

Science-Based Targets

*London Boroughs Energy Group
Meeting, 12th February 2019*



Agenda

- Why do we need science-based targets?
- What are science-based targets?
- How can we set science-based targets?



Introduction to Carbon Credentials

Our Mission: To enable a global low carbon economy



Strategy	Data	Energy Performance	People	Clients
 <p>SCIENCE BASED TARGETS</p> <p>DRIVING AMBITIOUS CORPORATE CLIMATE ACTION</p>  <p>CDP ACCREDITED PROVIDER 2018</p>  <p>G R E S B</p>	 <p>ADAPt</p> <p>ASSURED DATA ANALYTICS PLATFORM</p> <p>41,000 buildings</p> <p>Data from over 60 countries</p>	<p>14% Savings</p>  <p>CAPP</p> <p>Collaborative Asset Performance Programme</p>	<p>Integrity Curiosity Excellence</p>  <p>30</p>  <p>Solar Aid</p>  <p>Lymphoma association</p>	 <p>UNIVERSITY OF WINCHESTER</p>  <p>AVIVA INVESTORS</p>  <p>everyone ACTIVE</p>  <p>MANCHESTER 1824 The University of Manchester</p>  <p>LONDON METROPOLITAN UNIVERSITY</p>  <p>PUKKA</p>  <p>London South Bank University</p>  <p>pwc</p>  <p>Queen Mary University of London</p>  <p>vodafone</p>  <p>BT</p>  <p>TESCO</p>  <p>KPMG</p>



Why do we need science-based targets?

There is scientific consensus that we must keep global warming to <math><2^{\circ}\text{C}</math> to avoid catastrophic climate change, and aim for

1°C

The **global average temperature** in 2017 was about 1°C above pre-industrial times, and 0.4°C above the 1981-2010 average

4.3°C

Current projections show **temperatures will increase** by 3.7-4.8°C by the year 2100 (compared to pre-industrial levels)

60%

By 2030, renewables need to supply **60% of electricity** to meet a 1.5 °C pathway.

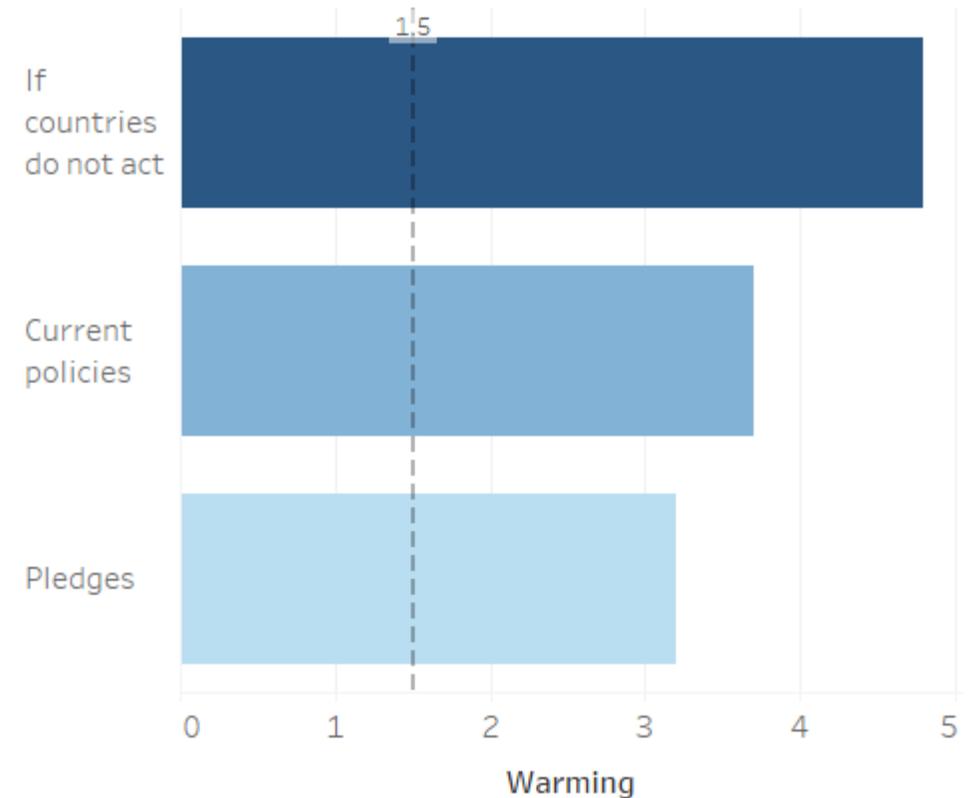
7 years

If we continue to release GHG emissions at current levels, we will hit **1.5°C of warming in 7 years** (with 50% probability)

20 years

If we continue to release GHG emissions at current levels, we will hit **2°C of warming in 20 years** (with 66% probability)

