Aftermarket is high-margin, but spare parts have lumpy demand across huge catalogues and many warehouses, which is too much for spreadsheets. AI forecasts patchy demand, positions stock across the network, and prices dynamically. Right part, right place, right time, right price. |
| | Examples: | Caterpillar uses AI for parts forecasting and serial-number-specific recommendations. Mitsubishi Electric Europe runs AI inventory optimisation on SAP. Volvo, Daimler Truck, VW, and MAN plan and price parts with Syncron. Boeing and Airbus price aftermarket parts with AI. |
| | Impact: | Fewer stockouts and less excess stock at the same time, higher availability, less cash in slow movers, and better margins from smarter pricing. Both the EU and US are active, with price transparency and e-commerce pushing towards dynamic pricing. |

Sources:
How AI is Revolutionizing GM's Supply Chain (2025), Trust by Design: How Schneider Electric Turned Data into Confidence in the Supply Chain (2025) Seizing the Agentic AI Advantage (2025), From Intelligence to Impact: How Agentic AI is Reshaping Today's Supply Chain (2026), Siemens, Microsoft and Rolls-Royce Collaborated to Demonstrate the Power of Digital Transformation with AI at Hannover Messe 2025 (2025), How Digital Twins Are Redefining Advanced Manufacturing (2025), Mitsubishi Electric Customer Story (2025), Innovative Solutions for Automotive After-sales Service (2026)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## Implement reference cases

These two cases illustrate how Implement Consulting Group has embedded AI into core business processes with clients, delivering tangible results and meaningful business impact.

**USE CASES – Implement Consulting Group cases**

### Transforming IT support with AI for a manufacturer

A manufacturer explored how AI could automate service desk processes. Implement led an innovation sprint to design a safeguarded AI chatbot to handle plain-text issues and convert them to IT tickets. Core design criteria were safety, unambiguous outputs, human-in-the-loop when required, and integration into core systems. Once the design was settled, Implement built an AI system receiving text-described IT issues from Microsoft Teams, analysing them and converting them into structured ServiceNow tickets.The sprint also clarified how the solution could scale into other domains without increasing headcount.

Impact

- More than DKK 2.2m in projected annual savings for one department
- Improves ticket quality in ~85% of cases and cuts manual clarification time by up to 50%
- Removes manual routing in 80% of cases, with a path toward AI-led ticket resolution

