

SCIENCE BASED TARGETS FOR FINANCIAL INSTITUTIONS

Donald Linderyd, WWF

2 December 2020



SCIENCE BASED TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

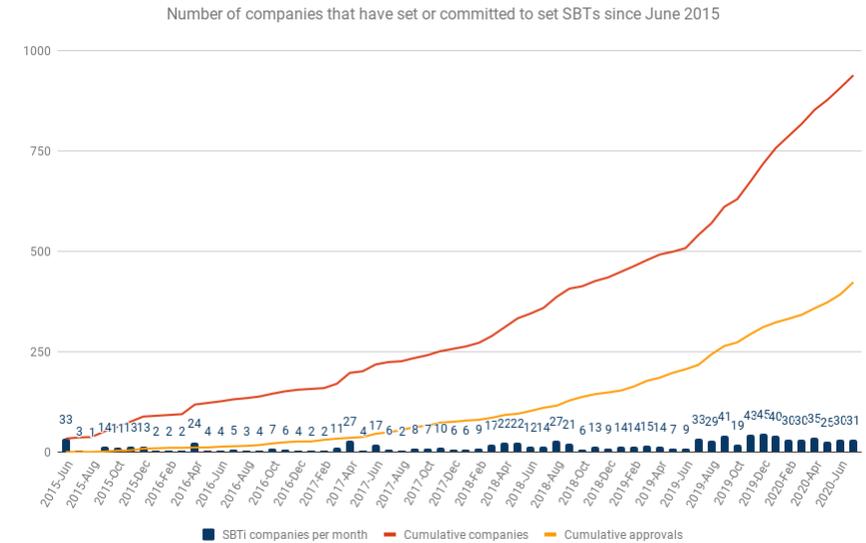
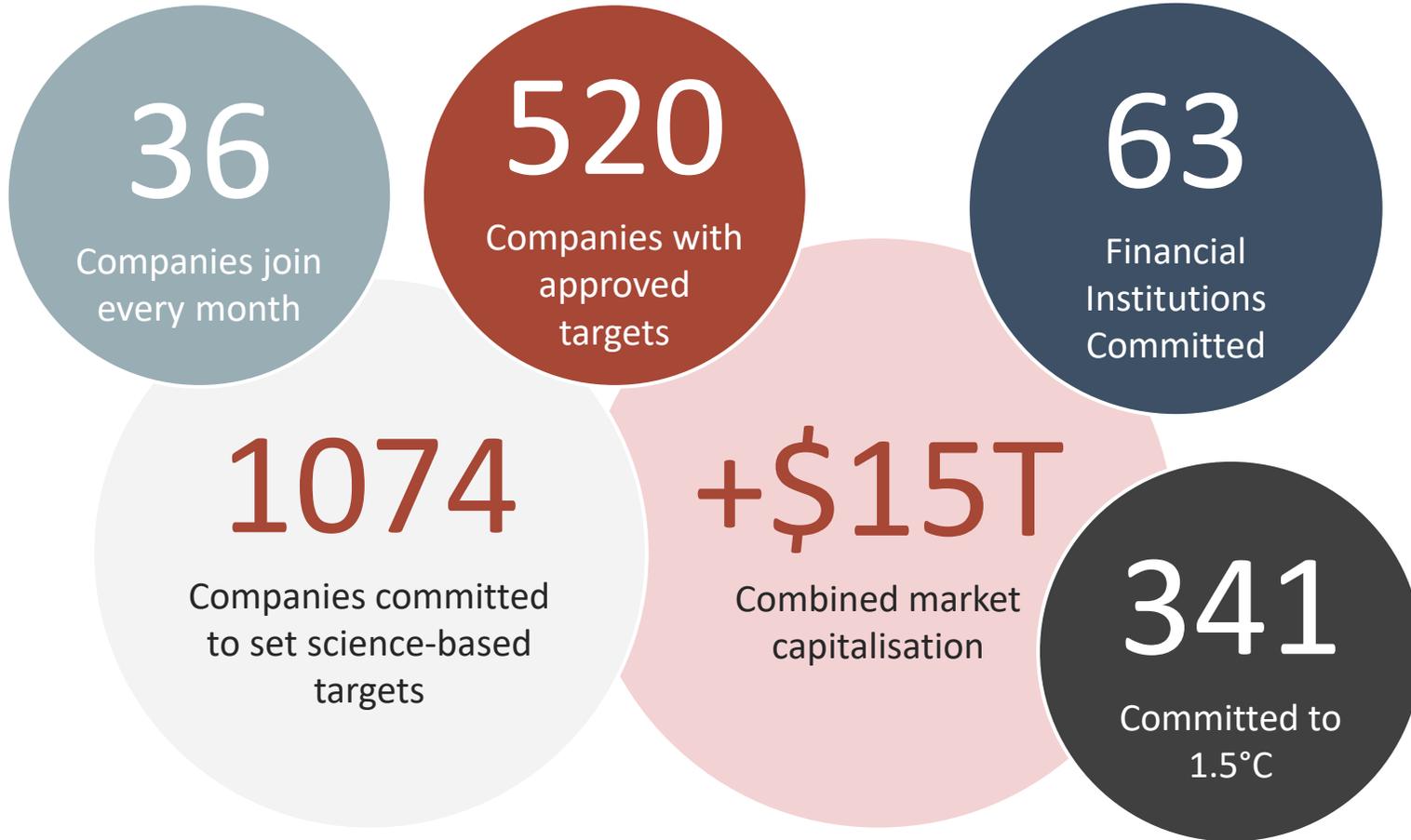
PARTNER ORGANIZATIONS



