



# €ERP Policy Training Workshop

The journey to the Environmentally Responsible Procurement Policy

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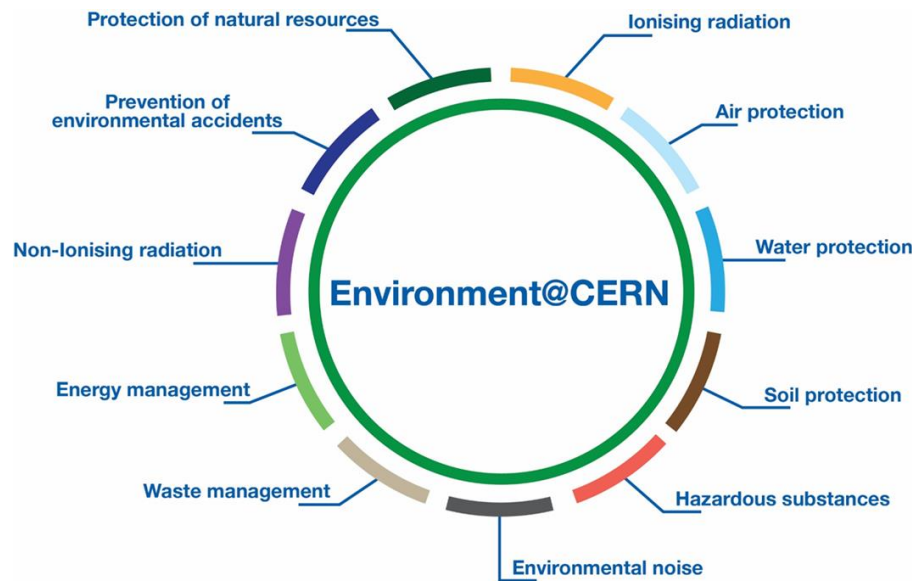
# The journey to the **Environmentally Responsible Procurement Policy**

## Creation of **CERN Environment Protection Steering Board (CEPS)**

- *Aim: Identification, prioritization of environmental objectives within the Organization.*
- *Presentation to CERN top management for decision.*
- *Budget allocation by the DG for the approved environmental objectives (11 in 2017).*

## Drafting of a **CERN Internal Environmental Report**

- *Internal document describing the status of environmental protection at CERN.*
- *Baseline for the definition of CERN's environmental objectives.*
- *Very first draft of future CERN external environmental reports.*



# Elaboration of Projects/action plans for 11 CERN environmental objectives



<b>Environmental Objective:</b>	<b>Increasing modal share of less polluting means of transport</b>	
<b>Air Protection-Mobility</b>		
<b>Initial ranking*</b>	Priority 2	<i>Date:</i> 26.07.2016
<b>CEPS ranking</b>	Priority 2	<i>Date:</i> 08.11.2019
<b>Target</b>	Remaining below 58% of individual car commuting by 2025	
<b>Present situation:</b>		
<p>SMB is developing an enterprise mobility plan (EMP) as announced during the public Conference on Mobility at CERN held on 20<sup>th</sup> September 2019. The EMP will integrate the mobility objectives defined in the CERN Masterplan 2030. The 2018 mobility survey, sent to staff and users with an overall rate of return of 43% (but 75% for CERN staff), revealed a larger modal for individual cars, the largest being from commuters coming from France, mainly due to the reduced public transport offer in France. The main reasons selected by individual car users were the increased flexibility and rapidity to commute. Today, nine mobility domains are under study to improve the situation in terms of social, economic and environmental impact.</p> <p>The SMB Department will present by the end of the year 2019 the detailed measures of the enterprise mobility plan to the Enlarged Directorate. Following the decisions, the actions related to the target set about commuting will be confirmed and other targets may be defined.</p>		
<b>Mitigation actions already carried out:</b>		
<p>SMB → Improvement on road safety, increase of CERN shuttle offer, optimization of the CERN car sharing services and CERN bike fleet. Exchanges with authorities to increase public transport offer.</p>		
<b>Regulatory framework, environmental or other relevant policy/strategy</b>		
<p>EU: European strategy: <a href="#">Strategy for low-emission mobility</a> (20/07/2016).                  CH: Stratégie de l'Office fédéral du développement territorial (ARE), <a href="#">La stratégie de l'ARE 2018</a> (5.4 Objectif stratégique D, Veiller à la mise en œuvre de l'Agenda 2030 pour le développement durable par la Suisse).                  F: Loi N° 2015-992 du 17 août 2015 relative à la transition énergétique pour la croissance verte.</p>		
<b>Prerequisites to attain target</b>	Finalization of the mobility proposal by SMB and decisions of the Enlarged Directorate	
<b>Actions</b>		
<b>1 Mobility measures to be launched once approved by the ED</b>		
<b>Budget:</b>	<b>Action owners:</b>	<b>Timeframe:</b>
n/a	SMB	2019
<b>CEPS board recommendation</b>		
The CEPS board recommends to implement measures to reduce the ratio of individual cars commuting and to reduce the GHG emissions of CERN vehicles fleet.		
<b>Key Performance Indicator</b>		
<p><b>Modal share for commuting trip (all personnel)</b></p> <p>Legend: MIT: Motorized individual transport (Car (individual), Car sharing, Mota/scooter), Public transport, CERN navette, Bicycle, Walking, Road transport (car public transport).</p> <p>... by country of residence</p> <p><b>Switzerland</b></p> <p><b>France</b></p>		

