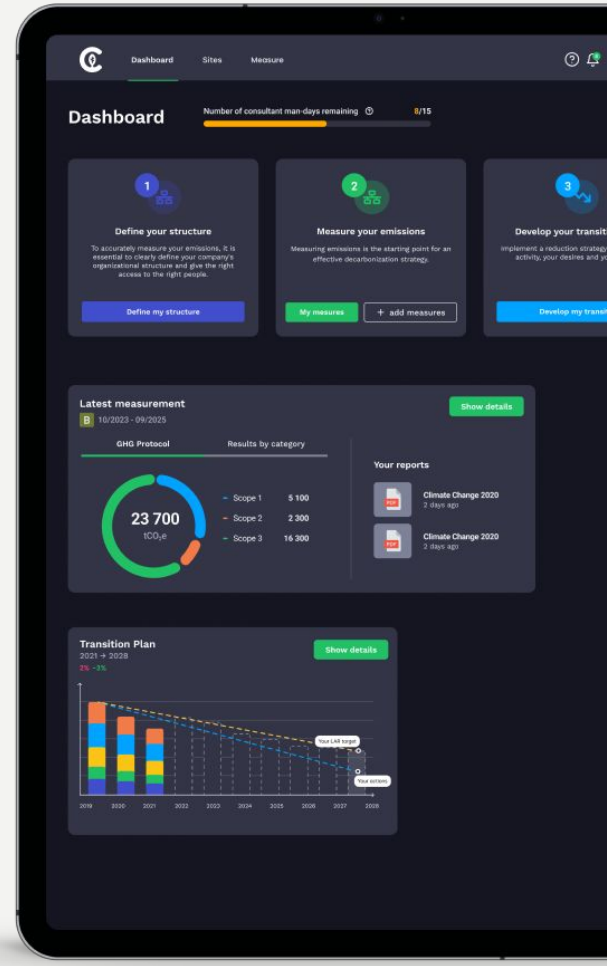
How to measure and reduce your company's carbon footprint?

ClimateSeed combines technology with the expertise of its consultants to optimize your carbon footprint in line with national and international standards.



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GREENHOUSE GAS PROTOCOL · ADEME · Bilans GES Organisation · ISO 14064 · CDP DISCLOSURE INSIGHT ACTION · PCAF Partnership for Carbon Accounting Financials · SCIENCE BASED TARGETS

What is a carbon footprint?

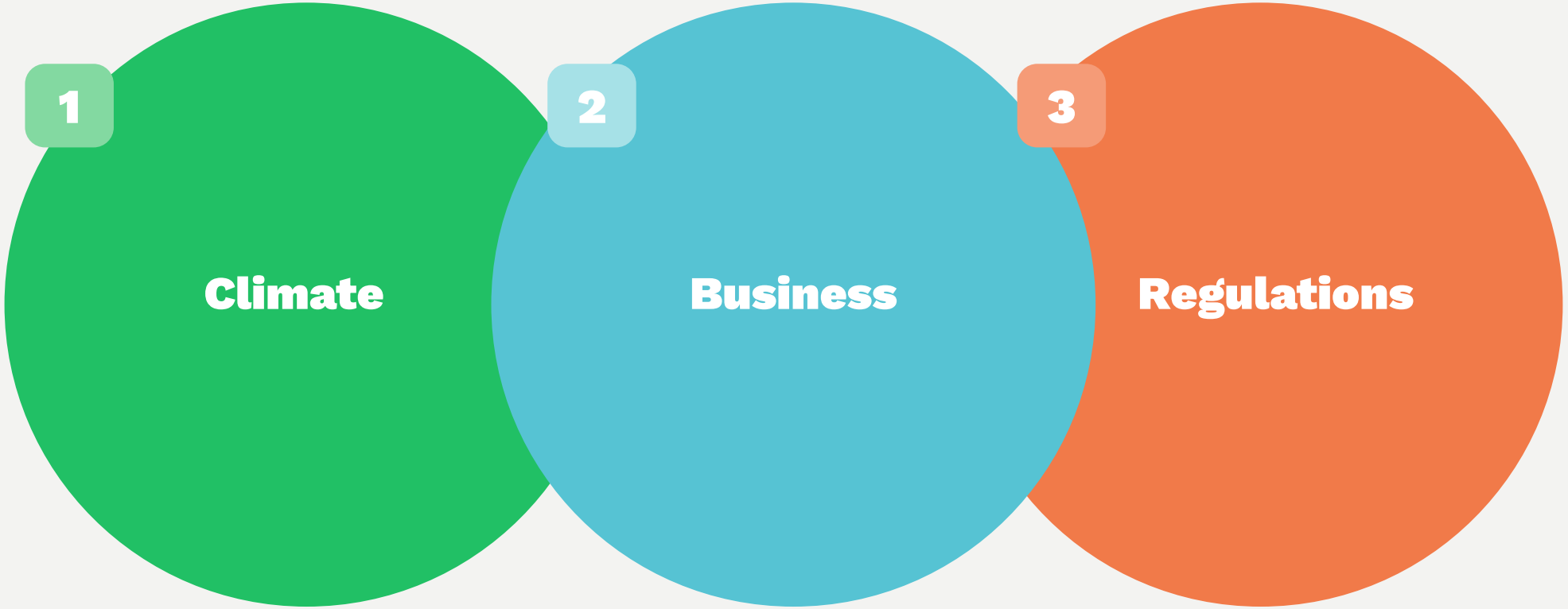
The carbon footprint is the **quantification of carbon dioxide and other greenhouse gas (GHG) emissions** generated over a given period.

