

Digital Systems & Services

Digital Engineering & AI Solutions

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Digital, AI

1. Autonomy Isn't Enough in High-Stakes Industries: Engineering Trust, Safety & Scalability into Agentic AI

Autonomous agents are sparking interest across industrial sectors, but intrigue alone isn't enough. In high-stakes environments like med-tech and critical infrastructure, systems must do more than act independently. They must earn trust through transparent, reliable, and explainable AI backed by human oversight.

GlobalLogic, a Hitachi Group Company, builds agentic systems designed to act with context, make decisions, and span digital and physical environments. These systems operate within a governed architecture that orchestrates agents across workflows, enforces compliance protocols, and connects to a shared enterprise knowledge fabric. This ensures agents act on verified knowledge, not guesswork, and escalate when uncertainty arises.

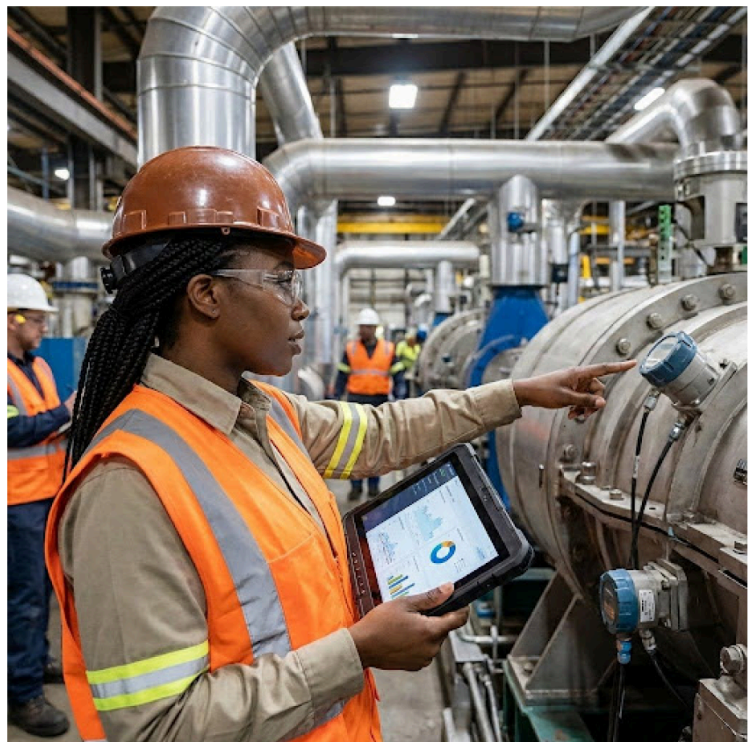
This approach is part of GlobalLogic's VelocityAI, an enterprise framework for safely accelerating AI adoption. As the physical world becomes more complex and machines become more intelligent, humans can no longer micromanage every system. VelocityAI

combines agentic architecture, human-aligned design, and enterprise governance to shift how work gets done: from manual control to strategic oversight. Agents handle the volume and speed; humans guide purpose and change. The company is not replacing people — it is elevating them, enabling machines to support the way humans naturally think, decide, and create.

This new operating model for industrial intelligence is grounded in accountability, engineered for safety, and aligned with Hitachi's Social Innovation mission.

(GlobalLogic)

Reference: [Agentic AI Architecture: How to Engineer Intelligent, Autonomous Enterprise Systems \(2025.11\)](#). [↗](#)



[1] Utilization of Agentic AI in Mission-Critical Industries

2. Data Infrastructure for AI-Era Data Centers

As AI workloads reshape infrastructure requirements, organizations face compounding complexity in managing data quality, sovereignty, and security. Research indicates 78% of organizations expect to operate more data centers within five years, yet only 2% anticipate complete visibility across them.^{*1, *2}

Hitachi Vantara addresses these challenges through its unified data platform. Virtual Storage Platform One (VSP One) and the VSP 360 management layer reduce

