News Release
For Immediate Release

HITACHI

Hitachi Launches Expanded HMAX Solutions Accelerating Social Innovation Globally Across Industries

A Suite of Solutions Leveraging Advanced AI with Company's Deep Domain Knowledge of Social Infrastructure

SANTA CLARA, Calif, January 6, 2026 – Hitachi, Ltd. (TSE:6501, "Hitachi") today introduced HMAX by Hitachi at CES 2026. HMAX by Hitachi is a suite of next-generation solutions that brings the power of AI to social infrastructure. By harnessing vast data from physical and digital assets, integrating advanced AI, and applying Hitachi's unmatched domain expertise, HMAX tackles the most complex social infrastructure challenges—maximizing outcomes and value for our clients and society. These solutions are derived from the formalized HMAX design principles, integrating a dynamic collection of advanced technologies, and a robust partner ecosystem that helps elevate end-system reliability and performance.

HMAX combines data collected from physical and digital assets such as sensors, industrial equipment, and machinery with Hitachi's domain knowledge accumulated through years of deploying operations and maintenance systems. Advanced AI technologies—i.e., perception AI, generative AI, agentic AI, and physical AI—are then applied to deliver new powerful solutions to organizations worldwide.

Hitachi's portfolio of HMAX solutions has expanded across three key categories that will truly benefit from the power of AI:

- **HMAX Mobility**: Powering smarter, better optimized transportation systems, autonomous operations, and IoT-enabled mobility.
- **HMAX Energy**: Helping ensure secure, reliable, and sustainable operation of mission-critical energy infrastructure across the entire value chain. Through a suite of digitally enabled services, HMAX Energy predicts and prevents issues before they arise—maximizing uptime, extending asset lifetime, and optimizing performance and efficiency.
- **HMAX Industry**: Advancing safety, productivity, quality, and environmental sustainability in buildings and factories, driving innovation for frontline workers and improving people's wellbeing.

Hitachi plans to extend HMAX into other mission-critical domains such as data centers and financial institutions.

Bringing the Power of AI into the Physical World
Labor shortages and aging equipment challenges are increasingly more severe in physical domains like manufacturing and social infrastructure. Physical AI addresses these problems by collecting, analyzing, and operationalizing field data in real-time. Whereas traditional AI focuses primarily on information and creative generation, physical AI creates value in the tangible world through applications such as predictive maintenance, complex systems optimization, robotics and more. As such, the physical AI market is expected to reach approximately 124.77 billion USD by 2030.*1

Hitachi's strengths in technology, data, and management of physical systems align perfectly with the world of physical AI. Drawing on over 110 years of OT experience and accumulated domain knowledge in mission-critical fields such as railways, energy, and manufacturing–Hitachi is uniquely positioned to bring the next generation of AI-powered solutions to the physical world.

"Hitachi is advancing its vision of 'Lumada 3.0,' which aims to lead social innovation to the next stage by integrating domain knowledge with AI," said Jun Abe, Executive Vice President of Hitachi, Ltd., General Manager of the Digital Systems & Services Division. "HMAX is the realization of this vision, and as a true 'One Hitachi' initiative that transcends sector boundaries, we will bring together the collective wisdom and technology of the entire group to create unprecedented synergies. By transforming field data into actionable intelligence through advanced AI, we will powerfully drive the resolution of complex social challenges and deliver tangible value that supports the next generation of social infrastructure."

Jun Taniguchi, Senior Vice President and Executive Officer, CEO of the Strategic SIB Business Unit at Hitachi, Ltd., added, "For many years, Hitachi has worked alongside customers in the field, overcoming numerous challenges together. Through HMAX, we aim to empower people and infrastructure, unlocking the latent potential of individuals and society. For example, HMAX delivers innovative solutions to our customers' most complex challenges, such as enhancing operations in railway and manufacturing sites facing shortages of skilled workers and ensuring stable operation of power grids essential for the introduction of renewable energy. With the expansion of HMAX, we are pleased to take a step forward together with our customers toward realizing a harmonized society where the environment, wellbeing, and economic growth are in balance."

*1 Grand View Research, Inc., Artificial Intelligence in Robotics Market (2024 – 2030), cited as the reference for the market size of AI-powered robots.

HMAX Design Principles
HMAX is built on four pillars that help customers apply AI to solve problems in physical environments:

- **Data from Digitalized Assets:** Assets such as power grids, railways, and manufacturing equipment generate vast amounts of data that feed into HMAX datasets—creating the ideal foundation for AI which enables HMAX's capabilities. This is a unique strength that only Hitachi, with its formidable global install-base, can deliver.
- **Domain Knowledge:** Hitachi's deep domain expertise in these physical systems is applied to the data—creating mission-appropriate AI-ready models.
- **Artificial Intelligence:** HMAX is designed to leverage a range of AI technologies, from data recognition to insight generation to autonomous execution. For example, perception AI detects and reports railway infrastructure faults by analyzing acoustic and vibration sensor data. Generative AI is used to accelerate energy optimization algorithms for power grids. Agentic AI is used to autonomously plan and execute optimal maintenance schedules. And finally, physical AI can control power grids or smart building systems reacting to inputs in real time.
- **Partner Ecosystem:** HMAX solutions are created using Hitachi's wide-ranging partner ecosystem—bringing state-of-the-art technology from industry leaders to create robust and dependable solutions that withstand the rigors of the physical world.

