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Corporate Carbon Footprint Scope 1 and 2: How to manage GHG accounting and implement reduction measures

Webinar 2

26 September 2022, 14:00 – 15:00

In collaboration with

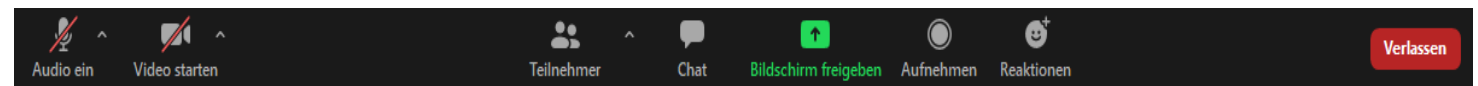


Let's make Global Goals Local Business

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- Slides and recording will be made available by UN Global Compact Network Switzerland & Liechtenstein after the webinar.
- Language: English

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Use the chat function to type in your questions or raise your hand to make a comment.

The Ten Principles of the UN Global Compact

Corporate sustainability starts with a company's value system. By incorporating the Ten Principles into strategies, policies and procedures, and establishing a culture of integrity, companies are not only upholding their basic responsibilities to people and planet, but also setting the stage for long-term success.

Companies operate responsibly



HUMAN RIGHTS

1. Businesses should support and respect the protection of internationally proclaimed human rights; and
2. make sure that they are not complicit in human rights abuses.



LABOUR

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. the elimination of all forms of forced and compulsory labour;
5. the effective abolition of child labour; and
6. the elimination of discrimination in respect of employment and occupation.



ENVIRONMENT

7. Businesses should support a precautionary approach to environmental challenges;
8. undertake initiatives to promote greater environmental responsibility; and
9. encourage the development and diffusion of environmentally friendly technologies.



ANTI-CORRUPTION

10. Businesses should work against corruption in all its forms, including extortion and bribery.

Companies contribute to progress

SUSTAINABLE DEVELOPMENT GOALS

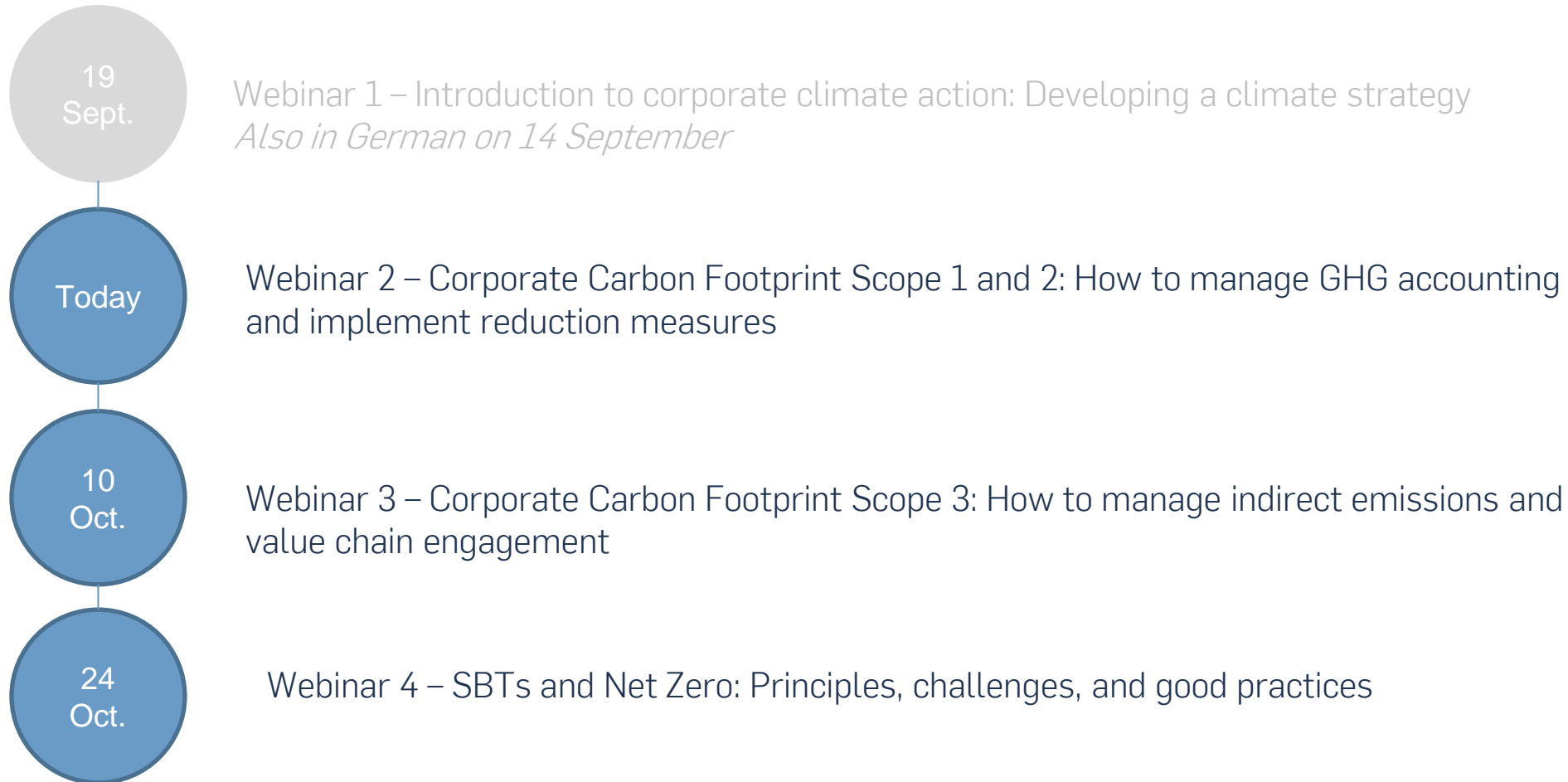


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What's next



Today's program

1. Context: Relevance for Swiss companies
2. Corporate Carbon Footprint
Introduction, Scope 1 + 2
3. Implementing Reduction Measures,
Scope 1 + 2
4. Best practices from Swiss companies
5. Key Take Aways

Input from



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Head CO₂-Management

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[About](#)

Goals of today

- ✓ know what GHG Accounting (CO₂-Management) is
- ✓ understand the method of implementing GHG Accounting in organizations (Scope 1 + 2)
- ✓ understand the process of initiating & implementing reduction measures (Scope 1 + 2)

Swiss Climate: experts for a sustainable future



Sustainability



ecovadis



CO₂ Management

TCFD



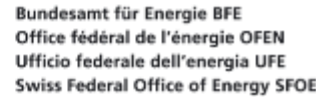
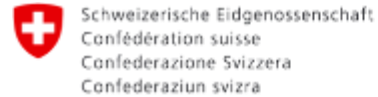
Energy



Carbon Offsetting



References



RAIFFEISEN

KUEHNE+NAGEL



CSL Behring

Bank
Banque
Banca

CLER



valiant

CarbaGas
gas nach Mass



Schindler

sonova
HEAR THE WORLD



Vontobel

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METALL- UND BEHALTERBAU



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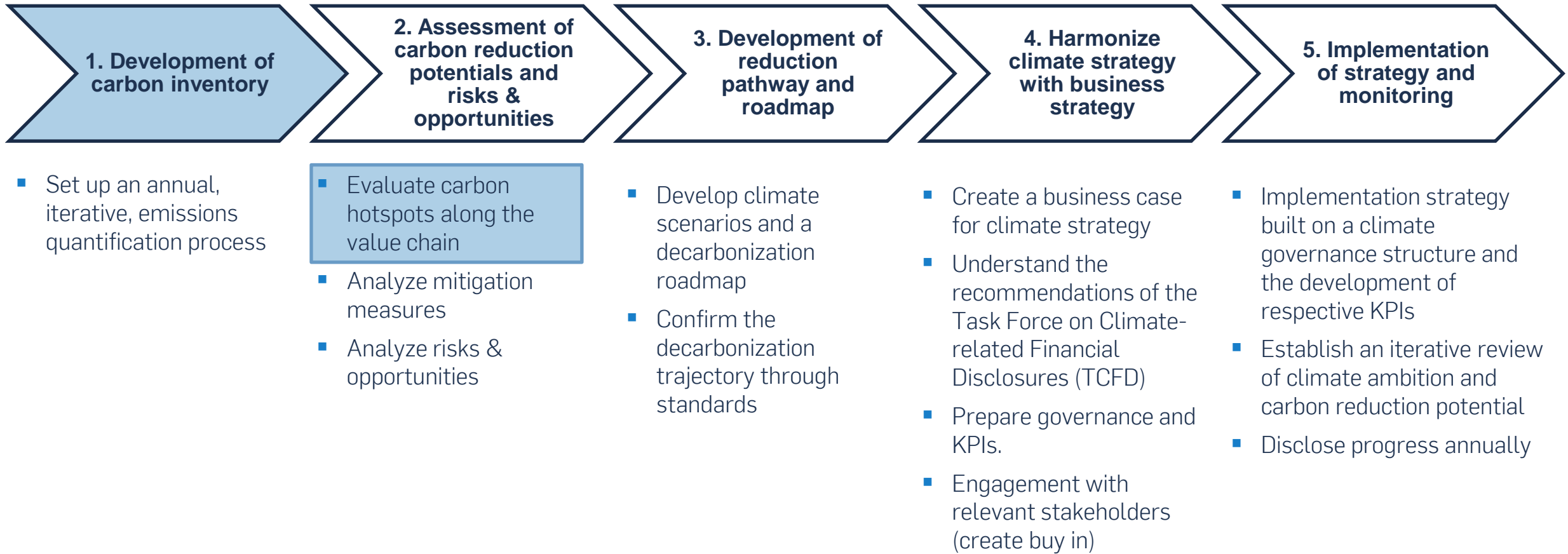
TEXAID



Context: Relevance for companies



Webinar 1: Climate strategy – How to get there

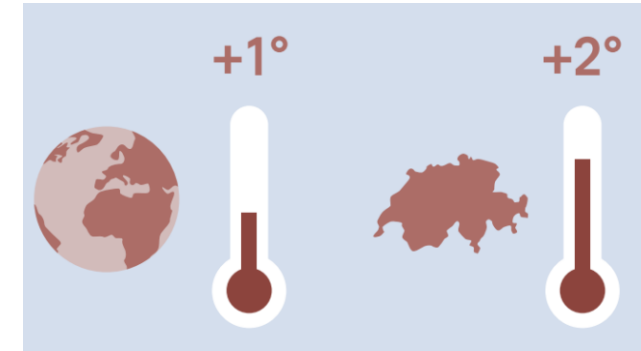


Compliance – net zero 2050

Climate protection: Federal Council adopts Switzerland's long-term climate strategy

Bern, 28.01.2021 - Switzerland aims to have net-zero greenhouse emissions by 2050. The Federal Council set the net-zero target in 2019 and on 27 January 2021 adopted the corresponding "Long-Term Climate Strategy for Switzerland". The strategy sets out climate policy guidelines up to 2050 and establishes strategic targets for key sectors, building on the measures and targets of the revised CO2 Act. The new CO2 Act is essential for achieving the net-zero target. It will lead to a 50 per cent reduction in greenhouse gases by 2030 and put Switzerland on track to meet its 2050 climate target.

Source: <https://www.bafu.admin.ch/bafu/en/home/documentation/news-releases/anzeige-nsb-unter-medienmitteilungen.msg-id-82140.html>



Switzerland - too small to have an impact?!