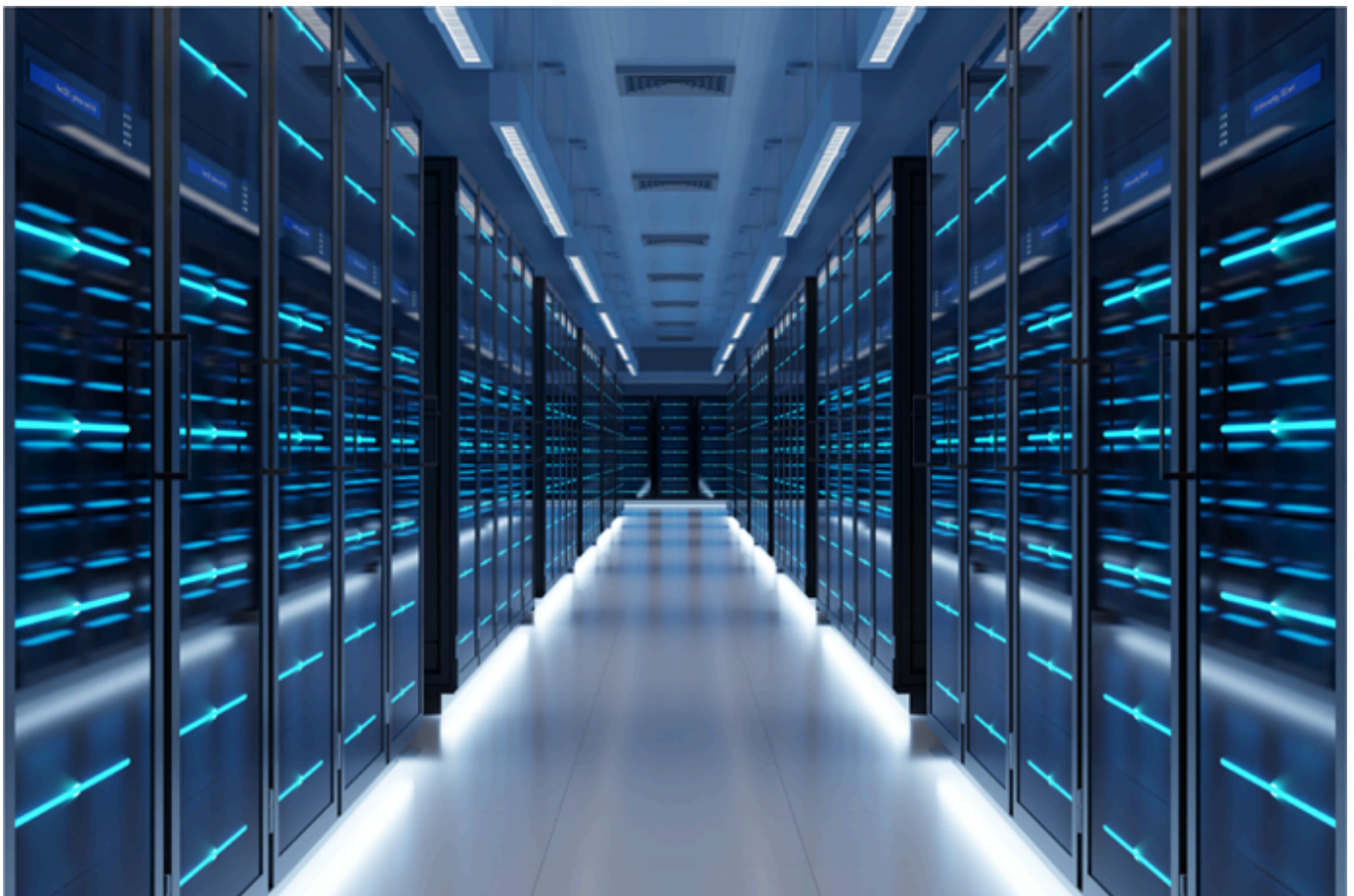
infrastructure complexity by eliminating data silos across hybrid cloud environments. Hitachi iQ accelerates the transition from data collection to data activation for AI workloads. These solutions support both infrastructure for AI — addressing compute density, data throughput, and thermal management — and AI for infrastructure, enabling predictive maintenance and energy optimization.