HMAX Use Cases and Deployments
The expansion of HMAX across multiple domains is already delivering tangible results.

HMAX Mobility	Currently deployed on 2,000+ trains, HMAX was first introduced by Hitachi Rail in 2024 as a comprehensive digital asset management solution seamlessly integrating a vast array of live data from the train, signaling and surrounding rail infrastructure into a single platform.[*2] HMAX leverages advanced AI and analytics using NVIDIA Metropolis Blueprint for video search and summarization (VSS) with Cosmos Reason vision language model to generate predictive insights and decision-support recommendations, such as identifying emerging asset degradation patterns, forecasting optimal maintenance windows, and highlighting opportunities to improve resource planning. These insights support operators and maintenance teams in making informed, timely decisions, which are then implemented through existing operational processes. The platform also leverages the upcoming NVIDIA IGX Thor industrial-grade edge computing to process vast volumes of data at the edge in real time, with only relevant information sent back to the operational control centers. AI and machine learning extracts knowledge from the data and applies it to achieve operational and service enhancements including energy consumption reduction and an on-condition/predictive maintenance process. The adoption of HMAX has delivered measurable value, including up to 15% reduction in maintenance costs and 15% lower energy consumption.

HMAX Energy	HMAX Energy combines advanced digital capabilities with extensive domain knowledge, service excellence and installed base intelligence to ensure reliable, efficient energy infrastructure. The collective use of automated inspection, real-time monitoring, predictive analytics and virtual support maximizes uptime and availability, optimizes operations, and extends asset lifetime. HMAX Energy is built on strong reference cases: When providing digitally-enabled services for the Italian renewable energy operator ERG, Hitachi Energy has helped reduce on-site inspection time by 35% and minimized unexpected downtime. For Baltic Cable AB, the transmission operator between Germany and Sweden, the introduction of a digital twin for high-voltage direct current (HVDC) systems has cut incident response time by 90%, contributing to improved operational efficiency and stable performance.
HMAX Industry	HMAX for Buildings enhances building operation, maintenance, and energy efficiency while also improving the wellbeing of residents, office workers, and visitors with NVIDIA Metropolis VSS Blueprint. Since 2025, Hitachi has provided digital services—including access control and HVAC management—as a service, supporting building safety, security, and comfort. These outcomes generate optimal building environments while sustainably improving a building's value.*3 Under HMAX for Factories, Hitachi and Daikin Industries, Ltd. began trial operations in April 2025 to implement an AI agent that supports equipment failure diagnostics in factories.*4 This AI agent is confirmed to identify causes and countermeasures within 10 seconds with over 90% accuracy. Starting December, Hitachi and Mitsubishi Chemical Corporation also began joint verification of troubleshooting assistance using the same AI agent. Furthermore, in December, Hitachi also launched AI agent services for industrial equipment operations and maintenance in a conversational format that streamlines production sites with instant, precise information tailored to equipment status.*5 Hitachi also provides comprehensive solutions across the entire value chain for battery and biopharmaceutical industries.

*2 Hitachi Rail Unveils the 'HMAX'. AI Solution, Accelerated by NVIDIA, to Optimize Trains, Signaling and Infrastructure: September 24, 2024
*3 Launch of Hitachi's Digital Service, HMAX for Building: BuilMirai, as an as-a-Service Type that Transforms the Value of Buildings Beginning with a Harmonized Society: September 29, 2025
*4 Through Collaborative Creation, Daikin and Hitachi Begin Trial Operation of AI Agent Supporting Equipment Failure Diagnostics in Factories: April 22, 2025
*5 Hitachi Industrial Equipment Systems Launching AI Agent Service, Part of HMAX Industry, to Help Industrial Workers with Machine Maintenance: December 22, 2025

CES 2026 Exhibition

Hitachi will exhibit at CES 2026, January 6 to 9, at the Las Vegas Convention Center.*6 HMAX, the centerpiece of Hitachi's CES experience, will be showcased with live demonstrations at Booth 8529 in the North Hall. Hitachi will also detail its HMAX vision during the CES Foundry session *Pioneering AI Technologies for the Physical World* on Thursday, January 8 at 11 a.m. PT at The Fontainebleau (Discovery Stage).

*6 Hitachi at CES 2026: Building a Harmonized Society Through Technology: December 4, 2025

To learn more about HMAX by Hitachi, visit www.hitachi.com/en-us/insights/hmax/.

About Hitachi, Ltd.
Through its Social Innovation Business (SIB) that brings together IT, OT (Operational Technology) and products, Hitachi contributes to a harmonized society where the environment, wellbeing, and economic growth are in balance. Hitachi operates globally in four sectors – Digital Systems & Services, Energy, Mobility, and Connective Industries – and the Strategic SIB Business Unit for new growth businesses. With Lumada at its core, Hitachi generates value from integrating data, technology and domain knowledge to solve customer and social challenges. Revenues for FY2024 (ended March 31, 2025) totaled 9,783.3 billion yen, with 618 consolidated subsidiaries and approximately 280,000 employees worldwide. Visit us at www.hitachi.com.

Information contained in this news release is current as of the date of the press announcement, but may be subject to change without prior notice.
