



Sustainable reporting obligations  
under CSRD:

Turning sustainability obligations  
into business strategy

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## Session Speaker: Sphera Strategic Advisory Services



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## Today's Topic:

How to turn **Sustainable Reporting Obligations** into a powerful tool for **Business Strategy**.

## Today's example:

Scope 3 Methodology & (CSRD) **ESRS E1 Transition Planning** Deep Dive

# What companies must report under CSRD?

Under the **Corporate Sustainability Reporting Directive (CSRD)**, the following types of companies are obligated to report:

## 1. Large Public-Interest Entities (PIEs):

1. **Listed Companies:** All companies listed on EU-regulated markets (including large SMEs and companies that are not listed on the EU but are operating in the EU).....

## 2. Large Companies (meeting at least one of the following criteria for two consecutive years):

1. **Employee Count:** Companies with more than **250 employees**.
2. **Net Revenue:** Companies with **€40 million or more in net turnover**.
3. **Total Assets:** Companies with **€20 million or more in total assets**.

## 3. Some Listed SMEs

## 4. Non-EU Companies:

1. Non-EU companies that have **significant operations** in the EU or generate substantial revenue from the EU market (e.g., turnover above €150 million) are also required to report under CSRD if they meet the size thresholds.

# European Sustainability Reporting Standards (ESRS)

## Overview of the standards

### Cross-cutting Standards:

ESRS 1 *General requirements*

ESRS 2 *General disclosures*

### Environmental Standards:

- **ESRS E1 *Climate change*** **Mandatory with few exceptions**
- ESRS E2 *Pollution*
- ESRS E3 *Water and marine resources*
- ESRS E4 *Biodiversity and ecosystems*
- ESRS E5 *Resource use and circular economy*

### Social Standards:

- ESRS S1 *Own workforce*
- ESRS S2 *Workers in the value chain*
- ESRS S3 *Affected communities*
- ESRS S4 *Consumer and end-users*

### Governance Standard:

- ESRS G1 *Business conduct*

Topical standards

# Deep Dive ESRS E1 – Climate Change

## Overview of the draft disclosure requirements



Transition plan for climate change mitigation, in line with limiting global warming to 1.5°  
(DR E1-1)

Policies related to climate change mitigation and adaptation (DR E1-2)

Actions and the resources allocated for their implementation (DR E1-3)

Targets related to mitigation and adaptation (DR E1-4)

Energy consumption and mix (incl. intensity per revenue) (DR E1-5)

Gross Scope 1,2,3 and total GHG emissions (incl. intensity per revenue) (DR E1-6)

GHG removals and mitigation projects financed through carbon credits (DR E1-7)

Internal carbon pricing (DR E1-8)

Anticipated financial effects from material physical risks as well as transition risks and opportunities (DR E1-9)

The disclosure requirements are based on the adopted delegated act July 2023 and subject to change in accordance with the applicable regulatory updates.

# Sphera's Approach to Transition Planning



# Quantification of greenhouse gas emissions

How companies can take action

## ANALYZE



- Set-up an annual, iterative, deepening emissions quantification process.
- Implement a software-based, comparable, manageable carbon accounting.

Carbon inventory

## MAIN REFERENCE STANDARDS



GREENHOUSE  
GAS PROTOCOL

### The Greenhouse Protocol (GHG-P)

- Most widely used accounting protocol for GHG accounting
- Basis for main voluntary and mandatory emissions reporting systems



### ISO Standards ISO 14064-1 / 14064-2 / 14064-3

- Verifiable standard based on GHG Protocol Standards
- Specific requirements for some calculation and boundary issues



### ESRS E1 – Disclosure Requirement E1-6

- GHG-Protocol as starting point
- Sets specific requirements (e.g. reporting boundaries, level of disaggregation, etc)
- Goes beyond GHG-P with requirements related to decarbonisation

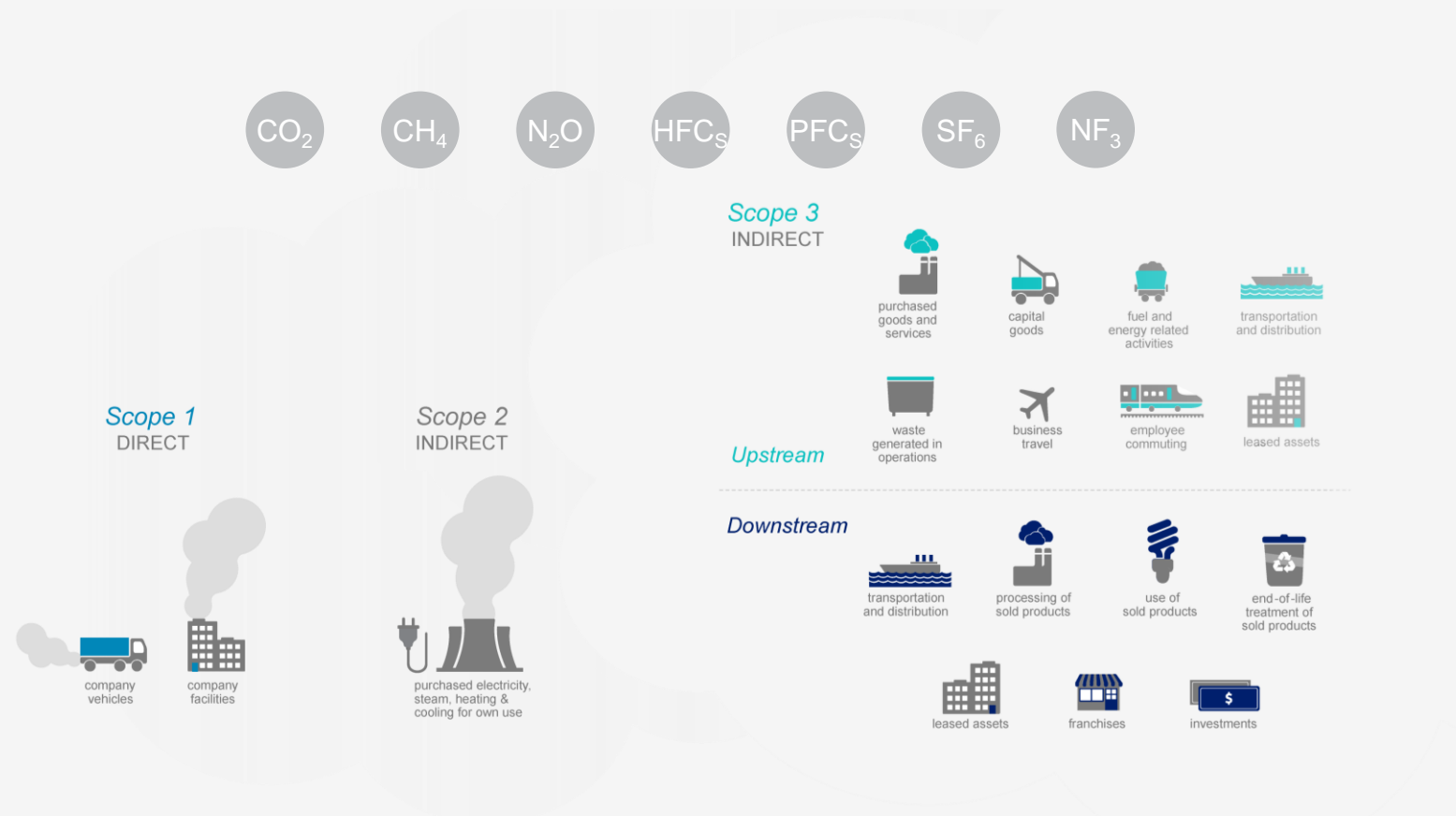


# Corporate carbon footprint

## Definition and key characteristics

### What is a corporate carbon footprint?

Assessment of the amount of greenhouse gases that occur from a company's activities and its upstream and downstream value chain.



### Scope 1

Direct GHG emissions occur from sources that are owned or controlled by the company.

### Scope 2

Indirect GHG emissions from the generation of purchased electricity, steam, and heating/cooling consumed by the company.

### Scope 3

All other indirect emissions not covered in Scope 2 like extraction and production of purchased materials; transportation of purchased fuels; and use of sold products and services.