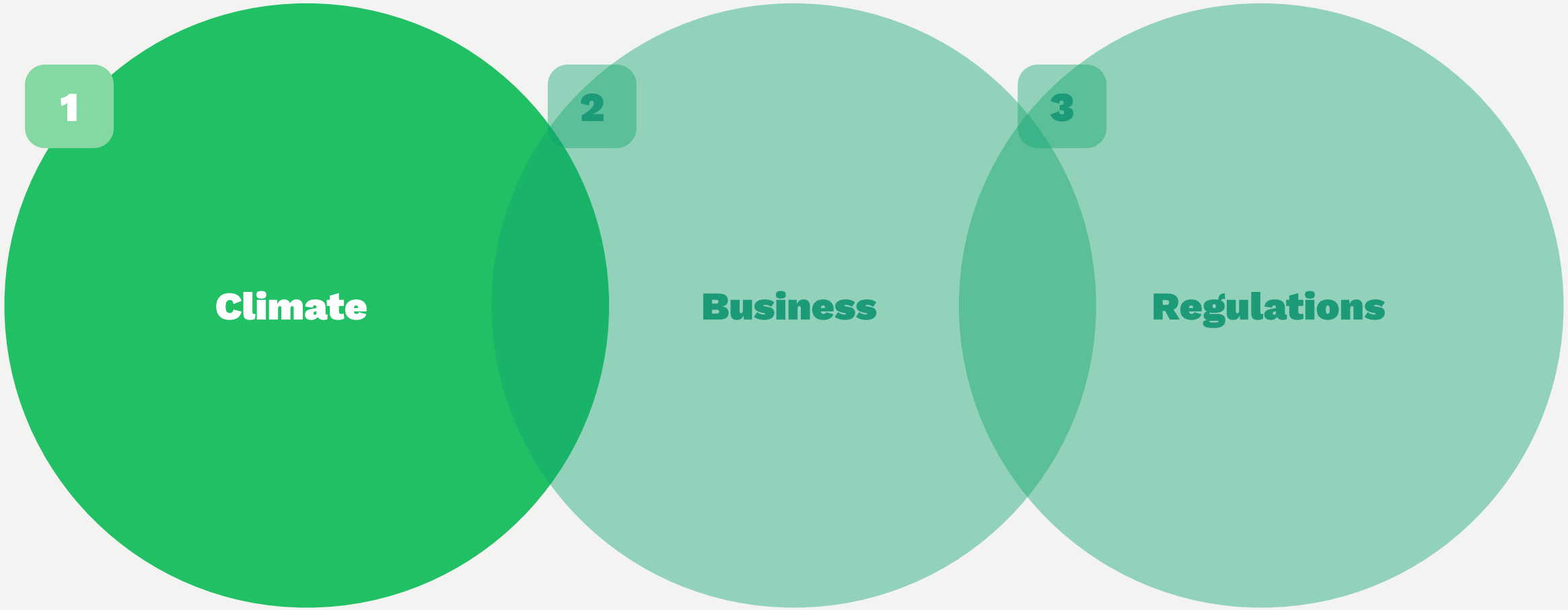
GHG Protocol

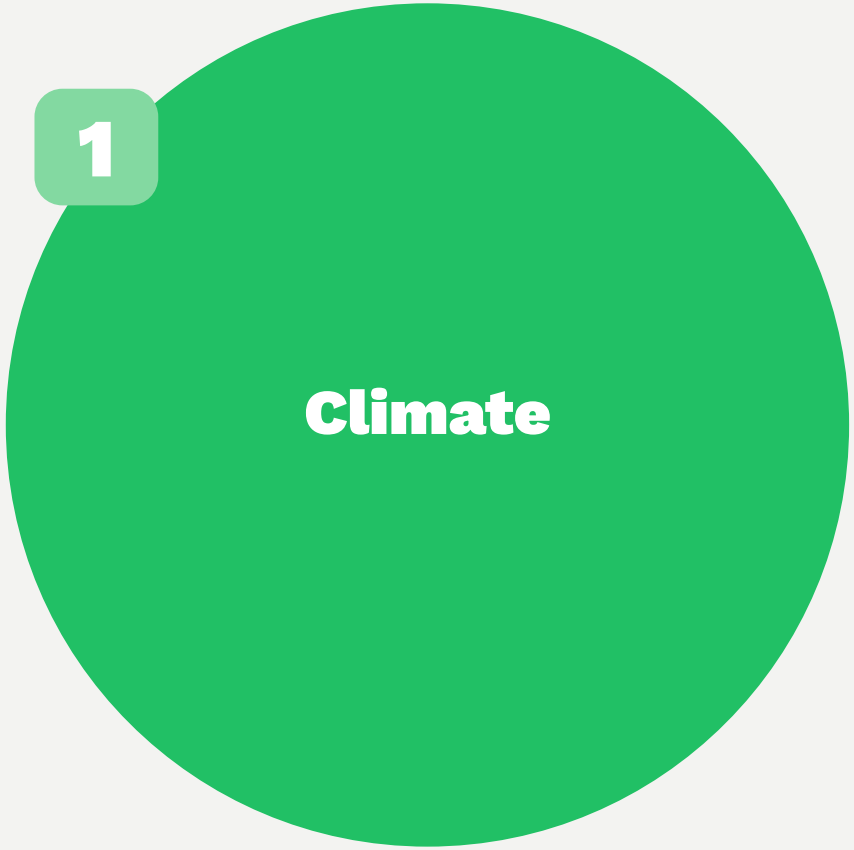
Bilan Carbone

ISO 14064

Why measure your emissions?







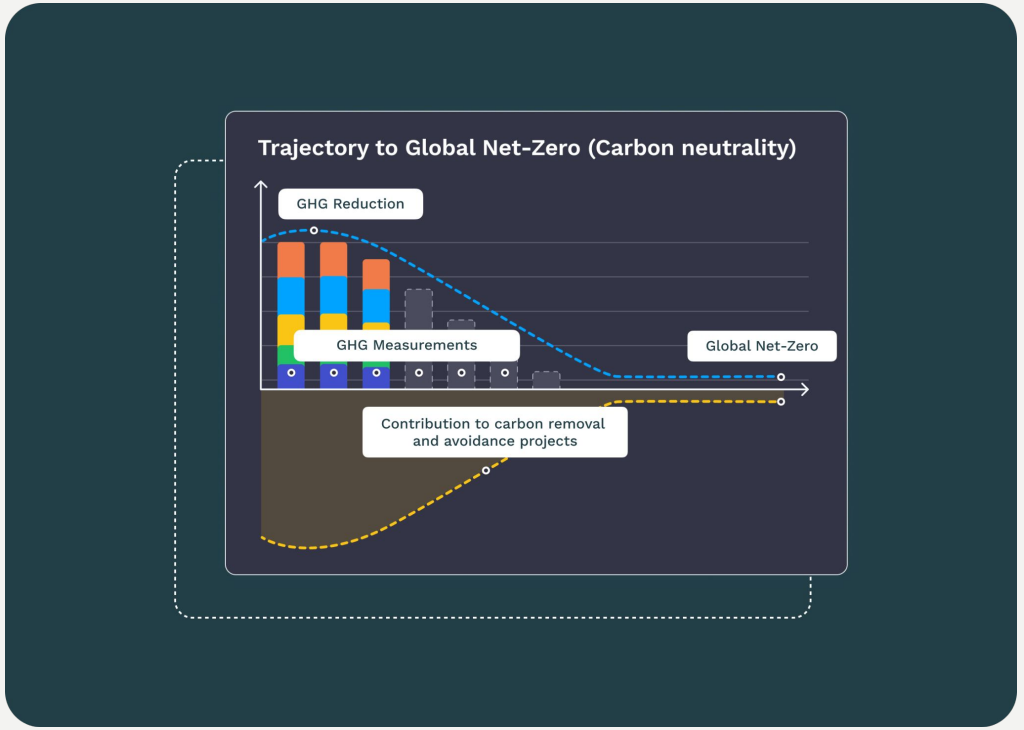
From a scientific point of view, human activity bears most of the responsibility for climate change (IPCC).