Courtesy: Michela Alessi – HSE Unit

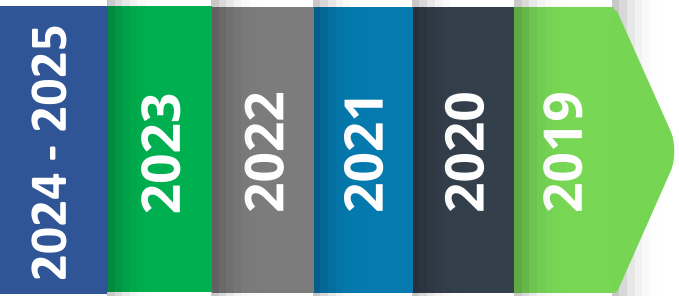
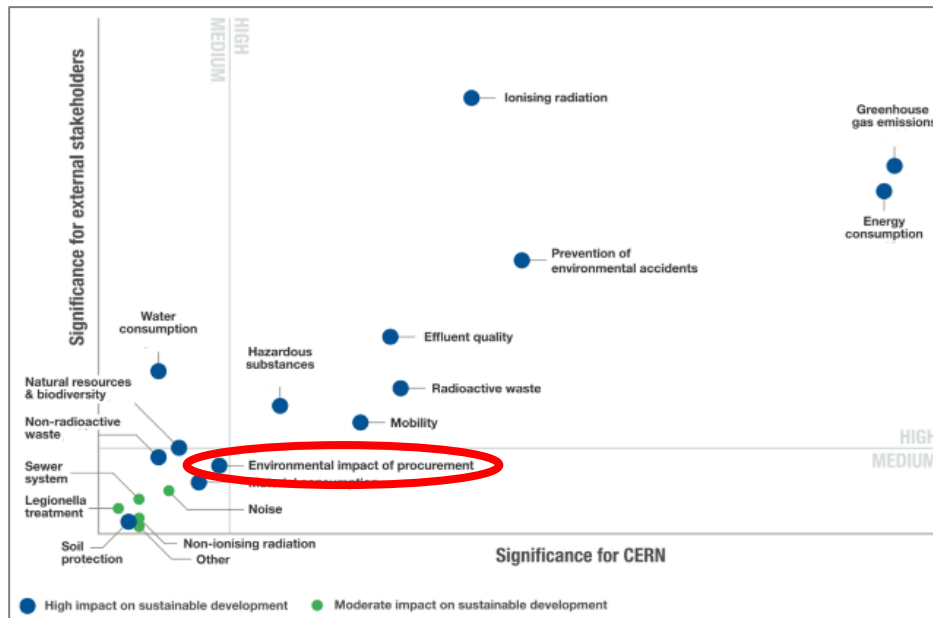
# CERN Council approval for public-facing CERN Environmental Reports

Reporting framework



## Elaboration of the 1<sup>st</sup> Materiality analysis according to GRI Standard

- Investigation with key internal/external stakeholder on CERN environmental priorities.
- Definition of priority topics to cover in the report.

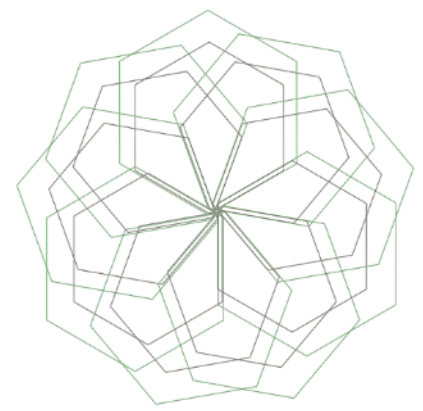




## Publication of the 1<sup>st</sup> CERN Environmental Report

### The first report (2017-2018)

*Establishing reporting frameworks and setting concrete goals*



Courtesy: Ebba Jakobsson – HSE Unit

#### Topics

- Energy consumption
- Greenhouse gas emissions
- Mobility
- Ionising radiation
- Noise
- Waste (radioactive and conventional)
- Water consumption
- Effluent quality
- Biodiversity
- Hazardous substances
- Prevention of environmental accidents



