



Deploying and monetizing AI in manufacturing starts with the network

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Manufacturers are accelerating into a new era. Large language models and agentic AI are transforming how plants operate, how teams collaborate and how quickly manufacturers can turn insight into revenue. To realize this potential, you need one critical element, the network infrastructure that connects it all. It is the invisible engine that turns data into momentum.

AI isn't new to the factory floor. Many firms have used machine learning for years to drive Industry 4.0. What has changed is the accessibility. LLMs and agentic AI allow your teams to interact with data using natural language, removing the friction between the shop floor, supply chains, and the boardroom.

Across operations, suppliers, and commercial models, AI is pushing manufacturers toward faster insight, faster action, and higher levels of automation. These aren't future scenarios. They're happening now, and the manufacturers moving fastest are seeing visible results.

What's less visible is what makes this possible. Every AI use case depends on data moving quickly and reliably, whether that be from sensors to systems, edge to cloud or from insight back to action. As AI becomes embedded in operations, the network becomes the invisible engine. And manufacturers who treat it as strategic infrastructure, not just a utility cost, will have a decisive advantage.¹

¹Verizon Business, [Networks, the invisible engines](#), 2025

How AI accelerates smart manufacturing

This shift in the acceleration of automation and the useful application of data has become more practical with AI. Christoffer Sundgren, Verizon's Senior Principal of Business Strategy Manufacturing, noted that the industry's new experiences with AI's large language models meant that people realized they could interact directly with their data using natural language and generate actionable insights without specialist support. That change alone removes friction. More teams can interrogate systems directly and act faster, without waiting on specialist reports or manual analysis.

- **Predictive maintenance:** AI can monitor equipment in real time to transform maintenance from reactive firefighting into planned operations.
- **Quality control:** Computer vision spots defects on production lines faster and more consistently than manual inspection. BMW Group uses over 200 AI solutions in production, including machine vision quality assurance that continuously monitors assembly lines.²
- **Digital twins:** Virtual replicas of physical assets enable manufacturers to test changes, optimize performance, and predict outcomes without disrupting production.³ **Airbus** uses advanced analytics, simulation and artificial intelligence meaning their digital twins empower from initial design to customer aftercare.⁴
- **Agentic workflows:** AI agents work together autonomously, one monitoring equipment, another checking parts availability, another drafting maintenance plan, eliminating manual handoffs.
- **Supply chain optimization:** AI forecasts demand, anticipates bottlenecks, and dynamically adjusts logistics. The logistics company **DB Schenker** uses AI for improved visibility and traceability across transport operations.⁵
- **ESG compliance:** AI can automate reporting for ESRS and Digital Product Passports by tracking resource usage in real-time, turning regulatory burden into operational advantage.



It's not always about cost saving. There is a business case around improving throughput, efficiency, and customer experience, which then drives revenue."

Colin Wilson
Solutions Architect, Verizon EMEA



²BMW Group, Retrieved from [This is how DIGITAL the BMW iFACTORY](#), May 2023

³Verizon Business, [Transforming factories into fully connected enterprises](#), 2025

⁴Airbus, [Digital Twins: Accelerating aerospace innovation from design to operations](#), April 2025

⁵DB Schenker, [AI-mpowering: Decoding the Cargo Code @DBSCHENKER](#), February 2024



Where AI delivers value

Most AI programs in manufacturing fall into one of two clear categories. The technology is often the same. The difference is intent.

Operational performance

- Reduced downtime and unplanned stoppages
- Fewer defects and higher yield
- Better throughput and line balance
- Stronger planning and flow across sites

Commercial growth

- New digital services built on operational data
- Data-driven product development, innovation, and insights for customers
- Paid support and performance-based models
- Software and platforms offered beyond the factory

The shift now is scale. Manufacturers that move beyond pilots can use the same AI foundations to improve operations and create repeatable commercial value.



Digital twins turn data into action

Digital twins are emerging as the core tool of AI-driven manufacturing. A digital twin creates a unified, real-time, data-informed model of an asset, a production line, or an entire factory, which enables teams to test changes, track performance, and identify issues before they escalate.⁶

The value of digital twins is growing as their use across manufacturing enterprises expands and is improved with AI data analysis. Operationally, they can improve plant efficiency and can help reduce carbon intensity. Strategically, they're becoming helpful for regulatory compliance. By tracking resource usage and energy supply in real-time, you can use the insights from the data to automate reporting for the European Sustainability Reporting Standards (ESRS) and generate data for Digital Product Passports—transforming compliance from cost center to competitive advantage.