In order to limit the global temperature rise to 1.5 degrees above pre-industrial levels, as stipulated in the Paris Agreement, **companies must take the necessary steps to reduce their emissions and contribute to global carbon neutrality.**

Carbon neutrality: the scientists' viewpoint

Carbon neutrality corresponds to an overall balance between anthropogenic emissions and absorptions.

To support the goal of global carbon neutrality, the IPCC indicates that it is important for an organization to draw a parallel:



1. **Reduce emissions in its value chain**
2. **Contribute to emission avoidance and sequestration projects beyond its value chain**

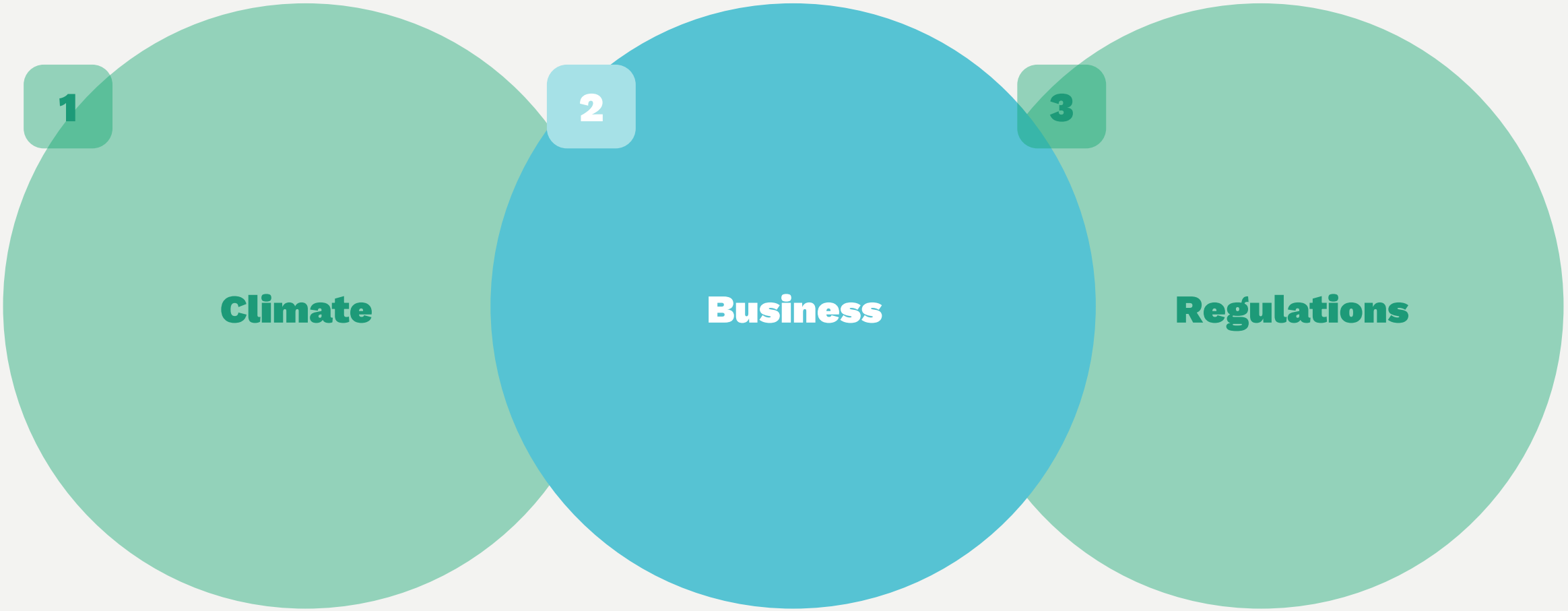
1

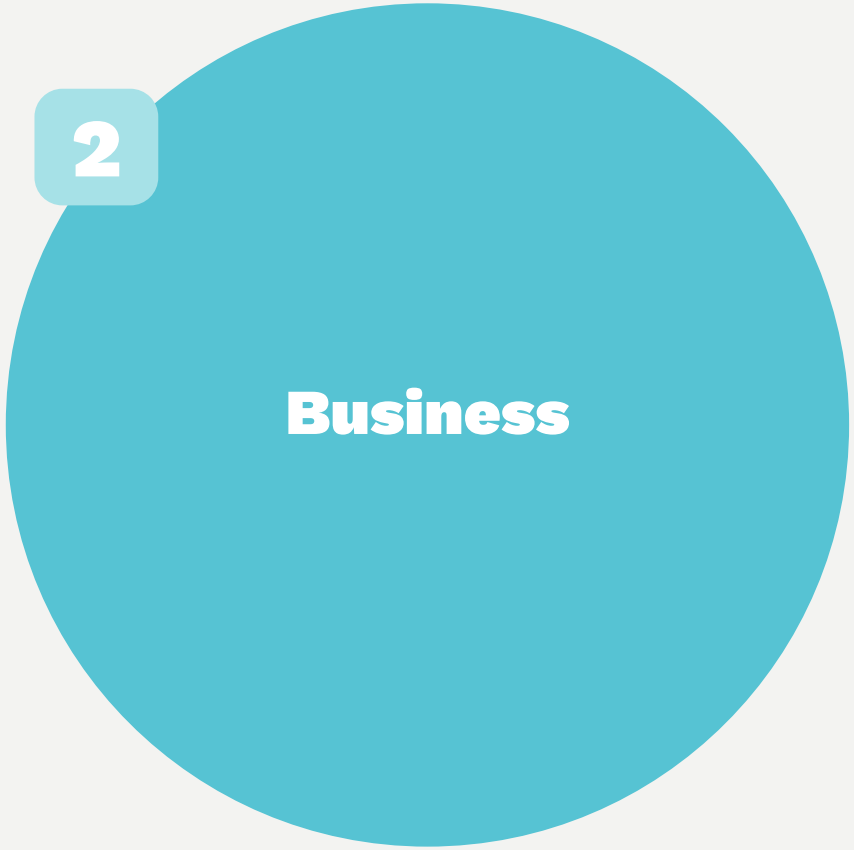
Climate

The role of
carbon footprint

The carbon footprint is analyzed to **determine reduction priorities,** i.e. how to focus efforts to reduce carbon and other greenhouse gas emissions.

Using the carbon footprint to identify levers for action is essential to drawing up an effective reduction plan.