# Challenges of corporate carbon accounting

## Scope 3 data challenge

### Activity data challenge

Data availability in company's internal systems



### Emission data challenge

Access to high quality emission & LCIA data



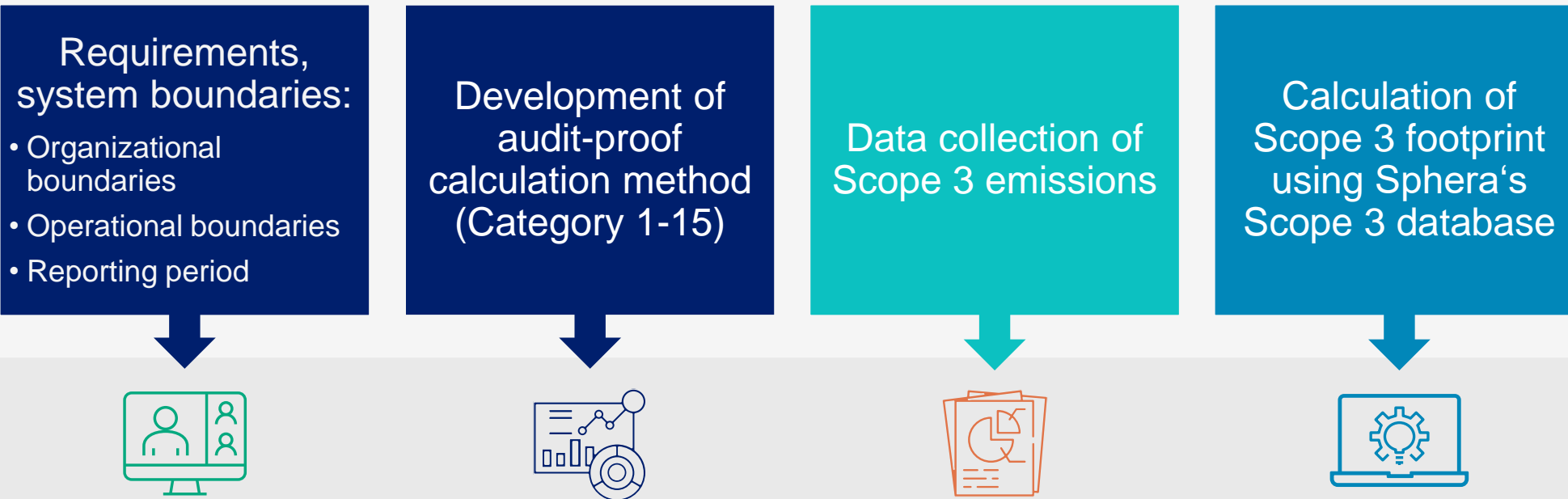
### Quantification challenge

Expertise for correct application of method for carbon accounting



# Baseline quantification: How does it work?

## Corporate carbon footprint and Scope 3 study



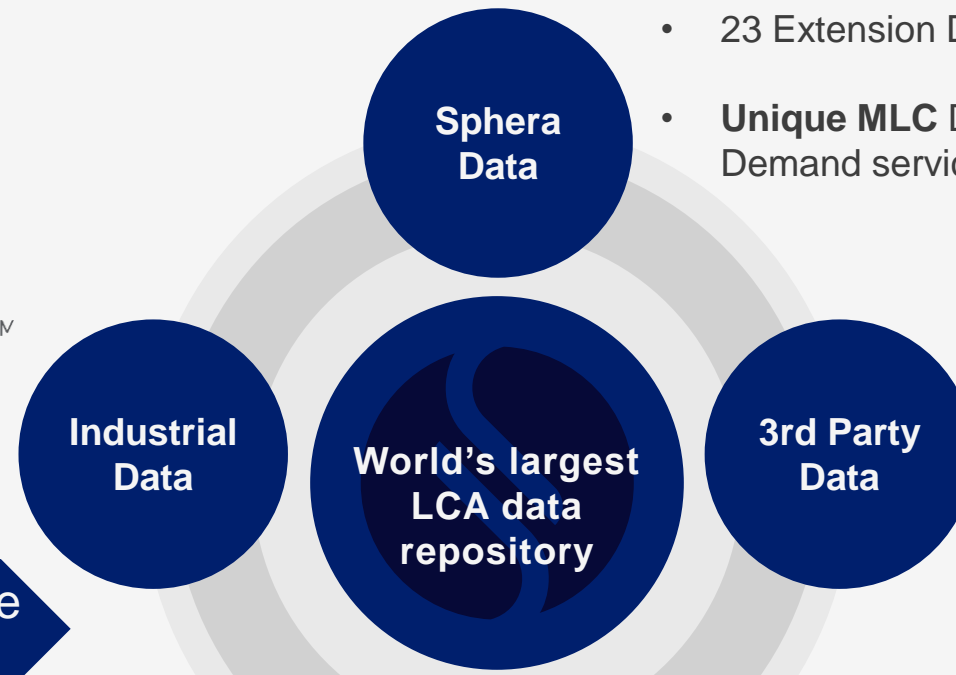
# Managed LCA Content: Updated Annually and DEKRA Verified

**sphera** LCA Data / EF factors  
Robust, authentic engineering-based LCI data repository



50+ Associations & Companies  
authorized data  
> 500 EPDs

All relevant LCI&LCIA data available  
within one solution



- MLC Professional Database
  - 23 Extension Databases
  - **Unique MLC** Data on Demand service
- } ~ 17,000 standards  
> 100,000 inventories

