

Success Stories

Carbon Footprint of Products (CFP) Management Platform



Client

Asahi Kasei

Industry

Chemical

Country

Japan

Reporting & BI



TECHNOLOGIES LEVERAGED

- Anaplan - Tableau



HISTORY OF TRANSFORMATION

In recent years, efforts to solve social issues such as the SDGs have been emphasized, as the effects of climate change are becoming more severe.

Under these circumstances, some automobile OEM manufacturers are presenting Carbon Footprint (CFP) reduction targets to their suppliers, and the movement toward carbon neutrality is accelerating throughout the supply chain.



SOLUTION OVERVIEW

NTT DATA, together with Asahi Kasei, developed a Product Management Platform for managing and evaluating the Carbon Footprint (CFP) for each final product, visualizing Direct emission of greenhouse gases, indirect emission due to the use of electricity, heat and steam, and other indirect emissions.

“This Product Management Platform started full-scale operation in April 2022 at Asahi Kasei.”



CLIENT CHALLENGE

Asahi Kasei needed to (*):

- Manage the greenhouse gas emission, including in-house and outside activities of the company.
- Attain a higher level of understanding of emissions, becoming necessary to manage Carbon Footprint (CFP) in units suitable for final product management between companies.
- Determine the cost amount of CFP and make business decisions
- Provide information to downstream manufacturers by the final product, necessary to make decisions



BUSINESS VALUE & KPIS

This platform:

- Covers the entire manufacturing process including the indirect emission of procured raw materials and outsourced processing
- Calculates CFP for each final product
- Puts a price on the company's CFP "Internal Carbon Pricing"
- Allows to quantify CFP as financial information and use it as an index for business decisions.



TECHNICAL SPECIFICATIONS

Platform Features

1. Coverage of the entire manufacturing process by adding outsourced processing (Scope3) and emissions generated in the company's manufacturing process (Scope1, 2) to CFP for each raw material purchased.

2. CFP calculation is based on "Cradle-to-Gate" assessment, which combines upstream emissions of materials and transportation, emissions from in-house manufacturing processes, and energy-related emissions such as electricity used during manufacturing.

With the above functions (1 and 2), it is possible to provide CFP for each product covering Scope 1, 2, and 3 to downstream manufactures. In addition to visualizing emissions by product, it is possible to

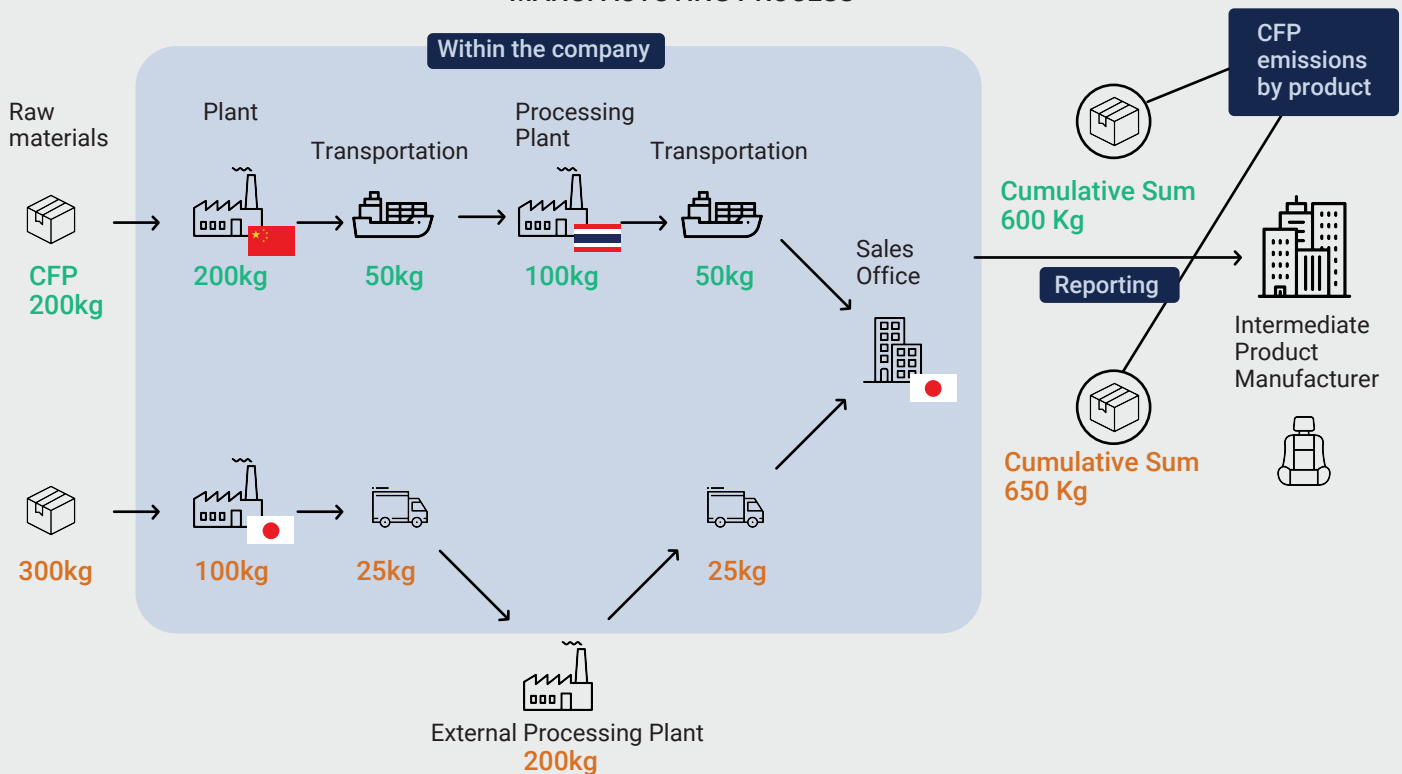
consider effective reduction measures for each manufacturing process.

