

# Moving Beyond Words: Driving Value Through Operationalized Scope 3 Emissions Reduction



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## Executive Summary

This Analyst Brief explores the push for transparency on Scope 3 emissions, the challenges organizations face in addressing them, the value that can be unlocked by managing these emissions, and the role technology plays in accelerating sustainability efforts.

## At a Glance

### Key stats

- **59%** of global organizations have a specific date for achieving net zero CO<sub>2</sub> emissions.
- **40%** of global supply chain participants experience pressure from external parties to focus on sustainability across the supply chain.
- **Almost 90%** of organizational emissions come from Scope 3 emissions in many sectors, including food and beverage manufacturing.

### What's important

Taking control of Scope 3 emissions not only enhances organizations' environmental performance but has business value implications.

### Key takeaways

Addressing Scope 3 emissions can help organizations improve cost and efficiency, while building resilience, reducing risks, and improving climate outcomes.

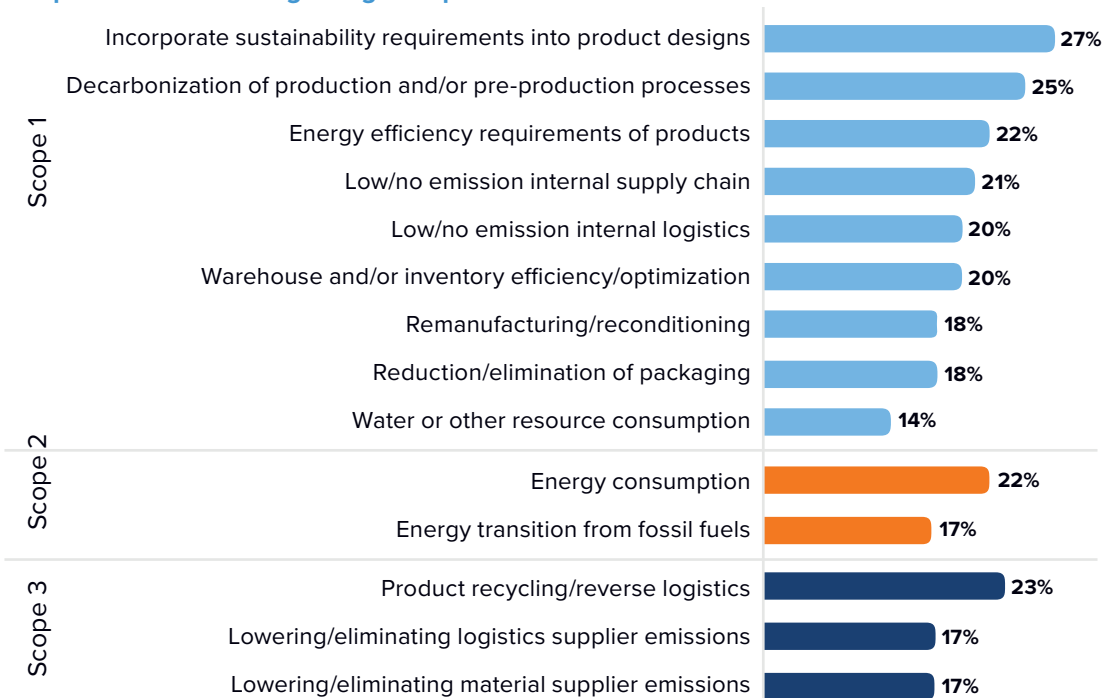
## Introduction

The global community faces unprecedented environmental challenges, including climate change events such as floods and fires, deforestation, and pollution. Governments and businesses are compelled to act to achieve sustainability goals, address business and financial risks, and alleviate stakeholder pressure. IDC’s recent 2023 Supply Chain Survey revealed that 40% of global supply chain participants are experiencing pressure from external parties to take strong action to improve sustainable outcomes, and 26% from internal groups such as investors and employees. While 59% of global organizations have a specific target date for achieving net zero CO<sub>2</sub> emissions<sup>1</sup>, attaining these targets requires more than goal setting and commitments. Instead, organizations must take concrete steps to reduce their carbon footprint, including the emissions embedded throughout their supply chain, which are also known as “Scope 3” emissions.

