



Science-Based Targets as a Cornerstone of Corporate Climate Strategy

Speakers



Kenza Taoufik

EU Regional Lead,
Transition Accelerator



Jonathan Schwieger

Head, Corporate
Climate Strategies



Priscilla Schönfeld

Project Manager,
Corporate Climate
Strategies



Vincent Erasmy

Senior Key Account
Manager



Agenda

- *Introduction to Science Based Targets (SBTs)*
- *SBT-setting process*
- *SBTi Net-Zero Standard*
- *Key Challenges in setting SBTs*
- *How First Climate can help you reach your targets*
- *Q&A*

Introducing *First Climate*



Generating positive climate impact – since 1999

With over twenty years of experience and hundreds of diverse clients, First Climate is a leading service provider of climate protection solutions and renewable energy. We support private and public sector organizations in achieving their climate and sustainability objectives.



Our Services: At a Glance

Our core competencies include products and services relating to carbon neutrality, green energy, green investments, and project development. For public sector clients, we provide consulting for industry best-practices as well as emissions trading services.



Climate
Strategies



Compensation
Neutralization



Climate Protection
Projects



Green
Energy



my.FirstClimate.com

Audience Question

How far along are you on your SBT journey?

1. Long-term (net-zero) target set/committed
2. Near-term target set
3. Near-term target committed
4. Planning to commit to SBTi in the next 12 months
5. Commitment to SBTi not yet planned





SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



DISCLOSURE INSIGHT ACTION

INTRODUCTION TO SCIENCE-BASED TARGETS (SBTs)

THE SCIENCE BASED TARGETS INITIATIVE (SBTi)



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

The Science Based Targets initiative (SBTi) is a **global body** enabling businesses to set **ambitious emissions reductions** targets in line with the **latest climate science**.



Founding Partners



United Nations
Global Compact



WORLD
RESOURCES
INSTITUTE

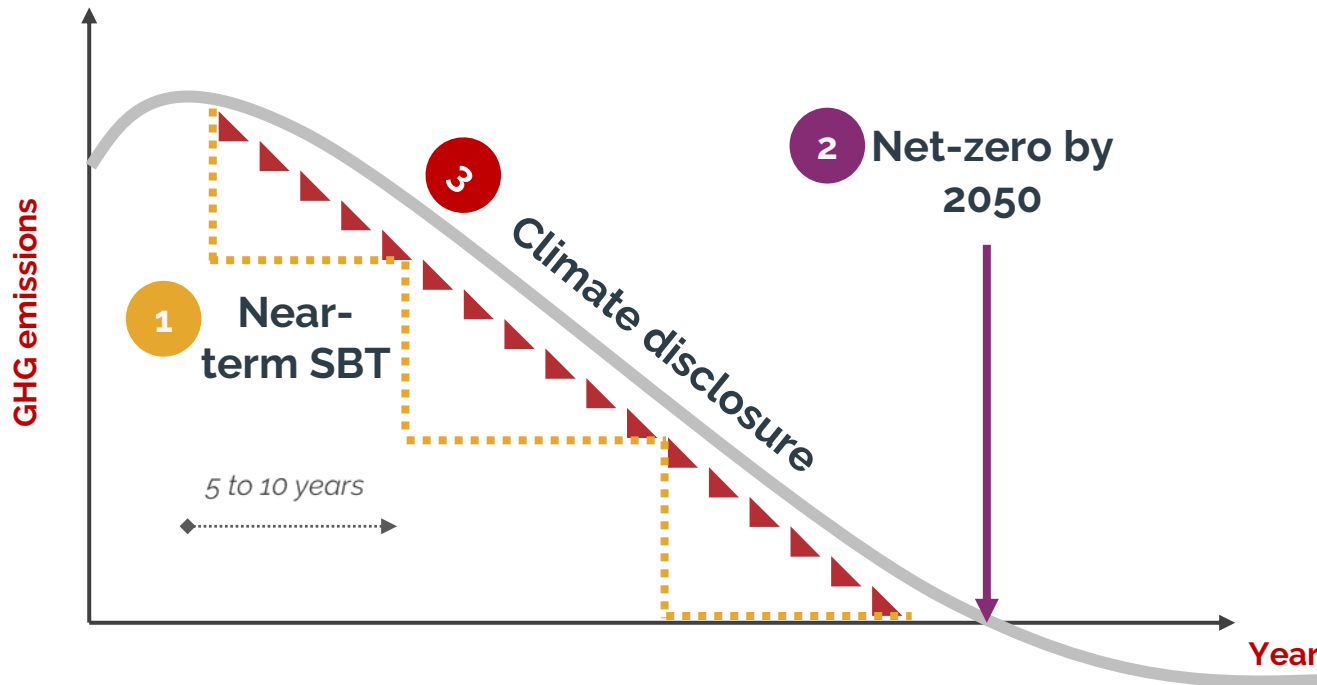


In collaboration with



INTRODUCTION TO SBTs

WHAT ARE SCIENCE-BASED TARGETS?



- 1 (Near-term) science-based target:** Ensures that the company is taking near-term action to reduce emissions at a pace that is consistent with keeping warming below 1.5°C;
- 2 Long-term net-zero target:** Provides clarity about the direction that the company will follow and serves as a north-star for long-term strategic and investment decisions;
- 3 Annual disclosure:** Gives visibility on how the climate strategy is being implemented and provides transparency on progress against targets

Science-based targets show companies **how much** and **how quickly** they need to reduce their greenhouse gas (GHG) emissions to prevent the worst effects of climate change

SBTi BUSINESS CASE: BENEFITS FOR COMPANIES

ALIGNING TO CLIMATE SCIENCE IS GOOD FOR BUSINESS



BUSINESS CASE

ADDRESS STAKEHOLDER EXPECTATIONS
i.e: long term sustainability of business model

INCREASE COMPETITIVENESS
i.e: minimize energy and emissions-related costs

ANTICIPATE REGULATORY, POLICY AND MARKET DEVELOPMENT
i.e: mitigate transition risks

SEIZE OPPORTUNITIES BEHIND THE LOW - CARBON TRANSITION
i.e: low - carbon products/services

SBT-SETTING PROCESS



SCIENCE
BASED
TARGETS

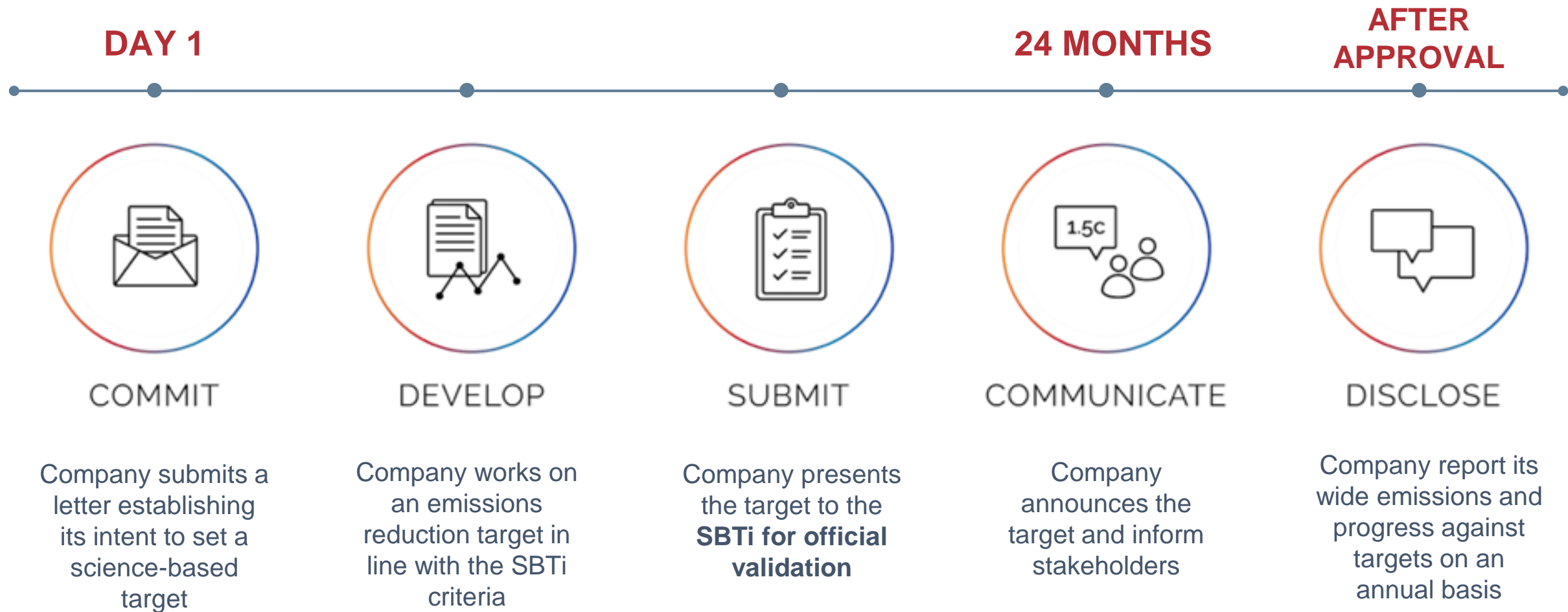
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



DISCLOSURE INSIGHT ACTION

PROCESS FOR SETTING A SCIENCE-BASED TARGET*

INCLUDES INDEPENDENT TARGET VALIDATION



*Process for large companies. SBTi offers a streamlined route for SMEs.

