



Science Based Targets Workshop 1

The meeting will commence shortly

Use the 'Q&A' functionality to ask questions



This meeting will be recorded



Welcome

Roger Maybury | Supplier Management Director, Commercial & Procurement, NR

Zero carbon Highways

Adam Simmons

Director – Future Road
Investment Strategies and
Government relations



Agenda



Topic	Speaker	Time
Introduction to Science Based Targets	Emma Watson (SBTi) Olwen Smith (SBTi)	10:10am
Questions for the SBTi	Emma Watson (SBTi) Olwen Smith (SBTi)	10:40am
Break		10:50am
Calculating your carbon footprint	James Cadman (Sustainability School)	11:00am
Questions for Sustainability School	James Cadman (Sustainability School)	11:30am
Panel Q&A	Rupa Bhatt (Network Rail)	11:35am
Workshop Close	Roger Maybury (Network Rail)	11:55am

Introduction to Science-Based Targets

Network Rail supplier workshop

Emma Watson
Olwen Smith
27th May 2021

Partner organizations



United Nations
Global Compact



WORLD
RESOURCES
INSTITUTE



In collaboration with

WE MEAN
BUSINESS
COALITION

CONTENTS

- What are Science-Based Targets (SBTs)?
- How SBTs fit into a net zero strategy
- How to commit to setting SBTs:
 - Regular target-setting route
 - SME target-setting route



WHAT ARE SCIENCE-BASED TARGETS?

THE SCIENCE BASED TARGETS INITIATIVE (SBTi)



SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Partner Organizations:



United Nations
Global Compact



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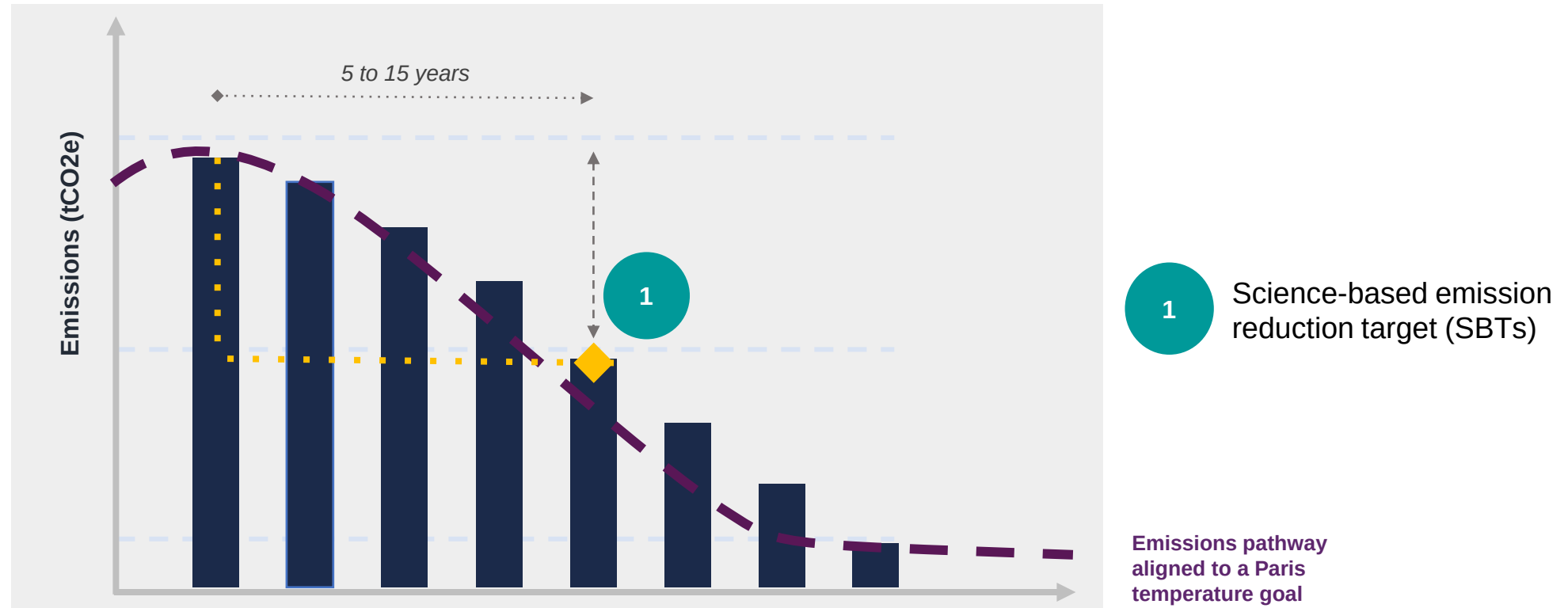


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INTRODUCTION TO SBTs

WHAT ARE SCIENCE-BASED TARGETS?



Targets adopted by companies to reduce greenhouse gas (GHG) emissions are considered "science-based" if they are in line with what the latest climate science says is necessary to **meet the goals of the Paris Agreement**: limiting global warming to **well below 2°C** above pre-industrial levels and making efforts to limit warming to **1.5°C**.

SBTs help companies determine **how much** and **how fast** they need to reduce its GHG emissions.

INTRODUCTION TO SBTs

WHAT ARE SCIENCE BASED TARGETS?



FROM PARIS AGREEMENT

- Mitigation goals for the global economy
- Expressed as a long-term goal
- Expressed in temperature metrics

TO SBTs

- Targets at the company level covering the most relevant source of emissions across the value-chain
- With a timeframe that ensures accountability and drives short-term action (5 to 15 years)
- Expressed in metrics that are relevant for the sector/company



INTRODUCTION TO SBTs

SBTi BUSINESS CASE: **BENEFITS FOR COMPANIES**



BUSINESS CASE

ADDRESS STAKEHOLDERS 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

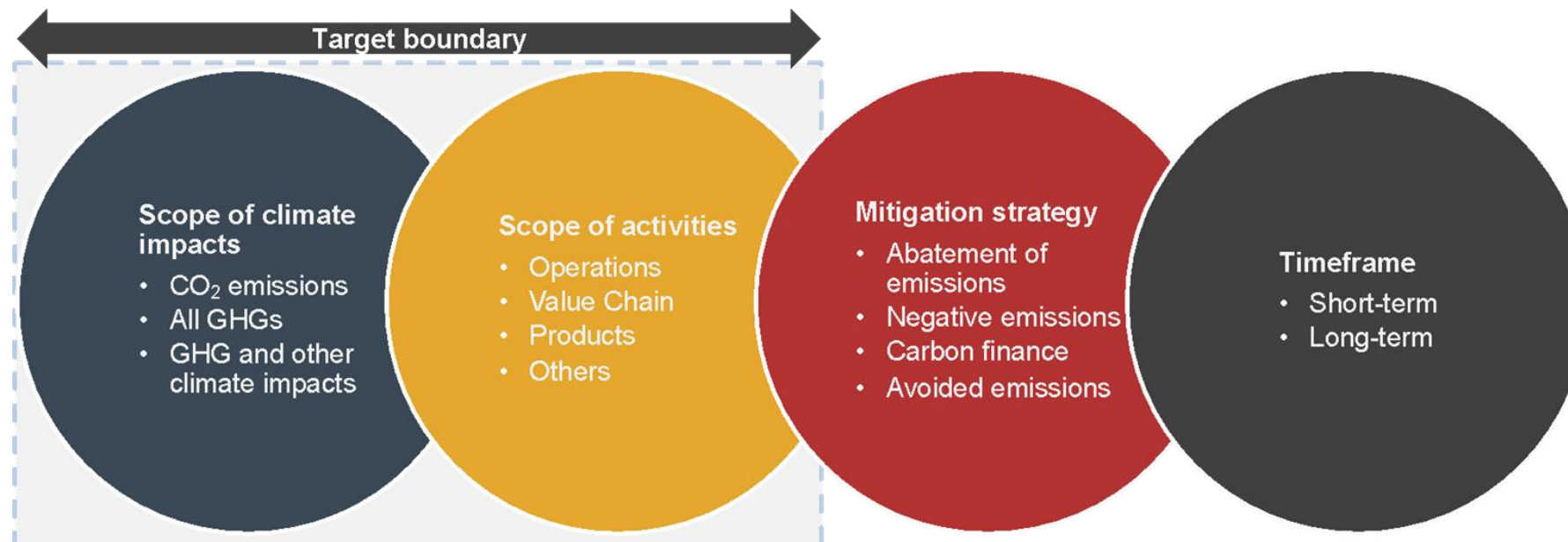


HOW SBTS FIT INTO A NET ZERO STRATEGY

Companies are setting net-zero targets without a global standard

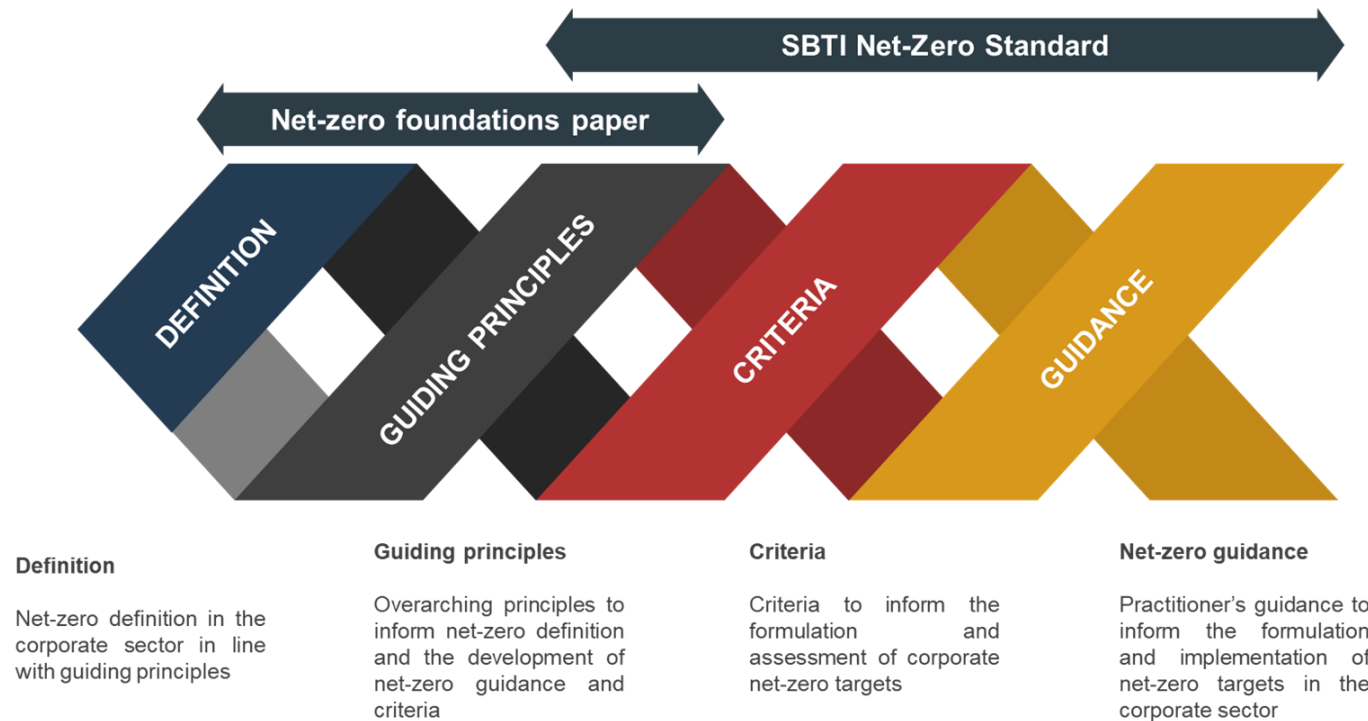
There is a high degree of heterogeneity in the current net-zero landscape. Net-zero targets differ across three important dimensions:

1. The sources of emissions included in the target;
2. The mitigation strategy pursued (including the degree of abatement achieved);
3. The timeframe of the target



