



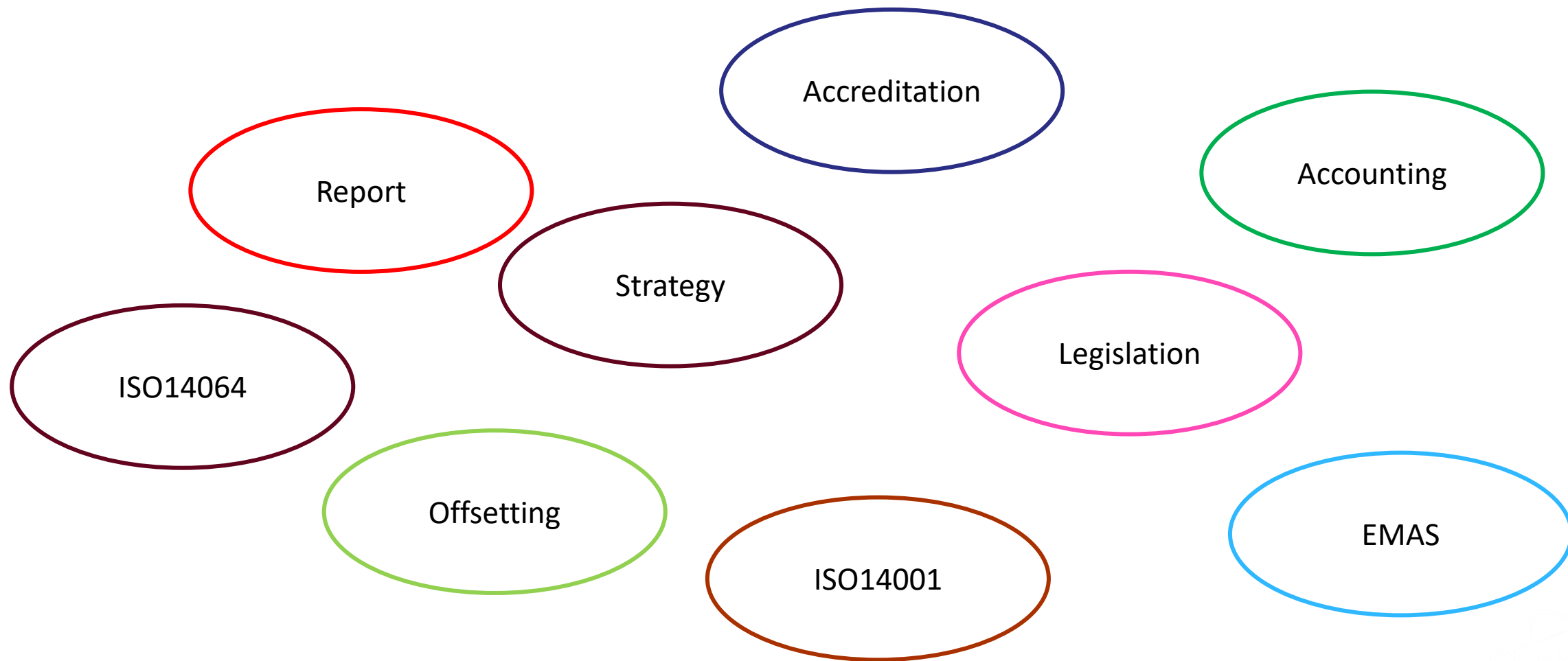
# Learnings from working towards GÉANT's first CO2 report

