Catalyzing Value Chain Decarbonization

Corporate Survey Results

FEBRUARY 2023
Context

- Value-chain decarbonization is one of the most significant opportunities to catalyze system-scale transformation towards a net-zero economy.

- On average, scope 3 emissions represent 70% of corporate greenhouse gas (GHG) inventories and are part of 96% of validated science-based targets.

- Given the scale and importance of scope 3 target-setting, and an increasing urgency for action, the SBTi has launched a process to review and update scope 3 target-setting guidance, methods, and criteria with the aim of ensuring the framework effectively catalyzes value-chain decarbonization while being cognisant of barriers corporates face.

- As a first step, a survey was conducted to understand the challenges faced with scope 3 target setting.

- This presentation outlines the results of the survey which will be used to inform the future development of scope 3 guidance updates. This report does not seek to provide clarifications on existing guidance or criteria.

- This comprehensive survey was carried out by the Science Based Targets initiative (SBTi) and Boston Consulting Group (BCG) in September 2022.
The end goal is clear, to reach a net-zero economy we need full value chain action

To reach a net-zero economy, the business model of companies need to evolve to continue to create value to society without causing the accumulation of greenhouse gases in the atmosphere.

A net-zero value chain implies that each and every step involved in the provision of goods and services aligns to a level of emissions that is compatible with achieving climate stability.

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022
Scope 3 represents 70% of corporate GHG footprints; targets on these emissions are critical to achieving system-wide decarbonization.

Scope 3 is significant across most sectors...

...and core to the SBTi’s theory of change

- Achieving a net-zero economy requires a fundamental transformation of the economy, which can only be achieved by aligning incentives and eliminating barriers to GHG reduction.

- The SBTi believes in the importance of value chain action and builds on attributional accounting to make shared cross-value chain responsibility between actors explicit.

- By requiring economic actors to set targets not only on their direct emissions, but also on emissions in their value chain, the SBTi seeks to align all actors behind a common goal.

Source: CDP Supply Chain Report: Changing the Chain, 2019; CDP Climate Change Questionnaire April 2022; BCG analysis
96% of validated science-based targets include scope 3

Science-based targets, 2022
Number of companies (‘000)

~4,500
Commitments

Validated targets

96%
Include scope 3

Note, of validated targets; Source: SBTi companies taking action dataset 2022; SBTi Progress Report 2020; BCG analysis
However, barriers remain which may prevent effective translation of scope 3 ambition into value-chain decarbonization.

**Baselining**
- Availability of value chain emissions data (reliance on average emissions factors).
- Consistent application of scope 3 baselining standards.

**Target Setting**
- Confidence in ability to deliver scope 3 targets.
- Availability of scope 3 specific science-based target-setting methods.
- Mismatch of growth plans and decarbonization ambition.

**Delivery**
- Ability to influence suppliers and customers.
- Cost of decarbonization.
- Ability to track progress due to data challenges.
- Awareness of "what counts" as a decarbonization lever.

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022
Objectives of the scope 3 guidance and criteria review

1. Clarify the role and importance of scope 3 targets in the delivery of 1.5°C pathways.

2. Evaluate scope 3 target boundary conditions and materiality thresholds.

3. Assess and refine existing scope 3 target-setting methodologies.

4. Identify new target-setting methodologies.

5. Consider accountability mechanisms for delivery of scope 3 targets.

The SBTi is launching a process to review scope 3 guidance & criteria
To inform the SBTi scope 3 review process, a stakeholder survey was launched to understand challenges faced when baselining, setting and delivering scope 3 targets.

Objective
Understand challenges companies face when setting and delivering scope 3 targets

- 230 respondents
- >20 sectors
- All major regions
- 85% with commitments or targets
- >100 questions

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022
Stakeholder engagement survey sampled a wide range of sectors and geographies

Respondents represent a range of sectors...

<table>
<thead>
<tr>
<th>Sector</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Materials</td>
<td>12%</td>
</tr>
<tr>
<td>Food, beverage &amp; tobacco</td>
<td>10%</td>
</tr>
<tr>
<td>Commercial &amp; professional services</td>
<td>7%</td>
</tr>
<tr>
<td>Consumer durables &amp; apparel</td>
<td>6%</td>
</tr>
<tr>
<td>Energy</td>
<td>5%</td>
</tr>
<tr>
<td>Software &amp; services</td>
<td>4%</td>
</tr>
<tr>
<td>Utilities</td>
<td>3%</td>
</tr>
<tr>
<td>Capital goods</td>
<td>3%</td>
</tr>
<tr>
<td>Transportation</td>
<td>3%</td>
</tr>
<tr>
<td>Automobiles &amp; components</td>
<td>3%</td>
</tr>
<tr>
<td>Diversified financials</td>
<td>3%</td>
</tr>
<tr>
<td>Retailing</td>
<td>3%</td>
</tr>
<tr>
<td>Technology hardware &amp; equipment</td>
<td>2%</td>
</tr>
<tr>
<td>Real estate</td>
<td>2%</td>
</tr>
<tr>
<td>Pharmaceuticals</td>
<td>2%</td>
</tr>
<tr>
<td>Banks</td>
<td>2%</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
</tr>
<tr>
<td>Non-corporate</td>
<td>23%</td>
</tr>
</tbody>
</table>

