

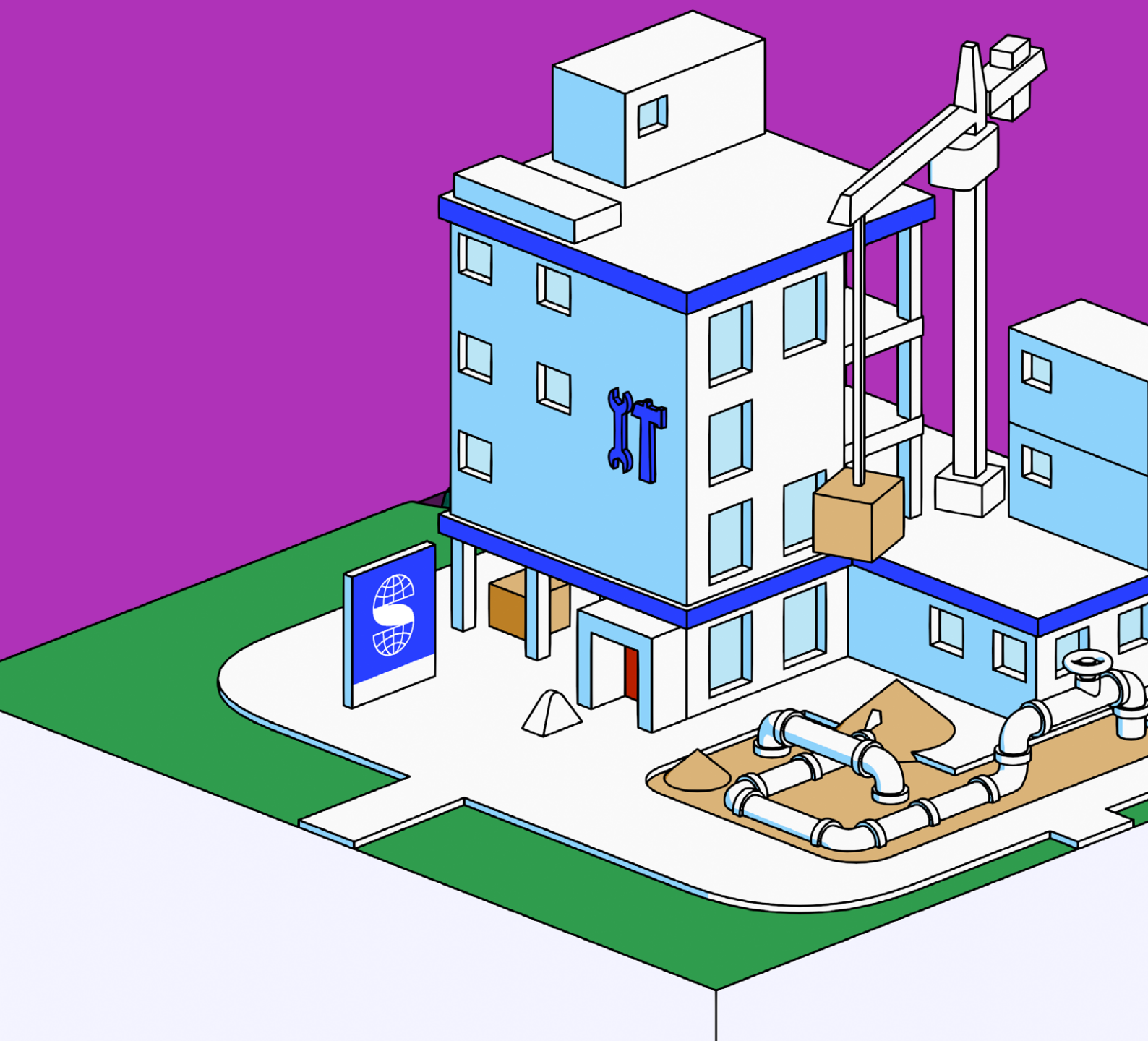
# Your guide to supply chain decarbonization



## Construction sector

Guide

Supply Chain



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## In our guide we explain

1. Some of the common hurdles companies face when measuring supply chain emissions.
2. How you can start measuring the footprint of your value chain – and why you don't have to wait for the perfect data.
3. How you can efficiently and effectively engage your suppliers in emissions measurement.
4. How you can set joint reduction targets and report your progress against these.

You'll also learn how Sweep for Supply Chain can help you achieve your climate goals and become a Forever Company.

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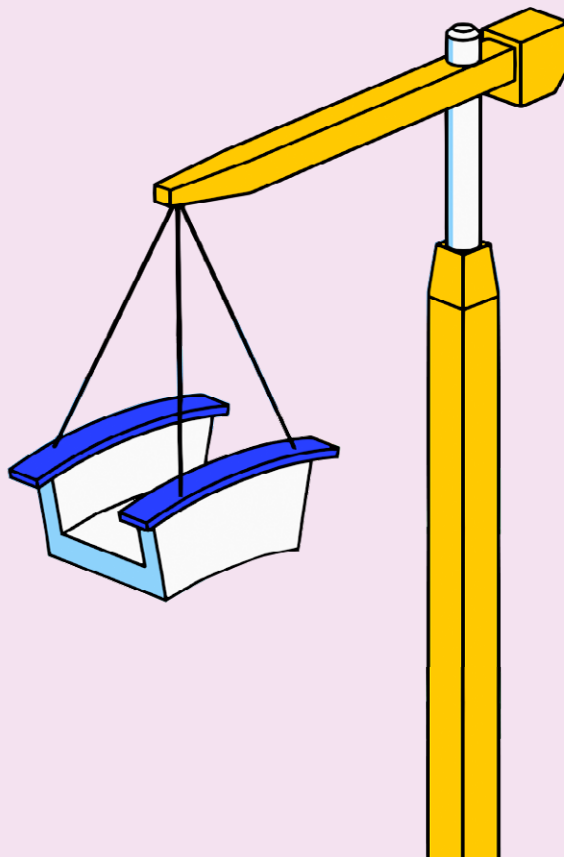
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# Introduction

Did you know that the built environment generates 40% of our annual global emissions? The vast majority of this carbon footprint comes from the production and transportation of building materials such as cement, and production waste emissions are another important contributor.

Inger Andersen, Executive Director of the United Nations Environment Programme (UNEP) stated: "The buildings sector represents 40% of Europe's energy demand, 80% of it from fossil fuels. This makes the sector an area for immediate action, investment, and policies to promote short and long-term energy security."

The [2022 Global Status Report for Buildings and Construction](#) revealed that emissions from building operations have reached an all-time high of around 10 gigatons of CO2. This is a 5% increase from 2020 and 2% higher than the previous peak in 2019 – highlighting that the gap between the climate performance of the sector and the 2050 decarbonization pathway is widening.

## New legislation

In recent years, industry standards and legislation have become stricter, making sustainability a priority in construction supply chains. Take a look at the latest legislation in the last chapter of this guide.