- Through its indirect (imported) emissions, Switzerland has approx. 2-3% share of global emissions but only 0.1% of global population
- This equals domestic emissions of Japan or Brasil

Source: McKinsey, Klimastandort Schweiz, 2022



Huge Risks- & Opportunities for companies

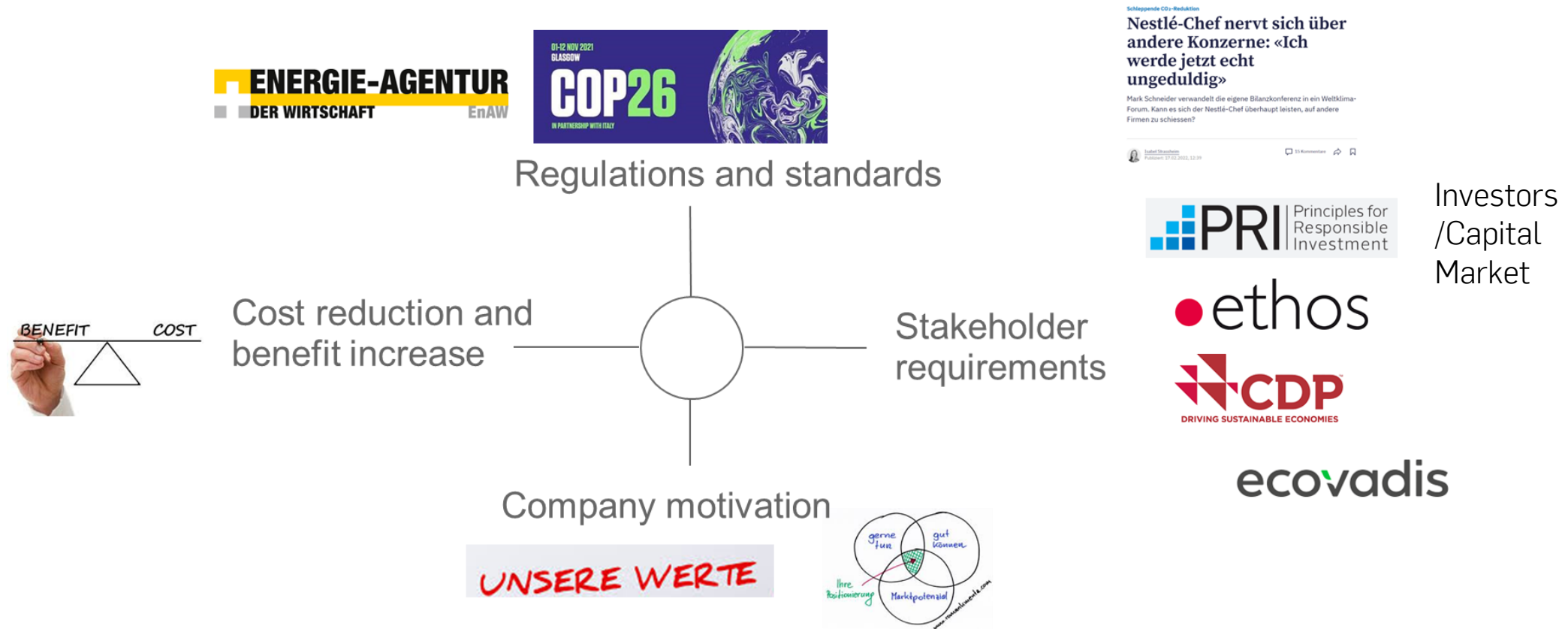
McKinsey, 2022:

- 30 – 50% of today's revenue at threat if companies do not succeed in decarbonisation
- **“War for Talents”**: 80% of Millennials want to work in a sustainable company
- sustainable companies have a 25 – 50% **lower fluctuation**
- Sustainability is a necessity of growing importance for **access to the capital market**
- Capital costs for renewable energies are decreasing
- Up to 80% of this expected impact could be materialised within the next 5 years

Source: McKinsey, Klimastandort Schweiz, 2022

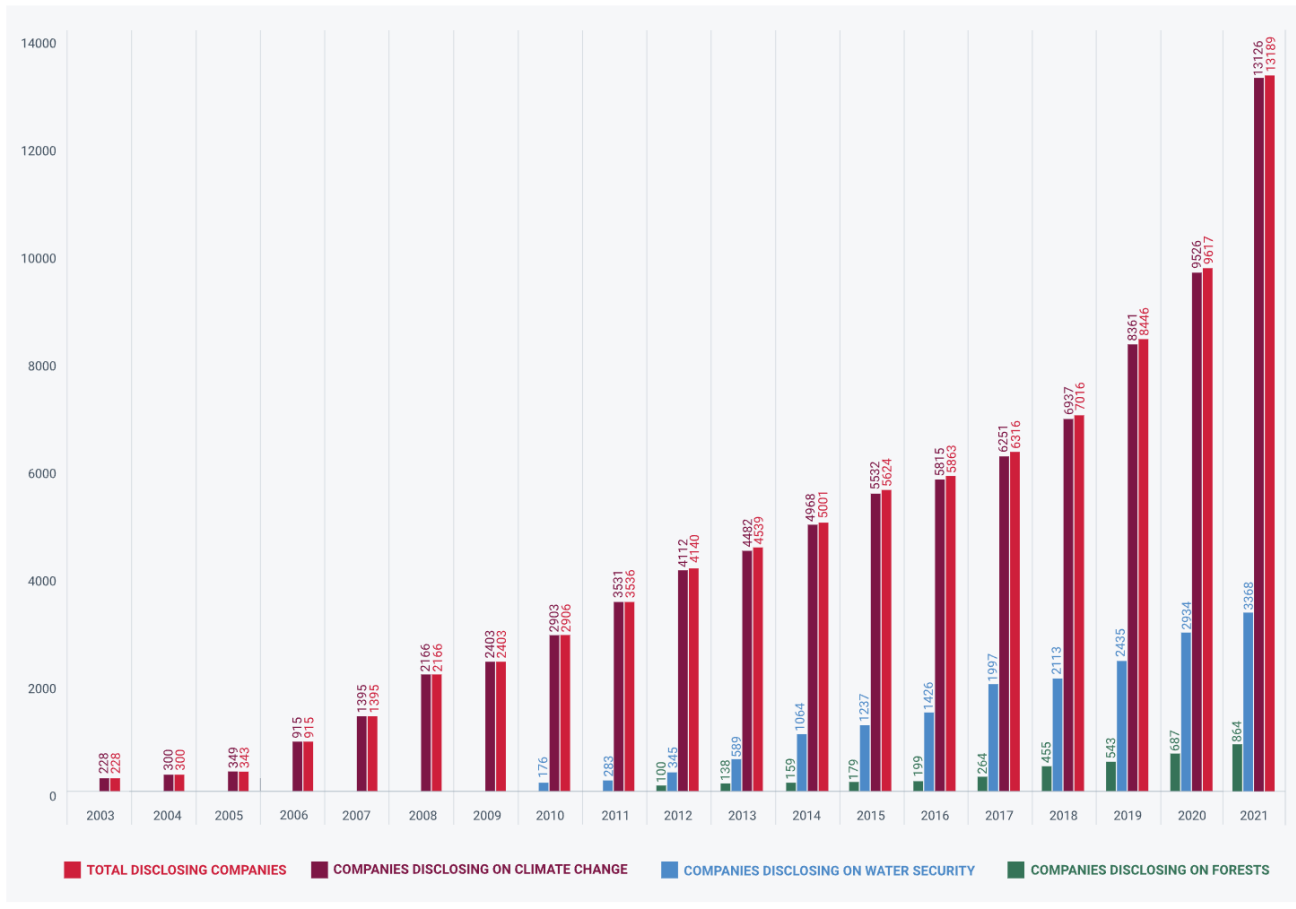


Incentives for implementing a CO₂ management...?



+ Employer Branding in the «War for Talents»

Growth in disclosing companies since 2003



“In 2021, a record-breaking 13,000+ companies representing over 64 % of global market capitalization disclosed through CDP – 35% more than last year, and over 141% more than when the Paris Agreement was signed in 2015.”



Source: CDP (2022)



Who has already implemented a GHG Accounting/CO2 Footprint?

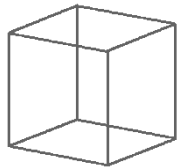
Corporate Carbon Footprint Scope 1 + 2 Introduction



How much is a ton of CO₂?

Disclaimer: in this webinar CO₂ = CO₂e = GHG

- 375 liters of diesel or 415 liters of gasoline (direct emissions)
- Roundtrip flight from Zurich to the Canary Islands
- A swimming pool of 10 x 25 meters (2 meters deep) or cube with an edge length of ~8 meters.
- A beech tree that grows about 80 years



Greenhouse gas potential

The greenhouse gas potential (or CO₂ equivalent) indicates how much a greenhouse gas contributes to global warming.

Greenhouse gas	GHG potential (100 years)
CO ₂ (carbon dioxide)	1
CH ₄ (methane)	28
N ₂ O (nitrous oxide)	265
SF ₆ (sulfur hexafluoride)	23'500

All Kyoto greenhouse gases considered

- CO₂ (carbon dioxide)
- CH₄ (methane), e.g. in agriculture
- N₂ O (nitrous oxide/nitrous oxide), e.g. fertilizer
- HFC/PFC (hydrofluorocarbons), e.g. refrigerants
- PFC (perfluorocarbons), e.g. refrigerants
- SF₆ (sulfur hexafluoride), e.g. insulation gas or quenching gas in high-voltage switchgears
- NF₃ (nitrogen trifluoride), e.g. production of solar cells

Source: GHG Protocol

How to set up a corporate carbon footprint, Scope 1 + 2



Don't reinvent the wheel: Standards for operational CO₂ accounting

Greenhouse Gas Protocol

Detailed information and instructions on how to define the system boundaries and prepare the GHG footprint



World Business Council for
Sustainable Development

ISO 14064

ISO 14064-1: Principles and requirements for corporate greenhouse gas inventories

(ISO 14064-2: Basics and requirements on climate projects for compensation)

(ISO 14064-3: Requirements for the verification process)



International
Organization for
Standardization

GHG Protocol Accounting Principles

RELEVANCE

Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.

COMPLETENESS

Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.

CONSISTENCY

Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.

TRANSPARENCY

Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.

ACCURACY

Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

Procedure setting up a GHG Accounting



Organisational system boundaries: Which sites and parts of the value chain are included?

- **Equity share approach:** Rarely used
- **Control approach**

"A company accounts for 100 percent of the GHG emissions from operations over which it has control. It does not account for GHG emissions from operations in which it owns an interest but has no control."

