SCIENCE-BASED TARGETS

A COMPREHENSIVE GUIDE FOR BUSINESSES



GREEN ELEMENT GROUP
SUSTAINABILITY INSPIRES US

About Green Element Group

Green Element Group is an environmental management consultancy offering a range of bespoke sustainability services, products, and resources, to empower organisations to manage their environmental impacts for a just and sustainable world.

GREEN ELEMENT GROUP
SUSTAINABILITY INSPIRES US

The Group consists of Green Element Limited, Compare Your Footprint Limited, and Sustainability Solved Resource Hub and Podcast.

Our mission is to empower organisations to manage their environmental impacts for a just and sustainable world

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Energy Procurement
SME Sustainability Assessment
Coaching
Courses

COMPARE YOUR FOOTPRINT

Carbon Footprinting Software and Expertise

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Introduction

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Science-based targets have become a significant tool in addressing the pressing issues of climate change.

They provide a clear and actionable pathway for organisations to align their efforts with the latest **climate science**, enabling them to effectively reduce their environmental impact and make meaningful change.

This educational guide aims to explain the concept of **science-based targets (SBTs)**, highlighting their significance, the process of setting them, and the associated costs and commitments involved.

To ensure a comprehensive understanding, the guide goes beyond the basics, delving into key sustainability terms that are fundamental to navigating the landscape of environmental responsibility. Concepts such as **greenhouse gas (GHG) emissions**, **net-zero**, **carbon footprinting**, and **scopes 1, 2, and 3** are explained in detail.

By equipping you with this valuable knowledge, this guide will empower your organisation to make informed decisions and take purposeful actions to significantly reduce its environmental impact.

If you have any questions about this guide or science-based targets, please do get in touch with us and we will aim to answer any questions you have.

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The climate emergency and 1.5°C target



Climate science has determined that unless we drastically reduce the rate of global warming, the results will be catastrophic. In the Paris Climate Agreement of 2015, almost 200 nations made a promise to keep the global temperature below 2°C above pre-industrial levels, with a preference for a rise of no more than 1.5°C.

The Intergovernmental Panel on Climate Change (IPCC)'s Special Report on 1.5°C showed that if the world's temperature increased above that threshold, the effects would be disastrous, causing the Arctic Sea ice to melt, threatening biodiversity, and causing sea levels to rise. According to the Climate Group, 669 jurisdictions across 15 countries have declared a state of climate emergency. The UK parliament was the first to pass a motion declaring a Climate Emergency in April 2019.

Although many countries have committed to this agreement, it is essential that organisations and individuals do the same to see effective change worldwide. The global goal is an ambitious target that requires significant global action to reduce greenhouse gas (GHG) emissions from human activities, such as burning fossil fuels and deforestation.

1.5°C		vs		2°C
45cm		Sea level rise by 2100		56cm
14%		Population facing at least one severe heatwave every 5 years		37%
10%		Probability of an ice-free Arctic summer at least once before hitting temperature limit		80%
271 million		Population exposed to water scarcity		388 million
8%		% of plant species that will lose 1/2 of their habitable area		16%
6%		% of insect species that will lose 1/2 of their habitable area		18%

Figures from: Carbon Brief and Climate Council

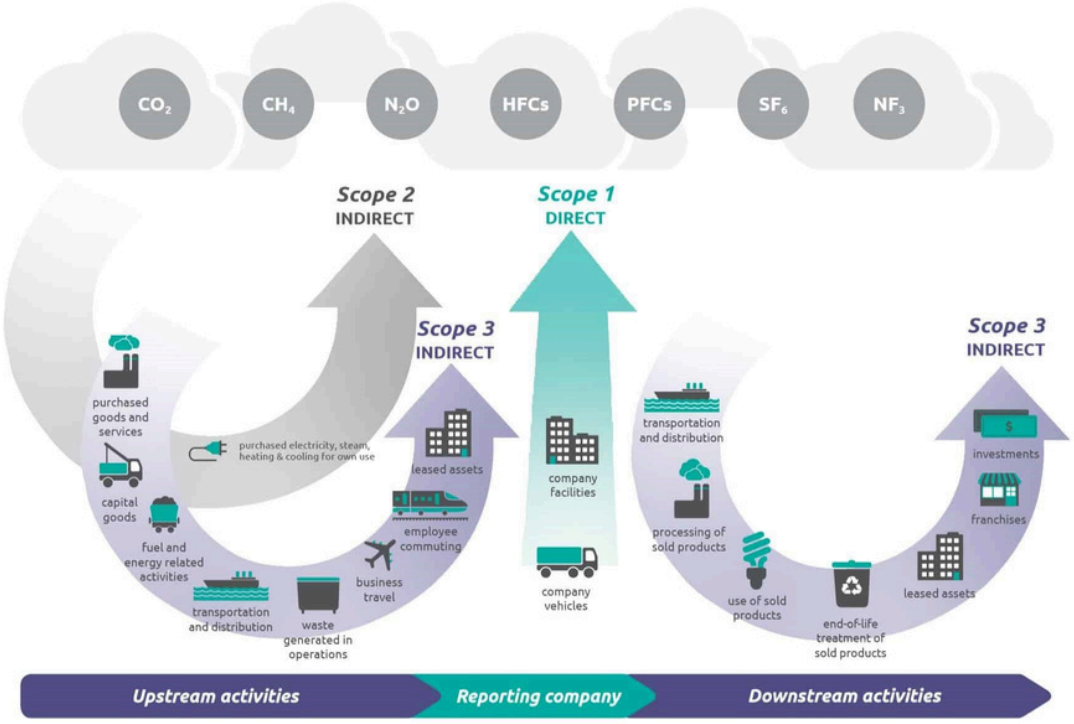
What are Greenhouse Gas (GHG) emissions?