Risk reduction

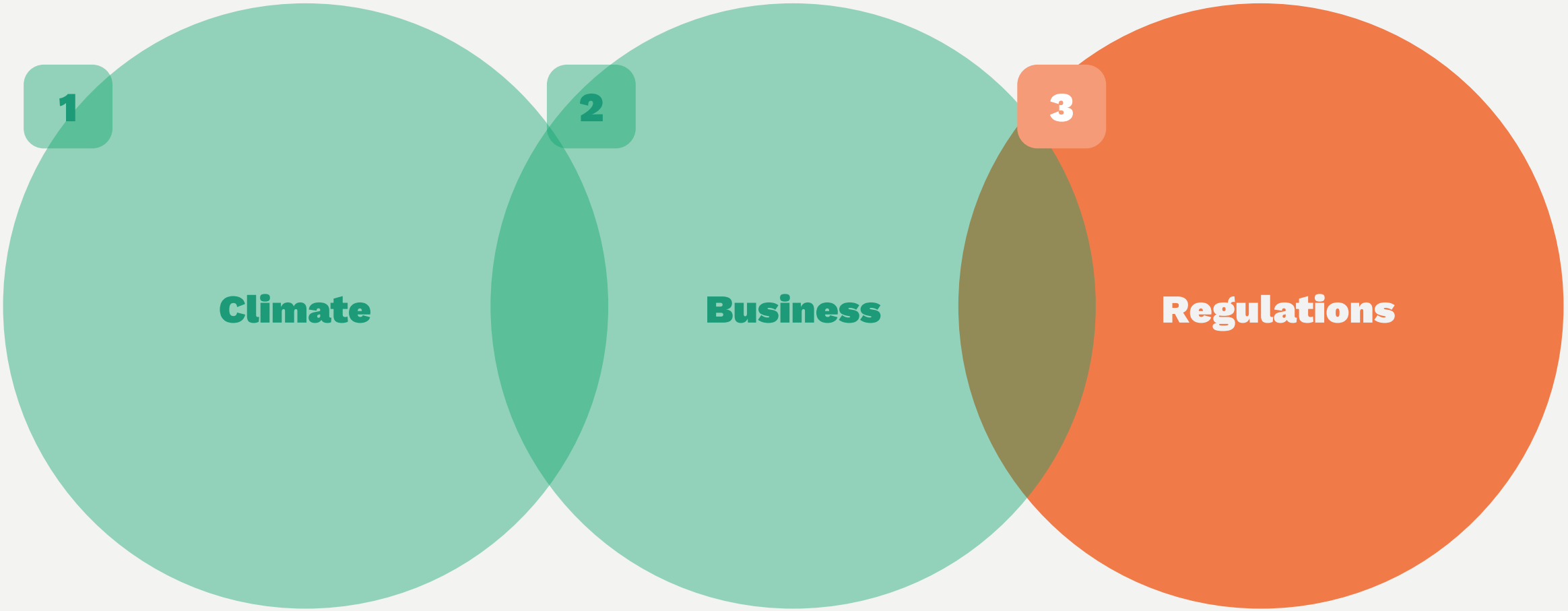
Reduce the company's exposure to climate-related risks, such as regulatory sanctions, supply chain disruptions and reputational issues.

Resilience

Ensure business continuity and strengthen resilience to the potential material and financial consequences of climate change.

Stakeholder expectations

Customers, investors, suppliers and employees appreciate companies that take decisive action against climate change.



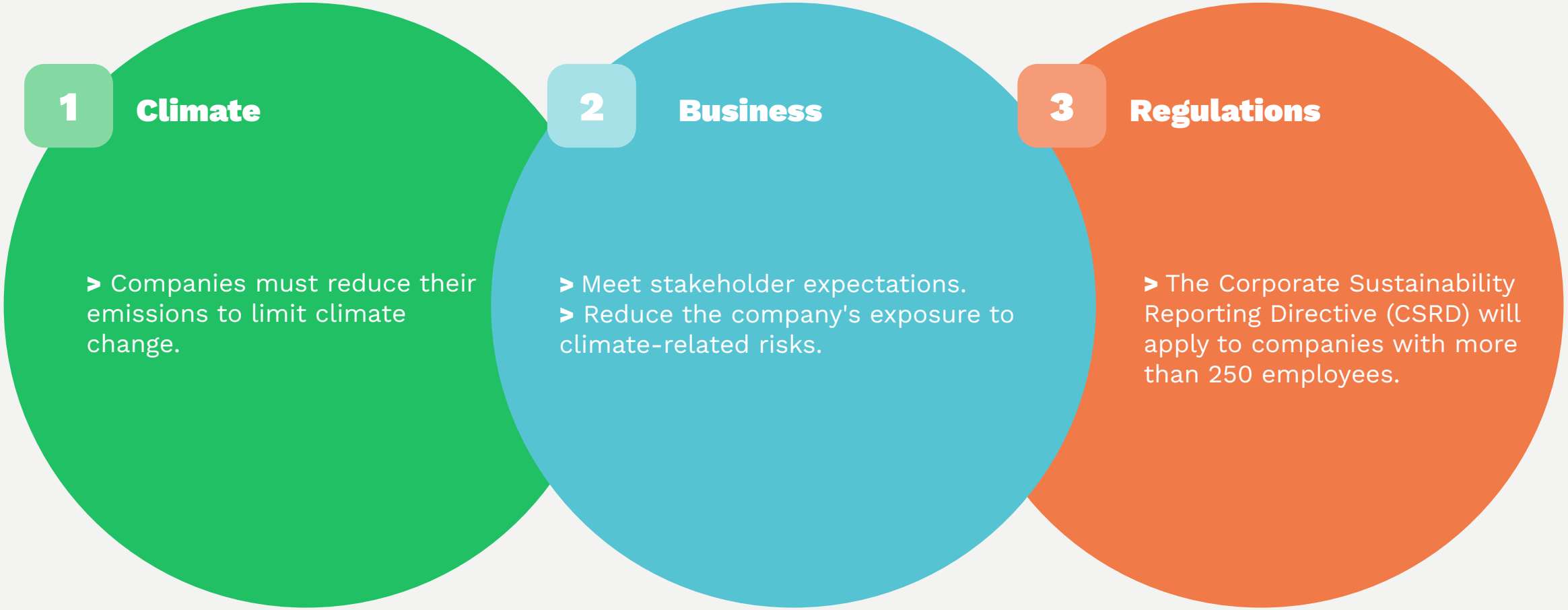
Compliance with European legislation

To comply with current European legislation, companies with more than 500 employees must calculate their carbon footprint.