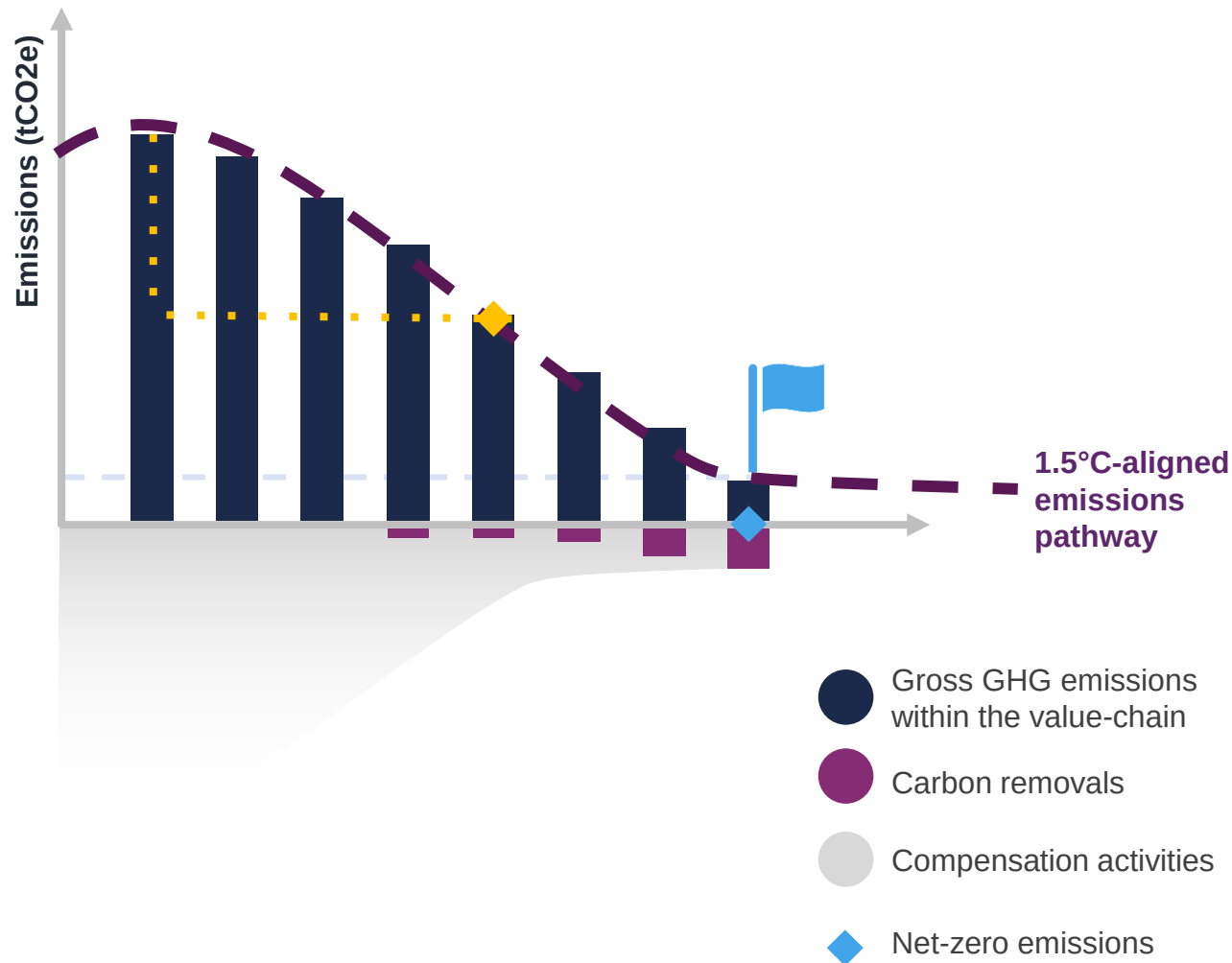
What is the SBTi doing to address Net-Zero?

SBTi corporate net-zero standard



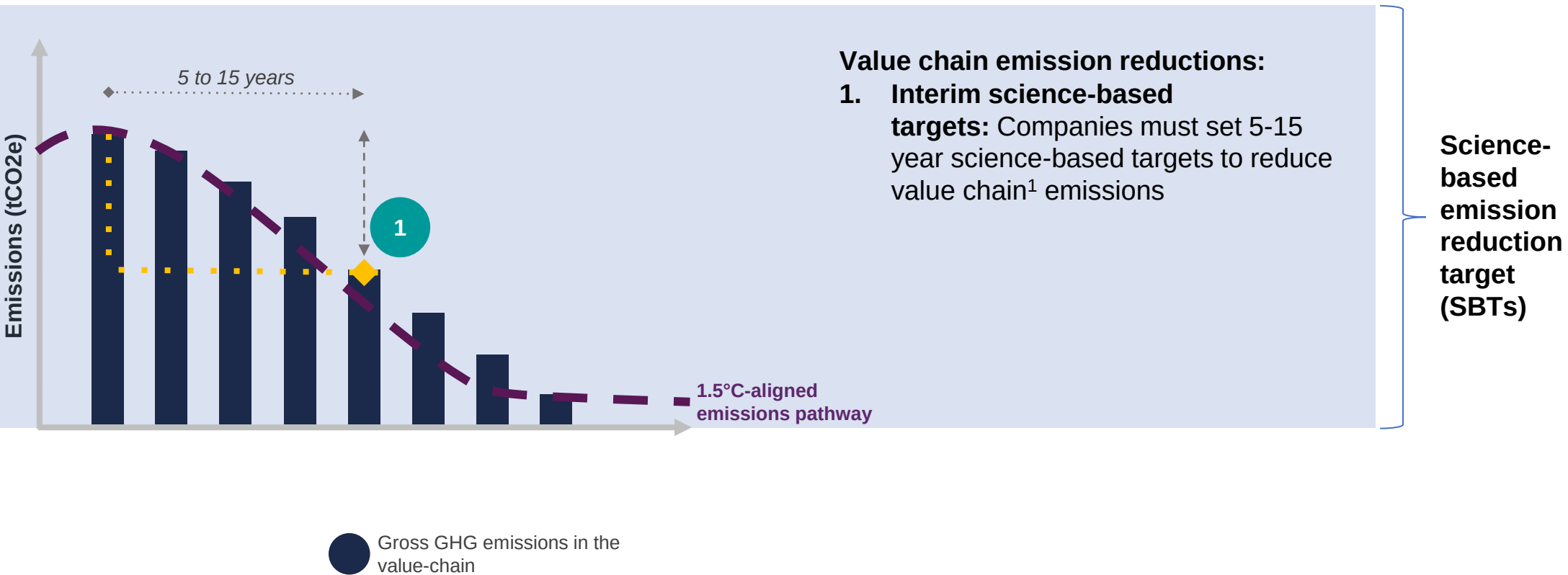
- The SBTi is conducting an inclusive, stakeholder-informed process to develop a framework to enable companies to set robust and credible net-zero targets in line with a 1.5°C future.
- It includes criteria and guidance, which will enable companies to have their targets validated by the SBTi.

What does it mean for a company to reach net-zero in line with science?

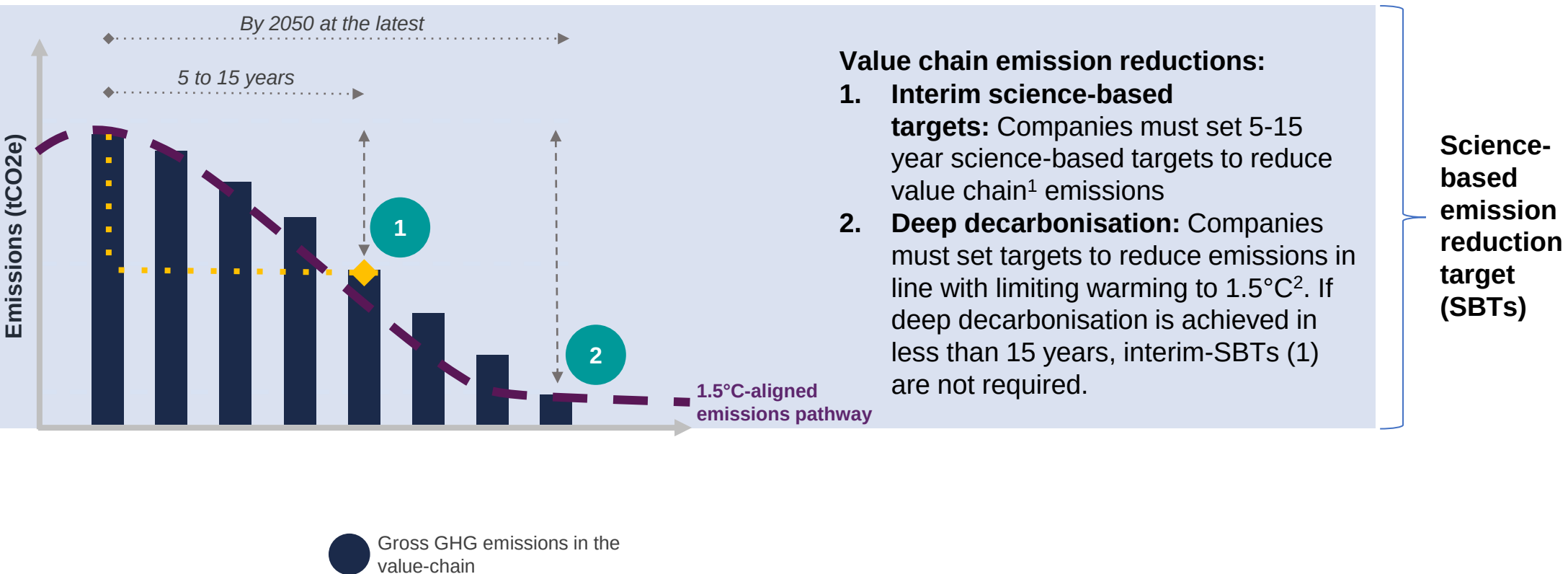


- To achieve emissions reductions within the value-chain consistent with scientific pathways that limit warming to 1.5C with no or limited overshoot;
- To neutralise the impact of any residual emissions by permanently removing an equivalent volume of CO₂

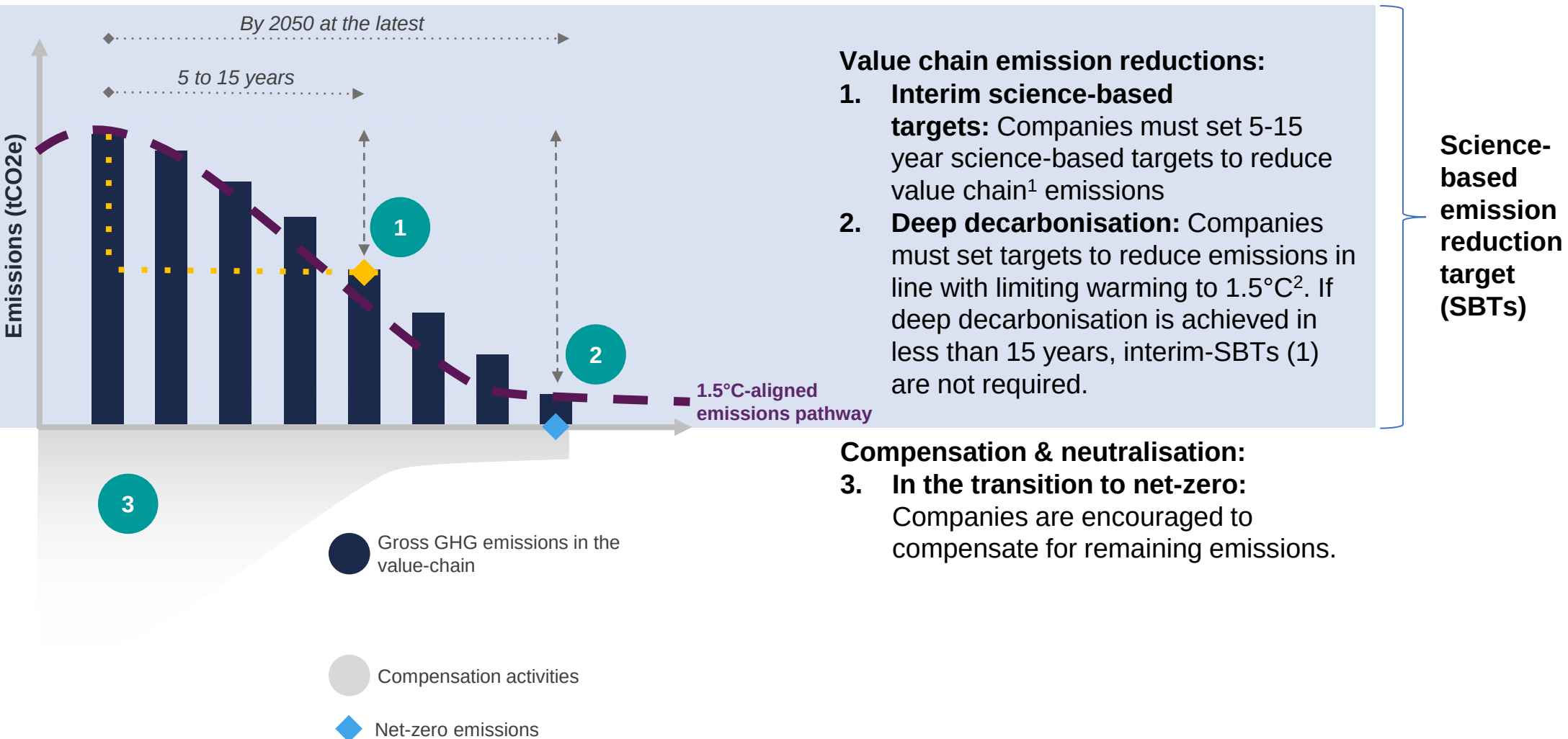
What does it mean for a company to reach net-zero in line with science?