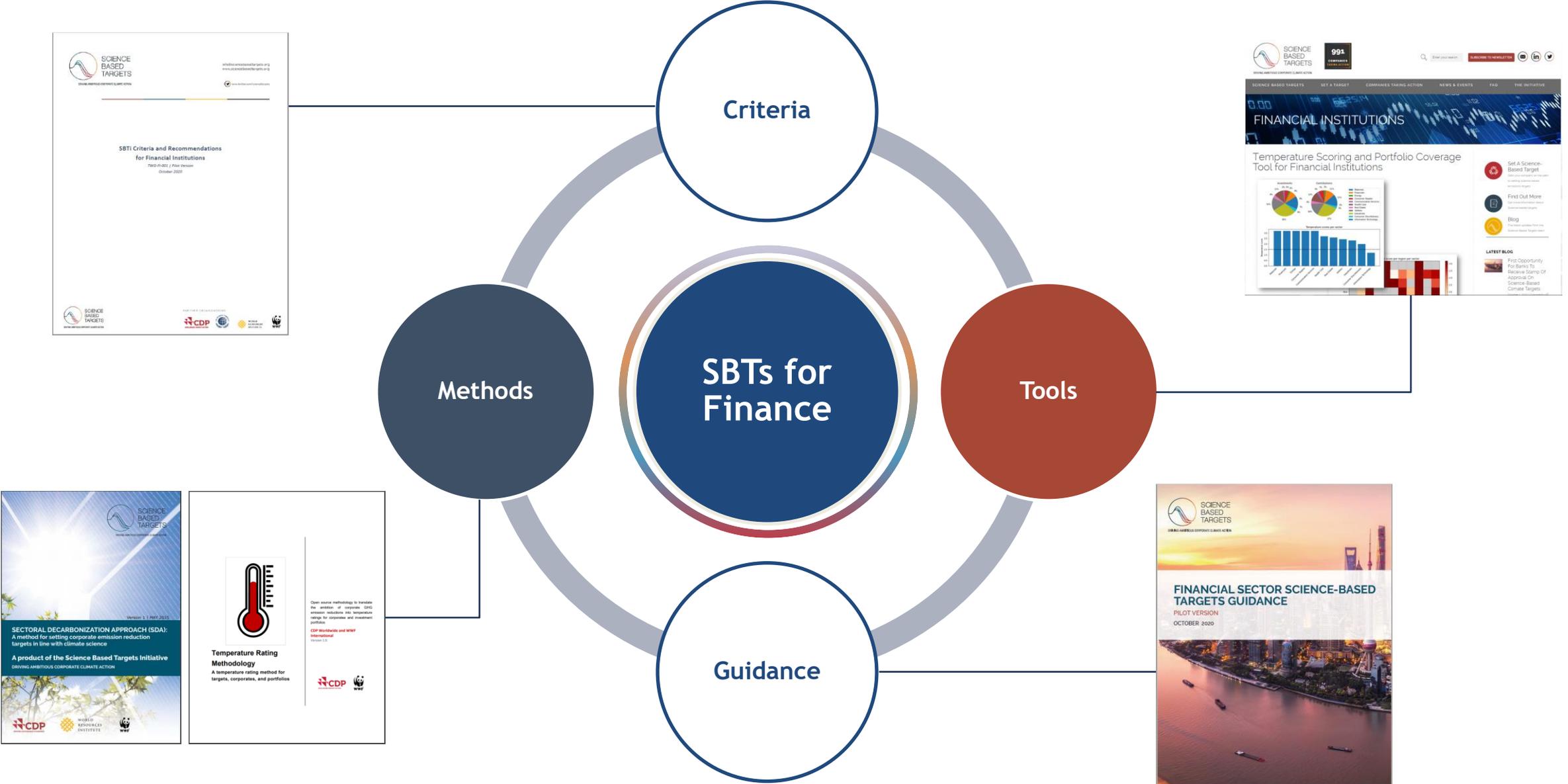
IN COLLABORATION WITH



SBTi | Global momentum by the numbers



SBTi Finance Framework | Framework - Launched 1 October 2020



SBTi Finance

Methods Overview

“The highest degree of sophistication is to map that into a form of **portfolio [temperature]** to judge the aggregate impact of the portfolio.”

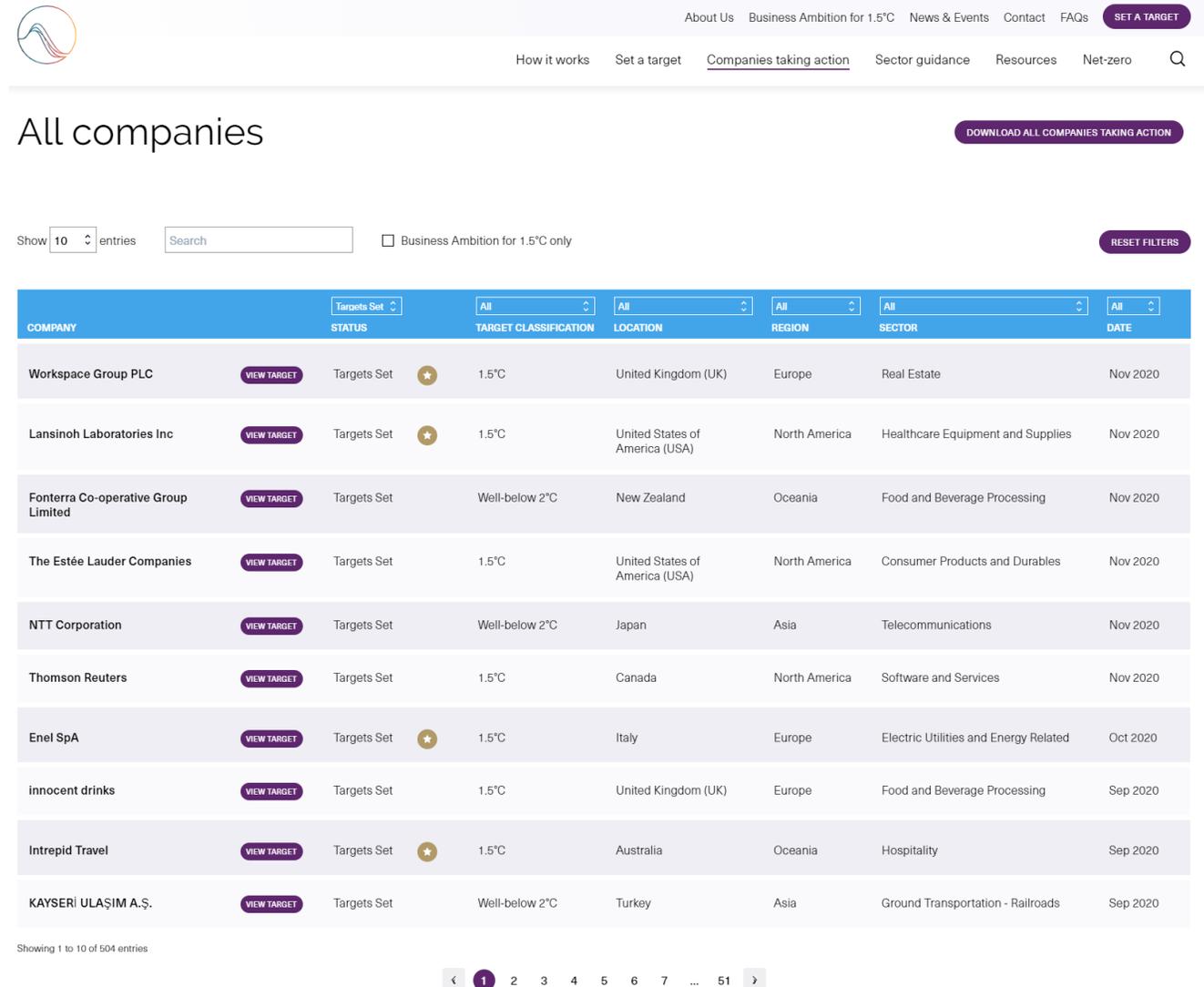
- Mark Carney, October 2020

SBTi Finance Framework | Method & Asset Class Coverage Links

Asset Class	Method	Description
Real Estate	Sector Decarbonization Approach (SDA)	Emissions-based physical intensity targets are set for non-residential buildings' intensity and total GHG emissions.
Mortgages	SDA	Emissions-based physical intensity targets are set for residential buildings' intensity and total GHG emissions.
Electricity Generation Project Finance	SDA	Emissions-based physical intensity targets are set for electricity generation projects' intensity and total GHG emissions.
	SDA	Emissions-based physical intensity targets are set at sector level within the portfolio for sector where sectoral decarbonization approaches are available.
Corporate Instruments (equity, bonds, loans)	SBT Portfolio Coverage	Financial institutions engage a portion of their investees to have their own SBTi-approved GHG reduction targets such that they will reach 100% coverage by 2040.
	Temperature Rating	This approach enables financial institutions to determine the current temperature rating of their portfolio and take actions to align their portfolios to ambitious long-term temperature goals by engaging with portfolio companies to set ambitious targets (e.g., 2.6°C in 2019 and 1.7°C in 2025).

