

# Nomura Research Institute, Ltd.

## Trial for introduction of SCOPE3 data sharing solution (NRI-CTS) in ASEAN region



### Objective of the project

This project aims to automate the calculation and reporting of CO2 emissions by effectively utilizing GPS terminals that carriers using large trucks in Thailand are required to install. Also using the data on transportation distances obtained through these terminals, the project avoids double-counting CO2 emissions between carriers in the event that they re-consign transportation to other carriers, while automating the process of calculating and reporting CO2 emissions.

### Cooperation with local companies/governments

The local partner is SCG LOGISTICS MANAGEMENT CO., LTD. The content of the cooperation and collaboration is the visualization of CO2 emissions (Scope 3) of trucks using data from NRI-CTS (Carbon Tracing System) and SCG Logistics Management's (SCGLM) Connected service.

SCG Connected service



Visualization of CO2 emissions (Scope3)

NRI-CTS



### Targeted economic/social issues

Thailand, where many Japanese companies have established operations and where economic growth is expected as a land transportation hub in ASEAN, plans to achieve "carbon neutrality" by 2050, based on the bio-circular and green (BCG) economic model.

Although cooperation by transport companies is essential to reduce CO2 emissions from land transportation, many transport companies are small, medium, and micro enterprises and hence the burden to do so is not small. This is because it requires a great deal of labor and expense to collect a vast amount of data based on highly specialized knowledge, calculate CO2 emissions and report the results to consignors such as shippers. Furthermore, there are many cases where transportation is re-consigned between operators, and when processing work to avoid double-counting CO2 emissions between trading partners, it is an even more difficult task because the calculations and data must be shared for this purpose.

Thailand has one of the world's highest death rates per 100,000 people resulting from traffic accidents. For this reason, the Department of Land Transport (DLT) of Thailand has mandated the installation of GPS terminals for some commercial vehicles such as buses and trucks since 2016. Transportation operators have purchased these terminals and services to calculate truck drivers' driving speed, distance, etc., and provide and report the data to the Department of Land Transport of Thailand (DLT). In addition to reducing traffic accidents through safe driving, the system also encourages eco-driving and helps reduce CO2 emissions.

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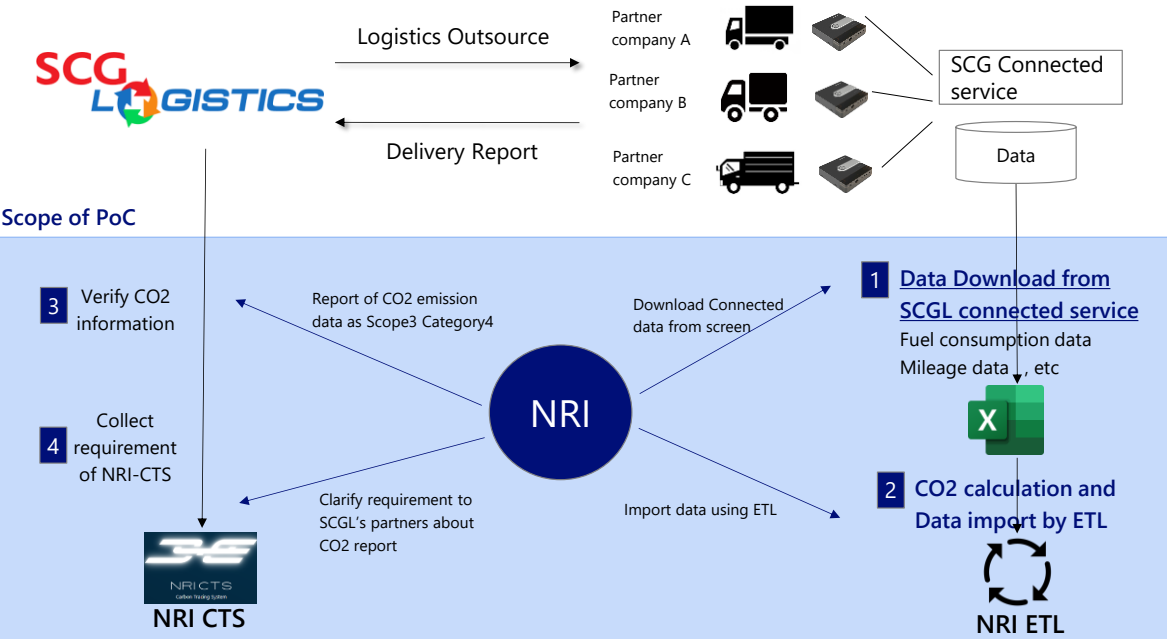


### Demonstration Period

September to December 2022

### Details of demonstration

To visualize the CO2 emissions of trucks, NRI imported data from SCG Connected Services to NRI-CTS, allowing SCGL to verify results and CO2 reports on NRI-CTS.



### Project outcome / Future Plans

#### [Results and Discussion]

The calculation logic for CO2 was implemented in accordance with the Japanese government's CO2 calculation guidelines for logistics. The calculation method was implemented using the fuel consumption method and the fuel method. However, it was recognized that future work will be necessary to link this method with the actual data in the TMS in order to allocate mixed freight in the future. Continuous improvement will be necessary as the data becomes more complete. Regarding data visualization, emissions information has been visualized for each group.

#### [Progress after completion of business]

ISO14083 was announced in March 2023, and WBCSD PACT and Smart Freight Centre are currently preparing technical specifications for data exchange of CO2 emissions in the field of logistics. NRI-CTS is also continuing its research and development toward a fuel method based on ISO14083.

#### [Future plans]

NRI-CTS is currently participating in the activities of the Ouranos EcoSystem and is implementing compliance with the European Battery Regulation. Since the European Battery Regulation requires the calculation of logistics emissions and compliance with the European Battery Regulation will spread to Thailand and other Southeast Asian countries, NRI-CTS plans to develop its business in line with this trend.