

Research project empowers businesses to harness Scope 3 emissions data for competitive advantage

Indirect (Scope 3) emissions often comprise the largest part of an organisation's carbon footprint, yet many companies struggle to accurately measure and manage them. VTT Technical Research Centre of Finland together with multiple partners is developing novel approaches for data collection, calculation, standardisation and sharing Scope 3 emissions and other sustainability data. In the first phase the focus is on energy related emissions and other sustainability aspects.

Large firms in the EU are already required to disclose their sustainability impacts, and this requirement will soon apply to smaller firms, too. Regulatory bodies worldwide are updating their policies to include sustainability reporting. The regulatory requirements are however the minimum state of sustainability performance in the companies. Our goal is to develop the competitiveness of companies by improving the utilization of sustainable development data throughout the production chain.

The Business Finland funded Optimi1 Co-Innovation project aims to ensure consistency in data collection and management, with various benefits attainable through this approach. The concepts could help all companies in managing and reducing their environmental footprint and improve the performance of sustainable development also in business creation.

Scope 3 emissions are the indirect emissions arising from activities that a company does not own or control, such as supply chain operations, production of raw materials, waste disposal, and logistics. Measuring and managing these emissions is difficult due to their indirect nature and the complexity of data collection in their value chains.

Businesses frequently rely on diverse data sources in their reports, like generic emission charts, rather than using primary data – real data – directly from value chains. This leads to inconsistent data and unreliable decision-making because primary data is scarce. Addressing these emissions is essential for creating a more sustainable business.

“The main goal of this project is to develop reliable methods for gathering sustainability data as primary data across the value chain to support better decision-making and catalyze shared emission reduction target setting with stakeholders. We look at the production process from raw materials to the end user, whereby customers' views on sustainable development goals and values are also taken into account,” says **Nina Wessberg**, Principal scientist from VTT.

“We will also set specific requirements for Scope 3 emissions and establish a framework to organize this data and track Key Sustainability Indicators (KPIs) that cover environmental, social, and economic aspects. This framework will help us to better count the sustainability impact of Scope 3 emissions, along with other sustainability aspects, from a future perspective while linking them to economic and social indicators.”

Concept applicable across various sectors

Beyond sustainability reporting, transparent and reliable Scope 3 data – along with the ability to integrate it with existing financially driven KPIs – can support companies towards more comprehensive decision-making in procurement, sales, marketing and product development. This new capability can create a clear competitive edge for companies in the market.

“There is already some standardisation for carbon emission data, but it's scattered and incomplete. By sorting and consolidating these standards, we aim to facilitate more consistent

and comparable reporting across different companies. This is crucial for accurately measuring, analysing, and ultimately reducing CO2 emissions, which is a key focus of our current research. In addition to reporting, companies need reliable data for internal purposes, such as improving their sustainability performance," says **Marileena Mäkelä**, Associate Professor, from the University of Jyväskylä.

The Optimi1 project currently focuses on the value chains of packaging and logistics, but the concept can also be applied to other sectors. The focus is measuring and reporting energy consumption and emissions throughout production.

"Supply chain is an important part of companies' scope 3 emissions, and this requires reliable data through measuring and reporting by the transport companies, allowing the manufacturing companies to be able to take the logistics into account. Ahola Group wants to be a reliable partner in this field by providing accurate reporting and effective logistics solutions with suitable energy choices," says **Martin Nybacka** R&D Project Coordinator from Ahola Group.

"As a company committed to fact-based sustainability, we strive to manage our impacts using accurate and credible data across the entire value chain. Reliable data is also critical in further development of Paptic materials so that they best serve customer needs. However, at present, there are still many issues to be resolved to ensure data reliability and comparability. Better tools for collecting and transferring data play an important role in addressing the current shortcomings," **Hanna Kalliomäki**, Paptic's Chief Sustainability Officer, says.

The 2-year research project requires close cooperation with companies covering the entire value chain. Participants include Ahola Transport, packaging producer Paptic, ICT and change management service providers Solita, IOXIO and Gofore. The project also collaborates with the University of Jyväskylä and is funded by Business Finland.

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