



Use case

When AI meets the factory floor

Learn how AI-driven solutions can turn production intelligence into new opportunities for revenue.

In manufacturing, technology can only earn its place when it improves output, efficiency or reliability. Artificial intelligence (AI) is starting to do exactly that, moving from experimental projects into day-to-day operations that can improve quality, uptime and throughput. But these advances don't happen by accident, as the right digital foundation is necessary to enable this kind of progress.

Since most networks were never designed to support real-time analytics, AI-driven decision-making or data-intensive workloads, bottlenecks can happen at the network level that slow insights and limit impact. To fully capitalize on AI, manufacturers must rethink how data moves from centralized systems to the factory floor and find ways to modernize infrastructure and extend intelligence closer to where work happens.

Challenge

Manufacturers are exploring how to expand AI across operations while balancing regulatory requirements, cost pressures and limited technical resources. One of the technical challenges they face is that most factories and machines were never designed to communicate with the cloud or interact with an AI agent. Upgrading these systems to enable that connectivity can be expensive and may require downtime that impacts productivity. As AI initiatives grow, existing production environments can struggle to support them when workloads demand rapid data exchange, local processing and consistent performance across multiple sites.

Traditional network architectures were often built for centralized systems and periodic data transfer, not for continual, high-volume data generated on the factory floor. When inspection, analytics and decision-making need to happen closer to equipment and products, delays in moving and processing data can slow experimentation, limit scalability and extend the time it takes to turn insights into action.



of surveyed executives said that network performance and reliability are critical for AI and machine learning initiatives.¹

Solution

To address these constraints, manufacturers can use Verizon AI Connect* to deploy and manage computer vision applications alongside Internet of Things (IoT) sensors directly within production lines. Instead of waiting for failures to disrupt operations, this solution can enable predictive maintenance by regularly monitoring equipment and products as they move through production. Near-real-time imagery and sensor readings can be compared to digital specifications to help identify early signs of wear, misalignment or performance changes. This can help you address issues before they escalate and reduce downtime.

By leveraging private 5G networks, Verizon can deliver ultralow latency that allows inspection data to be processed locally and near-real-time feedback to be provided without relying on centralized infrastructure. This responsiveness and consistency are essential for powering edge-based AI workloads.

Benefits

With Verizon AI Connect, AI-driven inspections can run closer to production, helping manufacturers realize improvements in quality consistency, earlier issue detection and reduced material waste. Faster feedback loops can also support more stable operations and fewer downstream disruptions.

Over time, these capabilities can open the door to new business models. By using existing production intelligence in new ways, your quality operations can evolve beyond internal cost control to become differentiated capabilities that support additional revenue.

Why Verizon

Verizon AI Connect brings together the capabilities needed to manage demanding AI workloads, all supported by the strength and scale of America's most reliable network.² With the help of network slicing, specific bandwidth can be reserved for mission-critical applications, delivering consistent speed and reliability. You can count on fast speeds for data and enhanced performance with the support of a modern infrastructure that empowers innovation and drives growth.



Expansive data center access with the power, space and cooling needed for advanced AI computing



Programmable networks for near-real-time control and rapid adaptation to changing AI demands



Security built in, helping safeguard data, privacy and compliance

Learn more

Talk to your Verizon Business representative today or visit [verizon.com/business/resources/scaling-ai/ai-for-business-development](https://www.verizon.com/business/resources/scaling-ai/ai-for-business-development) to explore how we can help you turn AI into new opportunities for growth.

*Verizon AI Connect is not available outside of the U.S., U.K. and France. However, the full capabilities of the solution (Wavelength, dark fiber, and other Verizon Business Group offerings that enable AI workloads) are supported where available.

1. "Architecting AI at scale," S&P Global Market Intelligence in partnership with Verizon Business, May 2025.

<https://www.verizon.com/business/resources/Tdb2/reports/verizon-delivering-ai-at-scale-networking-insights.pdf>

2. Based on RootMetrics® United States RootScore® Report: 2H 2025. Tested with best commercially available smartphones on three national mobile networks across all available network types. Your experiences may vary. RootMetrics rankings are not an endorsement of Verizon. All rights reserved.

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