Depending on the industry, Scope 3 emissions can account for more than 90% of emissions in the sector. This underscores the importance of addressing these emissions in addition to reducing direct emissions (Scope 1) and indirect emissions from energy consumption (Scope 2). Failure to address Scope 3 emissions can result in a significant gap between a company’s net zero target and its actual carbon emissions.

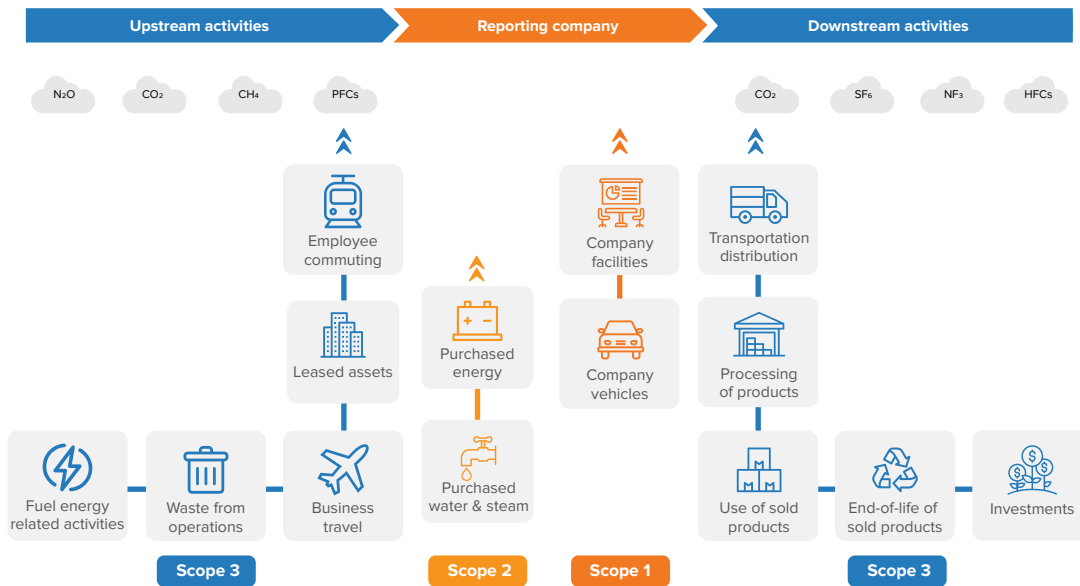
As a result, Scope 3 emissions are increasing in significance for supply chain organizations. IDC’s 2023 Supply Chain Survey indicated that while fewer categories of Scope 3 emissions are being measured when compared to Scope 1 emissions, these categories are still considered important as compared with direct (Scope 1) and energy consumption (Scope 2) emissions (Figure 1). And while addressing Scope 3 emissions can help strengthen organizational resilience and reduce risks associated with environmental challenges, many organizations also recognise that tackling Scope 3 emissions can provide financial benefits, such as cost savings, increased efficiency, and revenue opportunities (Figure 2).

**Figure 1: Comparing sustainability areas of focus across supply chain participants: Scope 3 emissions are gaining in importance**



<sup>1</sup> IDC 2022 Future Enterprise Resiliency & Spending Survey, Wave 4

Source: IDC 2023 Supply Chain Survey



### What are Scope 3 emissions?

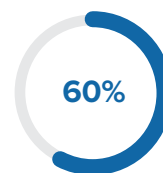
Scope 1 emissions are the direct emissions from company-owned or controlled resources, and Scope 2 emissions are the indirect ones from the generation of purchased energy. Scope 3 emissions address all indirect emissions not included in Scope 2 that occur in the value chain of the reporting company. This encompasses indirect emissions from upstream (supply side) and downstream (customer side) activities, such as fuel consumption, business travel, waste generation, purchased goods and services, transportation and distribution, capital goods and equipment, investments, franchises, use and end-of-life treatment of products.