3. Dual analysis of cost and CFP achieved by combining with management information and using Internal Carbon Pricing (ICP)

The ICP is calculated by converting CFP into a monetary amount using the CFP cost unit price set by the company. By utilizing ICP, it is possible to:

- Compare the cost of future income and expenditure planning for each product with the cost of reducing CFP associated with the investment
- Determine the investment priority of switching from ICP for each manufacturing process to the latest energy-saving equipment and renewable energy.

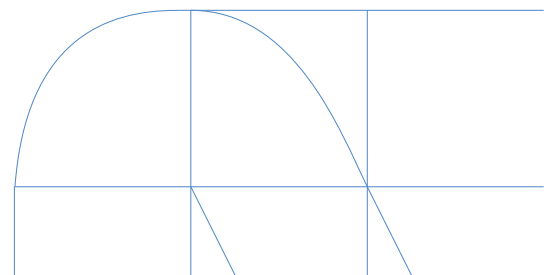
FEATURES 1,2: CARBON FOOTPRINTS (CFP) MANAGEMENT OF EACH PRODUCT' S MANUFACTURING PROCESS



"It's an example of NTTDATA's offering model (Not the actual case of Asahi Kasei)."

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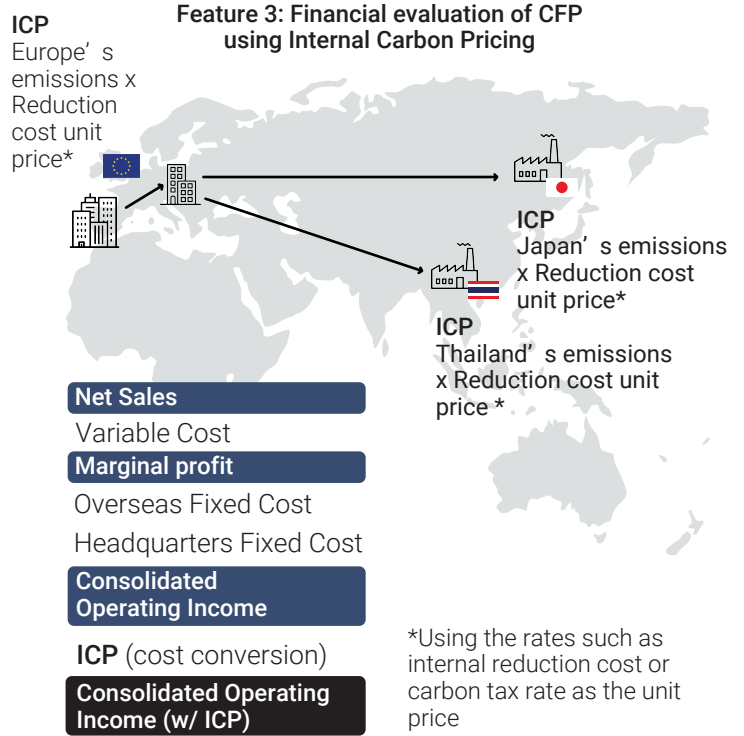


