A guide to Scope 3 emissions reporting

Streamline Scope 3 reporting with ESG reporting software



Contents

01
Introduction

02
What are Scope 3 emissions?

03
Scope 3 and supply chain emissions

04
Scope 3 reporting: the challenge and opportunity

05
How to calculate and report on Scope 3 emissions

06
How to reduce Scope 3 emissions

07
Simplify Scope 3 accounting with IBM

01 Introduction

Investors are increasingly scrutinizing environmental, social and governance (ESG) performance—and looking for companies to rise to the challenge of delivering ESG improvements.

There has been exponential growth in organizations calculating and reporting emissions from their directly owned or controlled business activities—Scopes 1 and 2. And now there is rising interest in the carbon we haven't been counting, which comes from all indirect impacts of an organization, both upstream and downstream. These emissions result from business operations by sources that are not owned or controlled by that business directly, such as from the supply chain, transport to operational sites or to customers, product use, and end-of-life treatment.

Research indicates that 5.5 times more emissions come from the supply chain alone, so any organization that's serious about decarbonization should report and reduce Scope 3 emissions.

Reporting and reducing Scope 3 emissions is of most immediate relevance to organizations that report to CDP or have committed to the Science Based Targets initiative (SBTi). They also have the most impact for organizations that operate in one of the eight supply chains that account for over 50% of global emissions[1]—namely food, construction, fashion, fast-moving consumer goods (FMCG), electronics, automotive and freight.

Scope 3 reporting provides the opportunity for companies in key industries to multiply their carbon reduction impact by decarbonizing their supply chains.

Due to the complexity and volume of data required, Scope 3 calculation and reporting must be addressed in a systematic way with the support of specialist software such as that provided by IBM.



02
What are Scope 3 emissions?

Scope 1 includes all “direct” emissions from an organization, such as company vehicles, fugitive emissions from manufacturing processes, and fuel combustion onsite, such as burning gas to produce heat.

Scope 2 encompasses “indirect” emissions from the consumption of purchased electricity, heat or steam.

Scope 3 requires organizations to look for instances of carbon emissions outside of their direct physical footprint and quantify them through the value chain outside of their direct control. This includes embodied emissions within resources consumed by the organization—paper used, waste produced, coffee consumed—and the emissions of any suppliers, which are especially important to organizations that produce physical products.

Scopes 1 and 2 are the most controllable scopes for GHG accounting and reduction, and the focal point of any decarbonization journey. But for leading organizations under investor pressure and looking to expand their impact, Scope 3 emissions provide the opportunity to reach other emitters in their value chain—such as suppliers and customers—and influence them to reduce their emissions, too.

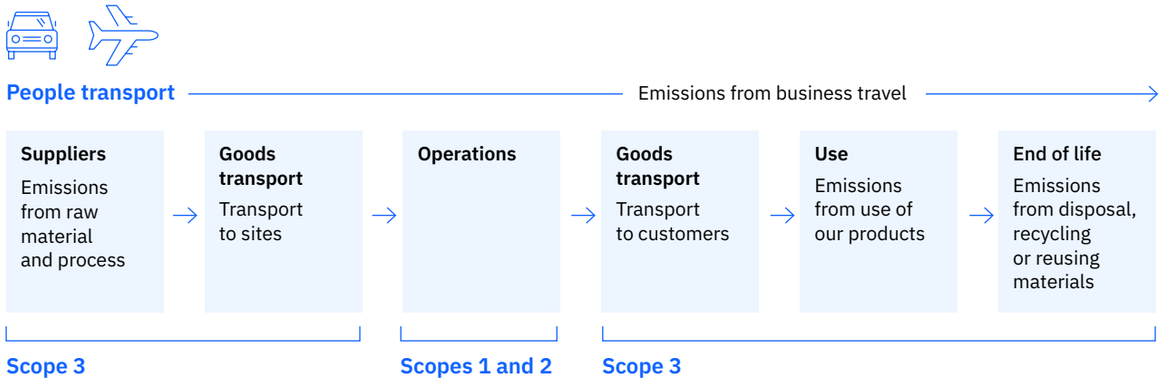


Figure 1. Decarbonization across the value chain

03
Scope 3 and supply chain emissions

Much of the discussion on Scope 3 focuses on the supply chain, and Scope 3 emissions are sometimes referred to as supply chain emissions. This is because for many organizations, most of their Scope 3 emissions relate to the supply chain. This is illustrated in the graphic below, which shows how supply chain emissions from Scope 3 compare with direct emissions by industry.