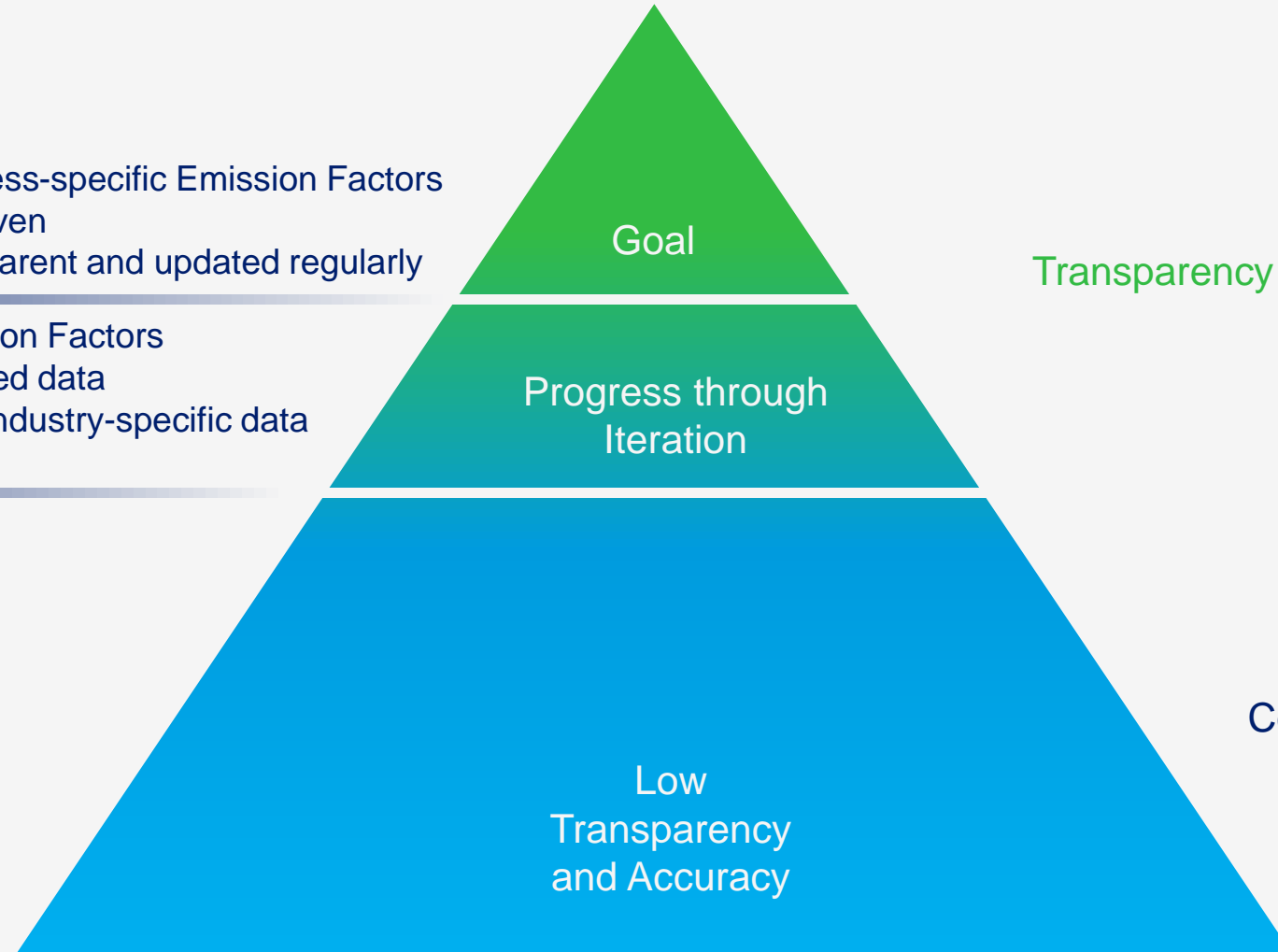




# Data Quality & Carbon Management

Data and Emission Factors

- LCA-based data
  - Supplier-specific data
  - Material-based data
  - Region-, material, and process-specific Emission Factors
  - Ideally fully primary data-driven
  - Emission Factors are transparent and updated regularly
- 
- Industry-specific data Emission Factors
  - Hybrid Spend / Material-based data
  - Assumptions are based on Industry-specific data
- 
- Broad Assumption-based
  - Spend-based
  - Research-based



Transparency

Accuracy

Transition-ready,  
highly integrated,  
actionable

Compliance-based,  
non-actionable,  
low integration

# The decisive part of your Transition Plan

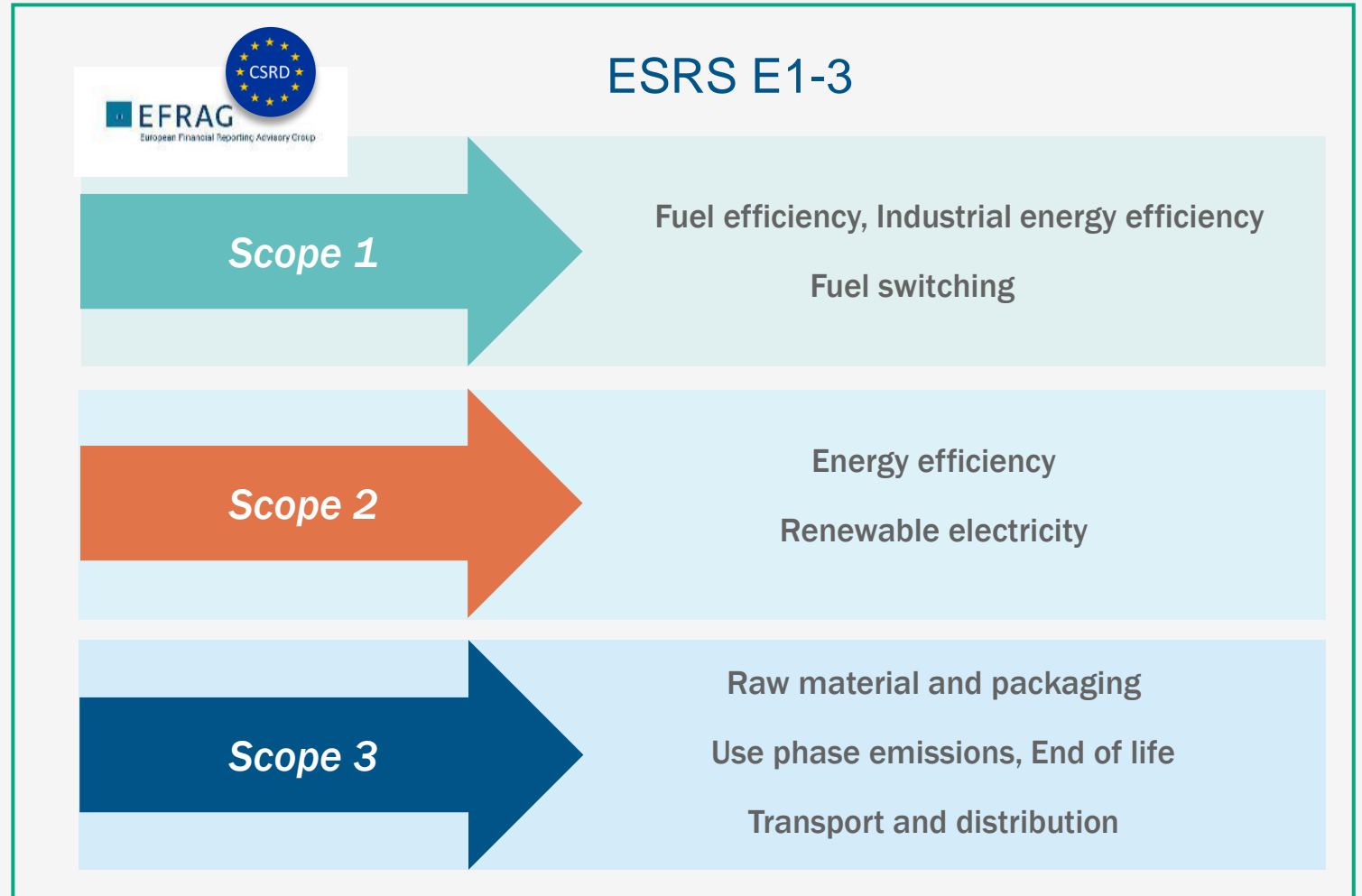
## Carbon Reduction Assessment

### ANALYZE



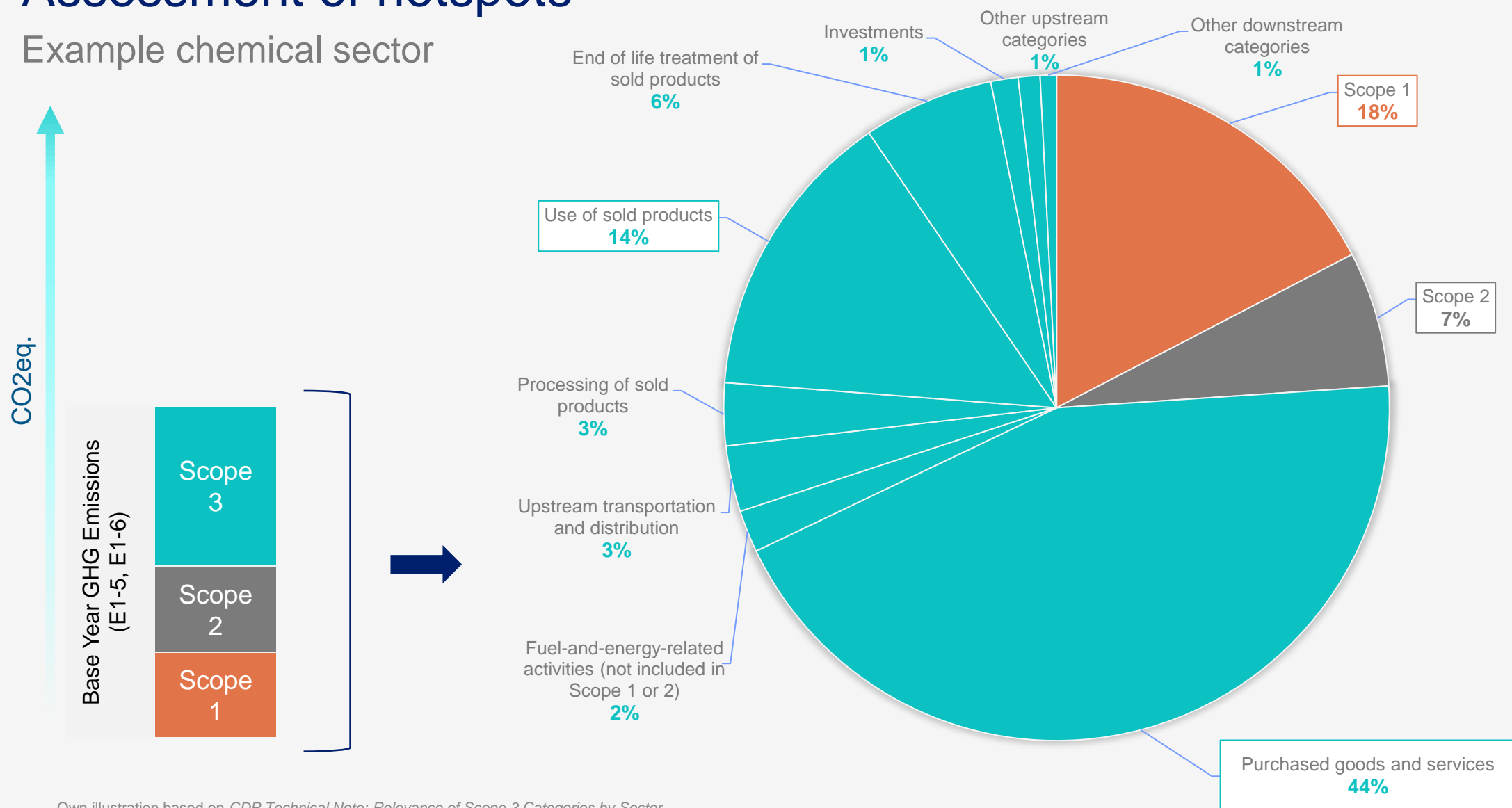
- Assess carbon hotspots in own operations and along the value chain.
- Analyze mitigation measures for direct and indirect emissions.

