Carbon footprinting:
Your company’s climate readiness starts here

26th of June 2025

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Anna Jeżewska

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Sustainability expert with 5 years of experience in supporting private sector companies across Europe with organizational carbon footprinting, decarbonization strategy and ESG reporting.

Experience and education:

- Manager at Civitta, Warsaw (2024-present)
- Senior Associate at the Carbon Trust, London (2021-2023)
- MPhil in Economics, University of Cambridge
- BSc in Mathematical Sciences, New Jersey Institute of Technology

Selected project experience:

- CSRD reporting compliance projects including double materiality, carbon footprint and EU Taxonomy assessments
- Organizational carbon footprinting and verification, decarbonization strategy for manufacturing and service companies (GHG Protocol)
- Portfolio emissions assessments for financial institutions (PCAF)
- In total, ~35 carbon footprint projects delivered across construction, transportation, manufacturing, tech, agri and financial industries

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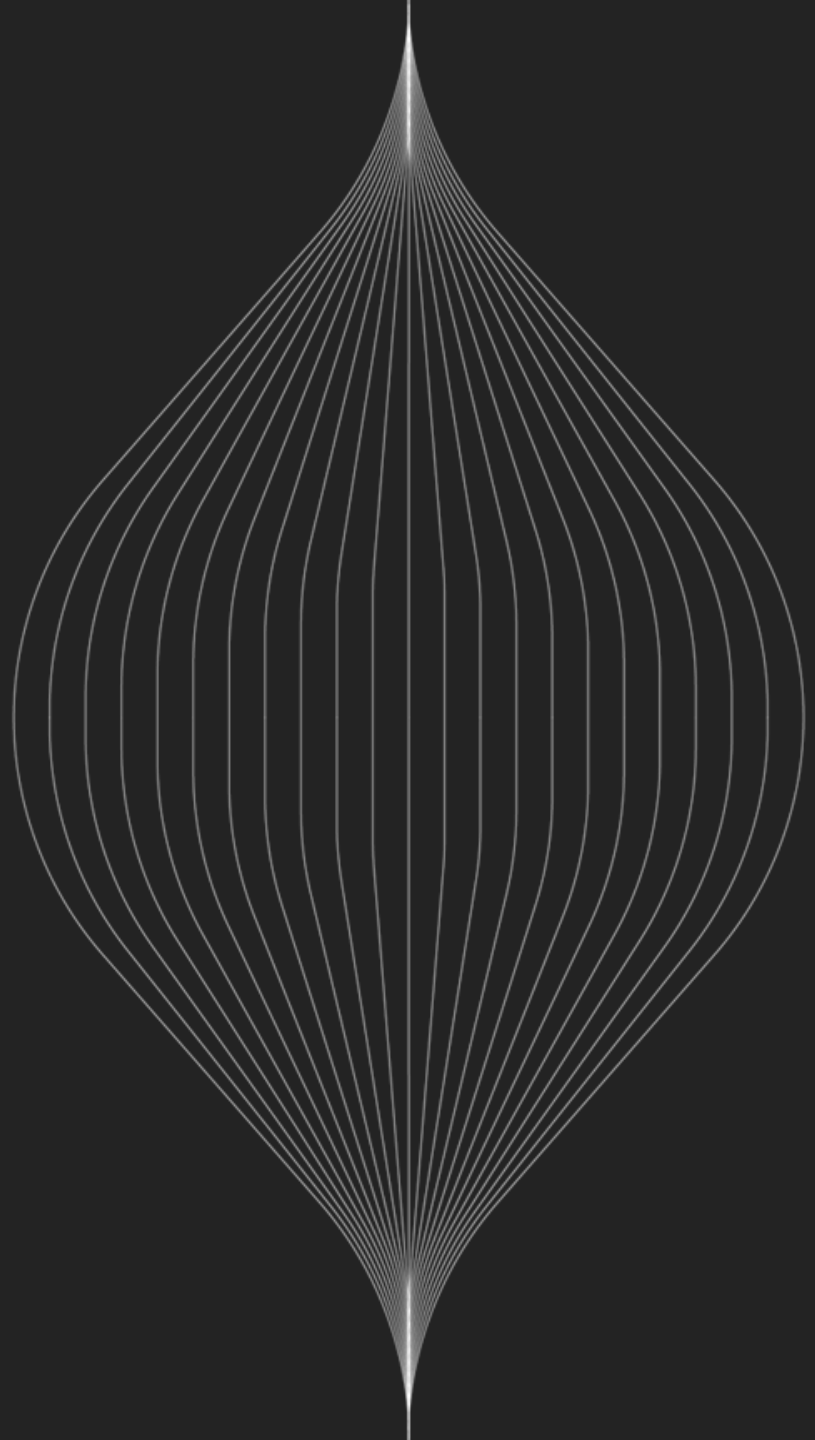
Agenda

1. Who we are
2. Introduction to carbon footprinting
3. Going beyond the footprint
4. Drivers of climate action & its benefits



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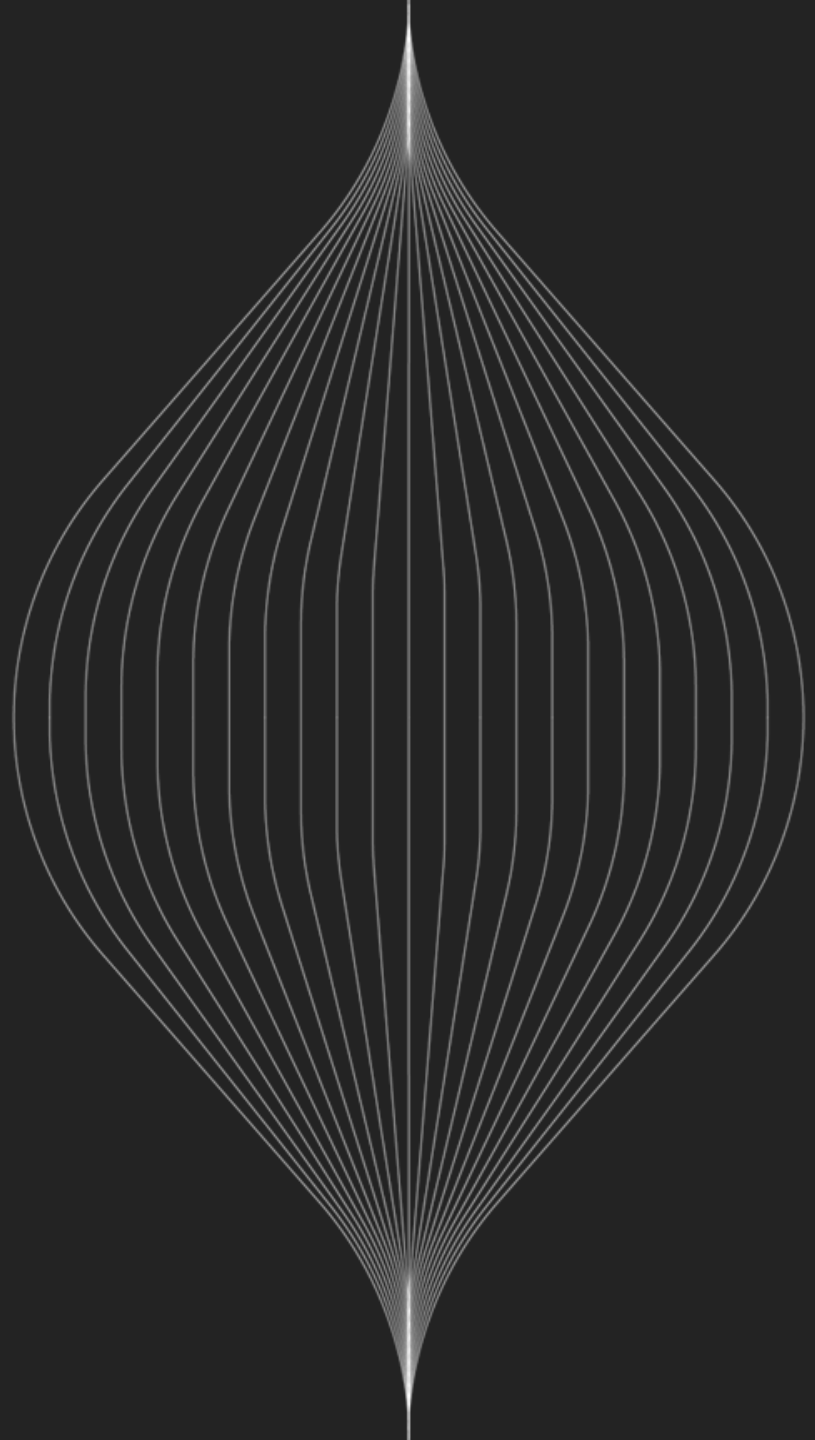

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Civitta is an inclusive and collaborative advisory and digital services firm, with its sustainability team expanding the competences of the private sector advisory team

Advisory

Digital

- Private sector
- Public sector
- Innovation / funding

Sustainability

21
Countries

30+
Offices

750+
Employees

We have a strong sustainability team presence in the Baltics and in Poland, and an extensive network of experts and partners outside these geographies

We support companies in all stages of their sustainability transformation

Environmental analysis

- Carbon footprint assessment
- Life cycle assessment
- Avoided impact assessment

ESG analytics & strategy

- Green audits
- Double-materiality assessment
- ESG strategies and policies
- ESG due diligence
- Climate proofing analysis and DNSH assessment
- Diversity and equality audits & strategies

Compliance & reporting

- Regulatory compliance (SFDR, CSRD, EU Taxonomy)
- Sustainability reporting
- Environmental product declarations (EPDs)

Our Sustainability Advisory team is a trusted partner for companies across a broad range of industries