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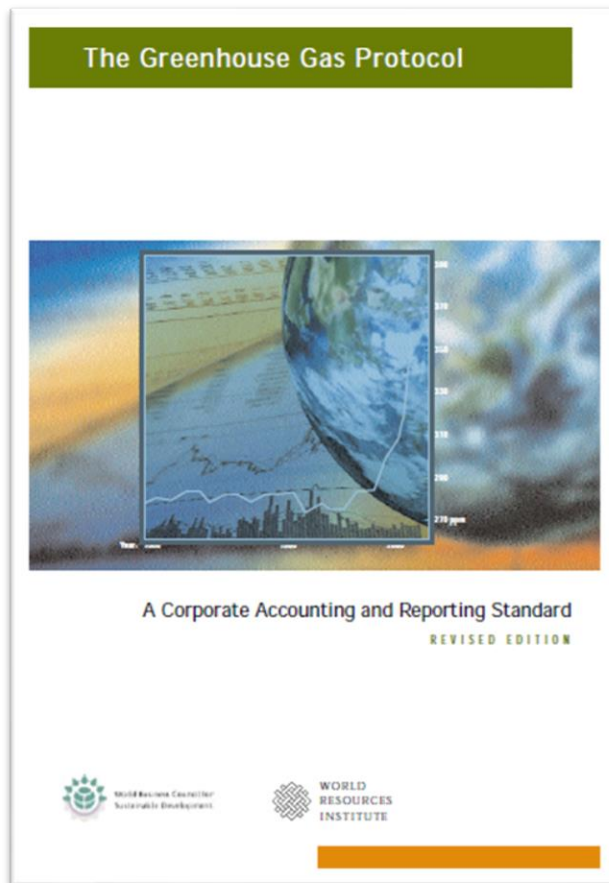
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Public

## Confusion – where to start?



# GHG Protocol



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The table includes a visual indicator for each section, with 'STANDARD' in orange and 'GUIDANCE' in green. A small image of a handprint in the sand is located at the bottom right of the page.

There are many other tools and offers out there, most of them are based on the GHG protocol.

<https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>



# Accounting and Setting Boundaries

Relevance  
Completeness  
Consistency  
Transparency  
Accuracy

CHAPTER 1. GHG Accounting and Reporting Principles 7

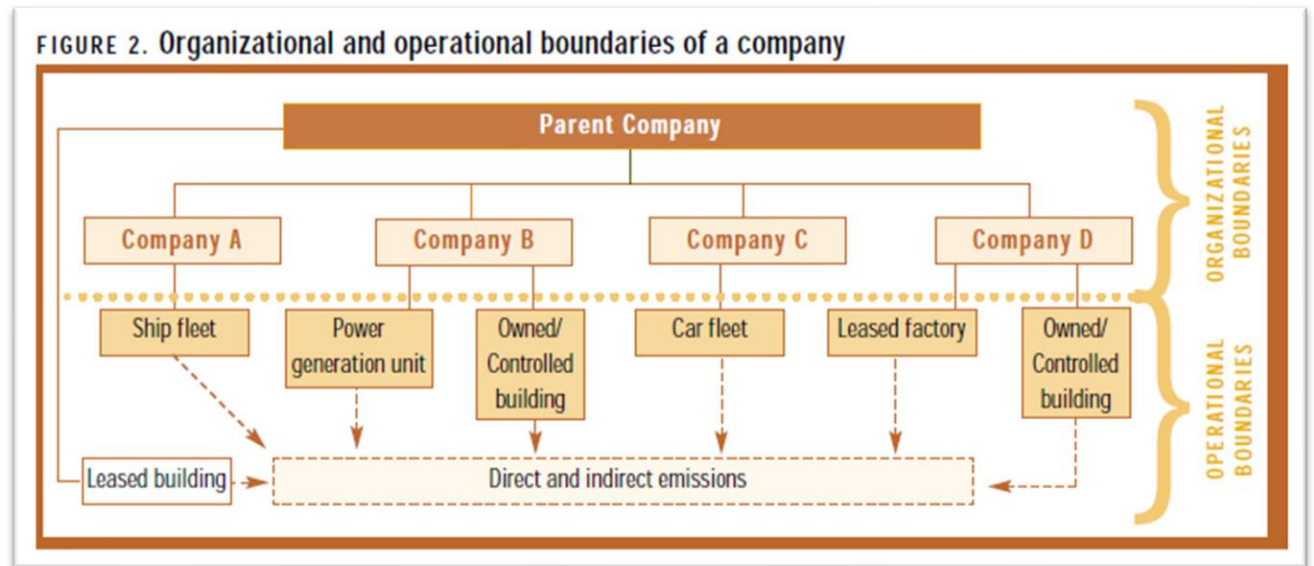
GHG accounting and reporting practices are evolving and are new to many businesses; however, the principles listed below are derived in part from generally accepted financial accounting and reporting principles. They also reflect the outcome of a collaborative process involving stakeholders from a wide range of technical, environmental, and accounting disciplines.