Carbon reduction  
assessment



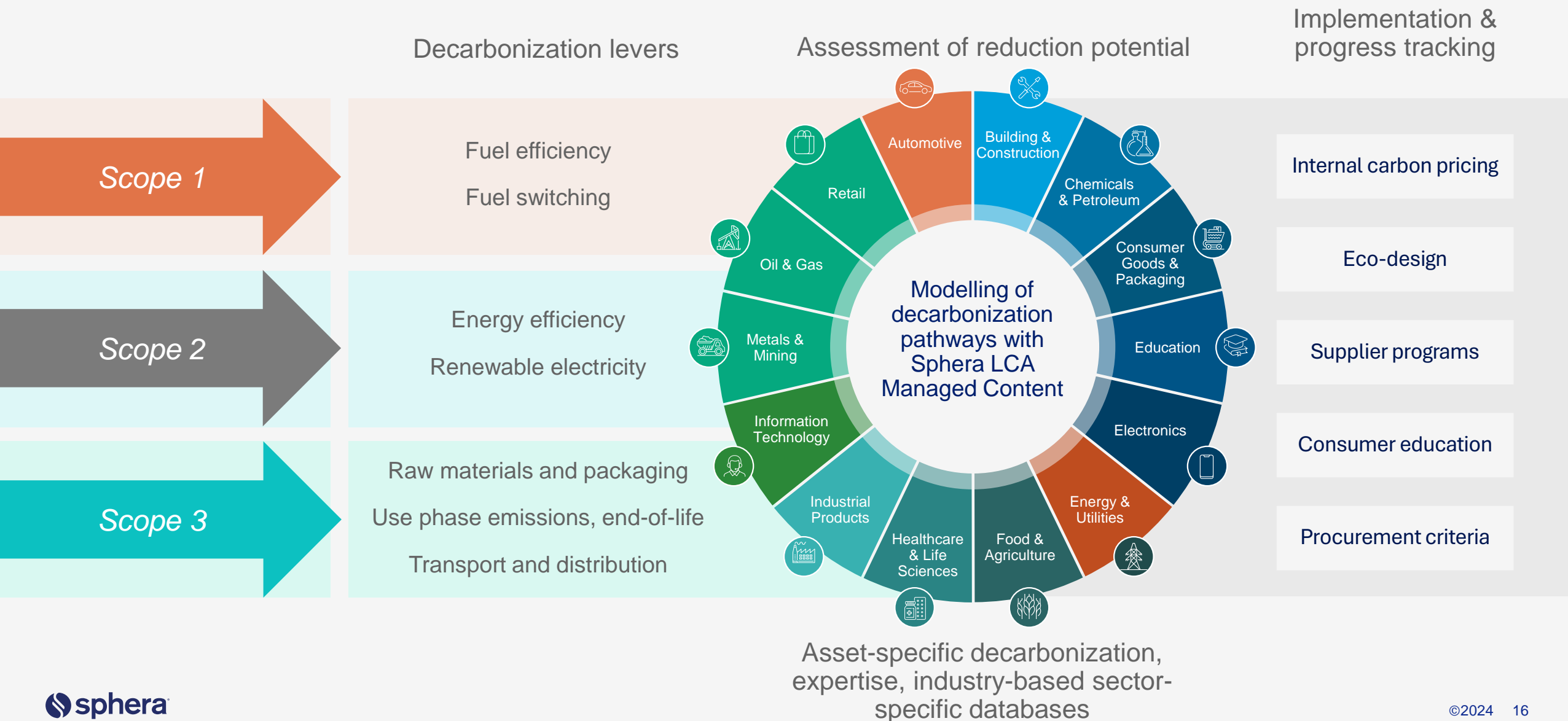
# Assessment of hotspots

## Example chemical sector



Own illustration based on CDP Technical Note: Relevance of Scope 3 Categories by Sector

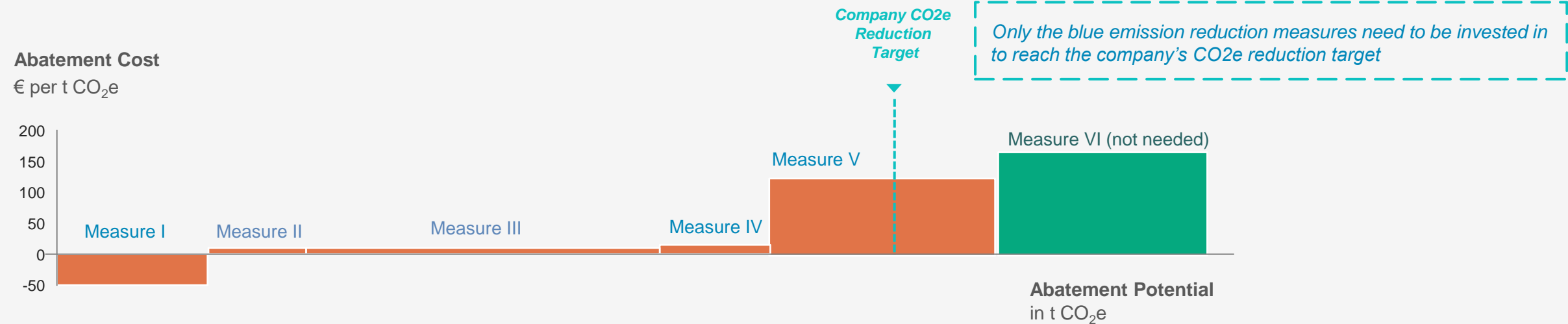
# Identification of decarbonization levers





# Carbon Reduction Assessment

## Assessment of Carbon Abatement Cost



Define and rank emission reduction projects according to Emission abatement costs [in € per t CO<sub>2</sub>e]

### Emission reduction measures

Measure I

Measure II

Measure III

...

Abatement Potential in t CO <sub>2</sub> e	Abatement costs in € per t CO <sub>2</sub> e	Lever costs in €
2.000	-50	-100.000
10.000	10	100.000
...	...	...

# Transition Plan

How companies can take action

## STRATEGIZE



- Develop Transition plan for climate change mitigation.
- Confirm the decarbonization trajectory through standards.