Non-exhaustive

Manufacturing

OÜ W-GLASS SAFETY GLASS, RAGN-SELLS, bagfactory, ETS NORD, ecoprint, sba, CSUB, ECOBIRCH, orkos

Materials

Voller, Akmenės CEMENTAS, CIRCALGAE, Primostar, Plaat Detail, neular, fibenol

Forestry, agriculture & food

IDAVANG, Balticovo, eAgronom, Agrone, RĪGAS MEŽI, PIENO ŽVAIGŽDĖS, maheklaster

Logistics & transport

HR FASTEST WAY, omniva, NORDIC AVIATION GROUP, Xfly, nordica, Tallinn Airport, LIETUVOS PAŠTAS

Wood processing

Warmeston, NORDWOOD, RAITWOOD, PINSKA LIIMPUIT, TAPVEI®

Public

Tallinn, KOŠICE, IVIA EXPAND YOUR BUSINESS, VÕRUMAA ARENDUSKESKUS, VÕRU VALD, TALLINNA SADAM, ZAAO

Energy and utilities

Destiny Energy Pte Ltd Sustainable Energy Solutions, ENERGIASALV, Polenergia, Roofit.Solar, bestair

Finance

LIVONIA PARTNERS, TRIND VC, LHV, specialist VC, nutshell VC

Smart infrastructure

Telema, SK ID SOLUTIONS, COMODULE, SKELE+ON TECHNOLOGIES

Technology

Surfshark, Wildix, NORD SECURITY, DIGMATIX

Other industries

AMAGNET, viru keskus, EKSPRESS GRUPP, EIKA, PÕLVA HAIGLA, acento kestlikud sündmused, EESTI KUNSTIMUUSEUM KUMU, ENVISION ASSOCIATES

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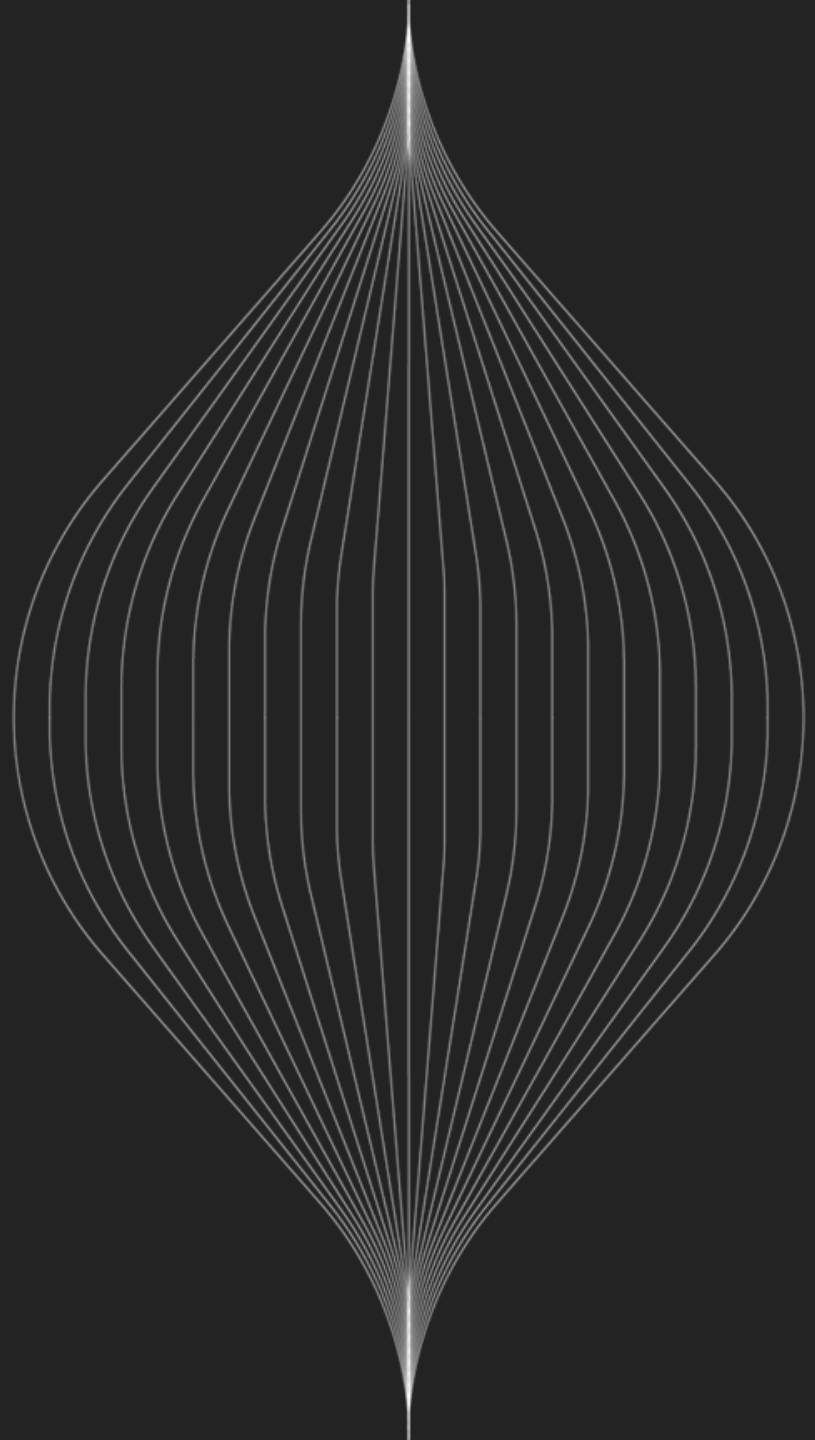

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Source: Daily Mail

CNN Climate Solutions Weather — Watch Listen Live TV Sign in

Heat waves are getting more dangerous with climate change — and we may still be underestimating them

UPDATED JUN 23, 2025

By Andrew Freedman

Pakistan could reach 50°C this week - as terrifying study predicts exactly how many people will DIE from climate change by 2050

MORE: 111 companies have cost the world $28 TRILLION in climate

AN CHADWICK FOR MAILONLINE

13:25 BST, 30 April 2025 | UPDATED: 14:17 BST, 30 April 2025

Millions of hectares under threat: drought could cover half of Ukraine's agricultural land by 2050

Alina Kvitko • 17:00, 22 June, 2025

Home > Heatwave > Climate change turns warm summer days in England into health threat

Climate change turns warm summer days in England into health threat

20 June, 2025

Heatwave

A high-pressure system over southern England has expanded to cover much of the UK since the start of the week beginning June 16th, bringing calm, sunny days and gradually rising temperatures.

UN warns Earth 'firmly on track toward an unlivable world'

1 of 10 | FILE - Wind turbines stand in front of the rising sun in Frankfurt, Germany, Friday, March 11, 2022. A United Nation-backed panel plans to release a highly anticipated scientific report on Monday, April 4, 2022, on international efforts to curb climate change before global temperatures reach dangerous levels. (AP Photo/Michael Probst, File) Read More

Global economy could face 50% loss in GDP between 2070 and 2090 from climate shocks, say actuaries

Exclusive: Report by risk experts says previous assessments ignored severe effects of climate crisis

A woman walks through a flooded street in Valencia, Spain. The effects of the climate crisis are likely to have a much bigger impact on economic wellbeing than previously thought, a report by actu

Global North Is Responsible for 92% of Excess Emissions

The United States and European Union bear disproportionate liability for emitting to the atmospheric commons, new research argue

By Rishika Pardikar 28 October 2020

Extreme weather now costing European agriculture €28bn a year, research finds

Climate Change

Even if GHG emissions subside by 2050, chances that long-term heating will exceed 1.5 degrees are more than 99%: AI-based study

Global ambition to limit warming to 1.5 degrees is almost certainly impossible

HEALTH AND WELLNESS

What 2050 could look like if we don't do anything about climate change: Hot, a constant cough, regular mask-wearing

Published Fri, May 14 2021-12:42 PM EDT • Updated Fri, May 14 2021-5:46 PM EDT

Catherine Clifford @IN/CATCLIFFORD/ @CATCLIFFORD

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AUDIO

Climate change could create millions of climate migrants by 2050

Droughts, floods, sea level rise, and other climate change impacts are uprooting people from their homes.

by YCC TEAM DECEMBER 26, 2024

JAPAN / SCIENCE & HEALTH

Last week's heat wave in Japan not possible without climate change, analysis shows

People cross a street under the hot sun in Tokyo on Friday. | AFP-JIJI

AGRICULTURE

Climate change threatens nearly half of agricultural output in U.S. and Europe

Fruit Today 25/06/2025

Real Estate To Suffer $0.5 Trillion Climate Hit By 2050: Report

By David Vetter, Senior Contributor. Climat...