Digital twins also vary in maturity. Many manufacturers start with single assets, then expand to production lines, and eventually build enterprise-wide views. As these systems mature, they enable closed-loop innovation: field data, service records, and performance metrics feed back into R&D, accelerating product improvements and informing future designs.

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Some machines have a digital twin running in the cloud, which requires constant data exchange and robust network infrastructure.”

Philip Horn

Head of Digital Transformation and Innovation
EML, Verizon EMEA

⁶Verizon Business, [Transforming factories into fully connected enterprises](#), 2024

The new frontier in AI for manufacturing

The next wave is agentic AI, where systems don't just answer questions but help run workflows across tools and teams. In practice, one agent can monitor equipment data, another can check parts availability, and another can draft a maintenance plan. The point isn't that plants run themselves tomorrow, but rather that teams spend less time stitching systems together by hand.

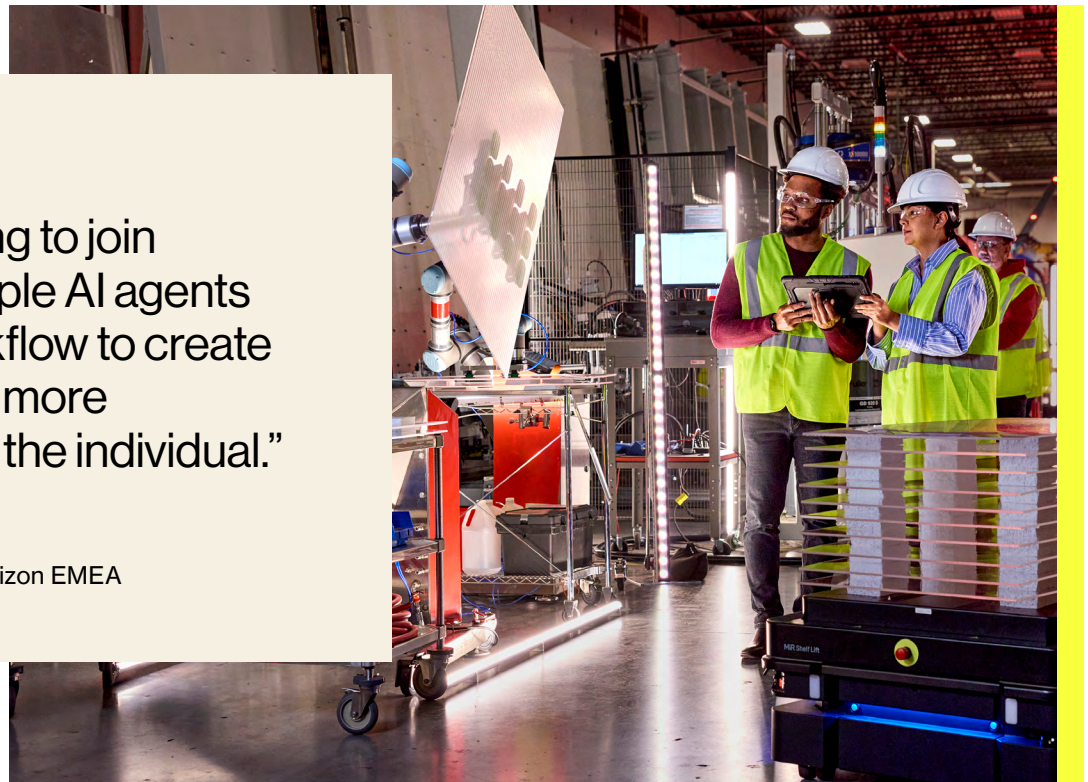
Early adopters are starting with narrow, low-risk workflows and expanding as confidence builds. The trajectory clearly seems to be forward, with manufacturing moving from assisted operations to increasingly autonomous ones.



They're starting to join together multiple AI agents to build a workflow to create something far more powerful than the individual."