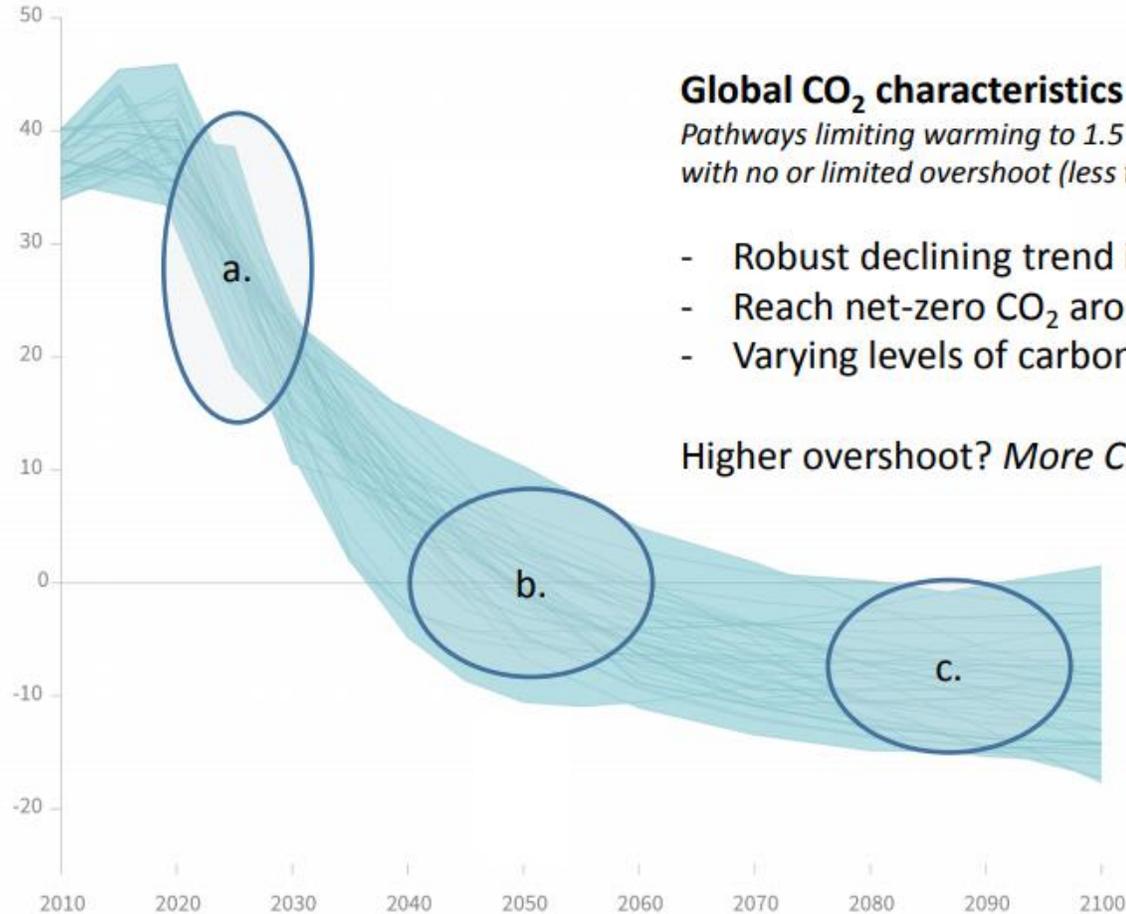
Warming projected by 2100



Source: Climate Action Tracker.

The emission reduction challenge

Billion tonnes of CO₂/yr

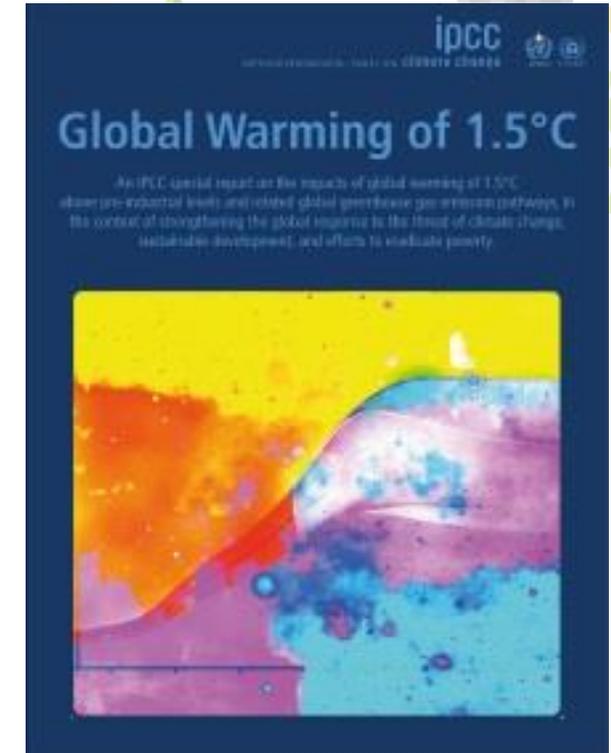


Global CO₂ characteristics

Pathways limiting warming to 1.5°C
with no or limited overshoot (less than 0.1°C):

- Robust declining trend in next decade
- Reach net-zero CO₂ around mid-century
- Varying levels of carbon-dioxide removal (CDR)

Higher overshoot? *More CDR*



Achieving 1.5 requires **rapid, far-reaching** changes on an **unprecedented scale**

1. In the next decade
2. In all systems
3. Everywhere

What is the difference between 1.5 and 2 degrees of warming?

1.5°C



Lower risk of species loss



10 million people fewer are expected to be exposed to sea level risk



Lower risk of extreme climatic changes



1 in 100 summers in the Arctic likely to be free of sea ice



14% of the world exposed to at least one heatwave every 5 years



GDP down 8%

2°C



99% of warm water corals expected to disappear



420 million more people frequently exposed to extreme heatwaves



Substantially larger increase in drought frequency and magnitude



At least 1 in 10 summers in the Arctic likely to be free of sea ice



37% of the world exposed to at least one heatwave every 5 years



GDP down 13%

The UK's current carbon target of 80% by 2050 does not satisfy the Paris Agreement commitments

UK edition ▾
The Guardian

UK to review climate target raising hopes of a zero emissions pledge

 **GOV.UK**

Climate experts asked for advice on net zero target

Climate experts will advise the government on whether the UK should set a date for a net zero emissions target.

The Telegraph

UK on path to 'zero carbon' economy

The Government will ask its official climate advisers to look into how the UK can become a net zero carbon economy CREDIT: MARIO HOPPMANN/AFP



What are science-based targets?

What are science-based targets?



What are science-based targets?



Science-based targets recognise the level of climate action needed globally to align with the Paris Agreement – and translate this down to **specific and practical targets for your organisation.**



Targets are considered **'science-based'** if they are in line with the emissions reduction levels required to keep global temperature increase **below 2 degrees.**

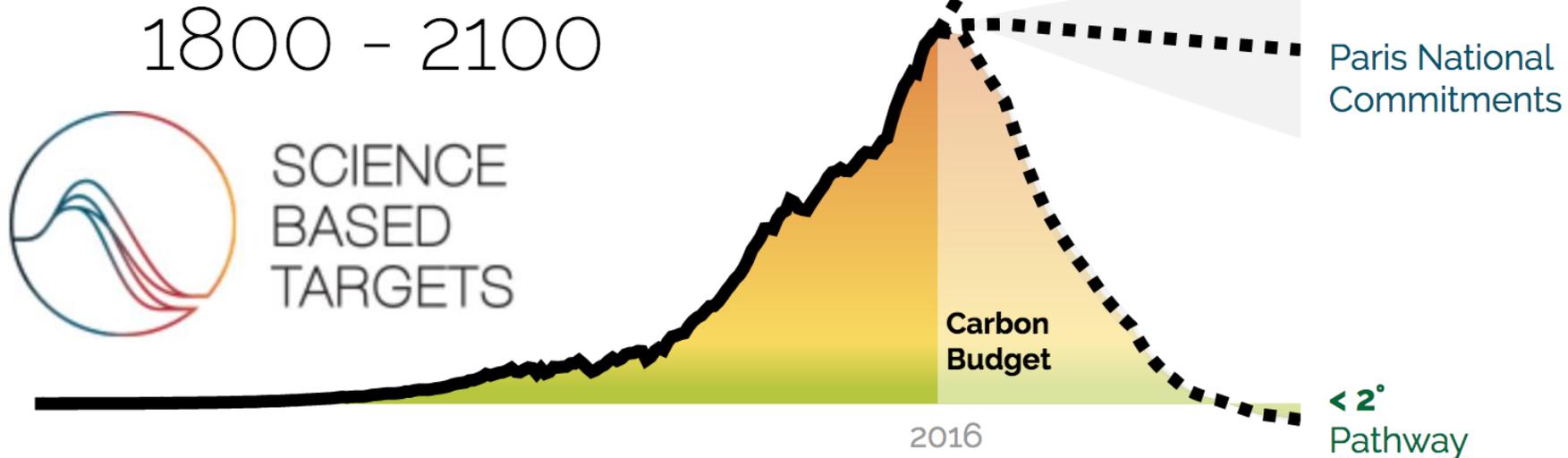
SBTi – Science Based Targets initiative



WORLD
RESOURCES
INSTITUTE



WE MEAN
BUSINESS



519

Companies have formally committed to set SBTs

168

Companies with approved targets

~5

Companies joining the Call to Action every week

The companies that have already have approved SBTs represent US\$3.4 trillion in market value, roughly equivalent to the London Stock Exchange.