IT support | Generative AI

### Enabling end-to-end traceability across the supply chain with AI

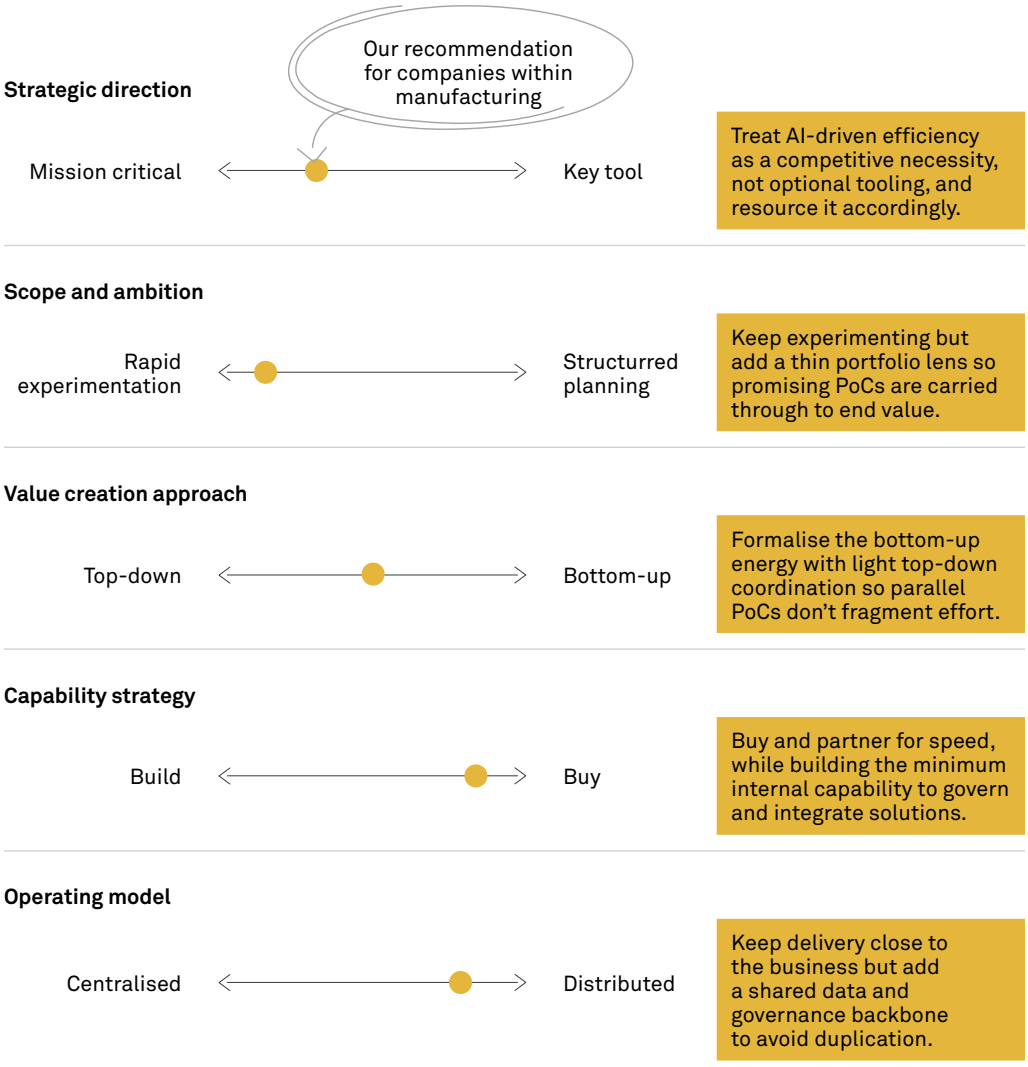
A global manufacturer of building products set out to establish full traceability across its supply chain, from raw material procurement to customer claims. Implement developed a traceability concept combining a shopfloor IIoT platform with enterprise data, unified through a purpose-built data pipeline. Generative AI was layered on top to structure this data and make it queryable in natural language, allowing operations and quality teams to answer critical questions – such as pinpointing the source of a quality defect or assessing production parameters – by drawing on data spanning the full value chain, from incoming raw materials to finished-product performance and customer feedback.

Impact

- Established end-to-end traceability across the entire supply chain, linking shopfloor and enterprise data into a single, structured source of truth
- Minimises time spent on root cause analysis and containment cases when quality issues arise
- Enables ongoing optimisation of production parameters based on structured, cross-value-chain insights

Supply chain | Generative AI

## In our experience, industrial goods and services companies must make explicit strategic choices to unlock the value of AI




Capturing value from AI initiatives requires a set of explicit strategic choices. There is no universally right answer, but leaving these choices unresolved can lead to unclear priorities and difficulty in scaling successful initiatives.