In summary, building supply chains have a significant impact on our climate - and companies' reputations and revenues are increasingly reliant on taking meaningful climate action across these chains.

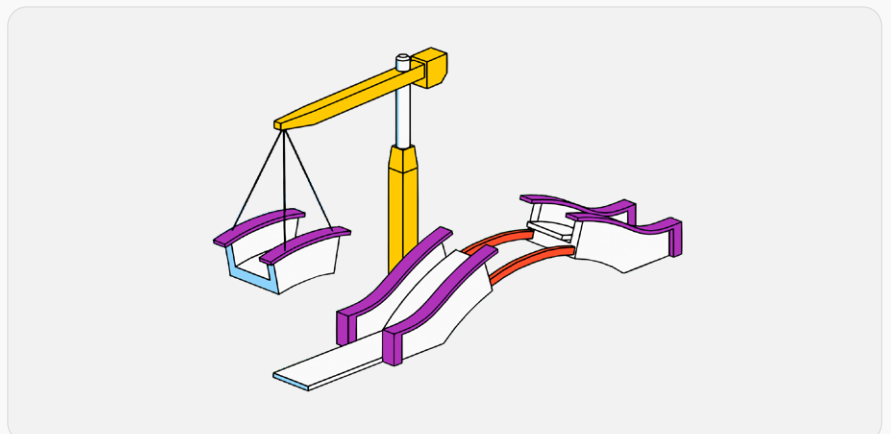
The great news is that as a construction company, you have the power to make sustainable procurement choices, and in doing so to really move the needle on climate change. And because our world is so interconnected through supply chains, the actions of a single organization can have ripple effects throughout the global economy.

## Sweep can help you map a smoother path to decarbonization

Sweep for Supply chain automates supplier data collection and drives collaborative emissions reduction. It enables you to:

- Engage your suppliers in climate action
- Jointly identify emission hotspots
- Set collaborative reduction activities
- Climate proof your purchasing decisions
- Use carbon data to optimize supply chain performance

We'll talk you through the complete supply chain climate journey below and show you how we can help at every step.



# Introduction

## The business benefits of acting on your supply chain emissions

Acting on the carbon footprint of your supply chain can also bring you a range of business benefits. Here are just a few.

1. **Cost reduction opportunities.** Emissions measurement can help you identify carbon hotspots and introduce plans to improve energy efficiency across your value chain, thereby saving you money.
2. **Reduced waste.** Green buildings reduce waste as they have a smaller environmental footprint and use renewable energy and materials. They also use water in a more effective and environmentally friendly way.
3. **Future-proofed compliance.** New legislation is already coming into force in some countries which makes it compulsory to report on your supply chain emissions - and this is likely to become more widespread. If you start taking action now, you'll increase your regulatory resilience.
4. **Investor appeal.** Investors know that companies that fail to take meaningful climate action don't have a future in the construction industry. So if you're looking to secure funding, embracing sustainability now simply makes business sense.
5. **Improved reputation.** Taking climate action across your entire supply chain will show your partners, clients and stakeholders that you're truly committed to sustainability, which will boost your competitive advantage.

### Climate training

Providing sustainability training for your staff can yield many benefits. A well trained sales team can effectively convey your low-carbon value proposition to customers. Your procurement team can motivate suppliers to reduce their own carbon footprint. Training is also key to cross-departmental collaboration on climate action. Find out more on how Sweep can help in our guide.

All this shows that taking a holistic approach to sustainability can set you up for future success.

**It's important to remember that responsibility for supply chain emissions is shared. Without effectively engaging your suppliers, you won't be able to achieve your climate goals.**

But get them on your side, and you have a good chance of driving collective and collaborative climate action. And in doing so, you'll become a Forever Company.

# The supply chain as part of Scope 3

Before we get into the business of measurement, let's get a quick overview of scopes.

When business leaders assess their carbon footprint, they often find the largest contributor is category 1 of Scope 3 emissions, which refers to "purchased goods and services." But these emissions can be the trickiest to measure.

## Scopes – A quick recap

### Scope 1

emissions are direct emissions from sources that are owned or controlled by your company, such as emissions from office buildings or company vehicles.

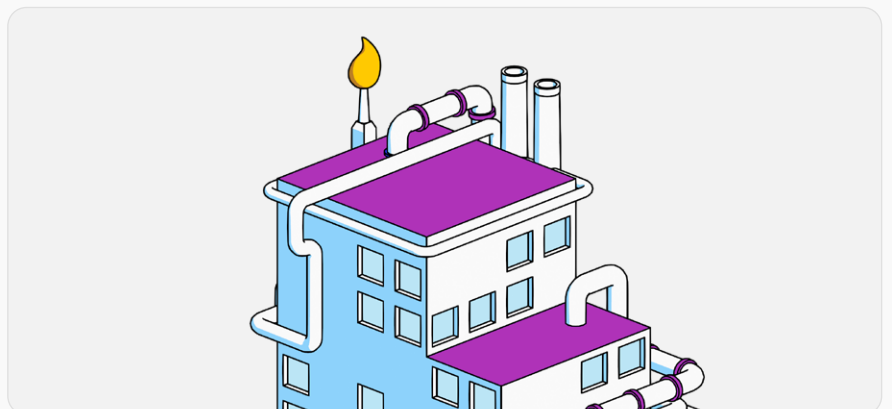
### Scope 2

emissions are indirect emissions from the generation of purchased electricity, heat, or steam that your company uses.

### Scope 3

emissions are all other indirect emissions that aren't included in Scope 2, such as the emissions from the extraction and production of purchased materials, the transport of goods, and the disposal of waste.

The three scopes were established by the Greenhouse Gas (GHG) Protocol to help governments and business leaders to understand, quantify, and manage their emissions. It also enables data to be compared between companies and sectors.



## 1. Why it's challenging to measure your Scope 3 emissions

Scope 3 emissions come from sources not owned or controlled by your company. These include both upstream and downstream activities, such as:

### Upstream Emissions

Upstream emissions refer to the emissions generated in the creation, transportation, and distribution of raw materials and energy used in the production of goods or services. These emissions occur before the product reaches the consumer.

### Downstream Emissions

Downstream emissions refer to the emissions generated in the use and disposal of products and services by the end consumer.

### Upstream emissions

- Purchased goods and services
- Capital goods (including tools and machinery)
- Raw material transportation
- Generated waste
- Business travel
- Employee commutes
- Leased assets

### Downstream emissions

- Transport and distribution of your product to consumers
- Processing of sold products
- Use of sold products
- Disposal or recycling of sold products
- Franchises
- Investments

As these emissions are produced by various external stakeholders, they can be difficult to measure. Below are some of the common challenges that companies encounter with Scope 3 emissions measurement:

1. **Collecting data.** Gathering accurate and comprehensive data on your full Scope 3 carbon footprint means engaging with many stakeholders, all of whom are likely to have different types of climate data.
2. **Managing data.** Managing and analyzing large amounts of disparate climate data and integrating this with your existing systems can be difficult and time-consuming.
3. **Engaging stakeholders.** With many conflicting business priorities, it's often hard to get buy-in both internally and externally for Scope 3 carbon measurement.