Richest 1% account for more carbon emissions than poorest 66%, report says

'Polluter elite' are plundering the planet to point of destruction, says Oxfam after comprehensive study of climate inequality

Introduction: the great carbon divide

One in four properties at flood risk by 2050 - report

17 December 2024

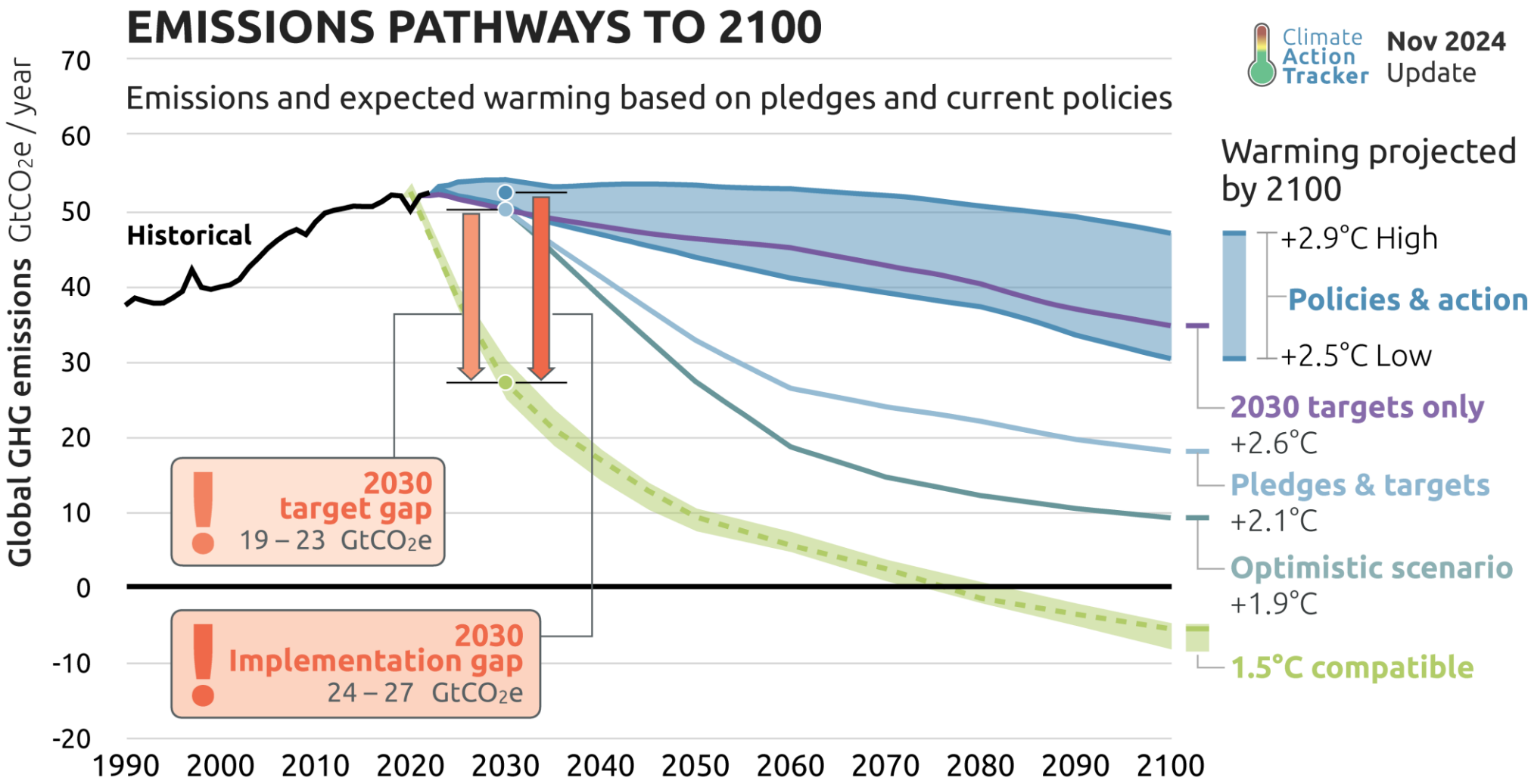
Share

Mark Poynting

Climate and environment researcher

Food investors warned of $38trn climate risks through 2050

Investors in the food and drink industry are being urged to enhance their climate risk management, given that up to $38trn in damages are expected by 2050 in a 2.5C warming scenario.


EMISSIONS PATHWAYS TO 2100
Emissions and expected warming based on pledges and current policies
Climate Action Tracker
Nov 2024 Update
Global GHG emissions GtCO2e / year
70
60
50
40
30
20
10
0
-10
-20
1990
2000
2010
2020
2030
2040
2050
2060
2070
2080
2090
2100
Historical
2030 target gap
19 – 23 GtCO2e
2030 Implementation gap
24 – 27 GtCO2e
Warming projected by 2100
+2.9°C High
Policies & action
+2.5°C Low
2030 targets only
+2.6°C
Pledges & targets
+2.1°C
Optimistic scenario
+1.9°C
1.5°C compatible

The basics: carbon footprinting for organizations is organized into 3 scopes, with scope 3 being the most complex but critical to assess

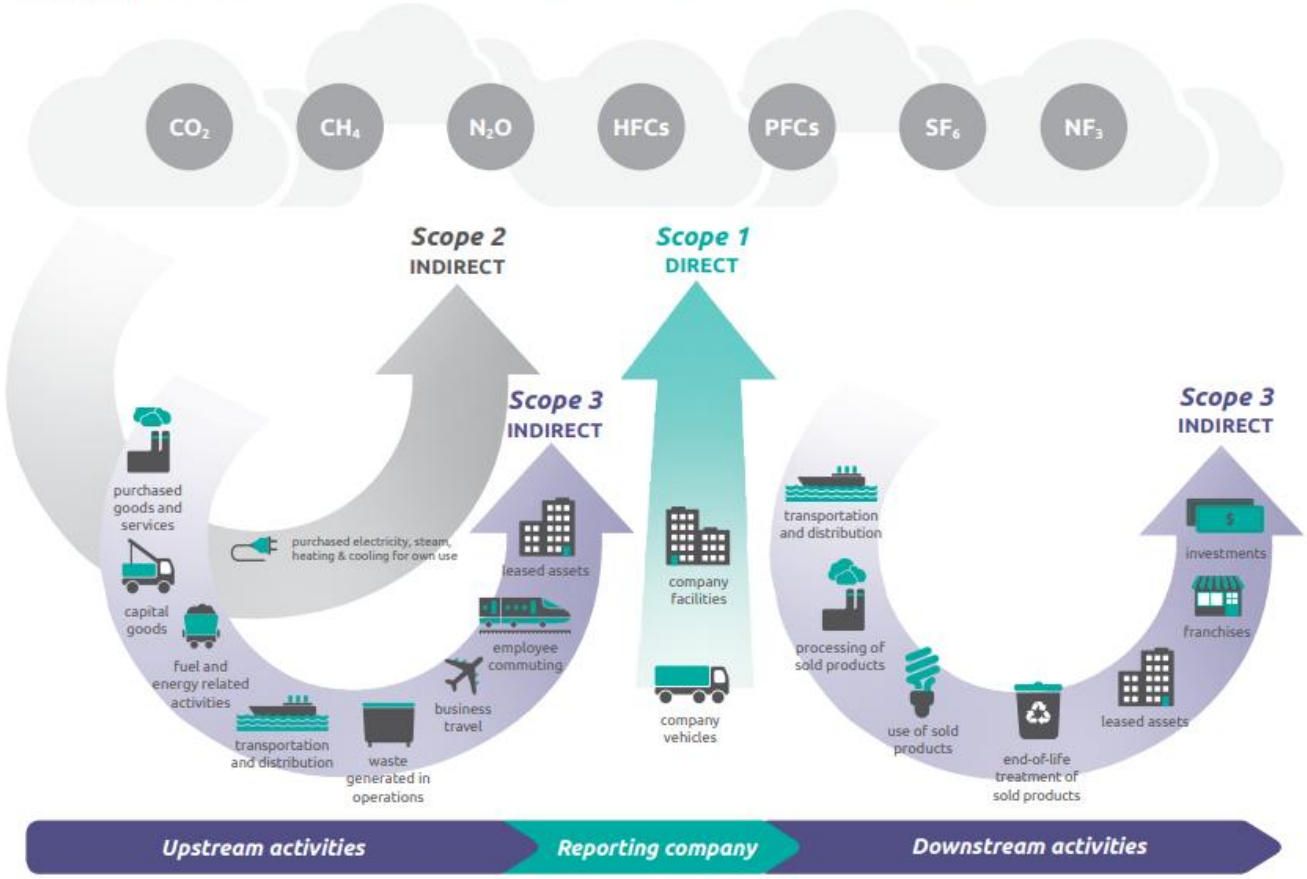
According to the methodology in the **Greenhouse Gas Protocol standards**, the impact of an organization's activities is divided into three scopes:

- **SCOPE 1** includes direct GHG emissions from sources under the company's ownership/control (e.g., use of fuels, burning of fuels in own boiler house);
- **SCOPE 2** includes indirect GHG emissions from purchased energy (electricity, heat, steam, cooling);
- **SCOPE 3** includes the remaining indirect GHG emissions that occur in the organization's value chain.

Emissions consist of all important greenhouse gases (GHG) mentioned in the Kyoto Protocol – carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PCFs), sulphur hexafluoride (SF_6) and nitrogen trifluoride (NF_3).

Total emissions are typically presented in **metric tonnes of CO_2 equivalent (tCO_2e)** by considering each gas's global warming potential.

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



Source: GHG Protocol Technical Guidance for Calculating Scope 3 Emissions

A range of different data are needed to cover relevant business activities across all 3 scopes and develop a comprehensive footprint

01

Scope 1

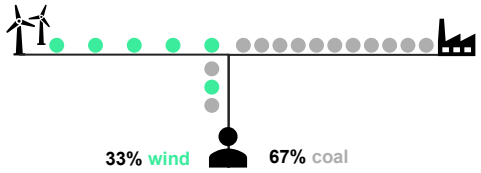
- Combustion of fuels in stationary (e.g. boiler) or mobile (e.g. vehicle) sources
- Emissions from physical or chemical processing
- Emissions from unintentional leaks, e.g., from refrigerants used in refrigeration and air conditioning equipment

02

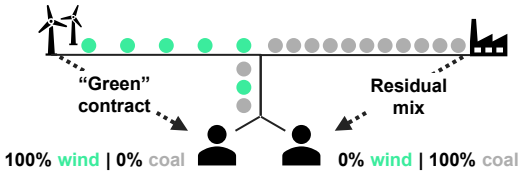
Scope 2

- Purchased electricity, heat, steam, cooling

Location-based approach



Market-based approach



03

Scope 3 (non-exhaustive)

PGS & capital goods

- Raw materials, e.g., steel, wood
- Water
- Office supplies
- IT equipment
- Manufacturing equipment
- Services, e.g., data centres, marketing, etc.