Greenhouse gases (**GHGs**) are gases present in the Earth's atmosphere that can trap heat from the sun. These gases allow sunlight to pass through the Earth's atmosphere and reach the surface, but they prevent some of the heat from escaping back into space. As a result, they contribute to the warming of the Earth's surface and the lower atmosphere, leading to global warming.

The most impactful GHGs emitted by humans include Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (NO_2), and Fluorinated Gases. **A GHG emission is when one or more of these greenhouse gases are released into the atmosphere.**

A carbon footprint is measured in tonnes of GHG emissions which are converted into carbon dioxide equivalent (CO2e), a standard unit for measuring carbon footprints. CO2e presents the carbon footprint as a single number that is based on the global warming potentials of each of the seven Kyoto Protocol greenhouse gases.

GHG emissions are categorised into three categories: **scope 1, scope 2, and scope 3**. The Greenhouse Gas Protocol defined these scopes as part of its Corporate Accounting Reporting Standard to provide a global framework for measuring and managing GHG emissions for all types of organisations and industries.



Source: GHG Protocol

How are emissions broken down into scopes 1, 2, and 3?

1 Scope 1

Scope 1 includes all **direct emissions** that are generated from sources that are directly owned or controlled by an organisation. These can include the use of natural gas at local or international sites, using liquid fuels to run a fleet of owned vehicles, or refrigerant gases leaking from air-conditioning and refrigeration units.

For example, a food delivery company would measure its diesel consumption from owned delivery vans, its gas consumption from its owned/controlled buildings, and losses of refrigerant gases via leaks from the refrigeration systems in its owned facilities and vans to keep the food fresh.

2 Scope 2

Scope 2 includes all **indirect emissions** from the generation of the electricity and heat and steam purchased and used by an organisation at local or international sites. These emissions can be measured as location-based or market-based.

Location-based emissions use the average fuel mix of the electricity grid based on the location of the electricity consumer. The "grid" is the system that generates the electricity and then distributes it to consumers. The fuel mix is the type of fuel used to generate electricity. This includes the percentage of coal, gas, oil, nuclear, biomass, and renewables. The average fuel mix used to generate the electricity over the reporting year is used.

Market-based emissions are based on the fuel mix used to generate the electricity that an organisation purchases. They consider the actual supply used by an organisation and the tariff it purchases. Therefore, the percentage of coal, gas, oil, nuclear, biomass, and renewables in the mix purchased is considered when calculating the emissions.

For example, a legal company asks for an electricity bill from its office building manager. From the bill, they collect the kilowatt hours (kWh) of electricity consumed within a certain period and the fuel mix used to generate the electricity that they have purchased. This enables them to calculate their market-based scope 2 emissions.

3 Scope 3

Scope 3 includes all **indirect emissions that occur in an organisation's value chain**; activities they do not own or control. These are usually the greatest share of an organisation's carbon footprint, covering emissions associated with the following 15 categories.



Upstream transport and distribution includes the transport of goods between an organisation's tier 1 suppliers and its own operations, inbound, and outbound logistics, and between an organisation's own facilities. **Downstream transport and distribution** includes the transport of sold products between an organisation and the end customer if this transport is not paid for by the reporting organisation.

All scope 3 emissions fall into one of the above 15 scope 3 categories, however there are some emissions that are optional to report within the categories. For example, homeworking emissions are optional to report as part of the category 'Employee Commuting'. Other relevant emissions may fall outside of a scope 3 category, for example, attendees travelling to an event hosted by an organisation; this should be measured and reduced if significant.

What is Net-Zero?

Achieving global net-zero requires a balance between the amount of greenhouse gas emissions we add to the atmosphere and the amount removed.

Net-zero is achieved when the amount of greenhouse gas emissions removed from the atmosphere is equal to or greater than the amount emitted. To reach this balance, emissions from transport, agriculture, industry, and buildings must be radically reduced by a minimum of 90%.



For organisations, one of the most effective ways to ensure that your environmental efforts are in line with global environmental goals is to set science-based targets through the Science Based Targets initiative.