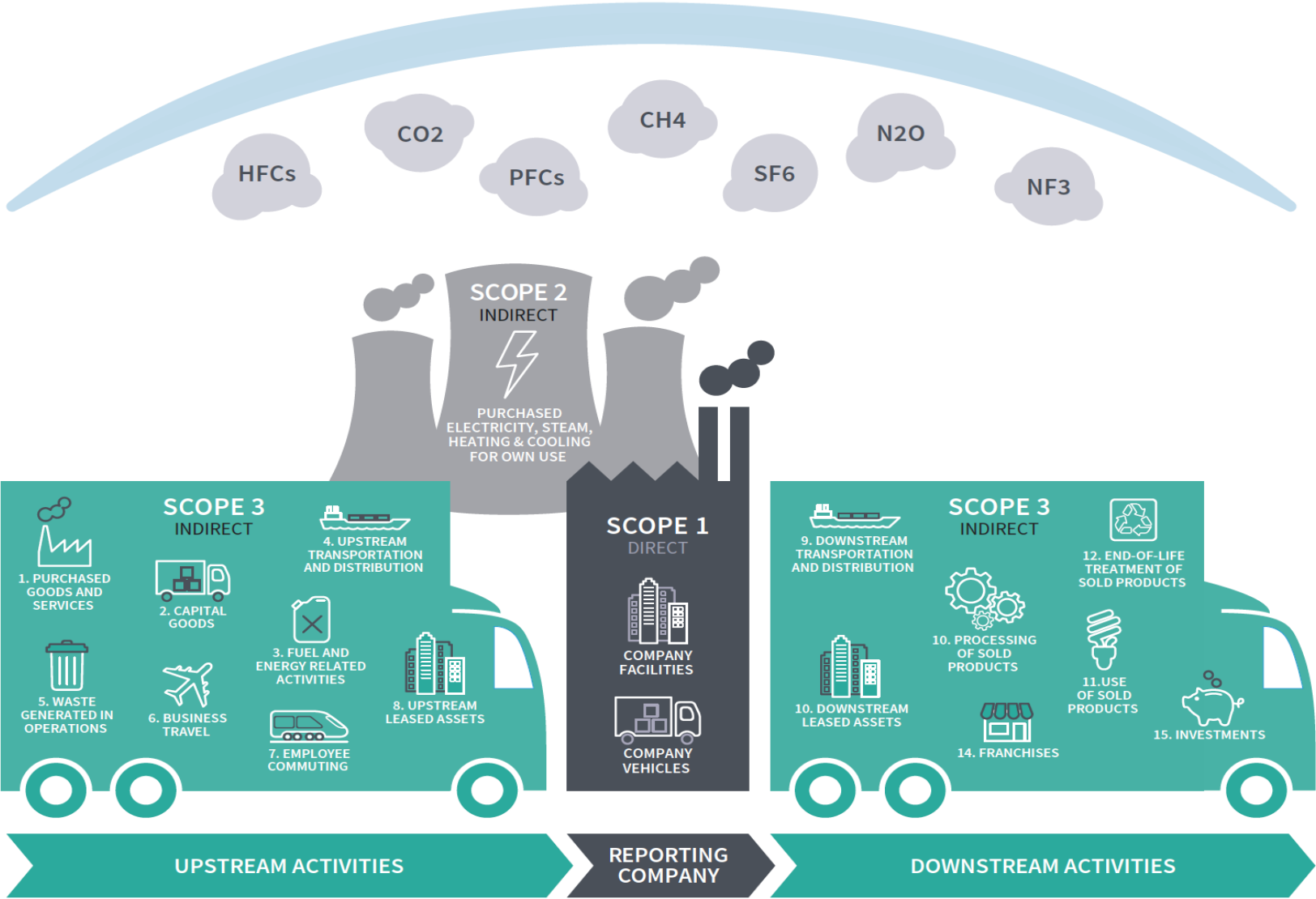
Two types of control

- **Operational:** "Company has operational control over an operation if the former or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation."
- **Financial** (rarely used): "The company has financial control over the operation if the former has the ability to direct the financial and operating policies of the latter with a view to gaining economic benefits from its activities."

Source: GHG Protocol



Operational system boundaries



Example System Boundaries

Organisational system boundaries

- Headquarters in Zürich
- 100% subsidiary in Bern

Operational system boundaries

- Scope 1 – Fuel consumption (machinery, transportation, business trips) & leakage cooling system
- Scope 2 – Energy: electricity, heating (district heating)
- Scope 3 – Business travels & commuting by employees (private vehicles)
- Scope 3 – Main consumables (e.g. materials for business activities, for production and for the maintenance of infrastructure at the sites)
- Scope 3 – Waste
- Scope 3 – Transports (up-/downstream)
- Scope 3 – Chemicals

Data collection

1 Define system boundaries

2 Data collection

3 Conversion into CO₂e with emission factors

4 Evaluation, interpretation, identification of hotspots

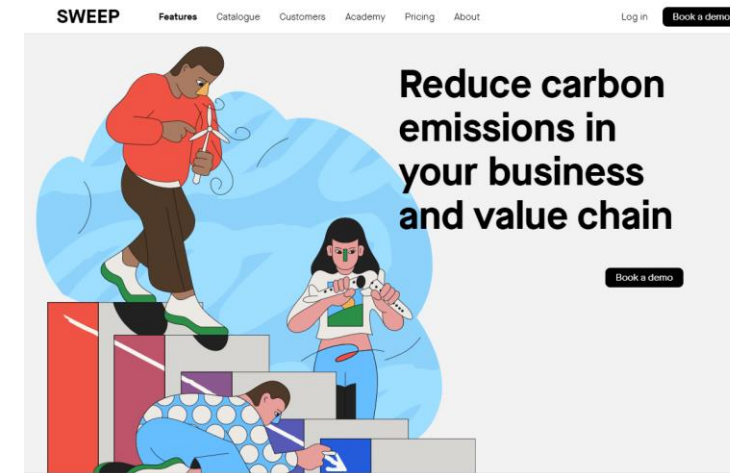
Document, document, document!

Important for raw data values:

- **Identify & define** responsible person data acquisition
- Specification of **data source** (e.g. reference to document)
- Indication of **data quality** (estimated, measured, survey, extrapolation, etc.)
- Correct **time reference**
- Variety of tools that support the data collection (e.g. surveys in sweep)

Data Sources Scope 1 + 2:

- Invoice coolant supplier
 - Usage data of company owned vehicles (cars, trucks, etc.)
 - Invoices of electricity suppliers and energy media suppliers (oil, gas, district heating, steam etc.)
 - Service charge statements of facility management
- Mostly good data quality for Scope 1 + 2



Defining relevant KPIs for CO₂ Intensity

What metrics are important for your business in relation to CO₂ emissions?
How do you track success/progress in CO₂ emission reduction?

Often sector specific, e.g.

- t CO₂/FTE
- t CO₂/m²
- t CO₂/t transported goods
- t CO₂/1k CHF revenue
- t CO₂/t purchased goods
- etc.

Once data is collected: Plausibility Check of Data



Goal: Evaluate data quality to eliminate incorrect data

Options for plausibility check:

- Comparison with data from previous year
- Comparison with other companies
- 4-eyes principle internally and/or external verification/audit
- Common sense, developing a sense for data
- Doublecheck with average values (e.g. for heating energy per m² for Swiss Offices)

→ **“BS in, BS out”**

Calculating the CO₂ footprint

1 Define system boundaries

2 Data collection

3 Conversion into CO₂e with emission factors

4 Evaluation, interpretation, identification of hotspots

Activity Data

quantitative measurement of an activity that results in greenhouse gas emissions

X

Emission factor

converts activity data into GHG emission data

=

GHG

Examples of activity data

- Liters of fuel consumed
- Kilowatt-hours of electricity consumed
- Kilograms of material consumed
- Kilometers of distance traveled
- Hours of time operated
- Square meters of area occupied
- Kilograms of waste generated
- Kilograms of product sold
- Quantity of money spent

Examples of emission factors

- kg CO₂ emitted per liter of fuel consumed
- kg CO₂ emitted per kWh of electricity consumed
- kg PFC emitted per kg of material consumed
- t CO₂ emitted per kilometer traveled
- kg SF₆ emitted per hour of time operated
- g N₂O emitted per square meter of area
- g CH₄ emitted per kg of waste generated
- kg HFC emitted per kg of product sold
- kg CO₂ emitted per unit of currency spent

Example

- Activity data: 100'000 kWh heating energy, produced by burning fossil oil
- Emission factor: 3.099 kg CO₂/kWh
- Footprint: 309.9 t CO₂e

Source: GHG Protocol

emission factors usually in CO₂ equivalents; the various greenhouse gases & their global warming potential (GWP) are already taken into account

Important Aspects for Calculations: Emission Factors



- Choice of **emission factors** is **essential** for footprint and must come from **sound and transparent sources**
- System boundaries of the emission factors must be **plausible and understandable**:
Direct vs. indirect emissions: Are renewable energies climate neutral? E.g. solar panels: direct emissions are zero. But: indirect emissions through production of solar panels, transportation, installation etc. → EF factors too have system boundaries
- **Documentation** of emission and conversion factors
- Check necessity of **annual changes** (accuracy vs. consistency)
- Calculation steps (e.g. formulas) must be coherent

Source: GHG Protocol & ISO 14064-1

Evaluation, Interpretation, Identification of Hotspots

1 Define system boundaries

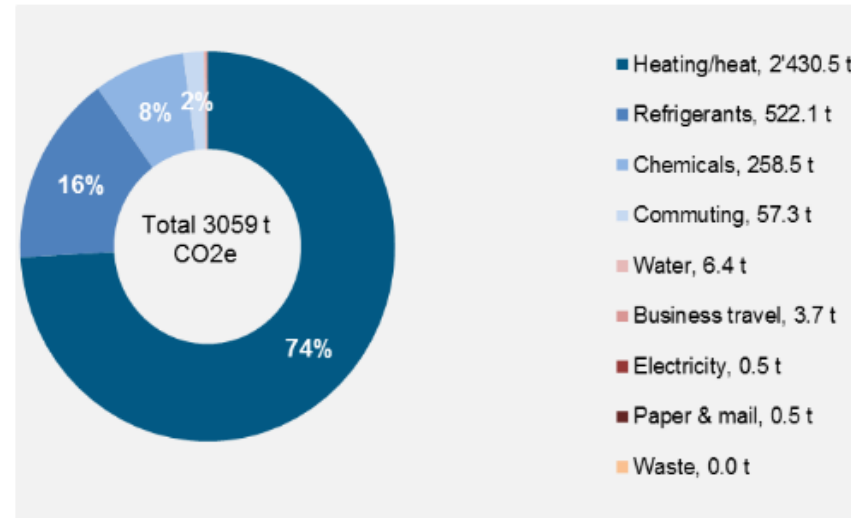
2 Data collection

3 Conversion into CO₂e with emission factors

4 Evaluation, interpretation, identification of hotspots

Scope 1 (direct emissions)		2019	2019
Source	Unit	Amount	t CO ₂
Heating			
Natural gas	kWh	5'309'463	1'081
Total Heating		5'309'463	1'081
Leakage refrigerants			
Antifrogen L	kg	1'240	0
R407C	kg	1	2
R410a	kg	1	2
R404a	kg	4	14
Total refrigerants	kg	1'246	18
Business travel (vehicles in possession of the organisation)			
Diesel vehicles	l	464'206	1'234
Gas vehicles	kg	59'963	155
Total business travel			1'388
Total direct emissions			2'488

Scope 2 (indirect emissions)		2019	2019
Source	Unit	Amount	t CO ₂
Electricity consumption			
Electricity consumption, mix	kWh	1'628'983	218
Electricity consumption, 100% renewable	kWh	7'857'865	1
Total electricity consumption	kWh	9'486'848	219
Business travel (vehicles in possession of the organisation)			
Electric vehicles	kWh	10'791	1.4
Total business travel	kWh	10'791	1
Total indirect emissions			221





If you have already implemented a GHG Accounting or you're working on it: What are your top 3 challenges?

Implementing Reduction Measures Scope 1 + 2



Drivers for Emission Reduction: Compliance, Employer Branding, Supply Chain, Investors, Cost Savings?