GHG accounting and reporting shall be based on the following 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.

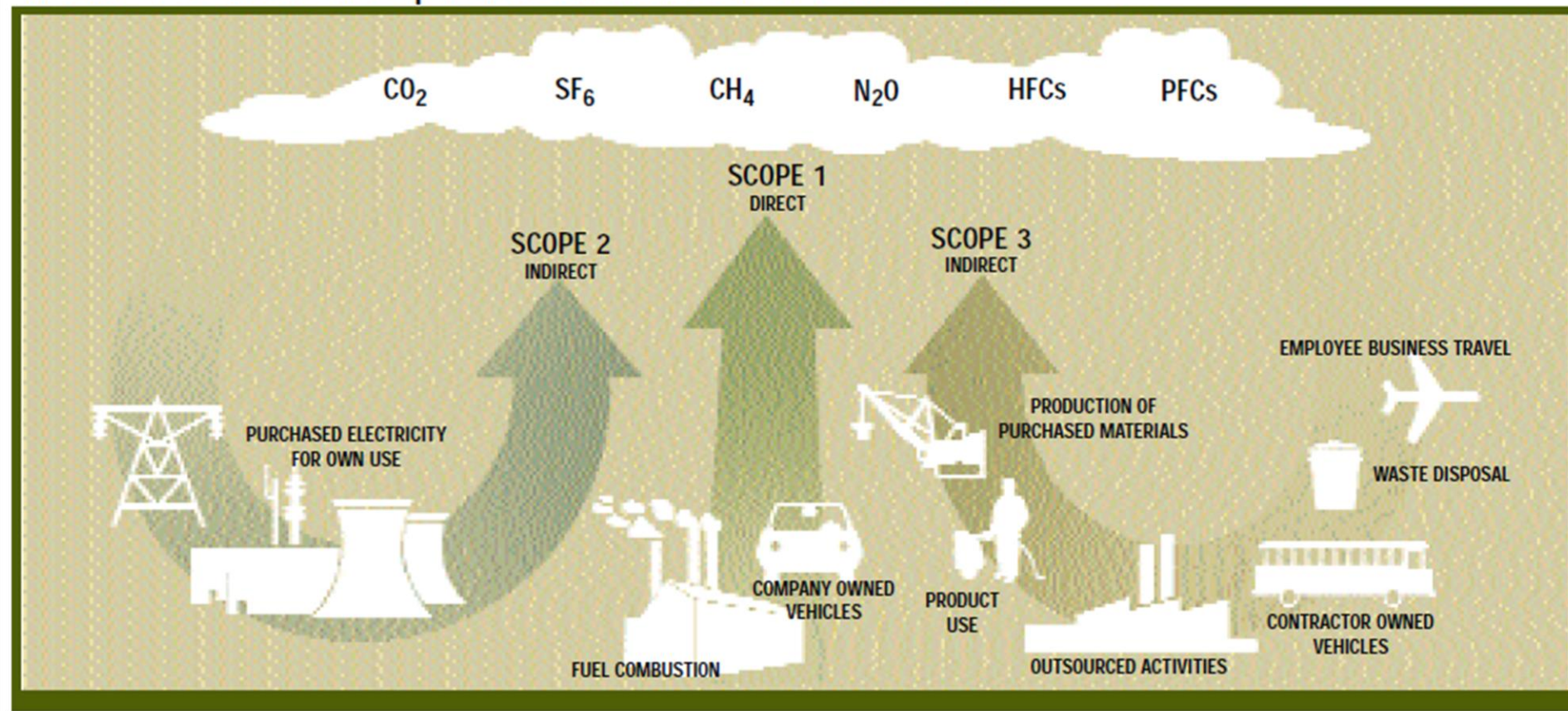


CORNYLIS



## 3 Scopes

FIGURE 3. Overview of scopes and emissions across a value chain



# The GHG Protocol approach in a nutshell

1. Inventory
2. Collection of data
3. Accounting
4. Reporting

## Inventory – Scopes 1 and 2

Scope	Item	GEANT	Discussed with
<b>SCOPE 1: DIRECT EMISSIONS</b>		n.a.	
	Owned buildings	n.a.	
	Owned vehicles	n.a.	
	Fugitive emissions		
	Fridge and freezers Amsteram office (GHG other than CO2)	applies	
	Fridge and freezers Cambridge office (GHG other than CO2)	applies	

Scope	Item	GEANT	Discussed with
<b>SCOPE 2: INDIRECT EMISSIONS</b>		applies	Matthew G
	<b>Offices</b>		
	Electricity used in Amsterdam office	applies	Leoncia
	Gas used in Amsterdam office	applies	Leoncia
	Electricity used in Cambridge office	applies	Landlord, Suzi
	Gas used in Cambridge office	n.a.	n.a.
	<b>Infrastructure</b>		
	Electricity used by Infrastructure (7 PoPs) - scope 2 if they are under Operational Lease	applies	Matthew G
	Electricity used by Network (OLS equipment, IP Switching Layer, Servers) - scope 2 if they are under Operational Lease	applies	Matthew G