The target year for reaching global net-zero is 2050 at the latest; it is estimated by climate scientists that hitting this target would result in a 60% chance of limiting global warming to the 1.5°C threshold. This in turn would reduce the most catastrophic impacts of a climate breakdown across the world.



What are science-based targets?



Science-based targets (SBTs) are specific measurable objectives that a company can set for itself to reduce greenhouse gas emissions. The concept of science-based targets emerged as a response to the growing recognition that businesses play a significant role in contributing to climate change through carbon emissions and other environmental factors. By aligning their emission reduction goals with scientific knowledge and climate scenarios, companies can contribute to global efforts to mitigate the effects of climate change and transition to a low-carbon economy.

Science-based targets are based on the best available **climate science**, which includes models and projections developed by leading climate scientists and organisations like the Intergovernmental Panel on Climate Change (IPCC). These targets are designed to reflect what is necessary to achieve the goals set out in international climate agreements.

Targets are science-based if they are in line with what the latest climate science deems necessary to meet the goals of the Paris Agreement – limiting global heating to 1.5°C above pre-industrial levels

Specifically, science-based targets aim to align an organisation's emissions reduction goals with the latest climate science, to ensure the organisation is doing its part to mitigate the risks of climate change. Many organisations have committed to setting science-based targets as part of their sustainability strategies, with the aim of reducing their carbon footprints and contributing to global efforts to combat climate change.

There are numerous models for calculating science-based targets and the most accessible models are available through the Science Based Targets initiative.

SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

What is the Science Based Targets initiative?

The Science Based Targets initiative (SBTi) is a collaborative effort by several organisations to encourage and support companies in setting and achieving reduction targets aligned with the goals of the Paris Agreement on climate change. The initiative was launched in 2015 by the:

Carbon Disclosure Project (CDP)

World Resources Institute (WRI)

United Nations Global Impact (UNGC)

World Wide Fund for Nature (WWF)

The initiative aims to ensure that organisations' climate targets are ambitious, transparent, and contribute to the overall global effort to mitigate climate change. The targets are evaluated and validated by the SBTi to ensure they meet the specific criteria.

Although this guide aims to provide a comprehensive overview of science-based targets, specific guidance for your organisation type or industry should be taken directly from the SBTi website.

Building on the momentum of the SBTi, The Science-Based Targets Network (SBTN) is a global initiative that aims to accelerate the adoption of science-based targets to combat climate change. It brings together experts from more than 60 NGOs, business associations, and consultancies to respond to the demand for more methods, guidance, and tools to set science-based targets for the whole Earth system.

Science Based Targets Initiative Net-Zero Standard

In October 2021, the SBTi published the world's first Science-Based Net-Zero Standard. The standard is a set of guidelines and criteria that organisations can use to ensure their Greenhouse Gas (GHG) emissions are in line with a 1.5°C future. The standard includes a comprehensive framework for organisations to set and verify their targets, which are aimed at achieving net-zero carbon emissions by 2050 or earlier.

Science-based net-zero can only be achieved through emissions reductions of a minimum of 90%, not carbon offsetting.

To be verified under the SBTi Net-Zero Standard, organisations need to demonstrate a credible and transparent approach to calculating their emissions, as well as clear strategies for reducing their carbon footprint. The standard also requires regular reporting and disclosure of carbon emissions and progress toward meeting net-zero targets.

The SBTi defines science-based net-zero as the achievement of three main steps:

1. **Near-term science-based targets**
2. **Long-term science-based targets**
3. **Company-level net-zero**



① Near-term science-based targets

Near-term science-based targets outline what companies will do now, and over the next 5-10 years, to reduce emissions in line with what is needed to get on track for net-zero and the 1.5°C limit on global heating. These targets are usually focused on specific emissions reduction goals that need to be achieved in the short-term to remain on track to achieve the long-term goals.



Near-term targets must include:

- **At least 95% of scope 1 and 2 emissions**
- **At least 67% of scope 3 emissions (if scope 3 is greater than 40% of total emissions)**

Small-to-Medium Enterprises (SMEs) are not required to validate their scope 3 targets; however, it is recommended that all companies continue to measure, report, and reduce their scope 3 emissions. Near-term target dates must be set between 5-10 years post-submission and targets must achieve at least a 42% absolute reduction in emissions by 2040.



2 Long-term science-based targets

Long-term (net-zero) science-based targets specify the degree of decarbonisation companies need to achieve to reach science-based net-zero. Companies are expected to make emissions reductions of at least 90-95% to reach net-zero. Long-term net-zero targets aim to reduce emissions to a residual level by 2050 which is in line with the 1.5°C goal.

Long-term targets must include:



- **At least 95% of scope 1 and 2 emissions**
- **At least 90% of Scope 3 emissions (for companies of all sizes)**

This requires a scope 3 screening assessment to understand an organisation's potential sources of greenhouse gas emissions and to ensure that 90% of total scope 3 emissions is included within the target boundary.

