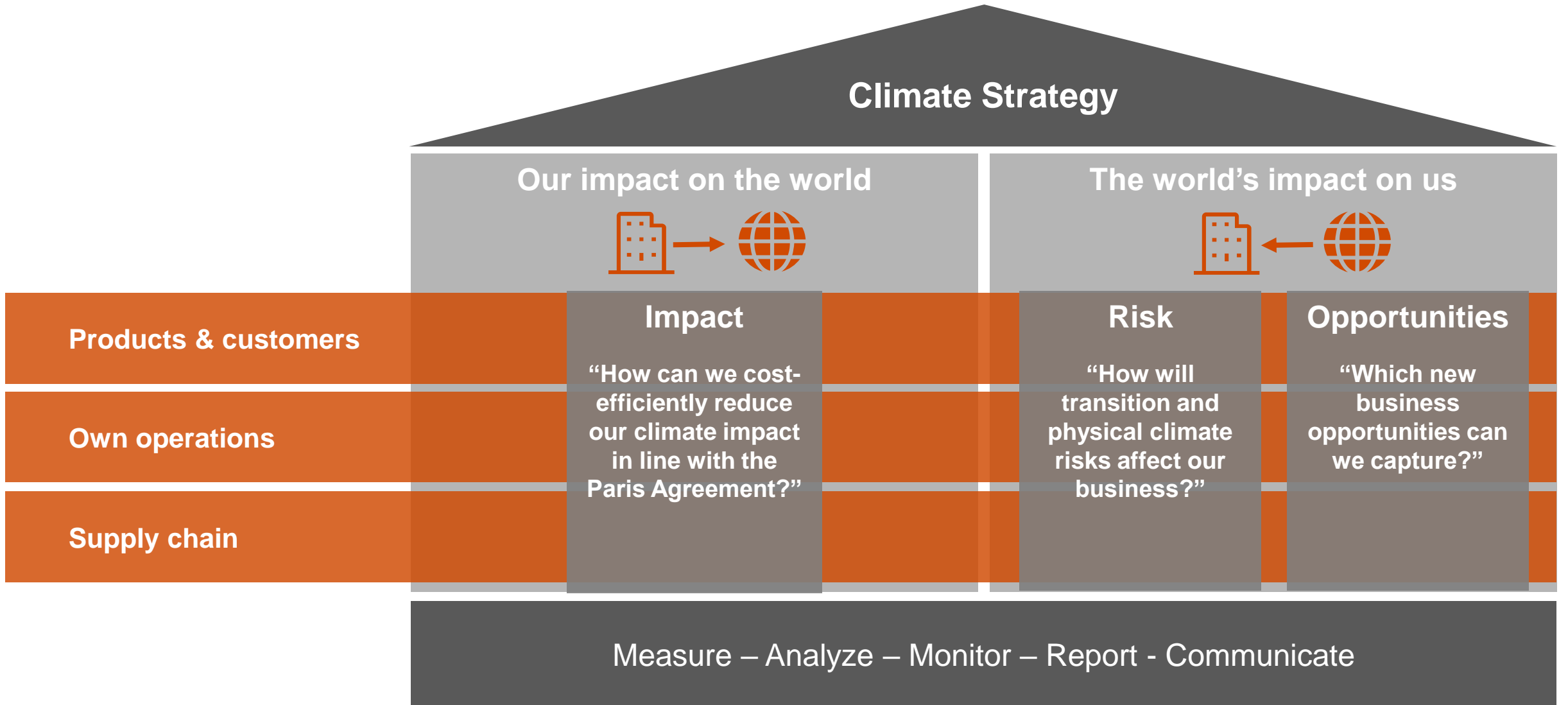


Climate strategy

Capability statement
September 2020



A holistic climate strategy helps you build a value-creating and resilient business model for the future





ARE THERE ANY **OPPORTUNITIES** TO OFFER NEW PRODUCTS AND SERVICES?

HOW CAN I INTEGRATE THIS INTO OUR **REPORTING**?

SUSTAINABILITY TARGET:
CO₂ FREE UNTIL 2040

WHAT **IMPACT** DOES THIS HAVE ON THE **VALUE** OF OUR COMPANY AND WHERE ARE THE **RISKS** AND **OPPORTUNITIES**?

HOW CAN I TRANSFORM OUR **ENERGY PRODUCTION** TO **RENEWABLES** EVEN FASTER?

HOW CAN I BETTER EMBED THE **CONCEPT OF SUSTAINABILITY** ACROSS OUR **EMPLOYEES**?

CEO

CFO

CSO

COO

CMO

The world is changing and business need to understand risks and identify opportunities

A changing world

Climate-related changes in regulation, markets, technologies and expectations of stakeholders affect business performance. Understanding the impacts of different future climate scenarios on ones business is key.

Opportunities

Changes in demand create new business opportunities, e.g. from green products and business models. PwC helps to identify and detail these.