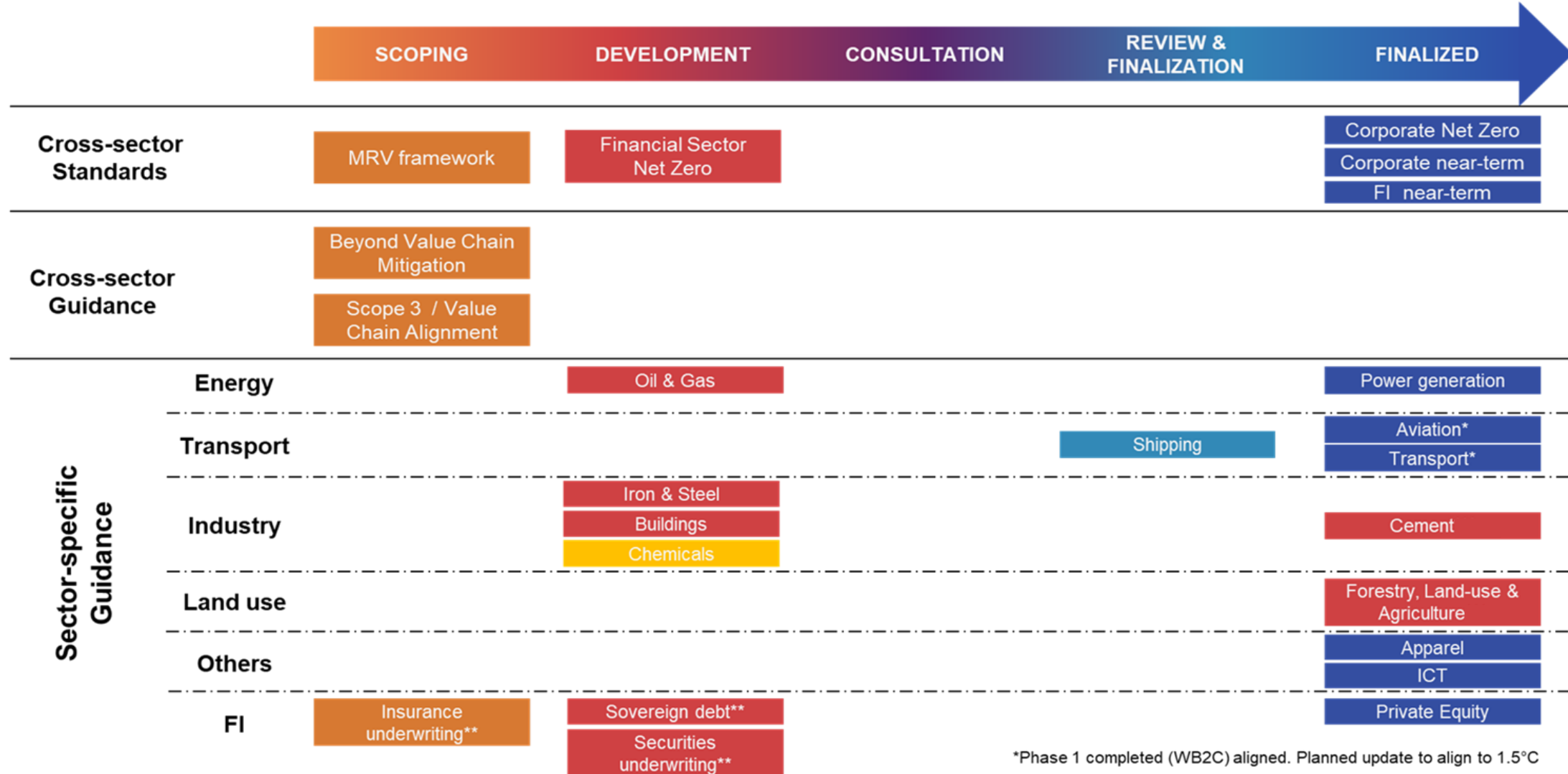
SECTOR METHODOLOGIES

AVAILABLE METHODS AND GUIDANCES



SBTi Methods & Sectors	POWER	<ul style="list-style-type: none"> • SDA only • Visit the SBTi Power webpage to access the guidance and SBTi tool.
	LAND TRANSPORTATION	<ul style="list-style-type: none"> • SDA or Absolute Contraction. • Visit the SBTi Transport webpage to access sector criteria, guidance and tool.
	FINANCIAL INSTITUTIONS	<ul style="list-style-type: none"> • Three methods for financed emissions (scope 3): SDA, SBT Portfolio Coverage, Temperature Rating • Visit the SBTi Financial Institutions webpage to access the guidance and tools.
	ALUMINUM, CEMENT, COMMERCIAL BUILDINGS, IRON AND STEEL, PULP AND PAPER	<ul style="list-style-type: none"> • SDA or Absolute Contraction. • Download the SBTi tool to model targets for these sectors.
	APPAREL & FOOTWEAR, ICT	<ul style="list-style-type: none"> • Absolute Contraction only. • Visit the Apparel & Footwear webpage and the ICT webpage to access relevant guidance.
	ALL OTHER SECTORS	<ul style="list-style-type: none"> • Absolute contraction only. • Download the SBTi Tool to model targets using the absolute contraction approach.

SBTi UPCOMING WORK



*Phase 1 completed (WB2C) aligned. Planned update to align to 1.5°C

**Asset class alignment guidance / method

THE SBTi NET-ZERO STANDARD



SCIENCE
BASED
TARGETS

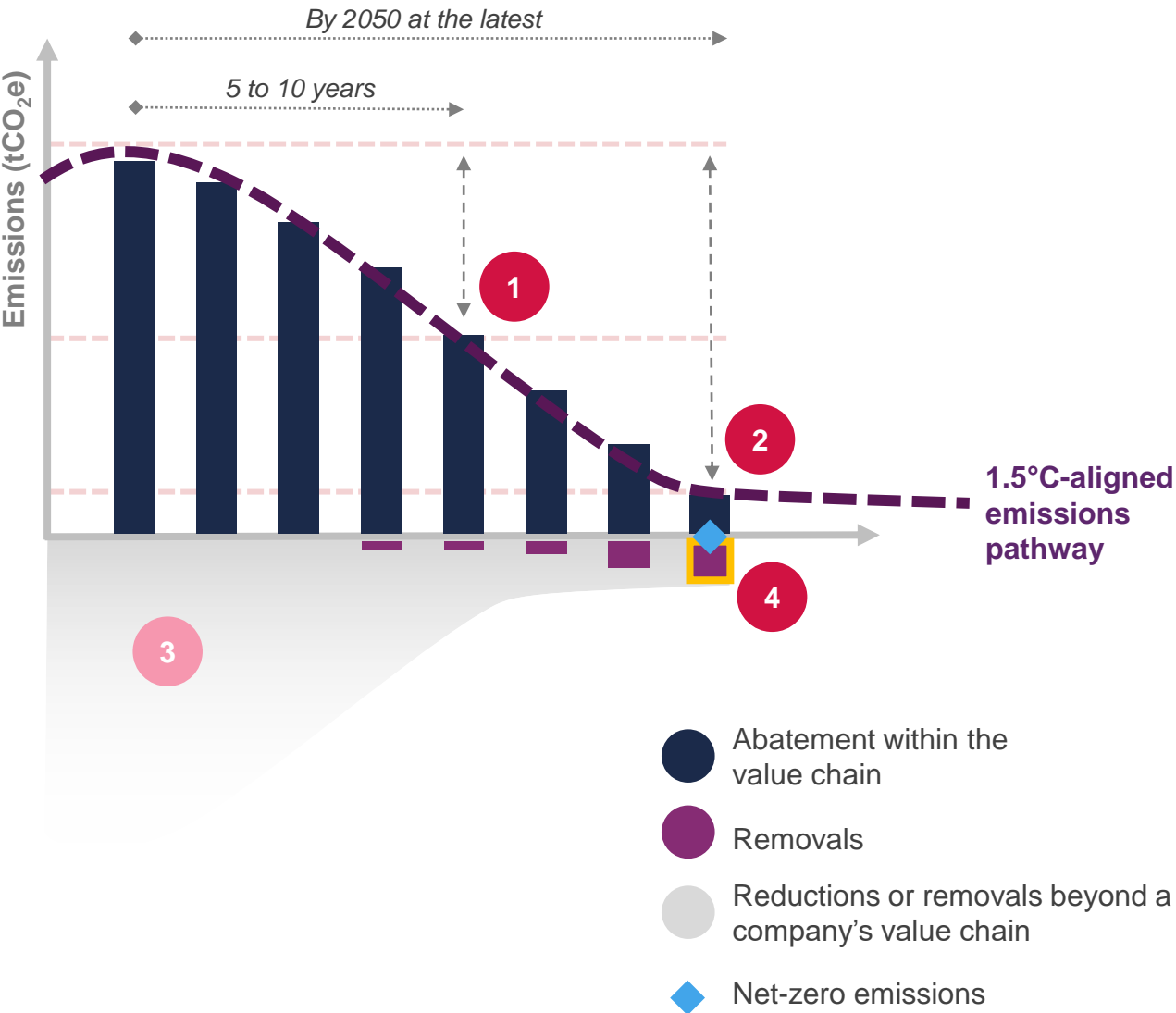
THE SBTI NET-ZERO STANDARD

ADDRESSING LACK OF CLARITY ON DEFINITION OF 'NET ZERO'