Transportation and distribution

- Fuel used / tkm travelled by logistics providers, modes of transport

Business travel

- Distance travelled by modes of transport
- Hotel stays, geography

Use of sold products

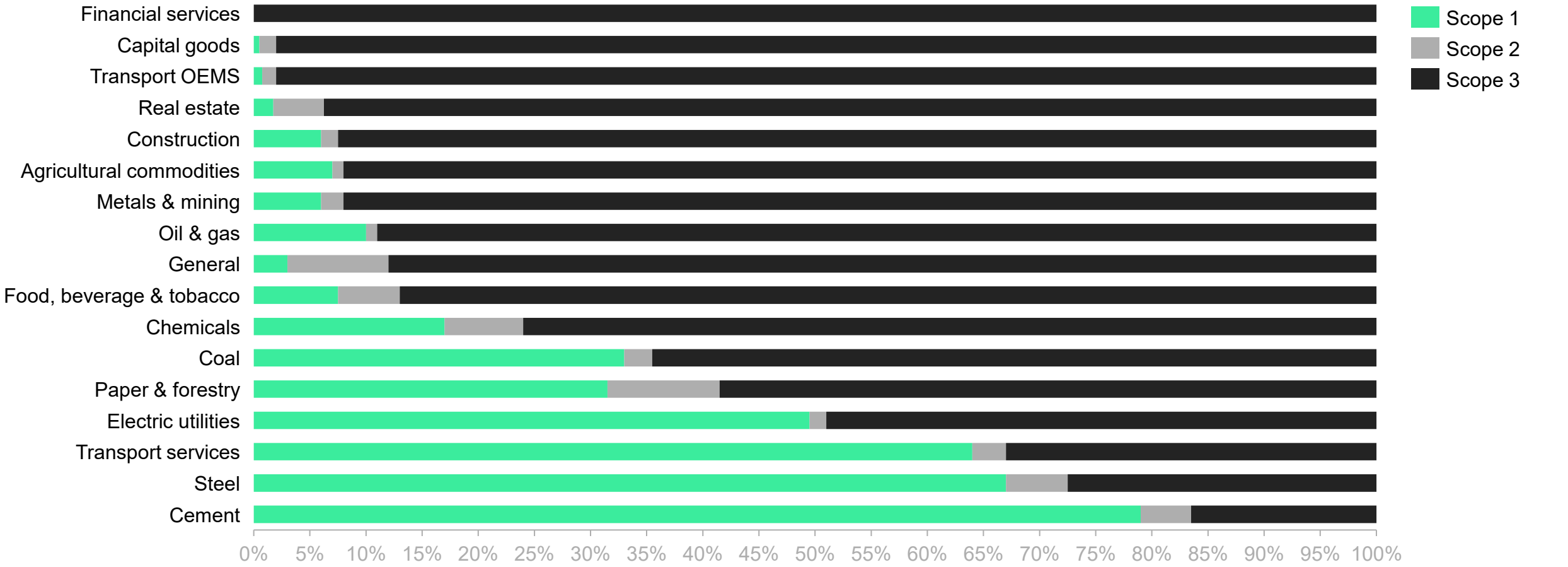
- Energy use + direct GHG emissions of products, estimated lifespan, geography

EOL treatment of sold products

- Product composition, treatment type, geography

CDP data provides a view of typical emissions hotspots in each sector, signposting the areas where companies should focus their mitigation actions

Scope 3 emissions are a large % of total emissions across most sectors and show the imperative to engage in value chain decarbonization

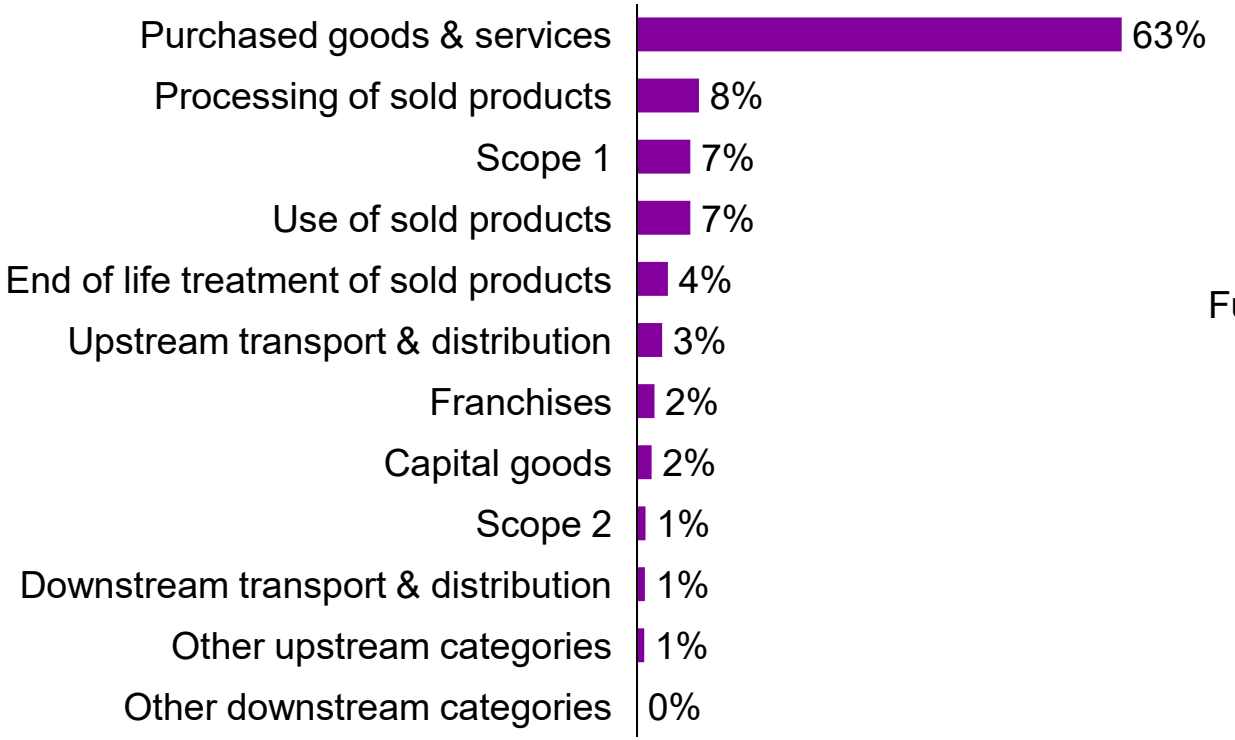


Source: CDP Technical Note: Relevance of Scope 3 Categories by Sector

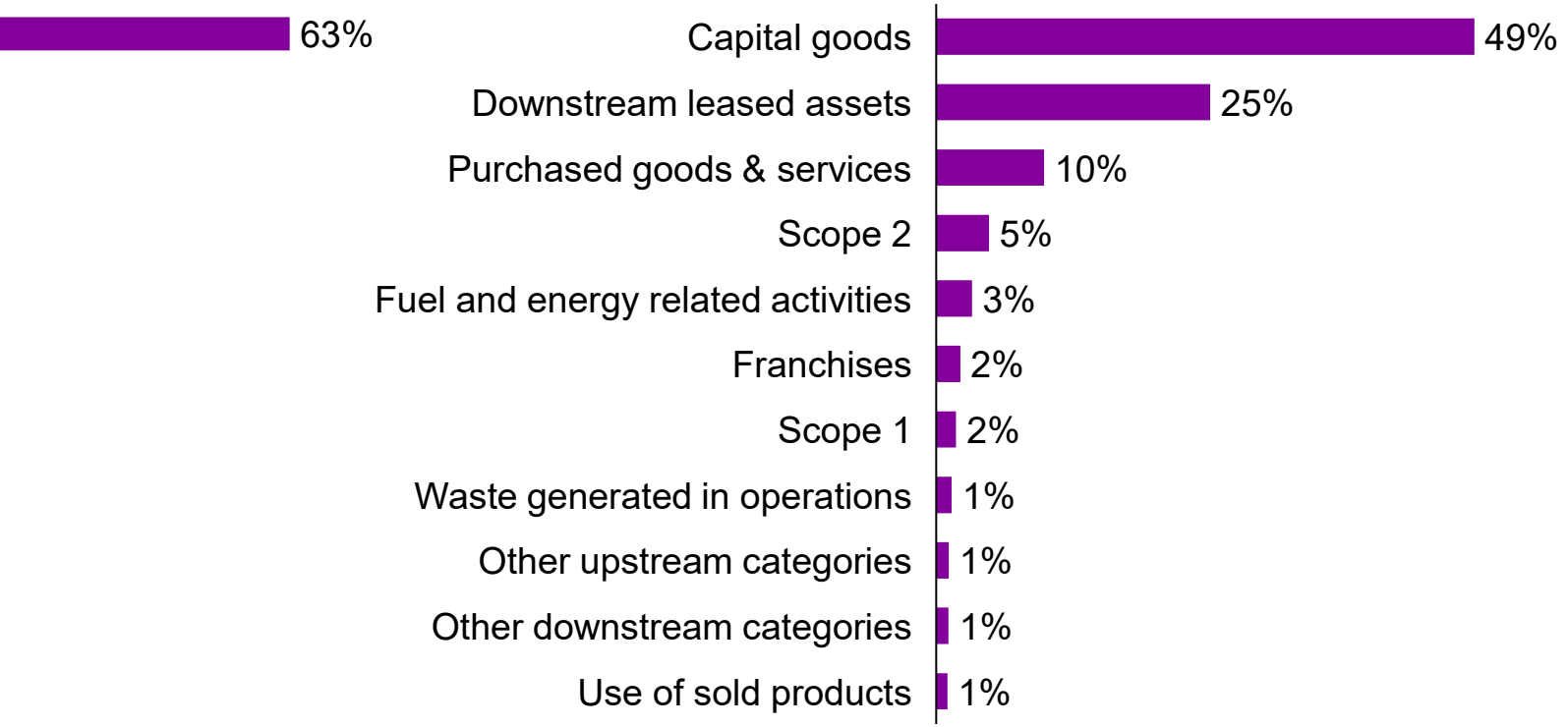
The most significant scope 3 categories vary by sector and provide a mapping of the carbon intensity of different elements in a company's value chain

GHG Emissions Categories as % of Total Scope 1-3 Emissions

Agricultural Commodities Sector



Real Estate Sector



Source: CDP Technical Note: Relevance of Scope 3 Categories by Sector

Your company's carbon footprint is **your compass for climate action** – real world examples

Unified communications solution provider

What did the carbon footprint reveal?