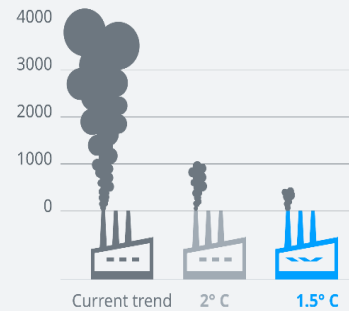
Risks

PwC provides guidance on transition as well as physical risks from climate change. Understand potential financial impacts of relevant scenarios.

Business needs to change in a carbon constrained world

1.5 degrees: How much carbon can we emit by 2100?

In gigatons of CO2 equivalents



Source: PIK | Status at 10/2018

©DW

Overview of the European Sustainability Taxonomy Regulation

Tuesday, April 21, 2020

Introduction

On 15 April 2020, the Council of the European Union published a [press release](#) stating that it had reached political agreement on the regulation on the establishment of an EU-wide framework designed to facilitate sustainable investment through a common classification system for sustainable activity (the "Taxonomy Regulation").

The [Taxonomy Regulation](#) will enable investors to refocus their investments on more sustainable technologies and businesses, and is aimed at directing sufficient private capital to sustainable investments to enable the EU to become carbon neutral by 2050 (and achieve the [Paris Agreement's](#) 2030 targets).

The New York Times

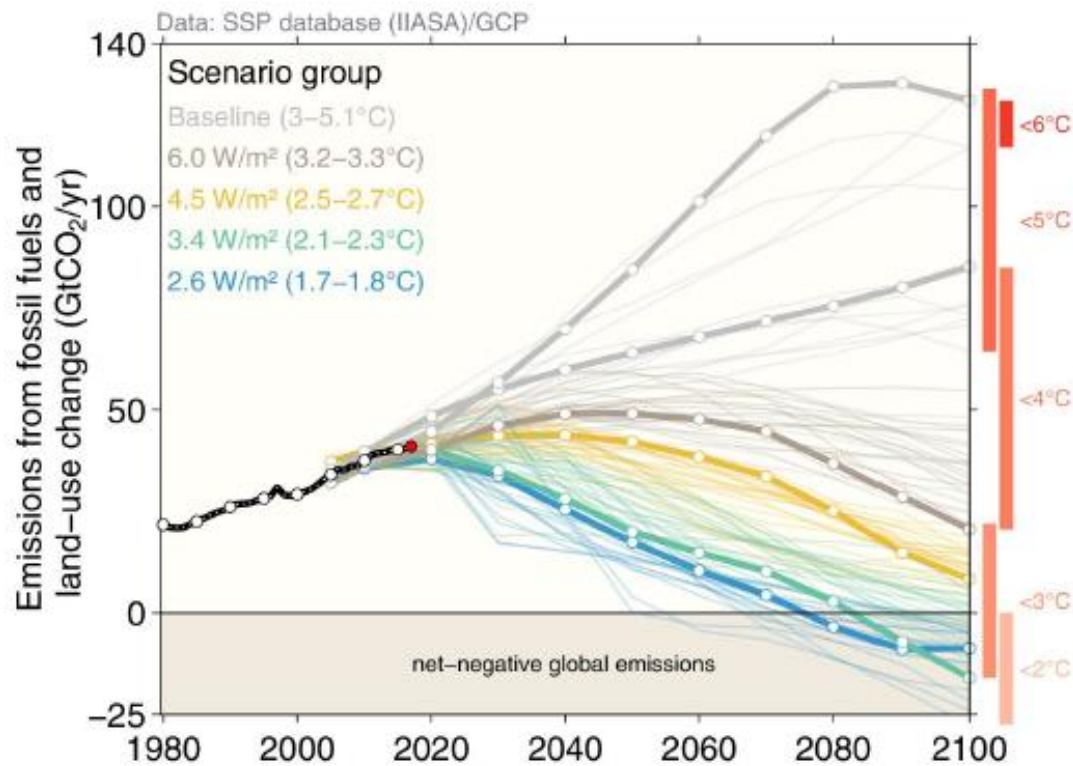
DEALBOOK

BlackRock C.E.O. Larry Fink: Climate Crisis Will Reshape Finance

In his influential annual letter to chief executives, Mr. Fink said his firm would avoid investments in companies that "present a high sustainability-related risk."



Much is uncertain, but it is certain that some form of climate-related risks will materialize



Source: Global Carbon Project

01

More Physical Risks

If we do not contain climate change, physical risks will materialize.



Drought



Flooding
& Sea
level



Heat



Extreme
weather
events



Wind

02

More Transition Risks

If we embark on a transition path, transition risks will materialize. An orderly transition is preferred over an abrupt and disorderly transition.



Technology



Legislative
changes &
regulation



Market

The TCFD recommendations origin from investors need to understand if companies are prepared to tackle climate change risks...