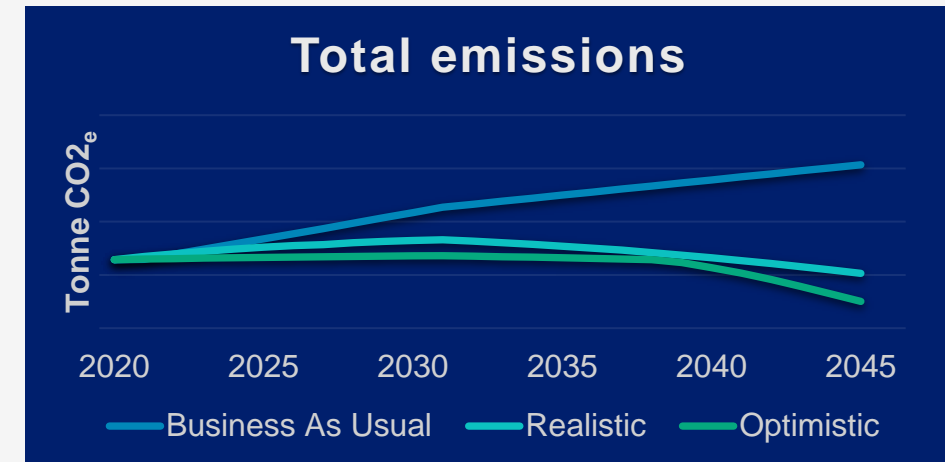
## Decarbonization Road Map Targets

## MAIN REFERENCE FOR TARGET SETTING



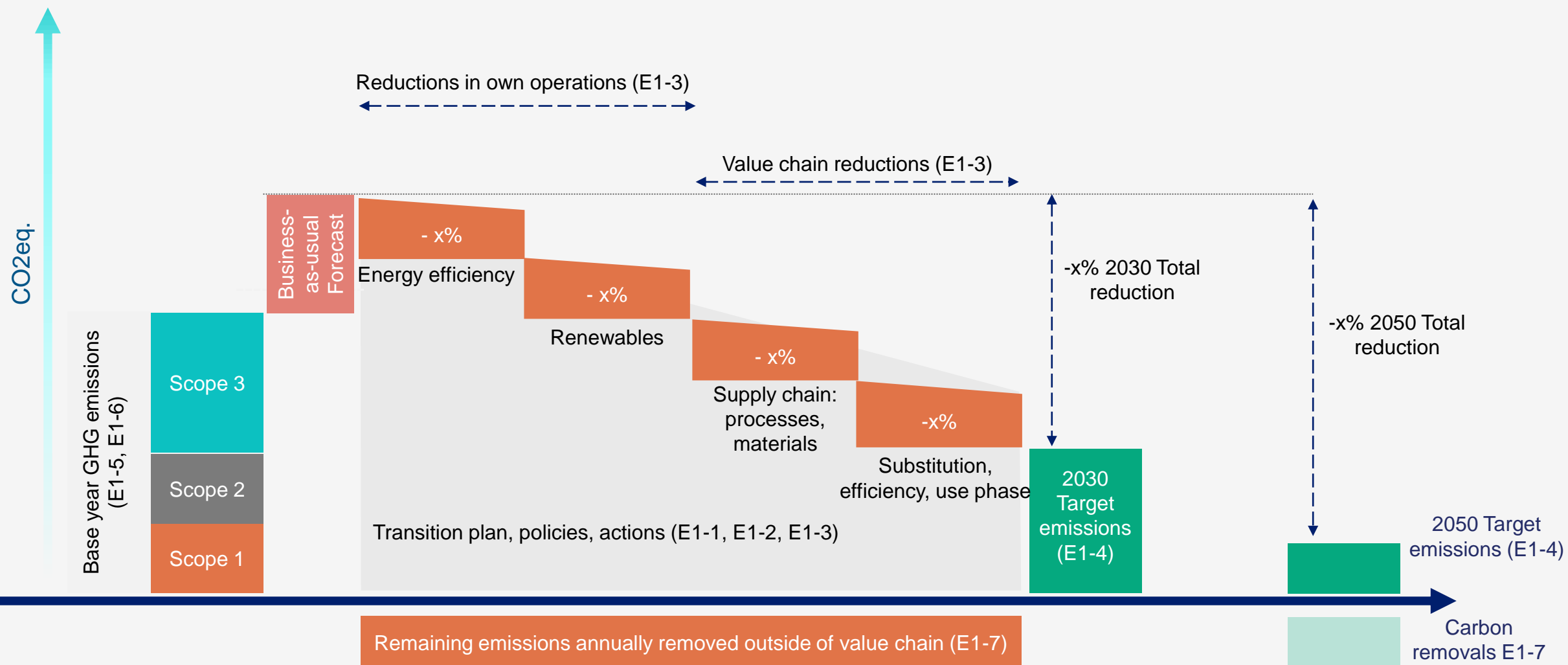
### ESRS E1-4

- Reduction targets for **Scope 1, 2, and 3 GHG emissions**.
- Include target values for the **year 2030** and, if available, for the year 2050.
- Science-based and compatible with **limiting global warming to 1.5° C**



# Transition plan for climate change mitigation

## Quantification of main decarbonization levers



# Climate change mitigation

How companies can take action

**ESRS E1 – Application  
requirement 31**

The undertaking may present its **GHG emission reduction targets** together with its **climate change mitigation actions** as a table or graphical pathway showing developments over time.

	Base year (e.g., 2025)	2030 target	2035 target	Up to 2050 target
GHG emissions (ktCO2eq)	100	60	40	
Energy efficiency and consumption reduction	-	-10	-4	
Material efficiency and consumption reduction	-	-5		
Fuel switching	-	-2		
Electrification	-		-10	
Use of renewable energy	-	-10	-3	
Phase out, substitution or modification of product	-	-8		
Phase out, substitution or modification of process	-	-5	-3	

# Transformation of Business Strategy

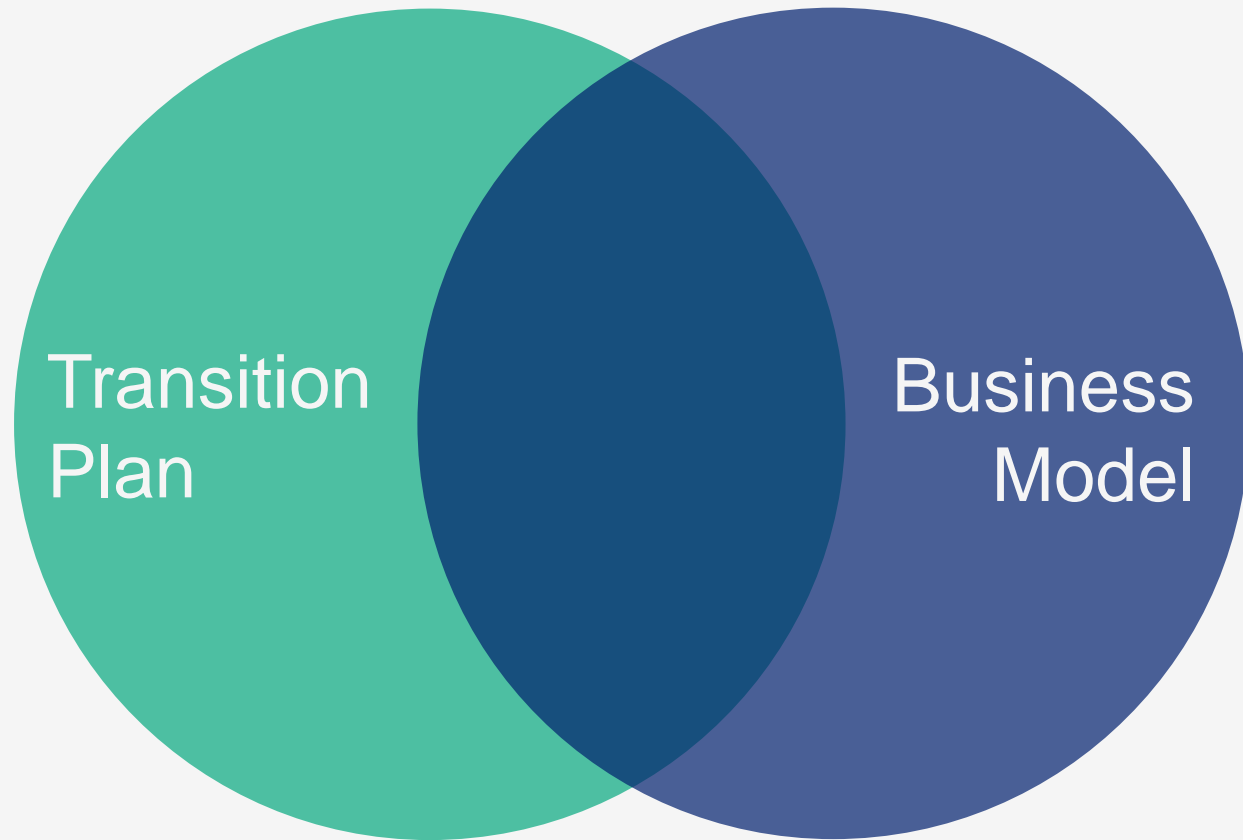
Integration of the Transition Plan into the Business Model

