Operationalizing Scope 3

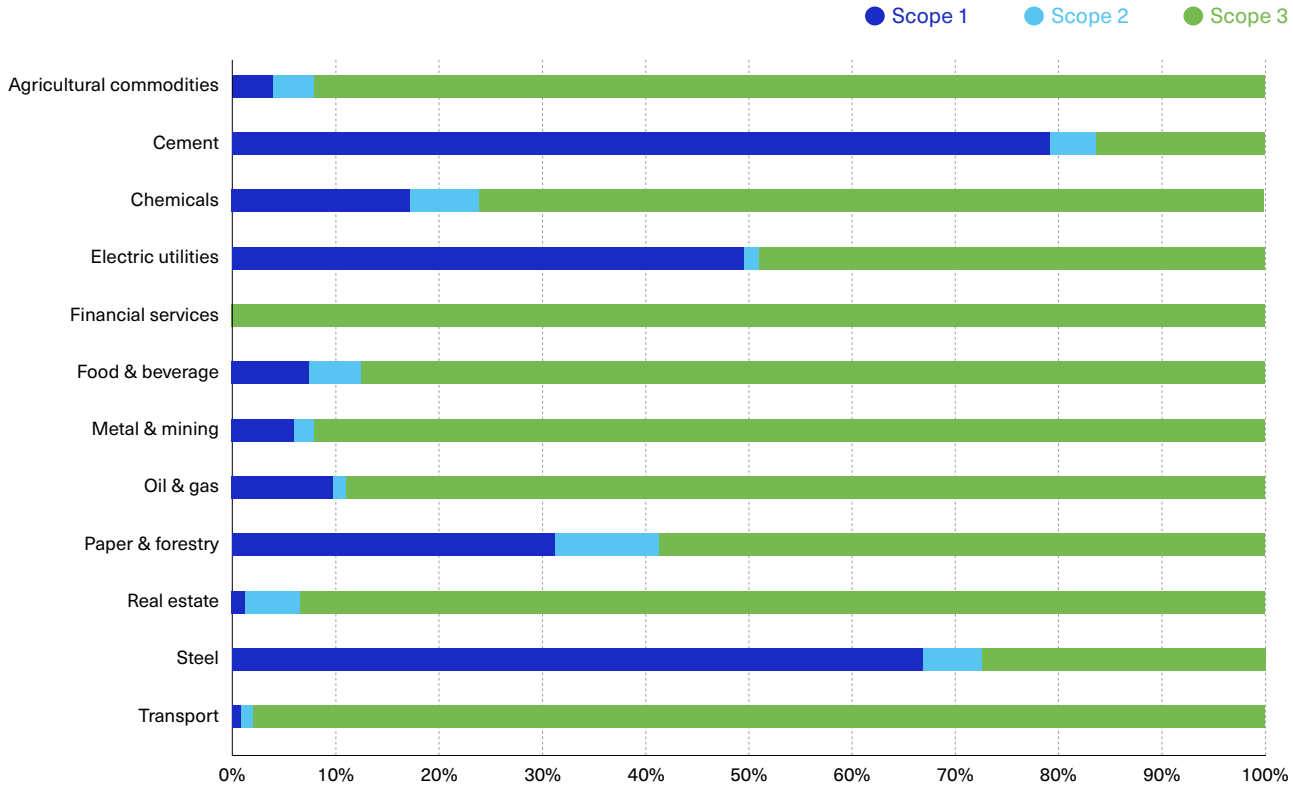
Bias to Action over Accounting

June 2024

1.0 Introduction

Value chain decarbonization is an essential component of corporate climate action – and of companies and investors' ability to manage the risks and opportunities of the climate transition. "Scope 3 emissions", the emissions that occur in companies' value chains but outside their direct operational control, account for over 80% of corporate carbon footprints on average (Exhibit 1).[1] Scope 3 emissions are by definition extensive: they encompass everything from the emissions derived from purchased goods and services (the supply chain) to how customers use end-products.

Exhibit 1. Scope 1, 2 and 3 Emissions by Sector



Source: CDP, "CDP Technical Note: Relevance of Scope 3 Categories by Sector" (April 2022), available at https://cdn.cdp.net/cdp-production/cms/guidance_docs/pdfs/000/003/504/original/CDP-technical-note-scope-3-relevance-by-sector.pdf.