## The Push for Transparency on Scope 3 Emissions

### Net zero goals and their significance in the context of sustainability strategies

The Paris Agreement on climate change seeks to limit global warming to “well below” 2.0°C above pre-industrial levels while “pursuing efforts” to limit warming to 1.5°C. To achieve this, organizations must set targets to eventually reach “net zero” emissions. Net zero emissions refer to a balance between the amount of human-caused greenhouse gas (GHG) emissions, such as carbon dioxide, methane, and nitrous oxide released into the atmosphere, and the amount removed from it. The effort to reach net zero entails reducing GHG emissions to as close to zero as possible and offsetting any remaining emissions through approved measures.

Importantly, and in accordance with the Greenhouse Gas Protocol (the global standard for greenhouse gas accounting), any effort to reach net zero should take into account all three scopes of greenhouse gas emissions. Scope 3 emissions often make up a significant portion of an organization’s carbon footprint, so failure to address Scope 3 emissions can result in a substantial gap between a company’s net zero target and its actual carbon emissions.



By 2026, regulations and sustainability-linked lending will drive over 60% of global manufacturers to adopt product carbon footprint as a key metric to operationalize sustainability beyond reporting.

IDC FutureScape: Worldwide Manufacturing 2023 Predictions

## Catalysts for enhanced Scope 3 emissions transparency

Several factors are driving the push for enhanced transparency on Scope 3 emissions:

- Stakeholders — customers, investors, and regulators — increasingly demand more comprehensive sustainability reporting, including Scope 3 emissions (see Figure 1).
- Growing awareness of the environmental impact of businesses means organizations must act responsibly to reduce legal, financial, and reputational risks.
- Improving Scope 3 emissions performance can lead to cost savings and increased efficiency through optimization and resource reduction strategies.
- Innovation in products and services centered around sustainability outcomes which address Scope 3 emissions (e.g., improved components or raw materials, local ecosystem development, supplier efficiency and optimization) can result in revenue opportunities or cost savings.

## Addressing the Challenges of Scope 3 Emissions in Environmentally Sustainable Transformation Efforts



**One of the biggest challenges in addressing Scope 3 emissions is the complexity of the value chain.**

One of the biggest challenges in measuring and addressing Scope 3 emissions is the complexity of the value chain. Organizations must identify and measure Scope 3 emissions, set reduction targets, and develop strategies to achieve them. This process is complicated by the diverse emissions factors of different products, services, and suppliers. Emissions factors represent the amount of greenhouse gases or other pollutants released into the environment per unit of a specific product, service, or supplier. These factors are used to estimate the total emissions of a particular activity, such as production or transportation, and to compare the environmental impacts of different products or services. Varying emissions factors mean that different products, services, and suppliers release different amounts of pollutants or greenhouse gases, making it challenging to accurately assess and compare their environmental impact. For example, the retail industry faces significant challenges in tracking Scope 3 emissions due to the complexity and size of the supply chain. Retailers need to engage with suppliers and customers to collect emissions data, which can be challenging due to the use of different materials and processes, different regions, and multiple tiers of suppliers. Additionally, retailers need to consider the emissions associated with product transportation, which involves multiple modes of transportation and the participation of multiple partners.

Another obstacle to improving Scope 3 emissions performance is the lack of accurate and comprehensive data. Reporting on emissions data requires detailed information from suppliers and customers, which can be difficult to obtain, especially for smaller businesses. Organizations are prioritizing supplier engagement, building trust, and establishing clear expectations to obtain the necessary data.

### Value drivers of addressing Scope 3 emissions

Despite these challenges, there are several value drivers for addressing sustainability in general, and specifically Scope 3 emissions. IDC’s research has shown that there are multiple benefits to organizations across value chains in pursuing projects that support sustainability outcomes (Figure 2). These benefits extend to Scope 3 emissions where the opportunities to reduce costs and improve efficiency by optimizing processes and reducing waste can be amplified through suppliers and customers. For example, Fraser & Neave Holdings, a large beverage manufacturer in Southeast Asia, are recognizing cost savings through the adoption of supply chain stewardship to elevate the productivity and performance of vendors with respect to sustainability practices and compliance with food safety standards<sup>2</sup>.