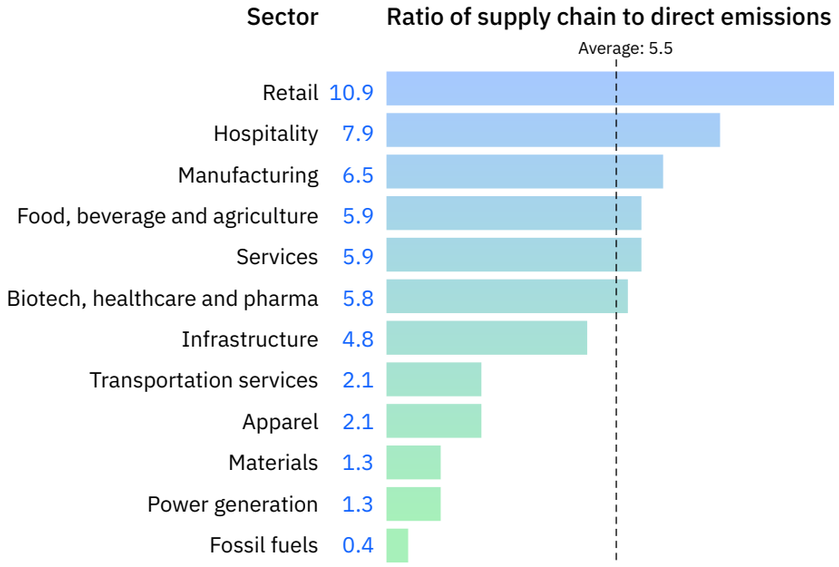


Figure 2. Your impact lies in your supply chain.[2]



For reporting purposes, under the guidance of the GHG Protocol, Scope 3 emissions consist of 15 categories and fall into either “upstream” or “downstream” emission types as shown in the table.

The most relevant Scope 3 emissions categories vary greatly both between and within industries.

For example, vehicle manufacturers who produce fossil fuel–powered cars would expect a significant portion of Scope 3 emissions to come from downstream Category 11, “use of sold products,” whereas in food and beverage/FMCG manufacturing, a significant portion of emissions would come upstream from Category 1, “purchased goods and services.” Within the commercial real estate sector, a real estate firm that develops buildings will have a very different Scope 3 category mix than a real estate investment trust that only invests in existing buildings.

Scope 3 categories[3]



Upstream Scope 3 emissions

1. Purchased goods and services
2. Capital goods
3. Activities related to fuel and energy (not included in Scope 1 or Scope 2)
4. Upstream transportation and distribution
5. Waste generated in operations
6. Business travel
7. Employee commuting
8. Upstream leased assets



Downstream Scope 3 emissions

9. Downstream transportation and distribution
10. Processing of sold products
11. Use of sold products
12. End-of-life treatment of sold products
13. Downstream leased assets
14. Franchises
15. Investments

04

Scope 3 reporting: the challenge and opportunity

The challenge

Scope 3 emissions present a significant opportunity for organizations to engage their suppliers to accelerate decarbonization globally. For example, supply chain carbon reduction initiatives put in place by relatively few end-consumer companies can yield a signification flow-on effect by reducing emissions for numerous organizations in the value chain.

But not without hard work. Significant barriers exist to report and reduce Scope 3 emissions. The following challenges are most cited:

- Establishing boundaries between scopes
- Capturing reliable data in a systematic and auditable way across numerous suppliers and locations
- Selecting emissions factors to derive accurate calculations
- Engaging with suppliers to both report and reduce emissions

Addressing upstream emissions is hard, with several barriers[1]



Lack of transparency

- Lack of high-quality data sharing with suppliers
- Scope 3 estimates rely on averages
- Hard to set targets (SBTi) where pathways are not agreed upon
- Lack of clarity on Scope 3 boundaries
- Challenges sourcing and selecting emissions factors



Challenge to execute

- Knowledge gap among suppliers
- Hard to monitor fragmented suppliers
- Low trust in supplier certifications
- Hard to change in-series production
- Performance and cost concerns vs low-carbon design
- Procurement incentives not aligned to climate
- Securing engagement across the supply chain
- Overwhelming breadth and depth of data required



Limited support

- Lack of government action/ investment
- Too high costs for individual value chains
- Concern over customers' willingness to pay

The opportunity

Though robust and detailed processes for Scope 3 reporting are not standard practice among organizations today, we expect Scope 3 accounting to become more mature and widely adopted, following the same steep trajectory we've seen with Scopes 1 and 2.

Any organization that's looking to lead in decarbonization should report and reduce Scope 3 emissions.