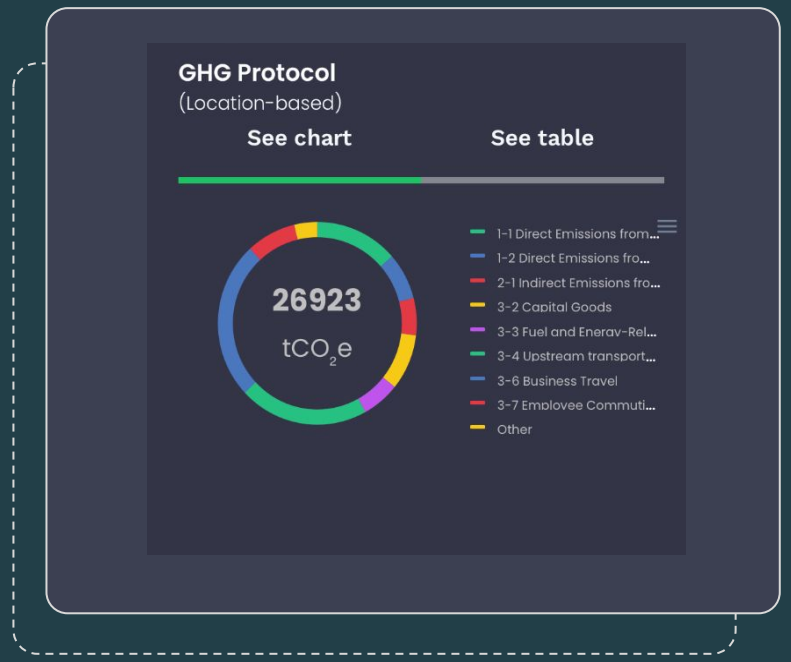
Compliance with CSRD regulation

From 2025, most companies with more than 250 employees must comply with the European directive **(CSRD)** and disclose some information about their environmental, social and governance (ESG) performance, **including their carbon footprint.**

In summary: Why measure your emissions?



How is the carbon footprint measured?



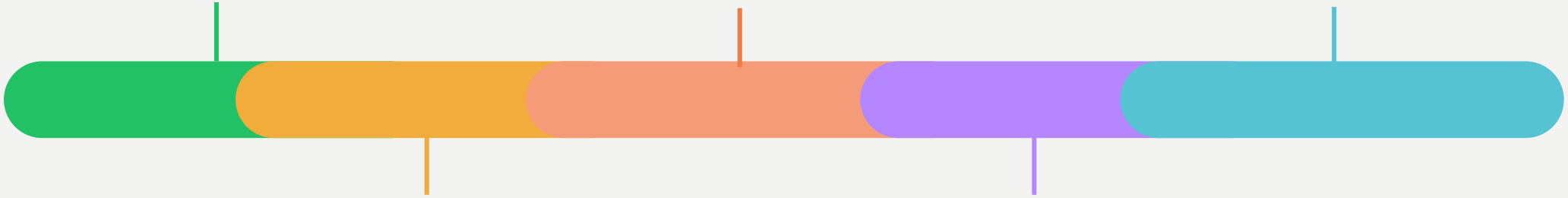
1 Definition of perimeter to consider

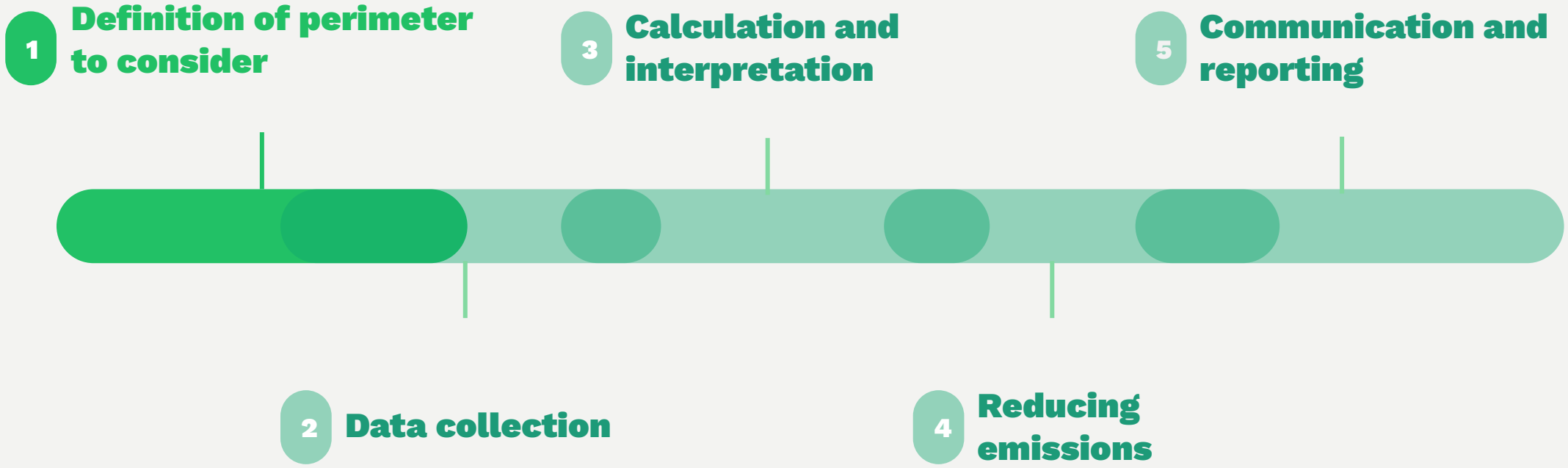
2 Data collection

3 Calculation and interpretation

4 Reducing emissions

5 Communication and reporting





Step 1/5

Definition of perimeter

Temporal Scope

This corresponds to the **period over which the company wishes to measure its carbon footprint,** typically the previous 12 months to have all the necessary data.