“Before Sweep, a person with the patience of an angel had to send hundreds of emails and hold many meetings, then manually enter data into spreadsheets. It's confusing and time-consuming when you have a network of 4,000+ suppliers,” says Res Witschi, Delegate For Sustainable Digitalization at Swisscom.

Here's how the Swiss telecom giant is using Sweep to empower teams, partners, and customers to reduce their collective emissions.

## 2. Supply chain carbon measurement challenges

When looking at the supply chain itself, there are further challenges to overcome:

1. **A lack of carbon knowledge.** Many suppliers don't understand what a carbon footprint is or how to begin measuring their emissions. Educating them in this regard is therefore crucial.
2. **The sophistication of the supply chain.** Many supply chains are formed of multiple tiers of suppliers – which makes it difficult to get a good depth of measurement.
3. **A lack of data accuracy.** In upstream supply chains, most emission estimates focus on the organization as a whole. They would have to be translated into product level emissions to be easily compared. At the moment, there is no standard methodology for this.
4. **Limited trust among value chain partners.** Some suppliers are wary of sharing detailed carbon data as they fear it could lead to the breakdown of their cost structures.

### Sweep School: Valuable training and onboarding materials

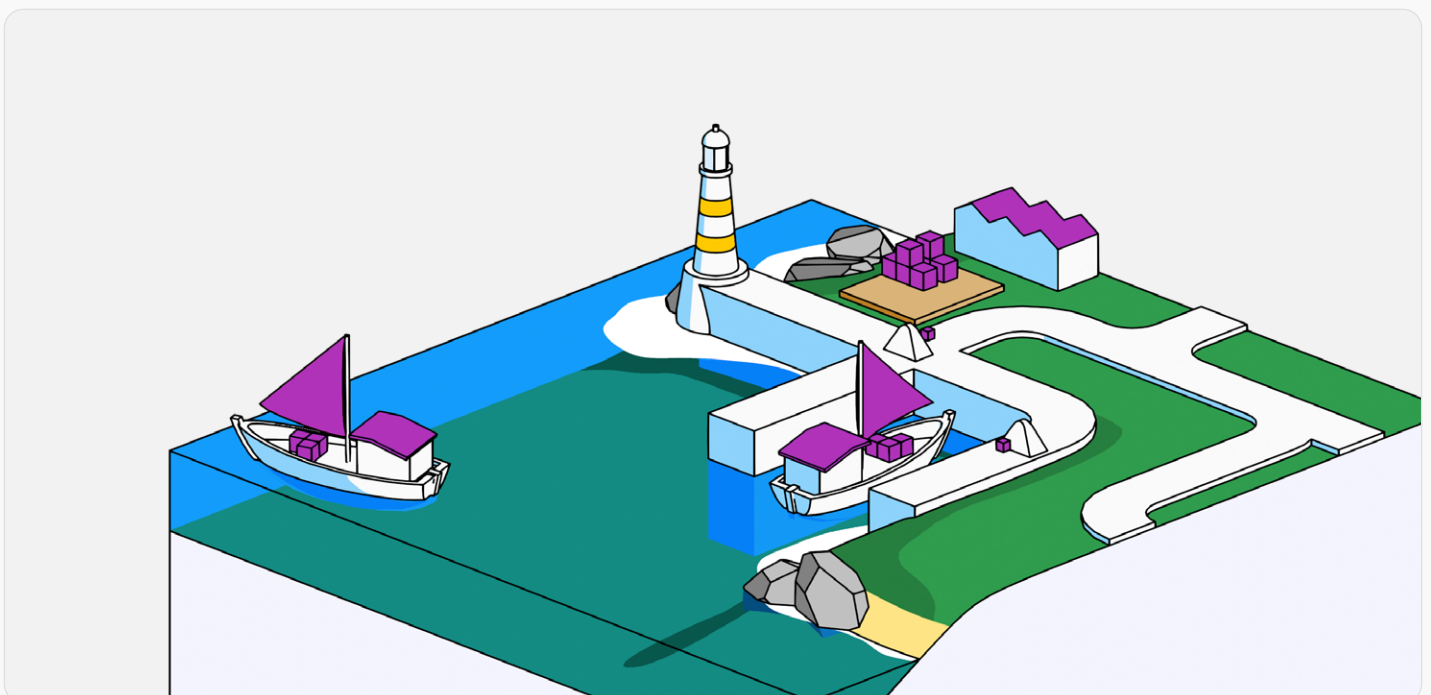
It's important to get everyone in your supply chain up to speed with understanding carbon footprint measurement and reduction. We've created a training program which will be an essential part of your onboarding to Sweep. It's accessible to your internal teams and everyone in your supply chain.

In short, **tackling supply chain emissions is about having a strong dialogue and good governance.**

The collective goal should be to **make sure your customer-supplier relationships revolve around more than just pricing.** Why? Because when we add a climate-action dimension to this relationship it benefits both sides.

**Suppliers:** Showing a commitment to climate action is increasingly a prerequisite to winning new business.

**Customers:** Engaging suppliers in emissions measurement and reduction helps companies improve their reputation, make smarter procurement decisions, and comply with the latest climate regulations.





# Measurement: Engaging your suppliers

## Three ingredients for an effective calculation

There are three key ingredients needed for a robust calculation of your supply chain emissions:

1. The right measurement method for your baseline.
2. The sophistication of the supply chain.
3. A lack of data accuracy.

Let's go through each of these in more detail.

### 1. Select the right method based on your data

The best method for establishing a baseline measurement for your supply chain emissions depends mostly on the supply chain data at your disposal and the resources available for tracking and measuring emissions. Below, we give you an overview of the four key ways to calculate the carbon footprint of your supply chain. Sweep helps you to select the right method based on your data maturity.

#### Emissions baseline

A baseline emission measurement is the initial measurement of a company's greenhouse gas emissions that serves as a reference point for tracking progress towards carbon footprint reduction goals.

#### Four methods of measurements

**Industry averages** – These are sectoral emission factors, or averages of the emission data submitted by organizations operating in a given sector. They can be used as a starting point for carbon footprint calculations in the absence of more accurate data.

**Spend-based** – This is based around the cost of purchased goods or services. The value is multiplied by a given emission factor to calculate an estimate of your total emissions. Spend-based emission factors are derived from an industry average of emission levels usually at a national level. This means they aren't super accurate. On the plus side, spend-based methodology is relatively simple to implement and can provide a useful approximation of your company's indirect emissions.