	<b>Fibres</b>	applies	Matthew G: is included in his analysis
	Undersea cables (leased) and transponders		Matthew G
	Cloud - is this an extra category? <a href="#">Here or Scope 3?</a>		
	<b>Digital Services</b>		
	staff laptops, used at home	?applies	Matthew G
	Corporate IT infrastrurcture & Services (servers in Ci	applies	To do: Mandeep

Requires many conversations and learning about your organisation

## Inventory – Scope 3 Overview

Scope	Item	GEANT	Discussed with
<b>SCOPE 3: INDIRECT EMISSIONS</b>			
<b>UPSTREAM</b>			
	Purchased Goods and Services (extraction, production and transport)	applies	Olaf, Hendrik, Matthew G, Steffi
	Capital Goods (building, machinery, tools)	applies	
			Hendrik, Matthew
	Upstream Transportation and Distribution	applies	
	Waste Generated in day-to-day Operations	applies	
	Business Travel	applies	
	Employee Commuting	applies	Suzi, Pauline, Magda, Tina
	Commute NL	applies	Tina
	Commute UK	applies	
	Upstream Leased Assets	n.a.	
<b>DOWNSTREAM</b>			
	Downstream Transportation and Distribution (to customers)	n.a.	
	Processing of Sold Products	n.a.	
	Use of Sold Products	?	
	InAcademia?		
	End-of-Life Treatment of Sold Products	n.a.	
	Downstream Leased Assets	n.a.	
	Franchises	n.a.	
	Investments	?	
	Other	n.a.	