The debate around Scope 3 lies with the "how". In the run-up to the release of the SEC's Climate Disclosure Rules in March of this year, much has been written about the challenges of value chain measurement – the lack of available data, the challenges of double-counting, and the high costs of implementation. The debates around Scope 3 have focused on perfecting granular measurement and distract from its original purpose: as a tool to guide companies' transition planning and emissions reduction action.

We recognize that ultimately Scope 3 estimation may never provide perfectly accurate assessment. Other systems for accounting for value chain emissions may be necessary to acquire the precision needed to support specific product claims, or to enforce carbon taxation that includes supply chain emissions. Nonetheless, Scope 3 provides a useful starting point for action.

In this paper, we provide a set of simplifying principles for practical Scope 3 measurement that set up companies to efficiently assess the risks and opportunities of climate across their supply chains and prioritize decarbonization activities. Companies and investors should recognize:

01 **Perfect is the enemy of the good.** Scope 3 measurement is about developing a "robust enough" view of the most material emissions to prioritize and manage engagement and decarbonization initiatives. Measurement will be a cycle of continuous improvement – therefore, we cannot wait until we get "perfect data" to act. Technology solutions available today can support "robust enough" analysis, while enabling better and better primary data collection - which companies should take advantage of.

02 **To track progress against transition plans, Scope 3 measurement should be performed in such a way where companies can measure the impact of potential interventions,** particularly in the most material categories where companies intend make near-term investments to decarbonize. Certain methodologies (such as spend-based methodologies, described on Page 5) are not appropriate to track these impacts over time, although they may be used to generate overall estimates and identify emissions hotspots.

03 **In material categories, companies should focus on improving primary data quality** through supplier engagement, industry collaboration, and leveraging emerging tools that facilitate data collection and sharing.

04 **Data collection should focus on accuracy and avoid false precision** lest we risk regulatory fallback due to dismissal of Scope 3 measurement being "garbage in, garbage out".

DEFINITION 1

Greenhouse Gas Protocol definitions of Emissions Scopes

Scope 1: Direct Emissions from owned or controlled sources, such as from the combustion of fuel in a company-owned factory.

Scope 2: Indirect emissions from the generation of purchased energy, such as using electricity from the grid.

Scope 3: Indirect emissions created by a company's value chain, such as from the purchase of products from suppliers or through outsourced transportation of goods.

We believe these principles require a collective reframing of companies, investors, and regulators' expectations. Every stakeholder group has a role to play in directing value chain measurement towards action:

→ **Companies and Practitioners:** Recognize that Scope 3 assessment is possible to do cheaply and easily today (and in keeping with regulatory requirements), and that it serves to prioritize action as companies progress on their decarbonization journey. As companies build out transition plans for specific areas of their value chains, they should leverage technology solutions and partnerships for more informed, precise measurements to identify hotspots and monitor the impact of interventions.

→ **Investors:** Scope 3 is a useful indicator of where individual assets and portfolio companies are exposed to climate risk and opportunity. Investors should recognize that companies are on a glide path: companies early in their journey should work to identify emissions drivers to prioritize. As companies progress, investors should encourage higher resolution value chain emissions analysis to support value-add upstream and downstream interventions.

→ **Innovators and Industry Groups:** These entities play a crucial role in continuing to make the collection and provision of primary data more easily (and cheaply) accessible across value chains – and, through the appropriate industry groups and NGOs, create forums for collective action. These entities can also play a role in developing the functionality to embed sustainability data into procurement and supply chain processes, account management, and product development – both to enhance data quality and to accelerate the business value of sustainable action.

2.0 The Mandate for Measurement – and Action

The regulatory mandate for Scope 3 is already here.

Global corporations operating across Europe and California must meet Scope 3 reporting requirements, per the EU's Corporate Sustainability Reporting Directive (applying to ~50,000 firms globally) and California's Climate Corporate Data Accountability Act (applying ~5,400 firms).[2,3] The US SEC Climate disclosure Rule does not require Scope 3 reporting, citing significant concerns about the costs of implementation and poor data quality – which can be addressed by reframing companies' approach to Scope 3 estimation.

Regulations, however, require Scope 3 reporting at the aggregate firm-level only – which is to say, at a level that is not highly informative to management teams or investors as to where risks and opportunities lie. Businesses looking to set Scope 3 targets or develop transition plans have reason to pursue higher resolution measurement and estimation, in areas where organizational emissions are material.