...and geographies¹

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>149</td>
</tr>
<tr>
<td>Europe</td>
<td>171</td>
</tr>
<tr>
<td>Asia</td>
<td>136</td>
</tr>
<tr>
<td>Latam</td>
<td>113</td>
</tr>
<tr>
<td>Africa</td>
<td>81</td>
</tr>
<tr>
<td>Oceania</td>
<td>84</td>
</tr>
</tbody>
</table>

Responses from all companies who completed a representative question; 1. One organization can cover multiple geographies, N=294; 2. N=237, ex. 46 respondents who did not complete this question; Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Three categories of challenges were researched

A. Challenges with baselining scope 3 emissions

B. Challenges with setting scope 3 science-based targets

C. Challenges with delivering progress towards a scope 3 science-based target

Source: SBTI Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Baselining: Some companies are motivated to develop a baseline in order to set a target

A primary motivator for baselining scope 3 emissions is to enable setting an SBT

Q. What was/is your motivation for developing a scope 3 GHG baseline? Select one or many, % of respondents

- To understand our emissions: 84%
- To be able to set an SBT: 78%
- To identify reduction levers: 79%
- Competitor pressure: 10%
- Shareholder pressure: 60%
- Public pressure: 10%
- Regulatory pressure: 10%
- Employee pressure: 10%
- Other: 10%

Regulation is not a motivator today, but is expected to be one in the future

Q. Are you currently subject to any regulatory disclosure on scope 3, or do you expect to be in the future?, % of respondents

- Today: 80%
  - Yes: 60%
  - No: 20%
  - Not Sure: 20%
- In the Future: 20%
  - Yes: 60%
  - No: 20%
  - Not Sure: 20%

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Baselining Barrier #1: Data access
Supplier specific emissions factors only represent 6% of baseline calculations

Method used to estimate scope 3 emissions, % of respondents, N=175

<table>
<thead>
<tr>
<th>Activity</th>
<th>Avg. use of supplier specific factors</th>
<th>Emissions factor type</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3.1 Purchased goods and services</td>
<td>3%</td>
<td>Hybrid¹, Spend, Activity, Supplier-specific</td>
</tr>
<tr>
<td>S3.2 Capital Goods</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>S3.3 Fuel and energy related activities</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>S3.4 Upstream transportation and distribution</td>
<td>8%</td>
<td></td>
</tr>
<tr>
<td>S3.5 Waste generated in operations</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>S3.6 Business travel</td>
<td>9%</td>
<td></td>
</tr>
<tr>
<td>S3.7 Employee commuting</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>S3.8 Upstream leased assets</td>
<td>1%</td>
<td></td>
</tr>
<tr>
<td>S3.9 Downstream transport</td>
<td>11%</td>
<td></td>
</tr>
<tr>
<td>S3.10 Processing of sold products</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>S3.11 Use of sold products</td>
<td>13%</td>
<td></td>
</tr>
<tr>
<td>S3.12 End of life treatment of sold products</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>S3.13 Downstream leased assets</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>S3.14 Franchises</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>S3.15 Investments</td>
<td>23%</td>
<td></td>
</tr>
</tbody>
</table>

¹ Hybrid: A mix of spend, activity and supplier specific emissions factors. Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis.
Baselining Barrier #2: Comparability
50% of companies re-baseline emissions due to methodological changes

Differing interpretations of accounting guidance can limit baseline comparability. Due to:

- Methodological choices e.g. spend vs. activity based emissions factors
- Optional categories e.g. indirect use phase
- Lack of sufficient sector specific accounting guidelines

In addition, changing methodological decisions often lead to re-baselining.

Q: Has your baseline changed in the last 5 years, why?, N=198

- No: 30%
- Yes: 70%

Why has your baseline changed? (%)

- Inorganic growth
- Changes in supplier factors
- Changes in emissions factors
- Calculation errors
- Changing to a different emissions factor database
- Changing the type of EF (e.g., spend based to activity)

1. Emissions factor 2. Changes to a baseline not driven by methodological decisions rather than directly by real economy decarbonization

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Target Setting

Almost all companies find setting a scope 3 science-based target challenging

Q: How challenging do/did you find setting a scope 3 target?

- Not challenging: 12%
- Somewhat challenging: 22%
- Challenging: 41%
- Extremely challenging: 26%
- 88% challenging

N = 175

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Target Setting Barrier #1: Confidence
70% of respondents believe lack of confidence in delivery is a barrier to target setting.