+  
Knowledge and  
technology for the  
environment

**Context:** accelerator operation years



## Launch of the CERN Environmentally Responsible Procurement Policy Project (€ERP<sup>3</sup>)

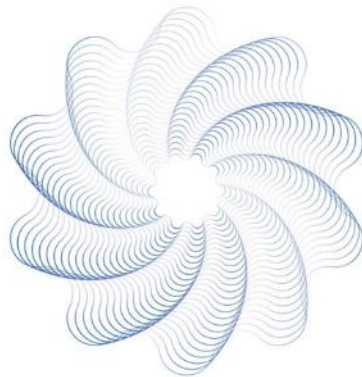
- Definition of the scope of a feasibility study on sustainable procurement.
- Definition of the objectives & modalities of implementation.



## Publication of the 2<sup>nd</sup> CERN Environmental Report

The second report (2019-2020)

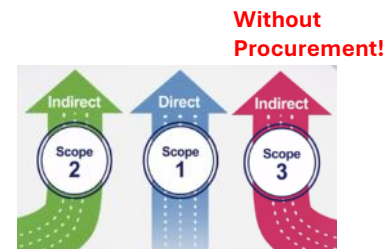
*Turning words into action*



Courtesy: E. Jakobsson – HSE Unit

### New topics

- Scope 3 emissions
  - Commuting
  - Business travel
  - Catering
  - Waste management
  - Water treatment
- Helium



**Context:** accelerator complex shutdown

2020

2019

2018

2017

2024 - 2025

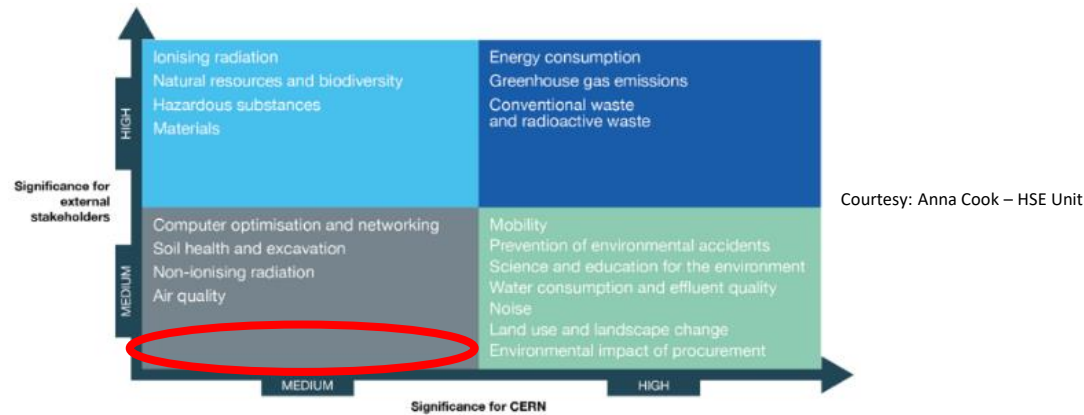
2023

2022

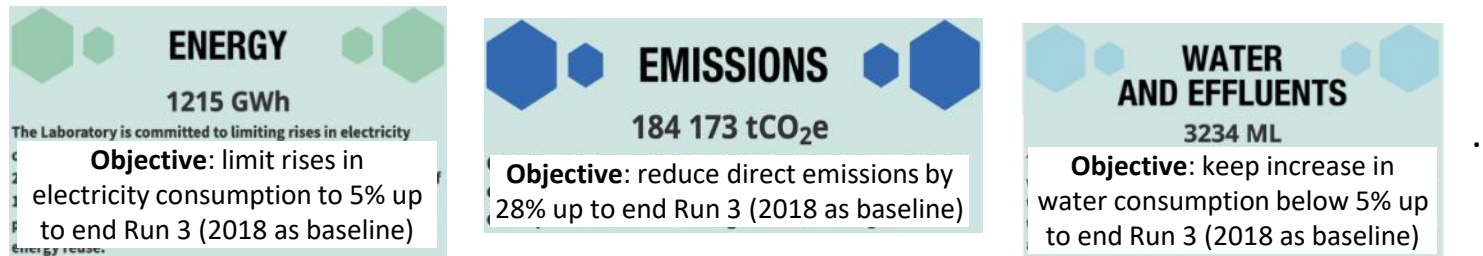
2021

## Elaboration of the 2<sup>nd</sup> Materiality analysis according to GRI Standard

- Investigation with key internal/external stakeholder on CERN environmental priorities.
- Definition of priority topics to cover in the 3<sup>d</sup> report.