		Scope 1 and Scope 2	Scope 3
Near-term science-based targets	Target boundary	95% coverage of scopes 1 + 2	If scope 3 is greater than 40% of total emissions, boundary to cover minimum 67% of scope 3
	Target year	5-10 years from date of submission	5-10 years from date of submission
Long-term and net-zero science-based targets	Target boundary	95% coverage of scopes 1 + 2	90% coverage of scope 3
	Target year	2050 or sooner	2050 or sooner

③ Company-level net-zero



Net-zero for a company means that it has successfully reduced its greenhouse gas emissions to a level required to limit global warming to 1.5°C as per the science-based targets. To achieve net-zero, the company must reach its long-term science-based targets, and it cannot simply offset its emissions with removals and claim to be net-zero before that.

Even if a company manages to balance emissions and removals temporarily on its path to net-zero, it must still reduce its emissions to the required level before it can officially be considered as having reached net-zero.

In simple terms, the net-zero target date for a company cannot come before its long-term science-based target date.

After cutting your organisation's emissions by at least 90%, there will still be around 10% of residual emissions remaining. Residual emissions are any greenhouse gas emissions that remain after an organisation has implemented all reasonable and feasible efforts to reduce emissions in all scopes and from all sources.

As a result, permanent physical carbon removal methods should be utilised to remove any residual emissions (up to 10% of baseline emissions). **Examples of permanent physical removals include:**

climeworks

Climeworks empowers people and companies to fight global warming by offering CO_2 removal as a service via direct air capture (DAC) technology. At Orca, Climeworks' DAC facility in Iceland, the CO_2 is permanently removed from the air by capturing and geologically storing it for thousands of years with Climeworks' storage partner Carbfix.

ecotree PRO

EcoTree's portfolio of nature-based projects across Europe can help organisations tackle their residual emissions. They take a holistic approach; sequestering carbon whilst helping biodiversity thrive and enhancing the local environment.

Who can set science-based targets?

The SBTi encourages organisations of all sizes and industries to make a commitment to setting science-based targets. The SBTi are actively developing sector-specific pathways to cater to different industries. In particular, the SBTi encourages organisations operating in the highest-emitting sectors as they hold a significant responsibility in driving the transition towards a net-zero future.

At present, the SBTi does not assess targets for cities, local governments, public sector institutions, educational institutions, and non-profit organisations. Cities interested in setting targets can register for more information through the Science Based Targets Network.

SMEs follow the simplified pathway for both near-term and long-term net-zero targets. This involves submitting information about an organisation's greenhouse gas inventory and proposed targets via an online form accessed through the SBTi website. The streamlined route for SMEs is less intensive and requires less time, making setting science-based targets more accessible for all companies. **See page 13 for the SBTi's major change to its definition of SMEs.**

The SBTi provides a comprehensive list of companies that have science-based targets on their website, which can help you to further understand what science-based targets look like. In total*, there are:

3101
science-based targets

5594
companies taking action

2215
net-zero commitments

*Figures accurate at time of publication: August 2023

The SBTi's definition of Small-to-Medium Sized enterprises (SMEs)

On 1st November 2023, the Science Based Targets initiative (SBTi) announced it is updating its definition of Small and Medium-Sized Enterprises (SMEs) that qualify for the initiative's SME target validation route.

Through the refinement of its SME criteria, the SBTi aims to steer a larger number of companies toward the conventional framework for verifying science-based targets. This strategic update is part of the SBTi's ongoing efforts to enhance its compliance and boost ambition from the private sector. This update will help to globally scale the impact of science-based targets.

The revised SME definition will become effective on January 1, 2024, and apply to any SME seeking to set science-based targets.

To be recognised as an SME, the following conditions must all be met:,

- The company's emissions must be less than 10,000 tCO2e* across Scope 1 and location-based Scope 2 emissions.
- The company must not possess or control maritime transport vessels. i
- The company must not possess or control power generation assets.
- The company must not be a subsidiary of a parent company whose collective activities fall under the standard validation route.
- The company must not fall under the categories of Financial Institutions (FI) or Oil & Gas (O&G) sectors.

*Tonnes of Carbon Dioxide Equivalent



Additionally, at least two of the following conditions must also be met:

- The company employs fewer than 250 employees*
- The company has an annual turnover of less than €40 million
- The company's total assets amount to less than €20 milloion
- The company is not in a mandatory sector related to Forest, Land, and Agriculture (FLAG).

*Aligned to the European Union's Corporate Sustainability Reporting Directive (CSRD) SME criteria

What is the process of setting a science-based target?

1 Commitment



An organisation publicly commits to setting science-based targets by joining the SBTi and submitting a **commitment letter**. This commitment demonstrates the organisation's dedication to taking climate action in line with scientific recommendations. Once you have committed to the SBTi, your organisation automatically joins the **Business Ambition for 1.5** and the **Race to Zero** campaigns.

All committed organisations are **listed on the SBTi website**. A commitment letter does not need to be signed by SMEs before submitting near-term and net-zero targets.