Colin Wilson

Enterprise Architect, Verizon EMEA



Turning AI into new revenue

Alongside operational improvements, forward-thinking manufacturers are asking a more ambitious question, how does this create new revenue? Better understanding of your own data may suggest new offerings or product innovation. The pharmaceutical company GSK has improved testing with robotics and efficient production of pharmaceuticals, meaning more vaccines can get to more patients from the digitized and optimized factories.⁷

If a manufacturer has built strong knowledge in a specialized process, and that knowledge sits in data and models, it could become a sellable product in the form of paid support, software as a service (SaaS), or ways to help customers run equipment more reliably.⁸

⁷GSK, [Robots, AI, and machine learning: how smart manufacturing is getting medicines and vaccines from factories to patients faster](#), January 2024

⁸Verizon Business, [Beyond busywork: Driving new AI revenue and business models, empowered by connectivity](#), 2025

Some manufacturers are converting domain knowledge into software products. Others are exploring how production data can inform customer relationships, in after-sales programs, offering insights into product performance or maintenance needs that create stickier partnerships. The key shift is recognizing that the data layer built for operational AI can also drive top-line growth.

Consider the manufacturing value chain itself. What if the data flowing through connected systems could support new commercial offerings? Manufacturers can collect useful data at scale, protect it properly, and share specific insights that create paid value around performance, availability, quality, and supply chain visibility.

Unilever, for example, deployed AI-enabled freezers with image capture across its ice cream supply chain, boosting sales by up to 30% in key markets while cutting raw material waste by 10%.⁹ The result was better demand prediction, measurable revenue growth, and a blueprint for AI-driven supply chain transformation

The strategic shift is recognizing that the same data infrastructure—digital twins, connected sensors, analytics platforms—required and built for operational AI can simultaneously power new commercial offerings, delivering a seamless path to new revenue streams.



Data flows one way, and ‘intelligence’ or instructions flow back the other way, and it has to happen fast. If that loop is slow or unreliable, the use case starts to fail.”

Christoffer Sundgren

Senior Principal - Business Strategy Manufacturing, Verizon EMEA

Treat the invisible engine as part of the AI plan

AI creates new demand on network infrastructure. As more data is captured, analyzed, and acted on in near real time, the network becomes the invisible engine connecting sensors, systems, and decision-making across the enterprise.¹⁰ As AI becomes embedded in operations, network infrastructure transitions from back-office utility to strategic differentiator.

It's not just about speed. Consistency, security, and control become critical as AI scales from pilot projects at a single site to enterprise-wide operations.

Many manufacturers discover too late that their network—designed for yesterday's requirements—becomes the bottleneck preventing AI from delivering value. Even strong AI computing can underperform if the network infrastructure isn't purpose-built for AI workloads, low-latency and industrial data sovereignty. And when performance suffers, so does return on investment.¹¹

⁹Unilever, [How AI is transforming Unilever Ice Cream's end-to-end supply chain](#), January 2025

¹⁰Verizon Business, [Networks, the invisible engines](#), 2025

¹¹Verizon Business, [Beyond busywork: Driving new AI revenue and business models, empowered by connectivity](#), 2025



Facing scaling problems early

The AI pilot graveyard is full of promising projects that worked beautifully in testing but collapsed at scale. The culprits are predictable, but underestimated. Data volume is one reason—after all, using cameras to train AI models across sites requires vast amounts of data and fast provisioning.

Another reason is performance under load. Manufacturing has cycles. Peaks can put strain on systems in ways that don't show up during testing. Security and compliance are also bigger issues at scale. As factories become more connected, the risks grow. Cloud-linked twins particularly can create many points of vulnerability when multiple machines exchange data and settings. A senior IT leader quoted in joint research with S&P Global puts it bluntly: "Our network is hindering our ability to deploy more functionality because of latency issues and the size of the connections."¹²

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You can't run a 2026 digital twin on a 2016 network infrastructure.”

Christoffer Sundgren
Senior Principal - Business Strategy
Manufacturing, Verizon EMEA

¹²Verizon Business, *Beyond busywork: Driving new AI revenue and business models, empowered by connectivity*, 2025



Turning AI into growth

Manufacturing is at an inflection point. AI capabilities that were experimental two years ago are becoming operational requirements. Manufacturers who move decisively, building the right infrastructure, aligning cross-functional teams, and treating AI as a growth engine rather than just an efficiency tool, will define the next era of industrial competition.