## Update of CERN Environment Priority Objectives



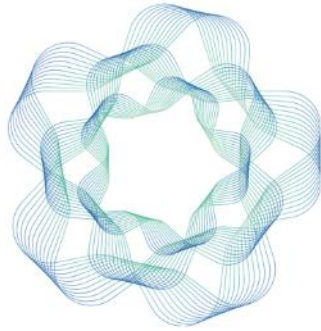
## CERN's Energy Policy

- Keep the energy required for its activities to a minimum.
- Improve energy efficiency.
- Recover waste energy.



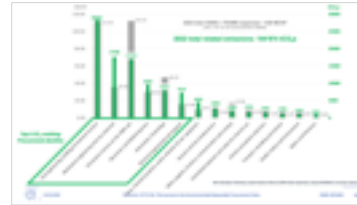
# Publication of the 3<sup>d</sup> CERN Environmental Report

## Challenge of overlap of long shutdown and Run 3



### New topic:

- Updated GRI Standard
- Scope 3 including Procurement
- Environmental impact of Procurement



## Approval of the CERN Environmentally Responsible Procurement Policy

- To embed environmental responsibility, where appropriate, throughout all phases of the procurement process.
- To commit to achieving sustainable results internally and throughout CERN supply chains.
- Networking, benchmarking, learning sustainable procurement best practices.



Chartered Institute of Procurement & Supply



The Sustainable Procurement Pledge



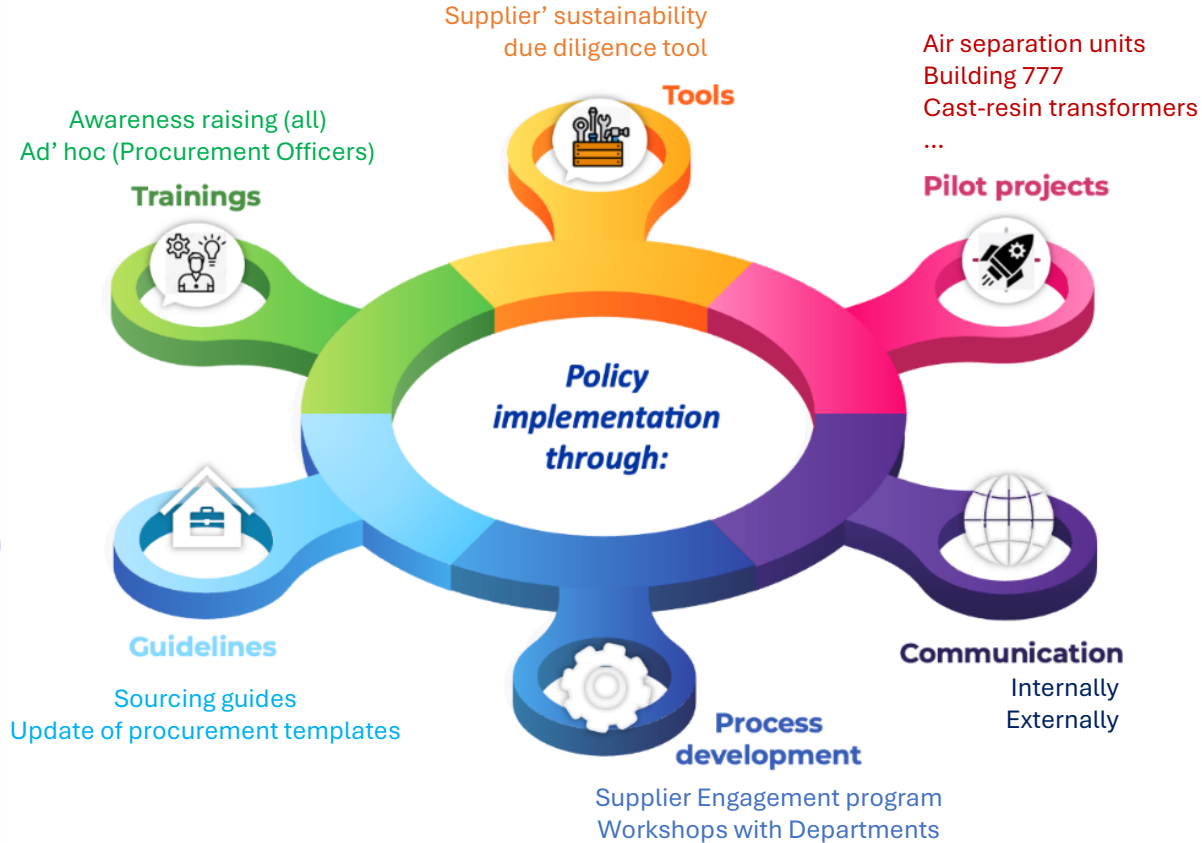
The Scope 3 Peer Group

## CERN is ISO 50001 certified

- More efficient energy use through the development of an Energy Management System.
- Energy performance reduces environmental impact by contributing to lower greenhouse gas emissions.