- ▶ Corporate net-zero targets can play a critical role in addressing the climate emergency, but the **lack of a robust benchmark has triggered scepticism** around net-zero as a concept.
- ▶ Over an 18-month period, the Science Based Targets Initiative carried out a **rigorous, stakeholder-informed process** to develop a framework to enable companies to set science-based net-zero targets.
- ▶ The SBTi Net-Zero Standard was launched on October 28th, 2021
- ▶ From January 2022 onwards , companies are able to have Net-Zero targets **independently validated** by the SBTi, thereby demonstrating to stakeholders that their near- and long-term decarbonization plans are aligned with climate science



Four key elements make up the Net-Zero Standard framework



1 To set near-term science-based targets:
5-10 year emission reduction targets in line with 1.5°C pathways







2 To set long-term science-based targets:
Target to reduce emissions to a residual level in line with 1.5°C scenarios by no later than 2050

3 Beyond value chain mitigation:
In the transition to net-zero, companies should take action to mitigate emissions beyond their value chains. For example, purchasing high-quality, jurisdictional REDD+ credits or investing in direct air capture (DAC) and geologic storage

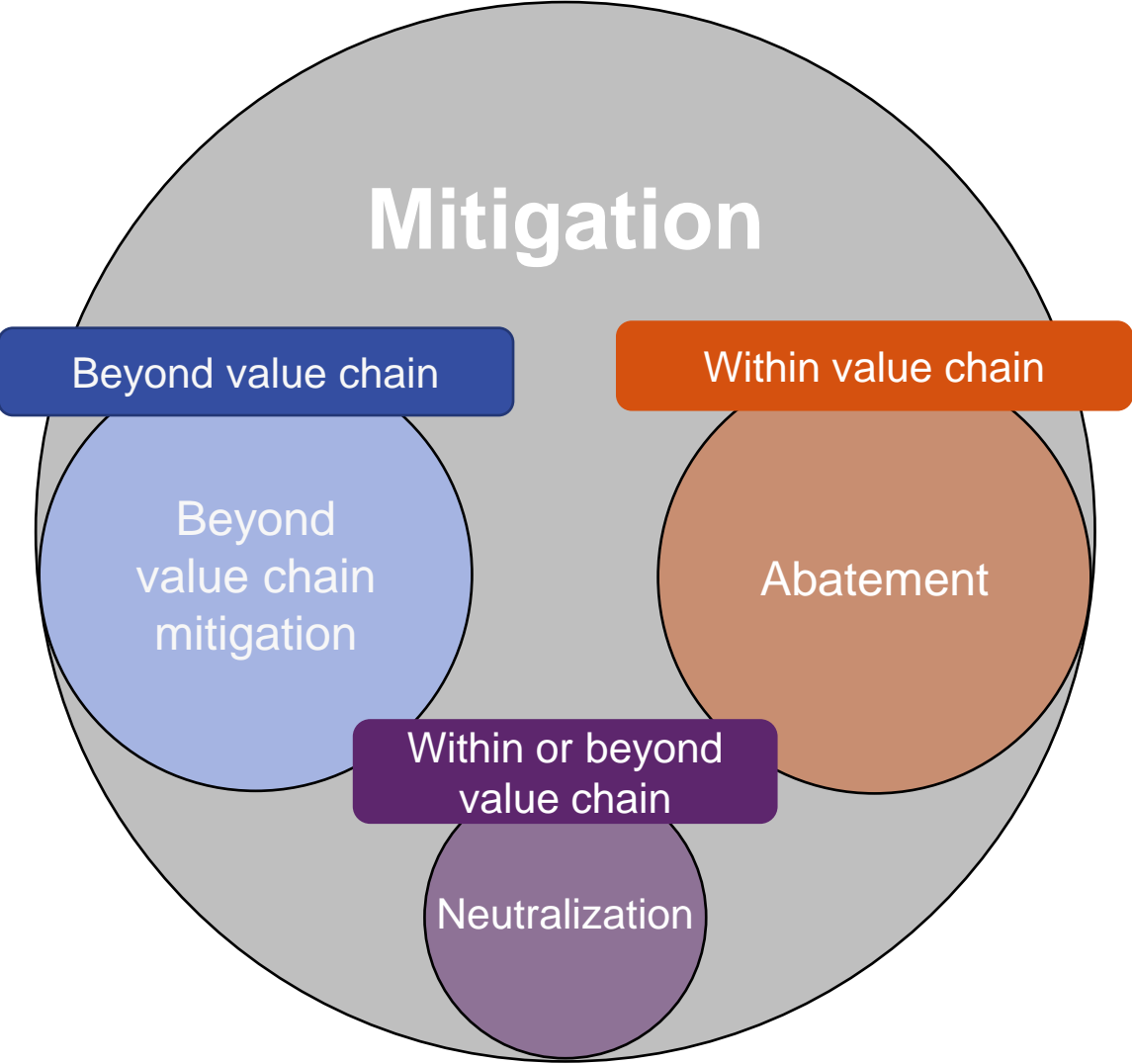
4 Neutralization of residual emissions:
GHGs released into the atmosphere when the company has achieved their long-term SBT must be counterbalanced through the permanent removal and storage of carbon from the atmosphere

Required **Recommended**

Four considerations for setting near-and long-term science-based targets

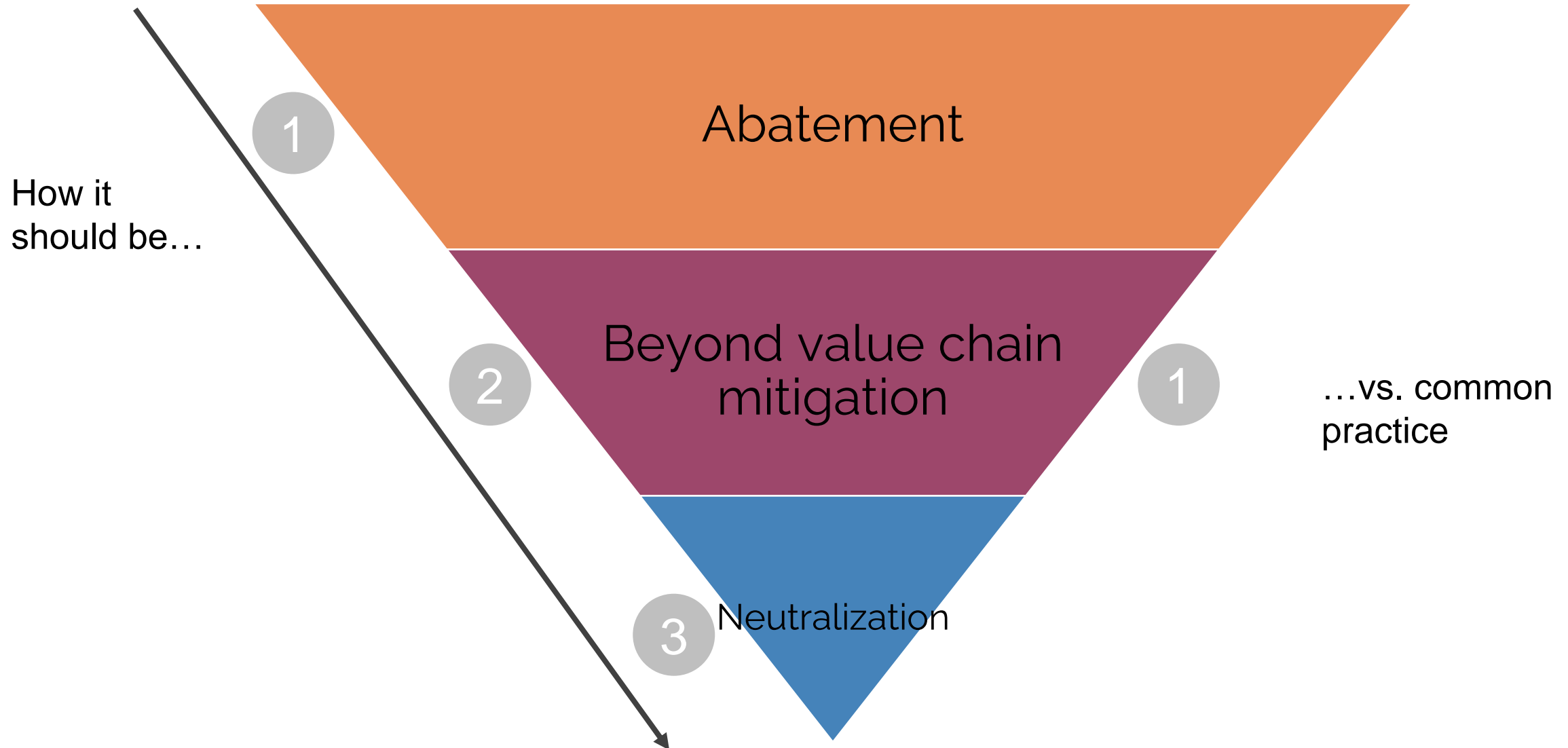
	 <div> Timeframe <i>What is the maximum timeframe to meet your targets?</i> </div>	 <div> Ambition <i>What is the ambition level in terms of limiting temperature rise?</i> </div>	 <div> Boundary <i>How much coverage or your emissions inventory is required?</i> </div>	 <div> Methods <i>What are the eligible methods to set your targets?</i> </div>
 <div> Near-term science-based target </div>	<div>5-10 years from date of submission</div>	<div> Scope 1 and 2: 1.5°C Scope 3: Well-below 2°C </div>	<div> Scope 1 and 2: 95% Scope 3: If >40% of total emissions, 67% coverage </div>	<div> 1. Absolute reduction 2. Sector-specific intensity convergence 3. Renewable electricity 4. Supplier or customer engagement 5. Scope 3 economic intensity reduction 6. Scope 3 physical intensity reduction </div>
 <div> Long-term science-based target </div>	<div>2050 latest</div>	<div>Scope 1, 2, and 3: 1.5°C</div>	<div> Scope 1 and 2: 95% Scope 3: 90% </div>	<div> 1. Absolute reduction 2. Sector-specific intensity convergence 3. Renewable electricity 4. Scope 3 economic intensity reduction 5. Scope 3 physical intensity reduction </div>