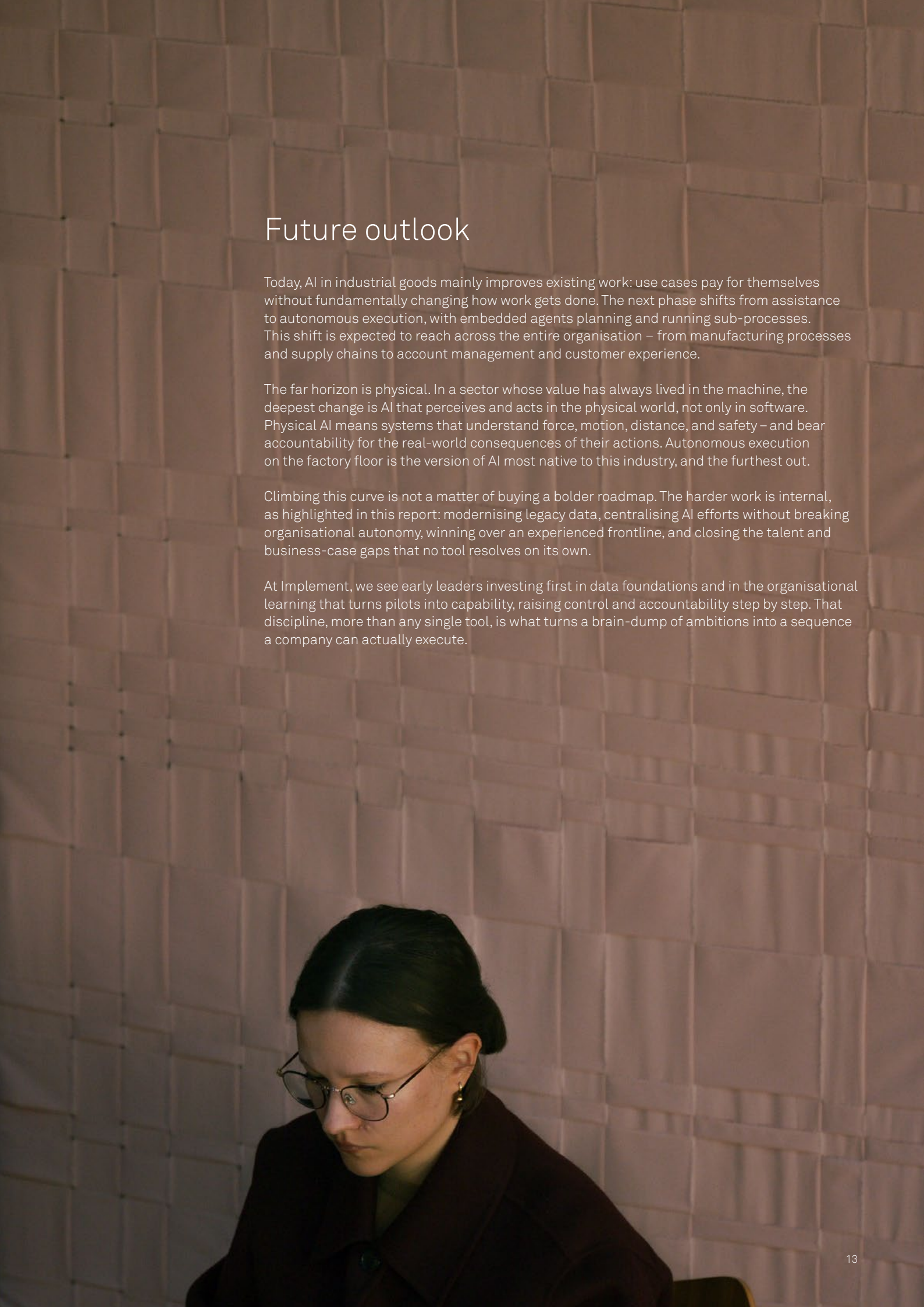
# Future outlook

Today, AI in industrial goods mainly improves existing work: use cases pay for themselves without fundamentally changing how work gets done. The next phase shifts from assistance to autonomous execution, with embedded agents planning and running sub-processes. This shift is expected to reach across the entire organisation – from manufacturing processes and supply chains to account management and customer experience.

The far horizon is physical. In a sector whose value has always lived in the machine, the deepest change is AI that perceives and acts in the physical world, not only in software. Physical AI means systems that understand force, motion, distance, and safety – and bear accountability for the real-world consequences of their actions. Autonomous execution on the factory floor is the version of AI most native to this industry, and the furthest out.

Climbing this curve is not a matter of buying a bolder roadmap. The harder work is internal, as highlighted in this report: modernising legacy data, centralising AI efforts without breaking organisational autonomy, winning over an experienced frontline, and closing the talent and business-case gaps that no tool resolves on its own.

At Implement, we see early leaders investing first in data foundations and in the organisational learning that turns pilots into capability, raising control and accountability step by step. That discipline, more than any single tool, is what turns a brain-dump of ambitions into a sequence a company can actually execute.