# Implementing the CERN Environmentally Responsible Procurement Policy



End 2025 Review



Lessons learnt

Feedback

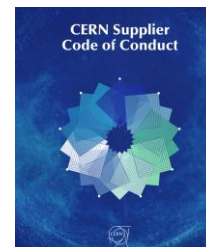
Proposals

Objectives Setting



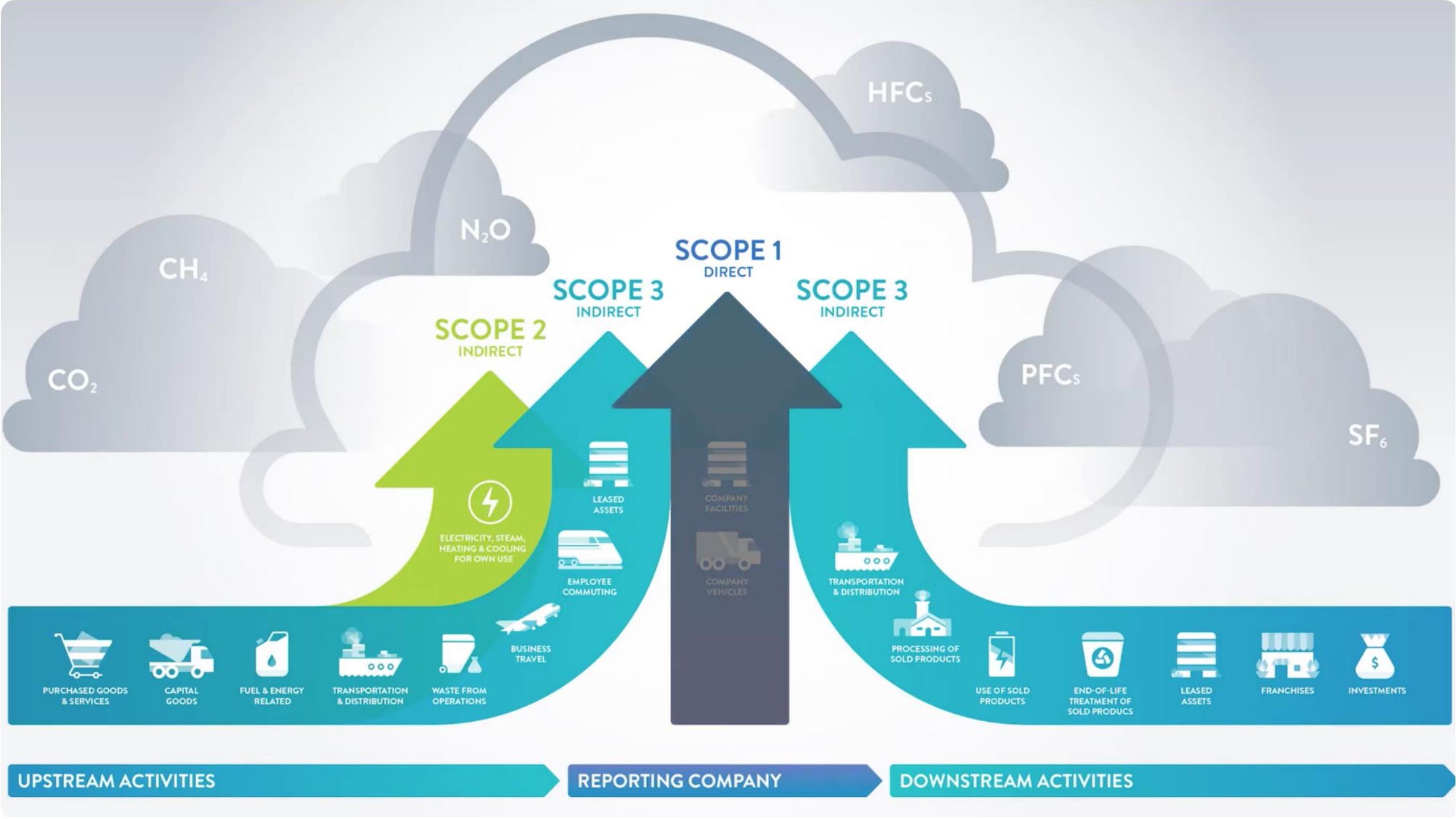
... aligned with CERN Environmental priority objectives