Hitachi Vantara's approach delivers measurable outcomes across simplicity, security, self-healing capabilities, and sustainability, the latter recognized through consecutive EcoVadis Gold certifications. This positions the platform as a foundation for data centers requiring continuous evolution rather than periodic overhaul.

(Hitachi Vantara)

*1. Enterprise Strategy Group (part of Omdia), Complete Survey Results: Private AI, Virtualization, and Cloud: Transforming the Future of Infrastructure Modernization (2025.7)

*2. Enterprise Strategy Group (part of Omdia), Complete Survey Results: Reinventing Data Loss Prevention: Adapting Data Security to the Generative AI Era (2025.5)



[2] Image of Infrastructure for Data Centers Provided by Hitachi Vantara

3. The Future of Agentic AI and the Role of HARC Agents

As enterprise systems become more distributed and autonomous, Agentic AI is emerging as a core engineering pattern. Agentic AI systems are composed of specialized agents that perceive context, reason over objectives, coordinate with peers, and act continuously within live environments. Unlike task-based automation, these agents operate as a persistent decision layer across applications, platforms, and infrastructure.

The next phase of Agentic AI will be defined by tighter multi-agent coordination, persistent state and memory, with goal-driven behavior. Agents will increasingly manage operational workflows end to end: detecting issues, deciding on interventions, and executing change with limited human involvement. This will reshape IT operations, supply chains, security, and service management. As autonomy increases, predictability, governance, and operational control become hard engineering requirements.

At Hitachi Digital Services, this challenge is addressed through HARC Agents, delivered by the Hitachi Application Reliability Center. HARC Agents apply established reliability engineering disciplines to agentic systems, treating autonomy as an operational concern rather than an experimental outcome.

The platform combines a governed HARC Agents library, a HARC Agents management system for identity, policy, and lifecycle control, and an operational AI layer providing continuous observability and optimization in production.

As Agentic AI becomes embedded in enterprise operating models, HARC Agents ensure these systems behave predictably, remain auditable, and deliver sustained business value at scale.

(Hitachi Digital Services)



[3] The Future of Agentic AI and the Role of HARC

4. Physical AI and the Industrial Operating Model of Industry 5.0

Industry 5.0 represents a structural shift in how intelligent enterprises are designed, driven by the convergence of enterprise IT, operational technology (OT), and domain-trained artificial intelligence.

This convergence is giving rise to Physical AI—systems that sense, reason, and act directly within physical environments such as energy grids, factories, transport networks, and critical infrastructure, enabling mission-critical operations at scale in a sustainable manner.

Unlike conventional automation, Physical AI functions as a real-time industrial decision layer. It enables predictive maintenance, autonomous optimization, and self-healing operations, while collapsing the gap between engineering and execution.

Enterprises move from task-driven service delivery to continuous system performance defined by reliability, safety, throughput, energy efficiency, and resilience, systematically

reducing latency, risk, and human bottlenecks.