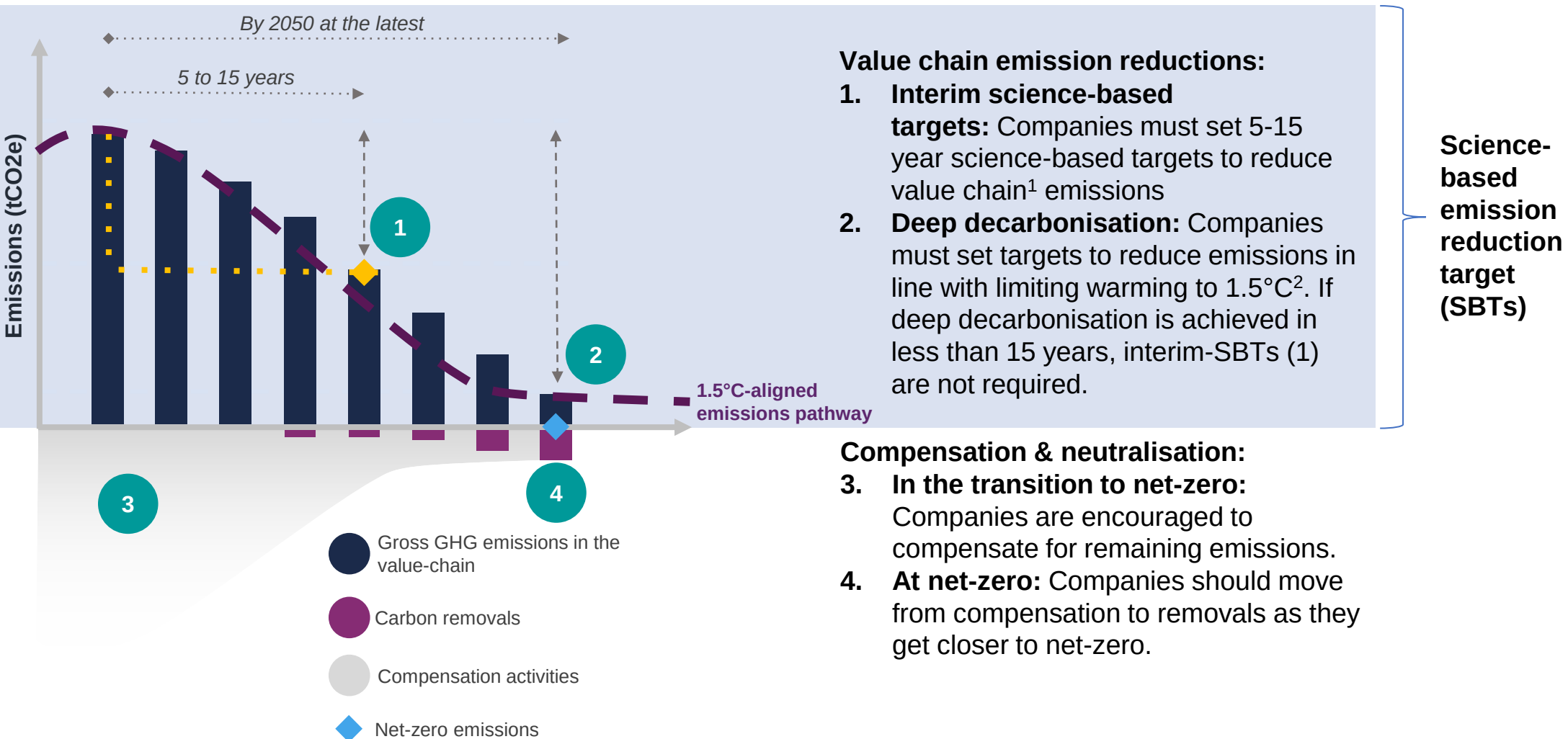
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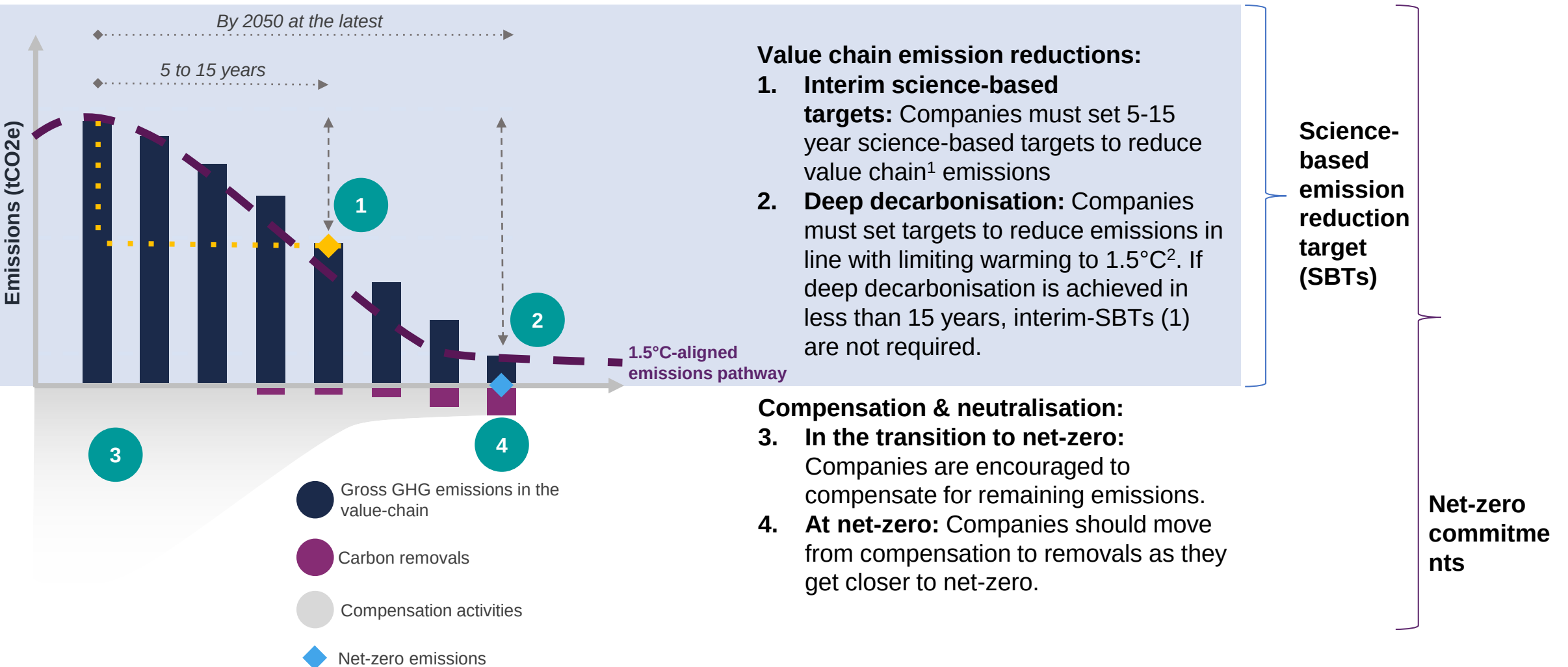
What does it mean for a company to reach net-zero in line with science?



What does it mean for a company to reach net-zero in line with science?



What does it mean for a company to reach net-zero in line with science?



CORPORATE NET-ZERO TARGETS

SCIENCE-BASED NET-ZERO TARGETS VS. “CLIMATE NEUTRALITY” TARGETS

How does the SBTi’s definition of net-zero differ from existing corporate “climate neutrality” targets?

- **Guided by the science** of what is needed to reach net-zero at a global level;
- **Net-zero targets address the *endpoint*** of a company’s emissions abatement journey more than a transitional state, where companies rely on a greater volume of offsetting;
- Net-zero targets must include a specific, **minimum amount of emissions abatement in the value chain** to be validated by the SBTi;
- Differentiates between offsets that result in avoided emissions or emissions reductions vs. offsets that result in carbon removal.