- Initiative by Financial Stability Board of the G20
- Task Force set up in 2016: Industry-led, including 32 members from both the real economy and the financial sector side ("Preparers and Users")
- Recommendations published in 2017: Focus on voluntary, consistent disclosure of climate-related financial risks used by companies in providing information to investors, lenders, insurers and other stakeholders.
- Covering physical, transition and legal climate-related risks

The improved data situation due to a holistic disclosure of climate risks in financial reports leads to ...

01

Companies applying Improved risk management processes and increasing competitiveness

02

Investors making better informed investment decisions and improving their capital allocation

03

Banks, Insurance & Underwriters benefit from improved assessment of risk exposure over short, medium and long-term horizons

FACES OF THE TCFD



Michael R. Bloomberg, Founder



Mark Carney, Former chair of FSB

... and consist of four essential building blocks, with scenario analysis being a core component

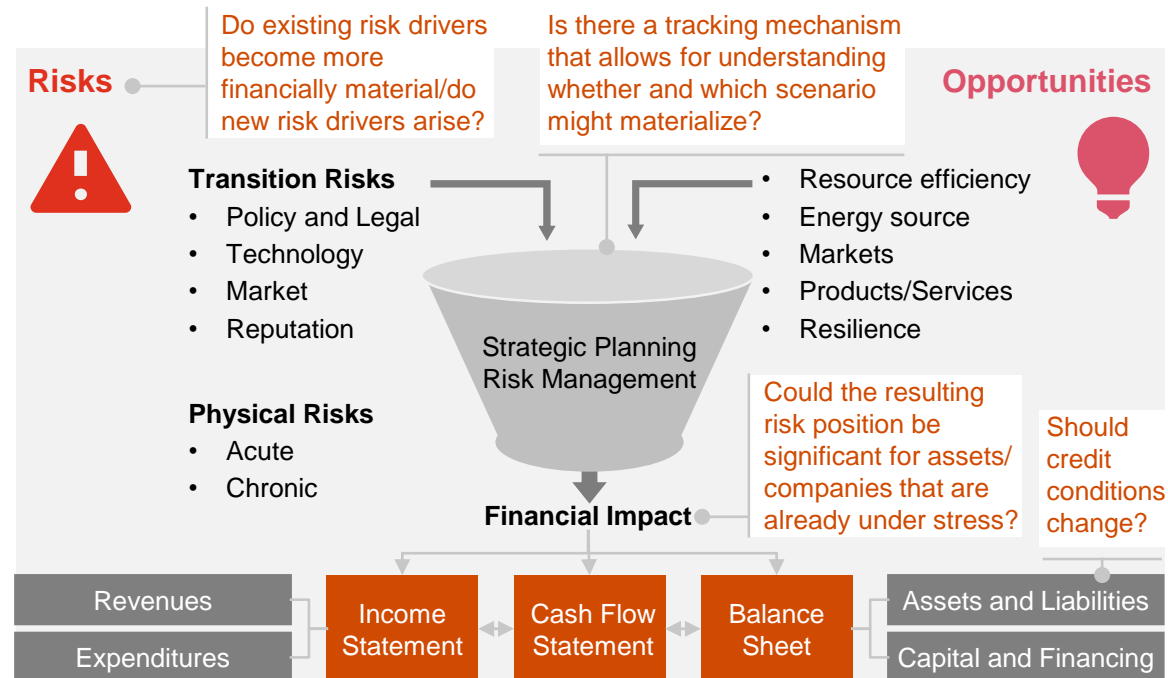


Central relevance of scenario analysis for nearly all TCFD dimensions and as catalysator for the organisational integration.

The recommendations of the TCFD and why scenario analysis is at the core

Key Features of the TCFD Recommendations

- Designed to solicit decision-useful, forward-looking information on financial impacts
- Strong focus on risks and opportunities related to transition to lower-carbon economy



Source: PwC based on TCFD

Scenario analysis is a strong methodology, when

... the past is no longer considered to predict the future:

- **possible outcomes are highly uncertain**, they will **play out over the medium to longer term**, and the **potential disruptive effects are substantial**, as
- historical trends and datasets are not a good predictor of future trends (e.g. accelerating or disruptive change) and at the same time
- scenario analysis allows for the modelling a variety of effects (under one common scenario) that can be interrelated and interact positively or negatively with one another.