Public sector organisations are looking ahead to the long-term



- 48% of public sector bodies surveyed expect to explore science-based targets by 2020
- The Science Based Targets initiative does not yet officially approve targets set by public sector organisations
- Despite this, methodologies can still be followed
- Councils such as Bristol (by 2030) and Manchester (by 2038) have set net zero targets



London's climate change commitments

MAYOR OF LONDON

- Strategy sets out a vision for London's environment in 2050, focusing on:
 - Cleaning up the capital's toxic air
 - Greening its streets
 - Reducing waste
 - Tackling climate change
- Ambitious targets include London **becoming a zero-carbon city** and at least 50 per cent green (i.e. parks and green roofs) **by 2050**.



Net zero carbon buildings are green and healthy buildings. They use *energy ultra-efficiently* and are *supplied by renewables*. They are comfortable homes where money isn't wasted on energy bills, productive workplaces insulated from extreme temperatures, and healthy schools free from dirty air.

We pledge to ensure that new buildings operate at net zero carbon by 2030 and all buildings by 2050.

What do company executives see as the benefits of setting science-based targets?



OF COMPANY EXECS HAVE SEEN
BRAND REPUTATION BOOSTED



OF COMPANY EXECS SAY SBTS
DRIVE INNOVATION



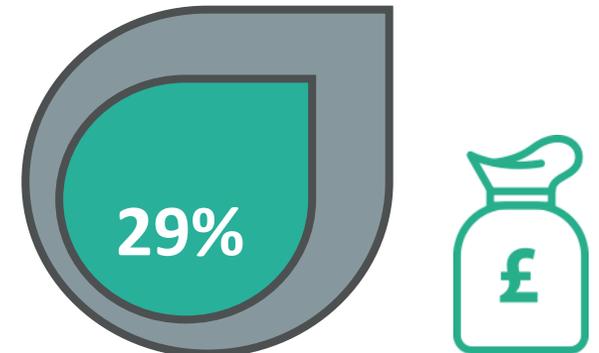
OF COMPANY EXECS HAVE GAINED
COMPETITIVE ADVANTAGE



OF COMPANY EXECS HAVE SEEN
INVESTOR CONFIDENCE BOOSTED



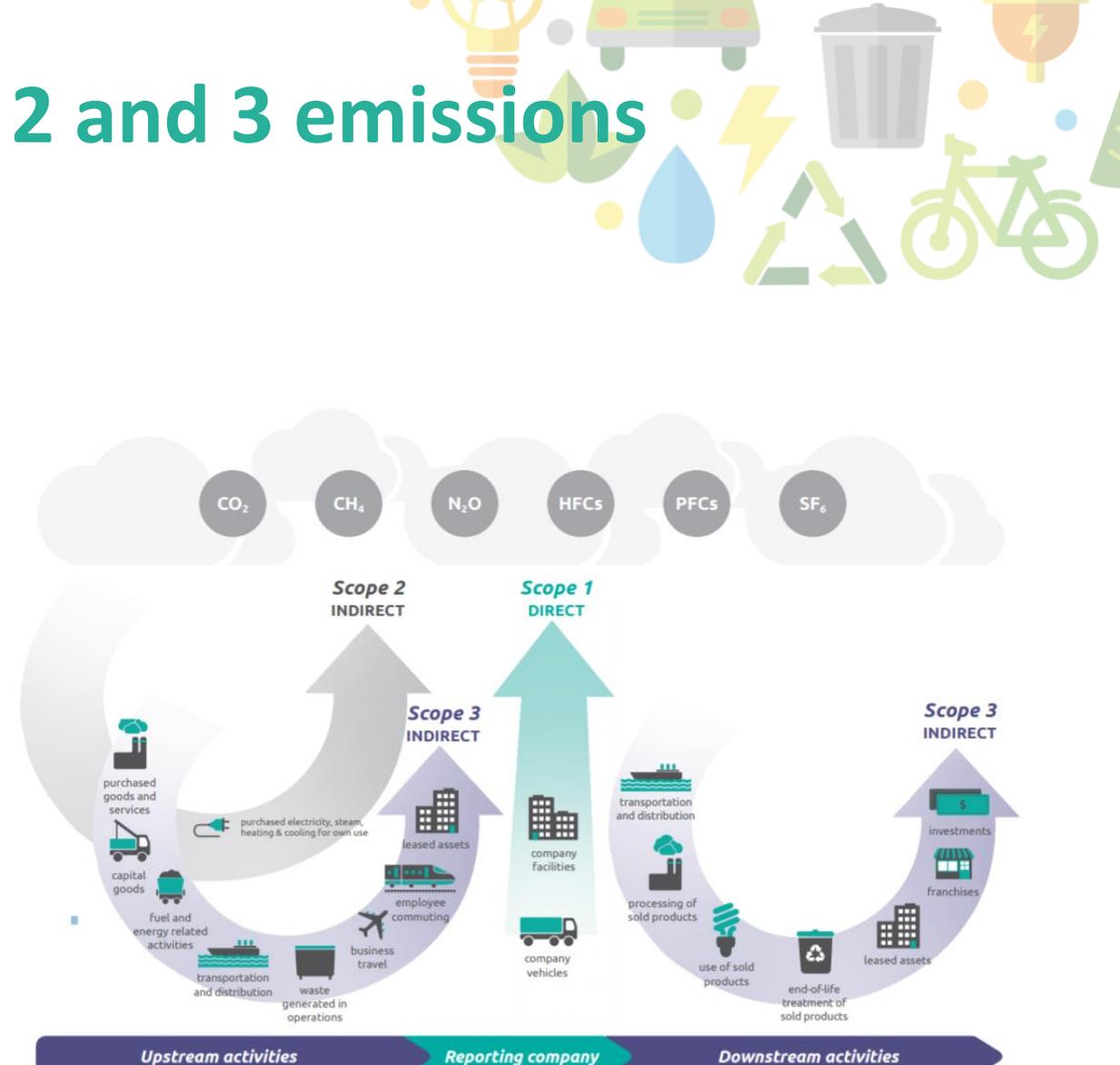
OF COMPANY EXECS HAVE
INCREASED REGULATORY RESILIENCE

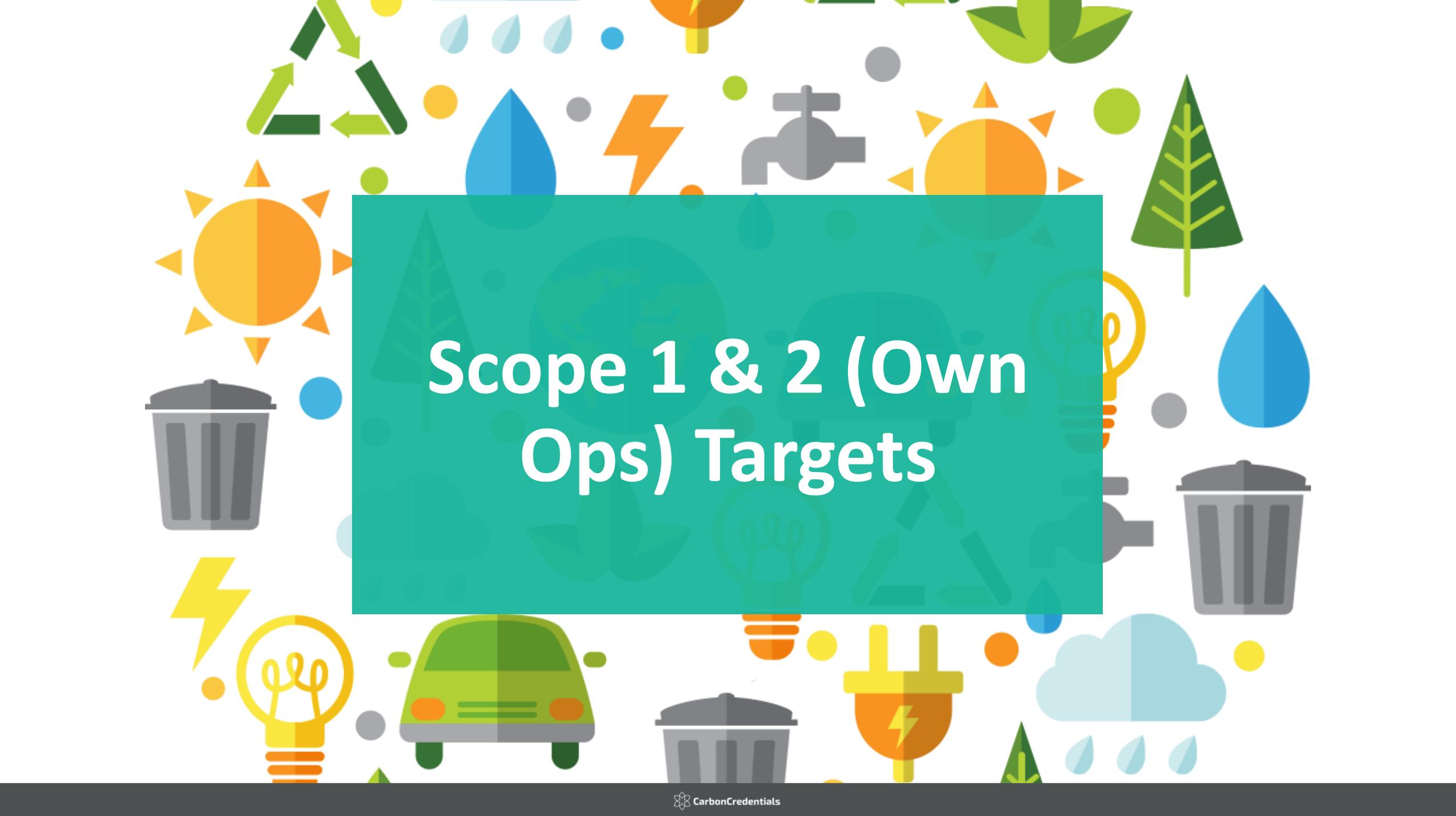


OF COMPANY EXECS HAVE SEEN
BOTTOM LINE SAVINGS

SBTi requirements: Scope 1, 2 and 3 emissions

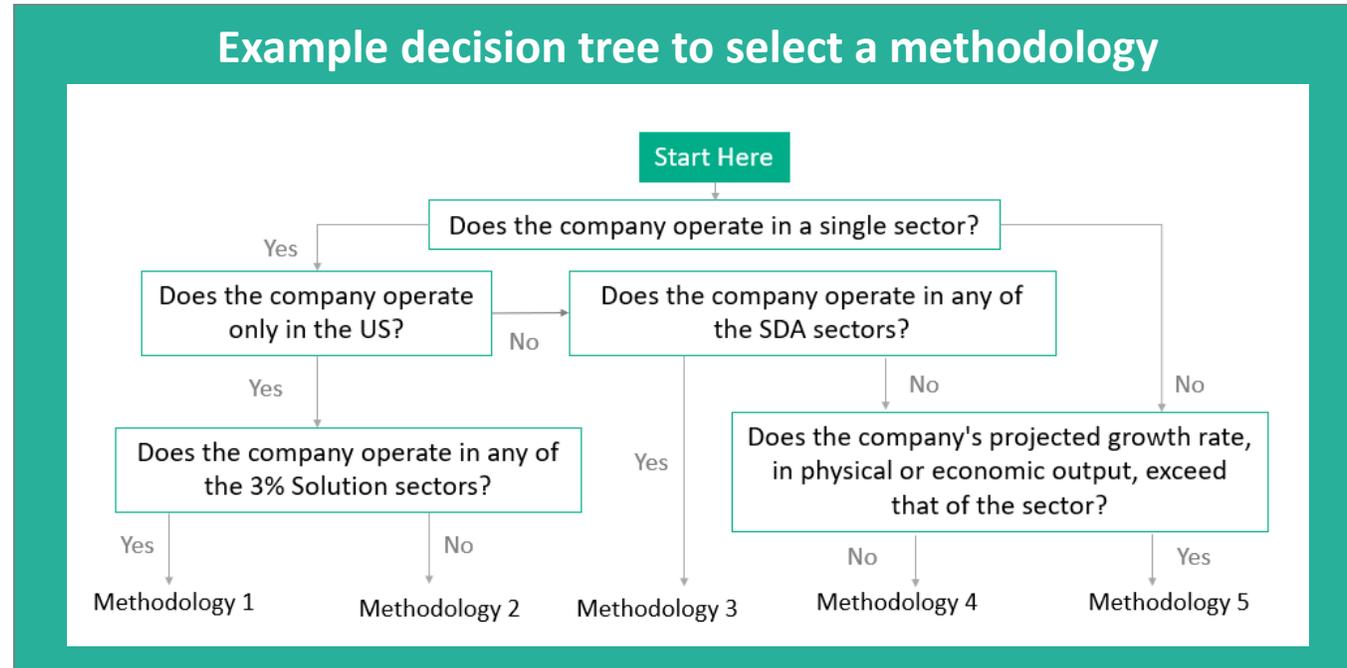
Scopes 1 and 2	
Target type	<ul style="list-style-type: none"> Absolute or intensity, recommends both
Boundary	<ul style="list-style-type: none"> Company-wide Scope 1 and 2
Timeframes	<ul style="list-style-type: none"> Must cover 5 -15 years from announcement Longer term targets recommended
Reductions	<ul style="list-style-type: none"> In line with most appropriate SBT methodology
Scope 3	
Target type	<ul style="list-style-type: none"> Absolute, intensity, energy-based target, <u>or</u> targets that influence behaviour
Boundary	<ul style="list-style-type: none"> Screening: if Scope 3 > 40%, set Scope 3 targets Include majority (2/3 or top 3 categories)
Reductions	<ul style="list-style-type: none"> Challenging and robust In line with best practice





