



Nomura Research Institute Group

NEWS RELEASE

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Nomura Research Institute, Ltd.

NRI and the 15 Companies of the Green × Digital Consortium Conduct Successful Proof of Concept for CO₂ Emissions Data Exchange

Tokyo, February 16, 2023 – Nomura Research Institute, Ltd. (Headquarters: Tokyo, Japan; Chairman, President & CEO Shingo Konomoto, “NRI”) recently participated as a project manager and solutions provider in Phase 1 of the proof of concept¹ of inter-enterprise CO₂ data exchange for visualizing CO₂ emissions (technical demonstration of inter-solution linkage based on WBCSD’s Pathfinder Network;² hereinafter, the “Experiment”) undertaken by the Green × Digital Consortium³ administered by the Japan Electronics and Information Technology Industries Association (“JEITA”; Chairman: Takahito Tokita, President and Representative Director of Fujitsu Limited). The Experiment concluded successfully⁴ on December 22, 2022.

**Green X Digital
Consortium**



As an initiative for decarbonization operations, companies are required to disclose GHG (greenhouse gas) emissions⁵ amounts from themselves and in their supply chains. Each company calculates its and its suppliers’ emissions after classifying them into three categories (SCOPE 1, 2, 3),⁶ in accordance with the GHG Protocol.⁷

Of these categories, SCOPE 3 covers emissions associated with the procurement of parts and raw materials from suppliers for a company’s business, but if the companies in a supply chain employ diverse “solutions” (tools and software used to calculate emissions, etc.) in the future, it will be necessary to establish methods of guaranteeing the exchange of emissions data between enterprises. The Experiment was intended to show, technologically, that even if diverse solutions exist alongside each other in the future, emissions data exchange will be achievable through globally shared Pathfinder Network rules.

The proof of concept for Pathfinder Network-based emissions data exchange was the world's third such experiment.⁸ The Experiment drew on participation from 15 entities of different scales (13 solutions), making it the largest of the three experiments in terms of the number of participating enterprises. Moreover, the Experiment tested not only the exchange of emissions data, but also the realization of emissions traceability through implementation of Pathfinder Network APIs for data linkage infrastructure, and the reflection of renewable energy usage in emissions calculations; all of these experiments concluded successfully. In terms of quality as well, the findings are noteworthy from a global perspective.

NRI participated in the Experiment using the NRI-CTS CO₂ emissions calculation/data linkage solution,⁹ which is scheduled to begin service in 2023. At the level of technical attributes, NRI-CTS is capable of compatibly substituting data linkage functional units for different technologies, and its participation in the Experiment was conducted over two groups: a version installed on an Oracle blockchain table by Oracle Corporation; and a version installed on Corda by SBI R3. In the Experiment, functional data linkage was achieved in both groups, thus confirming the design's technological flexibility.

The success of the Experiment means that, going forward, we can expect that many enterprises will choose solutions and move forward with visualizing their emissions, and that the push towards sharing supply chain emissions data will accelerate. NRI believes that providing NRI-CTS services and associated consulting and solutions development will allow us to contribute to facilitating our clients' enterprise climate change response efforts in Japan and around the world.

In addition, NRI intends to contribute to the development of the Pathfinder Framework and Pathfinder Network by feeding the knowledge obtained from the Experiment back to WBCSD in collaboration with the Green × Digital Consortium.

¹ For an overall view of the proof of concept experiment, see JEITA's press releases.

² For the Pathfinder Network, see the following:

<https://www.carbon-transparency.com/media/luhii1or/pathfinder-network-vision-paper.pdf>

³ For the Green × Digital Consortium, see the following website:

<https://www.gxdc.jp/>

⁴ The report can be accessed at <https://www.gxdc.jp/pdf/report.pdf>.

⁵ CO₂ accounts for approximately 90% of Japan's greenhouse gases. For details, see the following URL:
<https://www.env.go.jp/content/900445424.pdf>

⁶ See the following URL: https://www.env.go.jp/earth/ondanka/supply_chain/gvc/supply_chain.html

⁷ Measurement targets and measurement methods set forth under a multi-stakeholder partnership jointly operated by WRI (World Resources Institute) and WBCSD (World Business Council for Sustainable Development).

⁸ For the two previous experiments, see the following:

https://www.carbon-transparency.com/media/pg0nifzp/20221111_advancing-emissions-transparency-with-breakthrough-in-value-chain-data-exchange.pdf

⁹ For NRI-CTS, see the following URLs:

https://www.nri.com/jp/news/info/cc/1st/2021/1215_1

https://www.nri.com/jp/news/info/cc/1st/2022/0914_1

<https://www.youtube.com/playlist?list=PLJUHKUSIkCZjCQ8ZQq2NREZ8k3geGMVeF>

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