... and the CERN Supplier Code of Conduct



2024 - 2025  
Kick off phase





UPSTREAM ACTIVITIES

REPORTING COMPANY

DOWNSTREAM ACTIVITIES



PURCHASED GOODS & SERVICES



CAPITAL GOODS



FUEL & ENERGY RELATED



TRANSPORTATION & DISTRIBUTION



WASTE FROM OPERATIONS



BUSINESS TRAVEL



ELECTRICITY, STEAM, HEATING & COOLING FOR OWN USE



EMPLOYEE COMMUTING



LEASED ASSETS



COMPANY VEHICLES



COMPANY FACILITIES



TRANSPORTATION & DISTRIBUTION



PROCESSING OF SOLD PRODUCTS



USE OF SOLD PRODUCTS



END-OF-LIFE TREATMENT OF SOLD PRODUCTS



LEASED ASSETS



FRANCHISES



INVESTMENTS

# Aim and outcome of Sustainable Procurement



## Social

## Economical

## Environment

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- Check supply chains wrt socially responsible and ethical behaviour.
- Develop social value in supply chains.

### *Socially Responsible Procurement*

- Reduce operating and maintenance costs.
- Avoid procurement beyond real needs.
- Develop co-innovation with strategic suppliers.

### *Economically Responsible Procurement*

- Adopt environmentally preferable goods and services.
- Avoid/minimize damage to the environment.

### *Environmentally Responsible Procurement*

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- ✓ Fair employment practices.
- ✓ Fair trade and ethical sourcing practices.
- ✓ Promoting workforce health/safety/wellbeing.
- ✓ Diversity and equality in the supplier market.
- ✓ ...

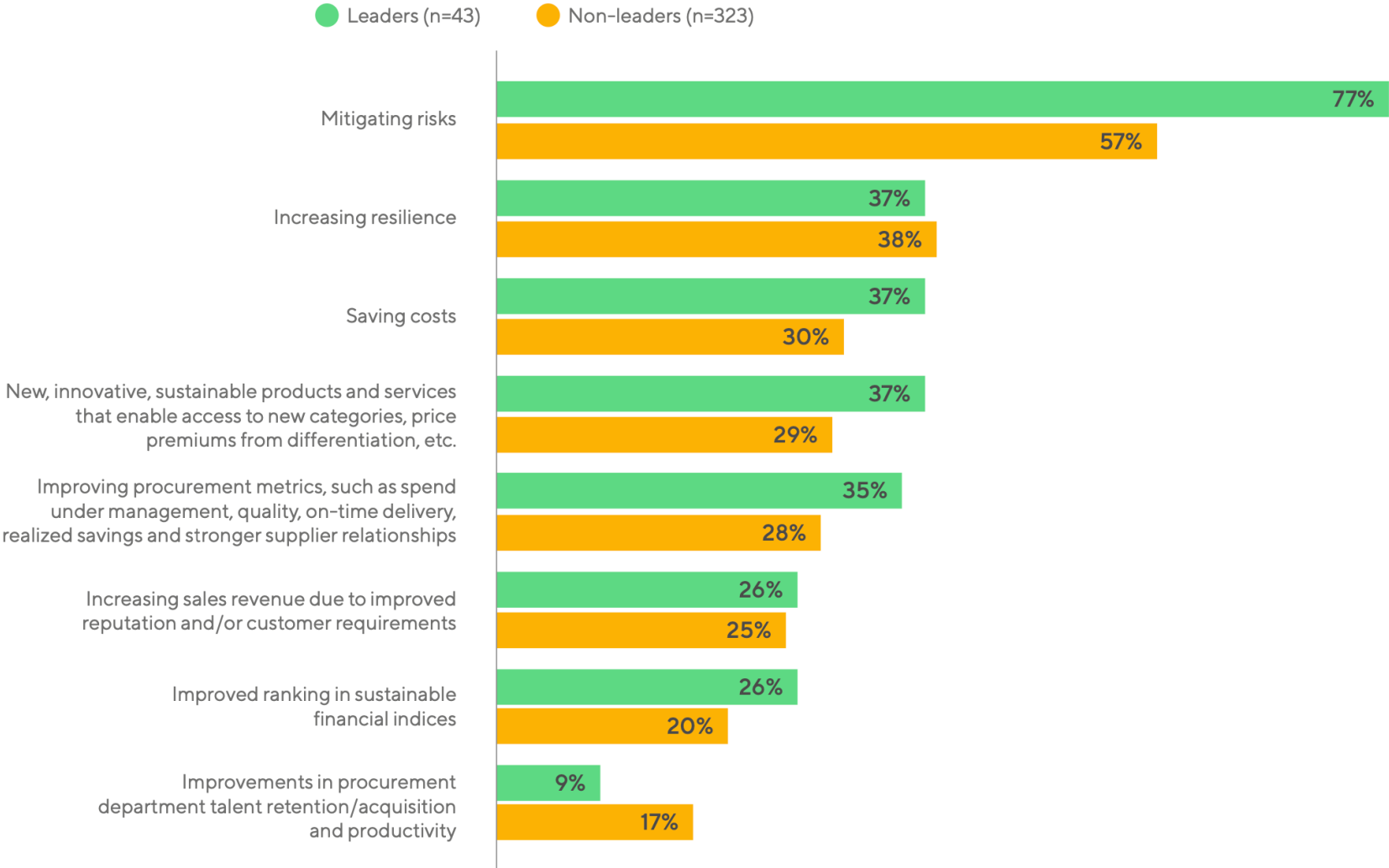
- ✓ Total Cost of Ownership (TCO) approach.
- ✓ Efficient supply chains.
- ✓ Adoption of green technologies.
- ✓ Create markets from recycling.
- ✓ Favour open competition.
- ✓ Reinforce resilience.
- ✓ ...