Scope 1 & 2 (Own Ops) Targets

It is important to select a methodology that fits your organisation's strategic objectives

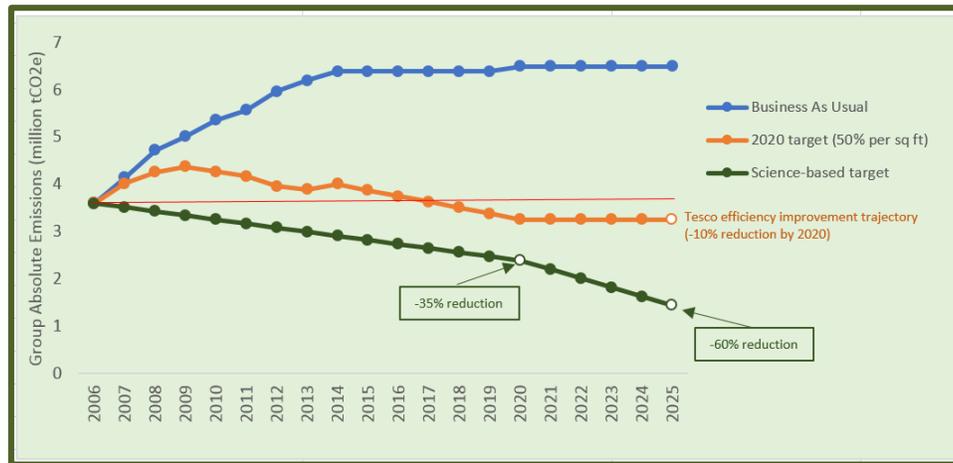


Sector-based approach	The global carbon budget is divided by sector and a company's required emissions reduction is sector-specific.
Absolute-based approach	A % of absolute emissions reductions is assigned to individual companies
Economic-based approach	The carbon budget is equated to global GDP and a company's share of emissions is determined by its gross profit, since the sum of all companies' gross profits worldwide equate to global GDP.

Case study: Setting targets aligned to 1.5 degrees

Deep knowledge of climate science and modelling

Sustainability communications expertise



FINANCIAL TIMES
Tesco PLC + Add to myFT
Tesco turns to solar in Paris climate accord pledge
Environment
Tesco to switch to 100% renewable
The supermarket giant said it was announcing “tougher science-based carbon reduction targets for its stores and distribution centres to help combat climate change” in a statement on its website.

Case Study



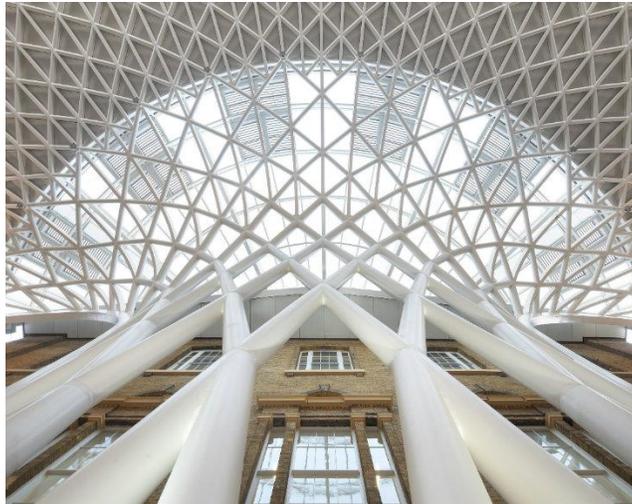
Science-Based Target Setting Project Brief

- Contrast zero carbon ambition with the Paris Climate Agreement
- Recommend optimal methodology and model Scope 1, 2 & 3 SBTs
- Provide mid-term milestones towards the long-term targets