SBTi Finance Methods | Portfolio Coverage

- Minimum % of their investees or borrowers (in monetary or GHG emissions terms) set their own **SBTi-approved** GHG reduction targets.
- Linear path to **100% portfolio coverage by 2040** (using a weighting approach in the SBT Finance Tool)
- Example: 10% coverage in 2020 → increase coverage by 4.5% per year ($90 / (2040 - 2020) = 4.5$) and reach **at least 32.5%** ($10 + [5 \times 4.5] = 32.5$) coverage by **2025**.
- Include all sectors

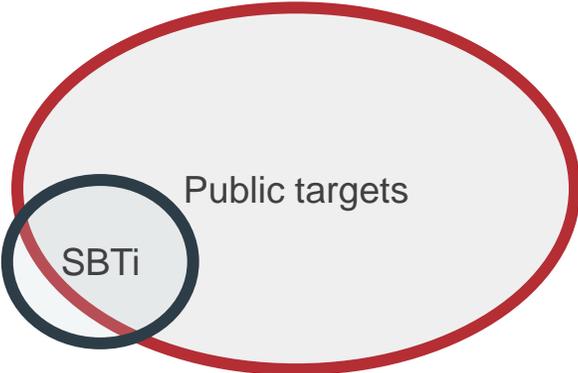


The screenshot shows the SBTi website interface. At the top, there is a navigation bar with links for 'About Us', 'Business Ambition for 1.5°C', 'News & Events', 'Contact', 'FAQs', and a 'SET A TARGET' button. Below the navigation bar, the main heading is 'All companies' with a 'DOWNLOAD ALL COMPANIES TAKING ACTION' button. A search bar and a checkbox for 'Business Ambition for 1.5°C only' are visible. The main content is a table with columns for COMPANY, STATUS, TARGET CLASSIFICATION, LOCATION, REGION, SECTOR, and DATE. The table lists 10 companies, each with a 'VIEW TARGET' button and a star icon. The companies listed are: Workspace Group PLC, Lansinoh Laboratories Inc, Fonterra Co-operative Group Limited, The Estée Lauder Companies, NTT Corporation, Thomson Reuters, Enel SpA, innocent drinks, Intrepid Travel, and KAYSERİ ULAŞIM A.Ş.

COMPANY	STATUS	TARGET CLASSIFICATION	LOCATION	REGION	SECTOR	DATE
Workspace Group PLC	Targets Set	1.5°C	United Kingdom (UK)	Europe	Real Estate	Nov 2020
Lansinoh Laboratories Inc	Targets Set	1.5°C	United States of America (USA)	North America	Healthcare Equipment and Supplies	Nov 2020
Fonterra Co-operative Group Limited	Targets Set	Well-below 2°C	New Zealand	Oceania	Food and Beverage Processing	Nov 2020
The Estée Lauder Companies	Targets Set	1.5°C	United States of America (USA)	North America	Consumer Products and Durables	Nov 2020
NTT Corporation	Targets Set	Well-below 2°C	Japan	Asia	Telecommunications	Nov 2020
Thomson Reuters	Targets Set	1.5°C	Canada	North America	Software and Services	Nov 2020
Enel SpA	Targets Set	1.5°C	Italy	Europe	Electric Utilities and Energy Related	Oct 2020
innocent drinks	Targets Set	1.5°C	United Kingdom (UK)	Europe	Food and Beverage Processing	Sep 2020
Intrepid Travel	Targets Set	1.5°C	Australia	Oceania	Hospitality	Sep 2020
KAYSERİ ULAŞIM A.Ş.	Targets Set	Well-below 2°C	Turkey	Asia	Ground Transportation - Railroads	Sep 2020

<https://sciencebasedtargets.org/companies-taking-action>

SBTi Finance Methods | Temperature Rating

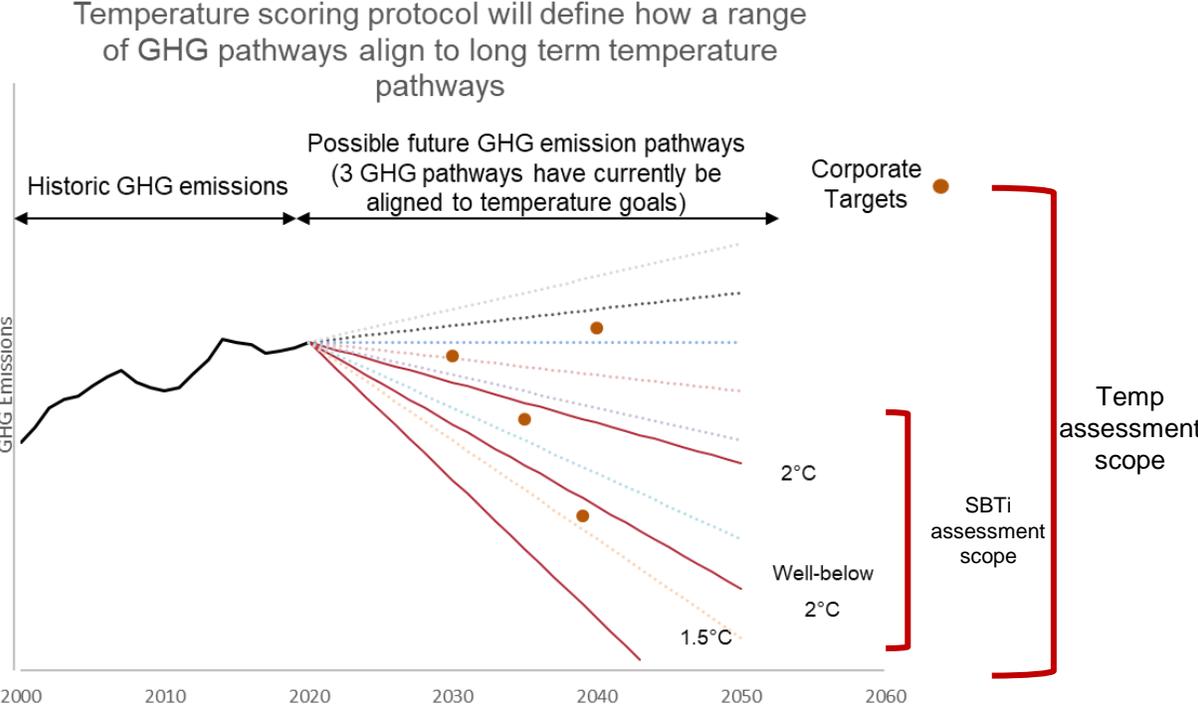


The SBTi have determined the GHG pathways that are aligned to three specific temperature pathways:

2°C, well-below 2°C, 1.5°C;

Temperature scoring:

