NEWS RELEASE

Cisco Research: Industrial AI Moves into Physical Operations, Readiness Gaps Determine Scale

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News Summary

- Two-thirds of industrial organizations have moved to active AI deployments in live operational environments.
- Network readiness and security posture are cited as the primary factors shaping how quickly and safely organizations scale AI across connected assets, machines, and sites.
- Strong IT/OT collaboration correlates with greater confidence in scaling AI, more stable network infrastructure, and stronger emphasis on cybersecurity.

SAN JOSE, Calif., April 7, 2026 /PRNewswire/ -- Cisco (NASDAQ: CSCO) today announced the release of its latest annual industrial research report, the *State of Industrial AI Report,* examining how critical infrastructure like factories, utilities, and transportation systems are accelerating their direct deployments of AI. The report provides a data-driven view into how industrial organizations are adopting AI, the challenges they face as AI moves into live operations, and the opportunities created as AI becomes embedded in physical systems, infrastructure, and workflows.

The double-blind global study surveyed more than 1,000 operational technology (OT) decision-makers across 19 countries and 21 industrial sectors. The findings show that AI is now delivering measurable operational benefits in use cases such as process automation, automated quality inspection, predictive maintenance, logistics, and energy forecasting. However, many organizations are increasingly constrained by readiness gaps in networking infrastructure, cybersecurity, and IT/OT operating models as AI shifts into real-time, production-grade use in physical environments.

"Industrial AI is moving from experimentation into production, where AI systems sense, reason, and act in the real world," said Vikas Butaney, SVP/GM of Secure Routing and Industrial IoT at Cisco. "At this stage, success is no longer determined by models alone, but by whether networks, security, and teams are ready to support AI at the edge, in motion, and at scale. The research shows that organizations confident in scaling AI are those treating infrastructure, cybersecurity, and IT/OT collaboration as foundational, not optional."

Key Takeaways from the State of Industrial AI Report
The survey shows industrial AI has moved from a future consideration to active deployment, with 61% of organizations now using AI in live industrial operations where performance, reliability, and security have direct physical consequences, and 20% reporting scaled, mature deployments. Across manufacturing, transportation, and utilities, AI is powering machine vision, robotics, mobility, and safety-critical operations. Most organizations plan to increase AI spending (83%), and nearly nine in ten expect meaningful outcomes within the next two years (87%). Yet as adoption accelerates, many are struggling to sustain and expand deployments, with readiness across network infrastructure, security, and skills increasingly determining whether AI can scale consistently across core physical environments.

- **Infrastructure readiness is emerging as a primary determinant of scale.** As AI becomes embedded in machines, sensors, vision systems, and autonomous operations, organizations face rising demands for reliable connectivity, wireless mobility, predictable latency, edge compute, and power, making network readiness a gating factor for physical AI deployments.
  - **97%** expect AI workloads to impact their industrial network requirements
  - **51%** of organizations expect AI workloads to increase connectivity and reliability requirements in their industrial networks
  - **96%** say wireless networking is essential to enabling AI
- **Cybersecurity is shaping both the pace and confidence of AI adoption.** As AI expands connectivity and data flows across industrial environments, security remains the top barrier to scale. At the same time, organizations increasingly view AI as part of the solution, with a majority expecting AI to strengthen monitoring, detection, and operational resilience.
  - **98%** say cybersecurity is foundational for AI-ready infrastructure
  - **40%** cite cybersecurity as the biggest obstacle to scaling AI
  - **85%** expect AI to improve their cybersecurity posture
- **IT/OT collaboration is proving critical to operationalizing AI at scale.** Organizations with closer collaboration between IT and operational teams report greater confidence in expanding AI, more stable networks supporting physical operations, and a stronger emphasis on cybersecurity as a baseline requirement, underscoring the need to build the skills required for scalable AI adoption.
  - **57%** report some level of IT/OT collaboration
  - **43%** report limited or no collaboration
  - **47%** of organizations with limited IT/OT collaboration cite network instability as a top operational challenge to scale AI

Background:

- The *State of Industrial AI Report* is based on data from a global survey of more than 1,000 operational technology decision-makers, conducted by Cisco in association with Sapio Research.
- Survey respondents were from 19 countries and across 21 industry sectors, representing a range of industries including manufacturing, transportation/logistics, energy/utilities and more.
- The report aggregates findings from decision-makers at companies with annual revenues of more than $100 million.

Additional Resources:

- Download the *State of Industrial AI Report*
- Download the *State of Industrial AI Report for EMEA*
- Download the *State of Industrial AI Report for Manufacturing*
- Download the *State of Industrial AI Report for Transportation*
- Download the *State of Industrial AI Report for Utilities*

- Blog: Industrial AI: Progress, Pressure, and the Path to Scale
- Learn more about Cisco Industrial IoT

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Disclaimer: Many of the products and features mentioned are still in development and will be made available as they are finalized, subject to ongoing evolution in development and innovation. The timeline for their release is subject to change.

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