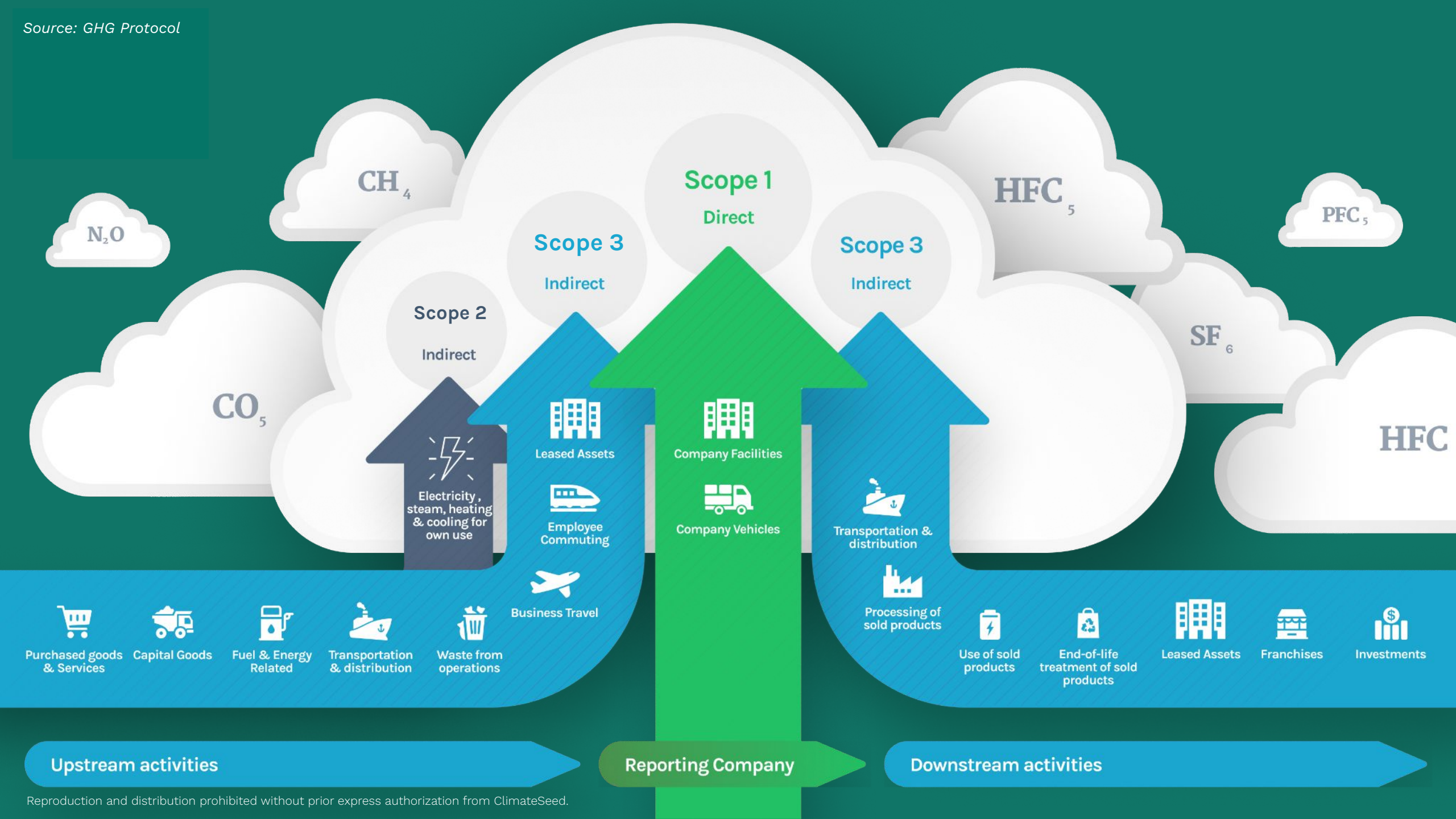
Organizational Scope

This includes the different sites, installations, and buildings to be considered. *For example, does the company want to measure the carbon footprint of its sites in multiple countries?*

Operational Scope

This relates to the emission types linked to these sites, installations, and buildings. Different methodologies usually classify emissions into Scopes or categories.

Source: GHG Protocol



1 **Definition of perimeter to consider**

3 **Calculation and interpretation**

5 **Communication and reporting**

2 **Data collection**

4 **Reducing emissions**

Step 2/5

Data collection

How to collect emissions data?

To start collecting data efficiently, you should:

- Know the **emissions categories to be taken into account** (energy, transport, waste management, etc.).
- Identify the **sources** of these data and designate a **person responsible** for data collection for each category.

The presence of a **project manager** is crucial to verify the completeness and consistency of the data collected with the budget objectives.

Step 2/5

Data collection

What types of data can I collect?

The data generally used to calculate the carbon footprint can be:

- **Physical** or **monetary** data: these are complementary, i.e. they can be used can be used simultaneously to cover different sources of emissions within a single same budget *(being careful, however, to avoid **double-counting**).*

- The data may be **primary**, i.e. referring directly to the organizational unit being analyzed, or **secondary**, i.e. resulting from statistics or extrapolated from comparable data.

For best accuracy, always give priority to **physical and primary data**.

Step 2/5

Data collection

The points of attention

1. Identify measurement perimeters.
2. Harmonize data.
3. Identify the right contacts.
4. Guarantee the quality of data collected.

Step 2/5

Data collection

Identify measurement perimeters

1. Ask what the main purpose of the measure is (legal obligation, financing, certification).
2. Understand which legal entities and sites must be included.
3. Explain emissions significance criteria and why insignificant emissions sources are excluded.

Step 2/5

Data collection

Harmonize data

1. Bring together data from different sources in a single database.
2. Pay attention to units of measurement.
3. Supplement missing data with extrapolations and coherent hypotheses, and ensure traceability.

Step 2/5

Data collection

Define the right stakeholders and guarantee the quality of the data collected

1. Identify the data required in each organizational unit and identify the data owner.
2. Share the importance of using physical and primary data.
3. Check the consistency of data from different sources and avoid double counting.

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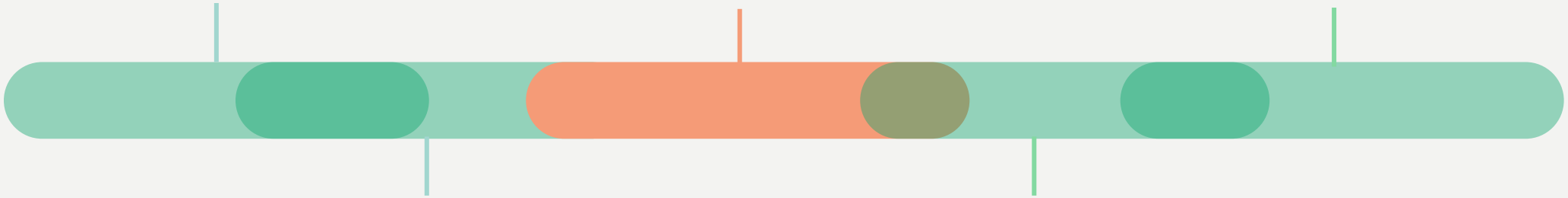


Step 3/5

Calculation and interpretation

Once the data has been obtained, how is the carbon footprint calculated?

The data collected must be converted into kg of CO_2e using an **emission factor.** This is a representative value used to convert the activity data collected into greenhouse gas emissions (GHG).

Greenhouse gas emissions are therefore calculated as follows:

Data x **emission factor** = **GHG emissions**

Step 3/5

Calculation and interpretation

Where can I find emission factors?

These emission factors can be found in public or private databases, often specific to a country or sector of activity.

Among the most widely used databases are:

DEFRA, EcoInvent, IAE, CDP or Base Carbone®.