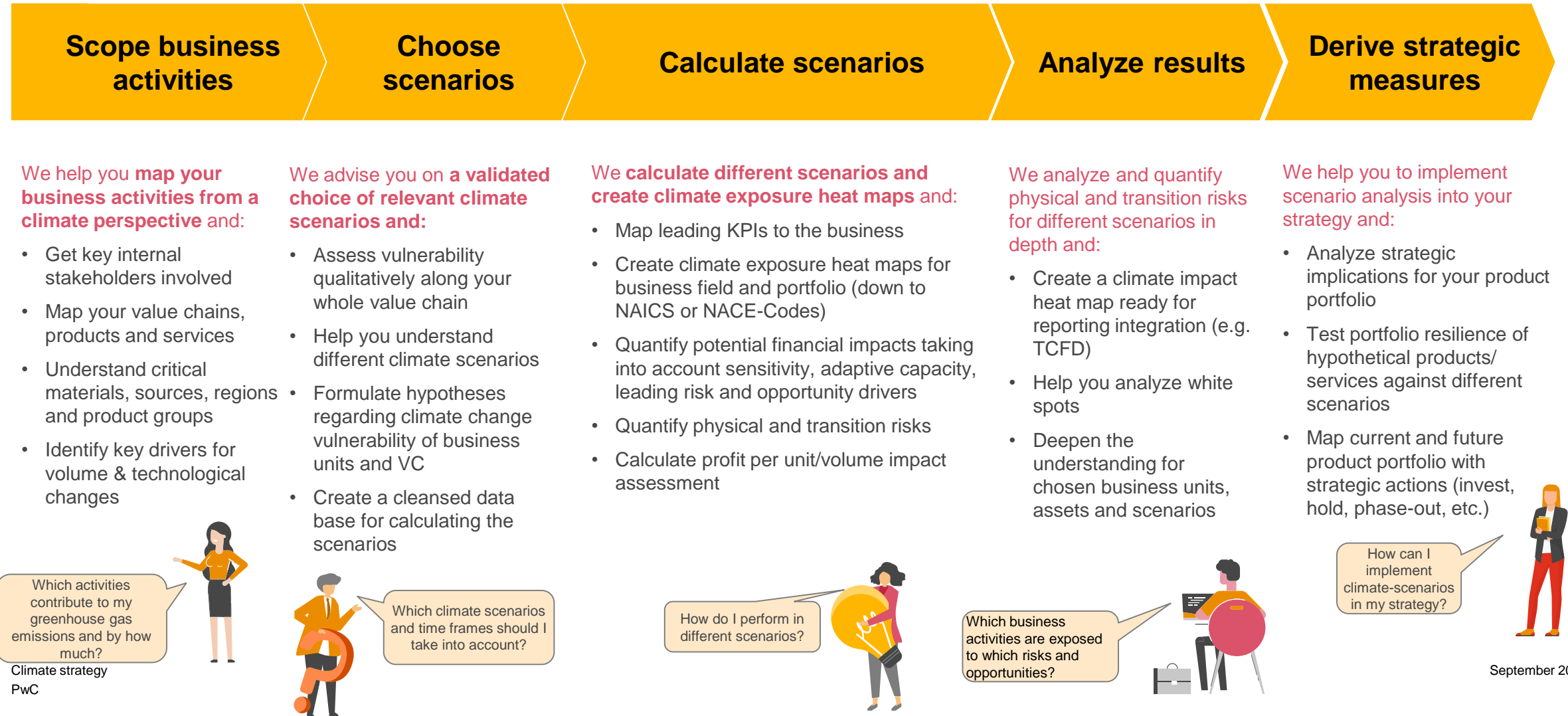
Accordingly, scenarios never have an inherent probability!



Climate scenario analysis captures potential system dynamics resulting from the system optimization towards a specific global warming pathway. It does not reflect on meta-trends or dynamics outside the climate/energy model. Scenario analysis thus is a complement of the current analysis work performed by the bank.

Source: Kepler Cheuvreux, The CO-Firm (now PwC) (2018): Investor Primer to Transition Risk Analysis

We perform scenario analyses of climate-related financial risks and opportunities along five steps



Our credentials



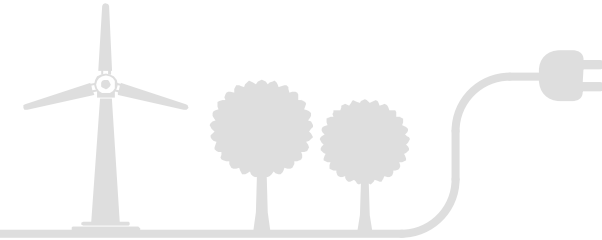
Large industrial manufacturer

We have performed a resilience test for various products, services and solutions of a large industrial manufacturer against four different scenarios resulting in different pathways towards a climate-resilient value chain. Additionally, we modelled the market sizes and possible market shares for various existing and new technologies in their portfolio. The project had strategic board relevance.



Large retail company

We have supported a large retail company in performing a scenario analysis of climate-related physical risks and opportunities. We derived financial impacts and strategic implications for their real estate and transport operations. The project created results ready for reporting in line with best practice TCFD requirements.