Carbon Pricing

- With a carbon price of EUR 100 per ton, around 70% of Switzerland's decarbonisation potential would be economic (macroeconomic perspective)
- CO₂ levy is CHF 120 per ton since January 2022

Source: McKinsey, Klimastandort Schweiz, 2022

Introduction: Internal Carbon Pricing

Goals:

- motivate climate friendly behaviour and decisions within companies
- Reduce future risks and costs through early anticipation & appropriate internalization of costs

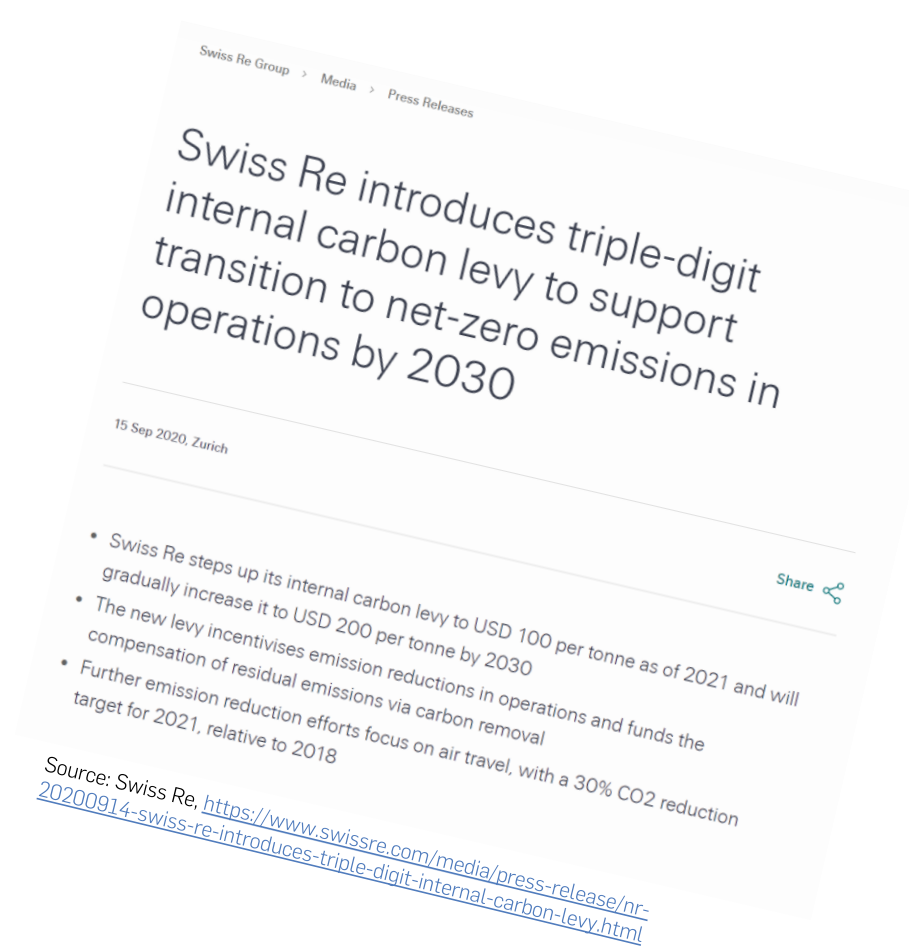
Method:

1. measure CO2 emissions of existing operations and projects for investment decisions
2. put a price on these emissions, for a financial value
3. Set the internal carbon price high enough to motivate your company to reduce emissions and increase investments in low-carbon projects

Benefit:

- Provides predictability to drive future-proof investments and innovation for low-carbon solutions
- Pooling of cash for offsetting and investing in carbon emission reduction projects (e.g. insetting)
- Strong signal to investors that climate-related risks are recognized and are being addressed

Source: Business Leadership Criteria on Carbon Pricing, UN Global Compact, UNFCCC and UNEP 2014 / GCNSL Webinar "Introduction to corporate climate action: Developing a climate strategy" 2022 / https://cdn.cdp.net/cdp-production/cms/reports/documents/000/005/651/original/CDP_Global_Carbon_Price_report_2021.pdf?1618938446





Have you already implemented an internal carbon pricing?

CO₂ levy – CHF 120/t CO₂

- CO₂ levy on Scope 1 emissions (e.g. burning of heating oil)
- 2/3 of revenue is redistributed annually to the population and the economy regardless of the amount of energy consumed
- 1/3 (max. CHF 450 million) invested in buildings programme to promote CO₂-effective measures such as energy-efficient renovations or renewable energies
- Exemptions
 - Operators of greenhouse gas-intensive installations can be exempted from the CO₂ levy if they commit to reducing their emissions.
 - Operators of **large** greenhouse gas-intensive installations must participate in the emissions trading scheme (ETS) and are exempted from the CO₂ levy. ETS limits emissions from most greenhouse gas-intensive industrial installations. absolute available quantity of emission allowances is defined in advance
 - Emission reduction paths with EnAW or act

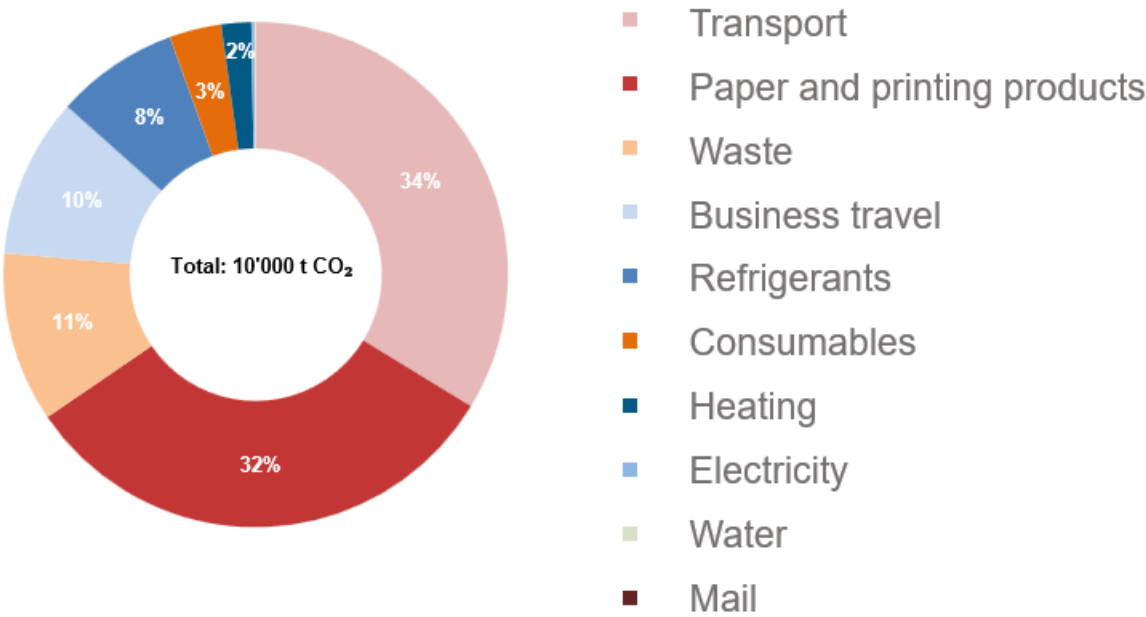
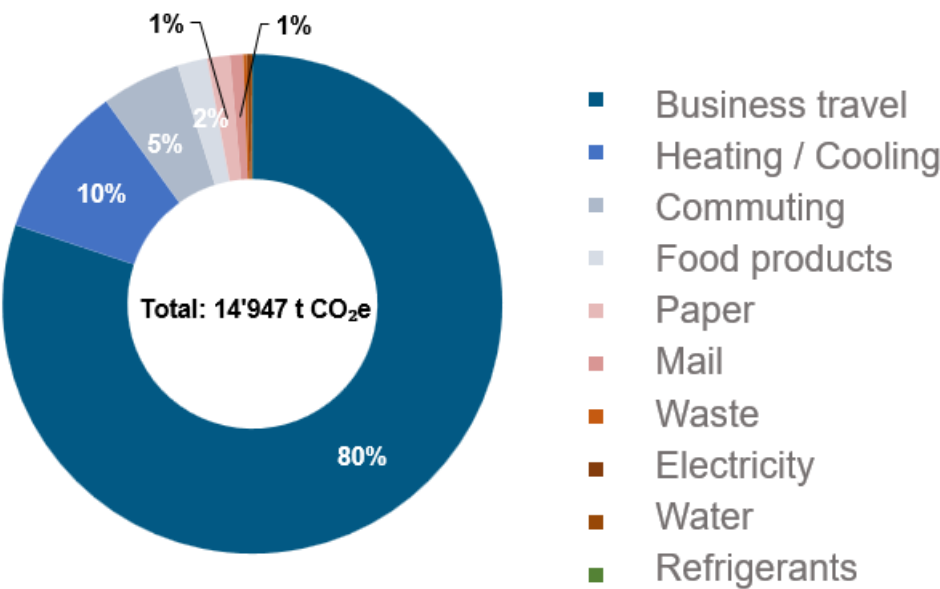
Source: bafu.admin.ch

How to implement reduction measures

1. **Identify Hotspots** of carbon footprint → biggest impact for reduction
2. **Deep Dive Hotspots:** Check the data behind the hotspots to understand the reasons
3. **Evaluate** possible **reduction measures** for corresponding hotspots:
e.g. potential CO₂-reduction, cost saving, required investment, marketing effect, awareness of employees, energy reduction, timeframe/complexity of implementation
4. **Define responsibilities, budgets & deadlines**
Governance Recommendation: Diverse Sustainability Board reporting to CEO or CFO with monthly meetings



Hotspots are sector specific



Types of measures

Technical measures




**Operation
optimization
measures**

**Organizational
measures**

**«Awareness»
measures**

Example Measure for Hotspot Heating

Description	Area	Responsible
Controlling the heating with timeclock, night and weekend temperature reduction, seasonal optimized, etc.	Heating/heat	John Miller