- assess and rate **+4,000 corporate GHG reduction targets** against a wider range of temperature outcomes (1.5–4°C)
- e.g. Company A’s GHG emission reduction target of XX% reduction in **absolute** emissions by 2025 implies their ambition is aligned to a Y.Y°C world.
- **IPCC SR 1.5** scenarios
- Companies with no target – default score
- Include all sectors



SBTi Finance

Temperature Scoring & Portfolio Coverage Tool



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi Finance Tool | Objectives

- Continued development – **Open Source Codebase**
- Widely distributed – any investment professionals should have access
- **Any infrastructure** – integrate with service provider & homegrown solutions
- **Data** agnostic – any data provider & own data lake
- **Transparent** – from corporate ambition to portfolio temperature score
- **Data security** – no sensitive portfolio data compromised
- **Scalable** – for many portfolios & aggregated on financial institutional level
- **Workflow** tool for:
 - Portfolio managers & CIO
 - ESG & Financial analysts
 - Risk management & Compliance

SBTi Finance Tool | Development Team

- Science Based Target initiative (SBTi)
 - WWF (project manager)
 - CDP
 - World Resources Institute
- Developers
 - Ortec Finance
 - OS-Climate
- Data & Service Providers
 - Bloomberg
 - CDP
 - ISS ESG
 - MSCI
 - Trucost
 - Urgentem
- Users
 - Net-Zero Asset Owner Alliance

Bloomberg

ISS ESG 

MSCI 

CDP
DISCLOSURE INSIGHT ACTION

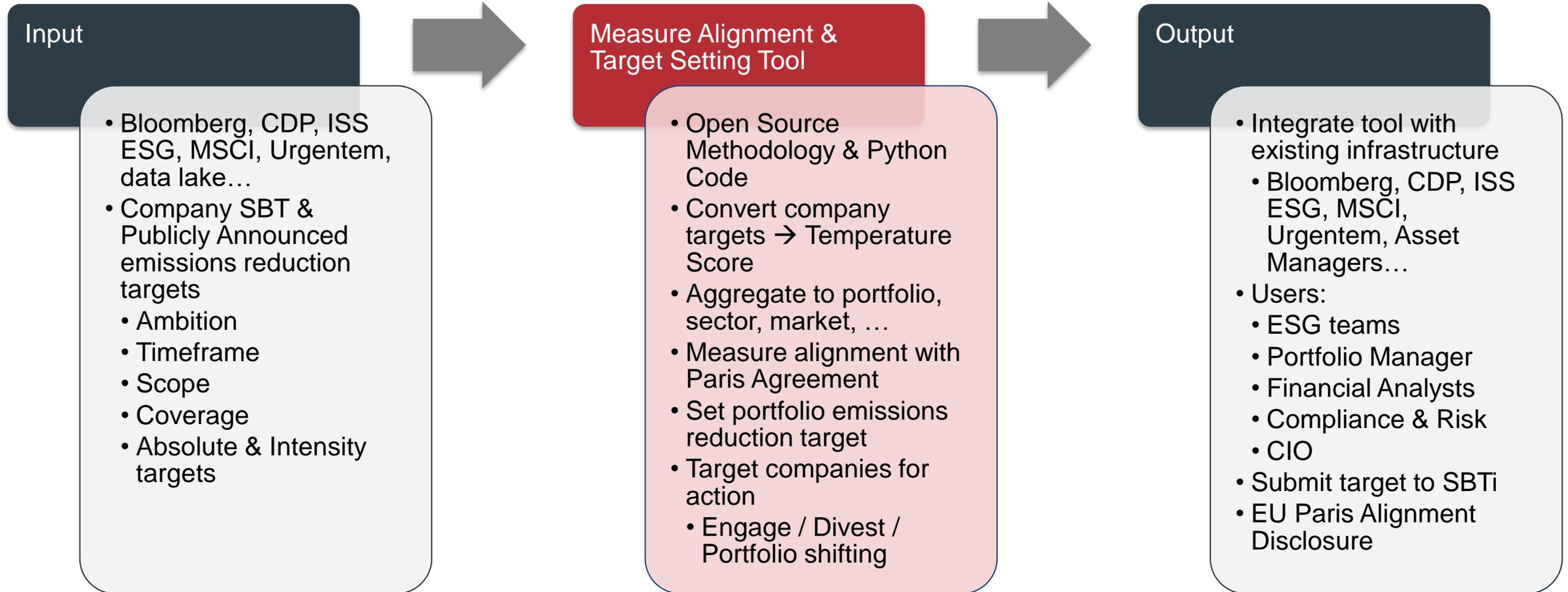
Trucost
ESG Analysis

S&P Global

URGENTEM



SBTi Finance Tool | Structure



SBTi Finance Tool | What Can We Use It For?

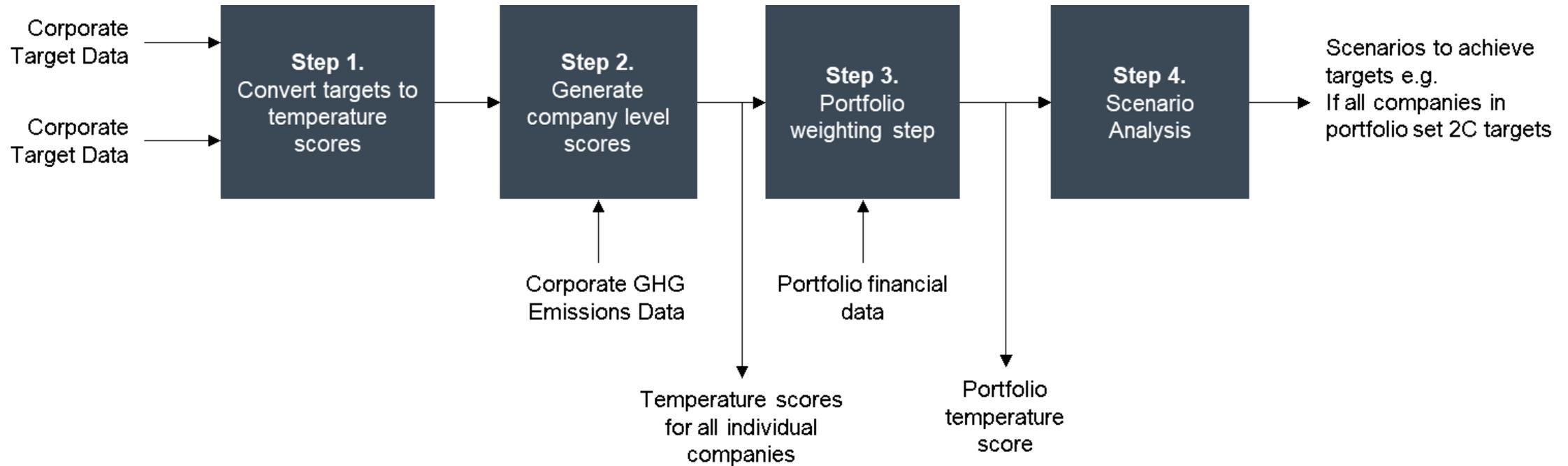
Portfolio manager / analyst analyzing:

- **companies, sectors**, countries, investment strategies and portfolios to
- understand how they **contribute to climate change**.