SBTi has evolved its terminology, phasing out compensation & moving towards “beyond value chain mitigation”

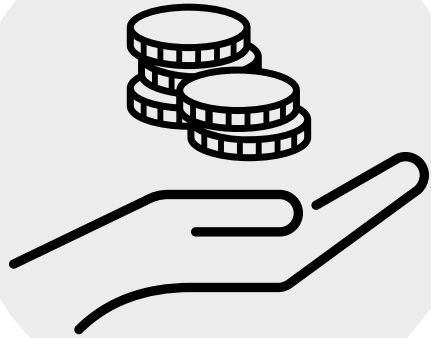


Term	Definition (as per SBTi Net Zero Standard)
Mitigation	A human intervention to reduce emissions or enhance the sinks of greenhouse gases (IPCC).
Abatement	Measures that companies take to prevent, reduce or eliminate sources of GHG emissions within their value chain . Examples include reducing energy use, switching to renewable energy and retiring high-emitting assets.
Beyond value chain mitigation (BVCM)	Mitigation action or investments that fall outside a company's value chain. This includes activities outside of a company's value chain that avoid or reduce greenhouse gas emissions, or that permanently remove and store greenhouse gases from the atmosphere.
Compensation (legacy terminology)	Actions that companies take to help society avoid or reduce emissions outside of their value chain.
Neutralization	Measures that companies take to remove carbon from the atmosphere and permanently store it to counterbalance the impact of emissions that remain unabated.

The Net-Zero Standard was developed with the mitigation hierarchy in mind

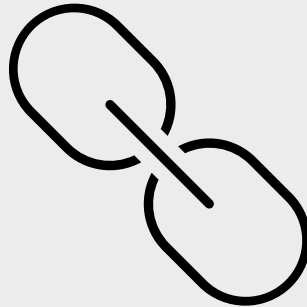


TO FOLLOW ON FROM THE NET-ZERO STANDARD, THE SBTi HAS PLANNED THREE PROJECTS TO TACKLE CHALLENGES RELATED TO NET-ZERO



Beyond Value Chain Mitigation

It is vital companies have clarity on how to take credible mitigation actions beyond their value chain. The SBTi is exploring models to incentivize this in a credible and robust way.



Net-Zero Value Chains

The SBTi recognizes the challenges around scope 3 and is planning to further develop scope 3 target setting methods and explore other approaches to drive net-zero value chain alignment.



Measurement, Reporting & Verification

The SBTi will develop an MRV framework to ensure transparency and accountability around the progress and achievement of science-based emission reduction and net-zero targets.

Four key resources for companies to set net-zero targets



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



DISCLOSURE INSIGHT ACTION

Getting Started Guide

A simple, step-by-step guide that allows companies to understand how to set net-zero targets.

SBTi Corporate Net-Zero Standard

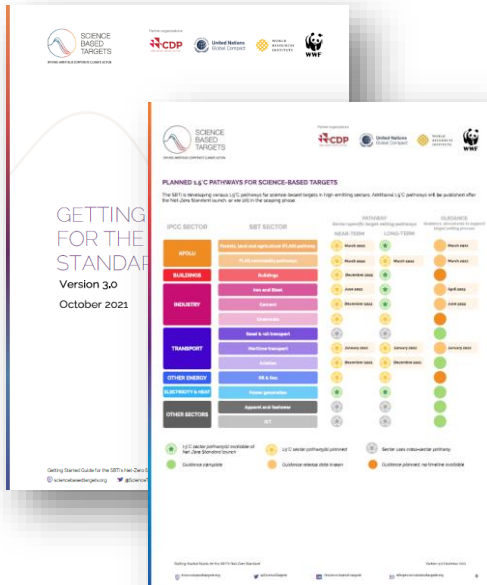
Provides criteria, guidance and recommendations to support corporates in setting net-zero targets.

SBTi Corporate Net-Zero Criteria

The criteria companies' net-zero targets must meet to be approved by the SBTi.

Net-Zero Tool

Target-setting tool to calculate long-term SBTs in line with the Net-Zero Standard.



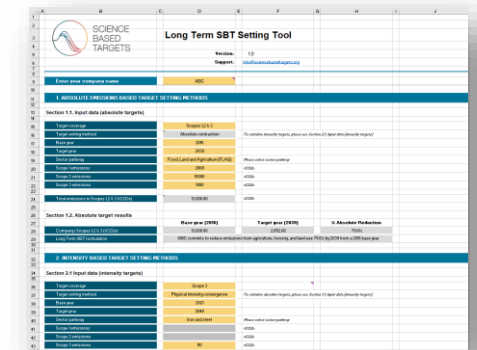
[Link](#)



[Link](#)



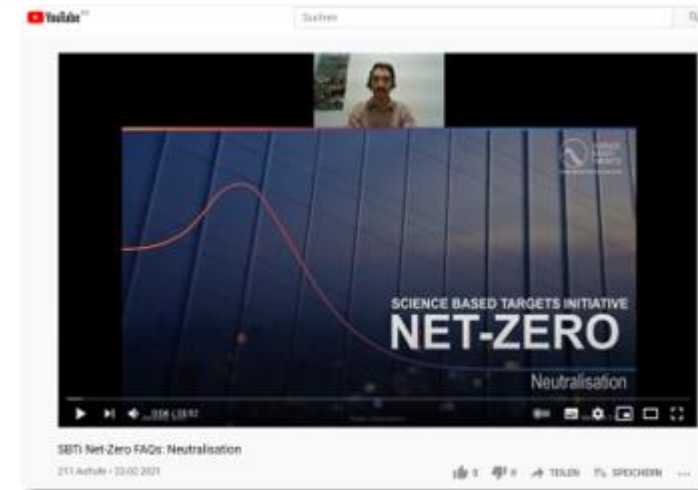
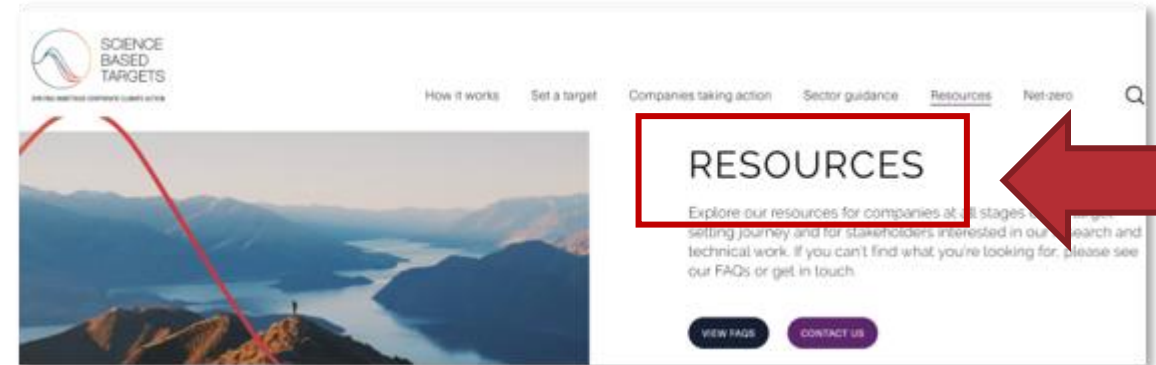
[Link](#)



[Link](#)

SBTi – GENERAL RESOURCES

- ▼ [SBTi Corporate Manual](#)
- ▼ [SBTi How-to-Guide](#)
- ▼ [SBTi FAQs](#)
- ▼ [SBTi target-setting tool](#)
- ▼ [The SBTi target validation booking system](#)
- ▼ [SBTi YouTube Channel: webinars & events](#)
- ▼ [30-min UNGC E-Learning course on SBTs and Net-Zero](#)





Key Challenges in setting SBTs

Overview of 4 key challenges in setting SBTs

Challenge 1: Choice of Base Year	Challenge 2: Scope 3 inventory and target coverage
Challenge 3: Choice of method	Challenge 4: Recalculation of targets

Key Challenge 1: Choice of Base Year (1/3)

Challenge:

- Which Base Year (BY) to choose when there are several BY options available?
- What to do when mitigation measures have already been implemented?
- Should a pre-covid Corporate Carbon Footprint (CCF) be used as a BY?