2 Define Target Boundary



The organisation identifies the scope of its emissions to be covered by the science-based target. This includes both direct (scope 1) emissions from owned or controlled sources, indirect (scope 2) emissions from purchased electricity, heat, and steam, and indirect (scope 3) emissions from the value chain. A scope 3 screening assessment can be used to define the scope 3 target boundary.

3 Baseline Year Emissions Inventory

The organisation conducts a comprehensive inventory of its greenhouse emissions in its chosen baseline year. This includes collecting data on all relevant emission sources in scope 1, 2, and 3 within the organisational boundary (please see Greenhouse Gas Protocol **Corporate Accounting Reporting Standard** for setting organisational boundaries).

The base year should:

- Have verifiable scope 1, 2, and 3 data available
- Be representative of an organisation’s typical greenhouse gas profile
- Have sufficient forward-looking ambition to make meaningful reductions consistent with reaching net-zero by 2050.

The SBTi recommends that the most recent year for which data is available is chosen as the base year. If a base year is chosen earlier than the previous two years (i.e., the 2018 baseline is submitted for validation in 2023), then organisations will be required to additionally submit the most recent year's greenhouse gas inventory alongside the baseline year for validation of targets. Some exceptions do occur owing to the COVID-19 pandemic; do check before submitting.

4 Choose a Target Pathway

The organisation selects a target pathway that aligns with the SBTi's criteria. The target pathway depends on the sector and organisation type. Some sectors follow their own target setting methods.

Target setting methods for scope 1 and 2 can include:

- **Cross-sector absolute reduction method:** emissions are reduced by a consistent and equal amount each year. Scope 1 and 2 targets set with the base year of 2020 or earlier must reduce baseline emissions by 4.2% annually. For baselines set later than 2020, emissions reductions must achieve a minimum of 42% by 2030 (aligned with the 1.5°C trajectory). For scope 3, a minimum linear annual reduction of 2.5% (aligned with well below 2°C) is allowable (with the same adjustments depending on the baseline year).

- **Sector-specific intensity convergence method:** a reduction in emissions relative to a specific business metric such as the production output of the company (i.e., tonnes CO2e per tonne of product produced). This pathway assumes global convergence of key sectors' emissions intensity by 2050. There are specific global emissions scenarios that inform the pathway for each sector.

- **Renewable electricity target:** companies may choose to set a scope 2 target on the procurement of renewable electricity, instead of a percentage reduction. Renewable electricity targets must be in line with procuring 80% renewable electricity by 2025 and 100% by 2030.

Target setting methods for scope 3 also include:

- **Scope 3 physical and economic intensity reduction methods:** a minimum reduction of 7% year-on-year for both methods, which must not result in an increase in baseline emissions. Economic intensity targets are set using greenhouse gas emissions per Value Added (GEVA) (tCO2e/$ value added).

- **Supplier, or customer engagement (near-term only) method:** can be set for any upstream or downstream scope 3 category where engagement efforts could result in emissions reduction. Engagement targets should result in timely emissions reductions, and suppliers and customers must set scope 1 and 2 near-term science-based targets at a minimum. This method is not applicable for net-zero targets.

It is important to check the latest versions of **SBTi Corporate and Net-Zero manual** when choosing the appropriate pathway for setting scope 1, 2, and 3 for science-based targets. Companies may choose to set a single target for all three scopes, a single target per scope, or multiple scope 3 category-specific targets; there are advantages and disadvantages associated with each approach.

5 Submit Target for Validation

An organisation submits its target(s) to the SBTi for validation. This involves providing detailed information on the target boundary, base-year emissions, target pathway, and the proposed reduction targets. SMEs are required to follow the **streamlined submission route** which involves an online form for both near-term and net-zero targets. Other organisations are required to download and complete forms available via the **SBTi website**:

- Corporate near-term target submission form
- SBTi Net-Zero target submission Form Part I
- SBTi Net-Zero target Submission Form Part 2
- Net-zero target setting tool
- SBTi target setting tool

Please note, there is a separate near-term submission form for **financial institutions**.

Organisations can submit their targets and upload their forms via the **online booking system available via the SBTi website**. After submission, following an initial screening, the SBTi's team of technical experts will review the targets against the SBTi criteria and provide their decision with in-depth feedback.

6 Validation Process



The SBTi reviews the submitted target and assesses its alignment with scientific requirements. This process includes:

- Evaluating the targets' ambition level and their contribution to global climate goals.
- After the initial screening, organisations can expect up to two target assessments by a member of the target validation team, a comprehensive target validation report per assessment that addresses non-conformities and provides recommendations.
- Up to 60 mins of feedback conversations after each assessment, and assistance with the wording for approved targets.

Note that the validation date booked on submission does not indicate a meeting with the SBTi, rather the date when an organisation's assessment will begin.

7 Target Approval and Public Announcement



If the submitted target meets the SBTi's criteria, it is approved and recognised as a science-based target. The organisation can then publicly announce its approved target and start implementing measures to achieve it.