For those organizations reporting to CDP or committed to the SBTi, the challenges of sourcing, capturing and reporting on Scope 3 are immediate and real, but for any organization looking to lead on decarbonization, Scope 3 reporting should be part of the plan. The breadth of the data types can be large, and the size and complexity should not be underestimated. There's no escaping Scope 3 emissions—but getting a technology partner in place early in the process can simplify and streamline the reporting process.



05
Four steps to calculate and report on Scope 3 emissions

ESG reporting software such as the IBM® Envizi ESG Suite can prepare organizations to calculate and report Scope 3 emissions and simplify what may seem like a daunting task. With over a decade of experience supporting sustainability leaders to streamline ESG reporting against all scopes, we recommend a systematic approach that's been tried and tested by our clients.

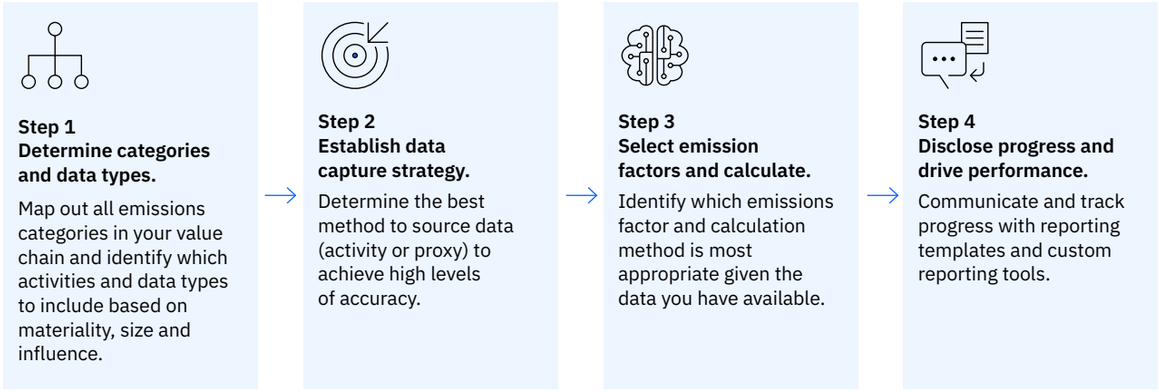


Figure 3. How to calculate and report Scope 3 emissions

Step 1
Determine which Scope 3 emissions categories and data types are most material to your organization's footprint and which are in your power to change.

One of the biggest challenges is establishing the boundaries for your Scope 3 data—determining which emissions categories you will report, and the suppliers and data types within each. The most relevant Scope 3 emissions categories vary greatly both between and within industries. We recommend working with consultants or knowledgeable internal staff to apply the "relevance test" to determine the boundaries of your Scope 3 reporting.

Step 2
Establish a strategy for capturing the best information in the most efficient way.

After you determine the boundaries of your Scope 3 reporting, the next step is to determine where you can source the data.

A consultant can help you assess whether you have access to primary or secondary activity data and where this data can be sourced. For example, you might already have data on purchased goods and services in your organization's accounting system, or you might be able to source data directly from your suppliers.

The IBM Envizi ESG Suite supports this process by automating data collection from existing systems where available—helping reduce manual errors, version confusion and productivity loss. IBM provides a flexible data structure to enable large organizations to easily set and change reporting boundaries so that your GHG emissions calculations stay up to date as your organization changes. Additionally, we provide traceability to the source of data and an audit trail noting when changes were made to the data set, and by whom. This helps reduce the risk of manual errors.



Step 3
Calculate emissions for each category using the most appropriate emissions factors and methods.

After you set your Scope 3 boundaries and determine where you will source your data, you can decide which emissions factor and calculation is most appropriate. Each category of Scope 3 emissions demands different emissions factors and calculation methods. For example, for Category 1—purchased goods and services—if you only have access to spend data (dollar value) without a volume, quantity or weight for an item, you'd use the spend-based method and apply an emissions factor to the dollar value to derive your emissions calculation for that supplier.

In cases where you have a cradle-to-grave emissions factor from the supplier, you can apply the supplier method.

IBM captures and stores publicly available emissions factors from lifecycle data tables as well as US EPA Climate Leaders Program, IEA National Electricity Factors, Intergovernmental Panel on Climate Change (IPCC) and custom emissions factors. We then apply our emissions engine and hierarchy management tools to derive GHG emissions calculations at any level of the organization—whole of enterprise, reporting group, location or sites.