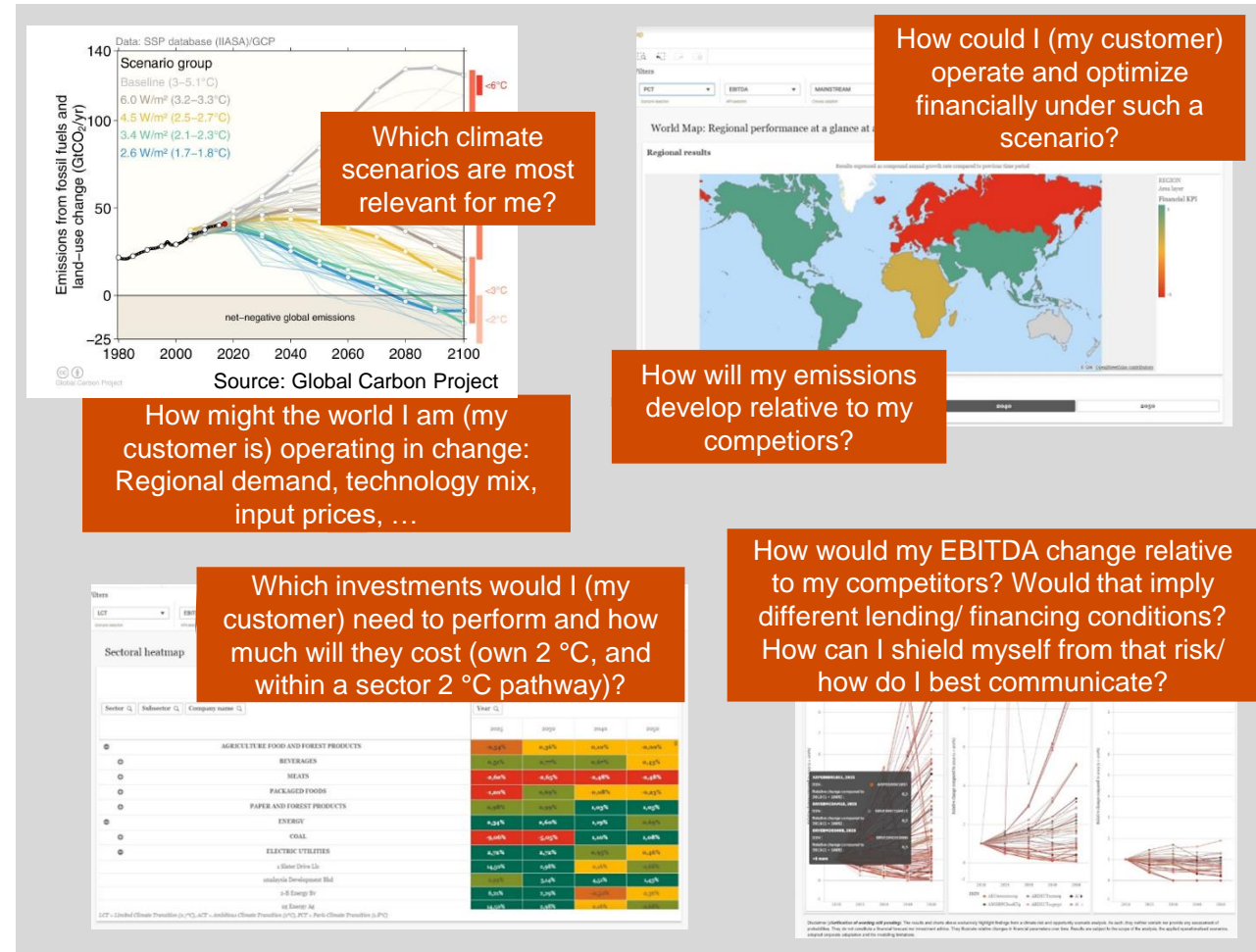
We have provided guidance to multiple national and international clients.

The Climate Excellence Tool gives answers about the effects of climate scenarios on the performance of sectors and companies

Provides forward-looking financial assessment of climate-related risks and opportunities

Fundamental and market-based modelling of scenario impacts ensures covering macroeconomic and sector-specific demand, price, technology and regulatory impacts in a consistent, integrated manner

Climate Excellence enables a more true and fair view on the specific risk position as it takes the adaptive capacity of companies into account



Our well-proven Climate Excellence approach is a good way to assess how assets are exposed to climate