The company discovered that the embodied emissions and use of their sold products (phones and headsets) formed a significant share of their total emissions.

What action did they take?

They began engaging their contract manufacturer to understand the potential of energy efficiency and eco-design improvements.

Supplier engagement to reduce scope 3 emissions.

Cybersecurity solutions provider

What did the carbon footprint reveal?

First analysis revealed that marketing services were a major emissions source, estimated using a spend-based approach.

What action did they take?

The company collaborated directly with marketing agencies and influencers to collect primary data, enabling a shift from spend-based to activity-based emissions accounting, resulting in a lower footprint.

Supplier engagement to improve footprint accuracy and guide future efforts.

Heat pumps reseller

What did the carbon footprint reveal?

The company found that a significant portion of its emissions came from clients' use of heat pumps.

What action did they take?

They developed an ESG strategy focused on transitioning their product portfolio toward highly energy-efficient, low-GWP refrigerant heat pumps.

ESG strategy based on hard data shows commitment to business transformation.

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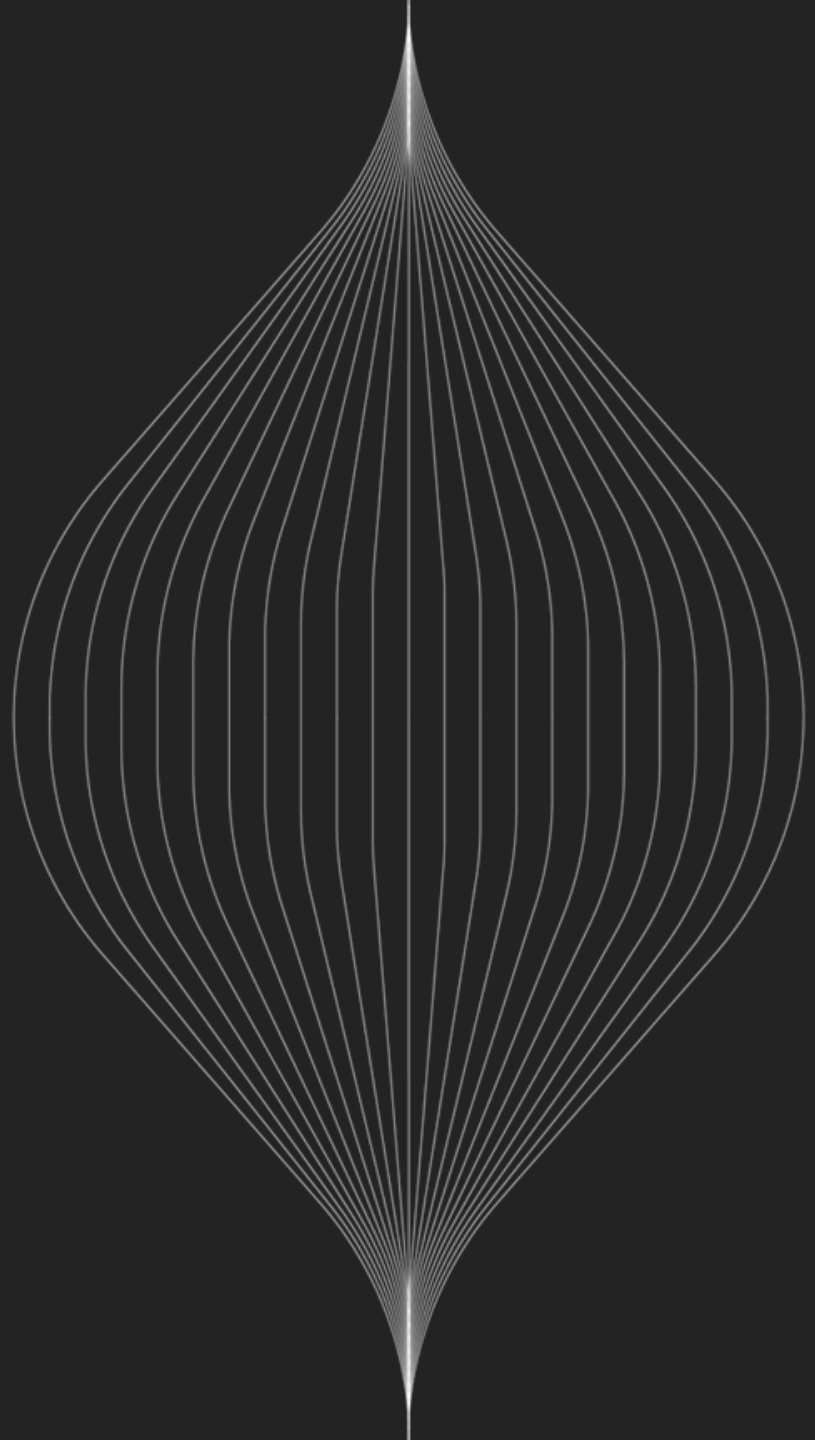

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Organizational
carbon
footprint

Science-based targets

Science-based targets show businesses how much and how quickly they need to reduce their GHG emissions to prevent the worst effects of climate change

What is a science-based target (SBT)?

- Based on climate science - aligned to the rate of decarbonization required to limit global temperature rise to 1.5°C
- Based on a **company's unique GHG emissions inventory** and modeled to reflect the company's selected base year and target year
- Companies can set near-term targets (5-10 years) or set a net-zero target for the long term (2050 latest)

Target requirements and methods

		Boundary	Ambition
Near-term	S1&2	95%	1.5°C
	S3	67%*	< 2°C
Long-term	S1&2	95%	1.5°C
	S3	90%	

* required if >40% of total emissions

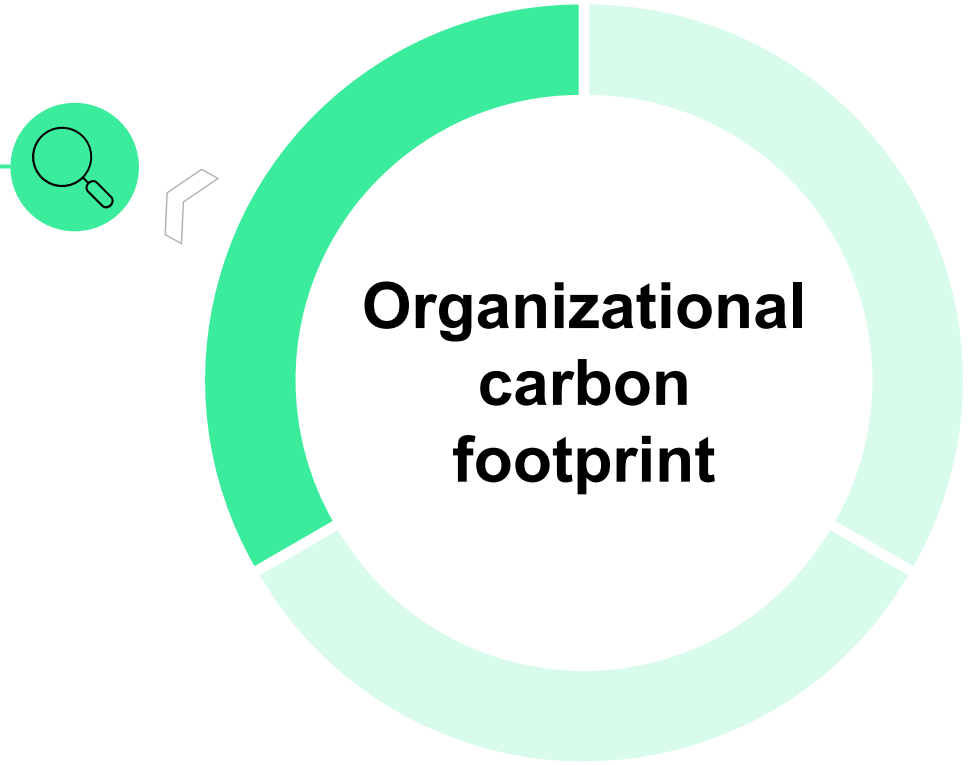
- Absolute reduction (S1+2+3)
- Sector-specific intensity convergence (S1+2+3)
- Physical intensity reduction (S3)
- Economic intensity reduction (S3)
- Supplier engagement targets (S3)