Category 1: Purchased goods and services

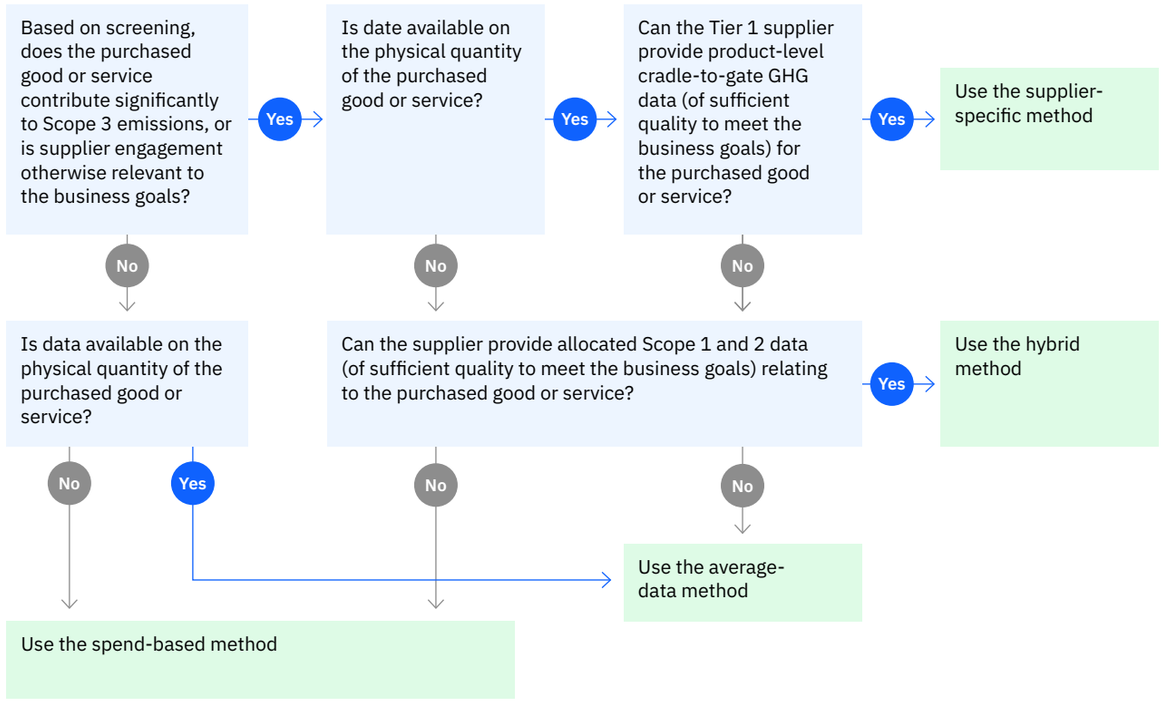


Figure 4. Decision tree for selecting a calculation method for emissions from purchased goods and services[4]

Step 4
Disclose progress and drive performance.

IBM organizes your GHG emissions data into a single source of truth and streamlines submissions to common sustainability guidance and reporting frameworks such as CDP, GRI, ENERGY STAR and GRESB, with prebuilt templates aligned to their requirements.

In addition, IBM provides insight to drive performance improvement in the form of internal reports that highlight emissions reduction opportunities, workflow management tools such as Kanban boards to encourage clear tracking and accountability for data capture tasks, and performance reports that keep key stakeholders informed of progress.

06

How to reduce Scope 3 emissions

Organizations that report and reduce Scope 3 emissions, especially within the top eight emitting supply chains, can use their buying power to encourage and support the suppliers in their value chain to adopt more sustainable business practices.

Although each business unit plays a critical role in business decarbonization efforts, the supply chain is a major place to reduce emissions. In fact, 62% of customers want companies to take a strong stand on issues such as sustainability,[5] and a net-zero supply chain would increase end consumers' costs by just 1–4%.[1] Though customers may drive business, investors and regulators can incentivize more progressive organizational commitments. In fact, 75% of investors now integrate ESG principles into their decision-making, and governments—even at the highest level—are creating binding targets to achieve carbon neutrality.

As your company accelerates its net-zero journey, it will become increasingly clear that solutions to reduce emissions within the supply chain will be the most challenging, yet most impactful. The procurement team, supply chain experts and chief procurement officers can lead this charge to become the unexpected heroes of your organization's decarbonization efforts.