Requires even more conversations and learning about your organisation



## Inventory – Scope 3 Examples

Scope	Item	GEANT	Discussed with
<b>SCOPE 3: INDIRECT EMISSIONS</b>			
<b>UPSTREAM</b>			
	<b>Purchased Goods and Services (extraction, production and transport)</b>	<b>applies</b>	Olaf, Hendrik, Matthew G, Steffi
	Consultants/free lancers	n.a. or applies?	
	Licenses (software etc)		?Linda?
	Cloud services for Geant Association (i.e. excluding data centers as part of the network)	applies	ask Matthew and Bram, is this an extra category?
	Data centre construction	<b>applies</b>	Hendrik, Matthew
	TNC and Project convention: printing, lanyards, give-aways, food, venues, rented furniture, technical	applies	Steffi, to do: Anna Everett
	Events organised by CRO: printing, lanyards, give-aways, food, venues, rented furniture, technical	applies	Beatrix. To do: Nicole H, Nadelina
	Printing and distribution of XX report and CONNECT magazine	applies	Daniel W, Beatrix. To do: talk to comms
	<b>Capital Goods (building, machinery, tools)</b>	<b>applies</b>	
	IT equipment for office and staff, and datacentres	applies	
	Network equipment (but not lease)	applies	
	Office furniture et al - only new purchases in each year	applies	



# CO2 Emissions Tables

## Scope 2

Facility information			Consumption Data			Emissions			
Facility Description	Country or Region	Information source	Year	Fuel mix	Amount	Units	CO2 (tonnes)	CO2 e (tonnes)	Notes
<b>Offices</b>									
Electricity used in Amsterdam office	Netherlands		2023						
Electricity used in Cambridge office	United Kingdom	Landlord, REGO certificate	2023	green	115825	kWh	0.00		npower Business Renewable, independently assured by EcoAct

## Scope 3

Compare with inventory

Facility information			Consumption Data			Emissions				
Facility Description	Country or Region	Information source	Year	Fuel mix	Amount	Units	CO2 (tonnes)	CO2 e (tonnes)	tools used	Notes
<b>Business Travel</b>										
Hotel		Egencia, manual calculations						18.12	<a href="https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023">https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023</a>	
Train	Netherlands and UK	Egencia, manual calculations	2023				0.41	1.62	CO2e data: <a href="https://www.eurostar.com/uk-en/sustainability">https://www.eurostar.com/uk-en/sustainability</a> , <a href="https://www.greateranglia.co.uk">https://www.greateranglia.co.uk</a>	Gaps in data claims, not CO2e, some estimated
Taxis	UK (Cambridge)	Ewave	2023	electric	14892	km	0.00	0.00	<a href="https://www.greateranglia.co.uk/ghg-conversion-factors-2023-condensed-set-update">ghg-conversion-factors-2023-condensed-set-update</a>	
Flights	international	Egencia, manual calculations	2023					672.26	<a href="https://clear.eco/carbon-offset-mv-flight/">https://clear.eco/carbon-offset-mv-flight/</a>	

# Problems Encountered Lead to Changes in Internal Processes

## Business travel

- Travel agency used in 2023 does not report on CO2
  - Some business travel is on cost claims
- Finance to develop a tool for pulling data from cost claims

## Commuting

- GEANT is working hybrid:
    - How often did each member of staff come to the office, by which means and how far
  - Data protection legislation prevents us from using door data and home addresses
- Change to data privacy note needed (comes into effect only for 2025 data)
- For some staff a survey is needed



## Learning from working on CO2 report

### Don't strive for perfection

- 2023 report will focus on Scope 2, commuting and business travel + other low hanging fruit
- 2024 report will be a bit better
- 2025 report should give comprehensive emissions data