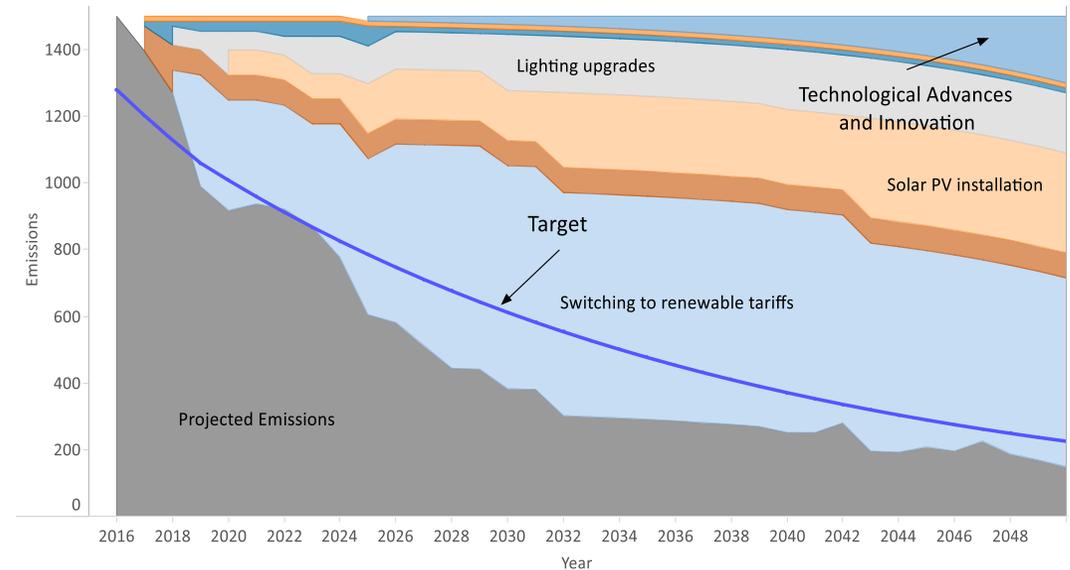
Case study: Developing the strategy



Alignment with strategy and projects that will reduce emissions



Roadmap and investment framework

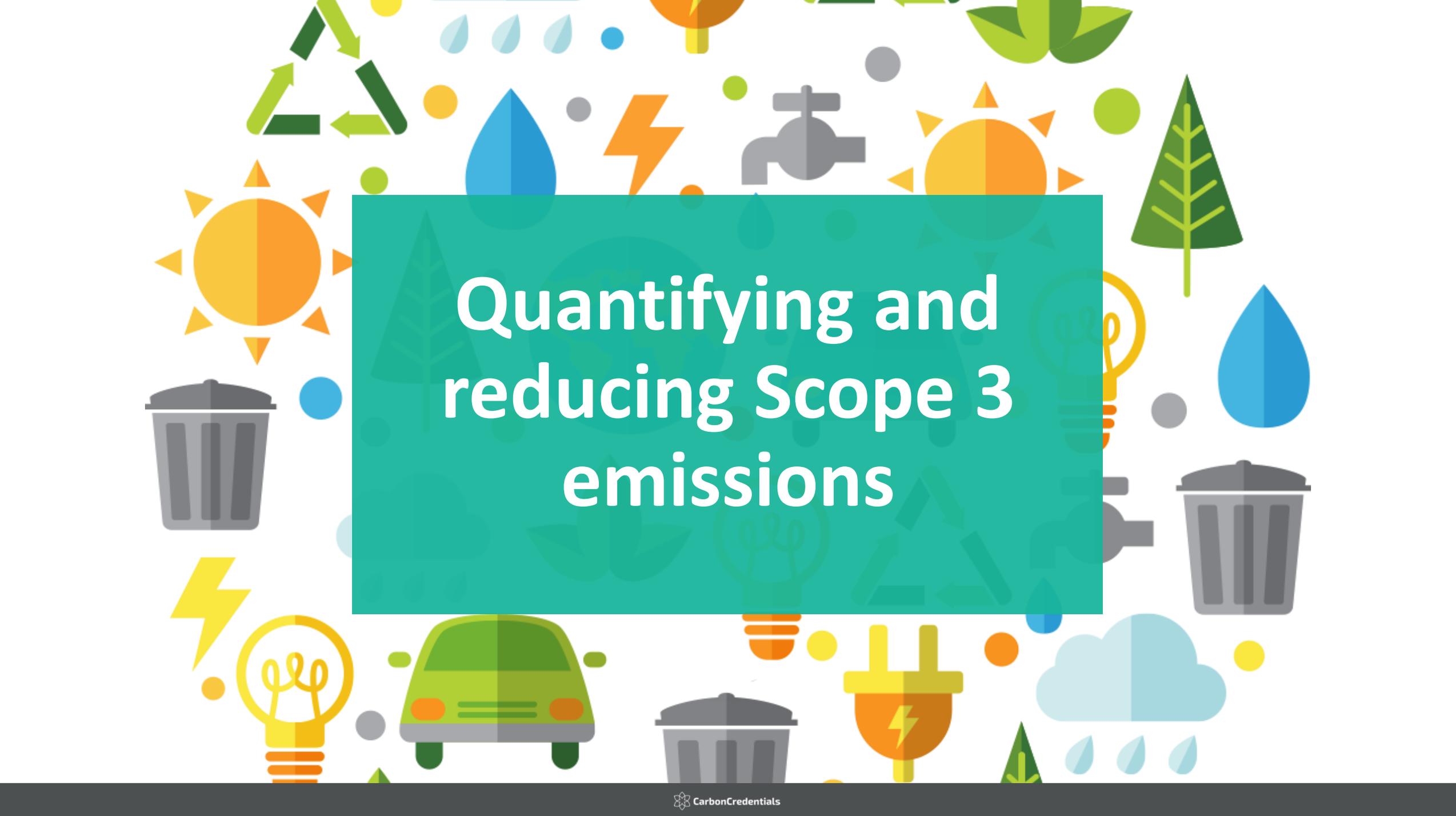


Case Study



Science-Based Target Setting Project Brief

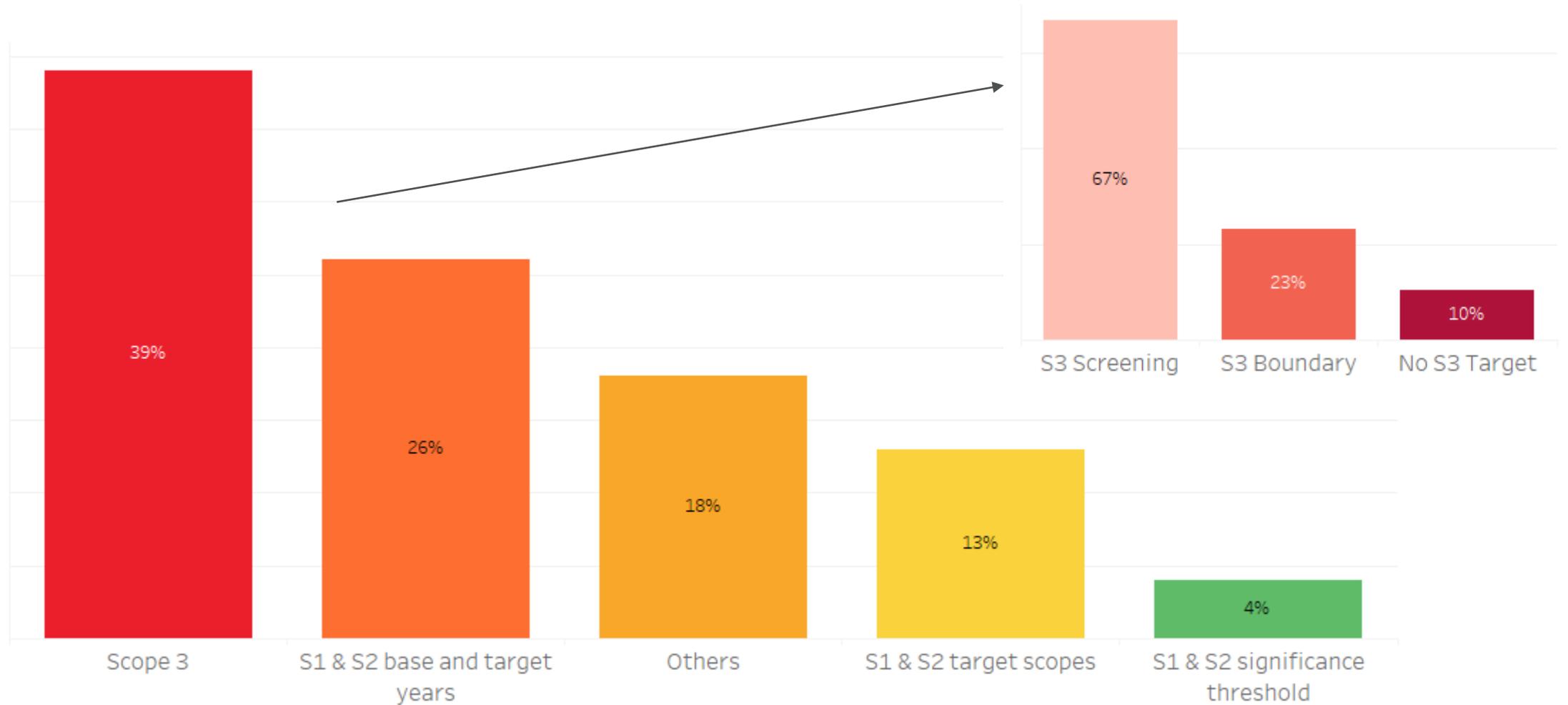
- Engage with stakeholders & understand emission scenarios
- Identify SBT & model scenarios
- Develop a strategy to reach targets