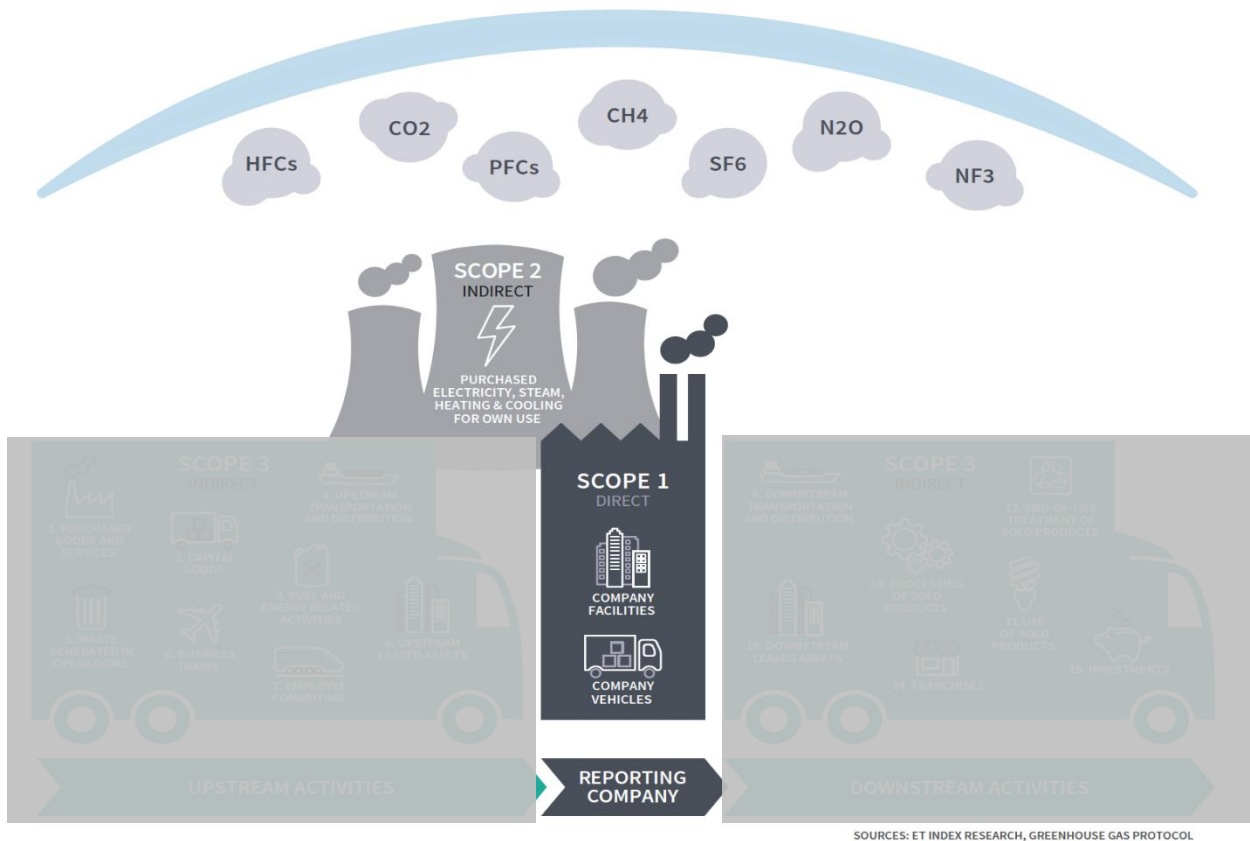
Status	CO ₂	kWh			\$\$\$	
planned	0 - neutral	2 - highly positive impact	0 - neutral	0 - neutral	2 - highly positive impact	2 - highly positive impact

CO₂ reduction / energy efficiency / time saving / marketing effect / cost reduction / employee satisfaction/awareness

Quantification of individual measures to estimate reduction potential

- Compare raw data (before/after), calculate difference
- Multiply difference by EF = reduction potential
- Further to be considered for reduction paths:
 - Company growth
 - Methodological changes (e.g. system boundaries through acquisitions or mergers, EF)
 - Market developments (e.g. electricity market)

Reduction Measures Scope 1 + 2 are often straight forward



SOURCES: ET INDEX RESEARCH, GREENHOUSE GAS PROTOCOL

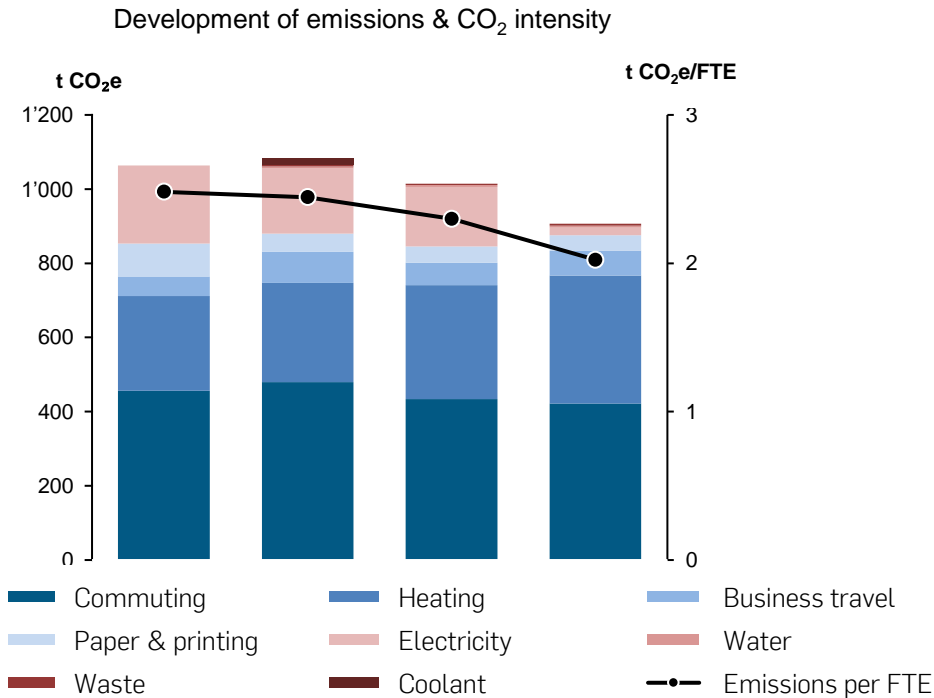
Scope 1 Emission Reduction Measures

- Replacement of fossil fuel heating (switch to district heating or heat pump)
- Mobility with company-owned vehicles: electric car fleets, public transport bonus, etc.
- Transport with company-owned vehicles: testing alternative fuels (e.g. biodiesel, LBG, hydrogen, electric)
- Use alternative coolant or lake water district cooling

Scope 2 Emission Reduction Measures

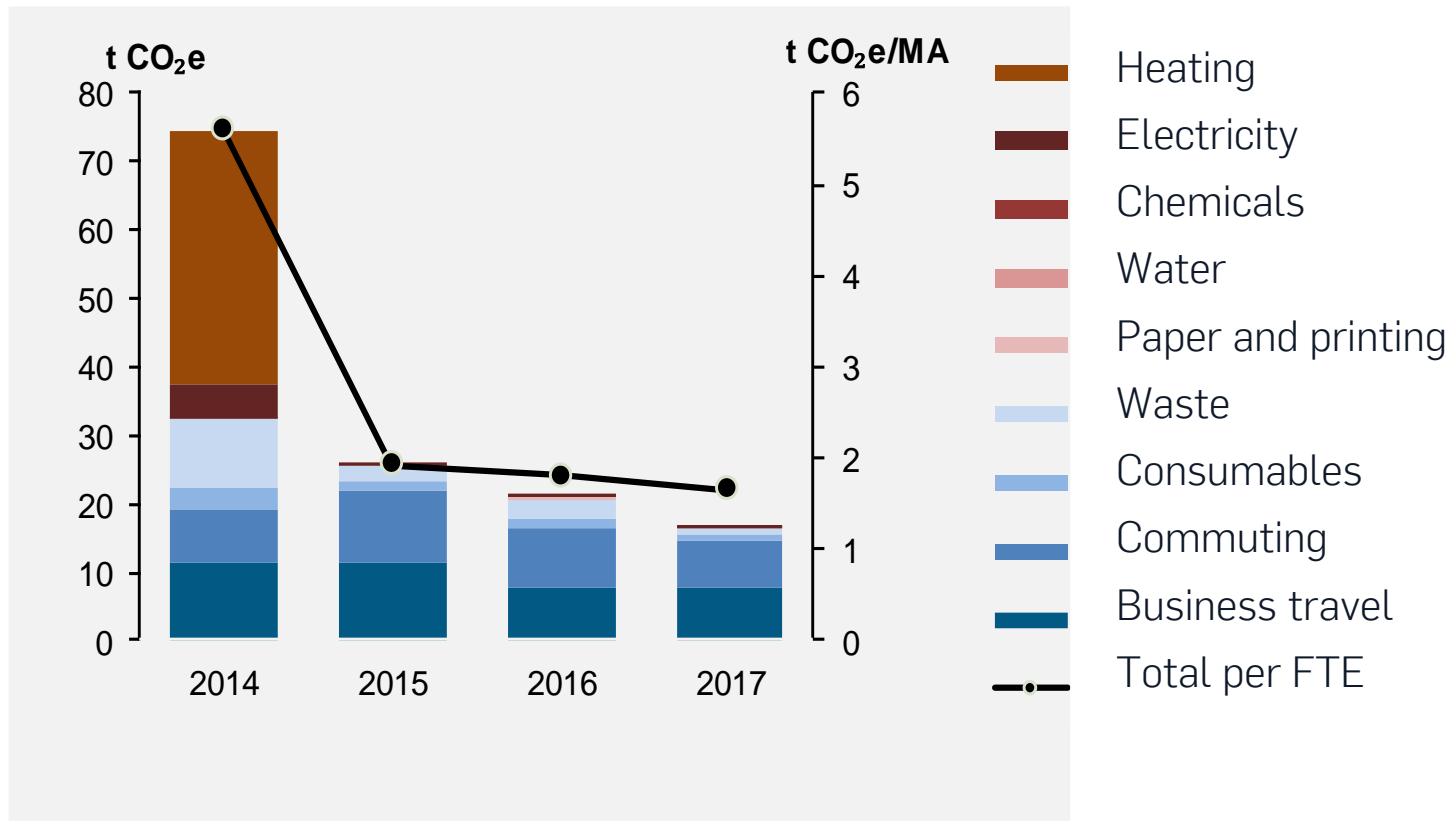
- Use of LEDs to reduce energy consumption
- Installation of photovoltaics
- Purchase green electricity, e.g. buying energy certificates (e.g. hydro power)
- Building efficiency improvements (e.g. insulation)
- Create awareness amongst employees

After one year: Re-Calculation of Footprint!



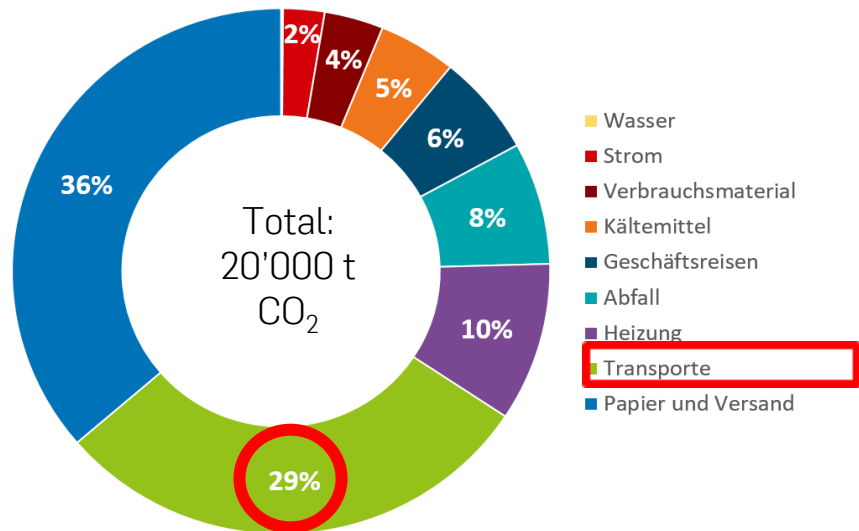
Hotspot Heating: Example

Company identified hotspot in footprint 2014. Switch from oil heating to heat pump and ground water



Hotspot Transport Scope 1: Example

Company active in logistics with company-owned trucks. Hotspot identified.