HOW TO COMMIT TO SET AN SBT

THE SBTi JOURNEY

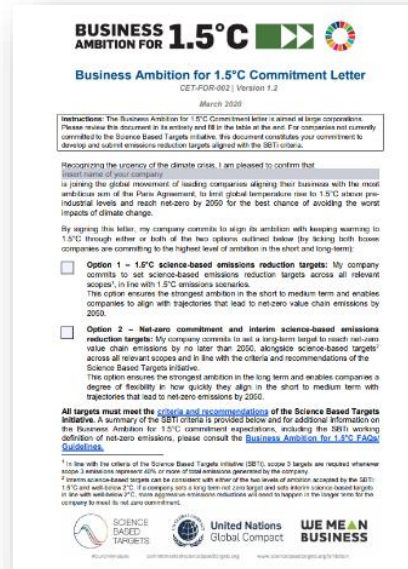
STEP BY STEP



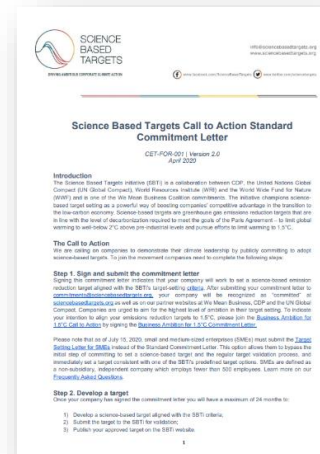
STEP 1: MAKE A PUBLIC COMMITMENT

THE ROUTES TO COMMIT TO THE SBTi

Commit to set targets within 24 months



Business Ambition for 1.5°C
Commitment Letter



Standard SBTi
Commitment Letter



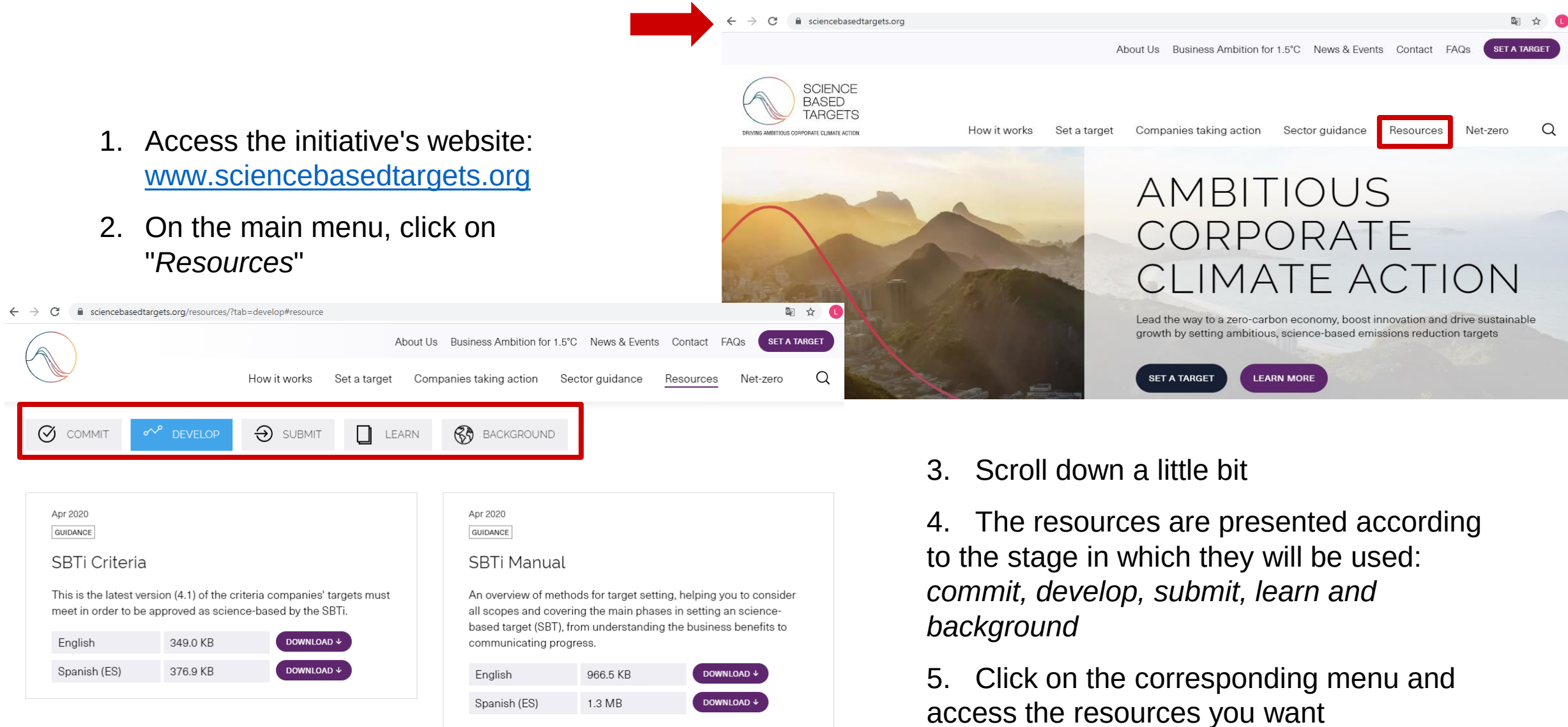
SMEs Target
Setting Letter

RACE TO ZERO

HOW TO SET A TARGET

STEP 2: DEVELOP THE TARGET | KEY RESOURCES WHERE TO FIND

1. Access the initiative's website:
www.sciencebasedtargets.org
2. On the main menu, click on
"Resources"



The screenshot shows the Science Based Targets website. A red arrow points to the website URL in the browser. The 'Resources' link in the main menu is highlighted with a red box. Below the main menu, a secondary navigation bar shows five stages: COMMIT, DEVELOP (highlighted with a red box), SUBMIT, LEARN, and BACKGROUND. The 'DEVELOP' stage is selected, and the page content below shows resources for 'SBTi Criteria' and 'SBTi Manual'.

SBTi Criteria

Apr 2020
GUIDANCE

This is the latest version (4.1) of the criteria companies' targets must meet in order to be approved as science-based by the SBTi.

Language	Size	Download
English	349.0 KB	DOWNLOAD
Spanish (ES)	376.9 KB	DOWNLOAD

SBTi Manual

Apr 2020
GUIDANCE

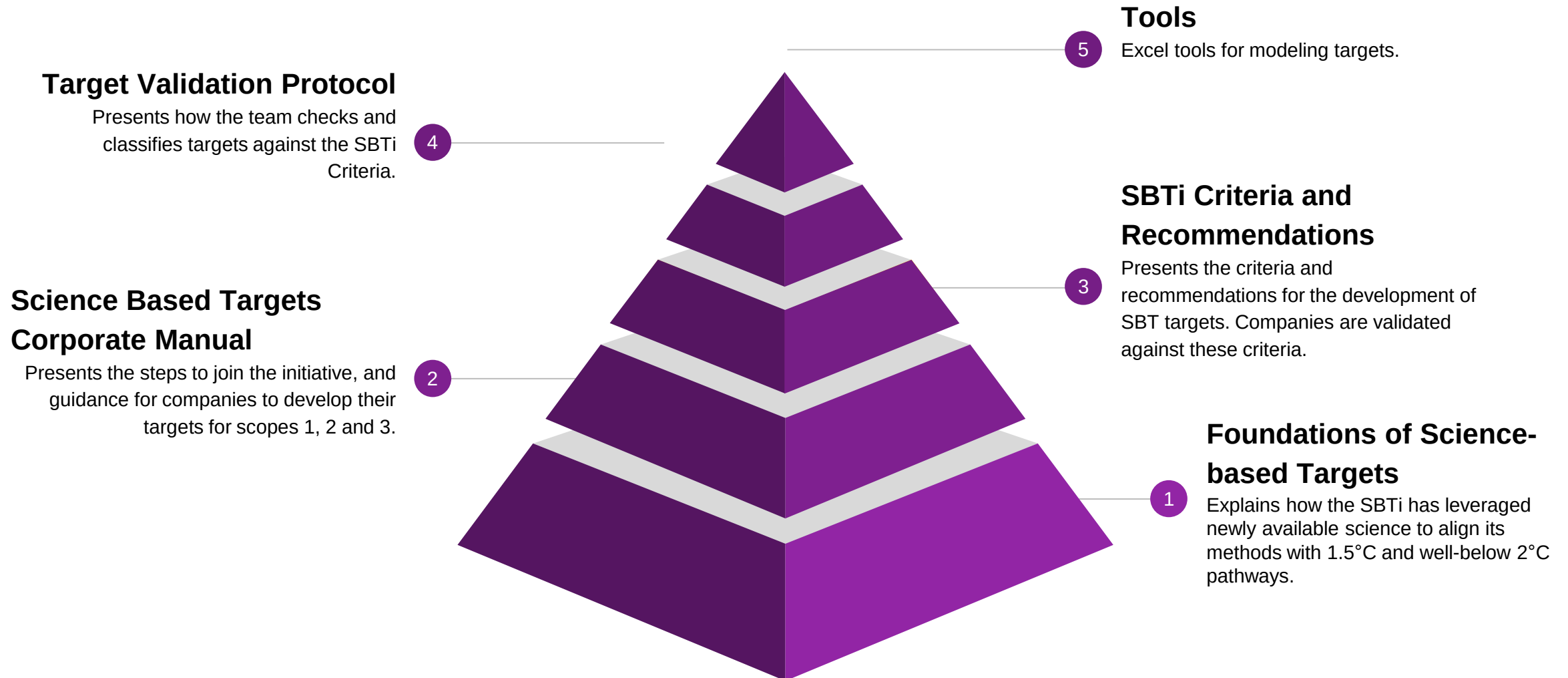
An overview of methods for target setting, helping you to consider all scopes and covering the main phases in setting a science-based target (SBT), from understanding the business benefits to communicating progress.

Language	Size	Download
English	966.5 KB	DOWNLOAD
Spanish (ES)	1.3 MB	DOWNLOAD

3. Scroll down a little bit
4. The resources are presented according to the stage in which they will be used:
commit, develop, submit, learn and background
5. Click on the corresponding menu and access the resources you want

HOW TO SET A TARGET

STEP 2: DEVELOP THE TARGET | KEY RESOURCES OVERVIEW





SMALL AND MEDIUM-SIZED ENTERPRISES: SMEs ROUTE

HOW TO SET A TARGET

SMES ROUTE



HOW TO SET A TARGET

SMES ROUTE

- The SBTi has developed an exclusive route for SMEs and these **MUST** submit a target through this route;
- This route enables SMEs to bypass the regular target validation process and to **immediately** set a science-based target for **scope 1 and 2**;
- SMEs must choose **one** of the **predefined options** available in the SME Target Setting Letter;
- Base year and target year **cannot** be different from the predefined ones;
- SBTi **does not** approve SME's scope 3 targets;
- Oil and gas companies and financial institutions **cannot** set targets through the SME's route, even if they fit the SME definition;
- SMEs **must** communicate their targets and publicly disclose their emissions inventory and progress against targets on an annual basis.

PREDEFINED options in the SME Target Setting Letter

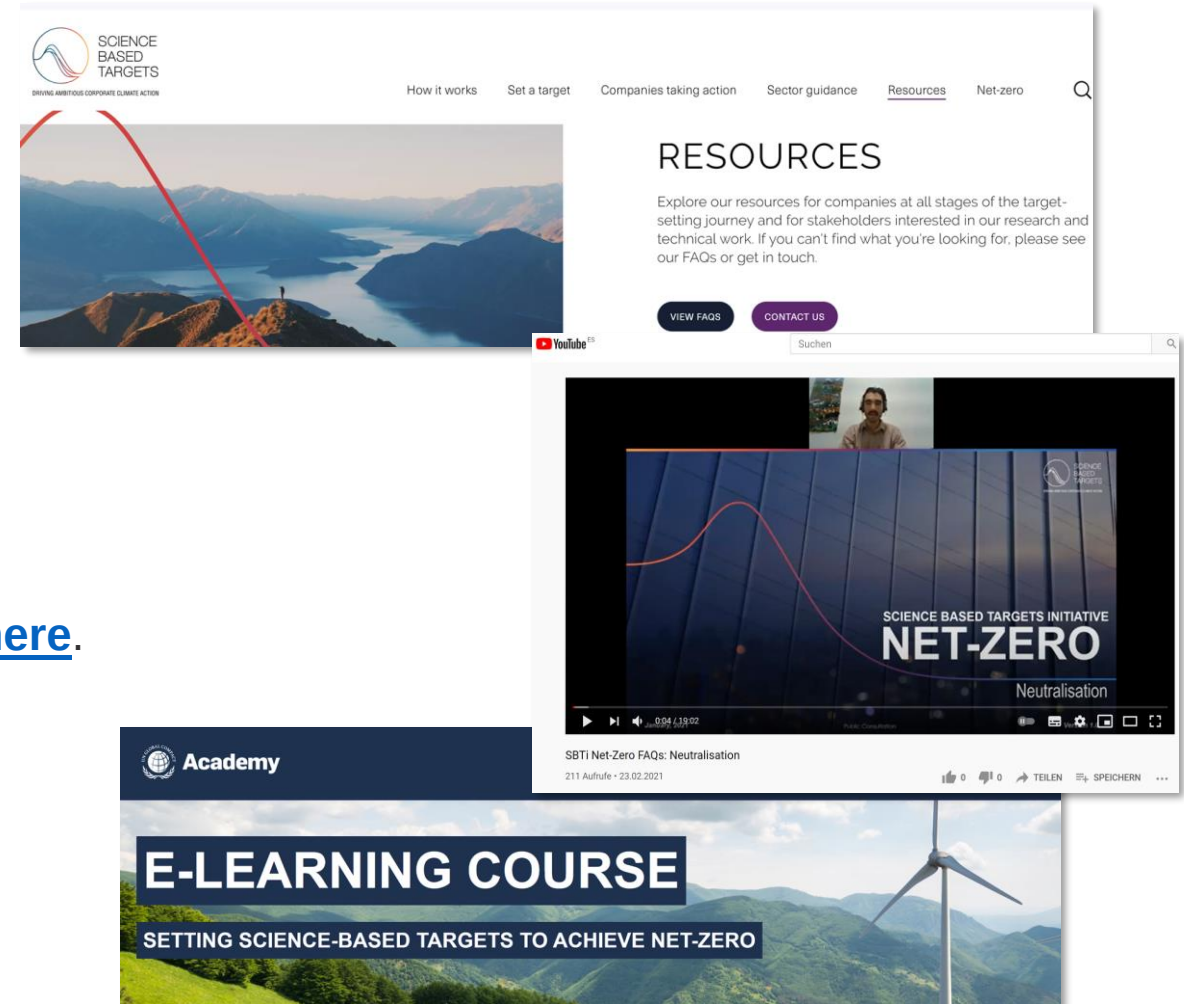
Commit to a target
1.5°C aligned option “_____ commits to reduce absolute scope 1 and scope 2 GHG emissions ___% by 2030 from a 20__ base year, and to measure and reduce its scope 3 emissions.” ☐ 50% from a 2018 base year ☐ 46% from a 2019 base year ☐ 42% from a 2020 base year
Well-below 2°C option “ ☐ _____ commits to reduce absolute scope 1 and scope 2 GHG emissions ___% by 2030 from a 20__ base year, and to measure and reduce its scope 3 emissions.” ☐ 30% from a 2018 base year ☐ 28% from a 2019 base year ☐ 25% from a 2020 base year

SME Target Setting Letter available at:
<https://sciencebasedtargets.org/resources/files/SBT-SME-Target-Setting-Letter.pdf>

LEARN MORE ABOUT SBTs & NET ZERO

NEW E-LEARNING OPTIONS

- Consult the SBTi [Resources](#)
- Review the SBTi's [FAQs for SMEs](#)
- Watch our new SBTi Net-Zero FAQ videos [here](#):
- Take the new UNGC E-Learning course on SBTs [here](#).



