News Release

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Hitachi launches Lumada Inspection Insights and strengthens digital and green portfolio

Committed to driving customer value and growth by combining world-class IT and OT expertise from Hitachi Energy and Hitachi Vantara within expanded Lumada portfolio

Combining the power of the camera with data and AI

Dallas, May 23, 2022 – Hitachi, Ltd. (TSE:6501) today announced the launch of Lumada Inspection Insights, its end-to-end portfolio of digital solutions for the inspection, monitoring, and optimization of critical assets. Pioneered by Hitachi Energy and Hitachi Vantara, Lumada Inspection Insights enables customers to automate asset inspection, support sustainability goals, improve physical security, and reduce risks and impacts related to storms or fires by using powerful artificial intelligence (AI) to analyze photographs and video, including LiDAR, thermal and satellite imagery.

The launch of the new portfolio is fully aligned with Hitachi's Mid-term Management Plan 2024 announced last month by Keiji Kojima, President & CEO, Hitachi, Ltd. In the Plan, Hitachi has set out its growth strategy and commitment to strengthening its digital and green portfolio, which is centered on the Lumada ecosystem. Central to Hitachi's commitment to social innovation, the Lumada ecosystem is accelerating the journey towards sustainable society through the data-driven cycle of value co-creation with customers. The company is also focused on growing its IT/OT/Products business through constant portfolio transformation.

The new Lumada Inspection Insights portfolio addresses various root causes of failures and forced shutdowns by deploying AI and machine learning (ML) to analyze a wide spectrum of image types, assets and risks. Predictive analytics assesses the risks to operations or environment, and organizations can streamline remediation before outages occur. Available as a comprehensive solution or standalone, the portfolio's four core applications are Hitachi Image Based Inspections, Hitachi Intelligent Infrastructure Monitoring, Hitachi Vegetation Manager, and Hitachi Map. These represent the company's latest advancements in its growing Data Operations (DataOps) and Industrial IoT offerings. More information on each solution is below.

Massimo Danieli, Managing Director of Hitachi Energy's Grid Automation business, said, "The energy transition is one of the most urgent issues of our times and together with customers, we are co-creating pioneering digital solutions to enable the carbon-neutral future." He added, "In collaboration with Hitachi Vantara, we are delighted to launch the Lumada Inspection Insights portfolio, which gives industrial organizations the tools they need to get the right information to the right teams when they need it most. The result is improved reliability, safety, and sustainability."

Frank Antonysamy, Chief Digital Solutions Officer, Hitachi Vantara, said, "Becoming data driven

is essential to accelerating digitalization and sustainability. This collaboration across Hitachi creates better outcomes for businesses, broader society and our environment by harnessing data and AI to solve multiple operational and business challenges. Together, we can improve industrial asset reliability, prevent wildfires and accelerate global sustainability efforts."

Lumada Inspection Insights features comprehensive, microservices-based capabilities that allow visibility of assets and factors such as current state, asset health, and encroachment, in a "single pane of glass" actionable view, from a variety of sources. With these unified insights, organizations can improve safety, reliability, and agility. The use of high-resolution, autonomous, and accurate wide-area surveillance ensures that truck rolls and workforce deployments are optimized, reducing waste and furthering a sustainable approach to operations and maintenance.

Utilities around the world are dealing with unprecedented climate-related challenges. In 2021, global wildfires generated an estimated total of 6,450 megatons of CO_2 equivalent – approximately 148 percent more than the EU's total fossil fuel emissions in 2020.[1] These wildfires and other extreme weather events also take a significant toll on transmission lines and other utility assets, threatening worker safety and grid reliability.
*1 Source: https://atmosphere.copernicus.eu/wildfires-wreaked-havoc-2021-cams-tracked-their-impact

"Inspection, planning and monitoring are among the most critical tasks utilities undertake to maintain grid reliability and resiliency," said John Villali, Research Director, IDC Energy Insights. He added, "Lumada Inspection Insights combines a variety of visual asset data types with advanced analytics and AI. This empowers utilities to improve decision making, optimize operations and as a result, achieve their reliability, safety, and sustainability goals."

Hitachi is exhibiting Lumada Inspection Insights at DISTRIBUTECH INTERNATIONAL 2022, which is held from May 23 at Dallas, Texas, United States.

Editor's Notes

About the four main solutions comprising Lumada Inspection Insights

1. Hitachi Image Based Inspections (HIBI):

Conventional asset inspection methods, such as climbing tall towers or hanging from helicopters, put technicians at risk. Hitachi Image Based Inspections replaces these dangerous, expensive, and time-consuming approaches by leveraging the industry's most sophisticated AI and machine learning (ML) capabilities in one fully automated and integrated platform. This solution provides scalable image inferencing and processing to help asset managers classify assets, detect defects and categorize defect severity. It automates defect assessment, instantly preprocessing and analyzing thousands of images. The solution's highly optimized human-in-the-loop capabilities enable continuous retraining of model-based subject matter expert input for a wide range of asset classes and image quality.