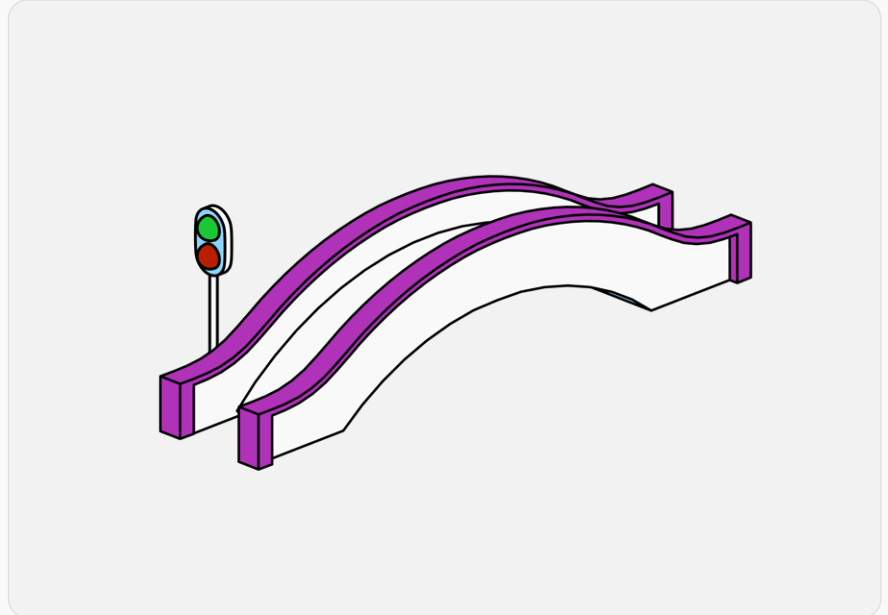
**Supplier-based** – As this is primary data, it's the most accurate form of Scope 3 accounting. It involves tracking the emissions from individual suppliers, and then using that data to calculate

the emissions associated with your company's purchased goods and services.

**Hybrid** – The hybrid method uses a mix of the above methodologies. It usually presents a fairly accurate picture of your total emissions, but it can be complex and resource-intensive to implement.

**Primary emission data**

This type of data refers to the actual, measured or calculated emissions from a particular source or activity. It's typically collected through direct measurement, monitoring or modeling of the emissions generated by activities such as fuel combustion, industrial processes, or transportation.



**2. Map your supply chain contributors**

Mapping your supply chain contributors is crucial as it gives you a clear picture of the activities, processes, and systems involved in the entire chain. It also helps you identify your top emitters.

**By mapping your value chain, you can get complete picture of your carbon footprint and identify opportunities for emission reductions.**

With a clear map (which we refer to as a 'Tree' in Sweep) you'll be able to visualize exactly what data you'll need and from whom. You can also use this to conduct a baseline measurement of your emissions using the data that you have at your disposal.

“We need to start demystifying the challenges of supply chain emissions. It starts with empowering teams and supplier educational resources and user-friendly tools like Sweep. When I started digging into QIMA's carbon footprint, Sweep's Tree was incredibly helpful to understand, structure, and get a full overview of our global emissions. That's a key step to identifying missing data and our main emission sources, and taking action from there.” Anouschka Jansen, Director Sustainability Solutions at Qima.

### 3. Collect more accurate data and set targets

Focus on the strategic suppliers using the Pareto principle of 80-20: 20% of your suppliers are likely responsible for 80% of your carbon footprint.

Focus on these suppliers first, and get them on board by making more exact data collection as simple as you can. Provide your procurement and sustainability teams tools to automate data collection for purchased goods and services. Empower them to send surveys to suppliers to collect missing data.

#### The Pareto Principle

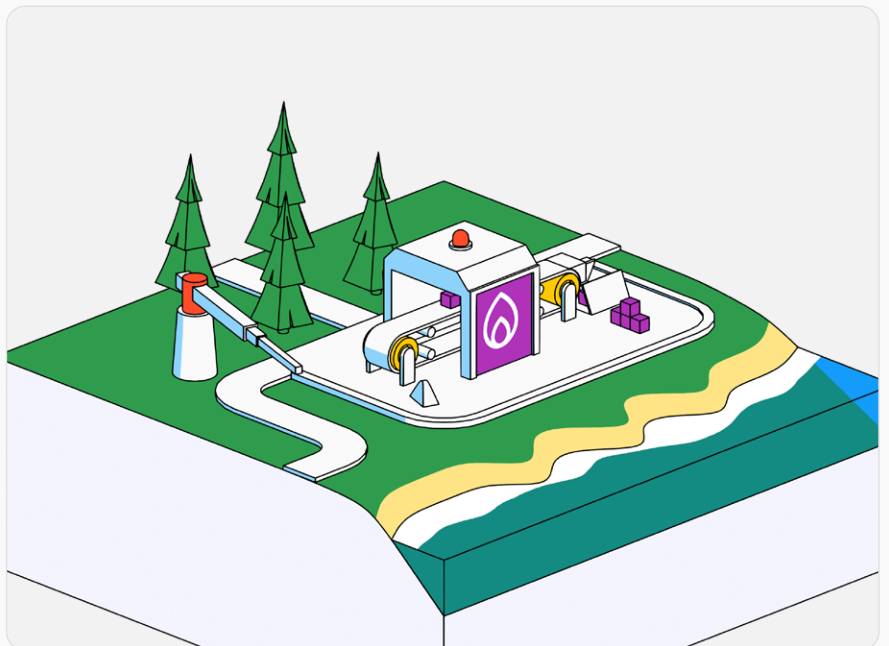
The Pareto Principle specifies that 80% of consequences come from 20% of the causes, highlighting an unequal relationship between inputs and outputs.

#### Customer story: PROSE

As a B Corp and Public Benefit Corporation, the beauty brand Prose has been committed to embedding sustainability in its business. The company started measuring its carbon footprint manually, but the limits of excel sheets soon became apparent when it wanted to get a precise carbon footprint at every stage of its products' life-cycle, from material sourcing to product disposal after consumer use. That's why Prose was looking for a solution to involve employees and partners working on various product stages and to use the data to develop low-carbon alternatives.

By using Sweep, the company gets a dynamic and granular view of its carbon footprint and reduction efforts across its entire company and value chain. [Read about its climate journey.](#)

“Prose is dedicated to a sustainable future where meaningful collaborations between innovators and changemakers affect industry-wide change. Making our measurement tools internal is critical for transparency, as it empowers teams to incorporate sustainability into our core business,” says Helen Nwosu, VP of Social Impact at Prose.

