

News Release

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Hitachi Vantara and Rainforest Connection expand partnership to protect rainforests through data and AI

Partnership to be featured at COP26, highlighting how data-driven solutions and predictive analytics are fundamental to addressing climate change and stopping illegal logging in Sumatra

GLASGOW, U.K. – November 9, 2021 – Hitachi Vantara, the digital infrastructure, data management and analytics, and digital solutions subsidiary of Hitachi Ltd. (TSE: 6501), is expanding its partnership with Rainforest Connection to help accelerate data-driven solutions to protect rainforests and their sensitive ecologies. The two organizations will continue developing and scaling predictive analytics to stop illegal logging and start exploring new use cases to protect forest biodiversity. At COP26, Hitachi Vantara and Rainforest Connection will discuss the fundamental role of data-driven solutions for addressing climate change, including how this partnership is helping protect the rainforests in Sumatra, during a November 9th keynote presentation*¹.

The rainforests are the world's most effective carbon sink, a vital defense against climate change. The world lost 4.2 million hectares of tropical forests in 2020*² alone and protecting tropical forests and biodiversity will be a significant part of discussions on meeting 2030 targets at the United Nations' Climate Change Conference (COP26 *³). Hitachi is a principal sponsor for COP26 in Glasgow.

"The use of data and technology are paramount for businesses and governments to meet sustainability goals," said Gajen Kandiah, CEO, Hitachi Vantara. "Together, Hitachi Vantara and Rainforest Connection are demonstrating how important a robust ecosystem of partners, along with AI and analytics, are to solve sustainability challenges at a community level and scale to create global change."

*1 Livestream Hitachi's COP26 Presentation and Explore Hitachi Vantara's Data-Driven Approach to Sustainability
<https://www.hitachivantara.com/en-us/company/corporate-social-responsibility.html>

*2 2021 Must Be a Turning Point for Forests. 2020 Data Shows Us Why
<https://www.wri.org/insights/2021-must-be-turning-point-forests-2020-data-shows-us-why>

*3 <https://ukcop26.org/>

Empowering forest communities: Turning prediction into protection

In Sumatra, the Indonesian government recognizes that forests are vital to economic and environmental safety of the communities and authorizes them to protect local forests from illegal logging. With only a few rangers to patrol large forest areas a few times per month, illegal logging was often discovered after the fact.

Using years of eco-acoustic data collected by Rainforest Connection's 'Guardian' system, Hitachi Vantara developed a baseline of forest sounds and built predictive algorithms and AI to detect anomalies such as voices or disturbed birds flying up, sounds that often precede logging.

"When a global giant like Hitachi Vantara opens its newest, cutting-edge technology to startups like Rainforest Connection that are working at the forefront of social impact and conservation, we can collectively bring about unimaginable, world-changing achievements," said Topher White, CEO, Rainforest Connection.

The partnership between Hitachi Vantara and Rainforest Connection, along with leadership from local non-governmental organizations like KKI Warsi^{*4}, can empower local villages with the predictive, data-driven warnings to help stop illegal logging before it starts. Rainforest Connection and KKI Warsi has deployed 27 Guardian devices in 9 Western Sumatran villages.

"Our communities depend on the forests for water, rice farming and protection from landslides. These small villages have the knowledge to protect the forest, but without the technology, they did not have enough resources," said Rudi Syaf, Executive Director, KKI Warsi. "We want to show that the local communities can partner with the government to manage the forest best and the support from Rainforest Connection and Hitachi Vantara are required to help us do that."

*4 <https://warsi.or.id/>

Partnership building data-driven solutions to protect biodiversity

The scalable cloud and data architecture developed by Hitachi Vantara is also helping Rainforest Connection build regional neural networks that support biodiversity. Rainforest Connection is cataloguing acoustic data from hundreds of species across regions, building a database, and applying AI and Machine Learning to more efficiently analyze and extract actionable insights from these soundscapes which can better inform how best to protect and preserve vulnerable species.

Rainforest Connection's Guardian system is currently being used in projects in Belize, Costa Rica, Suriname, Ecuador, Peru, Brazil, Bolivia, Romania, South Africa, Cameroon, Philippines, Indonesia, Malaysia, Italy, Austria, United Kingdom, Chile, Greece, and Ireland.

Hitachi to Highlight Data's Critical Role in Sustainability at COP26

Hitachi Vantara's Gajen Kandiah, Rainforest Connection's Topher White and leadership from one of the UK's leading electricity distribution network operators UK Power Networks*⁵ will discuss how data-driven solutions and partnerships are addressing climate change at COP26. The livestream event*⁶ is Nov 9, 3 p.m. GMT.

*⁵ <https://innovation.ukpowernetworks.co.uk/projects/optimize-prime/>

*⁶ <https://www.hitachivantara.com/en-us/company/corporate-social-responsibility.html>

Additional Resources

- Watch HVTV: Bioacoustics and AI Help Save Rainforests

<https://www.hitachivantara.com/en-us/newsroom-hvtv/in-the-press/2020/gl201217.html>

- Case Study: Rainforest Connection Helps Prevent Illegal Deforestation with Hitachi Vantara Partnership

<https://www.hitachivantara.com/en-us/company/customer-stories/rainforest-connection-case-study.html>

- Infographic: Rainforest Connection Infographic

<https://www.hitachivantara.com/en-us/pdf/infographic/rainforest-connection-helps-prevent-illegal-deforestation-infographic.pdf>

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About Rainforest Connection

Rainforest Connection (RFCx) has created the world's first scalable, real-time monitoring system for protecting and studying remote ecosystems. Unlike visual based tracking systems (such as drones or satellites), the RFCx approach relies on acoustic

sensors (RFCx Guardians) that will monitor the ecosystem soundscape at selected locations 365 days a year. With over six years of experience operating in rainforests around the world, RFCx technology acts as a force multiplier which does much of the monitoring and analysis work for a fraction of the cost. RFCx technology is advancing through a comprehensive biodiversity monitoring program that allows the local partners to measure progress of wildlife restoration and recovery through principles of adaptive management. The audio recordings being collected from online RFCx Guardian detect and analyze everything from illegal activities to primates, birds, frogs, insects, bats, and countless other groups of organisms. Acoustic data is extremely rich in information about the makeup of an ecosystem. The RFCx monitoring platform has the capacity to create CNN models for analysis.

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.

About Hitachi, Ltd.

Hitachi, Ltd. (TSE: 6501), headquartered in Tokyo, Japan, contributes to a sustainable society with a higher quality of life by driving innovation through data and technology as the Social Innovation Business. Hitachi is focused on strengthening its contribution to the Environment, the Resilience of business and social infrastructure as well as comprehensive programs to enhance Security & Safety. Hitachi resolves the issues faced by customers and society across six domains: IT, Energy, Mobility, Industry, Smart Life and Automotive Systems through its proprietary Lumada solutions. The company's consolidated revenues for fiscal year 2020 (ended March 31, 2021) totaled 8,729.1 billion yen (\$78.6 billion), with 871 consolidated subsidiaries and approximately 350,000 employees worldwide. For more information on Hitachi, please visit the company's website at <https://www.hitachi.com>.

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