## STRATEGIZE



- Assessment of risks and opportunities
- Screening of product and service portfolio
- Alignment with strategy and financial planning

**Transformation of  
Business Strategy**



# Transformation of business strategy

## 360° screening: is your business strategy aligned with your climate ambition?

### Risks & Opportunities



- Assessment of climate-related risks and opportunities
- Calculation of financial impacts
- Definition of risk management approach



### Product Portfolio



- Holistic assessment of the product portfolio considering decarbonization readiness
- Identification of products with positive/negative contribution
- Definition of product management approach



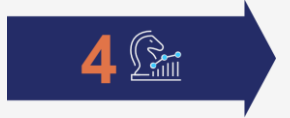
### Financial Planning



- Integration of transition plan into the organization's overall financial planning
- Alignment of CAPEX spend with decarbonization goals
- Internal and external funding of decarbonization measures

# Transformation of Business Strategy

## ESRS E1-2 | Examples of Relevant Disclosure and Application Requirements



22. The undertaking shall describe its **policies** adopted **to manage its material impacts, risks and opportunities** related to **climate change mitigation** and adaptation.

25. The undertaking shall **indicate whether and how its policies address the following areas:**

- a) climate change mitigation;**
- b) climate change adaptation;
- c) energy efficiency;**
- d) renewable energy deployment; and**
- e) Other**

AR 17. Policies related to **climate change mitigation** address the management of the undertaking's **GHG emissions, GHG removals and transition risks over different time horizons,**

AR 18. Policies related to **climate change adaptation** address the management of the undertaking's **physical climate risks and of its transition risks related to climate change adaptation.**

# Climate strategy implementation

## OPERATIONALIZE

# 5 & 6

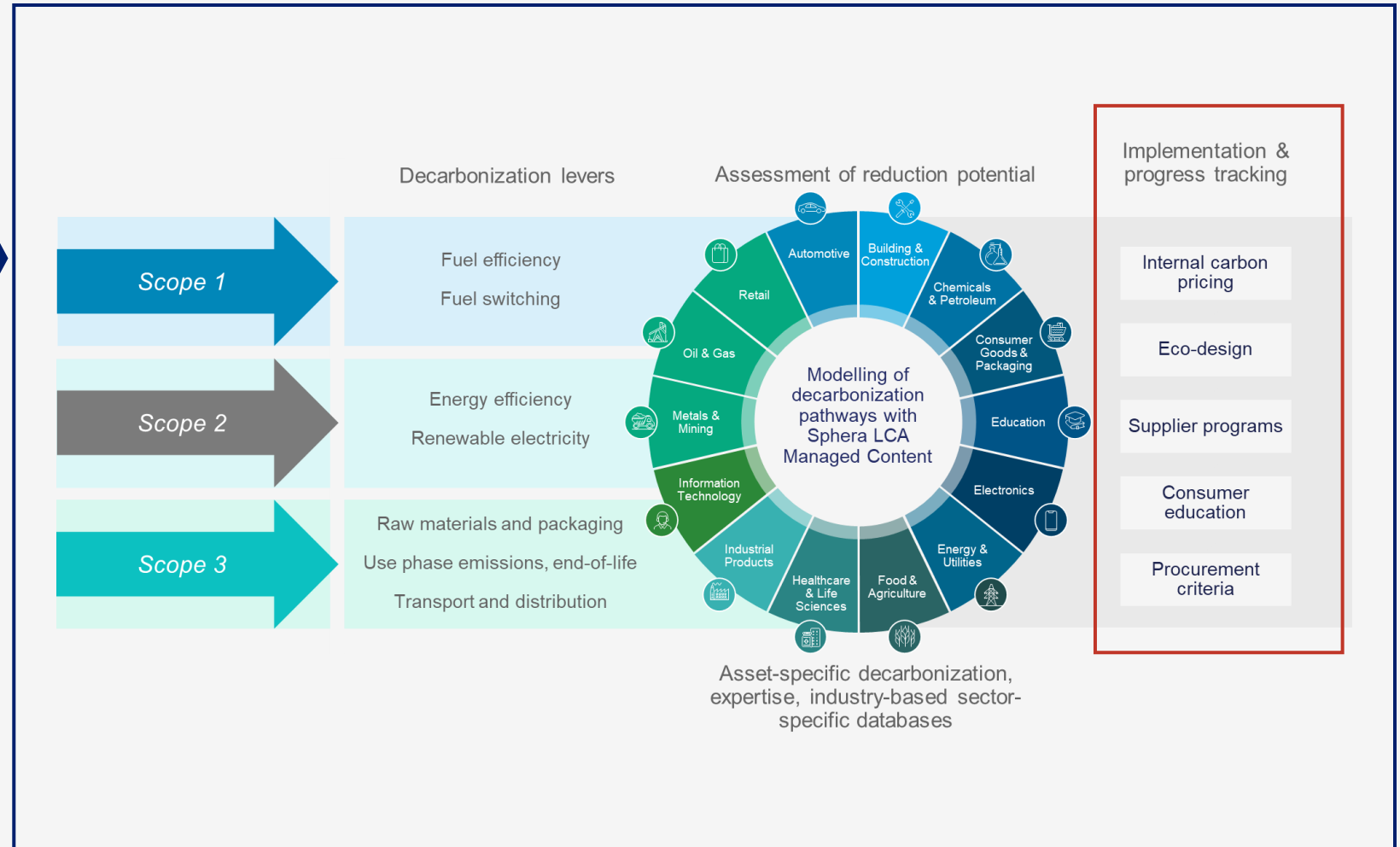


## Climate Strategy Implementation

- Internal Carbon Pricing
- Sustainable Product Innovation (ECODESIGN)
- Supplier Engagement