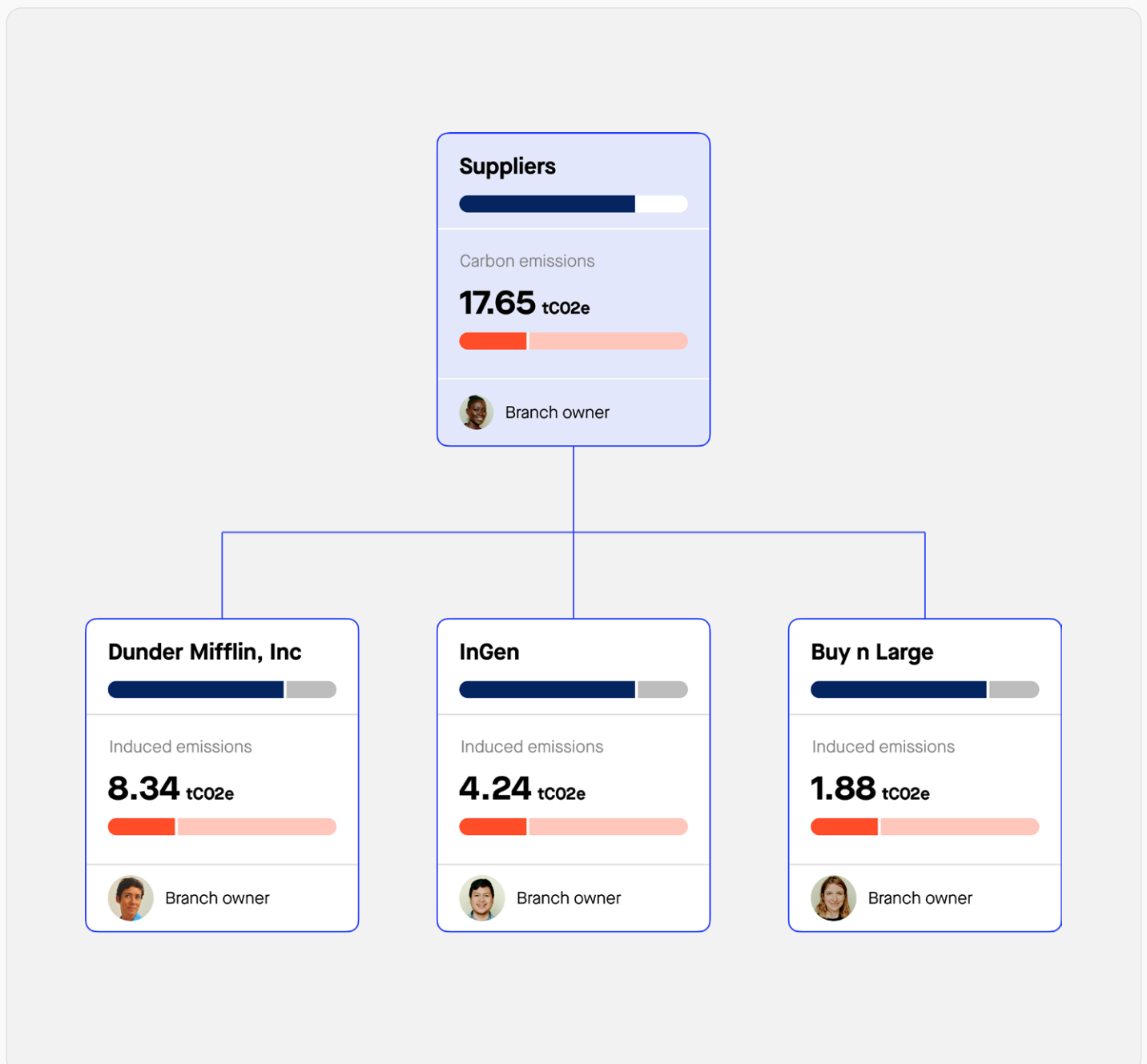


## The Sweep methodology

If you don't have exact supplier-based data at your disposal, don't worry. You can still obtain a baseline measurement for your supply chain emissions. Our platform is specifically designed to suit companies with varying levels of data maturity.

We can help you:

1. Model your supply chain using benchmark data and identify your emission hotspots. We use industry estimates and spend-based data as a starting point.
2. Send each supplier a straightforward climate survey. This is the first step to embarking on their own climate journey and tracking the impact of their actions. Note that you can adapt our climate surveys to make them suited to your needs.