8 Implementation and Progress Tracking



The organisation develops a strategy and action plan to achieve the science-based target. It implements emission reduction measures, sets milestones, and tracks progress over time. The organisation must commit to publicly reporting its carbon footprint annually, for example via an annual or sustainability report.

In its recent **Impact Report**, Finisterre shared its science-based targets as well as information on measuring its own carbon footprint with the help of Green Element Group. Below is a great example of how a carbon footprint can be publicised within a company Impact Report.

ENVIRONMENT

We're working to reduce our environmental impact and improve the health of our ocean.

To do this, we're focusing on:

+ Using environmentally preferred materials that are certified recycled and organic, or from renewable and regenerative sources
+ Aligning our operations to science-based CO_2 and biodiversity targets
+ Actively supporting marine conservation and restoration projects by volunteering our time and expertise, or by providing financial support

finisterre.com



Our carbon footprint

The future of our planet and the health of our ocean depends on everyone playing their part to take climate action.

We set near-term carbon reduction targets in 2021, aligned to the Paris Agreement's 1.5°C cap on global heating, and verified by the Science Based Targets Initiative (SBTi).

We first measured our carbon footprint across our supply chain and business in full in 2020 (scope 1, 2 and 3 emissions). As a small team, mapping our scope 3 emissions was a huge task. Collecting accurate data takes time, effort, and collaboration with our suppliers. We're always juggling the need to take immediate action to reduce emissions, with the time and resources it takes to measure things accurately.

This year, we took a step back and recalculated our scope 1 and 2 emissions only for 2021. By focusing on our energy consumption and switching more of our stores and offices to renewable energy tariffs in 2021, our operational emissions decreased by 48%, compared to 2020.[1]

1. Market Based Emissions
2. Our carbon emissions are reported one year in arrears because it takes time to gather quality data

In 2021, 78% of our stores and offices were powered by renewable electricity

Yet we know most of our carbon emissions (93%) come from our supply chain – from materials, transport, manufacturing and distribution.

We now need to focus on cutting these indirect emissions (scope 3) to reach our climate goals.

Our next task is to review our scope 1, 2 and 3 emissions for 2022,[2] using Green Element for strategic support and their Compare Your Footprint tool to streamline the process. This will give us meaningful data on our carbon hotspots, enabling us to build a realistic carbon reduction strategy to meet our science-based targets.

Read more about the challenges

TOTAL SCOPE 1 & 2 GHG EMISSIONS
tCO2e



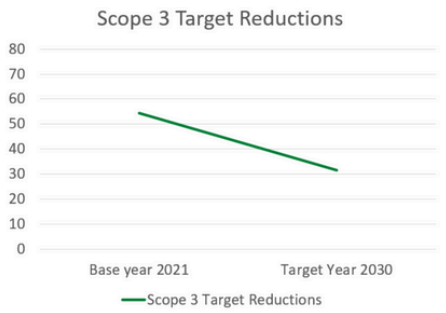
Source: Finisterre 2022 Impact Report

Green Element Group also published its 2022 impact reporting containing science-based targets and a breakdown of its carbon footprint.

Near Term Targets

By 2030, we will reduce Scope 1 and 2 emissions to 0 and reduce Scope 3 by 42%.

- In 2018, we set verified Science Based Targets for 2023. We will reset these with a base-year of 2021 to align with the SBTi Net Zero Standard.
- Following a scoping exercise reviewing sources of our emissions, we have included all scope 1, 2 and 3 emissions within our footprint.
- Scope 3 was the greatest source of emissions, these included purchased goods and services, emissions associated with working from home, business travel and staff commuting.

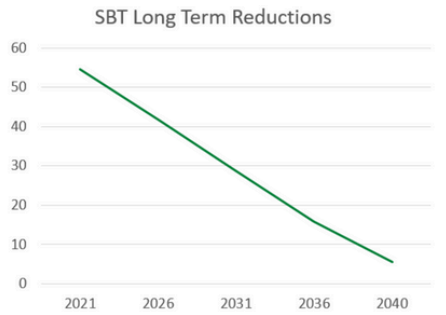


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Long Term Targets

By 2040, we will reduce Scope 1, 2, and 3 emissions by at least 90%.

- The graph demonstrates GE and CYF's long-term net-zero trajectory with a 2040 target year for reaching 90% absolute emissions reduction from the baseline year (2021).
- This equates to 4.74% emissions reduction per year.
- The remaining 10% (maximum), referred to as the residual emissions, must then be removed using nature – or technology – based, permanent carbon removals and storage.



46

Our total carbon footprint per employee has decreased by 56% since 2018.

We are committed to supporting organisations in measuring and managing their environmental impacts. It is therefore vital for us to become the most sustainable business to be able to confidently walk-the-talk.



We calculated our emissions in 2018 when we first set our science-based targets. We updated these based on our 2021 data to create long term net-zero targets and will continue to report on this annually. Our team is currently working on our 2022 carbon footprint which will include more accurate measurement of our purchased goods and services. We show a closer look at our 2021 carbon footprint on the next page.