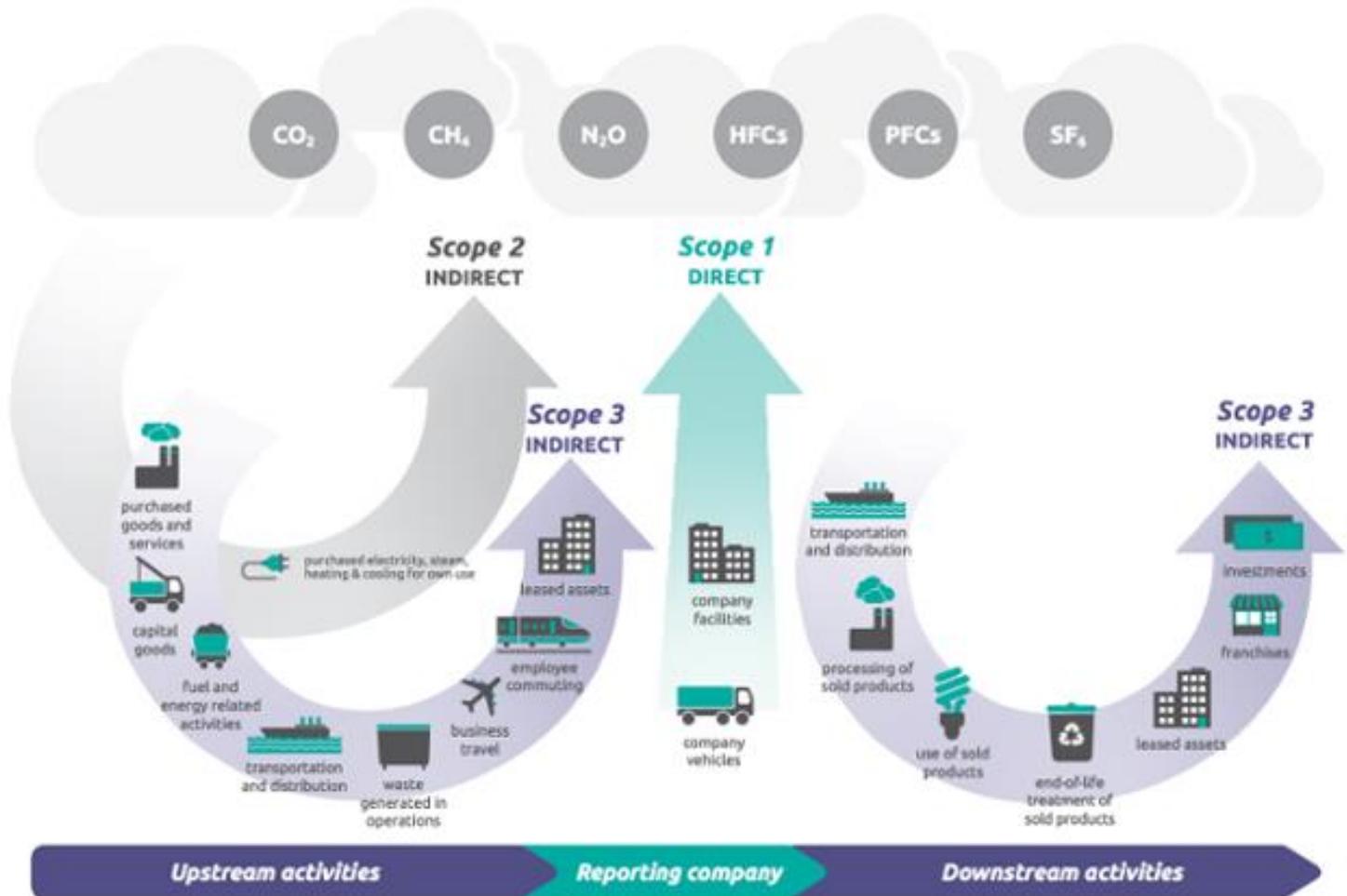
Quantifying and reducing Scope 3 emissions

Common pitfalls

From March to July 2017, **81 targets** were submitted to the Science Based Targets initiative for validation, **56% of which did not pass.**