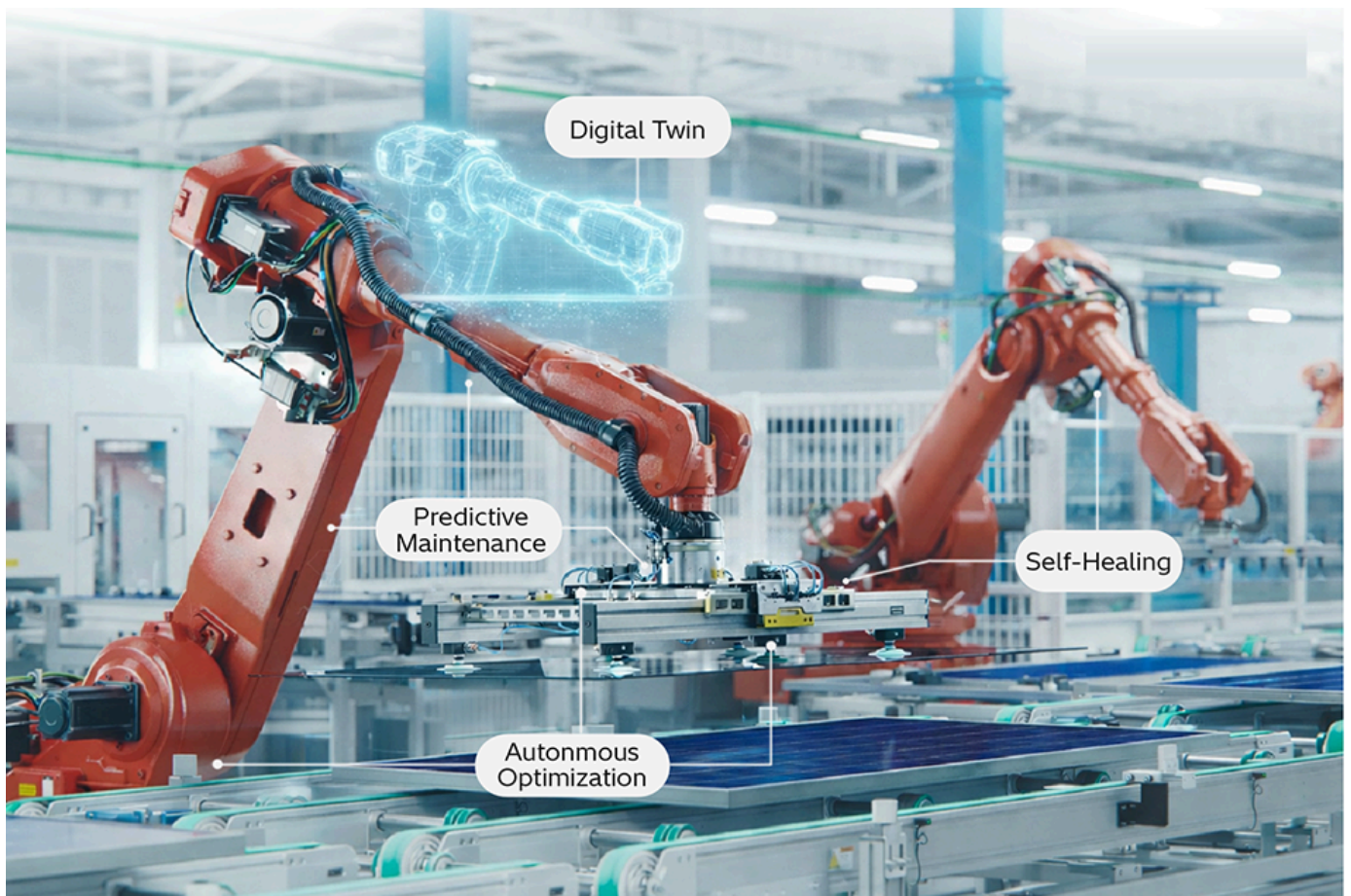
This transformation requires four foundations: unified and trustworthy industrial data, deeply integrated IT-OT architectures, enterprise-grade governance and observability, and domain-specific AI engineered for measurable outcomes.

Hitachi Digital Services operationalizes these foundations by integrating IT and OT at scale, engineering trusted industrial data platforms, and embedding domain expertise directly into AI systems.

Through digital twins, AI-enabled asset management, and autonomous operations frameworks, HDS deploys Physical AI into live industrial environments, enabling real-time insight, decisioning, and orchestration across mission-critical systems.

As a core pillar of Industry 5.0, Physical AI will define competitiveness across energy, mobility, manufacturing, and infrastructure by 2030.

(Hitachi Digital Services)



[4] The Industrial Operating Model Using Physical AI