Robust Scope 3 measurement is important because value chain decarbonization can create business value. While that specific value varies by sector, through engaging on value chain emissions can unlock:

→ **Risk management and supply chain resilience:** Accelerating suppliers' climate transition helps prepare all value chain participants to face increasingly volatile physical risks (impacting food systems, physical resources and infrastructure) and changing policy requirements.

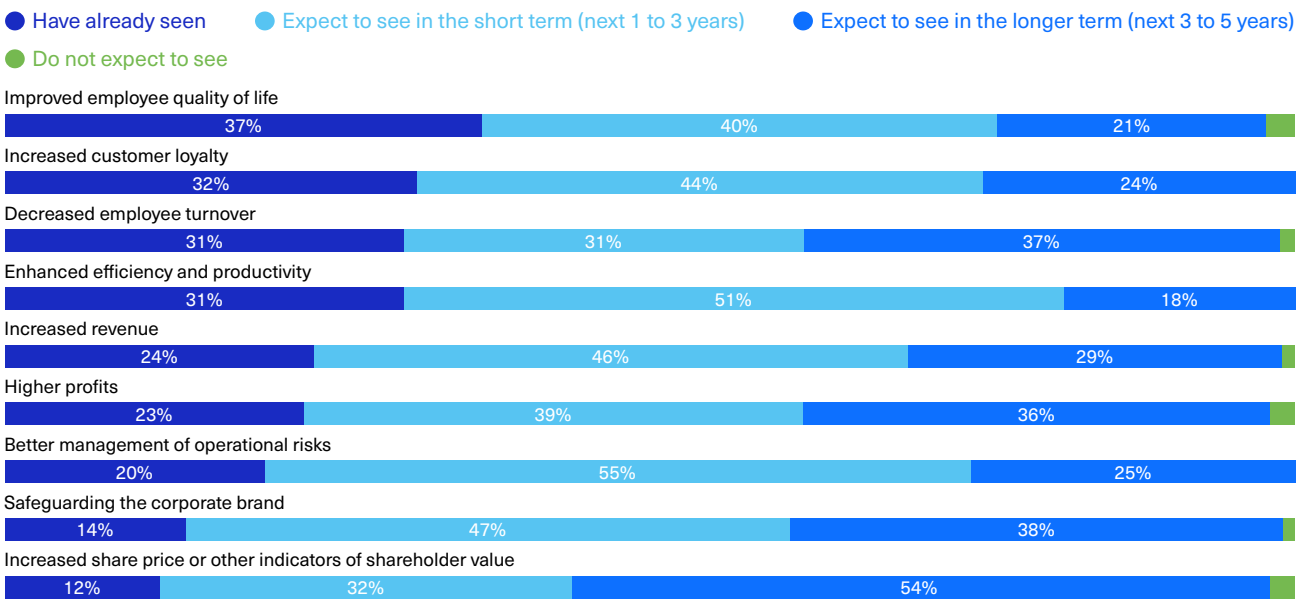
→ **Cost reductions:** Depending on an organization's placement in a value chain, as much of 70% of costs flow from the supply chain. Optimizing inputs of energy, water and materials and strategic supplier relationships can help manage costs.

→ **Growth through sustainable products:** Supply chain decarbonization enables companies to make product claims, improve customer loyalty and access new markets.

→ **Strengthened stakeholder relationships:** Decarbonization creates opportunities to strengthen ties with customers, employees, suppliers and investors, as well as respond to growing demand for emissions measurement and reductions.

Among a survey of over 500 large corporations in the Americas, supply chain executives who recently implemented sustainability programs broadly observe or expect to observe value across all the above dimensions:

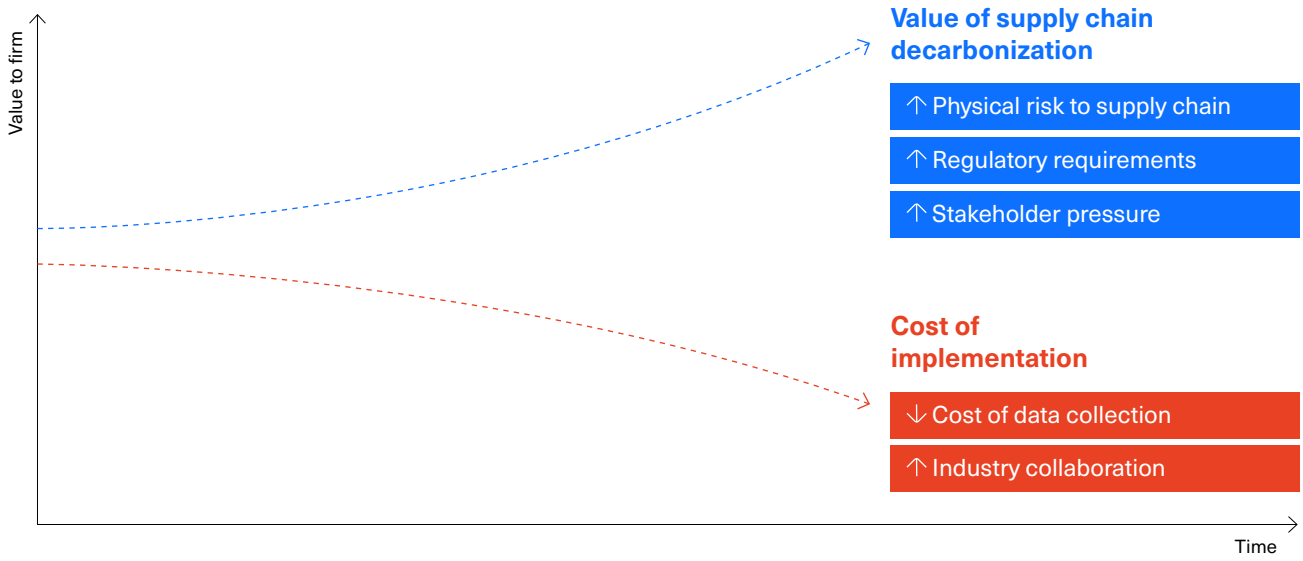
Exhibit 1. Observed and Projected Business Value of Supply Chain Sustainability Efforts



Source: EY, "How sustainable supply chains are driving business transformation" (September 2022), available at https://www.ey.com/en_us/insights/supply-chain/supply-chain-sustainability-2022.

Exhibit 3. Illustrative: The business case for value chain engagement is growing

Source: Galvanize Climate Solutions



Much has been made of the proposed costs of implementing emissions assessment (and disclosure); the SEC's climate disclosure rule devotes no less than 127 pages to analysis of the costs and benefits.[5] Ultimately, the SEC states they "are unable to reliably quantify" the potential costs of implementation, reflecting the lack of consensus around approach.

Cost of implementation is a function of depth of analysis. Delivering a *firm-level* corporate Scope 3 estimate for the purposes of meeting regulatory reporting requirements will generally much cost less than higher resolution analysis.[6] Costs of implementation rise with resolution (i.e. deriving scope 1, 2 and 3 emissions across multiple tiers of suppliers, potentially disaggregated by business line or product –which requires much greater analytical resource– and methodology (spend-based methodologies vs activity-based or hybrid approaches).

Higher resolution assessment is likely required to unlock the business value of Scope 3 decarbonization. Additionally, higher resolution assessment helps partially address the inherent issue of double-counting emissions in Scope 3 assessment. However, we believe that 1) proper prioritization can limit the need for deep data collection to areas where emissions are most material and/or where meaningful action can be taken; and, 2) continued technology innovation and efforts by industry groups will play a growing role in managing the costs of measurement by advancing industry-specific measurement standard and abatement solutions.

In short, the business case for value chain engagement is growing as the costs of assessment come down and the benefits of timely climate action rise.

DEFINITION 2

Value Chain Emissions Estimation Methodologies

Spend-based Method: Calculating carbon emissions by multiplying the cost of a purchased good or service by an emissions factor, which is based on an industry average of emissions levels per unit spend.

Activity-based Method: Calculating carbon emissions by multiplying the physical unit of activity (such as the mass of material purchased, the distance travelled or the number of units sold) by an industry average emissions factor. This method requires access to supplier primary data.

Hybrid Method: The practice of using all activity-based data available to implement the activity-based method, and estimating missing activity via the spend-based method.