	2018	2021
Total corporate carbon footprint (tCO2e)	41	54.6
Number of employees	7	21
Normalised carbon footprint per employee (tCO2e)	5.9	2.6

44

Source: Green Element Group Impact Report 2022

Science-Based Targets Case Studies



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Green Element Group is an Environmental Management Consultancy offering a range of bespoke sustainability services, products, and resources to empower organisations to manage their environmental impacts for a just and sustainable world.

1. **Near-term target:** By 2030, Green Element Group has committed to reducing Scope 1 and 2 emissions to 0, and reducing Scope 3 by 42%.

2. **Long-term target:** By 2040, Green Element Group has committed to reducing Scopes 1, 2, and 3 emissions by at least 90%.

The Guardian

The Guardian Media Group is amongst the UK's leading media organisations. Its primary business is Guardian News and Media, publisher of guardian.com.

1. **Near-term target:** Guardian News and Media commits to reduce absolute Scope 1, 2, and 3 greenhouse gas emissions by 2030, from a 2020 base year.

✓ Guardian News and Media also commit to reducing absolute Scope 2 GHG emissions beyond the minimum boundary from the use of sold products 42% within the same timeframe.

finisterre

Finisterre designs functional and sustainable products for those that share a love of the sea. They are committed to making informed decisions about their impact on the environment and are constantly trying to push boundaries to make the best products possible.

1. **Near-term target:** Finisterre commits to reducing scope 1 and 2 GHG emissions 42% by 2030 from a 2020 base year, and to measure and reduce its scope 3 emissions.

✓ This target was approved using a streamlined target validation route exclusive to small and medium-sized enterprises (SMEs).

Tribe | IMPACT CAPITAL

Tribe Impact Capital is the UK's first dedicated Impact Wealth Manager and offers discretionary and advisory portfolio management.

1. **Scope 1 and 2:** Tribe Impact Capital commits to reduce absolute Scope 1 greenhouse gas emissions by 70% by 2030 from the base year 2020. They commit to continue active annual sourcing of 100% renewable energy through 2030.
2. **Scope 3 categories 1-14:** Tribe Impact Capital commits to reduce absolute Scope 3 greenhouse gas emissions by 50% by 2030 from a 2020 base year.
3. **Headline target:** Tribe Impact Capital portfolio targets cover 75% of its total investment and lending by assets under management as of 2020. As of that year, required activities made up 75% of their total investment and lending by assets under management while optional activities made up 14% and out-of-scope activities made up 11%.

How much does it cost to submit a science-based target?*



The SBTi offers multiple target validation services and package offerings to set different target types.

Near-term science-based target submission: $9,500

A comprehensive technical review as part of the near-term science-based target submission service. This service also includes a second submission, free of charge, for validations that are not accepted and are resubmitted within six months.

Target update service: $4,750

The target update service combines and improves the previous "resubmission" and "voluntary ambition update" services. It provides a streamlined process for companies seeking to align their targets with our new minimum ambition level of 1.5°C or update previously approved targets. The service includes a comprehensive target validation report.

Net-zero submission target: $9,500

After establishing a near-term science-based target, the next step in the Net-Zero Standard overview is to set a long-term science-based target to reduce emissions by at least 90% by 2050. The net-zero target submission service offers a rigorous technical review of your company's long-term science-based target.

Net-zero science-based target update + net-zero target submission: $12,750

Companies with previously-approved near-term targets can submit their near-term science-based target and a net-zero target for validation simultaneously at a discounted rate. This combined service encourages companies to increase the ambition of their near-term targets and align with the Net-Zero Standard. Results are delivered within 60 business days of contract signature.

*Figures accurate at time of publication: August 2023

Near-term science-based target submission + net-zero target submission: $14,500

For companies submitting new near-term and net-zero targets for the first time and seeking alignment with the Net-Zero Standard, a discounted rate is available for submitting both targets together. Both submissions undergo a separate, rigorous technical review conducted by a team of experts, with results delivered within 60 business days of contract signature.

FLAG near-term target submission: $7,500

In addition to standard near-term targets, companies may be required or choose to set a FLAG target (Forests, Land, and Agriculture). Please note that FLAG targets can ONLY be submitted as an add-on to another service, such as a target service update or near-term submission.

Financial institution target submission: $14,500

This service is tailored specifically for a robust review of targets submitted by financial institutions (FIs). FIs differ from other sectors as they provide finance and services to companies responsible for reducing greenhouse gas emissions rather than directly controlling emissions.

Small and medium-sized enterprises target submission or update: $1,000

Designed as a streamlined route for small and medium-sized enterprises (SMEs), this service is available to non-subsidiary, independent companies with fewer than 500 employees. SMEs can bypass the initial commitment stage and standard target validation process. The price applies to near-term and/or net-zero target submissions and updates.