Step 3/5

Calculation and interpretation

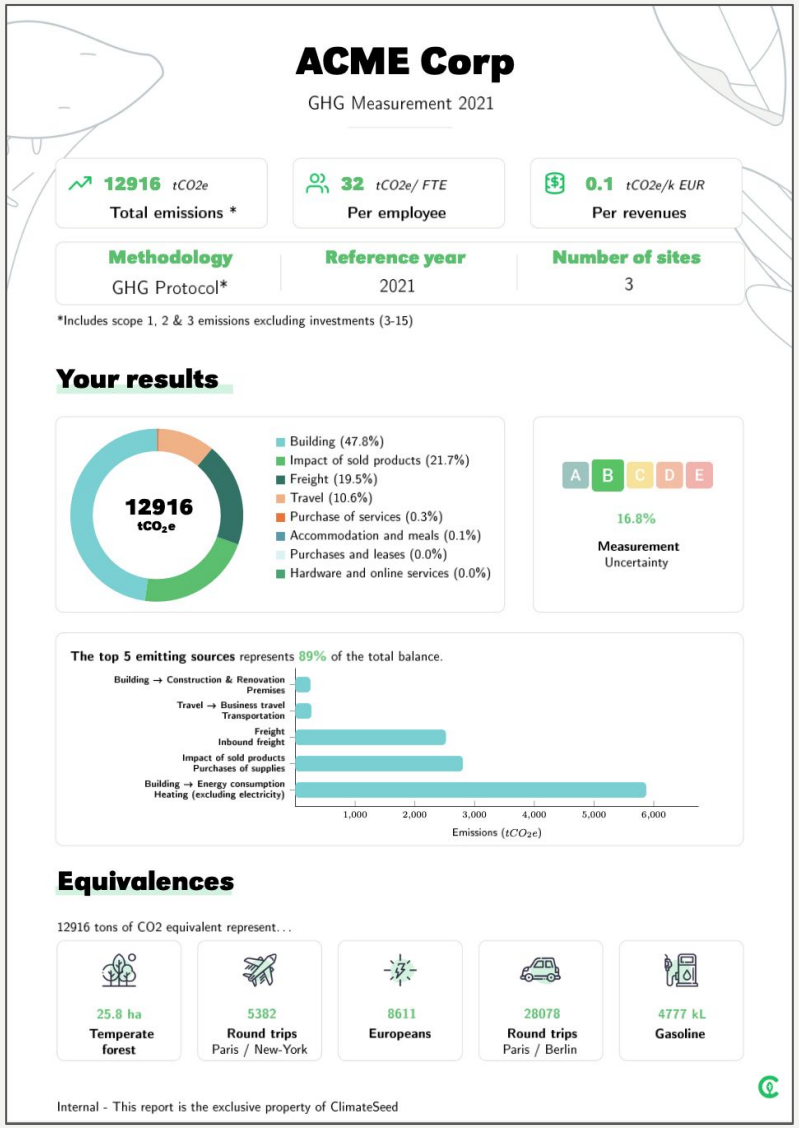
What information can I obtain from the carbon footprint, and how can I interpret it?

- **More relevant emissions categories:** the results of the analysis may highlight impacts that were previously underestimated or not taken into account.
- **Carbon measurements specific to your facility** (ratio tCO_2/number of employees, tCO_2/products sold, etc.) to be tracked over time.
- **The carbon footprint of your head office, legal entities or divisions,** in order to anticipate future environmental reporting obligations and market requirements.
- **Identify potential sources of energy and material wastage,** and implement actions to reduce them with financial and environmental benefits.

Step 3/5

Examples:

Extracts from carbon footprint reports



ACME Corp

GHG Measurement 2021

12916 tCO2e — Total emissions *

32 tCO2e/ FTE — Per employee

0.1 tCO2e/k EUR — Per revenues

Methodology	Reference year	Number of sites
GHG Protocol*	2021	3

*Includes scope 1, 2 & 3 emissions excluding investments (3-15)

Your results

A B C D E

16.8%

Measurement Uncertainty

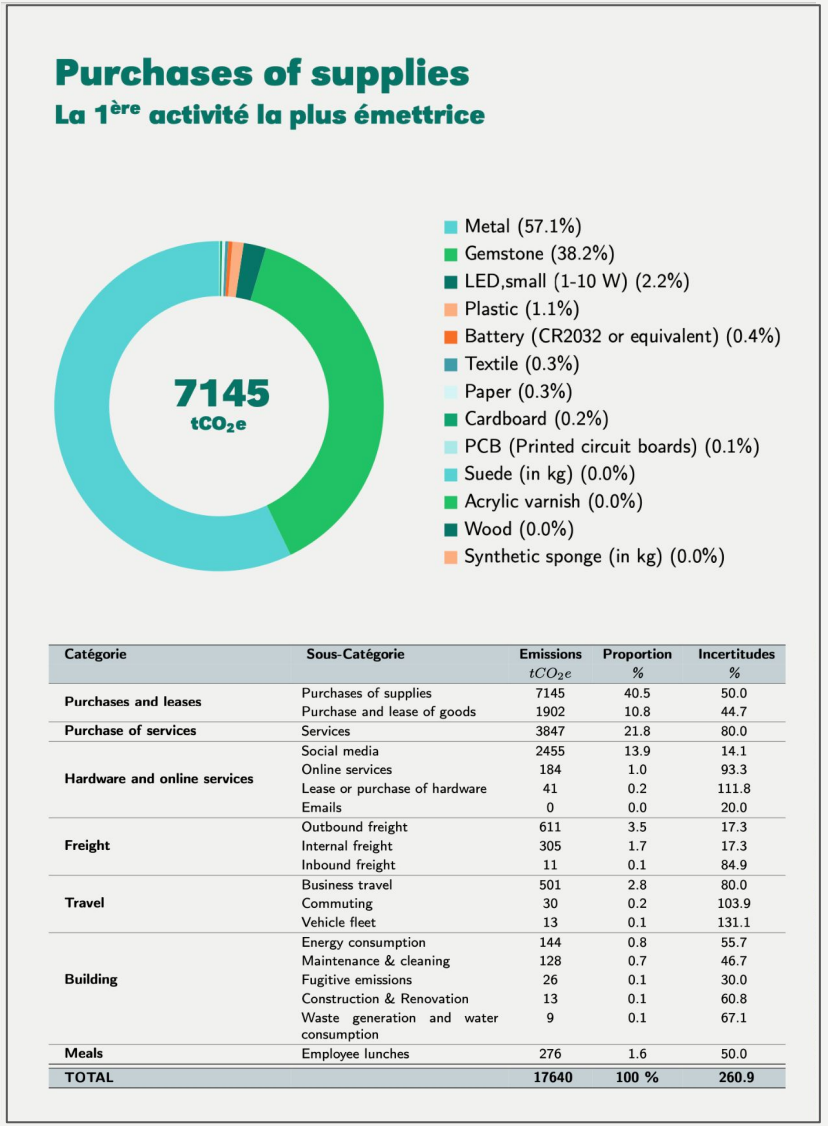
The top 5 emitting sources represents 89% of the total balance.

Equivalences

12916 tons of CO2 equivalent represent...