RESOURCES

→ **Case Studies:** Corporate Leaders Measuring, Disclosing & Reducing Scope 3 Emissions (Ceres)

→ **Climate Disclosure Regulatory Landscape Analysis** (Transform to Net Zero)

→ **California SB 253 and SB 261:** A Guide for Companies (Watershed)

3.0 Innovation and Collaboration for Measurement at Scale

In some ways, Scope 3 is not so much a measurement problem as a communication and coordination problem: few, if any, companies can tackle or even measure Scope 3 well alone. This is why we are bullish on the opportunity for technology and industry collaboration to continue to make measurement faster, cheaper and more robust.[a]

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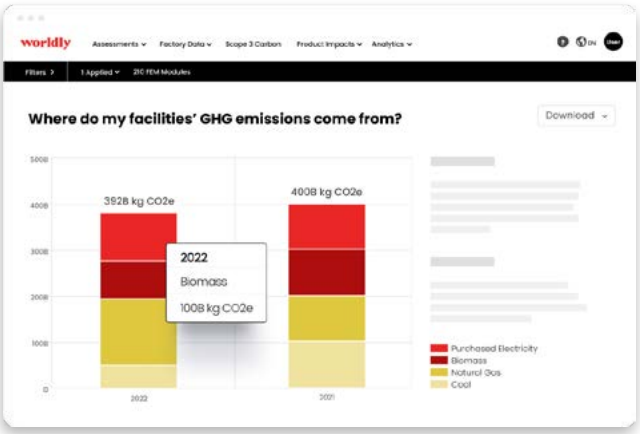
Exhibit 4. Worldly's Sustainability Insights and Measurement Platform



Technology providers can facilitate and aggregate primary data collection at scale to drive deep supply chain visibility. For example, in retail and apparel, over 90% of corporate emissions come from the value chain – and yet 45% of global supply chain leaders have limited visibility into upstream operations.[7] Worldly addresses this problem by collecting and verifying primary data in a consistent way from tens of thousands of factories around the world. Worldly then acts as central data platform for brands and retailers who source from this global manufacturing base; insights from this data empower brands to strategically invest in supply chain efficiencies for both impact and value. Worldly is also an example of the benefits of industry collaboration: Worldly was spun out of the Sustainable Apparel Coalition, the industry group formed by Walmart and Patagonia to develop a consistent approach to sustainability measurement.

Technology solutions can also be used analyze vast amounts of supply chain information, geospatial data and other inputs to refine emissions calculations at scale. Agricultural resilience platform Regrow is one such example: Regrow provides businesses with field-level visibility across their ag supply chains by combining remote sensing inputs and process-based modeling. Regrow's technology is capable of delivering robust and comprehensive Scope 3 measurement across sourcing regions without supplier surveys.

Finally, technology providers can also enable the integration of sustainability data into sourcing, supplier management and product development. Higher carbon data fidelity enables companies to integrate sustainability data into procurement functions, allowing buyers to compare and incentivize suppliers based on emissions. Embedding sustainability in these upstream functions also enables meeting value chain emissions targets more cost-effectively.

Industry initiatives (including trade groups and NGOs) play an important role in developing standardized measurement approaches and opportunities to partner on decarbonization. Companies operating in the same industry or who share value chain elements are often a natural starting point for such efforts. These groups also provide the opportunity for companies to engage on challenges that may be unique to specific sectors.

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Exhibit 5. Regrow's Sustainability Insights Platform

For example, although food & agriculture contributes over a quarter of global greenhouse gas emissions, until recently there has been both a lack of measurement guidance and measurement capability to support supply chain action at scale. Agribusinesses are uniquely challenged by the lack of traceability of commodities, which are sourced from "supply sheds" - regions of suppliers who provide functionally equivalent goods or services.

To address this, the industry collaboration Value Change Initiative (anchored by agribusiness leaders including General Mills, PepsiCo, Mars, Danone and others) partnered with Regrow to establish best practices for measuring and monitoring agricultural practices and ecosystem outcomes at the supply shed level. By defining approaches to measure relevant Scope 3 categories and account for supply chain interventions such as land use change and crop rotation, market participants have much clearer license to pursue reductions and insetting.[8] This initiative also allows for collaboration and co-investment by companies to share the costs and benefits of building capacity to support growers in adopting sustainable practices.

Other consortia play similarly valuable roles in other sectors, although not all industries have active initiatives. Table 1 provides several examples.