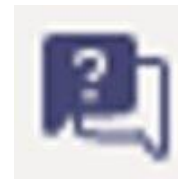


Q&A



Break

Use the 'Q&A' functionality to ask questions





Introduction to Climate Change & Carbon Footprinting

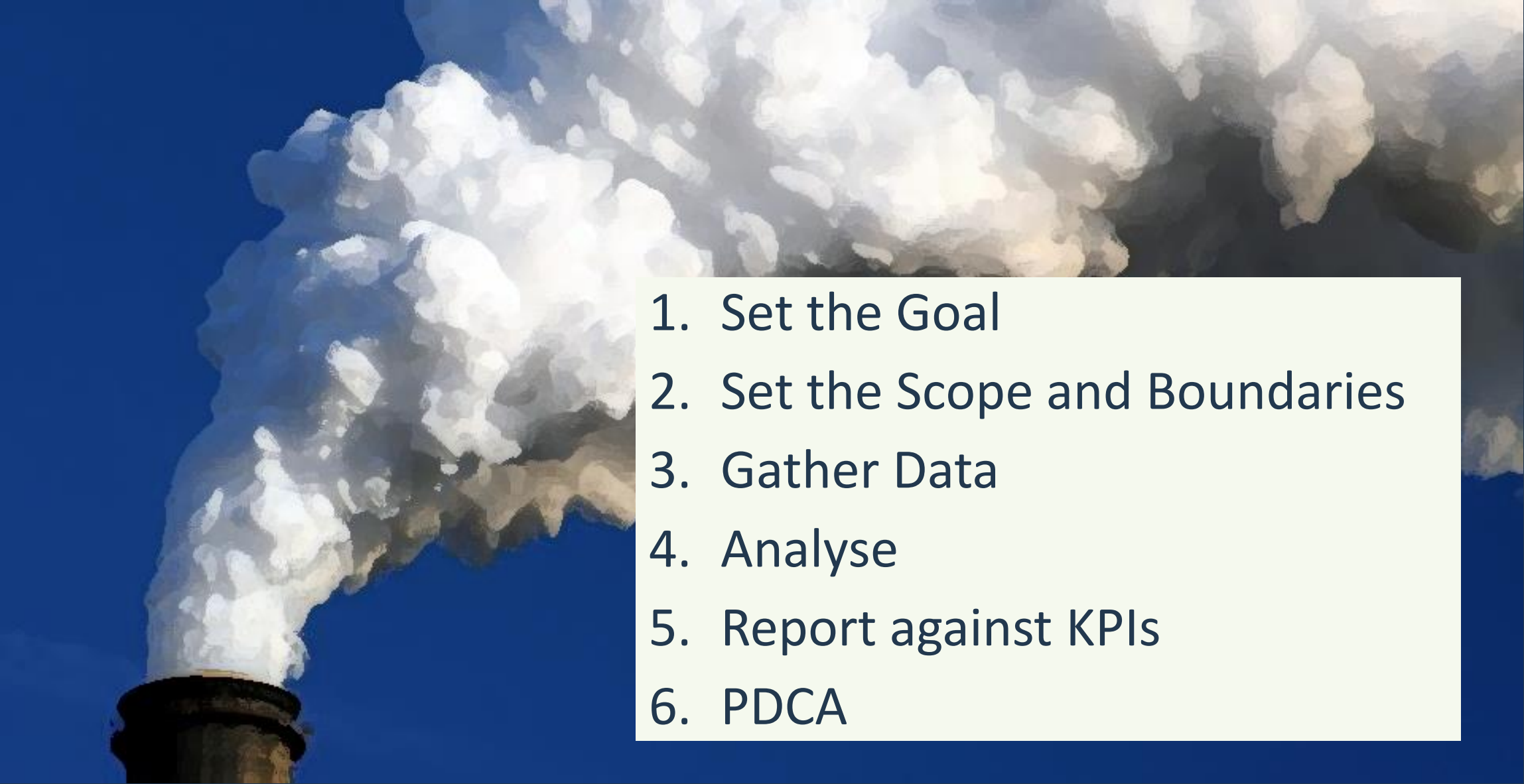
James Cadman, Action Sustainability

What is Carbon Footprinting?

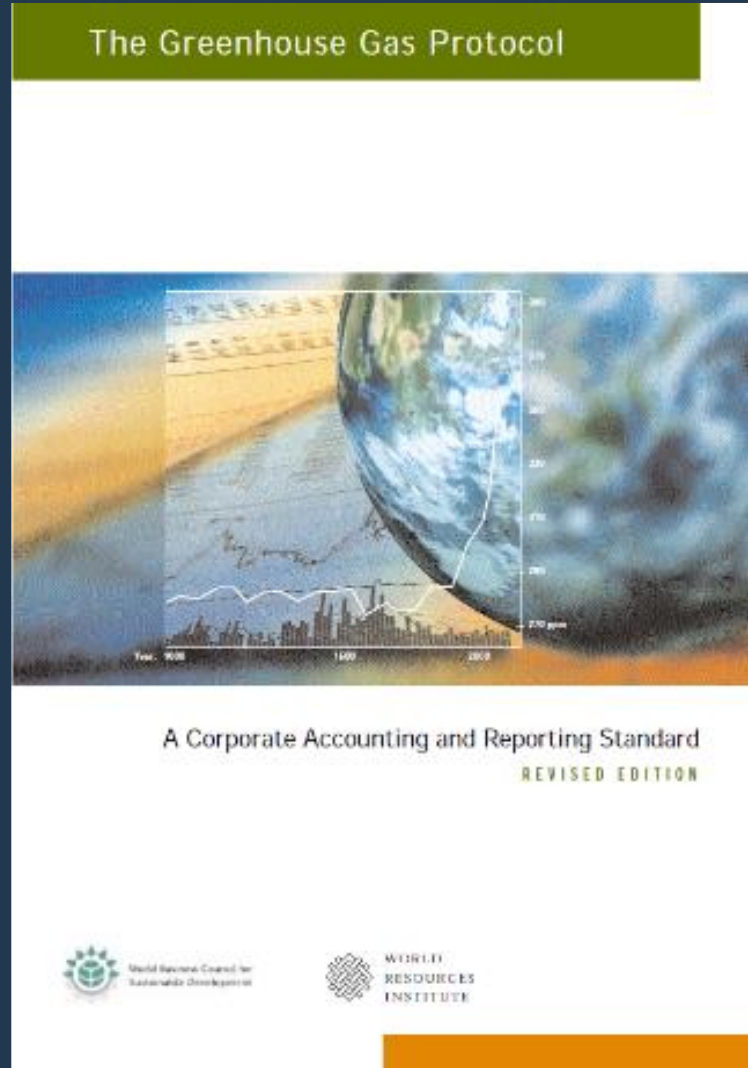


“Commonly used to describe the total amount of CO₂ and other greenhouse gas (GHG) emissions attributable to an organisation, project or product.”

Carbon reduction workshop: undertaking a footprint

- 
1. Set the Goal
 2. Set the Scope and Boundaries
 3. Gather Data
 4. Analyse
 5. Report against KPIs
 6. PDCA

The GHG Protocol



Annual accounting and reporting of 6 greenhouse gases (Kyoto Protocol)

GHG inventory using standardised approaches and principles

Develop an effective strategy to manage and reduce GHG emissions

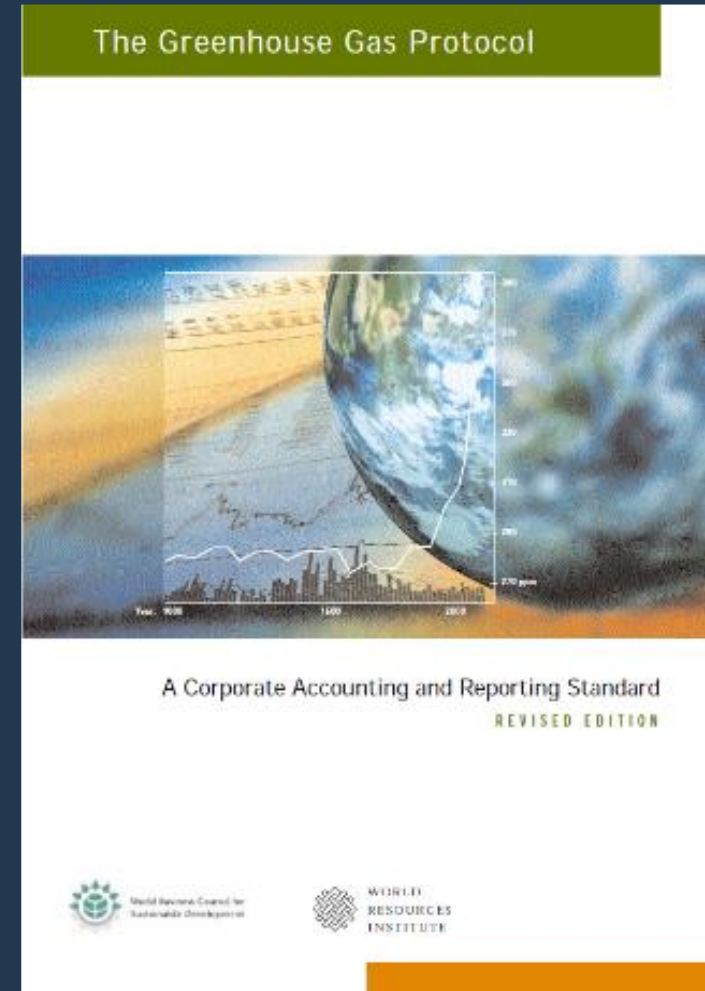
Consistency and transparency in GHG Accounting and Reporting

Describes how to identify levels of ownership and control

GHG Protocol

Organizational Boundaries: Consolidation approaches

- Equity share approach
- Control approach
 - Financial control
 - Operational control



- **Equity share**

- Under the equity share approach, *a company accounts for GHG emissions from operations according to its share of equity in the operation.*
- The equity share reflects economic interest, which is the extent of rights a company has to the risks and rewards flowing from an operation.