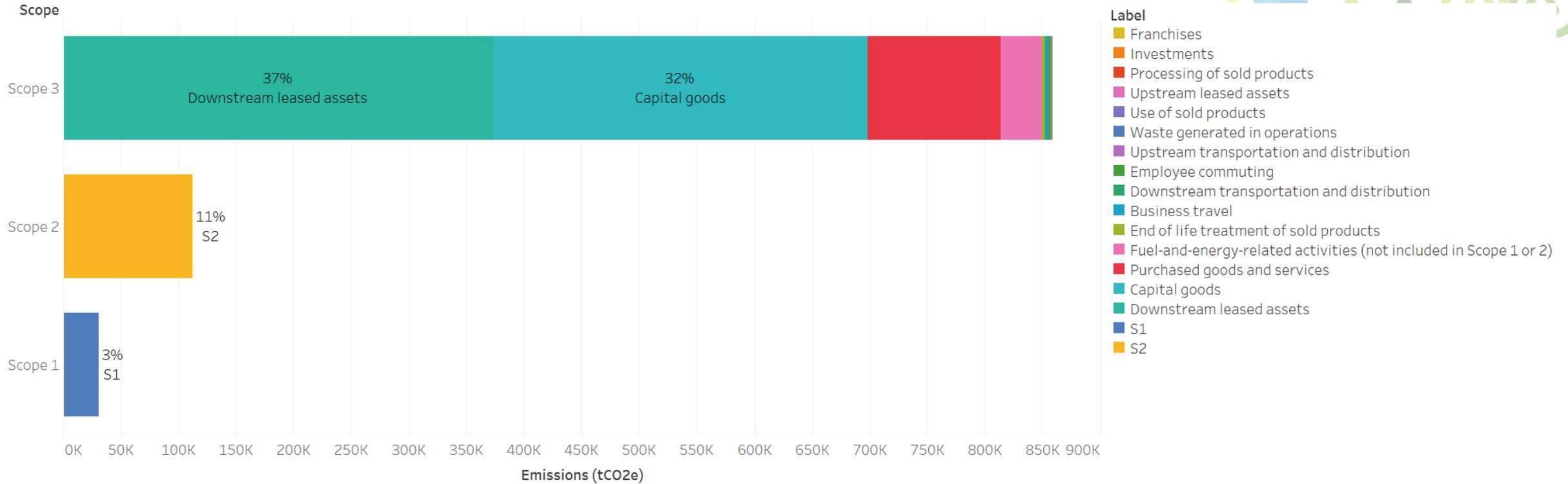


Overview of Value Chain (Scope 3) Emissions



1. Purchased goods and services
 2. Capital goods
 3. Fuel- and energy-related activities (not included in scope 1 or scope 2)
 4. Upstream transportation and distribution
 5. Waste generated in operations
 6. Business travel
 7. Employee commuting
 8. Upstream leased assets
-
9. Downstream transportation and distribution
 10. Processing of sold products
 11. Use of sold products
 12. End-of-life treatment of sold products
 13. Downstream leased assets
 14. Franchises
 15. Investments

Case Study: Screening Scope 3 Emissions



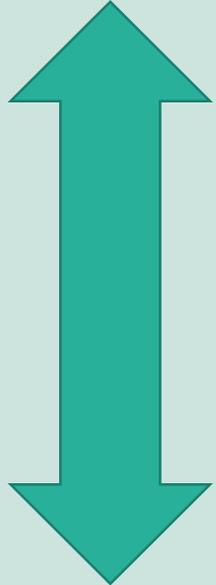
Case Study



Screening Scope 3 Emissions

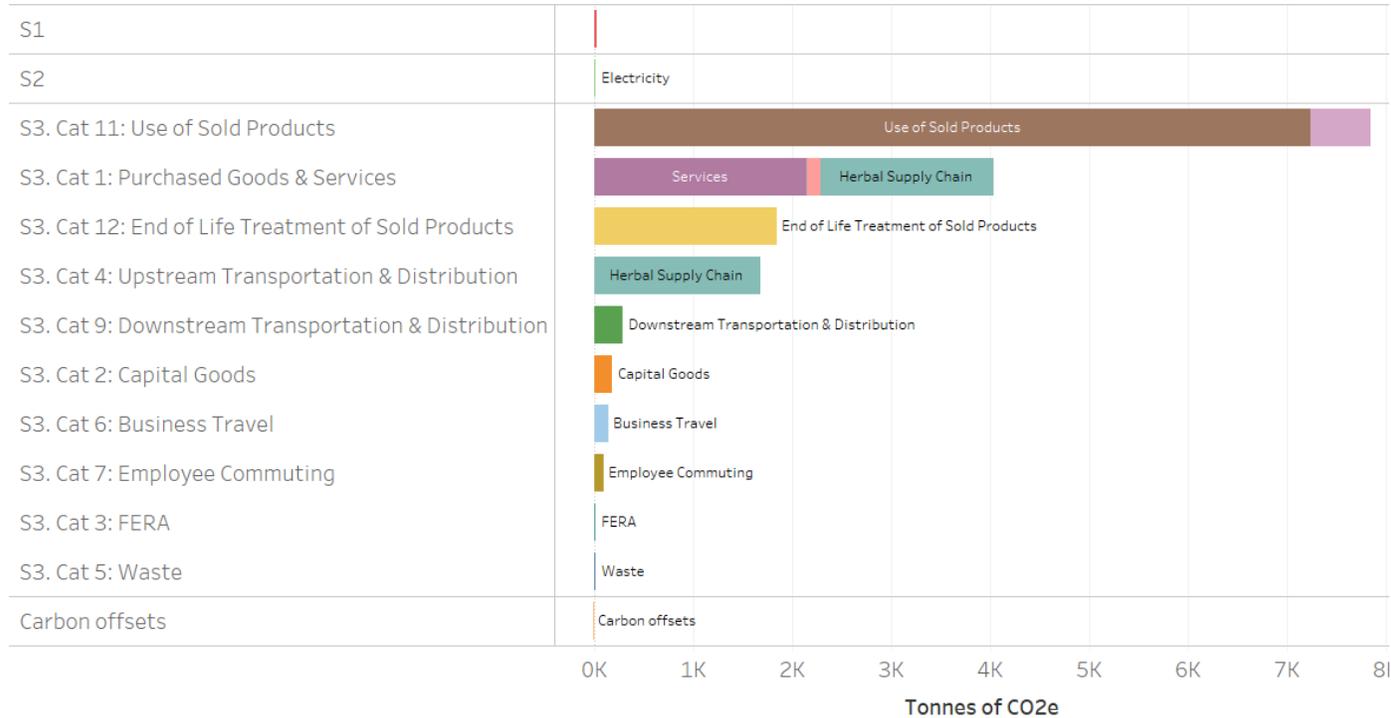
- Relevance assessment and data mapping
- Calculation of scope 3 emissions
- Emission hotspots

Scope 3 target hierarchy

TARGET TYPE	PREFERENCE
1. % absolute emissions targets (in line with 2 degree pathway when possible) or intensity target based on the SDA	<p>Most preferred</p>  <p>Least preferred</p>
2. Emissions based intensity target	
3. Non- emissions target in absolute or intensity terms such as reducing kWh or reducing energy use per product	
4. Targets that influence behaviour of suppliers or customers (e.g., request suppliers to set SBT, educate customers on cold water washing)	

Case Study: Hitting the Scope 3 requirements

Developing the Scope 3 inventory



Engage to formulate pragmatic supply chain & customer targets

Pukka Herbs

Bristol-based tea company **Pukka Herbs** commits to reduce absolute Scope 1 & 2 GHG emissions 100% by 2030 from a 2017 base-year. Pukka Herbs also commits to reduce Scope 3 GHG emissions from crop to cup 50% per million units of products by 2030 from a 2017 base-year.

Case Study



Science-Based Target Setting Project Brief

- Complete Scope 3 inventory according to GHG Protocol
- Model Scope 1 & 2 science-based targets
- Formulating ambitious yet pragmatic Scope 3 targets

Next steps

- Consider if your current targets are doing enough to limit climate change
- Understand if you have properly analysed your full Scope 3 footprint
- Raise SBTs at your next Sustainability / Energy Management Group meeting
- Get in touch with us if you would like to find more on emma.watson@carboncredentials