2. Hitachi Intelligent Infrastructure Monitoring:

Utilities and other asset intensive organizations are challenged with the need to ensure that their service territories are safe and the service they provide is reliable. To meet this goal, utilities need to have insights to prevent safety incidents, or respond effectively when they happen. Hitachi Intelligent Infrastructure Monitoring leverages video, a powerful data type that is generally utilized to a fraction of its potential. With it, organizations can gather new data though smart cameras, 3D LiDAR sensors and edge gateways, and integrate with CRM, ERP,

and other sources of data as required. Operators can gain granular, continuous 3D intelligence for sensitive areas (such as substations), find correlations, causations and real-time incidents.

3. Hitachi Vegetation Manager:

Hitachi Vegetation Manager is the first of its kind, closed-loop vegetation resource planning solution that leverages artificial intelligence and advanced analytics to improve the accuracy and effectiveness of an organization's vegetation job activities and planning efforts.
The solution utilizes images from a variety of visual sources, including photo, video, and imagery from industry-leading Maxar satellites. The incorporation of satellite technology allows utilities to cover and survey their entire territory to automatically confirm line clearances and maintain compliance with regulations. Satellite technology also provides organizations with more comprehensive insights at scale, allowing them to reduce cost and emissions by minimizing truck and helicopter trips. By combining the images with climate, ecosystem and cut plan data and machine learning algorithms, Hitachi Vegetation Manager enables instant grid-wide visibility and better insights so that organizations can optimize decision-making.

4. Hitachi Map:

Hitachi Map is designed to be the primary interaction point for users, from field technicians looking for work orders in a specific area to a control center team managing a city-wide outage. It's a "single pane of glass" from which users can access essential information, make informed decisions, and take immediate action. Hitachi Map combines information from numerous applications such as EAM, APM, FSM, ADMS, GIS, and more into a single, interactive and easy-to-use geospatial view. Users have intuitive access to key information at their fingertips without having to navigate multiple systems, interpret contextual variations. This approach eliminates extra and duplicative work and reduces carbon emissions from unnecessary travel to and from a site.

Links

Hitachi Image Based Inspections
https://www.hitachivantara.com/hibi/

Hitachi Intelligent Infrastructure Monitoring
http://www.hitachivantara.com/HIIM

Hitachi Vegetation Manager
https://www.hitachienergy.com/offering/solutions/asset-and-work-management/lumada-fsm/vegetation-manager

Hitachi Map
https://www.hitachienergy.com/offering/solutions/inspection-insights/map

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About Hitachi, Ltd.
Hitachi drives Social Innovation Business, creating a sustainable society with data and technology. We will solve customers' and society's challenges with Lumada solutions leveraging IT, OT (Operational Technology) and products, under the business structure of Digital Systems & Services, Green Energy & Mobility, Connective Industries and Automotive Systems. Driven by green, digital, and innovation, we aim for growth through collaboration with our customers. The company's consolidated revenues for fiscal year 2021 (ended March 31, 2022) totaled 10,264.6 billion yen ($84,136 million USD), with 853 consolidated subsidiaries

and approximately 370,000 employees worldwide. For more information on Hitachi, please visit the company's website at https://www.hitachi.com.

About Hitachi Energy Ltd.
Hitachi Energy is a global technology leader that is advancing a sustainable energy future for all. We serve customers in the utility, industry and infrastructure sectors with innovative solutions and services across the value chain. Together with customers and partners, we pioneer technologies and enable the digital transformation required to accelerate the energy transition towards a carbon-neutral future. We are advancing the world's energy system to become more sustainable, flexible and secure whilst balancing social, environmental and economic value. Hitachi Energy has a proven track record and unparalleled installed base in more than 140 countries. Headquartered in Switzerland, we employ around 38,000 people in 90 countries and generate business volumes of approximately $10 billion USD.
https://www.hitachienergy.com
https://www.linkedin.com/company/hitachienergy
https://twitter.com/HitachiEnergy

About Hitachi Vantara
Hitachi Vantara, a wholly-owned subsidiary of Hitachi, Ltd., guides our customers from what's now to what's next by solving their digital challenges. Working alongside each customer, we apply our unmatched industrial and digital capabilities to their data and applications to benefit both business and society. More than 80% of the Fortune 100 trust Hitachi Vantara to help them develop new revenue streams, unlock competitive advantages, lower costs, enhance customer experiences, and deliver social and environmental value. Visit us at www.hitachivantara.com.