- **Financial control**

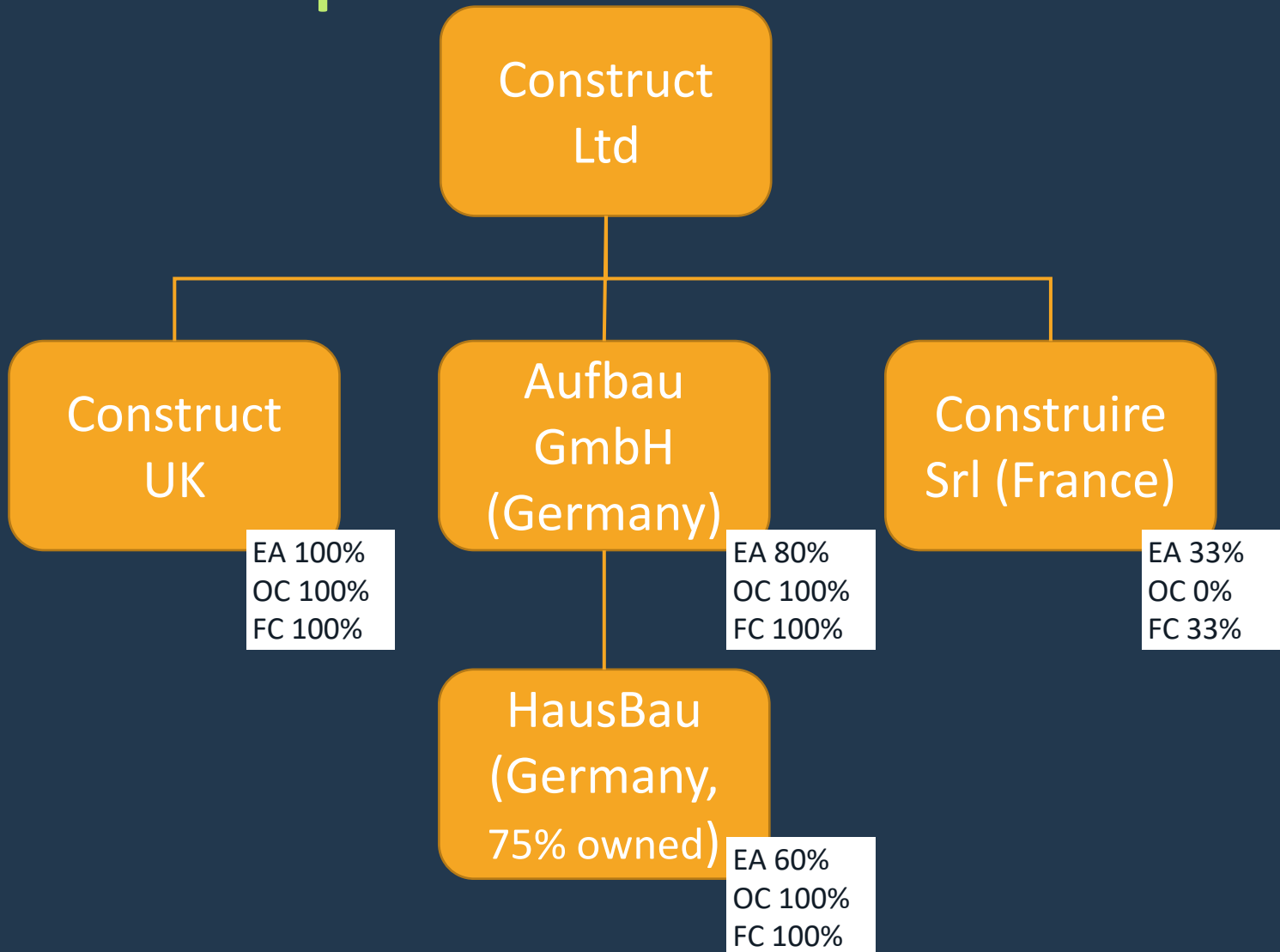
- Under the financial control approach, *a company accounts for 100% of the GHG emissions over which it has financial control.*
- It does not account for GHG emissions from operations in which it owns an interest but does not have financial control.



- **Operational control**
 - Under the operational control approach, *a company accounts for 100% of the GHG emissions over which it has operational control.*
 - It does not account for GHG emissions from operations in which it owns an interest but does not have operational control.



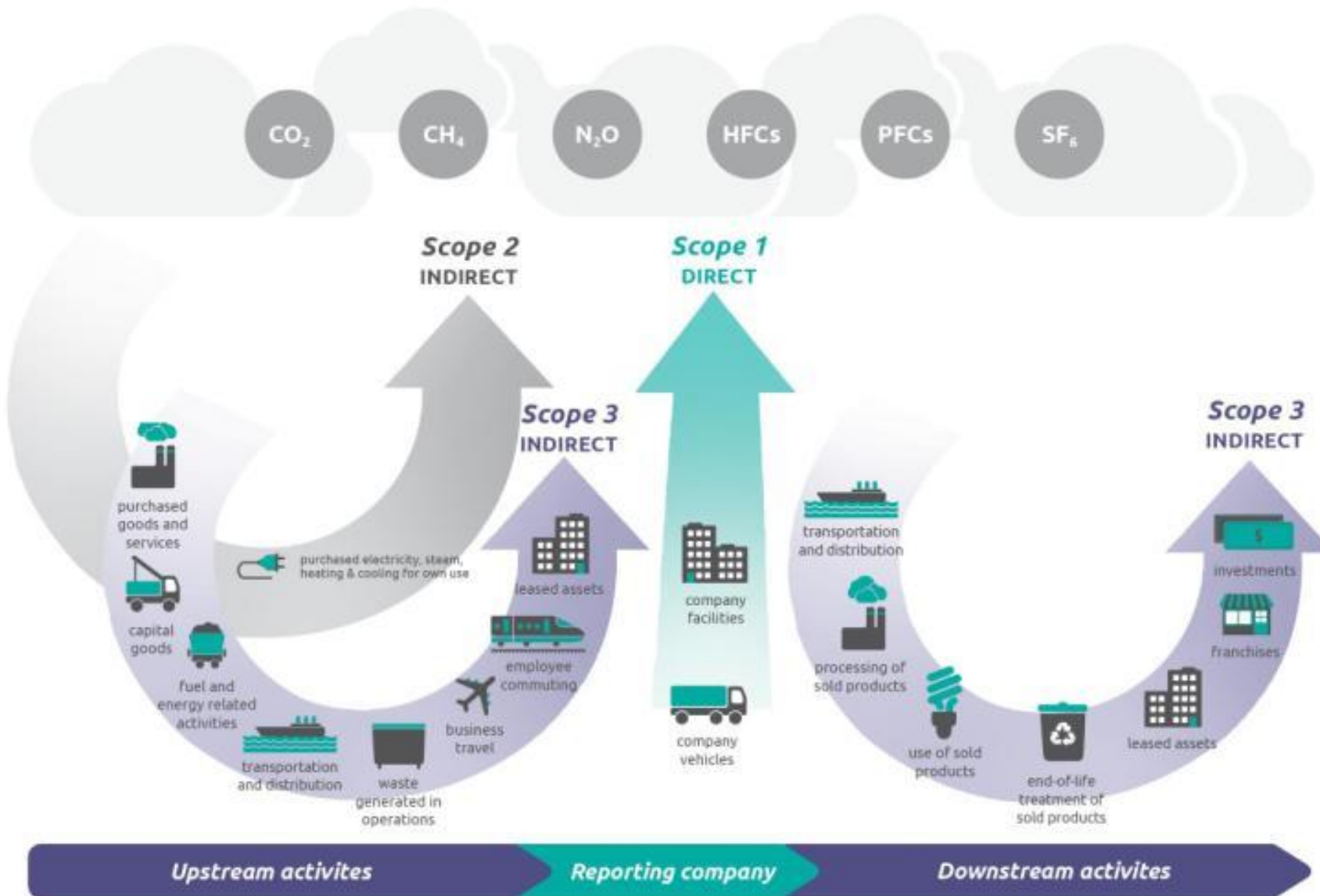
Example



Biz Units	Structure	Equity	Control
Construct UK	Incorporated Company	100%	OC 100% FC 100%
Aufbau GmbH	Incorporated Company	80%	OC 100% FC 100%
HausBau	Subsidiary of Aufbau GmbH 75% owned	60%	OC 100% FC 100%
Construire Srl	Non-incorporated Joint Venture	33%	OC 0% FC 33%

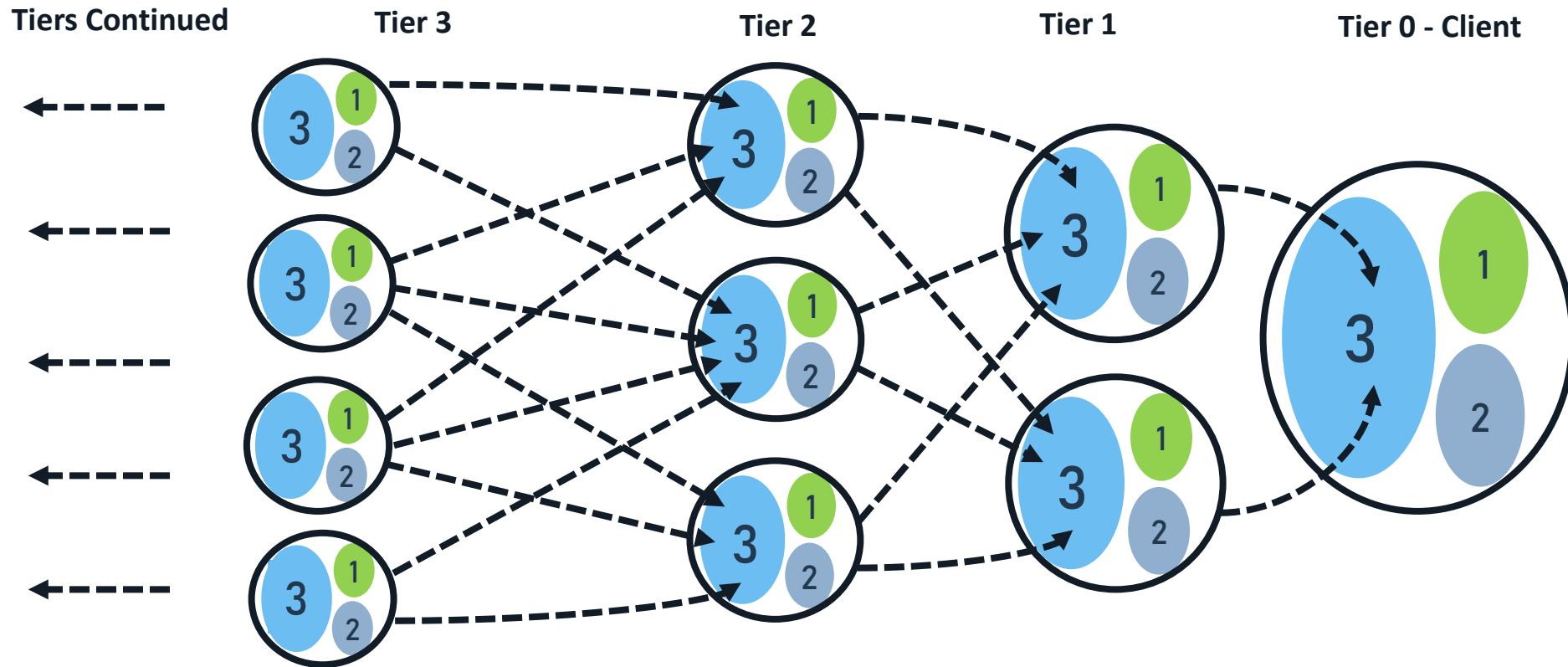
Operational Boundaries – Scopes

Figure [1.1] Overview of GHG Protocol scopes and emissions across the value chain



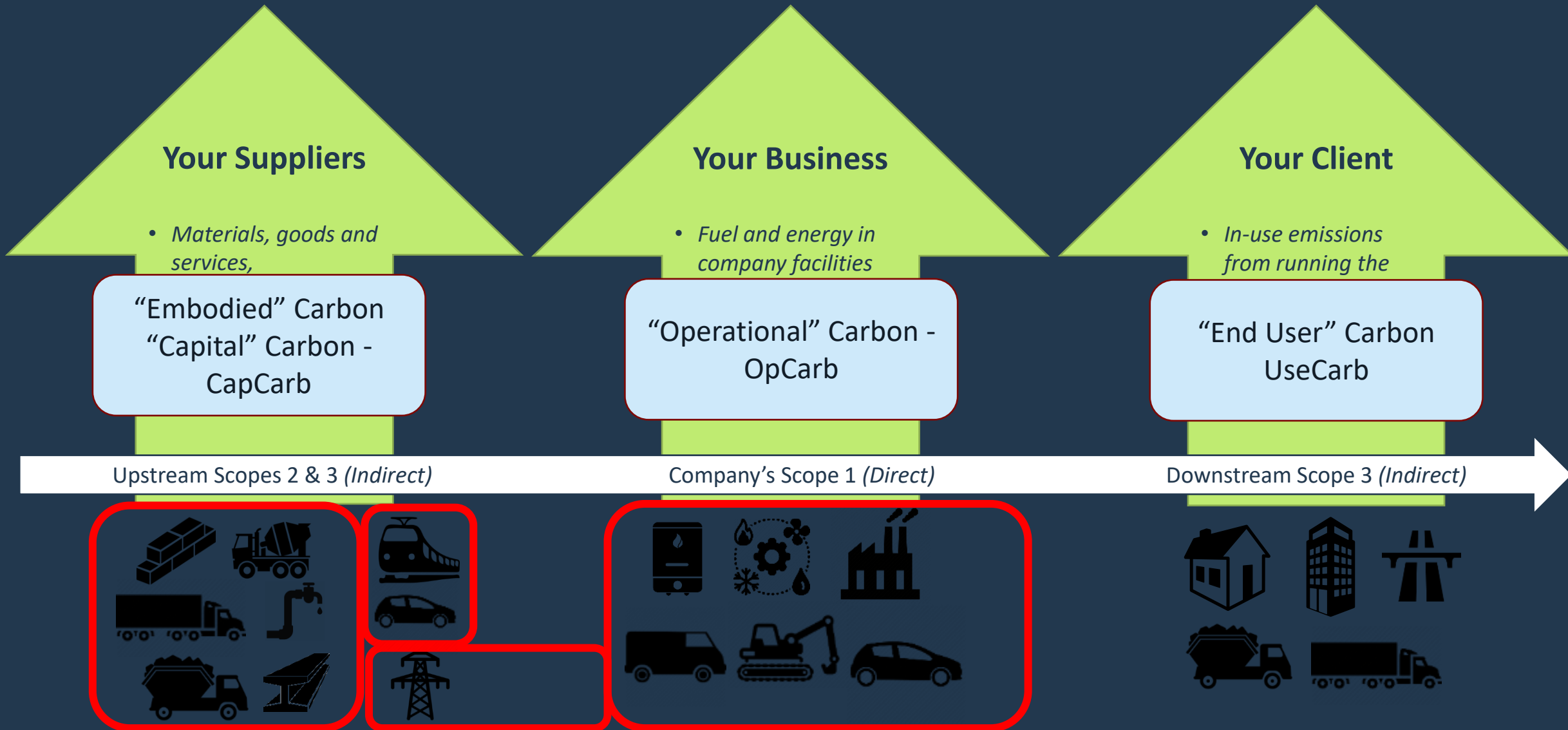
- **Direct emissions** are emissions from sources that are owned or controlled by the reporting company
- **Indirect emissions** are emissions that are a consequence of the activities of the company but occur at sources owned or controlled by another company
- **Gather data, set a baseline year, and report annually**