## Progress Monitoring

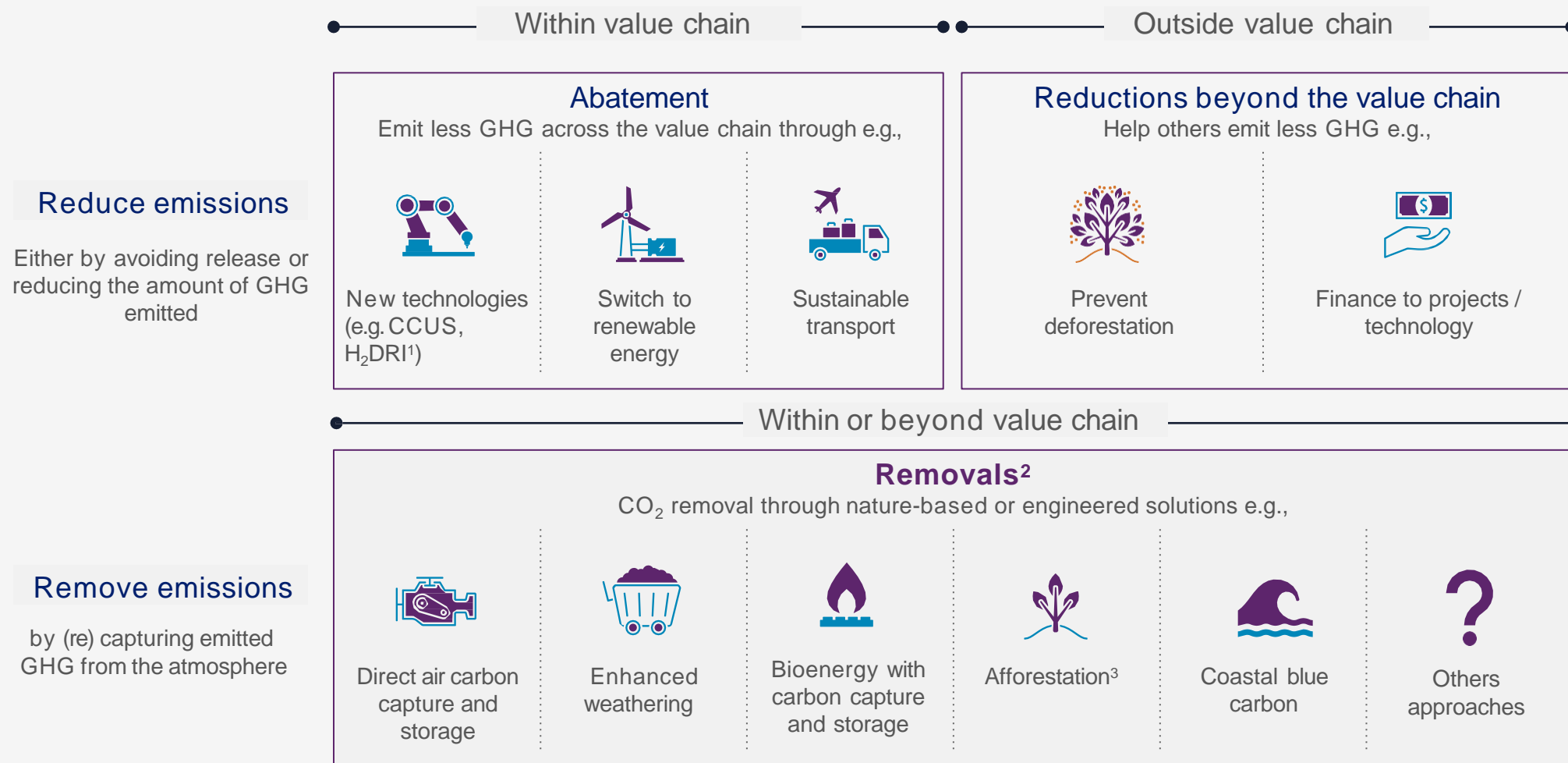
- Monitoring & Reporting





# Climate change mitigation

## Implementation of transition plan and climate strategy

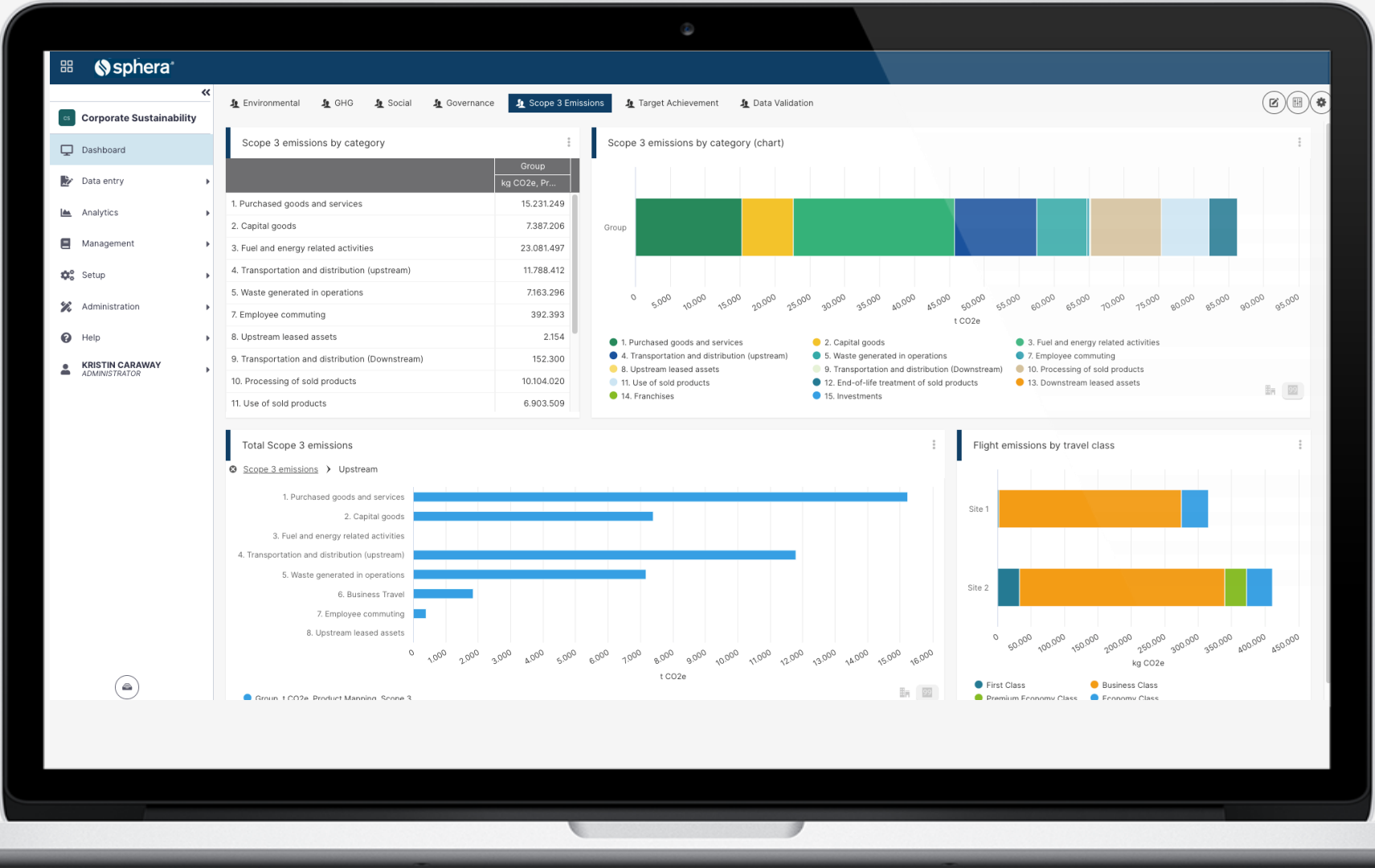


1. CCUS = carbon capture, utilization and storage, H<sub>2</sub>DRI = hydrogen direct-reduced iron (both technologies prevent GHGs from entering the atmosphere and therefore count towards emission reductions); 2. Removals contribute towards "beyond value chain mitigation", or "neutralization", depending on whether they are used to counterbalance remaining residual emissions; 3. Can also count towards emissions reductions for companies with forestry, land-use and agricultural emissions in their supply chains

# Scope 3 Emissions

Different Scope 3 activities can be tracked and analyzed in SpheraCloud Corporate Sustainability.