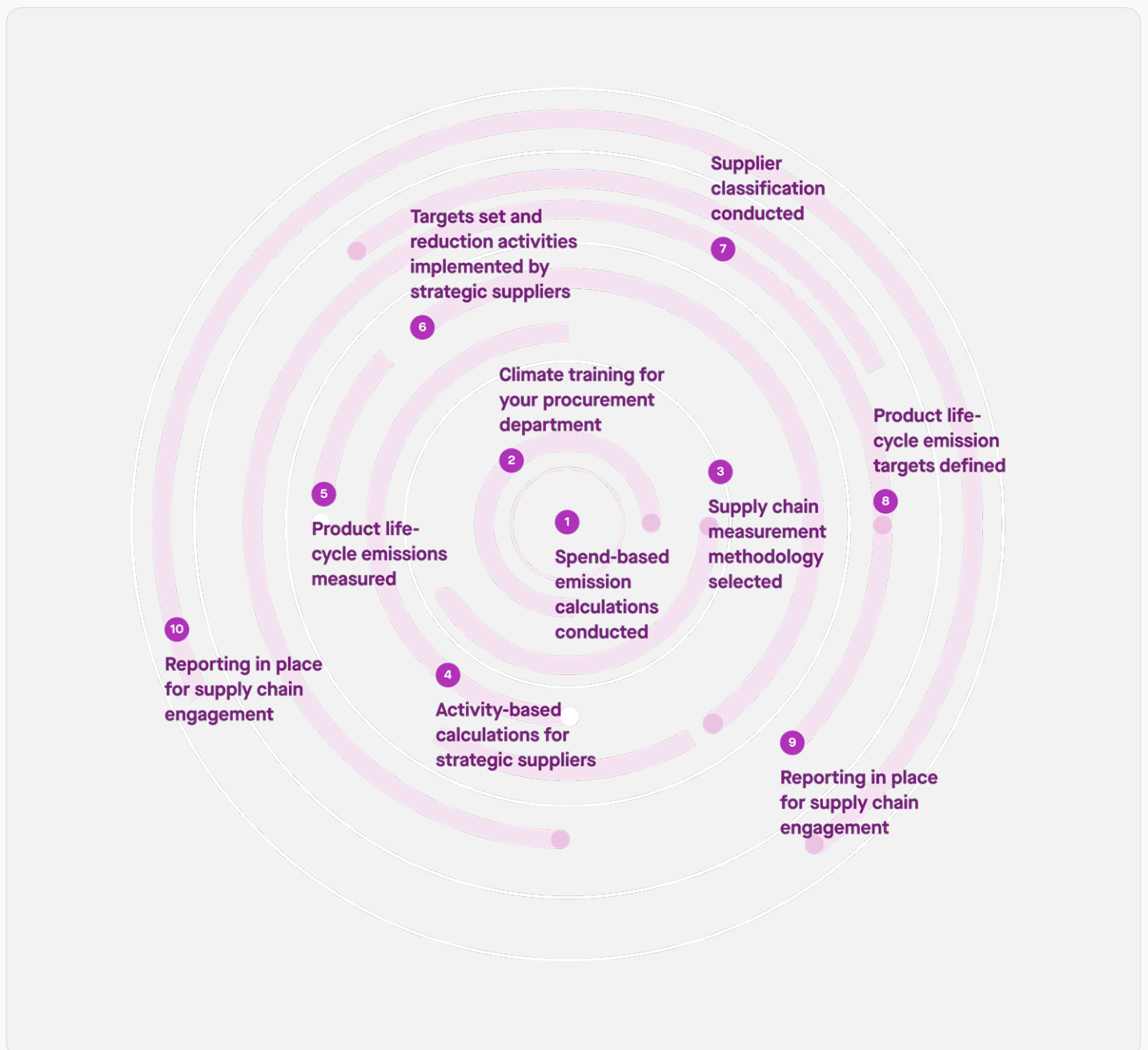


**Remember: climate action is not a straight line**

It's tempting to think that taking climate action is a four step, linear process: measure, set targets, reduce, communicate... Although – for the sake of clarity – this guide addresses each of these elements, the reality is somewhat different. In fact, a climate action pathway is best seen as a spiral of activity, moving ever outwards.

Your company can begin measuring its carbon footprint using benchmark data. Use this to set targets and engage in reduction activities across your supply chain. But once you start reducing your emissions, you need to reach a deeper level of accuracy with your carbon measurement. Here, getting data directly from your suppliers is crucial.

The below diagram shows how your climate action should evolve and grow – from a straightforward baseline measurement, to a comprehensive reduction strategy involving your entire value chain.



### Proportional emissions vs product carbon footprint approach: which is better?

Once you've measured your emissions, the next step is understanding how to communicate them to your internal and external stakeholders in an understandable way. Below are two commonly used approaches.

#### The proportional footprint

This is based around the cost of purchased goods or services. The value is multiplied by a given emission factor to calculate an estimate of your total emissions. Spend-based emission factors are derived from an industry average of emission levels usually at a national level. This means they aren't super accurate. On the plus side, spend-based methodology is relatively simple to implement and can provide a useful approximation of your company's indirect emissions.

#### The product carbon footprint

Measuring a product's carbon footprint is valuable for procurement because it gives you an at-a-glance overview of the environmental impact of the products that your company is purchasing and using. This information can be used to make informed purchasing decisions and can help reduce your overall emissions – while identifying potential cost savings.

With Sweep, you can define your product system boundaries i.e. all the activities, processes, and suppliers involved in producing and delivering your products to the end user. You can then efficiently collect climate data from your entire value chain.

You'll obtain a robust estimate of the carbon footprint for that particular product – giving you greater purchasing power.

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## Measuring a product's carbon footprint gives you a comprehensive understanding of the emissions associated with its production, distribution, use, and disposal.

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“Eco-designing products takes time. You have to test different materials and processes across all life cycle stages to find the optimal configuration to create the most durable product with the lowest carbon footprint overall. Sweep helps us simulate these changes to inform the development of our low-carbon products and optimize our overall climate strategy”, says Lucie Vareon, Sustainability Manager at Withings.

# Target setting

## 1. Setting separate targets for Scopes 1, 2, and 3

A common method in carbon accounting is to establish a starting point, known as a baseline year, and then set science-based targets (SBTs) to decrease emissions in comparison to that baseline. It's worth setting separate targets for your Scope 1, 2, and 3 emissions, either absolute or intensity-based.

### Absolute emission targets

Absolute emission targets refer to a specific amount of emissions that your company commits to reducing or avoiding over a given period of time. This target is set in terms of the total amount of emissions and isn't dependent on the growth of your business, or the profits made in a given year.

Example: Duff's Beer pledges to reduce its Scope 3 emissions by 40% by 2030.

### Intensity-based emission targets

Intensity-based emission targets refer to a reduction in emissions per unit of economic activity. They allow businesses to set emission reduction targets while at the same time accounting for growth or business changes (such as mergers or acquisitions).

Example: Honeydukes pledges to remove 5 metric tonne (MT) of CO<sub>2</sub> per \$1 million in sales.

## 2. Setting supplier climate targets

As category 1, Scope 3 emissions represent the biggest part of your carbon footprint, you'll have to work with your suppliers to align on your science-based targets – their targets effectively feed into your broader company target.

You might view this as a **next generation climate KPI** – is your supply chain aligned with the science-based trajectory of limiting global warming to 1.5 degrees?

**What are  
Science-based targets?**

Science-based targets are goals set to align with the level of decarbonization needed to limit global warming to 2 degrees Celsius or less, as outlined in the Paris Agreement.

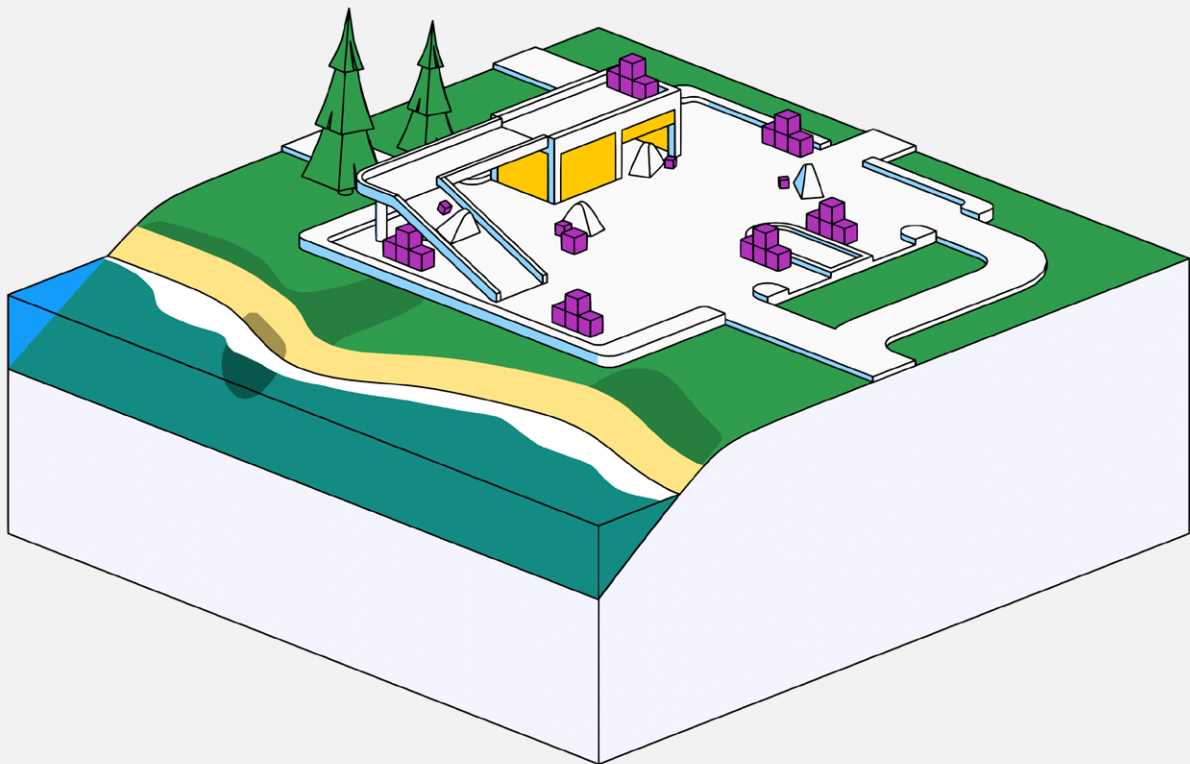
### What's the temperature of your supply chain?