You can for example:

- Measure a **portfolio's temperature score**
- Identify biggest contributors – e.g. company, country and sector basis
- Strategic allocation and securities selection
- Analyze effects of changes in a portfolio
- **Model impact of engagement on temperature score**
- **Plan engagement strategies** based on your modelling
- Help you **create** an **action plan** for reaching your emission reduction target

SBTi Finance Tool | Analysis Process



SBTi Finance Tool | Analysis Example step 1 - 3

Company Temp Score

	Short-term 2021-2024	Mid-term 2025-2035	Long-term 2035-2050
Scope 1+2	Temp score	Temp score	Temp score
Scope 3	Temp score	Temp score	Temp score

Portfolio Temp Score (50 company portfolio with randomized data)

```
▶ temperature_score.aggregation_method = PortfolioAggregationMethod.WATS
   aggregated_portfolio = temperature_score.aggregate_scores(amended_portfolio)
   print_aggregations(aggregated_portfolio)
```

Timeframe	Scope	Temp score
mid	S1S2	2.63
mid	S1S2S3	2.88

Portfolio Coverage

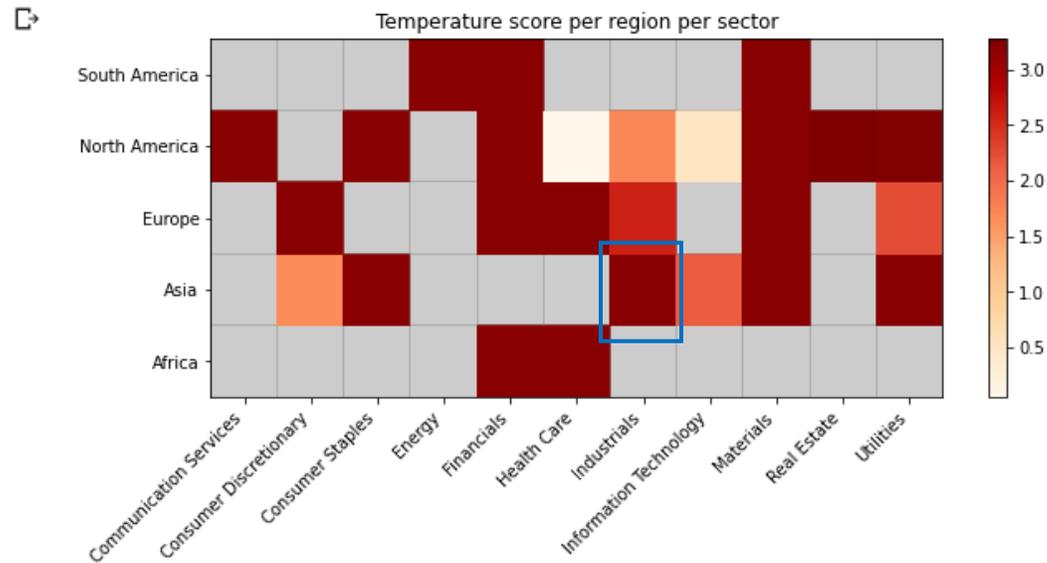
```
▶ portfolio_coverage_tvp = PortfolioCoverageTVP()
   coverage = portfolio_coverage_tvp.get_portfolio_coverage(amended_portfolio.copy(), temperature_score.aggregation_method)
   print("Part of portfolio with climate targets is {c:.2f}%".format(c=coverage))
```

Part of portfolio with climate targets is 35.45%

SBTi Finance Tool | Where are my hot spots?

Heat map

```
[13] analysis_parameters = ([ETimeFrames.MID], [EScope.S1S2], grouping)
plot_grouped_heatmap(grouped_aggregations, analysis_parameters)
```

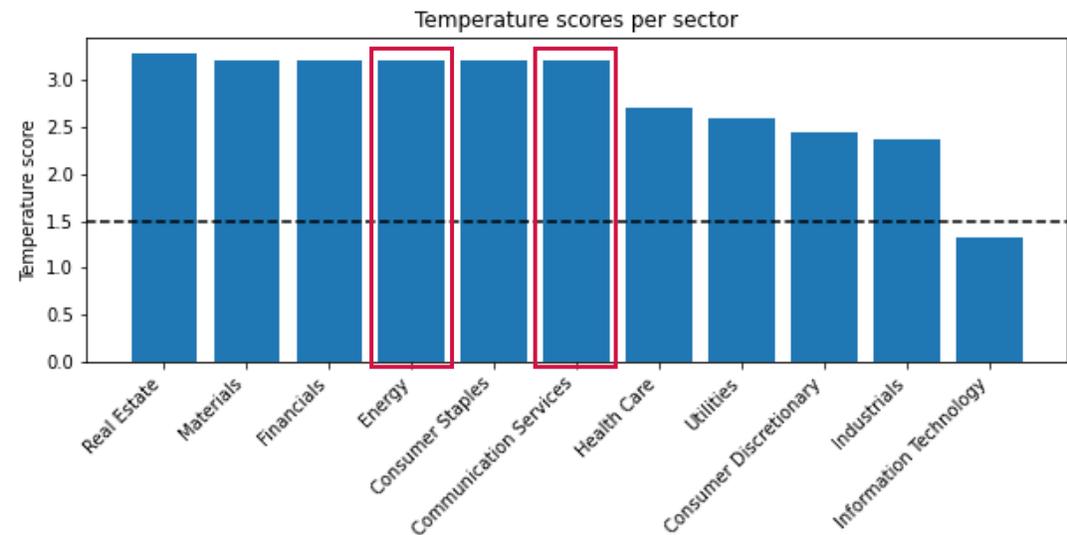
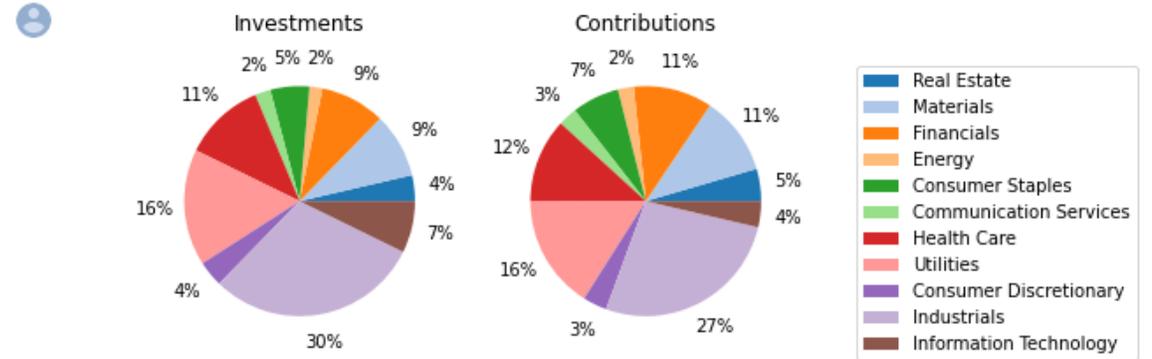


Focus on

- Asian Industrials
- Consumer staples
- Communication services
- Energy

Sector analysis

```
plot_grouped_statistics(aggregated_portfolio, company_contributions, analysis_parameters)
```



SBTi Finance Tool | Which companies should I engage with?