- ✓ Reduced use of energy (efficiency, renewable).
- ✓ Improved air quality (CO2 emissions reduction).
- ✓ Reduced use of water (savings, efficiency).
- ✓ Improved water/soil quality (pollution prevention).
- ✓ Reduced needs of raw materials/natural resources.
- ✓ Reduced waste and by-products.
- ✓ ...

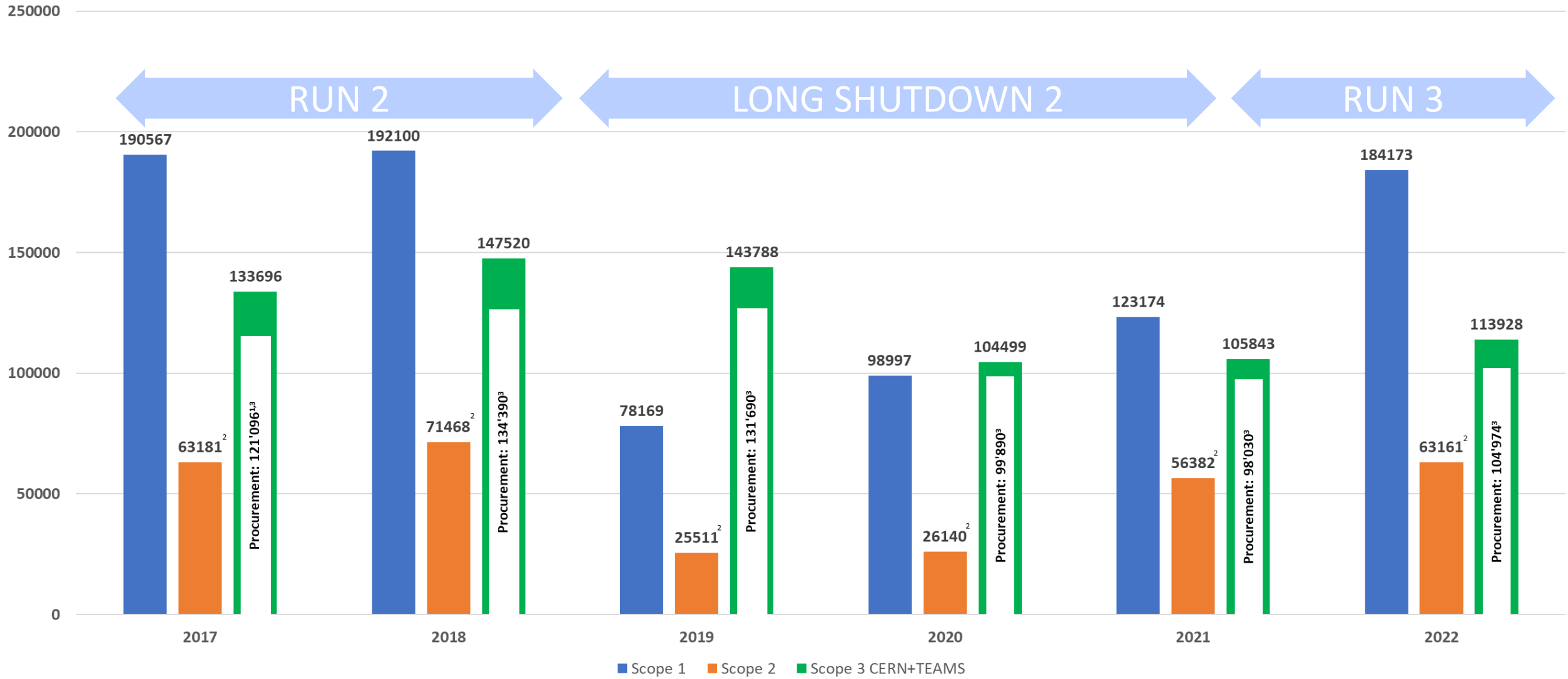
# Benefits of Sustainable Procurement

“Sustainable Procurement Barometer 2024,” EcoVadis and Accenture, February 2024. Based on data collected from nearly 600 buyers and more than 1,000 suppliers, worldwide.

What benefits has your organization derived from its sustainable procurement program? (n=366)



# CERN Carbon footprint (Scopes 1, 2 and 3)



<sup>1</sup> 2017 data extrapolated