Manufacturing is already on a journey to automation and efficiency with Industry 4.0, now AI can help accelerate this shift. The question isn't whether the industry should invest in AI to enhance smarter manufacturing, but rather how quickly and easily manufacturers can make it work across the full enterprise, and how directly they can link it to revenue.

AI in manufacturing: is your network ready for what's next?

Those manufacturers building AI on resilient, AI-ready connectivity will move faster, innovate more confidently, and scale automation across the enterprise. Without that foundation, even the most promising AI use cases risk stalling after the pilot stage.

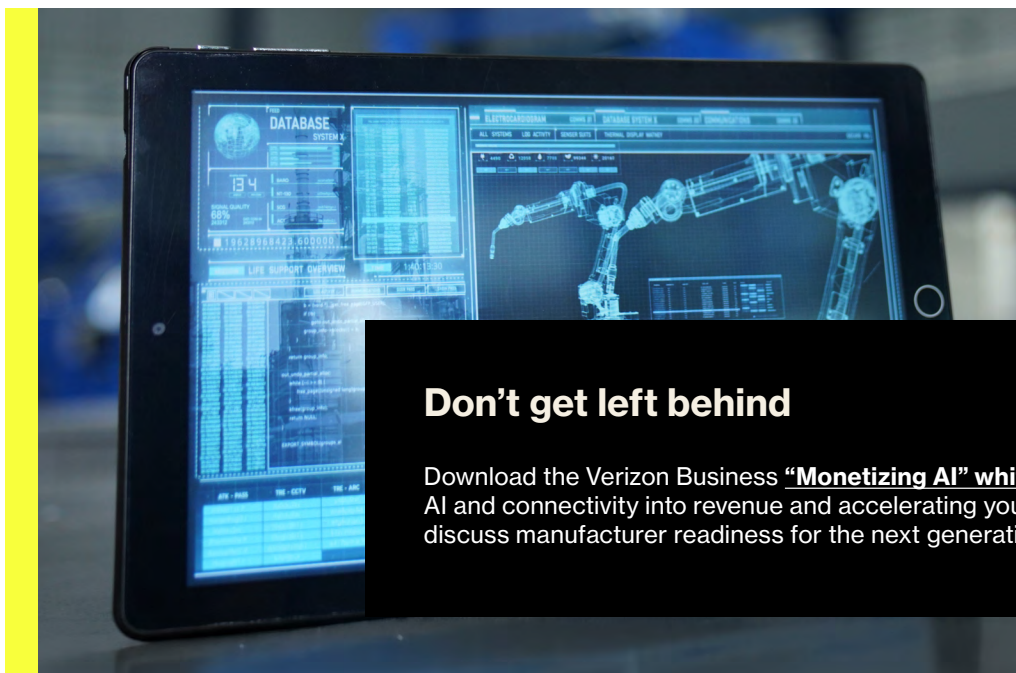
The invaluable and proprietary data that a company has trained their AI and machine learning on needs specific protections that is usually described as AI data security. The data may need to be separate from the usual public chat models and European regulators require data to be within EU data boundaries. This is where Verizon can help manufacturers to secure sensitive information, which enables them to manage their own sovereign AI.

If manufacturers want to ensure their infrastructure can support the next phase of AI-driven production, they need to ask some direct questions:

- **Data:** Can we unify IT and OT data so AI has real-time visibility across machines, plants, and supply chains? How do we ensure data sovereignty?

- **Volume:** Can our network handle continuous streams of telemetry from thousands of sensors without congestion?
- **Latency:** Is our infrastructure fast enough to enable real-time predictive maintenance and instant quality interventions?
- **Scale:** Can we expand AI workloads across multiple sites without degrading performance?
- **Security:** Are our intellectual property and control systems protected against threats that could halt production?

Can your organization confidently answer “yes” to all of them? If not, the next step isn’t another AI pilot, but strengthening the invisible engine that will carry the future of your operations.



Don't get left behind

Download the Verizon Business **“Monetizing AI”** [whitepaper](#) for insights on turning AI and connectivity into revenue and accelerating your growth. Or **contact Verizon** to discuss manufacturer readiness for the next generation of generative and agentic AI.

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