

Drive Operational Innovation

Hitachi Vantara's IoT leadership comes from decades of IT and OT experience.

he embodiment of Hitachi's evolution as a technology company travels at 50 miles per hour across Denmark's capital. It transports thousands of people per hour, getting them where they need to be, on time, for nearly 100 percent of all rides.

This is the Copenhagen Metro, the driverless train system developed by Hitachi's locomotive and transport systems divisions. It is now using Hitachi Vantara's cutting-edge solutions for digital innovation, Lumada, to shorten waiting times even more.

Using Internet of Things (IoT) sensors connected through Lumada, the rapid transit system can now detect the number of passengers waiting at any time and automatically adjust train schedules, depending on demand.

"This technology not only adjusts the train control to reflect demand, but also contributes to energy conservation by offering the most efficient train operation," Toshiaki Higashihara, President & CEO, Hitachi, Ltd., told thousands of attendees at Hitachi Vantara's NEXT 2018 conference. "This is a perfect example of how Hitachi combined IoT and digital technologies such as data gathering and analysis to take on the challenge of improving social infrastructures."

This ability to combine Hitachi's 100 years of operational technology expertise with 60 years of experience in IT is what separates Hitachi Vantara apart from nearly every one of its competitors that works in IoT, according to Brian Householder, CEO of Hitachi Vantara.

"There's no other company on the planet with the IT and OT [informational and operational technology] capabilities that we have," he said at NEXT 2018. "What you usually see when people talk about IoT, if you look at the company that's talking about it, they usually have only half of the equation."

Industry analysts are taking notice. In May 2018, Gartner named Hitachi Vantara a "Visionary" for its industrial IoT prowess with Lumada. Gartner noted the platform for its robust edge capabilities that are purpose-built for a wide range of sectors, including manufacturing, transportation and energy.

With the ability to run on-premises, in the cloud and in hybrid environments, Lumada's composable platform combines artificial intelligence, analytics and digital twin capabilities. It helps companies improve operational efficiencies, cut costs and create new business models.

"We see it as a natural extension of what we're doing with data," said John Magee, Hitachi Vantara's vice president of portfolio marketing. This means IoT is not separate but complementary to all the other kinds of data collected and analyzed by enterprises.

Predictive Maintenance Reduces Delays

This ethos is represented by Lumada Maintenance Insights, one of Hitachi Vantara's newest products in its suite of industrial IoT applications. The software uses machine learning and data analytics to make smart maintenance recommendations for missioncritical equipment.

When the Lumada application notes, for instance, a spike in vibrations in a centrifugal pump, the software predicts that the anomaly could lead to a loss in pressure in the following days, ultimately resulting in system failure. To prevent this from happening, the application provides a few recommendations, organized by how likely it is that the solution will fix the problem.

Once a repair recommendation is selected, the application indicates whether all the required parts are available and provides schedule recommendations based on cost, speed and overall equipment effectiveness. All these recommendations are based on an analysis of IT and OT sources, including machine sensors and systems for workforce management and enterprise resource management.

"The whole OT world is ripe for more standardization and automation of these processes," Magee said.

Collaboration for IoT Insights

To get partners involved, Hitachi Vantara has created a new competency for big data insights and IoT as part of its new partner program, according to Kimberly King, Hitachi Vantara's vice president of global partner strategy and programs. This new competency puts a focus on enabling partners to help customers analyze and visualize their data and drive better outcomes

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JOHN MAGEE, VICE PRESIDENT OF PORTFOLIO MARKETING, HITACHI VANTARA

using artificial intelligence, advanced analytics and asset virtualization solutions.

"Today, we've made it easier for our partners to successfully bring data analytics and IoT solutions to market with us," King said.

One way that Hitachi Vantara has started transitioning partners to IoT is by letting them shadow the company on its own deployments. Coda Technologies, a Salt Lake City-based solution provider, has been shadowing Hitachi Vantara while the partner starts to identify its own opportunities.

"We're working with a mining company in Utah with a substantial fleet of earthmovers and trucks. They are using an IoT solution that ships with Caterpillar equipment automatically," said Scottie Kearns, co-owner of Coda. "We're in the early stages, but we're adding more sensors to the equipment. Hitachi says it has case studies that will give us ideas about how to do it."

This kind of collaboration isn't limited to partners, however. It happens within Hitachi itself, and it all goes back to the company's long history of working in OT and IT.

James Destro, vice president of product management at Hitachi Vantara, said he collaborates with Hitachi's divisions daily to understand their needs so that his team can build validated, market-ready IoT solutions. That collaboration involves sending employees to Japan to learn, for example, how Hitachi control systems work to build applications like Lumada Maintenance Insights.

If that level of collaboration didn't exist, Destro said his job would be a lot more difficult. This teamwork underlines the unique opportunity Hitachi Vantara and its partners have.

"We believe that integration and the cross-pollination of the DNA is very important for us to make sure we're truly leveraging OT and IT," he said. "It's one thing to say it and be owned by a parent company that has OT expertise. It's another thing to be truly integrated."