Goal: Fossil-free supply with LBG/CNG.
Support through research project

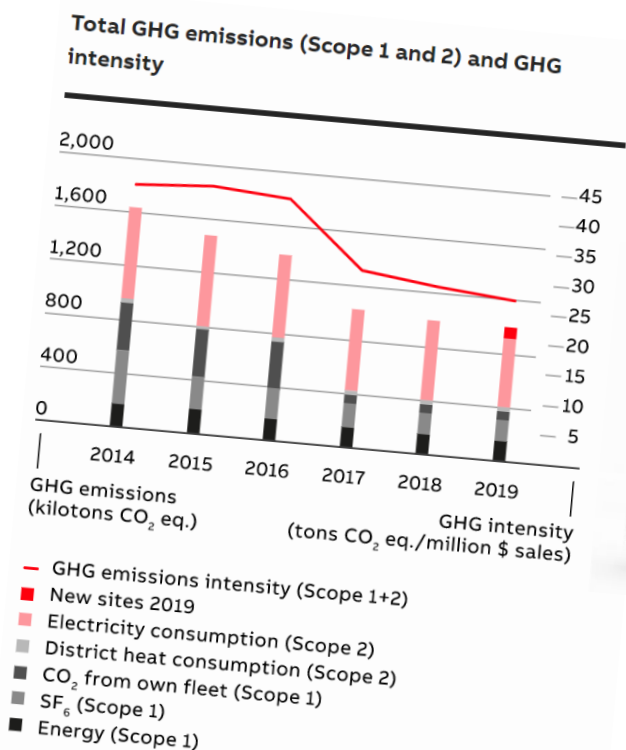
Team: Logistics, CSR

Implementation until 2030

Inspiration from companies

Axpo and IWB to build Muttsee solar plant; Denner to use the electricity

<https://www.axpo.com/ch/en/about-us/media-and-politics/>, 2021



<https://sustainabilityreport.abb.com/2019>



Mistral project cooling telephone exchanges using fresh air

Mistral achieves energy savings equivalent to the consumption of 9,000 offices and apartments or

45 GWh p.a.

Electricity requirements covered by renewable energy

Swisscom buys certificates every year and offsets the amount of non-renewable electricity used at a level of

100 % <https://www.swisscom-report.ch/en/sustainability-report/sustainability-report/energy-efficiency-and-climate-protection/co2-emissions-energy-consumption-efficiency>

SWISS POST

News Profile Responsibility Innovation Media

About us > Responsibility > Our priorities > Delivery by electric scooter

On the road with an electric scooter

"It is the best thing that has happened to me in my entire career with Swiss Post," says mail carrier Urs Schaub about his electric tricycle. He rides it every day in Ormalingen (BL), silently and emission-free.

All of the 6,000 or so scooters used by Swiss Post for delivery purposes are electrically powered – using only eco-electricity produced in Switzerland.

<https://www.post.ch/en/about-us/responsibility/our-priorities/delivery-by-electric-scooter>

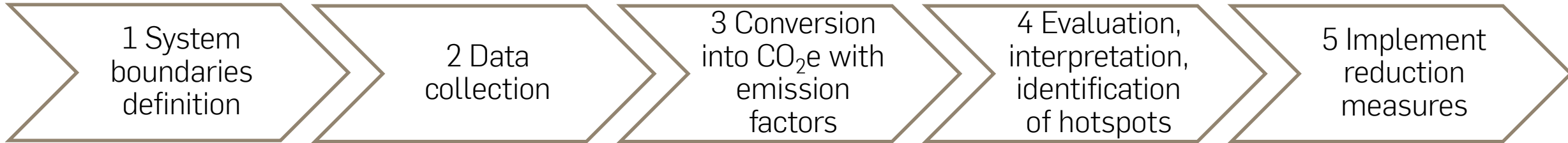
Some remarks on the Swiss Energy Market

- Swiss energy mix: 80% „climate friendly“. Mainly thanks to hydro & nuclear power
- Especially in winter Switzerland relies on imports. Imports are getting greener every year thanks to investments in wind and solar power in the EU
- Lack of EU Framework Agreement → limitation access to european grid from 2025 expected
- Investment in fossil fuel based power plants is being discussed (e.g. gas power)
- Possible result: Decarbonisation slowed down & extensive offsetting

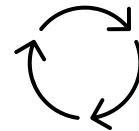
Source: McKinsey, Klimastandort Schweiz, 2022 & www.verkehrslub.ch/angebote/services/webinare/archiv-webinare_2022

Key Take-Aways

Checklist for a corporate GHG Accounting Scope 1+2



... and repeat annually!



Reduction Measures Scope 1 + 2 are often straight forward:

Switch to renewable energy sources for heating, cooling, mobility and electricity.

....but make no mistake – scope 3 is waiting for you...

What's next

19
Sept.

Webinar 1 – Introduction to corporate climate action: Developing a climate strategy
Also in German on 14 September and French on 15 September

Today

Webinar 2 – Corporate Carbon Footprint Scope 1 and 2: How to manage GHG accounting and implement reduction measures

10
Oct.

Webinar 3 – Corporate Carbon Footprint Scope 3: How to manage indirect emissions and value chain engagement

24
Oct.

Webinar 4 – SBTs and Net Zero: Principles, challenges, and good practices



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In collaboration with



Thank you for attending!



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Calculating the CO₂ footprint



Quantification method	Description	Relevant data types
Direct measurement	Quantification of GHG emissions using direct monitoring, mass balance or stoichiometry GHG = Emissions Data x GWP	Direct emissions data
Calculation	Quantification of GHG emissions by multiplying activity data by an emission factor GHG = Activity Data x Emission Factor x GWP	Activity data Emission factors

Source: GHG Protocol

Comparison of product footprint and company footprint



Product Footprint

- CO₂ -emissions of a product or service during its lifetime
- Standard: ISO 14044 and the Greenhouse Gas Protocol



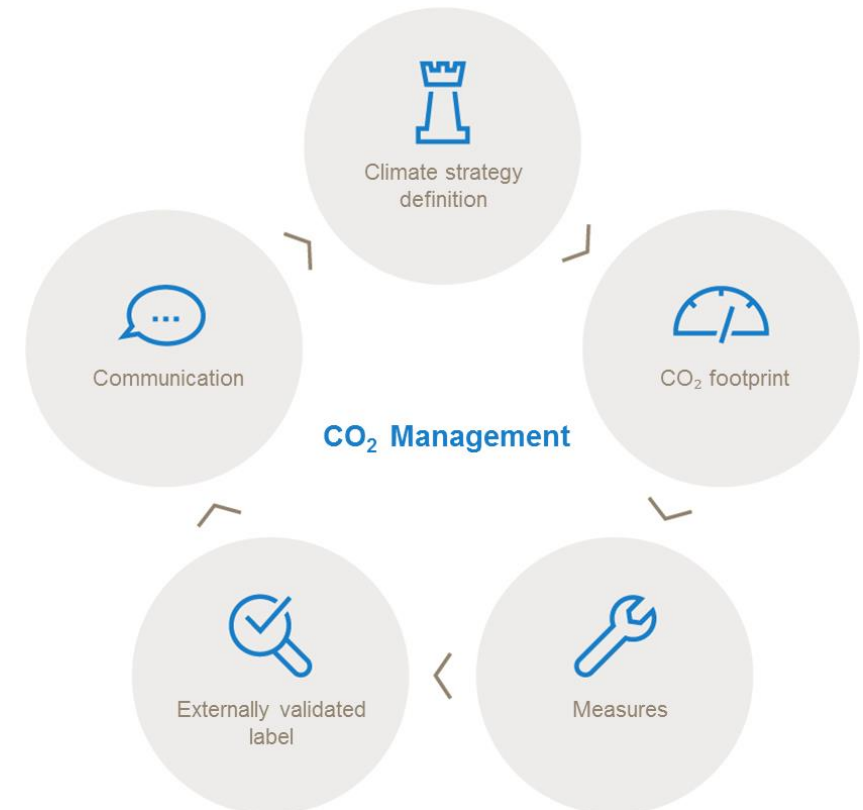
Company Footprint

- CO₂ -emissions of a company during a defined period (e.g. calendar year)
- Standard: ISO 14064-1 and Greenhouse Gas Protocol

Iterative process according to the «Management Approach»

An integral CO₂ management in a company starts with the definition of a **climate strategy**

- What does an integrated strategy mean/include?
- Why is the integrated approach important?



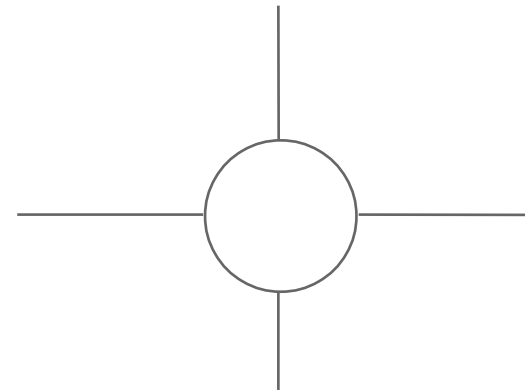
Drivers for CO₂ management



Regulations and standards

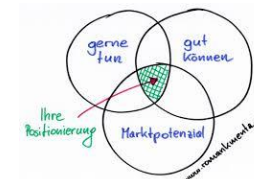


Reducing costs and increasing benefits



Stakeholder requirements

Corporate motivation



More reasons

- Making a contribution to climate protection
- Potential savings in energy costs and resources
- Rising raw material prices, existing or future legislation (e.g. CO2 tax, cantonal targets such as large consumer articles)
- Existing or future legislation (e.g. CO2 tax, cantonal targets such as the large consumer article)
- Access to capital markets/investors (e.g. CDP/ESG/SRI/Impact Investment)
- Process optimisation and innovation
- Position yourself as an attractive employer
- Strengthen reputation and competitiveness
- B-to-B printing
- Resulting from materiality analysis within the framework of sustainability management

See also reading WWF Germany & CDP (2014):
From emissions report to climate strategy, p. 9ff



The 4 current main drivers 2022

- Capital Markets/Investors: ESG, Sustainable Finance
- Responsible employer: Employer branding
- B-to-B: Pressure from (large) customers
- State: Regulatory pressure (compliance)