Best Practice for choice of Base Year

- BY should be representative of a company's typical GHG emission profile
- Use of latest GHG inventory available
- Verifiable data for Sc.1-3
- BY should not be older than 2015

The choice of the Base Year is of special importance, as it is used as a basis for setting targets and tracking progress towards targets over time.

Key Challenge 1: Choice of Base Year (2/3)

1) Forward-looking ambition (FLA) adjustment

Applicability:

Sc.1&2 targets with a BY earlier than the most recent CCF

Goal:

FLA adjustment prevents companies from setting targets that have already been achieved, but still rewards companies for early action by allowing them to count past emissions reductions toward achieving near-term target

Action required:

- Calculate FLA
- Adjust target ambition level if necessary

$$FLA\ adjustment = \max \left\{ RTD + \left[\frac{(Target\ year - Most\ recent\ year)}{(2050 - Most\ recent\ year)} \times (NZA - RTD) \right] - A_0, 0 \right\}$$

RTD= % reduction to date between BY and most recent year

NZA= % reduction required for reaching Net-Zero in 2050 from BY

A₀= Min. target ambition (%)

2) Min. ambition threshold

Applicability:

Absolut reduction targets with a BY later than 2020

Goal:

Ensure that targets with a BY later than 2020 reduce emissions by at least the same amount overall as targets with a 2020 BY, to ensure decarbonization aligned with climate science

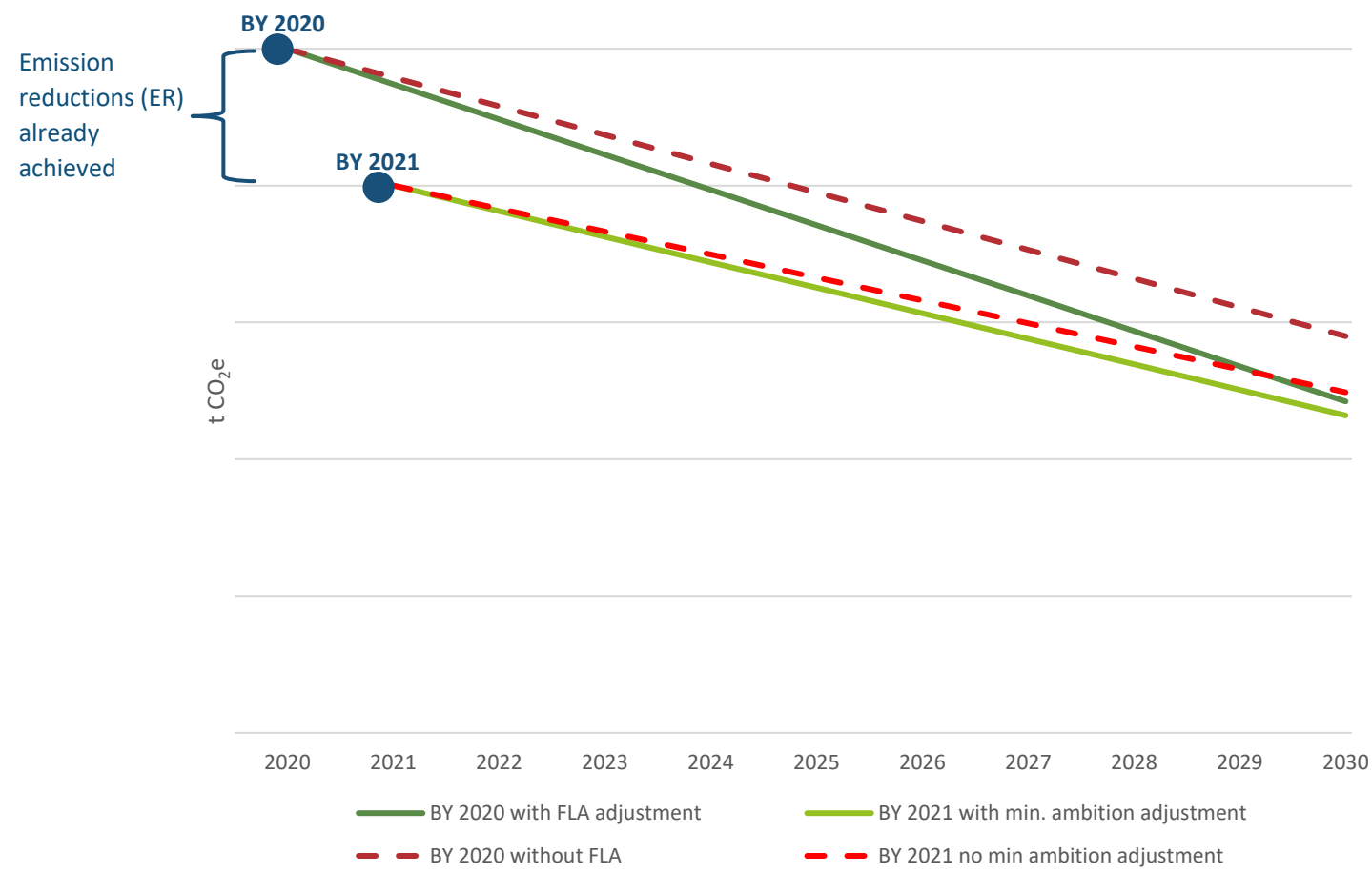
Action required:

- Fixation of BY to 2020 when calculating target ambition level (formula below)

$$Absolute\ reduction\ target\ Scope\ 1,\ 2 = \begin{cases} Base\ year \leq 2020, & 4.2\% \times (Target\ year - Base\ year) \\ Base\ year > 2020, & 4.2\% \times (Target\ year - 2020) \end{cases}$$

$$Absolute\ reduction\ target\ Scope\ 3 = \begin{cases} Base\ year \leq 2020, & 2.5\% \times (Target\ year - Base\ year) \\ Base\ year > 2020, & 2.5\% \times (Target\ year - 2020) \end{cases}$$

Key Challenge 1: Choice of Base Year (3/3)



	BY 2020	BY 2021
BY representative of a company's typical GHG emission profile and based on verifiable data?	Yes	Yes
SBTi BY specific requirements	FLA adjustment	Min. ambition threshold adjustment

Key Challenge 2: Scope 3 inventory and target coverage (1/2)

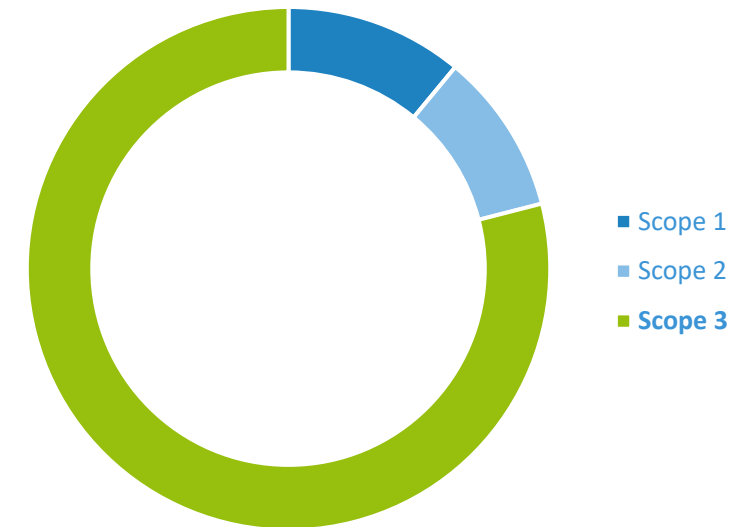
Challenge:

- Which Scope 3 categories should be calculated?
- Is the current Scope 3 inventory sufficiently elaborated to set SBT?
- What categories should be covered in the science-based target?

Scope 3 coverage requirements by SBTi

- A screening of scope 3 inventory is required
- If Sc.3 emissions > 40% of total emissions, required to set Sc.3 target
- Near-term target: min. scope 3 coverage of 67% required
- Long-term target: min. scope 3 coverage of 90% required

Typical emissions profile



Scope 3 emissions make up main share companies in most sectors. The quantification however is a challenge.