Analyze temperature score contribution & ownership % of companies in my portfolio

```
company_contributions[['company_name', 'company_id', 'contribution', 'temperature_score', 'ownership_percentage',
```

	company_name	company_id	contribution	temperature_score	ownership_percentage	portfolio_percentage
0	Company N	FR0000000014	9.52	3.20	0.19	7.82
1	Company AG	US0079031078	3.29	1.36	0.33	6.36
2	Company Q	CA0000000017	2.66	3.20	4.81	2.18
3	Company AO	TW0002308004	2.65	3.83	0.01	1.82
4	Company AM	FR0000120644	2.34	3.38	12.25	1.82
5	Company U	US0000000021	2.32	3.36	0.54	1.82
6	Company AH	US00724F1012	2.29	3.31	5.87	1.82
30	Company C	IT0000000003	2.21	3.20	0.34	1.82
25	Company AF	ID0000000032	2.21	3.20	0.97	1.82
26	Company G	CN0000000007	2.21	3.20	0.05	1.82

Put Company Q & Company AM into our engagement scenario 4a: “Engage to encourage companies to set 2C targets”.

SBTi Finance Tool | What is the impact on my portfolio TS? - step 4

Modelling 2 companies in a 50-company portfolio

```
[20] scenario_portfolio = portfolio.copy()
      scenario_portfolio.loc[scenario_portfolio['company_id'] == 'CA0000000017', 'engagement_target'] = True
      scenario_portfolio.loc[scenario_portfolio['company_id'] == 'FR0000120644', 'engagement_target'] = True
```

```
▶ scenario_companies = [SBTi.interfaces.PortfolioCompany.parse_obj(company) for company in scenario_portfolio.to_dict(orient="records")]
  scenario_data = SBTi.utils.get_data([provider], scenario_companies)

  temperature_score.scenario = scenario
  scenario_companies = SBTi.utils.dataframe_to_portfolio(scenario_portfolio)
  scenario_scores = temperature_score.calculate(data_providers=[provider], portfolio=scenario_companies)
  scenario_aggregated = temperature_score.aggregate_scores(scenario_scores)
  print_scenario_gain(aggregated_portfolio, scenario_aggregated)
```

👤 Actual portfolio temperature score

Timeframe	Scope	Temp score
mid	S1S2	2.63

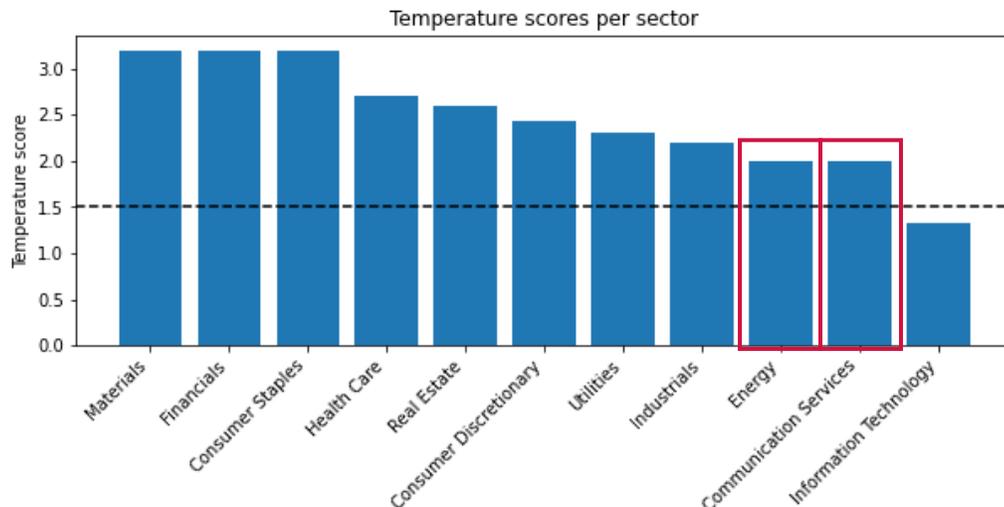
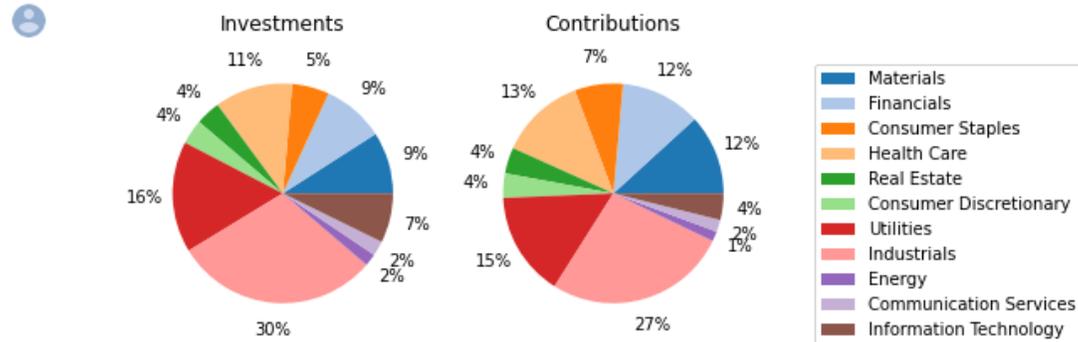
Scenario portfolio temperature score

Timeframe	Scope	Temp score
mid	S1S2	2.46

SBTi Finance Tool | What is the impact on a sector level?

What is the likelihood that I can reach a certain target with my engagement strategy?

```
[23] scenario_contributions = collect_company_contributions(scenario_aggregated, scenario_scores, analysis_parameters)
plot_grouped_statistics(scenario_aggregated, scenario_contributions, analysis_parameters)
```



Results:

I need a more ambitious engagement strategy to reach a 1.5°C target

Solution:

Model scenarios for more companies in more sectors and regions ...

SBTi Finance Tool | Reporting

Reporting to SBTi

- Example notebook for reporting and submitting targets to SBTi ([5 reporting.ipynb](#))
- Anonymized data-export – no need to disclose holdings

Calculation settings:

```
Aggregation method: WATS
Default score: 3.20
```

Portfolio coverage is 35.45%

Portfolio Temperature scores:

Timeframe	Scope	Temp score
mid	S1S2	2.63
mid	S1S2S3	2.88

Percentage of score based on default:

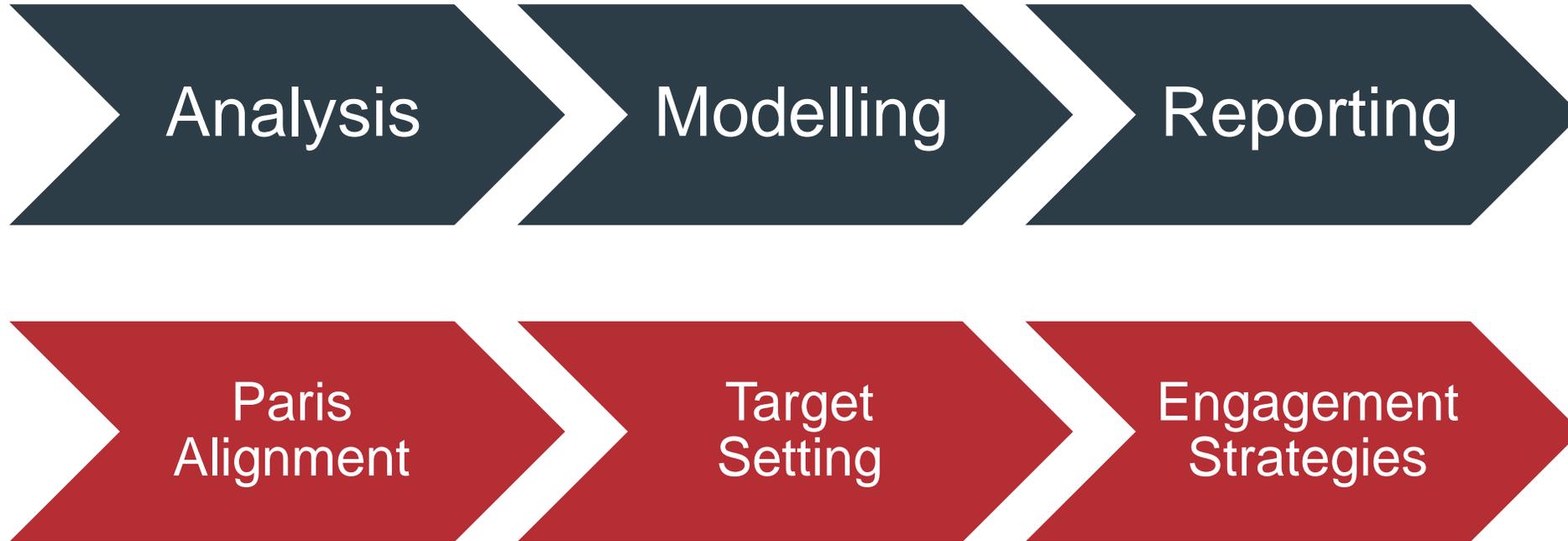
Timeframe	Scope	% Default score
mid	S1S2	66.36
mid	S1S2S3	78.02

Temperature scores per sector:

	Temp score
mid - S1S2	
Communication Services	3.20
Consumer Discretionary	2.44
Consumer Staples	3.20
Energy	3.20
Financials	3.20
Health Care	2.70
Industrials	2.36
Information Technology	1.32
Materials	3.20
Real Estate	3.28
Utilities	2.58

	Temp score
mid - S1S2S3	
Communication Services	3.20
Consumer Discretionary	3.08
Consumer Staples	3.20
Energy	3.20
Financials	3.11
Health Care	3.05
Industrials	2.72
Information Technology	2.15
Materials	3.20
Real Estate	3.21
Utilities	2.73

SBTi Finance Tool | Solution



Next Step



DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

SBTi Finance Tool | Where do we start? - Data, Tools & Services

Company	Solution(s)
CDP	Provides cleaned input data collected via its annual disclosure system, centered on GHG emissions & target data. CDP can also provide completed temperature ratings for all disclosing companies.
Bloomberg	Has developed a temperature rating/alignment tool with the ability to call in a portfolio directly and link input data seamlessly for calculation of temperature scores at company and portfolio level.
ISS ESG	Provides data needed to run the open source tool. The SBTi temperature analysis can be used to complement ISS ESG's scenario alignment, fully automatic on portfolio level & integrated into the ISS ESG climate impact reports. Further tool integration into existing products is being explored.
MSCI	MSCI collects and provides data to institutional investors that could be used as input data for the SBTi's new methodology and tool. MSCI is testing the tool to understand similarities & differences between MSCI's Warming Potential metric and SBTi's new temperature scoring.
Ortec Finance, OS-Climate & Linux Fnd	Ortec provides temperature scoring analysis of portfolios & companies as a service for asset managers. OS-Climate Platform-building with Allianz, Amazon, Microsoft, Ortec Finance, and S&P to enhance the tool via open source development with input from SBTi, SASB, & Ceres.
Trucost part of S&P Global	Data from Trucost and S&P Global can be used by the SBTi-Finance tool. Deeper integration is being explored.
Urgentem	Urgentem will incorporate the python code (branched) as an API on one of its servers and will develop a module within its current platform (Element6) that will have company level temperature scores and portfolio and sector aggregations.
SBTi Finance	Google Colab Interactive analysis workflow example with method summary



Bloomberg



**Trucost
ESG Analysis**

S&P Global

URGENTEM



Q&A

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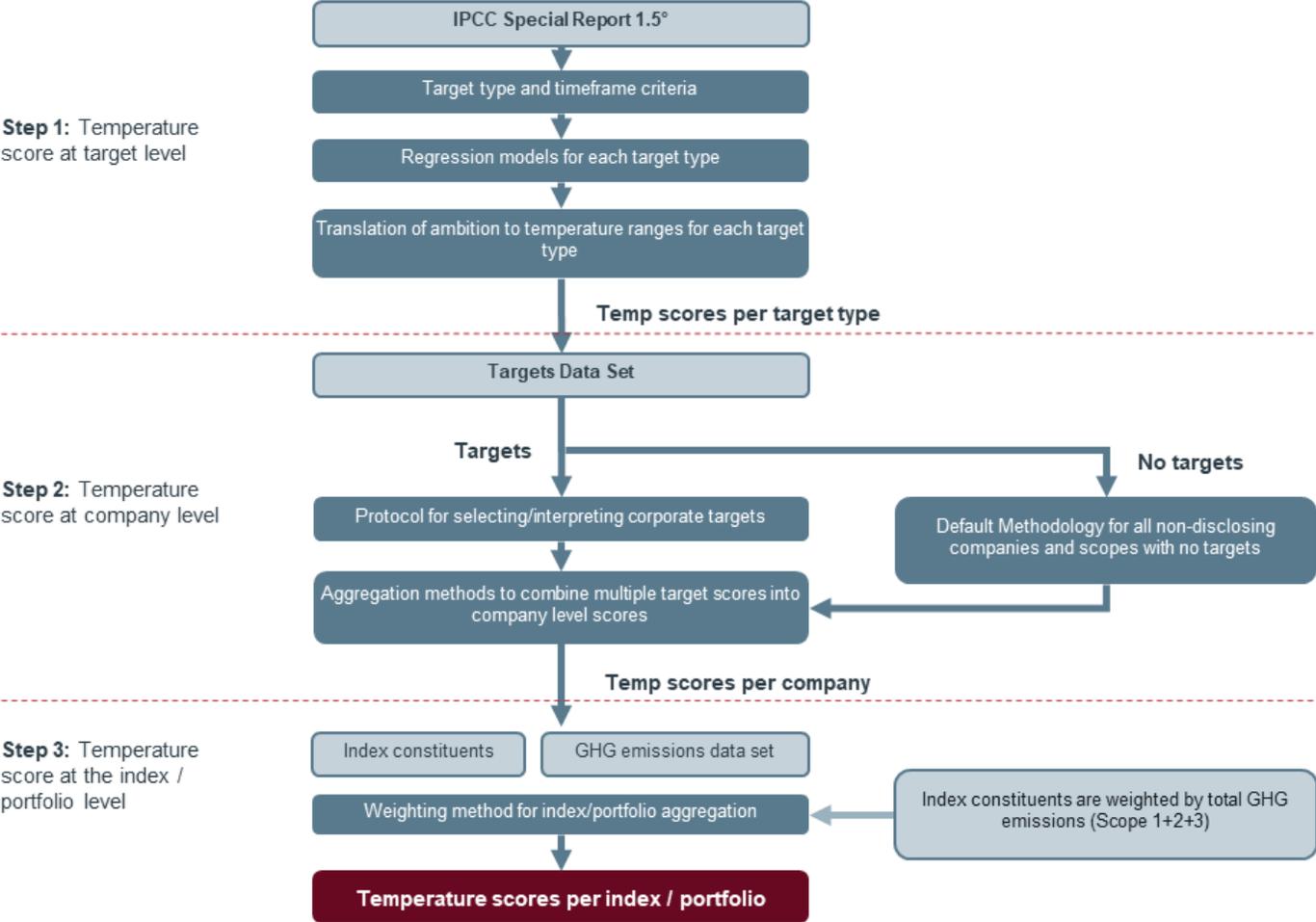
www.sciencebasedtargets.org