## We can support you throughout your AI journey

We believe in co-creation to deliver successful solutions, and we bring together a team of experts in machine learning, data engineering, security, and change management to help clients with:

## Our offerings:

**AI strategic advisory**

- AI strategy
- AI ambition setting
- AI roadmap development
- Organisational readiness assessment
- AI operating model

**AI use case discovery and piloting**

- Use case identification and prioritisation
- Feasibility assessment
- Proof-of-concept development
- Co-development of advanced pilot prototypes

**AI solution delivery**

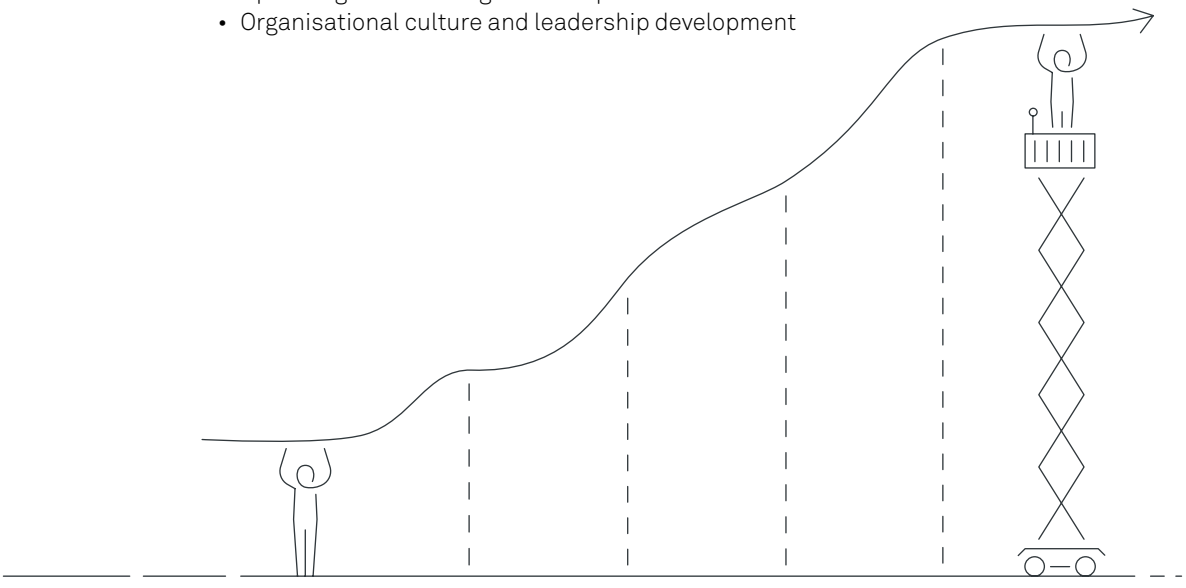
- Scaling proof-of-concepts
- Deployment of ready-to-use AI solutions
- AI delivery model management
- Integration with existing systems

**AI security and compliance advisory**

- Risk assessment and mitigation
- Data privacy and confidentiality
- Compliance with regulations and standards
- AI architecture

**AI learning journeys and adoption**

- Productivity increase through AI training
- AI change management planning and execution
- Operating model changes and implementation with AI
- Organisational culture and leadership development



# About Implement

## Local roots, global perspective.

Born in Denmark with offices in Copenhagen, Aarhus, Stockholm, Malmö, Gothenburg, Oslo, Zurich, Munich, Hamburg, Düsseldorf, and Raleigh, NC. With 1,800+ employees, multinational clients, and worldwide projects, we offer expertise with a global perspective.

We believe that great organisational impact leads to great impact for humanity. Implement was created to help turn true expertise into real change.

- Founded in 1996
- Employee-owned
- Average CAGR of 20%
- Working globally

## Ready to unlock AI's potential?

**Daring to dream. Ready to Implement.**

AI holds immense potential but demands gradual steps to fully realise it. We are at the early stage of innovation, much like when the lightbulb was first invented, with more breakthroughs yet to come. The challenge is to imagine what is possible and focus on achieving disruptive impact through concrete actions.

At Implement, we translate imagination into reality, collaborating to prototype and bring about change while addressing the natural concerns that come with new technologies. Join us in harnessing AI's transformative power to create tangible benefits.

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