Table 1. Active Industry Consortiums for Value Change Action *(Not exhaustive)*

Consortium	Sector	# of Members	Description
Cascale	Retail & Apparel	300+	Coalition of brands and manufacturers developing and maintaining tools for effective measurement of social and environmental impacts (the Higg Index) as well as collaborative partnerships for action
Drive Sustainability	Automotive OEMs	15	Partnership of responsible automotive manufacturers focused on improving and measuring the social, ethical and environmental performance of automotive supply chains
Value Change Initiative	Dairy Agribusiness Apparel	70+	Collaborative forum focused on defining sector-specific guidance to address key barriers to scalable Scope 3 measurement and action across dairy, apparel, and food & agriculture
Semiconductor Climate Consortium	Semiconductor & component manufacturers	100+	Developing best practice for Scope 1-3 measurement for semiconductor companies and aligning on common approaches to improve and reduce emissions in the semiconductor value chain
Sustainable Markets Initiative Health Systems Task Force	Pharmaceuticals	7	Developing end-to-end healthcare emissions calculation standard and tools to allow stakeholders to track emissions across the care pathway; aligning on common supplier standard to incentivize collective decarbonization efforts

4.0 Simplifying Principles for Scope 3

To efficiently pursue Scope 3 measurement, companies must also adapt their approaches. We provide here a set of simplifying principles for Scope 3 to allow companies to assess exposure to climate risk and begin reducing their carbon footprints – the actual drivers of measurement's value. The guidance described here is not meant to supersede regulatory requirements, or to replace the GHGP measurement protocol[9] (which is currently being updated[10]), but rather to provide a lens for navigating the choices practitioners make when measuring or evaluating Scope 3 emissions.

01 **Perfect is the enemy of the good. Corporate Scope 3 measurement is about developing a "robust enough" view of the most material emissions to prioritize and manage engagement and decarbonization initiatives.** Perfectly accurate and granular supply chain emissions accounting is not realistic and can be detrimental – a recent IBM survey has found that corporations are spending 43% more on sustainability reporting than sustainability actions.[11] Regulators and investors should not expect companies to deliver product lifetime cycle analysis (LCA)[12] or Environmental Product Declaration (EPD)[13] -level measurement for every line item of Scope 3, and companies should not focus on this level of detailed analysis where it does not enable near-term decarbonization. Additionally, there is never an endpoint to "better data" - energy mix, product manufacturing locations, product materials, and a host of other factors are ever changing and will require constant updating if precise accounting of emissions is the primary goal.

In the spirit of letting the good drive action, FTSE Russell has found that the top 2 emissions categories account for between 72 and 89% of all Scope 3 emissions across every major economic sectors. As seen in Table 2, *Purchased goods and services and Use of sold products* drive the majority of emissions in any sectors. These categories will typically be where a higher resolution look at Scope 3 emissions is warranted - and where the bulk of impact will come from.

Table 2. Classification of Material GHG Categories by Sector

ICB code	Industry or sector	Most material Scope 3 GHG emis-sions categories	Share of overall Scope 3 intensity covered (%)
ICB 10	Technology	Purchased goods and services; use of sold products	88%
ICB 15	Telecommunications	Purchased goods and services; use of sold products	76%
ICB 20	Health Care	Purchased goods and services; use of sold products	78%
ICB 35	Real Estate	Capital goods; downstream leased as-sets	82%
ICB 40	Consumer Discretionary	Purchased goods and services; use of sold products	87%
ICB 4050	Travel and Leisure	Purchased goods and services; fran-chises	75%
ICB 45	Consumer Staples	Purchased goods and services; use of sold products	78%
ICB 50	Industrials	Purchased goods and services; use of sold products	89%
ICB 5510	Basic Resources	Purchased goods and services; Pro-cessing of sold products	78%
ICB 5520	Chemicals	Purchased goods and services; use of sold products	72%
ICB 60	Energy	Purchased goods and services; use of sold products	88%
ICB 65	Utilities	Fuel- and energy-related activities; use of sold products	89%
ICB 6510	Waste and Disposal Services	Purchased goods and services; up-stream transport & distribution	74%

Source: FTSE Russell, "Solving the Scope 3 Conundrum" (January 2024), available at https://www.lseg.com/content/dam/ftse-russell/en_us/documents/research/solving-scope-3-conundrum.pdf

02 **Scope 3 measurement should be performed in such a way where companies can measure the impact of potential interventions.** In this light, companies should move beyond using spend-based accounting[14] alone as it does not generally provide a solid basis to accurately determine Scope 3 emissions, much less quantify the impact of any emissions reducing actions. While spend-based accounting holds value as a screening methodology for companies with no or few physical products, most companies will be better served by using a hybrid approach that combines the activity-based approach for physical goods with spend-based accounting for services and other non-physical categories. Taking this hybrid approach is likely to be more reliable in identifying where action will be most beneficial. Many technology providers (including those mentioned in this paper) are capable of delivering these approaches today.