Key decarbonization levers

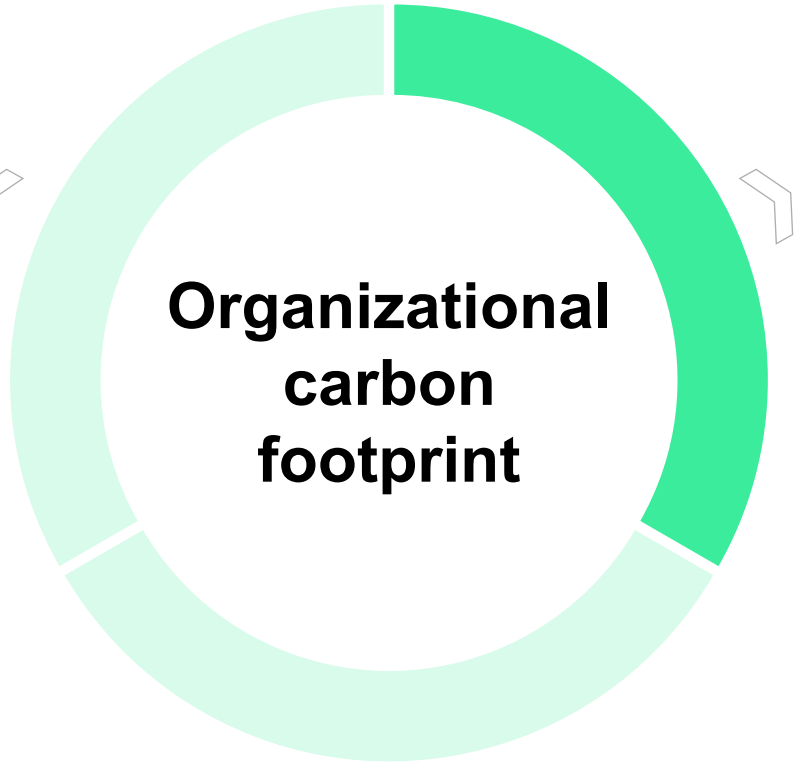
1. Electrification & transition to renewable energy
2. Energy efficiency improvements
3. Value chain engagement, low-carbon procurement standards
4. Product and business model innovation
5. Supply chain and logistics optimization
6. Neutralization of residual emissions (<10%) through carbon removals

Source: Science Based Targets initiative

Science-based targets

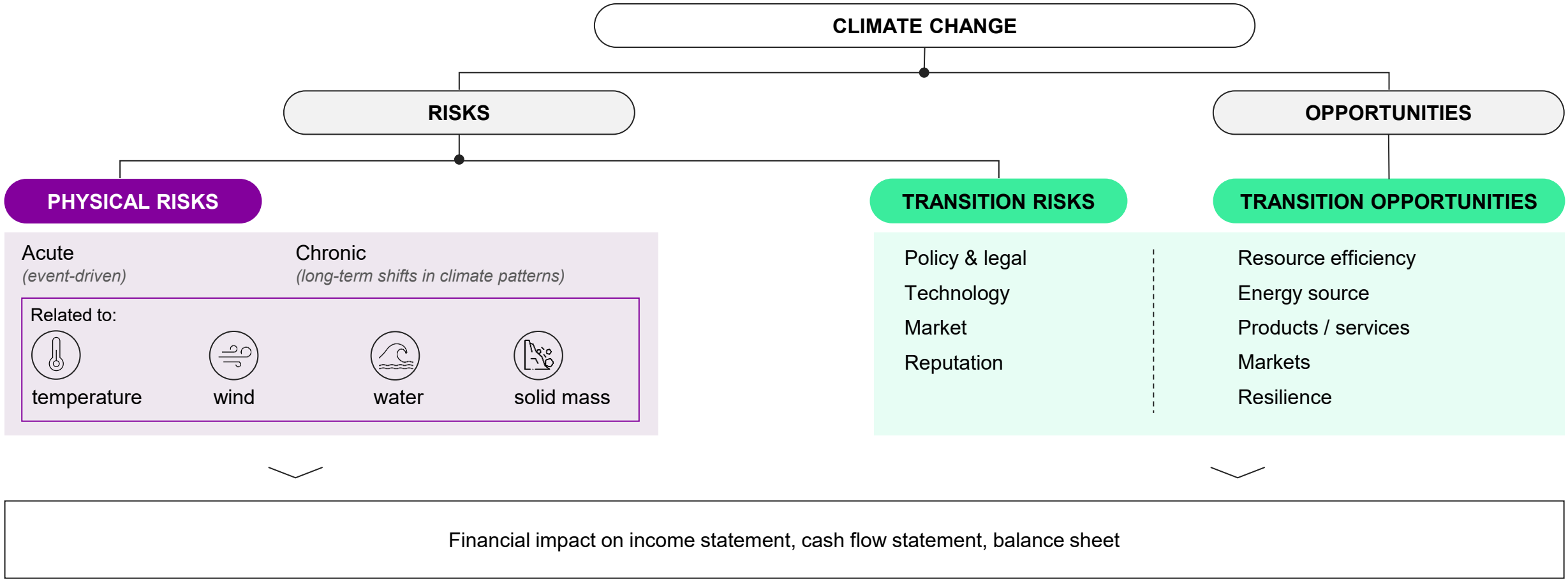


Science-based targets



Climate risk & opportunity assessment

Climate change risk and opportunity assessments aim to uncover the financial impacts, positive and negative, on businesses

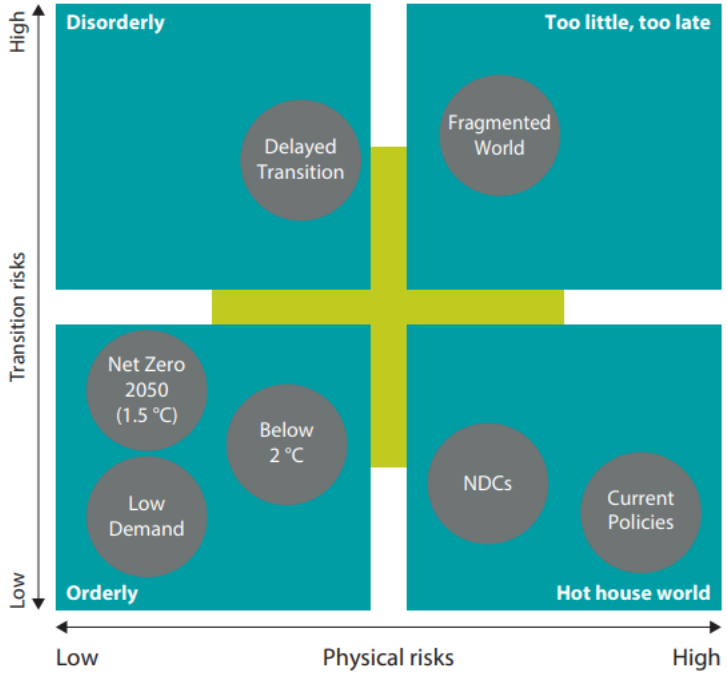


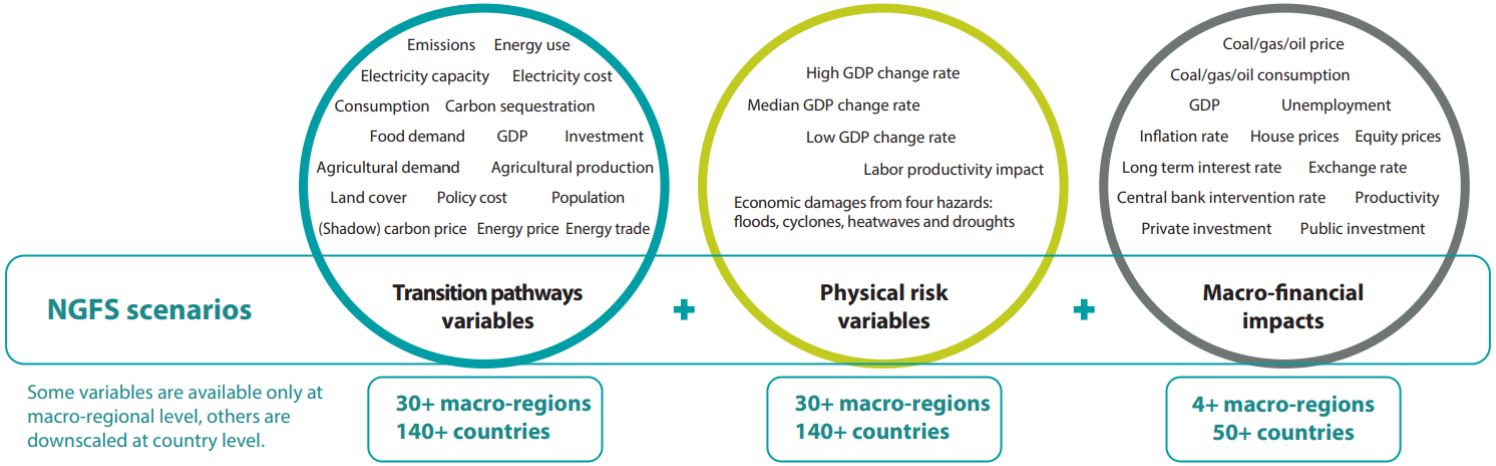
Source: TCFD

The analysis considers the implications of different warming scenarios on direct business operations and the value chain

Key steps for climate risk and opportunity assessment

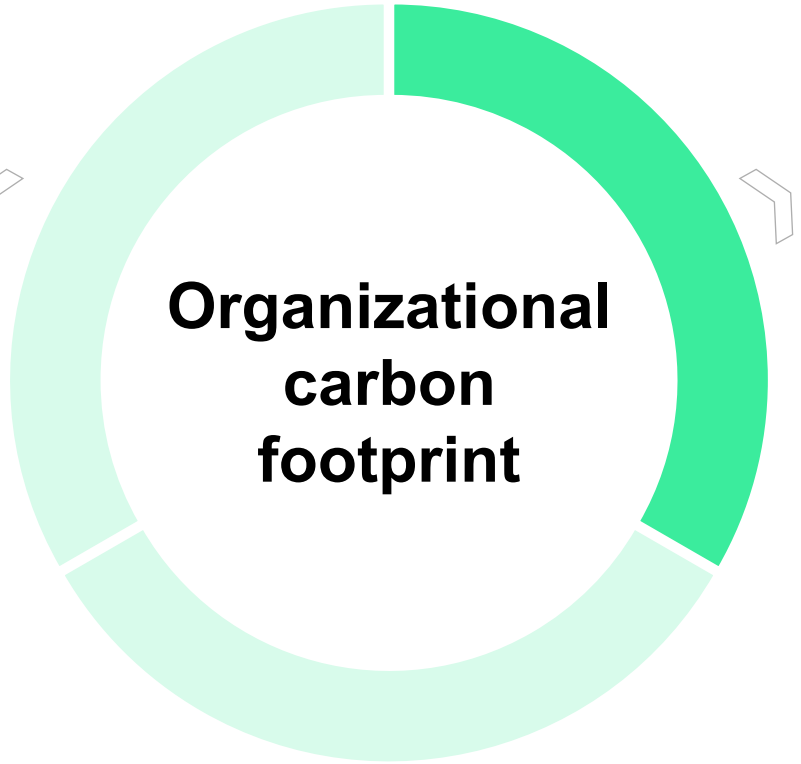
1. Operations and value chain (VC) mapping
2. Identification of risks and opportunities per TCFD category and VC stage
3. Scenario analysis to stress test and quantify R&Os
4. Develop actions to mitigate risks / harness opportunities
5. Set targets and track progress with metrics