**Figure 2: Supply chain participants are reaping benefits from sustainability initiatives.**

**Top benefits organizations are deriving from their sustainability initiatives**



Source: Future Enterprise Resiliency & Spending Survey, Wave 9, IDC, October 2022

### Primary focus areas for tracking and improving Scope 3 emissions

To track and manage Scope 3 emissions, organizations must first conduct a comprehensive analysis of their value chain to detect and prioritize the most significant sources of Scope 3 emissions. This analysis should include data on the emissions associated with raw materials, transportation, production, and end-of-life disposal.

Organizations should also engage with suppliers and customers to gather data on emissions associated with the production, transportation, and use of products and services. This may involve developing sustainability reporting requirements for suppliers, working with logistics

<sup>2</sup> Fraser & Neave Sustainability Report 2022

providers to track transportation emissions, and collecting data from customers on product use and disposal. Additionally, supply chain participants will need to work with stakeholders to set science-based emissions reduction targets that include Scope 3 emissions. The targets should be ambitious, achievable, and aligned with the goals of the Paris Agreement on climate change. Next, organizations should develop strategies to achieve their reduction targets, including identifying opportunities to reduce emissions through operational improvements, product redesign, and supply chain optimization. Strategies may also include collaborating with suppliers and customers to implement sustainability initiatives, and investing in renewable energy and other low-carbon technologies.

Organizations can leverage technology, such as digital platforms, data analytics, and machine learning, to streamline these processes, improve accuracy, and reduce costs. Specific sustainability technologies are also available to address areas such as CO<sub>2</sub> tracking solutions, enterprise carbon and energy management, sustainability performance and project management software, sustainability and ESG reporting, and sustainability management systems.

## Tech-Driven Sustainability: Accelerating Environmental Transformation Plans

Technology plays a critical role in accelerating sustainability efforts by enabling organizations to track and reduce Scope 3 emissions. Digital platforms, data analytics, and machine learning can help collect and analyze emissions data, identify areas for improvement, and develop strategies to achieve reduction targets. Digital platforms can help organizations engage with suppliers and customers to streamline data collection, increase transparency, and build trust.

As highlighted in Figure 3, supply chain participants in Asia/Pacific are planning to adopt sustainability and ESG reporting systems, solutions that support sustainable sourcing, and CO<sub>2</sub>/emissions tracking systems. These systems help reduce issues with tracking complex metrics and processes across multiple partners, easing the administrative burden, and enabling collaboration between organizations to achieve net zero emissions targets.



**Digital platforms, data analytics, and machine learning can help collect and analyze emissions data.**

Specific areas where sustainability technologies assist include:

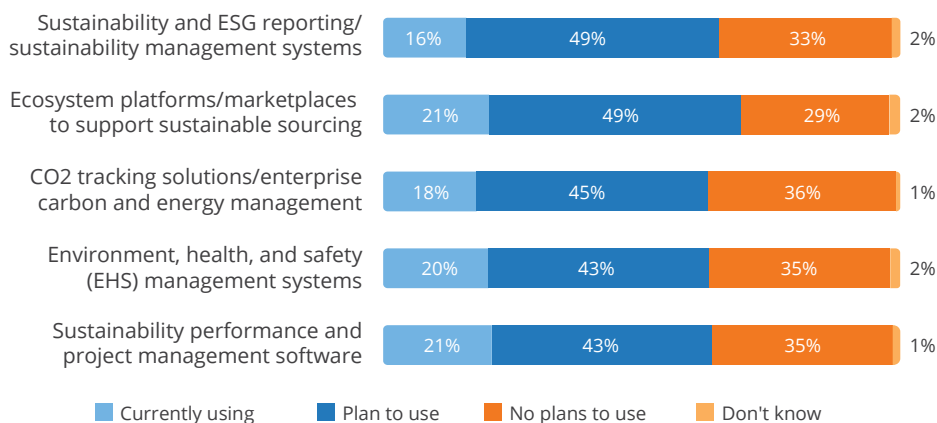
- 1. Sustainability and ESG reporting/sustainability management systems:** These systems can help organizations track and report on their sustainability and ESG performance, including Scope 3 emissions. They can provide a centralized platform for collecting and analyzing data, enabling organizations to identify emissions sources, set reduction

targets across various stakeholders in organizational value chains, and develop strategies to achieve them. Such reporting systems can also help organizations communicate their sustainability performance to stakeholders, including customers, investors, and regulators.