SBTi Finance Methods | Temperature Rating

Temperature scoring process

1. The protocol for interpreting corporate targets is applied to a cleaned target data.
2. Target scores are aggregated to produce company level scores for scopes and timeframes
3. Company scores are weighted and aggregated to produce portfolio level scores



SBTi Finance Tool | What data do we need?

- Portfolio
- Financials + Emissions
- Emissions Reduction Targets
- +4,000 publicly disclosed targets
- +520 SBTi approved target

	A	B	C	D	E	F
1	company_name	company_id	company_isin	weights	investment_value	engagement_target
2	Advanced Micro Devices	US0079031078	US0079031078	6.36%	35000000	true
3	Adobe Systems Inc.	US00724F1012	US00724F1012	1.82%	10000000	
4	Capgemini Group	FR0000125338	FR0000125338	1.82%	10000000	
5	Cisco Systems	US17275R1023	US17275R1023	1.82%	10000000	
6	Coca-Cola HBC AG	CH0198251305	CH0198251305	1.82%	10000000	
7	CVS Health	US1266501006	US1266501006	1.82%	10000000	
8	Danone	FR0000120644	FR0000120644	1.82%	10000000	
9	Dell Technologies	US24703L1035	US24703L1035	1.82%	10000000	
10	Delta Electronics	TW0003308804	TW0003308804	1.82%	10000000	

	A	I	J	K	L	M	N	O	P	Q
1	company_name	industry_level_4	sector	ghg_s1s2	ghg_s3	company	company_m	company_enterprise_value	company_total_assets	company_cash_e
2	Advanced Micro Devices, Inc		Industrials	24965246,13	66591747,47	20248547997	10464805624	20370723453	814618,2057	4528467715
3	Adobe Systems Inc.		Utilities	1288468,92	1739806,666	276185899,6	170431377	348843699,9	27314,64803	69006941
4	Capgemini Group		Consumer Discretionary	230191,469	1285703,571	10283015132	3087133686	4800604057	343642,4737	1163119848
5	Cisco Systems, Inc.		Industrials	178705,0618	476673,9446	1860376238	1395966781	1849921444	159262,6094	117630751,5
6	Coca-Cola HBC AG		Industrials	97771,83581	260794,4407	31781332590	20377644508	34890123636	43112605,78	28933197273
7	CVS Health		Health Care	466041,1002	1094183,453	22080444056	89487875452	1,42816E+11	12916972,79	51876930016

	A	C	D	E	F	G	H	I	J	K	L	M	N
1	company_name	target_type	intensity_metric	scope	coverage_s1	coverage_s2	coverage_s3	reduction_ambition	base_year	end_year	start_year	base_year_ghg_s1	base_year_ghg_s2
2	Advanced Micro De	Absolute		S1+S2	1	1		0,3	2018	2025		11000	1200
3	Adobe Systems Inc	Intensity	Revenue	S2		1		0,4	2015	2030	2019	1558	13333
4	Capgemini Group	Intensity	Revenue	S3			0,6	0,15	2018	2050	2018	1209218,586	2110267,414
5	Cisco Systems, Inc.	Intensity	Revenue	S1+S2+S3	0,95	0,95	0,5	0,91	2018	2035	2020	184098,8183	80204,18168
6	Coca-Cola HBC AG	Intensity	Revenue	S1+S2+S3	1	1	0,7	0,93	2015	2025	2016	27727,46028	236575,5397
7	CVS Health	Intensity	Revenue	S1+S2	1	1		0,76	2015	2025	2015	0	0
8	Danone	Absolute		S3			0,8	0,21	2015	2030	2015	545004,528	1094846,472
9	Dell Technologies	Intensity	Revenue	S1+S2	1	1		0,6	2015	2020	2015	814592,7738	825258,2262
10	Delta Electronics	Intensity	Revenue	S1+S2	1	1		0,47	2015	2020	2015	37200,15376	10506,84624

SBTi Finance Methods | Temperature Rating

Target Level of Ambition:

Separate targets for S1+2 and S1+2+3

- Scope 1+2: minimum well-below 2°C scenario
- Scope 1+2+3: minimum 2°C scenario by 2040

Example:

- FI starting with scope 1+2 portfolio temperature score of 2.9°C in 2020 → need to reduce its portfolio temperature by at least 0.0575°C per year
 $([2.9^{\circ}\text{C} - 1.75^{\circ}\text{C}]/[2040 - 2020]) = 0.0575^{\circ}\text{C}$
- and reach at least 2.61°C portfolio temperature score by 2025.

Amundi example

- The first step: Identify target and GHG emission data for all portfolio companies. This was done by using data disclosed to CDP as part of its 2019 disclosure process.
- When including both approved science-based targets and targets disclosed through CDP, between 35 and 65 percent of funds contained no targets.
- This meant that the default scoring approach used to assign temperatures to companies with no valid public targets did have a significant influence on the results.

Fund Name	S1+2 score	S1+2+3 score
CPR Invest – Climate Action	2.3°C	2.7°C
CPR Invest – Food for Generations	2.6°C	2.6°C
Amundi Global Ecology	2.6°C	2.6°C
Amundi Global Equity Sustainable Income	2.6°C	2.7°C

SBTi Finance Tool | Temperature Score Calculation

1) Convert individual targets → Target Temperature Scores

- Target validation protocol – minimum quality criteria
- Regression models of estimated warming in 2100 from IPCC scenarios

2) Aggregate targets to company level scores

- Default score for no valid targets
- Weighted based on reported emissions
- → Company Temperature Scores

	Short-term 2021-2024	Mid-term 2025-2035	Long-term 2035-2050
Scope 1+2	Temp score	Temp score	Temp score
Scope 3	Temp score	Temp score	Temp score

3) Aggregate to portfolio, sector, market level Temperature Scores

- 7 aggregation methods: Weighted average TS, Total emissions weighted TS, market owned emissions weighted TS, total assets emissions weighted TS...
- Portfolio TS per scope & per time frame
- Portfolio coverage: companies that have SBTi-approved targets

4) What-if analysis

- 6 engagement scenarios – model effect on TS of companies setting targets
- → Design engagement strategy