Key Challenge 2: Scope 3 inventory and target coverage (2/2)

Scope 3 Screening

- Determine overall size of value chain emissions
- Qualitative screening: Criteria by GHG Protocol to identify relevant categories
- High-level quantitative screening: using less data intensive calculation methods (spend-based method)
- Sector guidance by SBTi

Criteria	Description of activities
Size	They contribute significantly to the company's total anticipated scope 3 emissions
Influence	There are potential emissions reductions that could be undertaken or influenced by the company
Risk	They contribute to the company's risk exposure (e.g., climate change related risks such as financial, regulatory, supply chain, product and technology, compliance/litigation, and reputational risks)
Stakeholders	They are deemed critical by key stakeholders (e.g., customers, suppliers, investors or civil society)
Outsourcing	They are outsourced activities previously performed in-house or activities outsourced by the reporting company that are typically performed in-house by other companies in the reporting company's sector
Sector guidance	They have been identified as significant by sector-specific guidance
Spending or revenue analysis	They are areas that require a high level of spending or generate a high level of revenue (and are sometimes correlated with high GHG emissions)
Other	They meet any additional criteria developed by the company or industry sector

GHGP Scope 3 Standard: Criteria for Scope 3 screening

Scope 3 category coverage of target

- SBTi sector guidance
- Sc.3 categories with most significant GHG emissions
- Benchmark of relevant peers within sector
- Dependent on which categories company wants to focus mitigation measures towards

Aluminium	→ Scoping Phase	Forest, Land and Agriculture (FLAG)	🔄 In Development
Apparel and footwear	🟢 Finalized	Information and Communication Technology (ICT)	🟢 Finalized
Aviation	🔄 In Development	Oil and Gas	🔄 In Development
Buildings	🔄 In Development	Power	🟢 Finalized
Chemicals	🔄 In Development	Steel	🔄 In Development
Cement	🔄 In Development	Transport	🔄 In Development
Financial institutions	🟢 Finalized		

SBTi Sector Guidance

Key Challenge 3: Choice of method

Challenge:



- Which method should be used to set Sc.1&2 targets?
- Which method should be used to set Sc.3 targets?

Scope 1&2

- Assess whether SDA available for the given sector
- If not, set a target using ACA
- Option to set complementary Renewable electricity target for Sc.2

Scope 3

- Assess whether SDA available for the given sector
- If not, use ACA
- Or use Supplier Engagement
- Or combination of ACA and Supplier Engagement
- Only in few cases Physical/Economic Intensity Contraction is used

		Methods What are the eligible methods to set targets?
Near-term target 	Scope 1 & 2	<ul style="list-style-type: none"> • Absolute Contraction Approach (ACA) • Physical Intensity Convergence (SDA) • Renewable electricity (Sc.2 only)
	Scope 3	<ul style="list-style-type: none"> • Absolute Contraction Approach (ACA) • Physical Intensity Convergence (SDA) • Supplier / customer Engagement • Physical Intensity Contraction • Economic Intensity Contraction
Long-term target (Net-Zero) 	Scope 1 & 2	<ul style="list-style-type: none"> • Absolute Contraction Approach (ACA) • Physical Intensity Convergence (SDA) • Renewable electricity (Sc.2 only)
	Scope 3	<ul style="list-style-type: none"> • Absolute Contraction Approach (ACA) • Physical Intensity Convergence (SDA) • Physical Intensity Contraction • Economic Intensity Contraction

Key Challenge 4: Recalculation of targets

Challenge:

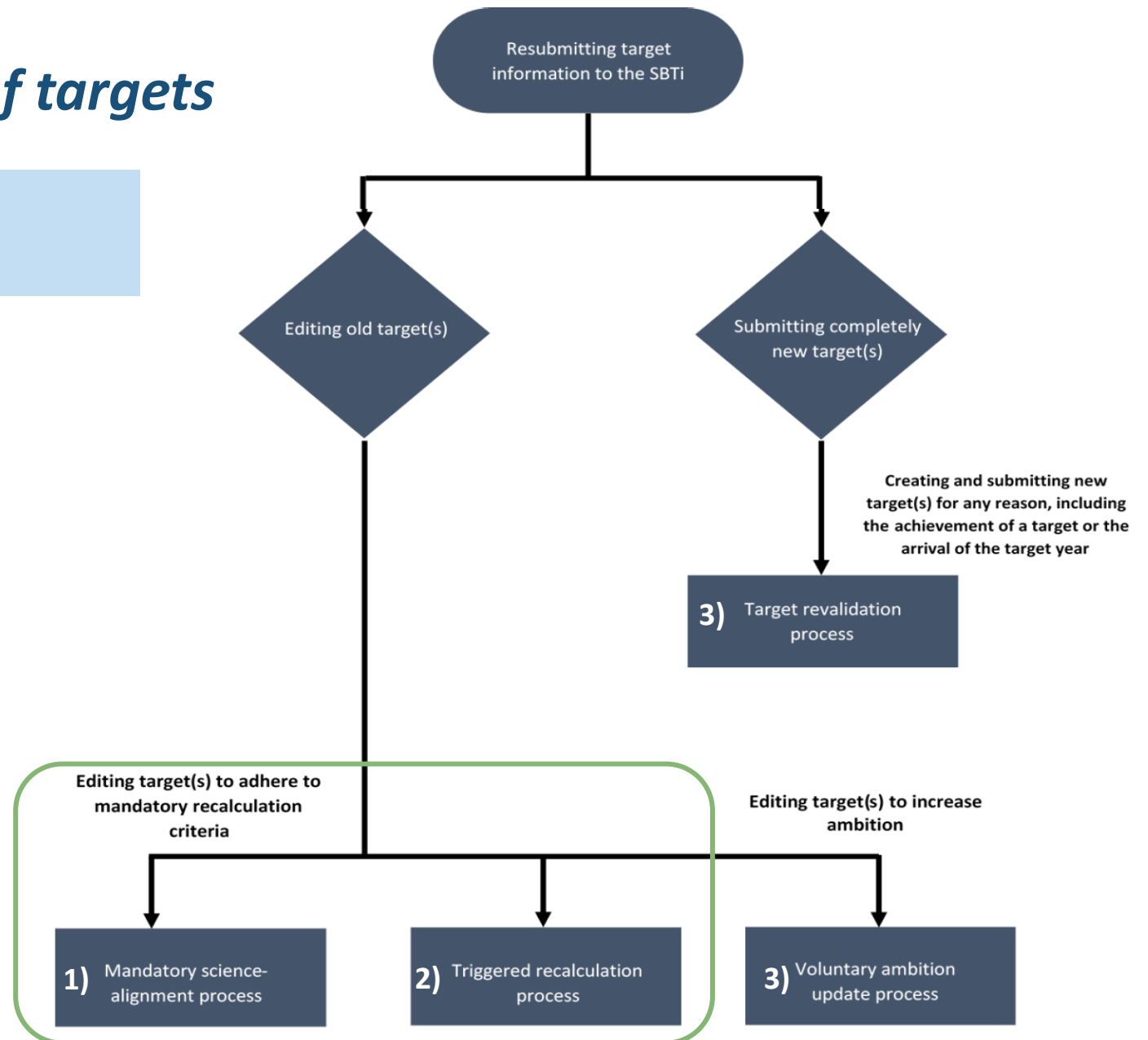
- When and why must targets be recalculated?

1) Mandatory science-alignment process

- Previously submitted targets must be updated, to ensure consistency with the most recent climate science.
- Every 5 years
- Update all targets based on latest SBTi criteria

2) Triggered recalculation process

- Previously submitted targets must be updated, to reflect business changes, so that targets remain relevant to the current company structure and operations.
- Update whenever necessary