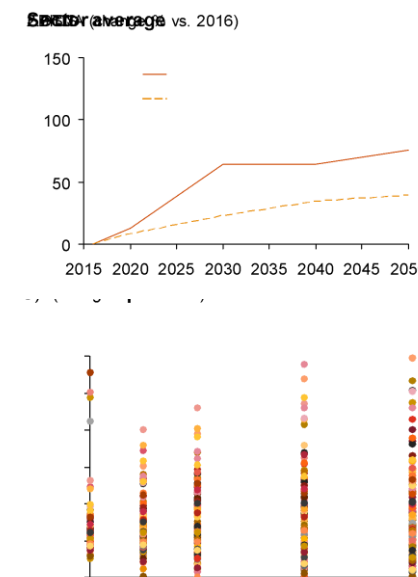
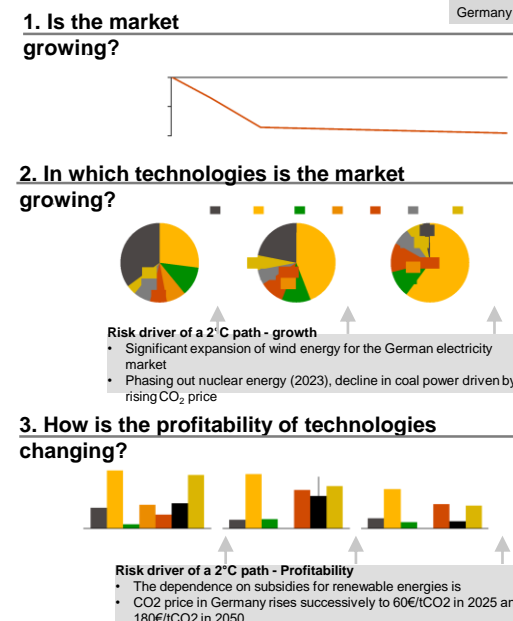
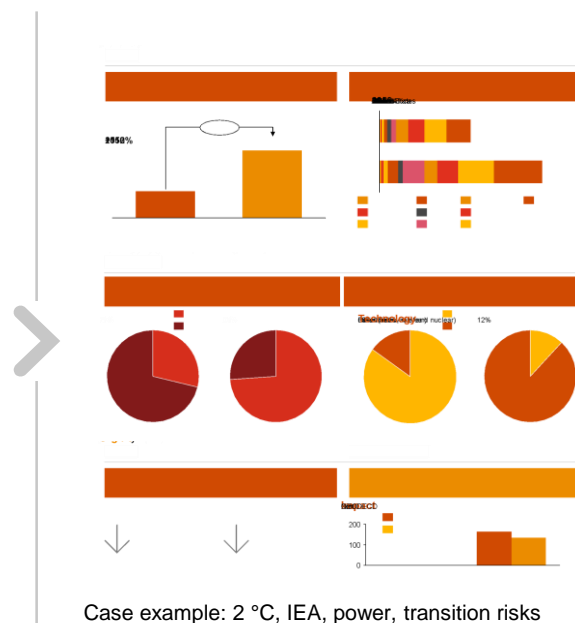
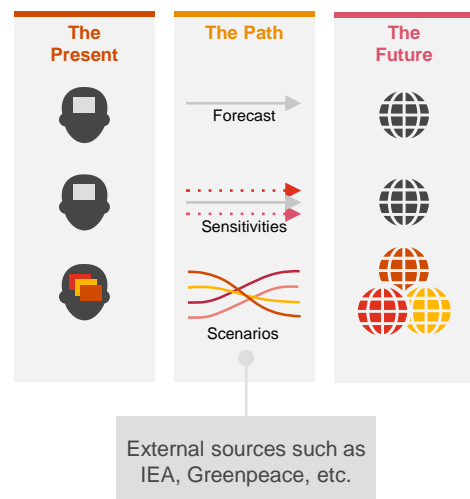
Illustrative examples

A scenario describes a possible future world ...
Scenarios have different narratives

... ideally along business fundamentals ...
Business fundamentals scenarios

... allowing for identifying key risk drivers...
Focus is on key drivers with significant financial impact

... and financial impacts
Enabling a differentiation of individual company and physical asset performance



Our coverage includes ...

Coverage of ALL sectors (NAICS codes up to 6th digit)



Sectors

11. Agriculture, Forestry, Fishing and Hunting	23. Construction	52. Finance and Insurance
21. Mining	31. - 33. Manufacturing	21. Real Estate Rental and Leasing
22. Utilities	48. - 49. Transportation and Warehousing	All remaining NAICS



Financial Assets Coverage

Listed and unlisted corporate bonds, listed and unlisted equity, Project Finance, Real Estate, Sovereign Bonds



Companies

All listed companies*, out of those more than 40,000 are listed



Physical Assets

>230,000 physical assets



Adaptation measures

>135 unique technical adaptation measure packages across sectors per industry



Countries

Global Coverage with more than 50 countries in depth

*if necessary extended manual mapping will be applied.

Open for all scenarios

ALL business-related scenarios can be analyzed.

1. TRANSITION RISKS

Focus right now lies on (Integrated) Energy System Models

- 1.8°C based on IEA ETP B2DS
- 2.0°C based on IEA ETP 2DS
- 2.7°C based on IEA ETP RTS
- **Disruptive Climate Transition (DCT1)** based on Greenpeace Advanced Energy [R]evolution
- **Disruptive Climate Transition (DCT2)** based on LUT University and EnergyWatchGroup (2019)

IPCC RCP 2.6

Deep Decarbonization Pathways Project (DDPP)

National scenarios Klimaschutzscenario (KS 80 & 95) des BMU

2. PHYSICAL RISKS

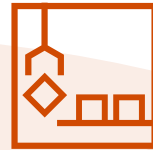
- 2°C based on IPCC RCP 2.6
- 3°C based on IPCC RCP 6.0
- 4-5°C based on IPCC RCP 8.5