Fee exemption - all services excluding Financial Institutions: $0

Companies with annual gross revenue under $1 billion USD and headquartered in developing countries and economies in transition, as defined by the United Nations Secretariat's Department of Economic and Social Affairs can request a waiver for their target submission fee. The SBTi encourages financially viable companies to pay the normal service fee to ensure the exemption can benefit those who need it most. Financial institutions are not eligible for a fee waiver.

What are the benefits of setting science-based targets?

Future-proof your business



Science-based targets are designed to align with the latest climate scientific evidence on climate change and sustainability. **By setting these targets, organisations can anticipate and adapt to future environmental and market changes.**

Acting now can reduce the risk to your business associated with climate change. Risk might be physical, like the impact of flooding on your supply chain, or transitional, for example new legislation phasing out fossil fuels that your organisation currently relies on. As the world becomes more conscious of environmental issues, businesses that are proactive in addressing their environmental impact are better positioned to remain competitive in the long-term.

Cost-effective



Contrary to the misconception that sustainability efforts are expensive, setting science-based targets and reducing your environmental impact can save you money, especially in the long run.

By identifying and addressing operational inefficiencies, emissions, and waste, organisations can optimise their processes, reduce resource consumption, and lower operational costs. Implementing measures to reduce greenhouse gas emissions like reduced energy-usage and waste reduction can lead to cost-savings for organisations as well as an increase in operational efficiency.

Opportunities to innovate

Science-based targets encourage businesses to think creatively and innovate in their operations. Organisations must explore and develop new technologies, products, and services that align with their sustainability goals. This drive for innovation can lead to the development of new revenue streams and opportunities for growth. Collaboration with other organisations working within the same industry can also accelerate the rate of innovation and ultimately lead to wider industry-change.

Building a positive reputation



Setting science-based targets shows that an organisation is committed to reducing its impact on the environment and taking real action to combat climate change. Increasing numbers of companies now place a heavy emphasis on environmental impact; setting science-based targets will ensure your business is at the forefront of greenhouse gas emissions reporting and ambition to reduce your organisation's carbon footprint. Setting science-based targets can increase investment and attract more business opportunities.

Employees also place increasing value on working for a more responsible employer. This is particularly relevant to younger generations joining the workforce. Science-based targets will help to attract talented new staff and elevate retention rates as employees buy in to the organisation's high environmental and ethical standards.

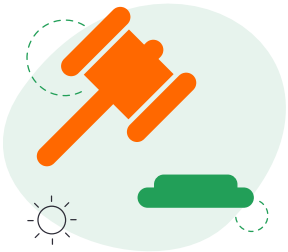
Improve credibility



Science-based targets provide a quantifiable and transparent way for organisations to showcase their environmental commitments. **When businesses set ambitious goals that are backed by scientific evidence, stakeholders, including investors, customers, and employees, perceive them as more credible and trustworthy.** This can result in stronger relationships with stakeholders and more robust relationships.

Exceed regulatory requirements

Governments worldwide are increasingly implementing regulations and policies aimed at mitigating climate change and promoting sustainable practices. **Setting science-based targets enables organisations to proactively align with, and often exceed regulatory requirements.** By doing so, businesses can avoid potential penalties, reputational damage, and operational disruptions resulting from non-compliance with environmental regulations.



These are global and local reporting requirements such as Task Force for Climate-Related Financial Disclosures (TCFD) which governments are enshrining in law for larger corporations, where measuring and reducing greenhouse gas emissions with clear targets is essential.

TCFD | TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

What our clients say

GREEN ELEMENT GROUP
SUSTAINABILITY INSPIRES US

finisterre

Setting science-based targets has enabled us to ensure that our targets are in line with the latest climate science and develop a clear reduction pathway. **The support we have received from Green Element Group has been invaluable.** Mapping your full carbon footprint can be overwhelming, but the team of analysts has helped to streamline our data collection and focus on the material changes we can make to keep us on track.



Adele Gingell
Head of Positive Impact and the Finisterre Foundation, Finisterre

emperor



Our team really values the support and expertise that Green Element provides. We work with a warm friendly team who take the time to explain some of the more complex aspects in a way we can all understand and get behind.

Lynn Dickinson,
Chief Responsible Business Officer, Emperor

Through partnering with Green Element Group, Emperor has successfully **submitted its scope 1 and 2 near-term science-based targets along with their net-zero target** with the Science-based Targets initiative. By working with Green Element Group, they have also cut their Scope 1 emissions by 74% and their Scope 2 emissions by 99%!

Read the full Emperor case study to find out more.

Next Steps

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Thank you for reading **Green Element Group's guide to science-based targets**. We hope you found it useful and insightful, and feel ready to start your journey of setting ambitious targets that will ensure your organisation is on track to reach net-zero by 2050.

We are committed to being at the forefront of sustainability and environmental solutions. **Our team of experts is on-hand to guide you through the entire process of setting science-based targets.** Our tailored approach ensures that your targets are both ambitious and achievable, enabling you to take meaningful steps towards drastically reducing your organisation's environmental impact.

Get in touch today to learn more about our science-based targets service and how we can help your organisation make a positive impact.



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BOOK A MEETING