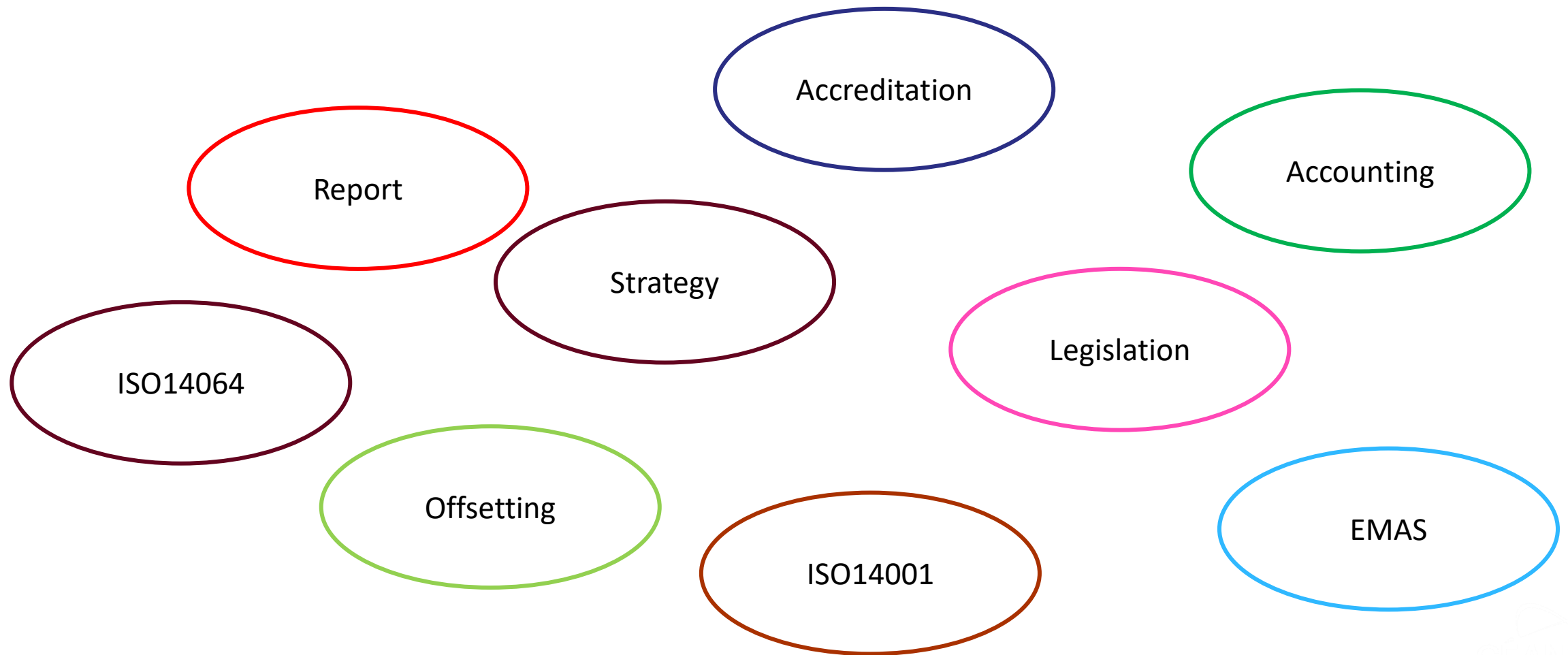
Although for 2023 and 2024 emissions data will be incomplete, the inventory will be quite complete and therefore the report will inform decisions and behaviour change.

# Learning from working on CO2 report

## We have done a lot already

- Green taxis, sharing of taxis
- Setting a maximum number of participants for conferences etc
- Change of business travel provider with better information and more green options
- Certificates about electronic waste disposal
- Ongoing work on green procurement and new internal policies
- Greening the offices (movement sensitive lighting, recycle bins, recycled paper, less use of paper)

## Confusion – where to start?



# This is the New Plan

## CO2 report

Follow GHG approach as it can be used for all accreditation schemes/legislation

1. Inventory
2. Collection of data
3. Accounting
4. Reporting

## Bring the report to the board for information and further directions

- Analyse for opportunities for CO2 reduction
- Set new internal policies and processes for further CO2 reduction
- Research into accreditation schemes
- Get agreement on accreditation schemes
- Get in consultant if needed
- Research into offsetting
- Get agreement on offsetting



# Thank You

Any questions?

[www.geant.org](http://www.geant.org)



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