In development

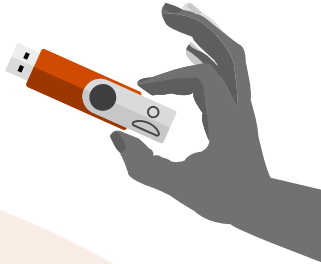


Clients can benefit from our methodology by receiving answers to the following questions

Real Economy



Financial Industry

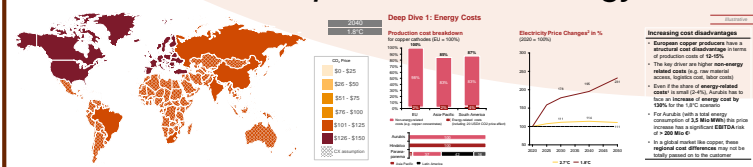


- What steering mechanism are necessary for my **supply chain**?
- How does my current **production** need to change?
- Do I need to adapt my **product portfolio**?
- How could I change my **energy purchases**?
- How do I **optimize** plants/supply chains/products?

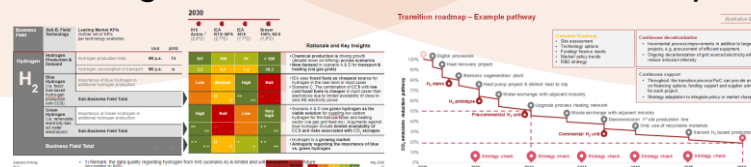
- How should I adapt my **strategy**?
- What changes are necessary for my **risk management** processes?
- What is the right level of **ambition** for me?
- How am I positioned relative to the **competition**?

- What **risks** and **opportunities** do I currently have in my **portfolios**?
- How can I **manage** my portfolios in the future?
- What **impacts** and **risks** drive different **sectors** with regard to transition requirements?
- What **new investment opportunities** could arise?

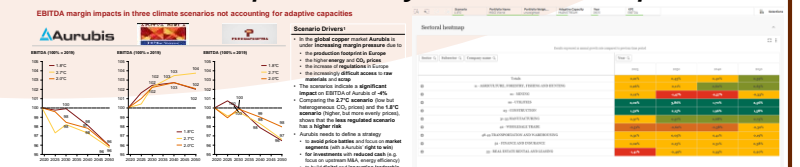
Data on resource prices & technology costs



Strategic measures & transition roadmaps



Financial impact analysis & heatmaps



Our credentials



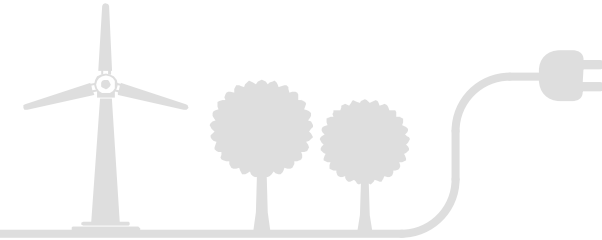
Large bank

"We analyzed the EBITDA development of our clients asset and wealth management portfolios under two climate transition scenarios using the Climate Excellence tool. Based on the results and deeper sector insights, our customer includes climate-related aspects in his investment process and risk model, is able to offer additional services to customers and understands climate risks and opportunities."



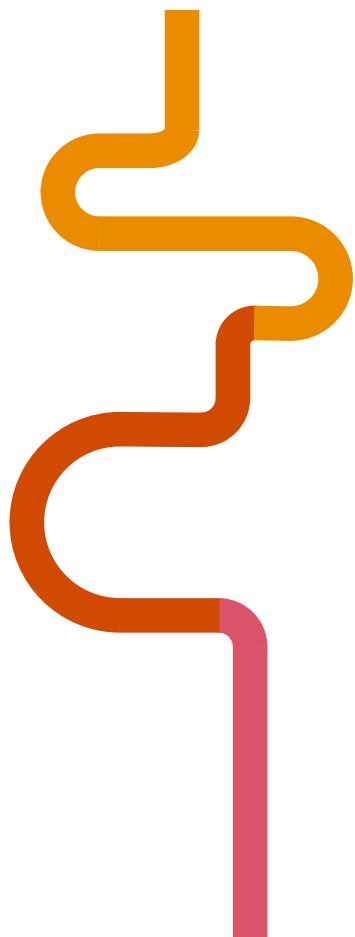
Large industrial manufacturer

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We have provided guidance to multiple national and international clients with the Climate Excellence Tool.

Understanding the business impact on the environment and having a clear transition roadmap is key to remain competitive



A changing world

Increasingly, clients, financiers and society require a proactive approach to limit climate change. Business need to take this seriously to thrive in the future.

Strategy

PwC provides support in understanding climate impact, setting targets and identifying solutions for decarbonization. We guide you through the low-carbon transformation.

Implementation

PwC supports with the implementation of a climate action roadmap, including steering, monitoring, reporting and assurance.