Source: NGFS long term scenarios for central banks and supervisors

Science-based targets



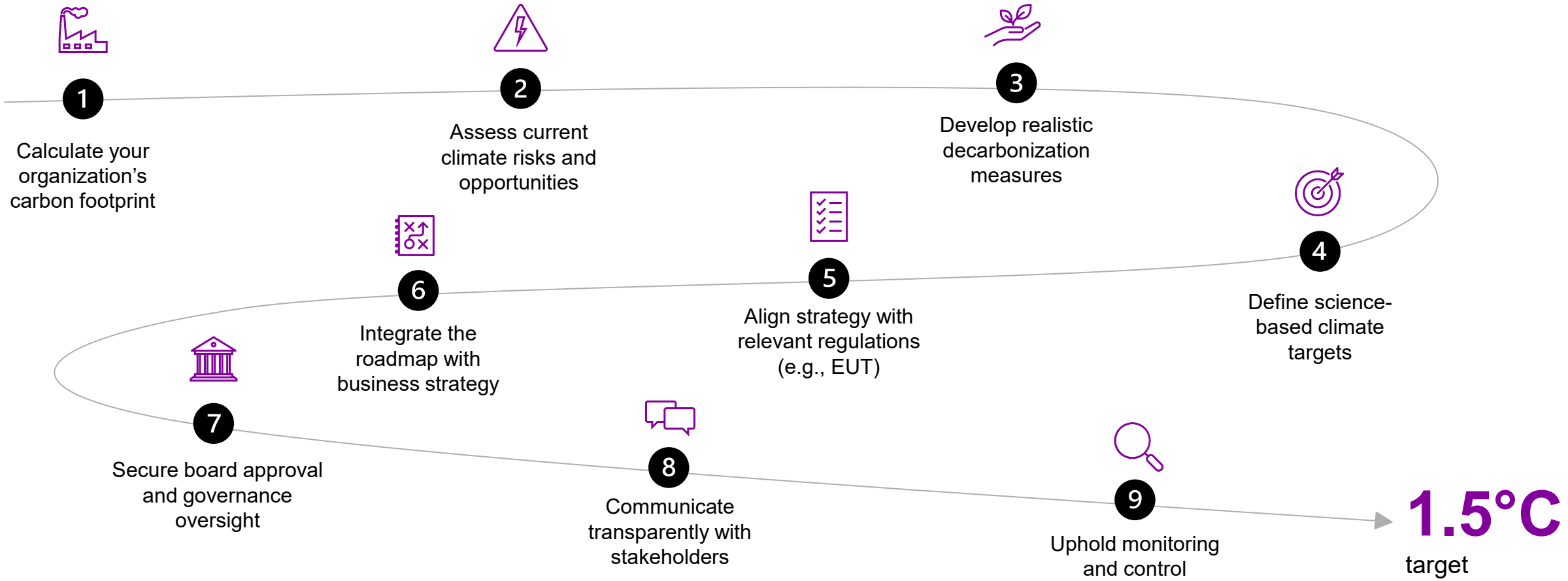
Climate risk & opportunity assessment

Science-based targets

Climate risk & opportunity assessment

Climate transition plan

A climate transition plan is a strategic roadmap outlining how an organization intends to reduce emissions and align with the Paris Agreement's 1.5°C target



Source: CDP - *The State of Play: 2023 Climate Transition Plan Disclosure;* SWEEP - *Climate transition plans under the CSRD*

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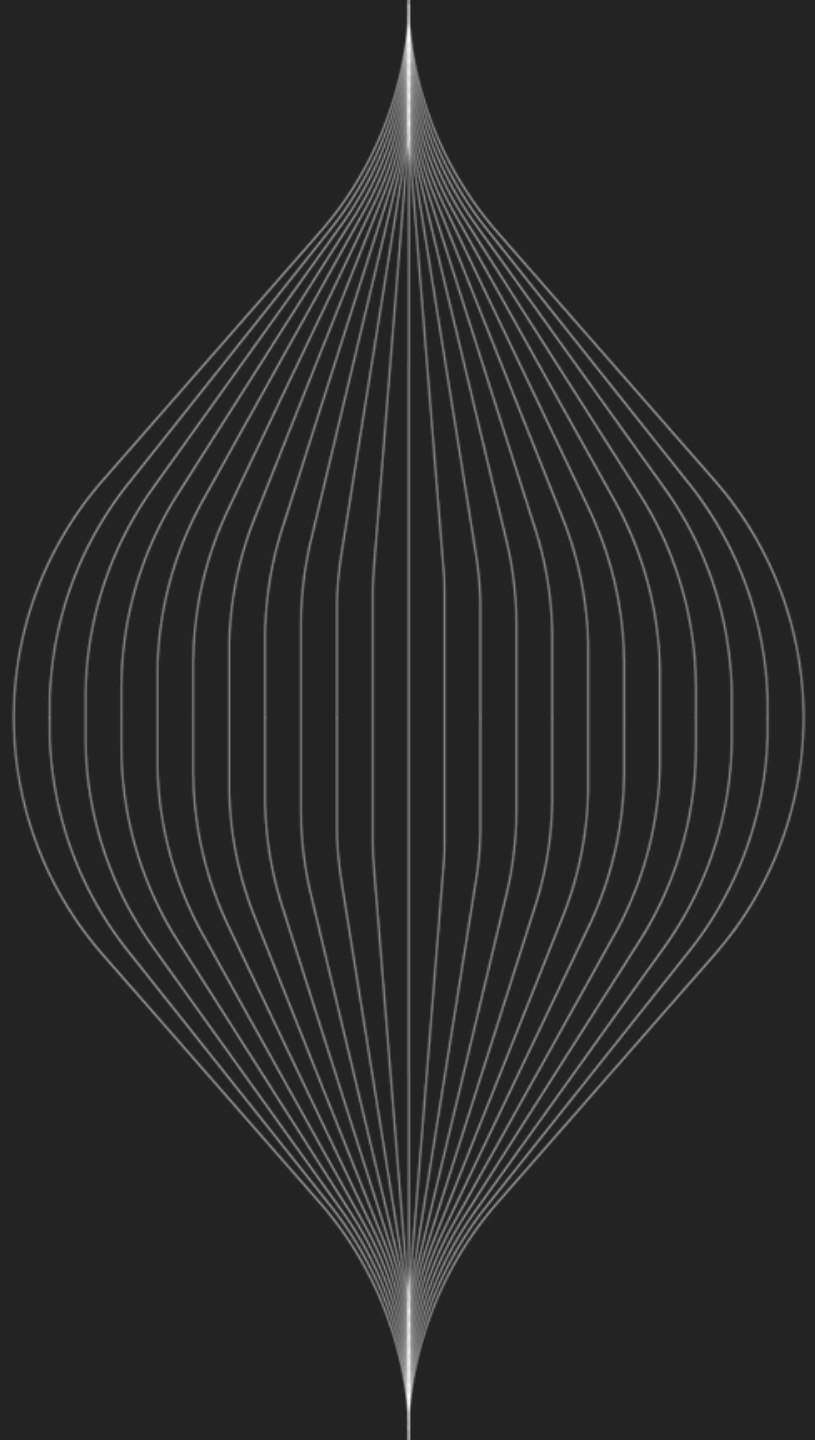

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Companies are adopting sustainability measures due to regulation, but also due to changing expectations from consumers, business partners and investors

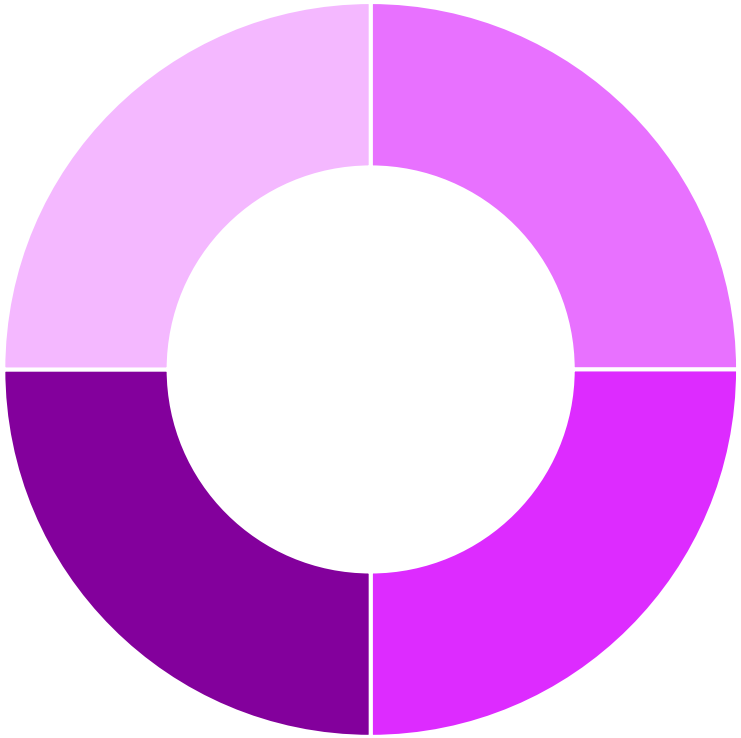
New ESG regulations have come into force and more are planned