25.8 ha	5382	8611	28078	4777 kL
Temperate forest	Round trips Paris / New-York	Europeans	Round trips Paris / Berlin	Gasoline

Internal - This report is the exclusive property of ClimateSeed



Purchases of supplies

La 1ère activité la plus émettrice

Catégorie	Sous-Catégorie	Emissions tCO_2e	Proportion %	Incertitudes %
Purchases and leases	Purchases of supplies	7145	40.5	50.0
	Purchase and lease of goods	1902	10.8	44.7
Purchase of services	Services	3847	21.8	80.0
Hardware and online services	Social media	2455	13.9	14.1
	Online services	184	1.0	93.3
	Lease or purchase of hardware	41	0.2	111.8
	Emails	0	0.0	20.0
Freight	Outbound freight	611	3.5	17.3
	Internal freight	305	1.7	17.3
	Inbound freight	11	0.1	84.9
Travel	Business travel	501	2.8	80.0
	Commuting	30	0.2	103.9
	Vehicle fleet	13	0.1	131.1
Building	Energy consumption	144	0.8	55.7
	Maintenance & cleaning	128	0.7	46.7
	Fugitive emissions	26	0.1	30.0
	Construction & Renovation	13	0.1	60.8
	Waste generation and water consumption	9	0.1	67.1
Meals	Employee lunches	276	1.6	50.0
TOTAL		17640	100 %	260.9

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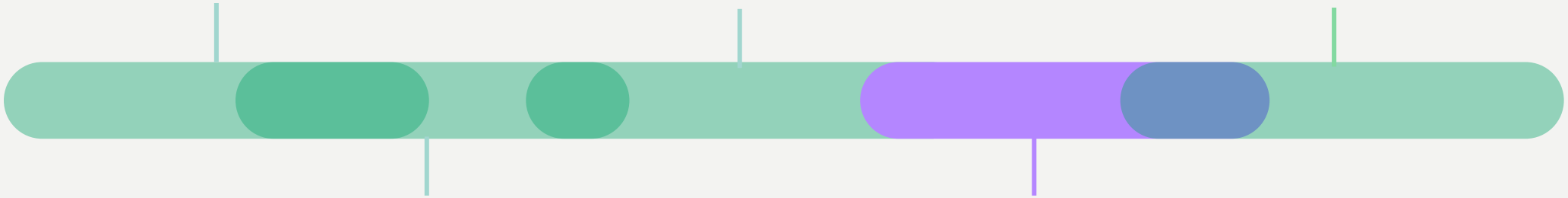

Step 4/5

Reducing emissions

How do you plan your reduction?

- **Identify the emissions categories on which you intend to take action**:
  For this, it is important to take into account the **scale of emissions** in the category, the **level of influence** on the emission source, the **cost of reduction**, the **acceptability** of possible reduction actions.

- **Define objectives, budget and timeline:** it is advisable to define precise objectives, a corresponding budget, those responsible, implementation deadlines and intermediate short and medium-term sub-objectives.

- **Involve the various stakeholders:** involve those responsible for reducing emissions or defining the necessary organizational and financial resources.

Step 4/5

Reducing emissions

How to achieve the reduction?

- **Define precise reduction actions:** for each emissions category, **define reduction actions,** specifying the **reduction potential** (in tCO_2e), the **implementation deadline**, the **type of action** (structuring/on-going), the **investment required**, **potential savings** or **additional costs**.

- **Check how much that actions contribute to reduction objectives:** for each emissions category, check that the expected reductions are consistent in quantitative terms with the objectives set.

- **Make reduction actions scalable:** particularly in the case of complex and international structures, share best practices within the company and eliminate obstacles to their scalability.

Step 4/5

Reducing emissions

How to control the reduction?

- **Create intermediate targets:** identify the causes of potential delays and the risks of not meeting targets, in order to adjust the reduction plan.
- **Adjust the budget:** if implementing a measure is more costly than expected, analyze the reasons and adjust the budget.
- **Check for new rebound emissions *(boomerang effect)*:** reducing certain emissions may lead to an increase in other emissions. *It is important to check that these do not cancel out the efforts made.*

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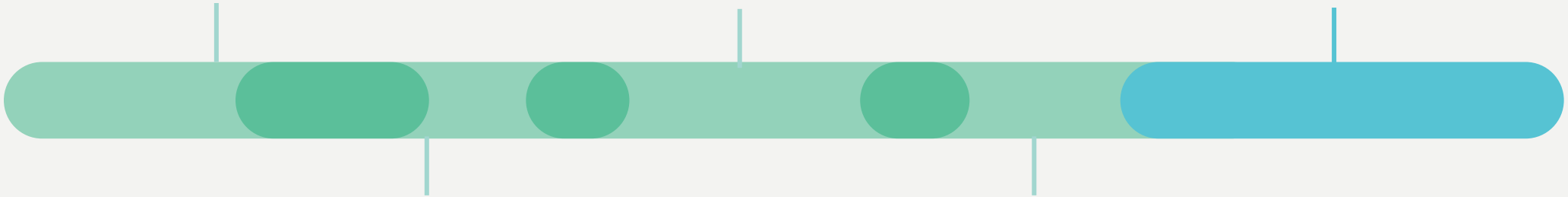


Step 5/5

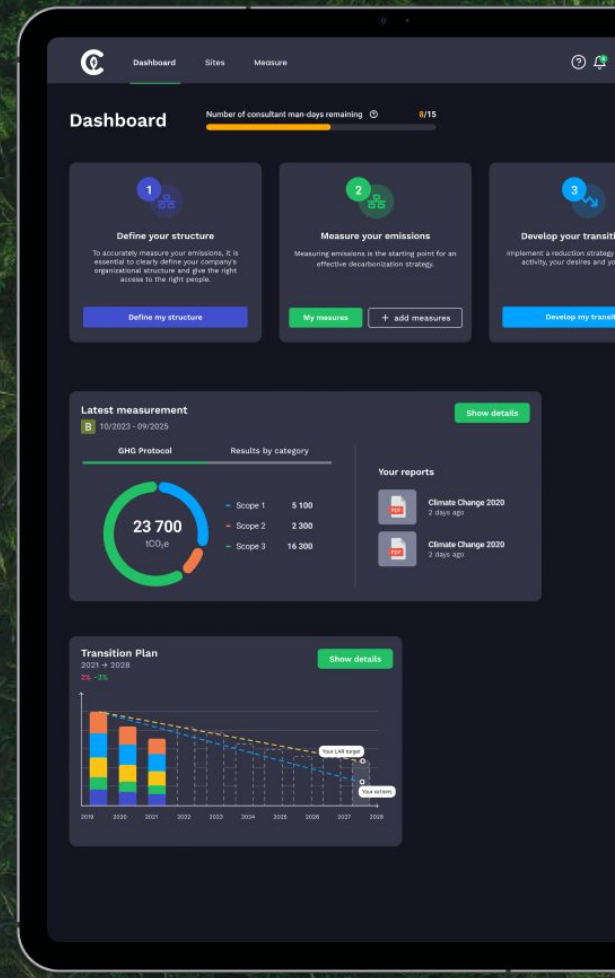
Communication and reporting

How can I communicate my carbon footprint and emissions reductions?

1. Sustainability Report or Extra-Financial Report
2. Customer and stakeholder communications (website, press release, dedicated communication campaigns)
3. Disclosure for

Need more information on this topic?

Click here to book your free demo of our **carbon footprint measurement tool.**



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