Companies understand the issue and start to act

Ikea gets stamp of approval for 80% science-based emissions target

15 June 2018, source [edie newsroom](#)

The Ikea Group has had its target of reducing greenhouse gas (GHG) emissions from its stores and operations by 80% by 2030 approved by the Science-Based Targets Initiative (SBTi).



Google redefines what it means to be '100% renewable'

By [Sarah Golden](#)

April 24, 2020



09.05.2019 | Press release | #Business/economy

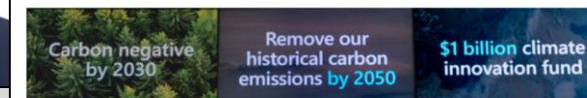
Climate action: Bosch to be carbon neutral worldwide by 2020

Earliest carbon neutrality of any global industrial enterprise

- » Bosch's carbon-neutral initiative unprecedented in scope and timeframe
- » Investments in plant, buildings, renewable energies, and green electricity
- » More than a billion euros earmarked for energy efficiency

Microsoft will be carbon negative by 2030

Jan 16, 2020 | [Brad Smith - President](#)



BASF setzt mit neuer Strategie auf profitables und gleichzeitig CO2-neutrales Wachstum

Mittwoch, 21. November 2018 - Redaktion



Dr. Martin Brudermüller Vorsitzender des Vorstands und Chief Technology Officer der BASF SE, Bild: BASF

Neben dem Ziel, bis 2030 CO₂-neutral zu wachsen, will BASF im Jahr 2025 rund 22 Milliarden Euro Umsatz mit sogenannten Accelerator-Produkten erzielen – also mit Produkten, die einen substanziellen Beitrag zur Nachhaltigkeit in der Wertschöpfungskette leisten. „All das aber ist nichts ohne die Mitarbeiter. Deshalb setzen wir uns zum ersten Mal auch ein Ziel für die Mitarbeiterzufriedenheit“, so Brudermüller. „Wir streben an, dass über 80 Prozent unserer Mitarbeiter der Meinung sind, dass sie sich bei BASF entfalten und ihre bestmögliche Leistung erbringen können.“

How PwC guides you towards cost-efficiently reducing your impact on climate change

Strategy

Implementation

Calculate your Footprint

Set Science Based Targets

Find Solutions for Decarbonization

Steering & Monitoring

Reporting & Assurance

We help you **assess your climate impact**:

Account for your material greenhouse gas emission sources along the entire value chain

- Use **smart tools** for footprinting
- Understand your **emission hotspots**
- Align your impact accounting with leading **accounting standards**

Which impact do I have along my value chain?



Climate strategy
PwC

We advise you on **setting relevant goals** for decarbonization:

- Develop **targets** for climate impact reduction in line with climate science
- Calculate greenhouse gas emission **reduction pathways**
- Create a **net-zero** emission vision
- Validate with the **Science Based Targets initiative**

How do I become a X°C company?



We **collaboratively develop** a set of **solutions based on your ambition level**:

- **Decarbonize** your business along the value chain
- Develop an understanding of **transition requirements** and provide **solutions** to reach temperature targets
- Increase **energy efficiency**
- Generate **renewable energies** or source them with PPAs, tariffs and certificates
- Develop **low-carbon products**
- Evaluate **cost-efficient** abatement options
- Develop a **climate action plan** for low-carbon transformation in line with the EU taxonomy

Which measures reduce my climate impact most cost-efficiently?



We guide you to a **successful and cohesive embedding** in existing processes:

- Develop an implementation **roadmap**
- **Monitor** target progress
- Set up a **governance and KPIs**
- Write a strategy **handbook**
- **Engage** suppliers, employees and customers

How can I implement my strategy successfully?



We bring **light in the manifold reporting requirements** and ensure compliance:

- Structure and **report** effectively on your climate action and roadmap
- Align with reporting standards and frameworks like **TCFD, CDP, GRI**
- Comply with reporting requirements like **EU CSR directive** and **EU taxonomy**
- Provide **assurance** to your reporting

How can I report assurance-ready about my climate action?



September 2020
17

Selected credentials



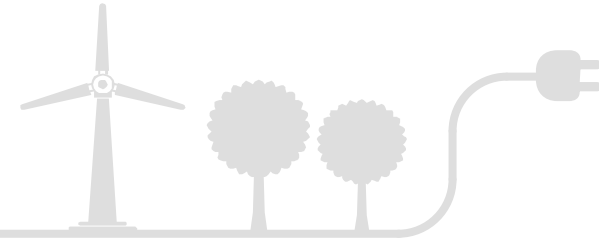
Large chemicals company

We have been accompanying a large chemicals company measuring their ecological, economic and social impact, including monetization along their value chain for several years.



Power technologies company

We have supported a large power technologies company in calculating their value chain climate impact, developing Science Based Targets, finding cost-efficient solutions for decarbonization and creating a climate action plan for implementation.



We have provided guidance to multiple national and international clients.

Thank you.

[pwc.de](https://www.pwc.de)

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