Respondents are concerned about the consequences of failure…

- Large implications to failing to deliver: 63%
- Stakeholders will hold us to account: 32%

…and lack confidence because of unclear delivery roadmaps

- We don’t have a clear delivery plan: 50%
- We don’t know how to reduce emissions: 29%

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Target Setting Barrier #2: Methods

Most respondents utilize absolute contraction as a scope 3 target-setting method.

- 57% of companies use absolute contraction for scope 3 target setting...
- ...however, tailored sector specific guidance may help address perceived barriers.
  - Scope 3 emissions originate from many different sources including some high emitting sectors.
  - For companies with scope 3 emissions in high emitting sectors, sector specific target-setting guidance may help create more nuanced targets compared to the absolute contraction method.
  - In addition, respondents commonly cite growth ambitions as a barrier to target setting.
  - Use of intensity-based target-setting methodologies may help to partially decouple planned growth from decarbonization ambition.

1. SDA = Sectoral Decarbonization Approach; Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Target Delivery
70% of scope 3 emissions concentrated in two categories

S3.1 & S3.11 seen as the hardest to decarbonize…

Q. Which scope 3 categories do you find the most challenging to decarbonize % of respondents, N=168

...representing >70% of global scope 3

S3.1 Purchased goods and services
S3.11 Use of sold products

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3.10 Processing of sold products</td>
<td>57%</td>
</tr>
<tr>
<td>S3.12 End-of-life treatment</td>
<td>55%</td>
</tr>
<tr>
<td>S3.15 Investments</td>
<td>53%</td>
</tr>
<tr>
<td>S3.4 Upstream T&amp;D</td>
<td>40%</td>
</tr>
<tr>
<td>S3.2 Capital Goods</td>
<td>39%</td>
</tr>
<tr>
<td>S3.9 Downstream Transport</td>
<td>29%</td>
</tr>
<tr>
<td>S3.7 Employee commuting</td>
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<td>S3.3 Fuel and energy</td>
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Source: CDP Climate Change Questionnaire 2022; SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Delivery Barrier #1: Influence
81% of respondents believe limited influence over supply chains is a barrier to delivery.
Delivery Barrier #2: Cost

61% of respondents are concerned that cost is a barrier to delivering a scope 3 target.

Is cost a challenge to delivering scope 3 targets?

- Agree: 61%
- Disagree: 12%
- Neutral: 27%

% respondents, N=180

Why is cost a challenge for delivering scope 3 targets?

- Buying low carbon products and services will incur a green premium: 75% in terms of increased OPEX
- Re-designing products will require CAPEX investment: 30%
- Our competitors are slow to act, limiting pressure on us: 20% in terms of insufficient business case

% respondents, N=117

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Delivery Barrier #3: Tracking progress
Access to measured supply chain data is a barrier to tracking the delivery of targets.

- Poor measured data availability
- Poor data quality
- Inability to track progress

- Hard to recognize the impact of actions with average factors (58%)
- Harder to identify and prioritize opportunities to act

- Supplier specific emissions factors not available (63%)
- Tier 2 emissions factors are unknown (42%)
- Supplier emissions factors are often not robust or verified (61%)
- Use of sold product emissions are at best rough estimates (24%)

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Delivery Barrier #4: What counts
Some respondents are unclear on "what counts" as a valid scope 3 decarbonization lever.

Q: How clear are you about which emission reduction activities can count towards delivery of a scope 3 science-based target? N=140

<table>
<thead>
<tr>
<th>FLAG Interventions</th>
<th>Unclear</th>
<th>Neutral</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>69%</td>
<td>19%</td>
<td></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Non-FLAG Interventions</th>
<th>Unclear</th>
<th>Neutral</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>68%</td>
<td>16%</td>
<td></td>
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<table>
<thead>
<tr>
<th>Neutralization</th>
<th>Unclear</th>
<th>Neutral</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>42%</td>
<td>18%</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Changes to avg. Emission factors</th>
<th>Unclear</th>
<th>Neutral</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>37%</td>
<td>14%</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Switching supplier</th>
<th>Unclear</th>
<th>Neutral</th>
<th>Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>27%</td>
<td>17%</td>
<td></td>
</tr>
</tbody>
</table>

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022; BCG analysis
Six high level solutions
Addressing barriers is critical to decarbonization – call to action for the entire ecosystem

1. Improved data collection & traceability
2. Enhanced accounting frameworks
3. Target-setting guidance and methods
4. Collective value chain action
5. Financiers & regulators
6. Internal efforts

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022
Six high level solutions
Addressing barriers is critical to decarbonization – call to action for the entire ecosystem

Improved data collection & traceability
Enhanced accounting frameworks
Target-setting guidance and methods
Collective value chain action
Financiers & regulators
Internal efforts

Baseline: Data access
Baseline: Baseline comparability
Setting: Confidence in delivery
Setting: Methods
Delivery: Influence
Delivery: Influence
Delivery: Cost
Delivery: Tracking impact
Delivery: What counts

Top Barriers Identified

Source: SBTi Scope 3 Stakeholder Engagement Survey, September 2022