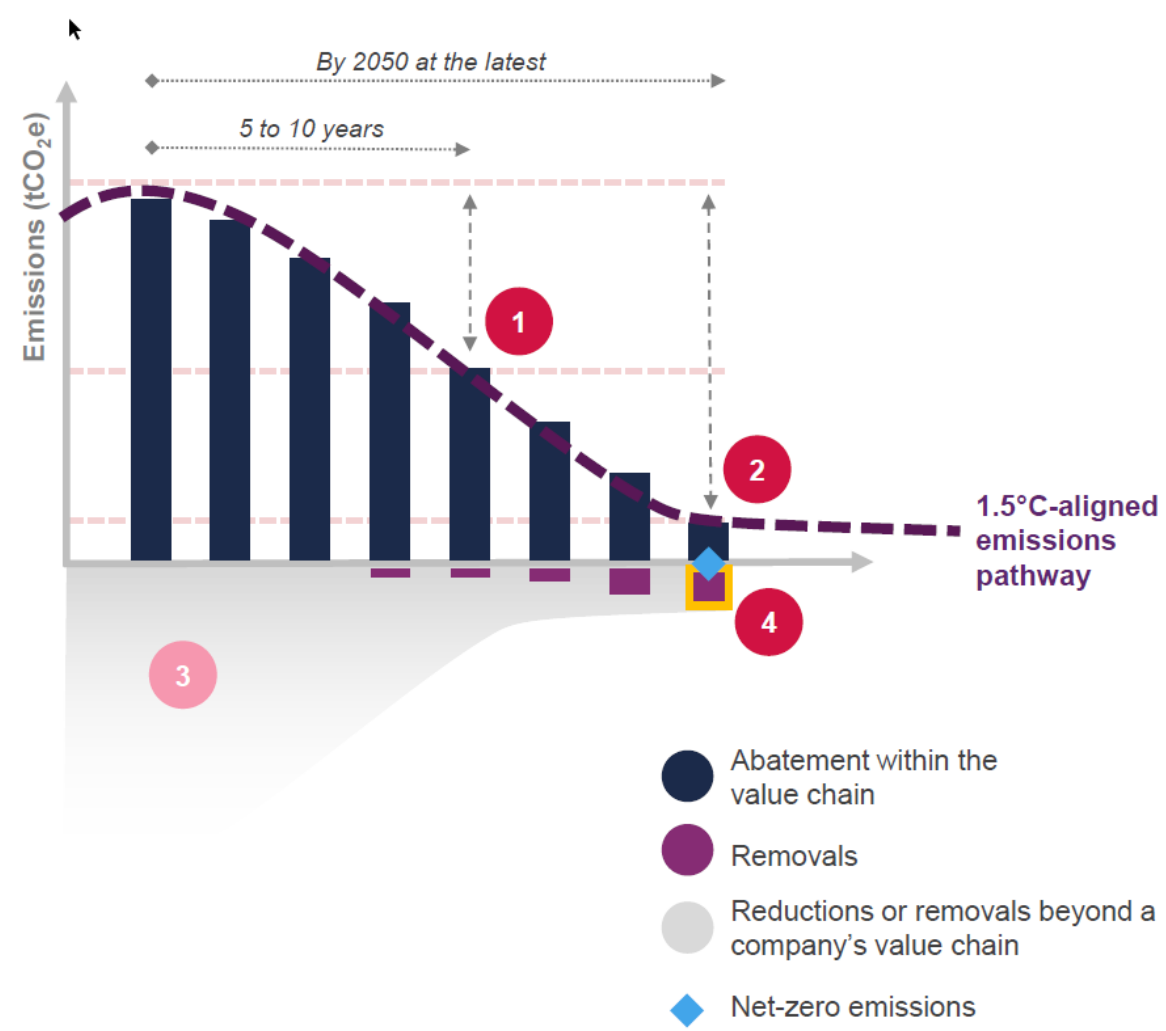
Take aways

- Solid CCF Scope 1,2 and all relevant scope 3 categories
- Consider impacts of choice of different base years in target calculation
- Stay updated on latest SBTi publications (e.g. new sector guidance and potential impact on Scope 3 coverage)
- Check regularly against recalculation criteria



How First Climate can help you reach your targets

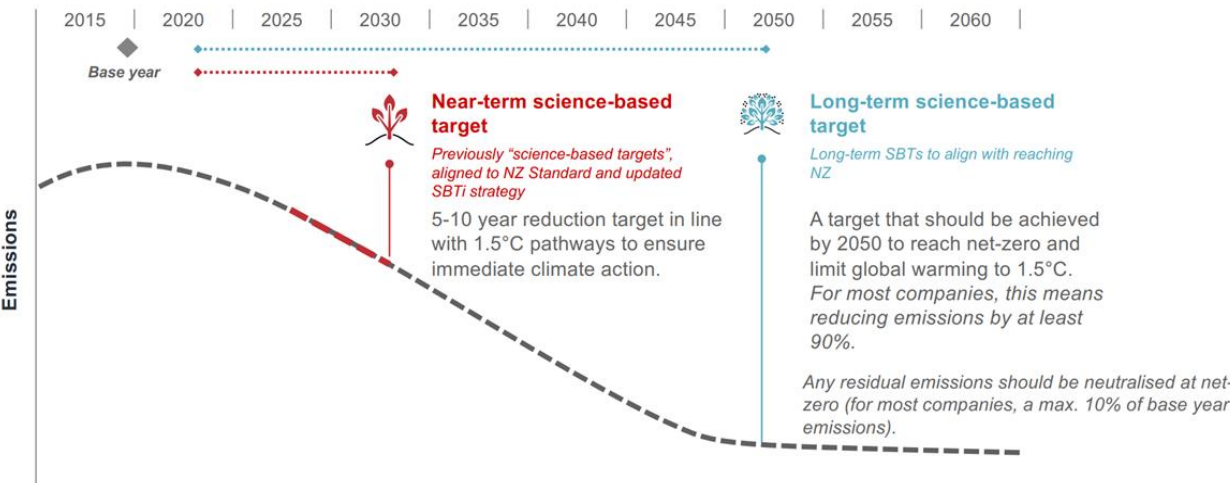
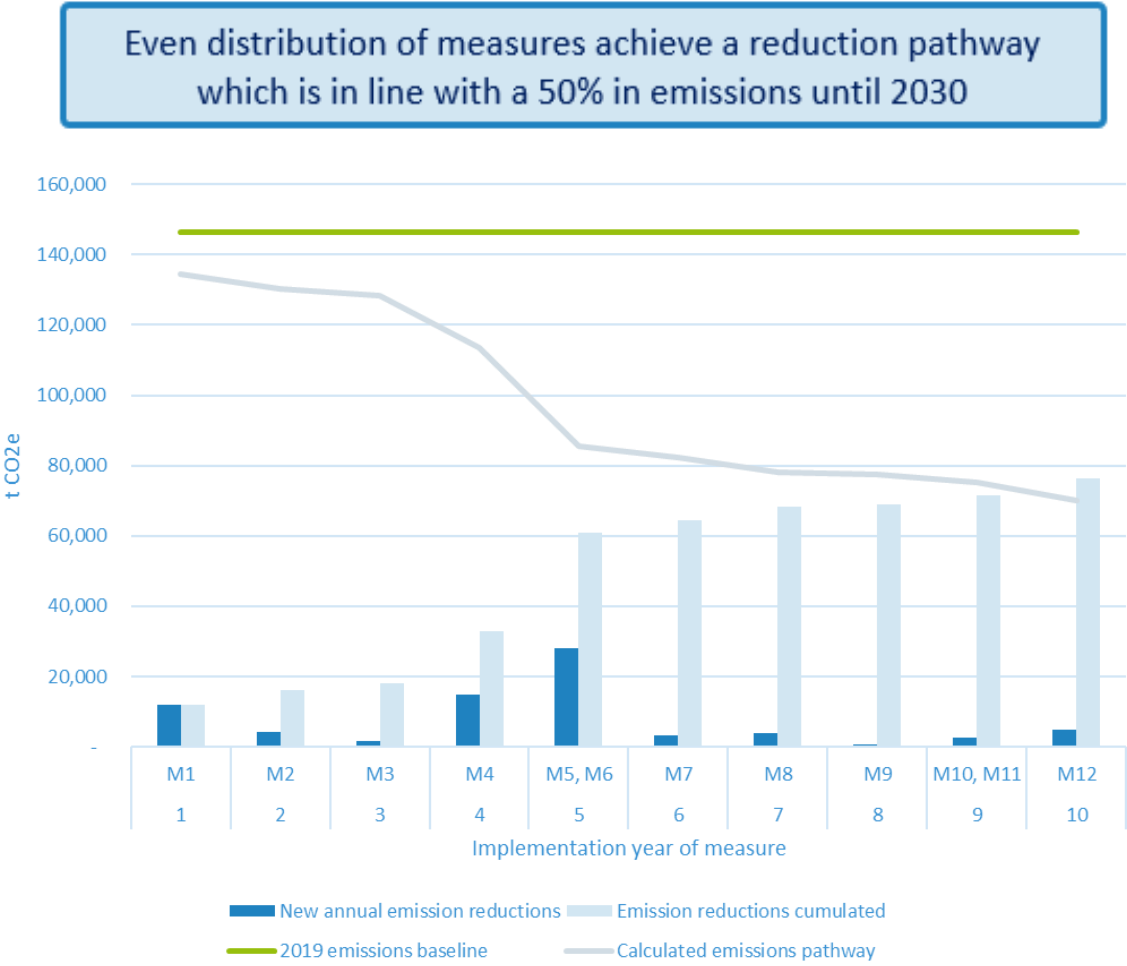
Recap of SBTi approach to Net-Zero



- 1 & 2 – Abatement within the value chain
- 3 – Beyond value chain mitigation
- 4 – Neutralization

1 & 2. Abatement within direct operations & value chain:

Emission reduction pathway



in theory
and
in practice

1 & 2. Abatement within direct operations & value chain:

Green electricity for Scope 2



2.1 Unbundled Energy Attribute Certificates (EACs)

2.2 Utility/Supplier Green Electricity Products / Bundled EACs / Green Tariffs

2.3 On-site Generation

2.4 Off-site Power Purchase Agreement (PPA)



Each Energy Attribute Certificate represents proof that 1 MWh of renewable energy has been produced and delivered to the grid



Different types of markets exist:

- Renewable Energy Certificates (RECs) in the US
- Guarantees of Origin (GoOs) in Europe
- International-RECs (I-RECs) in other regions



EACs are a voluntary tool to reduce a corporate's Scope 2 emissions for electricity consumption (excl. heat and steam) and comply with the Greenhouse Gas Protocol Scope 2 Guidance