Implementation of a climate strategy

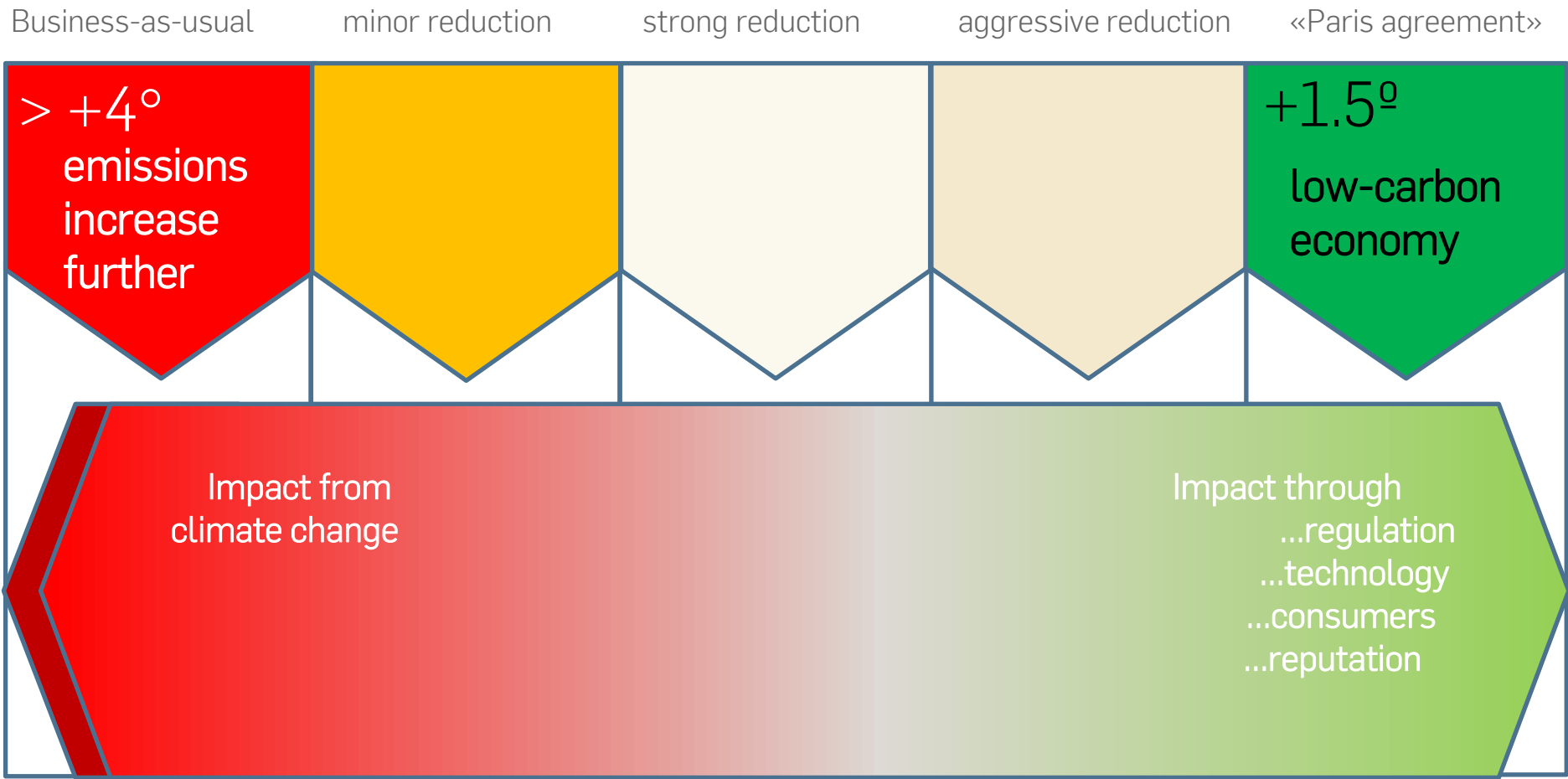
- How to establish a climate strategy in a company?
- Bottom up or top down?
- Company culture and soft factors, how to deal with them?
- Responsibilities?
- Role model? Pioneer?
- Motivation?
- Incentives?

→ Important framework conditions to realize measures

A climate strategy is based on..

1. SWOT analysis of current business model to review the business model in anticipated market conditions, this includes the
 - a) **Stakeholder** and **industry** analysis
 - b) Analysis of physical and transitional risks
2. Hotspot analysis of CO₂ emission sources for prioritization of measures
3. Quantitative CO₂ emission **reduction goal and qualitative goals** to have the organization on the same path

Climate risks for companies (1/2)



Source: based on IIGCC (2018), IPCC (2013)

Climate risks for companies (2/2)

- **Physical** risks (weather, temperatures, catastrophes)
- **Transition** risks
 - **Regulative** risks (laws, standards, political changes)
 - **Market** risks (geopolitical dependencies, customer expectations, trends) / Price risks (volatility of prices, costs structures, availability of resources)
 - **Reputation** risks (stakeholder requirements, media/journalists, changes in society)
 - **Legal** risk (activists, court costs)

Questions of an opportunity and risk analysis

- Is the expected effect short or long term?
- Is the level of impact local, regional, national or international?
- What is the probability of the risk/opportunity?
- Is a one-off or frequent occurrence of the expected risk/opportunity to be expected?
- Can the risk be actively minimised or can the opportunity be seized?



Climate opportunities for companies

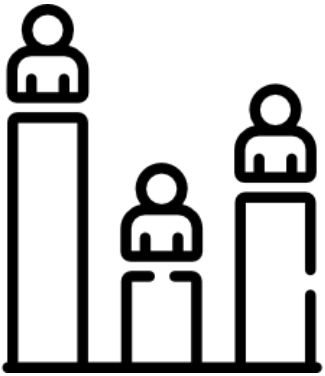
- Energy- and resource efficiency often goes hand in hand with **CO₂** emission as well as **cost** reduction
- Companies can become less dependent on energy and raw material prices
- Stakeholders (customers and **investors** in particular) consider companies' climate performance and increasingly demand data and transparency
- Climate protection measures lead to new business models and can drive **innovation** (e.g. circular economy)
- Increase attractiveness as an **employer**; strengthen image => make a contribution to climate protection; role model

Climate Goals



slido

- What would you consider as an ambitious climate target?



Elements of a (specific) climate goal

- Climate goals primarily depend on the climate strategy and the vision behind it (e.g. «net-zero»?)
- “if you can’t measure it, you can’t manage it”
- Set quantitative (**reduction**) goals with a **time frame**, e.g. -20 % of CO₂-emissions until 2025
- Calculation at different **levels** (with different methods): Very **lean** to very **elaborate**
- Transparent **plan of action** that describes **how** these goals and targets are to be achieved, think about KPIs

Reduction target and calculation

Steps to a realistic goal

- Recommendations: first calculate carbon footprints for to consecutive years
- Define target year
- Decide for a relative or absolute reduction target
- Identify reduction potential via measures and estimate it for unknown measures
- Ambitious or conservative goal?

Two different perspectives

Bottom-up approach

(internal viewpoint)

- What measures are planned?
- What additional measures can be implemented?
- What are your ambitions? Are technological developments expected?

Top-down approach

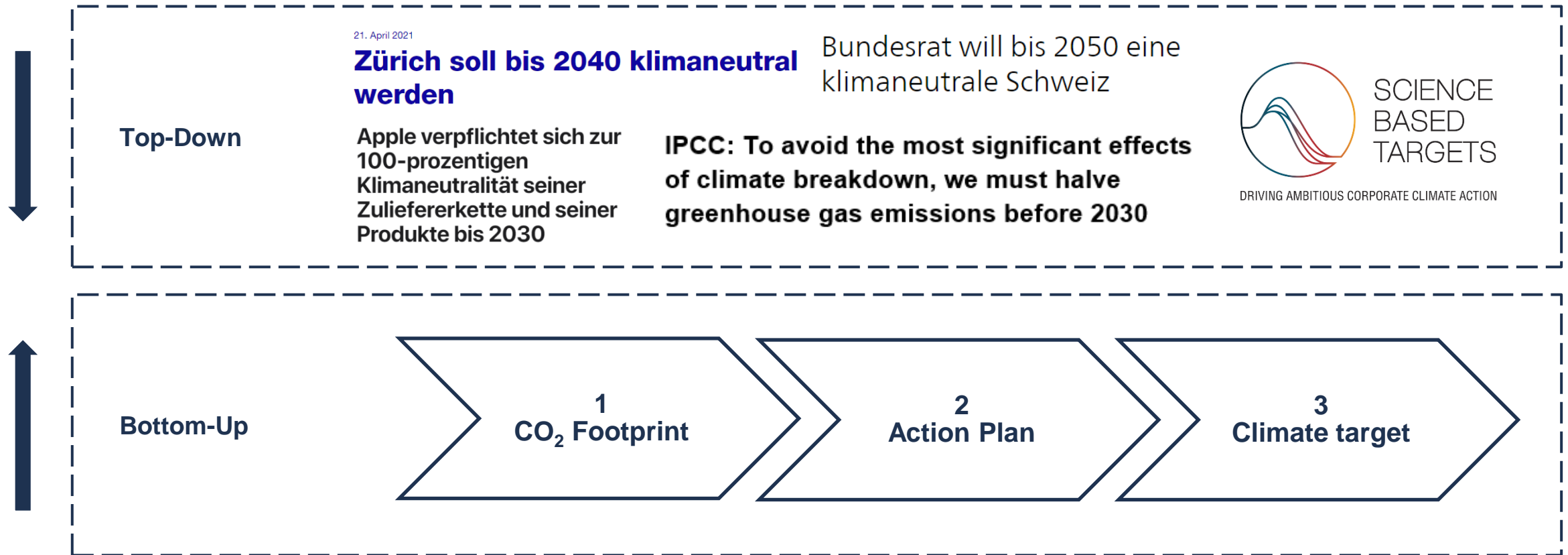
(contextualisation)

- Important contextualization (Science based target (SBT*), competitors, CH climate targets, etc.)
- How to reach the $< 1.5 / 2^{\circ}\text{C}$ target?
- Sectoral and other criteria to determine the reduction target

→ adhering to globally agreed 1.5°C limit can also safeguard long-term competitiveness.



Two different perspectives



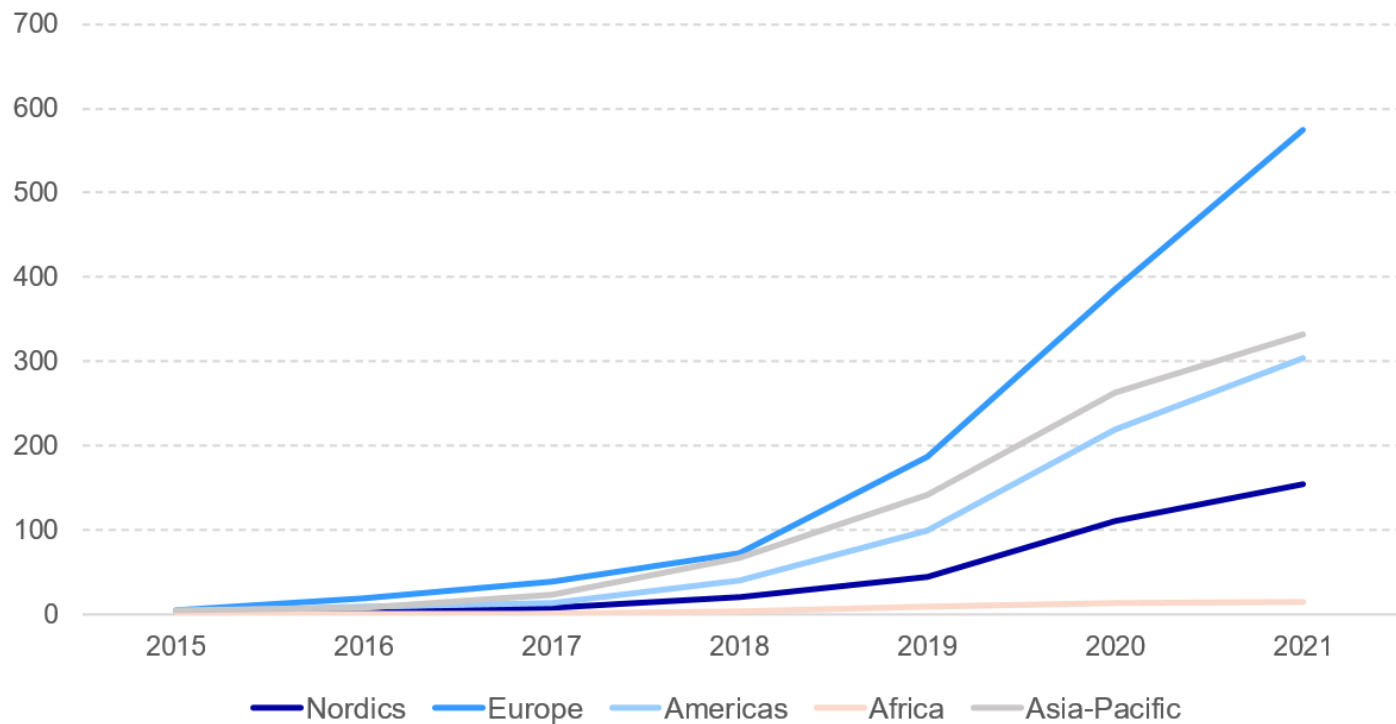
Science-based target

- Science-based climate target in line with the results of the Paris Agreement (2 degree target)
- ~2,500 companies with commitment (of which ~1,200 accepted). Number rapidly increasing
- Approximately -2.5 – 4.2 % per year is certainly science-based
- Relatively complex methods
- More details at <http://sciencebasedtargets.org/>