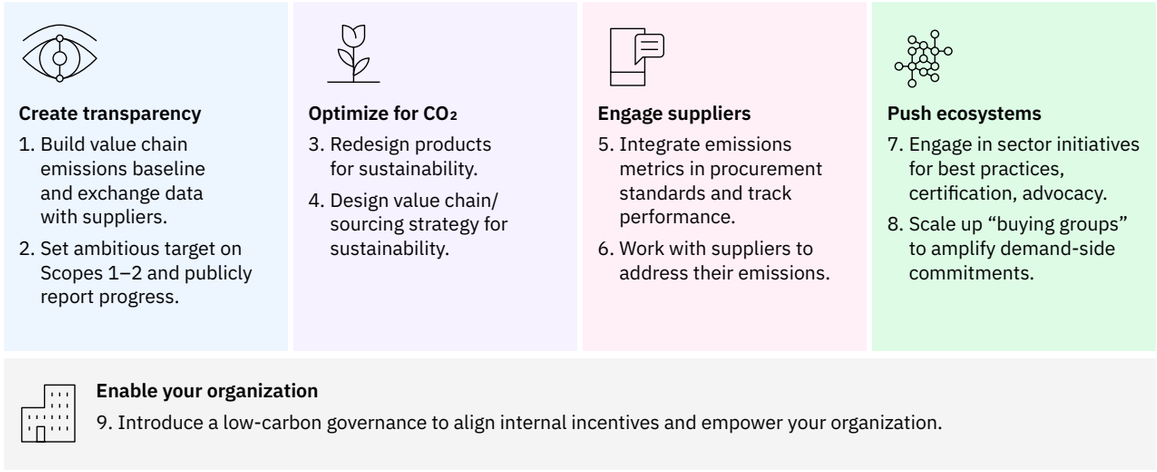


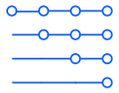
Figure 5: A recent report by the World Economic Forum and Boston Consulting Group[1] outlines key strategies organizations can use to engage and support their supply chains.

07

Simplify Scope 3 accounting with IBM

Scope 3 emissions accounting is complex but not impossible. The IBM Envizi ESG Suite supports clients to account for Scope 3 emissions across all 15 categories and drives leading performance, completely out of the box, helping save you the cost and complexity of developing bespoke solutions. We continually update our software in line with customer needs to ensure they stay ahead. The following sustainability software features can simplify and strengthen your Scope 3 emissions accounting process.

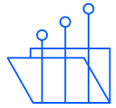




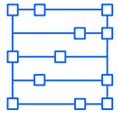
Data capture and automation
The IBM Envizi ESG Suite supports data capture against all Scope 3 categories completely out of the box. We can automate files directly from the source, helping reduce risk and productivity loss.



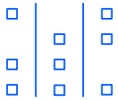
Audit trails and data health checks
The IBM Envizi ESG Suite makes all captured data traceable to the source, including timestamps and an audit trail for any changes subsequently made to that data.



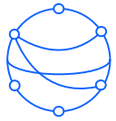
Custom reports to measure and disclose progress
Baseline emissions must be recalculated when the organization undergoes structural changes that change the inventory boundary, such as acquisitions or divestments. The IBM Envizi ESG Suite can simplify the process for recalculating baselines.



Support for emissions factors and carbon accounting methodologies
The IBM Envizi ESG Suite can capture emissions factors for lifecycle databases and nationally recognized data tables such as US EPA Climate Leaders Program, Emissions & Generation Resource Integrated Database (egrid) USA, International Energy Agency (IEA) National Electricity Factors, NZ Ministry for the Environment, and IPCC. In addition, ESG and sustainability software can allow system administrators to define custom time-varying factors.



Project management tools
To make meaningful comparisons of emissions over time, a GHG inventory boundary must be established between data sets. IBM's software contains functionality to help set and manage boundaries over time.



Global coverage
IBM supports multi-country, multicurrency and multi-metric reporting and allows data capture in local units of measure and currencies. It can also convert to standard units to simplify sustainability reporting.

Learn more about how IBM can support you to achieve your Scope 3 emissions reporting goals.

© Copyright IBM Corporation 2022

IBM Corporation
Route 100
Somers, NY 10589

Produced in the United States of America
October 2022

IBM and the IBM logo are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademark is available on the Web at “Copyright and trademark information” at ibm.com/trademark.

This document is current as of the initial date of publication and may be changed by IBM at any time. Not all offerings are available in every country in which IBM operates.

THE INFORMATION IN THIS DOCUMENT IS PROVIDED “AS IS” WITHOUT ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING WITHOUT ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND ANY WARRANTY OR CONDITION OF NON-INFRINGEMENT. IBM products are warranted according to the terms and conditions of the agreements under which they are provided.

1 Net-Zero Challenge: the supply chain opportunity, World Economic Forum, January 2021.
2 Changing the Chain: Global Supply Chain Report 2019/20, CDP, 2019.
3 Corporate Value Chain (Scope 3) Standard, GHG Protocol.
4 Category 1: Purchased Goods and Services, Technical Guidance for Calculating Scope 3 Emissions, GHG Protocol.
5 Getting to “Net Zero” is a big gain for CPOs, Accenture, 30 October 2020.