01

- The EU Green Deal regulations package
- CSDDD[1], ESPR[2], PPWR[3] as well as sector-specific and national legislations

▼

Non-compliance risk



Consumers are looking for sustainable products and services

02

- Changing consumer expectations and habits – growing demand for sustainable products
- Bigger openness to product-as-a-service models such as resale, repair, reuse, rent

▼

Reduced demand, reputational risk

Companies are imposing ESG requirements on their business partners

04

- Increasing scrutiny of the value chain, including environmental and social audits
- ESG factors included in tenders and contracts

▼

Contract termination, operational risk

Banks and investors favor funding sustainable projects

03

- Banks and investors include strict ESG criteria in their investment decisions
- Green projects benefit from more favorable financing terms

▼

Capital risk

[1]Corporate Sustainability Due Diligence Directive, [2]Ecodesign for Sustainable Products Regulation, [3]Packaging and Packaging Waste Directive

The ECB's Bank Lending Survey of July 2024 showed that climate risks were increasingly considered in lending conditions

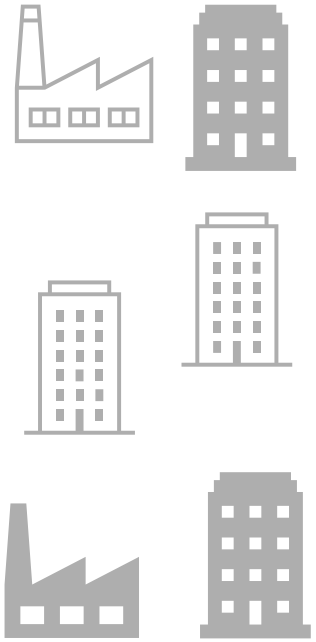
ECB

Supervisory expectations on climate-related and environmental risks, transition plans

EU Banks

Assessing ESG risk exposure, financed emissions

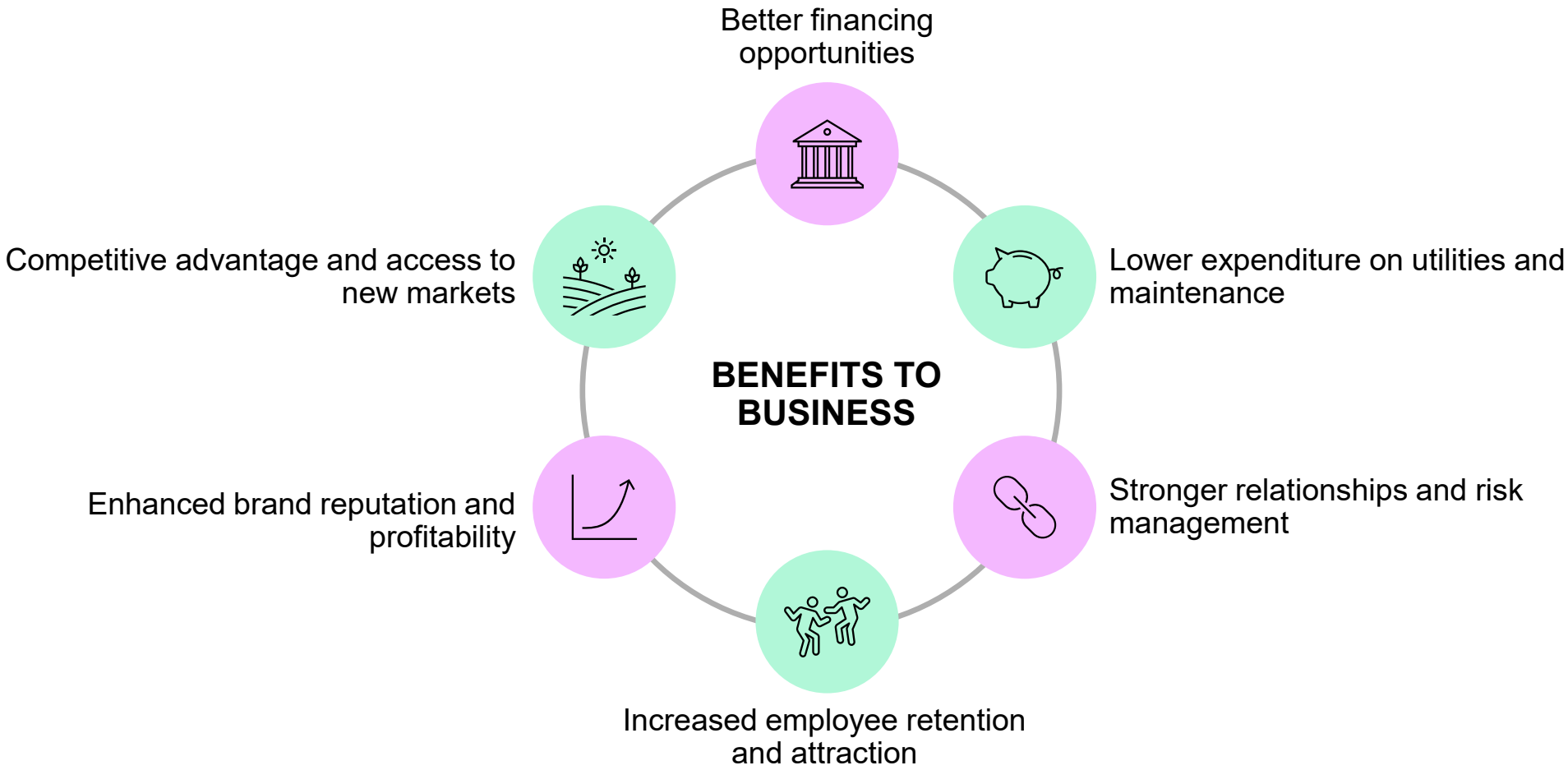
Credit portfolio companies



Demand for ESG data, esp. GHG emissions, remains

Access to and conditions of capital are affected

Beyond addressing the climate emergency, decarbonization actions also create business value



Any questions?

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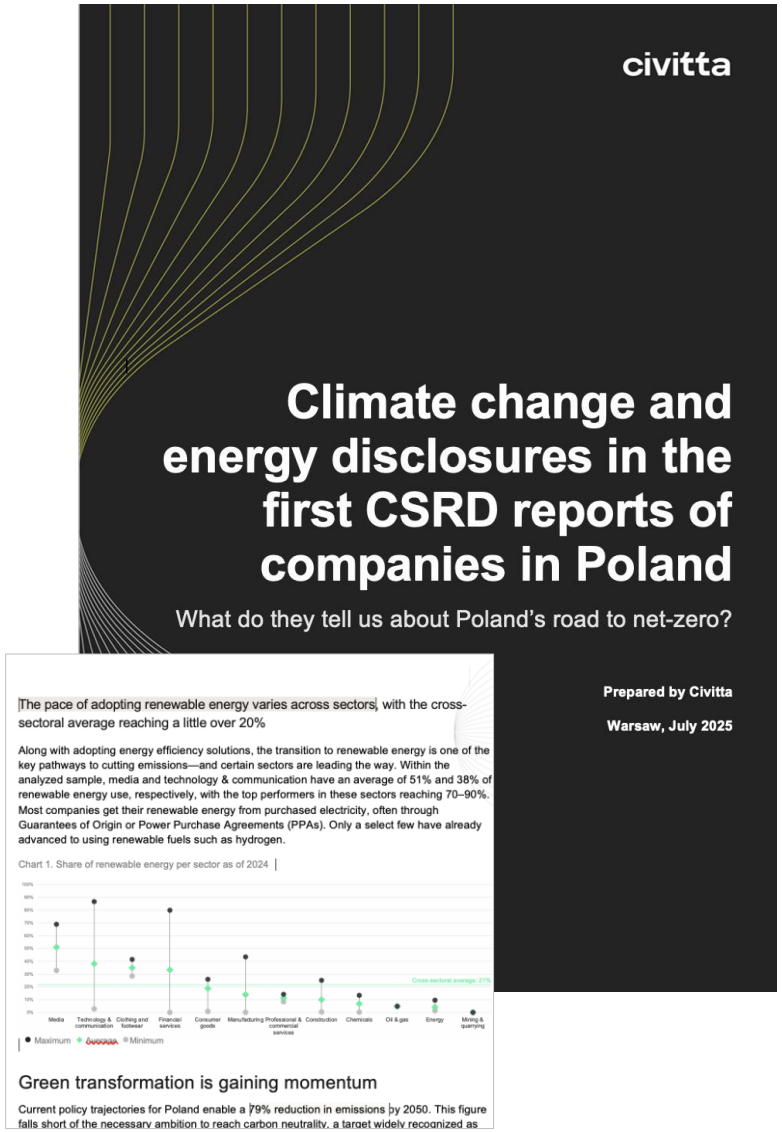
Coming soon:

Our study on Polish companies' ESRS Climate change disclosures!



What you'll learn:

- **Reporting landscape:** How Polish businesses are adapting to new requirements
- **Carbon footprint insights:** The dominance of indirect (Scope 3) emissions and the significant decarbonization challenges
- **Energy transition pace:** The current state of renewable energy adoption in Poland and its sectoral variations

Why this report matters:

- Gain a clear understanding of the current market landscape and key trends in ESG reporting in Poland.
- Benchmark your company's performance against industry peers.
- Inform strategic decisions for effective decarbonization and sustainable growth.

Stay tuned for the full report coming in July!

Question the answer

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Anna Jeżewska, Manager
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