Ggf.
Aktualisieren

Growing number of companies with an SBT

Number of companies committing to SBTi globally
(Cumulative numbers)



Source: Science Based Targets and Nordea

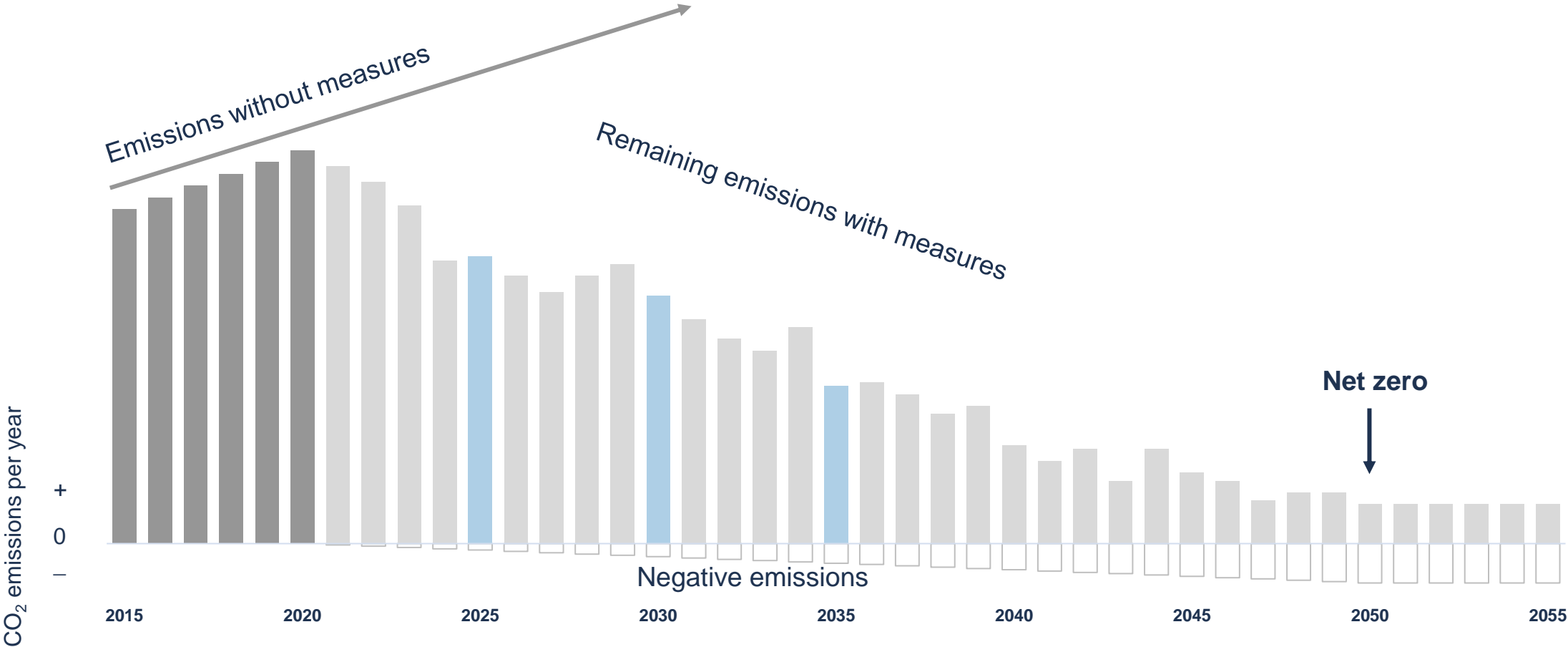


SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION



The path to net zero



Science Based Target



Climate target: 5-15 years

System boundaries:
Scope 1+2: **min. 95 %**
Scope 3: min. **66 %**

Annual reduction:
Scope 1+2: **4.2 %**
Scope 3: **2.5 - 4.2 %**

Science Based Target

Net-Zero Standard



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

Climate target: **before 2050**

System boundaries:
Scope 1+2: min. **95 %**
Scope 3: **min. 90 %**

Annual reduction:
Scope 1+2: **4.2 %**
Scope 3: **4.2 %**

Examples from Swiss companies



Schindler

Example: Schindler

Schindler committed to
science-based targets

–50%

of scope 1 and 2 GHG emissions
by 2030

–42%

of scope 3 GHG emissions
by 2030

Net zero

by 2040



SCIENCE
BASED
TARGETS

Schindler commits to full-scope net-zero emissions by 2040

Schindler today announced its commitment to reaching net-zero greenhouse gas emissions worldwide by 2040. These science-based emissions reduction targets have been approved by the Science Based Targets initiative (SBTi), the global body that helps businesses set emissions reduction target in line with a 1.5°C future.

Example: VALSER

„VALSER hat sich zum Ziel gesetzt, die CO₂ Emissionen bis 2030 gegenüber 2016 um 30 % zu reduzieren, indem zum Beispiel vermehrt die Bahn für den Transport, PET-Verpackungen aus 100% rezykliertem Material oder ausschliesslich erneuerbare Energien für die Produktion genutzt werden. Alle verbleibenden oder nicht vermeidbaren CO₂-Emissionen kompensieren wir mit Zertifikaten aus hochwertigen Klimaprojekten“



Example: HUG AG

DIE HUG-FAMILIE UND DER KLIMASCHUTZ

In allem was wir tun, folgen wir dem Grundsatz «Reduktion vor Kompensation».

Wir wollen uns im Rahmen der Science Based Targets Initiative wissenschaftlich validierte Klimaschutzziele setzen. Deshalb ermitteln wir bis Ende 2023 unseren CO₂-Fussabdruck in der Lieferkette und setzen uns anschliessend Ziele, die dem Ambitionsniveau des Pariser Klimaabkommens entsprechen.

Beim Klimaschutz bauen wir auf ein **modulares Vorgehen**:

1. Teilnahme am Programm der Energie-Agentur der Wirtschaft (EnAW) zur **kontrollierten Reduktion** von CO₂-Emissionen aus unserer Produktionstätigkeit.
2. Kontinuierliche Verbesserung unserer **Energieeffizienz**.
3. Einsatz von **erneuerbarer Energie**: Strom aus Schweizer Wasserkraft und Solarenergie.
4. Jährliche Berechnung der **CO₂-Bilanz unseres betrieblichen Fussabdrucks**. Ausgleich von Treibhausgasemissionen mit Kompensationsprojekten.
5. Berechnung unseres CO₂-Fussabdrucks in der Lieferkette bis Ende 2023.
6. Zusätzliche Ziele und Massnahmen auf Produktebene und in unserer Lieferkette zur Reduktion unseres CO₂-Fussabdruckes.



Gütesiegel der Firma Swiss Climate AG für Unternehmen, die zur Reduktion von Treibhausgasemissionen beitragen. Die CO₂-Kompensation der ermittelten Emissionen erfolgt über CO₂-Zertifikate aus qualitativ hochwertigen Klimaprojekten. Damit sich ein Unternehmen als klimaneutral bezeichnen darf, müssen mindestens die Treibhausgasemissionen der Kerngeschäftstätigkeit vollständig mit bereits ausgestellten Zertifikaten kompensiert werden. Die Zertifikate entsprechen anerkannten Standards wie z.B. Gold Standard, VCS, ISO 14064-2 oder SC-FCS.

KLIMASCHUTZ-POSITIONSPAPIER



Example: Swiss Re

Swiss Re Group > Our business > Asset Management > Responsible investing in practice





Climate action

Responsible investing has many aspects. A holistic Responsible Investing strategy should also consider climate-related activities as an integral part. With ours, we actively support the transition to a net-zero emissions economy and mitigate climate-related risks.

Our approach Risks Opportunities Targets & KPI Net-Zero Asset Owner Alliance

Swiss Re is a long-term investor. As a result, it is important that we also take a long-term view on the risk factors that may have an adverse impact on our portfolio, such as climate change. We therefore address climate change to make our portfolio more resilient.

Our investment-related climate strategy

 Set targets ¹	 Take actions	 Measure	 Report
Define targets to reach net-zero emissions in alignment with 1.5°C by 2050 at the latest <ul style="list-style-type: none">• Financing targets	Actively manage transition and physical risks, and support real economy transition to net zero <ul style="list-style-type: none">• Renewable infrastructure loan investment target² and implementation• Green bond investment target³ and implementation	Measure and monitor trajectory of needed development towards net zero <ul style="list-style-type: none">• Renewable infrastructure loan investments• Green bond investments	Inform shareholders and other stakeholders transparently on developments <ul style="list-style-type: none">• Financial Report: TCFD• Sustainability Report• Responsible Investing homepage• Assessments and questionnaires (eg PRI, CDP)
<ul style="list-style-type: none">• Voting & engagement targets• Sub-portfolio targets<ul style="list-style-type: none">• Corporate bonds• Listed equities• Real estate• Sector targets	<ul style="list-style-type: none">• Exercise voting rights & engage• Corporate bonds & listed equities coal phase-out & coal expansion restriction• Infrastructure loan & private placement fossil fuel⁴ guidelines	<ul style="list-style-type: none">• Voting & engagement records• Carbon Footprint<ul style="list-style-type: none">• Corporate bonds• Listed equities• Real estate• Government bonds• Fossil fuel exposure• Forward-looking indicators	

¹ In alignment with the Net-Zero Asset Owner Alliance Inaugural 2025 Target Setting Protocol.
² Investment target also includes social infrastructure loans.
³ Investment target also includes social and sustainability bonds.
⁴ Fossil fuel: coal, oil & gas (including oil sands).
Source: Swiss Re



Example: Lufthansa Group

THE LUFTHANSA GROUP'S CLIMATE PROTECTION GOALS

The company's CO₂ balance is to be halved by 2030 compared to 2019 and to be neutral in 2050

Air transport connects people, countries and cultures around the world. Its economic importance is enormous, it drives employment and it ensures the fast and reliable flow of goods. At the same time, it has undesirable effects on climate and the environment. The Lufthansa Group takes its responsibility for effective climate protection seriously - with a clearly defined path toward CO₂ neutrality.

More (international) examples

Yet: carbon neutrality alone ≠ specific climate goal

PRESS RELEASE
July 21, 2020

Apple commits to be 100 percent carbon neutral for its supply chain and products by 2030

In our founding decade, Google became the first major company to be carbon neutral. In our second decade, we were the first company to achieve 100% renewable energy. By 2030, we aim to be the first major company to operate carbon free.

Shell's target is to become a net-zero emissions energy business by 2050, in step with society's progress in achieving the goal of the UN Paris Agreement on climate change.

Zalando Goes Carbon Neutral Starting Today

Published on 30.10.2019

Siemens is going carbon neutral

With our commitment to turn our operations carbon neutral by 2030, Siemens has set a clear signal that companies must take leadership in driving decarbonization. It is our firm belief that companies play a pioneering role in the fight against climate change. Our goal is clear: All Siemens production facilities and buildings worldwide are to achieve a net zero-carbon footprint by 2030. This program not only benefits humanity and the environment, but also comes with sustainable economic advantages for our company. Meantime, we have already reduced 54% of our CO2 footprint.



Global Compact
Network
Switzerland & Liechtenstein