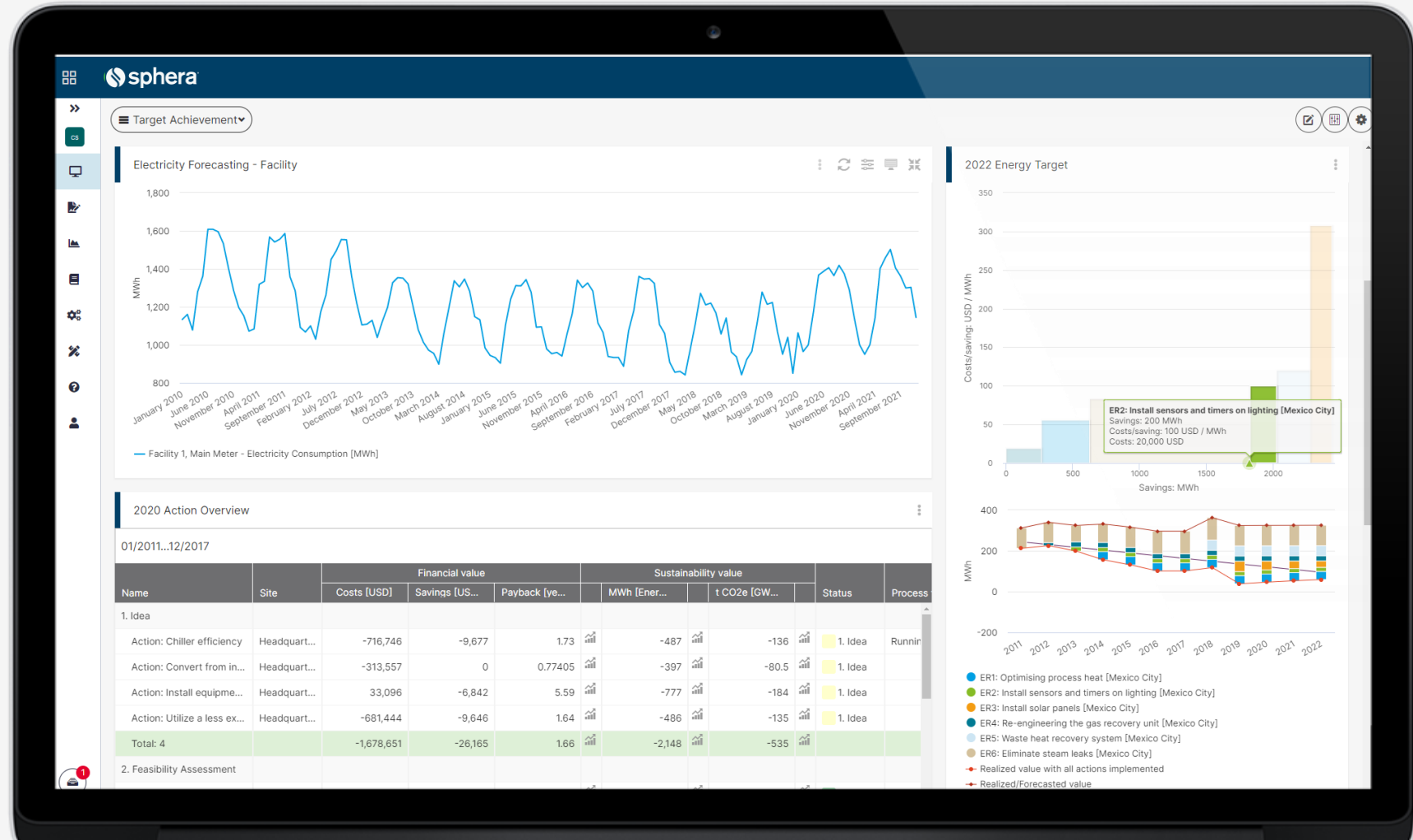
Sphera has also supported numerous clients in accurately quantifying Scope 3 emissions.



# Targets and actions

Targets & Actions module adds powerful functionality to achieve tangible business benefits, such as reduced energy cost.

Provides what-if scenarios & simulations of facility level efficiency measures including cost abatement reports displaying the most cost and resource efficient actions.



# Sphera's Approach to Transition Planning





Thank you for your time.  
If you have any question,  
please do not hesitate to  
contact us.

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# Mercedes-Benz AG

## Quantifying Scope 3 decarbonization

*“Sphera’s sophisticated supply chain LCA models and their extensive supply chain understanding helped us gain transparency in our supply chain. Quantifying decarbonization pathways for our main materials was the missing piece of our corporate decarbonization strategy.”*

— Dr. Klaus Ruthland, Corporate Environmental Protection and Energy Management, Mercedes-Benz AG



### CHALLENGES



Missing emissions transparency in the supply chain

Lack of reliable, detailed emissions inventories for steel, aluminum and plastics

Limited knowledge on the influence and impact of renewable energy and recycled or bio-based materials

Lack of CO2 reduction potentials for target setting

### SOLUTIONS



Mercedes-Benz AG partnered with **Sphera Sustainability Consulting** services to conduct a detailed CO2 modeling of the supply chains and developed impactful material insights.

### RESULTS



Gained CO2 transparency in the supply chain

Developed the ability to quantify supply chain strategies in terms of decarbonization potential

Acquired the ability to formulate, quantify and refine CO2 reduction targets



# CSRD, EU Taxonomy regulation and decarbonization

*“We had excellent, timely support from Sphera’s sustainability consultants. Their expertise in CSRD, EU Taxonomy regulation and carbon management made the project run smoothly. Their knowledge and guidance greatly helped us to prepare for EU regulatory requirements in sustainability performance reporting.”*

*- Claude Seywert, CEO, Encevo*



## CHALLENGES



Prepare for CSRD and EU Taxonomy regulation's disclosure requirements

Develop decarbonization trajectory

## SOLUTIONS



Encevo commissioned **Sphera Sustainability Consultants** to develop a proof of concept for EU Taxonomy reporting, discuss internal governance structure, prepare for CSRD and establish a decarbonization trajectory.

## RESULTS



**Proof of concept** how to adopt the EU Taxonomy regulation

**Identified gaps** in KPI reporting for CSRD

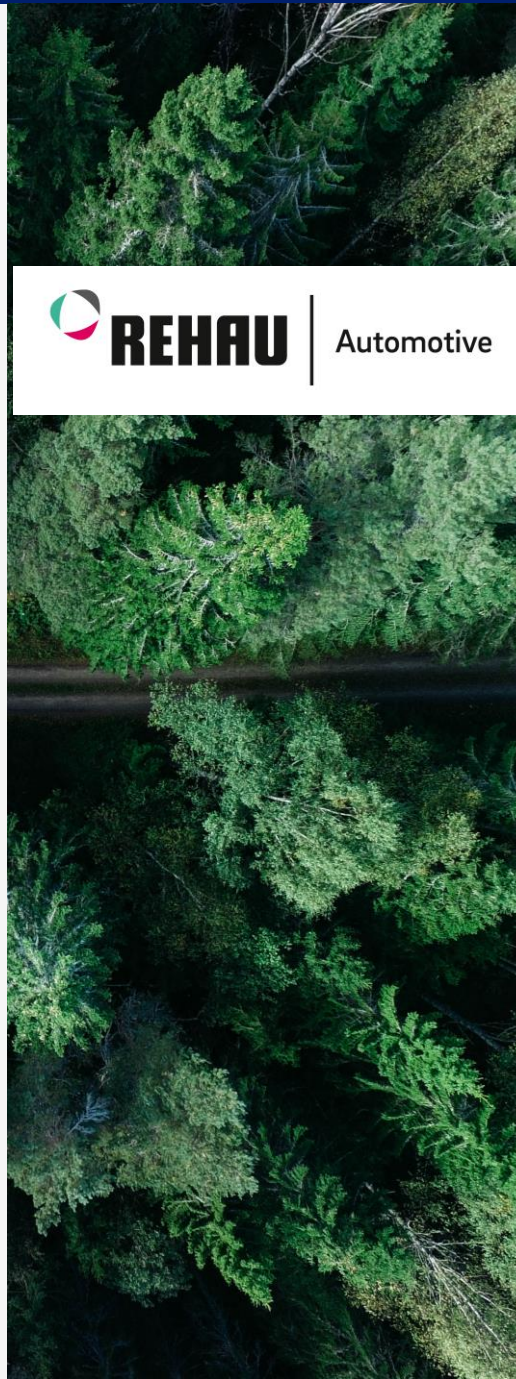
**Creation of internal knowledge** and awareness

**Establishing a comprehensive corporate carbon footprint** and realistic decarbonization scenarios

# Providing actionable insights into Scope 3 emissions hotspots

*"To decarbonize your business, you first need to understand your status quo and identify GHG emissions hotspots along the value chain. Sphera helped us quantify our baseline based on a solid methodology and high-quality data, spot relevant data gaps, and close them moving forward. This provides us with a foundation for continuous, measurable improvements."*

— Andreas Pinkernelle, Head of Sustainability, REHAU Automotive



## CHALLENGES



**Need for a reliable Scope 3 GHG emissions baseline.**

**Missing information on hotspots within Scope 3.**

**Lack of high-quality material-specific emission factors.**

**Need for a consistent GHG calculation method to track progress.**

## SOLUTIONS



REHAU Automotive engaged **Sphera Sustainability and ESG Consulting** services to conduct a detailed Scope 3 study for a robust quantification of their greenhouse gas (GHG) emissions baseline.

## RESULTS



**Development of a specific Scope 3 quantification approach** as a foundation for a robust decarbonization strategy.

**Evolving from spend-based to physical unit-based activity data** for action-oriented reduction options

**Accurate mapping of material compositions** to specific LCA-based emission factors

**Training and knowledge transfer** to enable annual in-house calculations and audit





Sphera is the leading global provider of integrated sustainability, risk & performance management software, data and services.

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