2. **Ecosystem platforms/marketplaces to support sustainable sourcing:** These platforms can help organizations source sustainable products and materials, reducing emissions associated with the production and transportation of goods. By working with suppliers and partners on these platforms, organizations can ensure that they are sourcing from sustainable sources and reducing their environmental impact. Ecosystem platforms can also help organizations identify opportunities for collaboration and innovation in sustainability.
3. **CO<sub>2</sub> tracking solutions/enterprise carbon and energy management:** These solutions can help track and manage carbon emissions across the value chain, including Scope 3 emissions. They can provide real-time visibility into emissions data, enabling organizations to identify emissions hotspots and take action to reduce them. By tracking emissions data, organizations can set reduction targets, monitor progress toward these targets, and report on their emissions performance to stakeholders.

**Figure 3: Sustainability technologies gaining traction in supporting environmental outcomes**

**Sustainability technology organizations are using, or planning to use, to directly support sustainability/ESG digital transformation initiatives and track the progress of those initiatives**



Source: Future Enterprise Resiliency & Spending Survey, Wave 9, IDC, October 2022

## Conclusion: The Way Forward

To address the increasing push for transparency on Scope 3 emissions, organizations must take concrete steps to reduce their carbon footprint, including focusing on identifying emissions sources, engaging suppliers and customers to collect data, setting reduction targets, and developing strategies to achieve them. Technology is essential to accelerate sustainability efforts, including specific sustainability technologies like sustainability reporting systems, ecosystem platforms for sustainable sourcing, and CO<sub>2</sub> tracking solutions, which provide data-driven insights, support sustainable sourcing, and enable collaboration across the value chain. By leveraging these technologies, organizations can

improve their sustainability performance, reduce environmental impact, and create long-term value for stakeholders.

Moving forward, organizations can:



**Conduct a comprehensive analysis of the value chain** to identify and prioritize the most significant sources of Scope 3 emissions. This analysis should include data on the emissions associated with raw materials, transportation, production, and end-of-life disposal.



**Engage with suppliers and customers to collect emissions data** associated with the production, transportation, and use of products and services. This may involve developing sustainability reporting requirements for suppliers, working with logistics providers to track transportation emissions, and collecting data from customers on product use and disposal.



**Set science-based emissions reduction targets** that include Scope 3 emissions. These targets should be ambitious, achievable, and aligned with the goals of the Paris Agreement on climate change.



**Explore emerging technologies** including platforms and Internet of Things (IoT) to track and monitor emissions data in real time. These technologies can provide greater visibility into emissions data across the value chain, enabling organizations to identify opportunities for optimization and improvement. For example, IoT sensors can be used to track energy consumption and emissions from manufacturing processes, while platforms are employed to track and share information on the sustainability of raw materials and products.



**Leverage data analytics and machine learning** to analyze large volumes of emissions data and identify patterns and insights. This can help organizations find areas for improvement, set reduction targets, and develop strategies to achieve them. For example, machine learning algorithms can be used to optimize transportation routes to minimize emissions and reduce costs, while data analytics can be used to identify suppliers with the highest emissions and work with them to implement sustainability initiatives.

## About the Analyst



### Stephanie Krishnan

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Stephanie Krishnan is an associate VP responsible for producing, developing, and growing the IDC Manufacturing, Retail, and Energy Insights programs in Asia/Pacific. Within Manufacturing Insights, Stephanie conducts supply chain and Industry 4.0 research that supports clients with global sourcing (profitable proximity and sustainable outcomes), transportation, logistics, warehousing, and more.

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At Terrascope, we empower enterprises to chart a credible pathway to net zero. Our end-to-end decarbonization platform provides insights and digital tools to take the uncertainty out of carbon measurement and build effective decarbonization strategies, with a focus on Scope 3 emissions. Contact us to get started.

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