The links between Scope 1, 2 and 3 carbon emissions in the Supply Chain

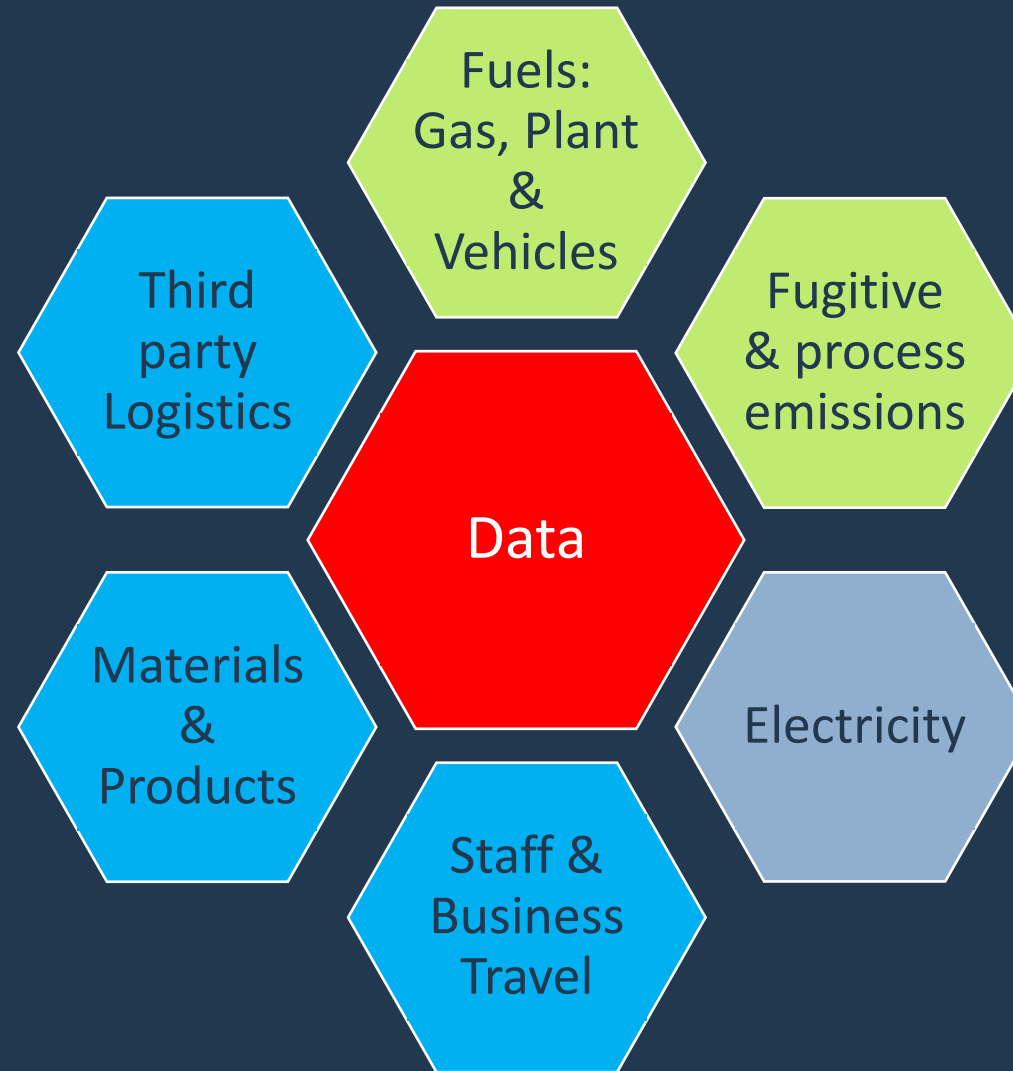


Scope 1 – Direct Emissions from owned or controlled sources
Scope 2 – Indirect emissions from generation of purchased energy
Scope 3 – All other indirect emissions that occur in a company's value chain

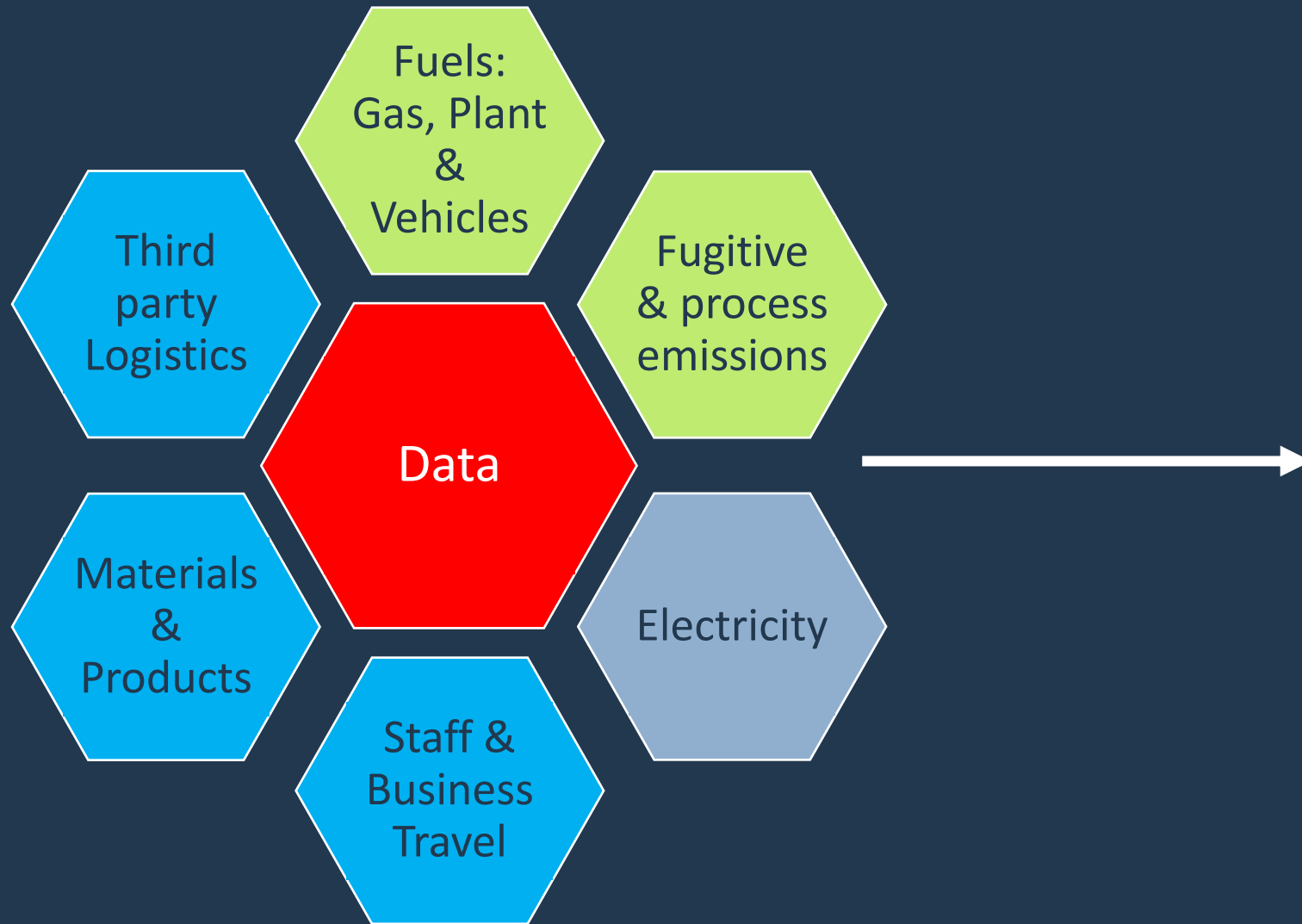
Set your Boundaries for your Organisation



Where does Data come from



Where does Activity Data come from



Kinds of Data

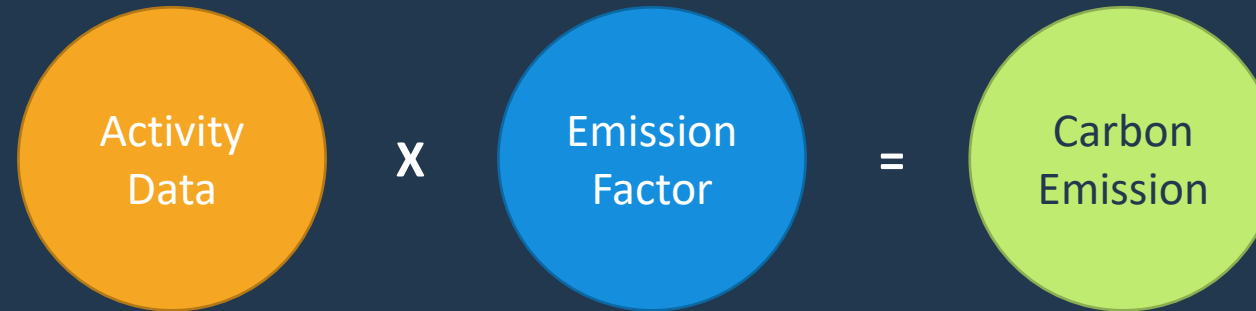
- Litres of fuel (diesel, LPG...)
- Litres of refrigerant
- kWh of electricity
- Mileage travelled
- Tonnes, m³ of materials

Where is the Data

- Fleet
- Estates
- HR / Travel agent
- Procurement
- Suppliers

How to calculate a carbon footprint

- A carbon footprint is



- For example



- **KgCO₂e** (“equivalent”) takes into account all the main GHGs emitted: CO₂, CH₄ and N₂O
- Think about **units of measurement** and converting between them: factors of a thousand
- Don’t forget you can calculate carbon from **proxy data** such as spend