This is a powerful idea borrowed from the financial sector. Financial organizations are increasingly demonstrating their commitment to climate action. To monitor progress and make more informed decisions, they need transparent and comparable metrics.

Regulators and organizations like the Task Force on Climate-related Financial Disclosures (TCFD) are exploring the measurement of financial portfolio temperature as a way for investors to better understand their impact on climate change. The temperature method translates the projected emissions of companies within a given portfolio into a rise in average global temperatures. It can be used to indicate, for example, whether a portfolio is likely to keep global warming to 1.5 degrees, as outlined in the Paris agreement.

In fact, investment performance is likely to soon be reported not just on returns, but also in terms of temperature.

Why not adopt the same idea for supply chains?





# Identifying carbon hotspots and planning reduction activities

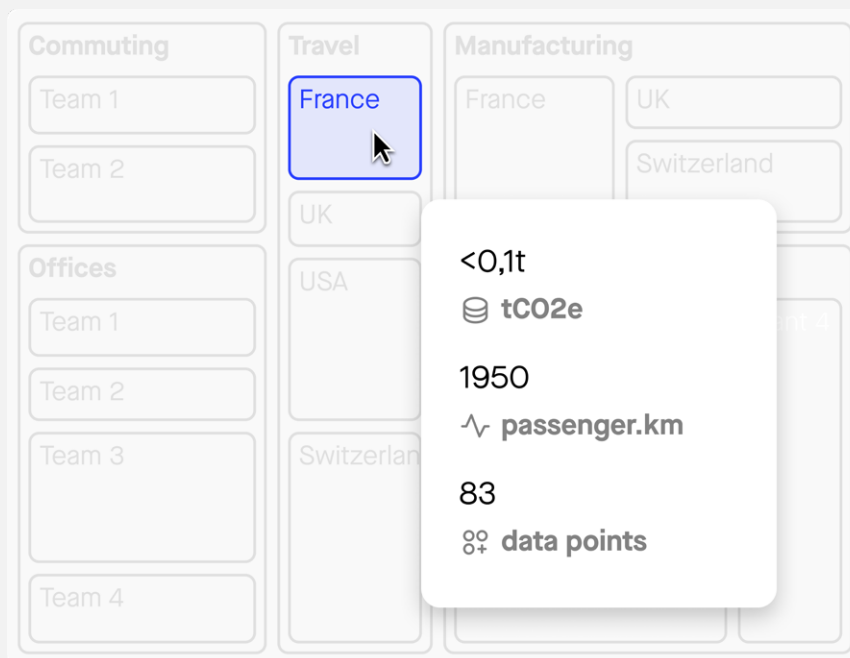
## Carbon simulation

Carbon simulation can help companies to identify and quantify emission sources, assess the effectiveness of different emission reduction strategies, and support decision-making on environmental initiatives.

## A targeted approach to reduction

A data-driven strategy for carbon reduction allows for more precise targeting, increased efficiency, and accountability in building a more sustainable business.

Sweep can help. We can empower you to get a thorough understanding of carbon emissions across your supply chain, enabling a more targeted approach to reduction. You'll have access to a powerful carbon simulation tool which can help you test the impact of specific activities in terms of reduction potential, cost, and feasibility. This will also support you to drive collaboration between CSR and procurement.



# Reporting your supply chain emissions

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When it comes to reporting, one of your key KPIs will be your suppliers' progress on their Scope 3 emissions. This will require you to share your reporting tool with each of them and to regularly monitor progress against targets. Each individual supplier target will fit into your own overall climate target.

Some companies choose to classify their suppliers based on their progress towards decarbonization. The idea is that a supplier can move up to the next level once they've taken the next step in measuring or addressing their emissions.

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## You might choose to classify your suppliers based on where they are on their sustainability journey.

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The below levels is just one suggestion of how you could conduct your classification:

**Level 1.** Suppliers that have achieved net zero for Scopes 1 and 2, and their Scope 3 reduction trajectories are aligned with a 2°C max increase in temperature.

**Level 2.** Suppliers whose Scope 1 and 2 trajectories are aligned with a 2°C max increase in temperature and their Scope 3 calculations are 80% based on physical data.

**Level 3.** Suppliers whose Scope 1 and 2 trajectories are aligned with a 2°C max increase in temperature and their Scope 3 calculations are 60% based on physical data.

**Level 4.** Suppliers that have calculated their Scope 1 and 2 emissions based on physical data and their Scope 3 carbon footprint based on spend-based data.

**Level 5.** Suppliers that are using a spend-based approach across all scopes to calculate and act on their carbon footprint.

Such classifications enable you to more easily demonstrate progress against targets.

### Did you know?

Microsoft, Unilever and General Motors were among the first companies to classify their suppliers based on their progress towards decarbonization.

E.g. In January 2020, we had 10% of suppliers at level 3, 20% at level 4 and 70% at level 5. But in January 2023, we have 5% of suppliers at level 1, 15% at level 2, 30% at level 3 and the remainder at level 4.

Your company's Scope 3 emission reports are likely to be requested by a number of stakeholders, including customers, suppliers, investors, and analysts. Reporting is also essential for complying with industry standards. These depend on your region and scope of operations.

**NFRD**

The NFRD requires companies to adjust their business model to prioritize environmental and social issues.

**ESRS**

The ESRS are a significant initiative to harmonize and streamline ESG reporting across the EU. They are part of a broader effort to promote sustainable finance and transition to a low-carbon economy.

**The current industry standards**

EUROPEAN UNION

**Non-Financial Reporting Directive (NFRD)**

This requires companies with 500+ employees to report their current and foreseeable impacts on the environment, use of renewable and non-renewable energy, GHG emissions, water use and air pollution.

**The Corporate Sustainability Reporting Directive (CSRD)**

This extends the scope of the NFRD to include more companies and introduces more detailed reporting requirements. It also establishes binding sustainability reporting standards that set scope and content. Under the CSRD, it's mandatory to disclose gross Scope 1, 2 and 3 greenhouse gas emissions in metric tons of CO2 equivalents. For Scope 3, companies must include emissions from all significant categories, including upstream purchasing, downstream sold products, travel and transportation, and financial investments.

**EU Sustainability Reporting Standards (ESRS) (Upcoming)**

This legislation is currently in draft form and is due to come into force in January 2024. It'll apply to all large and most listed EU companies, as well as non-EU companies with a turnover in the EU of more than €50M. It mandates that companies disclose information about the impact their operations and supply chain have on the environment and society.