Platform Mechanism

a) Enter supplier and site data into Anaplan to understand the CFP of the entire product: The consolidated emissions by product are automatically aggregated using the product composition table (Global BOM) that connects global manufacturing processes.

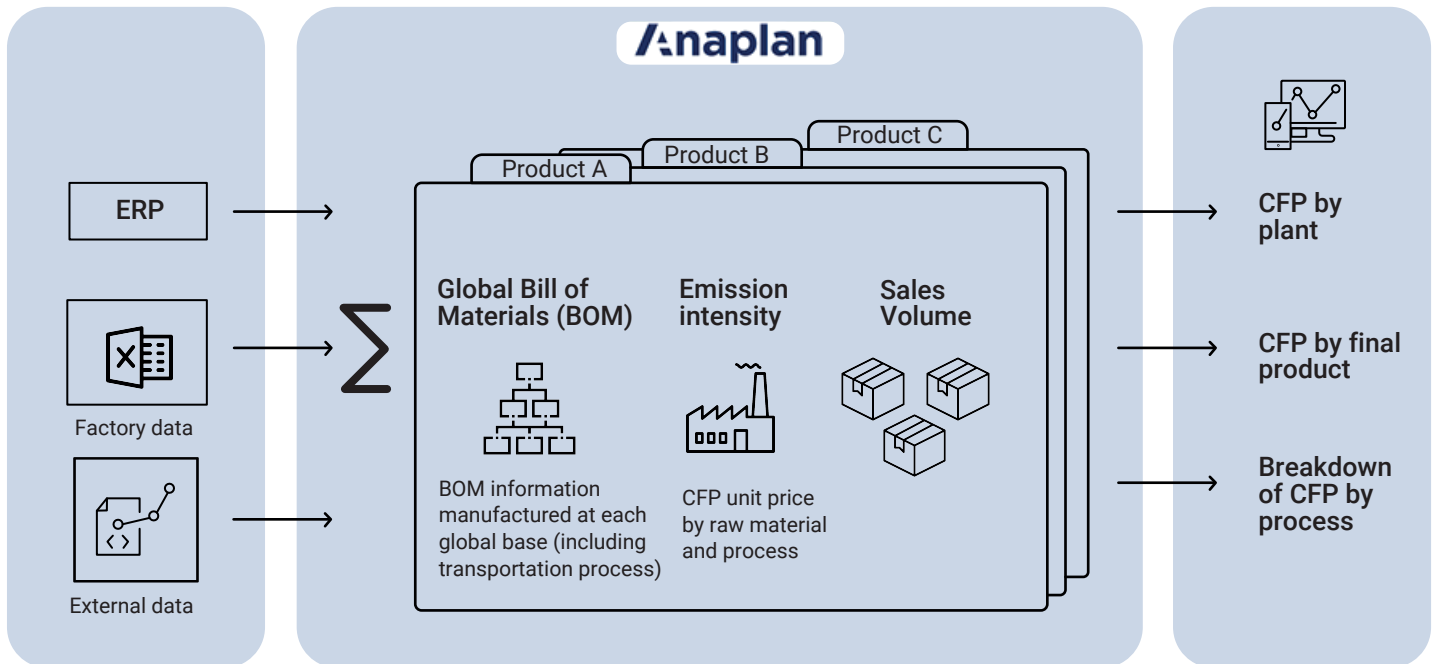
b) Leverage Anaplan's high-speed calculation to obtain within seconds the CFP for each final product throughout the entire global manufacturing process.

c) Link the emission amount by product with Tableau, an analysis platform, resulting in a detailed data analysis by manufacturing process and product type.



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System configuration image with Asahi Kasei



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