Some Fundamentals - Emissions Factors

Comparing Power Sources and Modes of Travel



1 kWh grid
electricity =
0.288 kg CO₂e



1 kWh red
diesel =
0.316 kg CO₂e



500 p.km by
train =
18 kg CO₂e



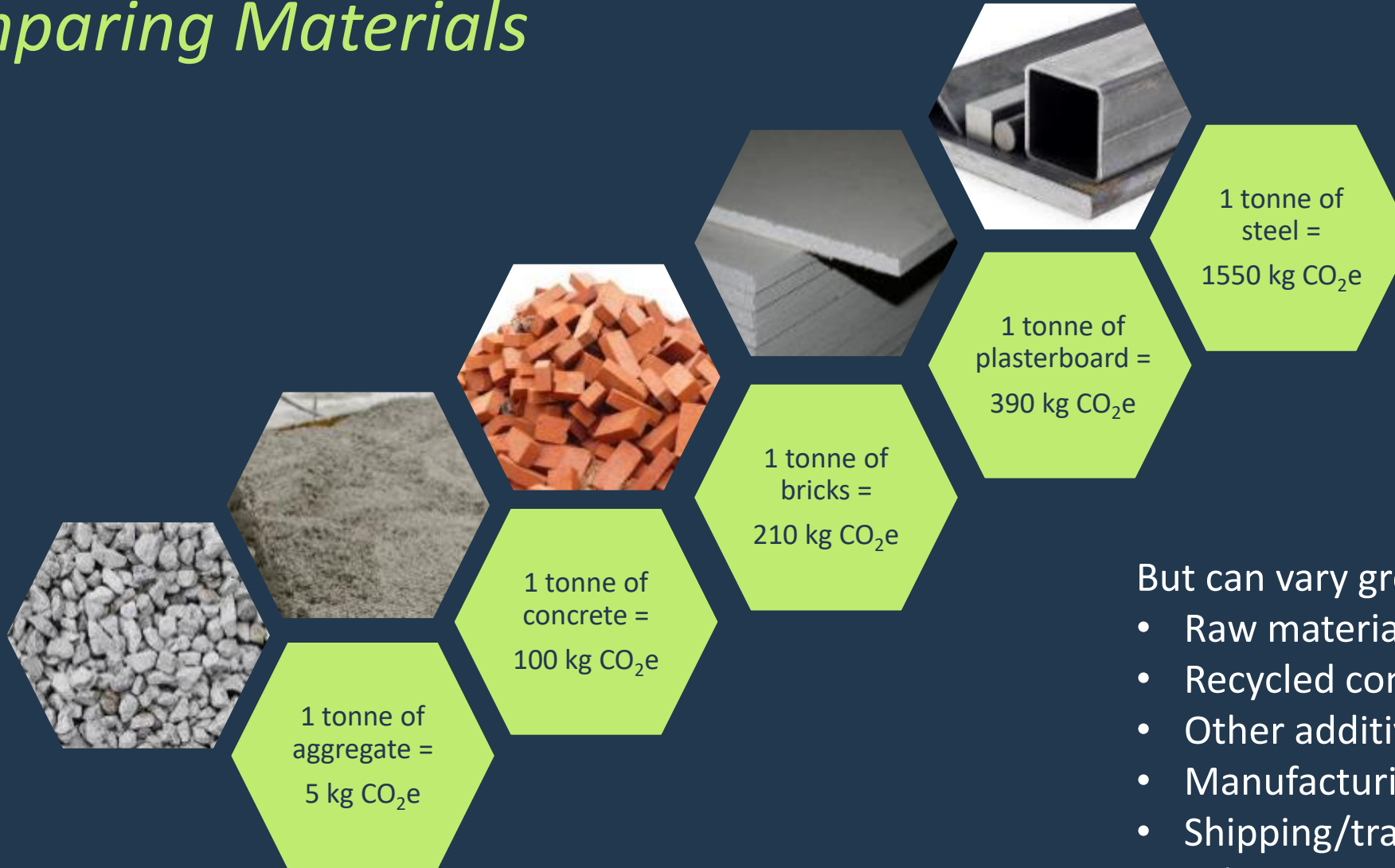
500 km by
car =
84 kg CO₂e



500 p.km by
airplane =
122 kg CO₂e

Some Fundamentals - Emissions Factors

Comparing Materials



But can vary greatly with

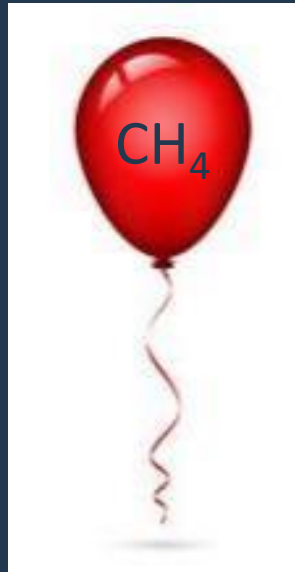
- Raw material source
- Recycled content
- Other additives, e.g. PFA, GGBS
- Manufacturing energy source
- Shipping/transport

Supplier engagement and EPDs !

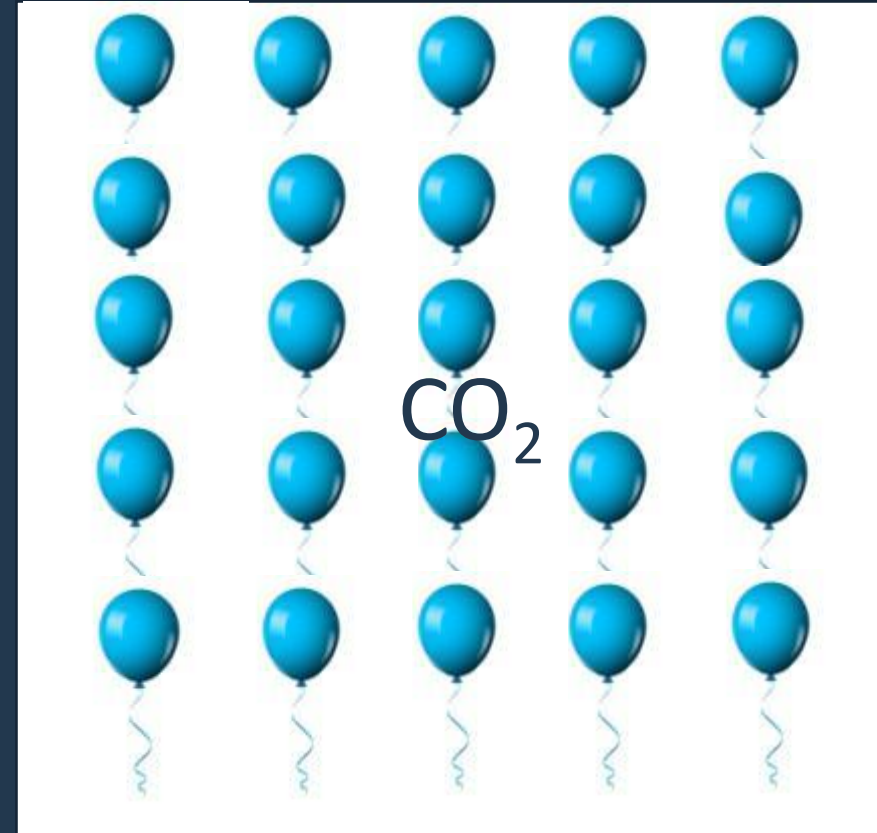
Some fundamentals – Global Warming Potentials: GWP

- It's all relative...

- CO_2 : 1
- CH_4 : 25
- N_2O : 298
- SF_6 : 22,800
- HFCs: 12 – 14,800
- PFCs: 7,390 – 12,200



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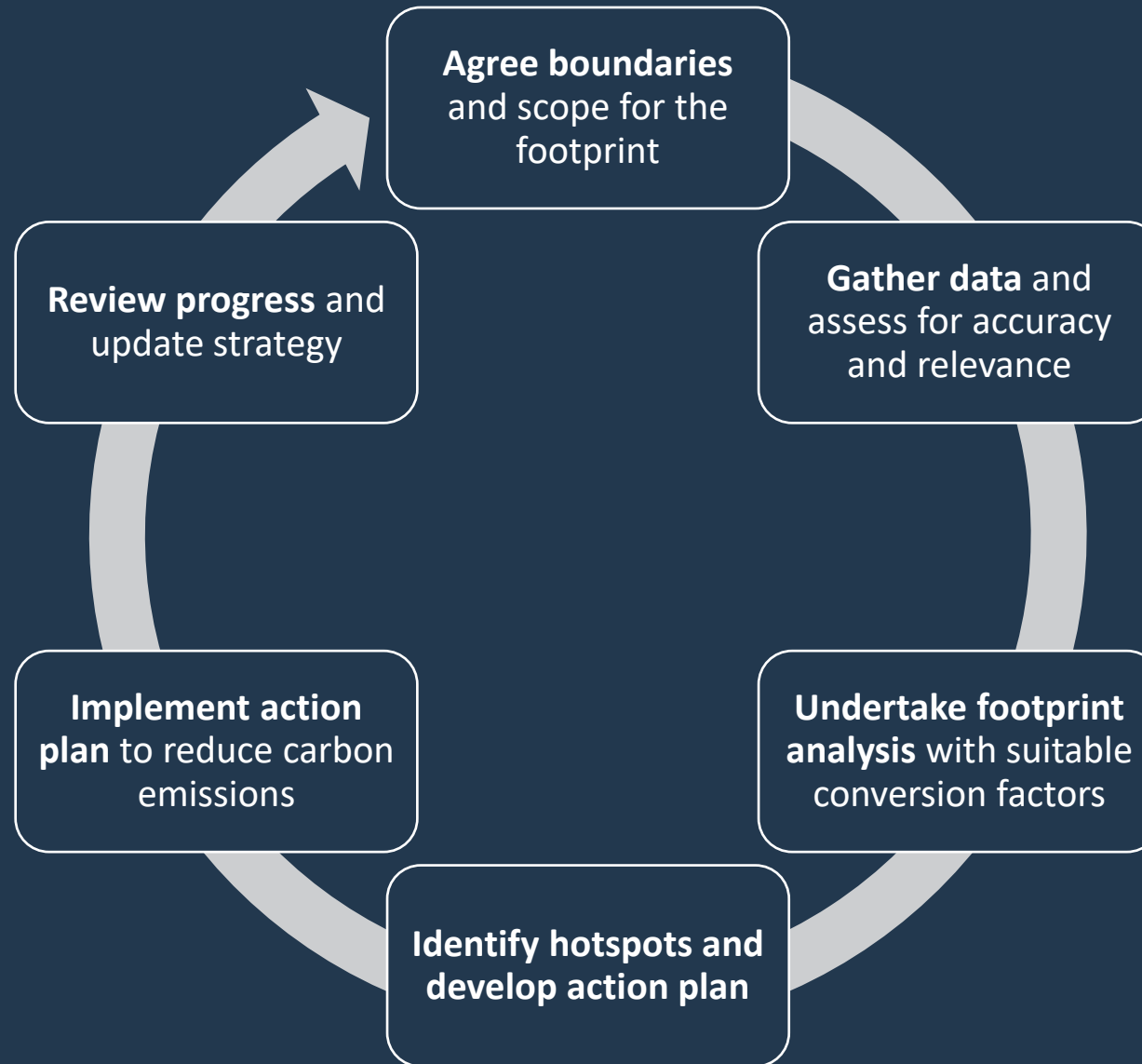


- Expressed as “tonnes of CO_2 equivalent”; tCO_2e

Resources Guidance – Free Data and Tools

- **Carbon Trust Carbon Calculator:** a simple tool to help you calculate your organisational footprint
<https://www.carbontrust.com/resources/sme-carbon-footprint-calculator>
- **Supply Chain Sustainability School:** the Climate Action Group is a collaborative Group of Partners engaging suppliers to provide activity data into a free online Tool to measure carbon emissions
<https://www.supplychainschool.co.uk/partners/groups/climate-action-group/>
- **Defra 2020 Greenhouse gas reporting conversion factors :** the UK Government's database of carbon factors for fuel, energy, transport, and materials, updated annually.
<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>
- **Bath Inventory of Carbon and Energy (ICE) database:** a well-established database of embodied carbon factors for a variety of materials, updated periodically.
<http://www.circularecology.com/embodied-energy-and-carbon-footprint-database.html>
- **The Embodied Carbon in Construction Calculator (EC3) Tool:** a database of EPDs for construction products <https://buildingtransparency.org/ec3>

The Footprinting Process: Data Collection & Analysis



Thank you!

James Cadman

- Lead Consultant at Action Sustainability
- 07884 654827
- www.actionsustainability.com
- @Action_Sustain





Q&A

Panel Q&A



Name	Role	Organisation
Adam Simmons	Director – Future Road Investment Strategies and Government relations	Highways England
Emma Watson	Senior Manager	SBTi
Olwen Smith	Regional Lead	SBTi
James Cadman	Lead Consultant	Sustainability School
Danielle Mulder	Director	Carbon Intelligence
Roger Maybury	Supplier Management Director	Network Rail
Emmanuel Deschamps	Head of Environmental & Sustainability Development	Network Rail
Jamie Shaw	Low Emission Strategy Lead	Network Rail

If we do not get to answer your question today, we will follow up with you with the answer or alternatively please feel free to submit your questions to sciencebasedtargets@networkrail.co.uk or Adam.Simmons@highwaysengland.co.uk



Second Workshop – 1st July 2021

We would welcome your feedback on today's workshop.

Please send feedback to: ScienceBasedTargets@networkrail.co.uk
Adam.Simmons@highwaysengland.co.uk

Thank You