FRANCE

**Regulatory 'Bilan d'Emissions de Gaz à Effet de Serre': BEGES**

This legislation applies to companies based in France with more than 250 employees that exceed 10,000 tons of CO2 emissions per year. (Although the specific thresholds and requirements for reporting under BEGES vary depending on company type and sector). As of 2022, BEGES has been extended to cover Scope 3. Companies are required to measure and report on their emissions from energy use, transportation, industrial processes, waste management, and other activities. They must also set reduction targets and report on their progress towards meeting these.

GERMANY

**The Supply Chain Act**

The Act on Corporate Due Diligence Obligations in Supply Chains came into force on January 1, 2023. It applies to companies which have their principal place of business or administrative headquarters in Germany and international businesses with branch offices in Germany. Companies are required to demonstrate their respect for human rights and the environment within global supply chains.

UK

**TCFD-aligned disclosure regulations**

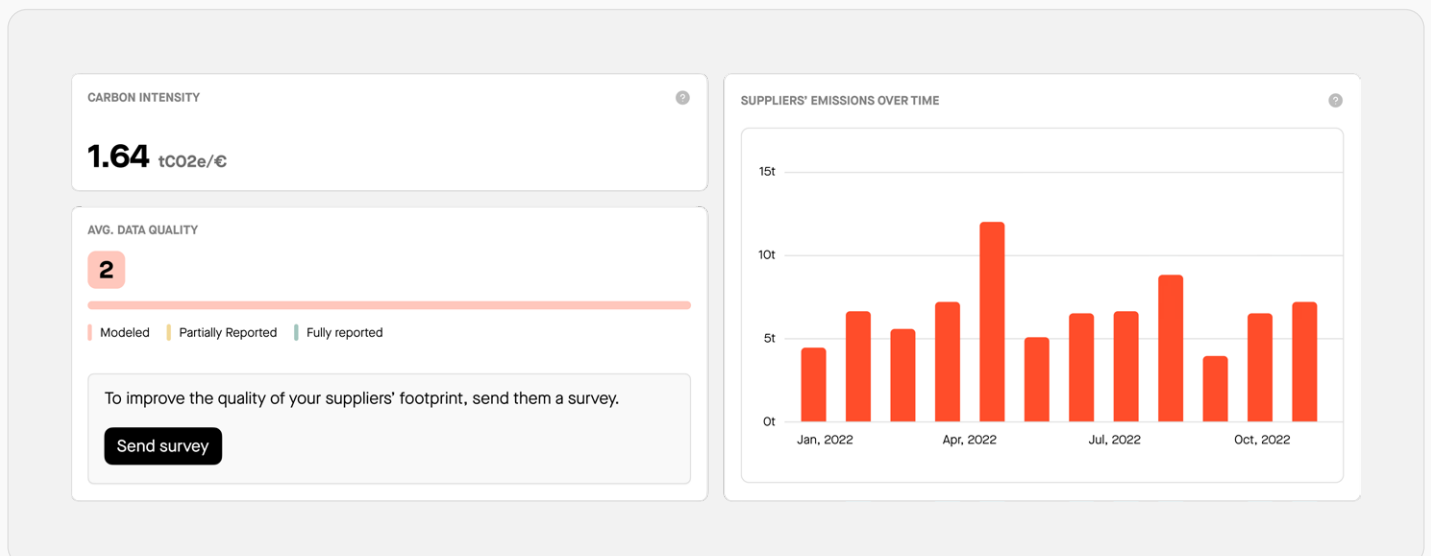
The UK has a number of regulations that are based on the 11 disclosures recommended by the TCFD. The TCFD's objective is to create uniform disclosures that companies can use when providing information to stakeholders. Their recommendations strongly encourage companies to include Scope 3 in their disclosures, but they don't mandate it.

**Streamlined Energy and Carbon Reporting (SECR)**

The UK is consolidating its business sustainability regulations through the Sustainable Disclosure Requirements (SDRs) which will include the Streamlined Energy and Carbon Reporting (SECR) policy. This requires companies that either have more than 250 employees or more than £36M revenue to submit their energy consumption and emissions from scope 1 and 2. Note that currently, only large quoted companies and LLPs are required to report on some of their Scope 3 emissions under SECR.

**Reporting your Supply Chain Emissions with Sweep**

Sweep comes ready packed with detailed dashboards and reports to give you great insight into all your emission data. All our reports are aligned with industry standards, like the GHG Protocol and Bilan Carbone. So your data's ready to be audited.

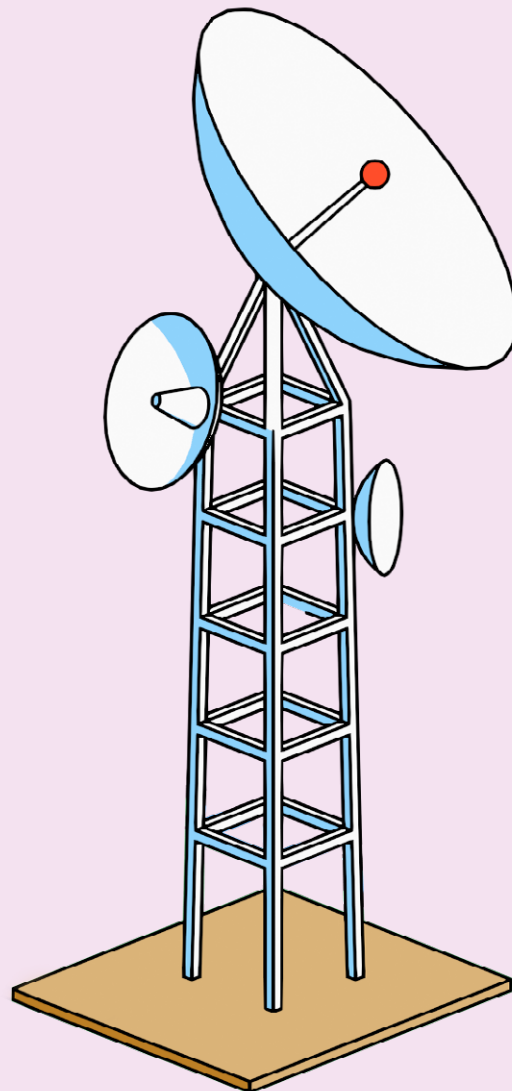


## A collaborative approach is key

If we could leave you with one leading thought, it's that effectively engaging your suppliers in your decarbonization strategy is key to achieving your climate targets. It may seem like a daunting task, but with the right education, efficient data collection and collaborative reduction activity, you'll have the foundations of a sustainable value chain. And the great news is that Sweep can help you at every step.

Ready to get your supply chain emissions on-track?

We'll help set you on a smoother decarbonization path, so that you can become a Forever Company.



Get in touch

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SWEEP