According to the GHG Protocol guidelines, EACs should always be sourced from the same market as the electricity they are used to green

3. Beyond value chain mitigation

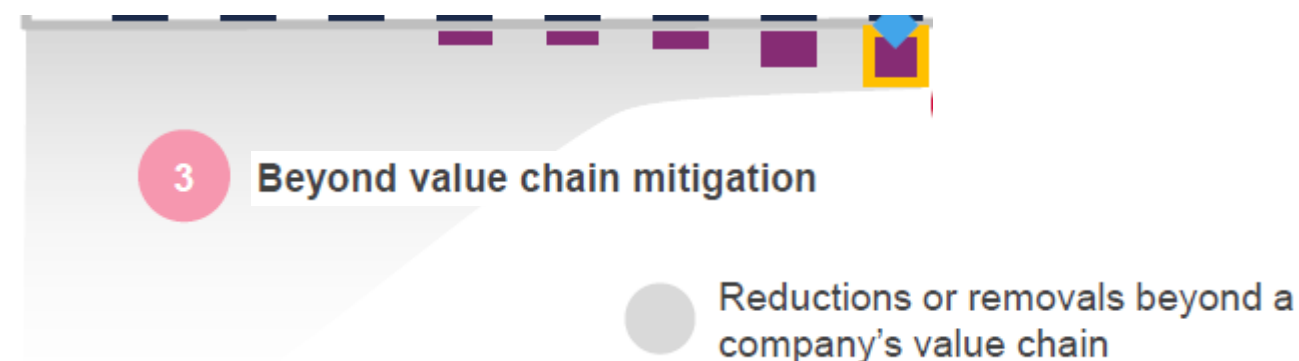
"The principle at the heart of the SBTi's Net-Zero Standard is the mitigation hierarchy. This hierarchy says that companies must prioritize value chain emission reductions ahead of actions or investments to mitigate emissions outside their value chains to achieve net-zero. However, the Standard also explicitly states that *"companies should go further and invest in mitigation outside their value chains **now** to contribute towards reaching societal net-zero"*. This means that while absolute emissions reductions must be prioritized, companies must also invest in BVCM to help the global economy align with 1.5°C and net-zero."



Net-Zero: Urgent
Beyond Value Chain
Mitigation Is Essential

13th Sep 2022

Purchasing high-quality carbon credits accelerates the transition to net-zero emissions at the global level.



<https://sciencebasedtargets.org/blog/net-zero-urgent-beyond-value-chain-mitigation-is-essential>

3. Beyond value chain mitigation: In the transition to Net-Zero

Project standards



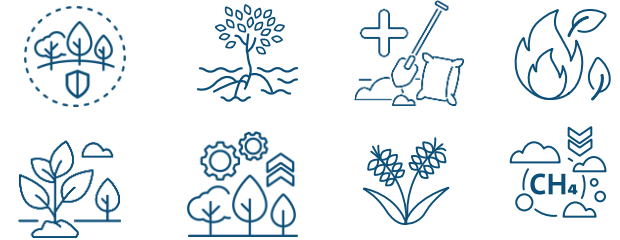
- Our projects meet the requirements of recognized quality standards such as the Clean Development Mechanism, Verified Carbon Standard and Gold Standard.
- Transactions are conducted in respective registries.

Geography



- The majority of these projects are located in less developed countries and emerging markets (China, India, Southeast Asia, Brazil, Africa, for example)
- Few European countries to date, and usually at relatively higher costs

Project technologies



- **Renewable energy:** Wind, Solar, Hydro power, Biogas, Biomass
- **Small-scale energy efficiency (EE):** Efficient cook stoves, water filter
- **Industrial EE:** Fuel conversion (energy switch), waste heat utilization
- **Forestry:** Reforestation, avoided deforestation, Improved Forest Management (IFM)

3. Beyond value chain mitigation: project categories

Prevent Deforestation



Blue Carbon



Community



Afforestation



Soil Carbon

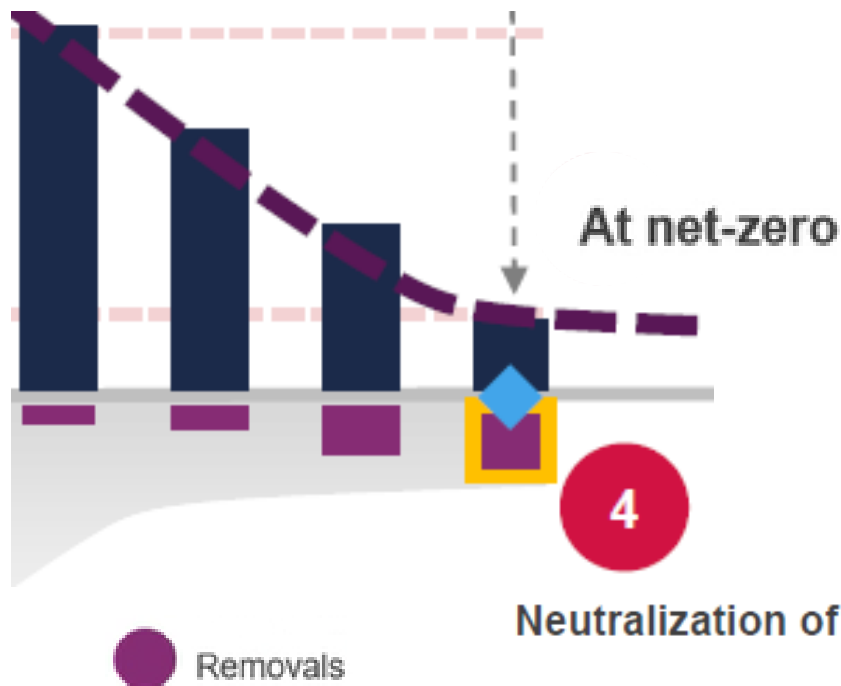


Renewable Energy



4. Neutralization and how removals can be used to achieve Net-Zero

Remove carbon from the atmosphere and permanently store it



"Why: Although most companies will reduce emissions by at least 90% through their long-term science based targets, some residual emissions may remain. These emissions must be neutralised to reach net-zero emissions and a state of no impact on the climate from GHG emissions."*

4. Neutralization: Access to high-quality carbon removal projects

Address your company's residual carbon emissions or act as an accelerator for early-stage but high-potential projects to grow the carbon removal market.

Your value

- Access to high-quality carbon removal credits
- Unique and exclusive project development for your company (feasibility study, screening of options etc.)
- Insights into carbon removal methods
- Know opportunities and risks of specific projects

How to engage

*Spot
Purchase*



*Advance
Payment*



*Forward
Purchase*



*Equity
Stake*



4. Neutralization: High-quality carbon removal projects

Volume of carbon removal credits
Maturity of project technology

Permanence
Price per ton



Natural Climate Solutions

- > 150k tons carbon removal p.a.
- Blue Carbon, ARR
- e.g. Colombia, Republic of Guinea (early-stage), Brazil (early-stage)



Technical Removal solutions

- > 45k tons carbon removal p.a.
- Biochar
- Switzerland, Canada (first credits issued in 2024)



In development

- Ca. 10k tons carbon removal p.a.
- Enhanced weathering, CO₂ storage in concrete
- Germany, Switzerland

4. NCS Project Development by First Climate

Project Technologies



REDD+



Afforestation



Blue Carbon



Improved Forest Management



Biochar, SOC



Colombia

- Native species afforestation



Argentina

- Native species afforestation



Indonesia

- Mangrove restoration



Germany

- KlimaHumus Initiative
- Reforestation



Mexico

- REDD+



Switzerland

- Harvested Wood Products
- Biochar Program



China

- Native species afforestation



Questions?



First Climate

**GREEN BY
CHOICE**

First Climate Markets AG

Industriestr. 10

61118 Bad Vilbel / Germany

First Climate (Switzerland) AG

Brandschenkestrasse 51

8002 Zurich / Switzerland



Q&A

If targets need to be recalculated, does that trigger another invoice by SBTi?

- This is quite straightforward. Every time a company submits targets for validation by the SBTi, there is a service fee that needs to be paid. The [SBTi target validation service offerings and associated costs can be found here](#). The SBTi provides a valuable service and the costs enable them to deliver that service to a high-standard while also continually making improvements and launching new services, criteria and deliverables. The updates improve the service provided to companies, while enabling the SBTi to scale into new regions and sectors. The SBTi accepts waiver submissions from companies based in developing countries.

When are O&G guidelines expected?

- There is no available timeline yet. For the latest information please refer to the following sector page: [Oil and Gas - Science Based Targets](#). The SBTi is currently working with Mott MacDonald, a global engineering, management, and development firm, to lead an independent expert panel review of the methods and guidance developed during the initial phase of the project (2020). On completion, the SBTi will evaluate the next steps required to revise and finalize the methods and guidance. This may include an additional public consultation period.

Will CDP adopt SBTi's MRV framework?

- The SBTi is working closely with CDP, as a founding partner of the initiative, in the development of it's MRV framework and will work to ensure the MRV framework does not result in heavy additional reporting burden for companies.