03 **Relatedly, emission calculation precision without accuracy is far worse than accuracy without precision.** Many measurement and accounting exercises focus on reporting a singular value without any associated uncertainty. This behavior risks misidentifying best opportunities for action, overstating or understating the impact of actions taken, and presents regulatory risk in that opponents of action on emissions can easily point to errors or inaccuracies in Scope 3 reporting as reason to forego the exercise altogether.

04 **In material categories, companies should focus on improving primary data quality through supplier engagement, industry collaboration and leveraging emerging tools that facilitate data collection and sharing.** Meaningful supplier engagement is critical – while Scope 3 measurement treats all supplier reported emissions as "primary data", if those suppliers are themselves using estimating methodologies for their emission calculation there is a risk that these reported emissions are insufficiently accurate to drive action. Therefore, working closely with suppliers to ensure that they are utilizing best practices from their industry and jointly leveraging emerging tools for better data collection and reporting across the product value chain will help to ensure that all are improving their emissions reporting activities.

Finally, action is the goal. Taking action to reduce and remove emissions today is critical and we should pursue measurement as a means to guide that action.

Better data collection is a never-ending process. To realize the value and promise of value chain measurement –from finding actions with the highest benefit to cost ratio, ensuring that actions taken get appropriately marketed to customers, or steadily improving annual emissions reporting– all market participants can take steps today.

RESOURCES

- **Scope for Improvement:** Solving the Scope 3 Conundrum (FTSE Russell)
- **How to Account and Report on Value Chain Impacts** (Value Change Initiative)
- **The 1.5C Supplier Engagement Guide** (Exponential Roadmap)
- **Transform to Net Zero:** Resource Library

REFERENCES

1 PwC, "Tackling the Scope 3 challenge" (September 2022), available at https://www.pwc.com/gx/en/issues/esg/scope-three-challenge.html.

2 Kirkland & Ellis "California Climate Disclosure Bills Would Have Far-Reaching Implications for Companies doing Business in the State" (April 2023), available at https://www.kirkland.com/publications/kirkland-alert/2023/04/california-climate-disclosure-bills.

3 Akin, "The EU Corporate Sustainability Reporting Directive" (November 2023), available at https://www.akingump.com/en/insights/alerts/the-eu-corporate-sustainability-reporting-directive-csrd-application-from-fy-2024.

4 Deloitte, "The Business Case for a Sustainable Supply Chain", available at https://deloitte.wsj.com/cio/the-business-case-for-a-sustainable-supply-chain-01671241372.

5 SEC, "The Enhancement and Standardization of Climate-Related Financial Disclosures for Investors" (May 2024), available at https://www.sec.gov/files/rules/final/2024/33-11275.pdf.

6 TASA Analytics, "Supply Chain Emissions Strategies" (2024).

7 Drapers Bespoke, "How important is data to your sustainability progress?" (March 2024), available at https://www.drapersonline.com/insight/the-industry-view/how-important-is-data-to-your-sustainability-progress.

8 Insetting is the practice of investing in carbon reduction or removal projects (such as nature-based solutions like reforestation and regenerative agriculture) within a company's own supply chain.

9 For more detail on the GHGP accounting protocol, see "Corporate Value Chain (Scope 3) Accounting and Reporting Standard", available at https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf.

10 For details on the update, see "Greenhouse Gas Protocol – Detailed Summary of Scope 3 Stakeholder Survey Responses", available at https://ghgprotocol.org/sites/default/files/2024-03/Scope-3-Survey-Summary-Draft.pdf.

11 IBM, "Beyond checking the box: How to create business value with embedded sustainability" (2024), available at https://www.ibm.com/downloads/cas/9GOGKOGZ.

12 For more info on LCA, please see "Life Cycle Analysis (LCA) of Energy Technology and Pathways", available at https://netl.doe.gov/LCA.

13 For more information on EPD, please see "The International EPD System", available at https://www.environdec.com/home.

14 For an overview of the spend-based accounting methodology, see "Calculating Scope 3: Spend-Based vs. Supplier-Specific" available at https://figbytes.com/blog/calculating-scope-3-spend-based-vs-supplier-specific/.

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Published by Galvanize Climate Solutions, 2024