<sup>2</sup> Location-based Scope2 estimates

<sup>3</sup> Spend-based Scope3 procurement estimates (Exiobase)

# Why a CERN Environmentally Responsible Procurement Policy ?

## Significant impact on CERN footprint



40% of CERN's annual funding is spent with its suppliers.

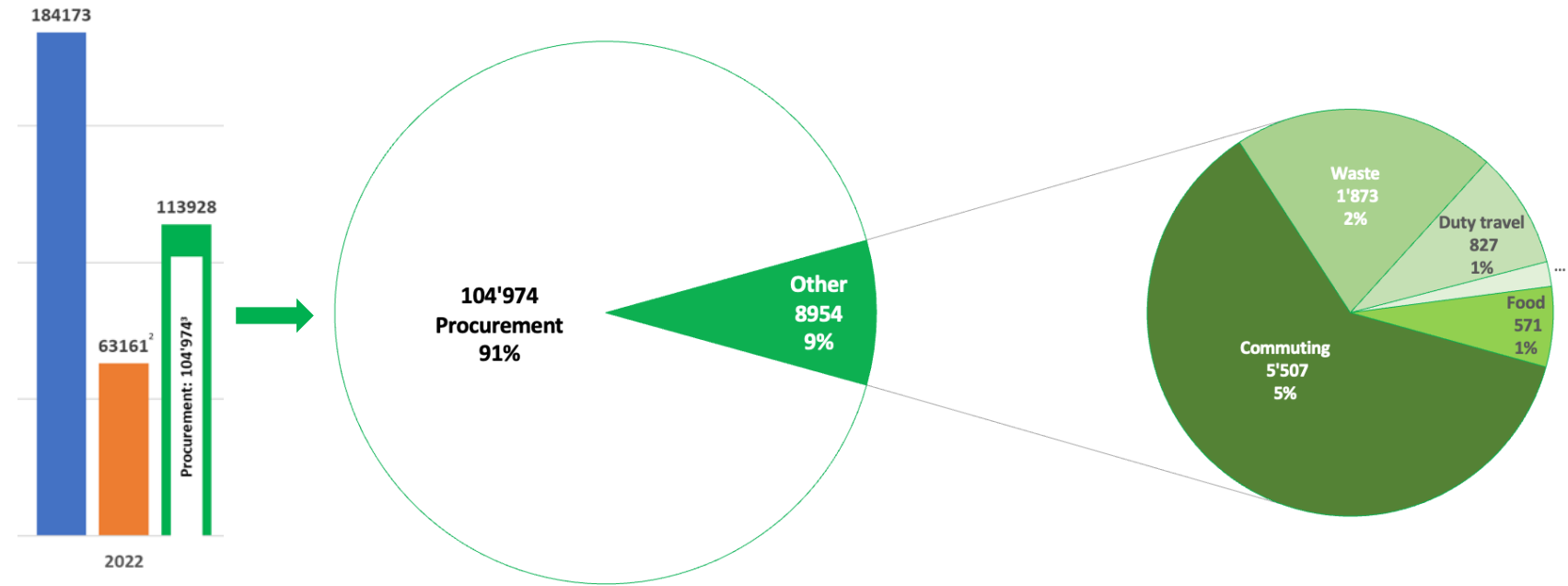


In 2022, > 90% of CERN's indirect (Scope 3) emissions resulted from purchases of goods & services.



35% of CERN global emissions are driven by its purchases.

## 2022 CERN+TEAMS indirect emissions (SCOPE 3) in tCO<sub>2</sub>e



## Stakeholders' expectations



- Increasing **Rules/Regulations** for environment protection.
- Reporting (e.g. GRI standards)

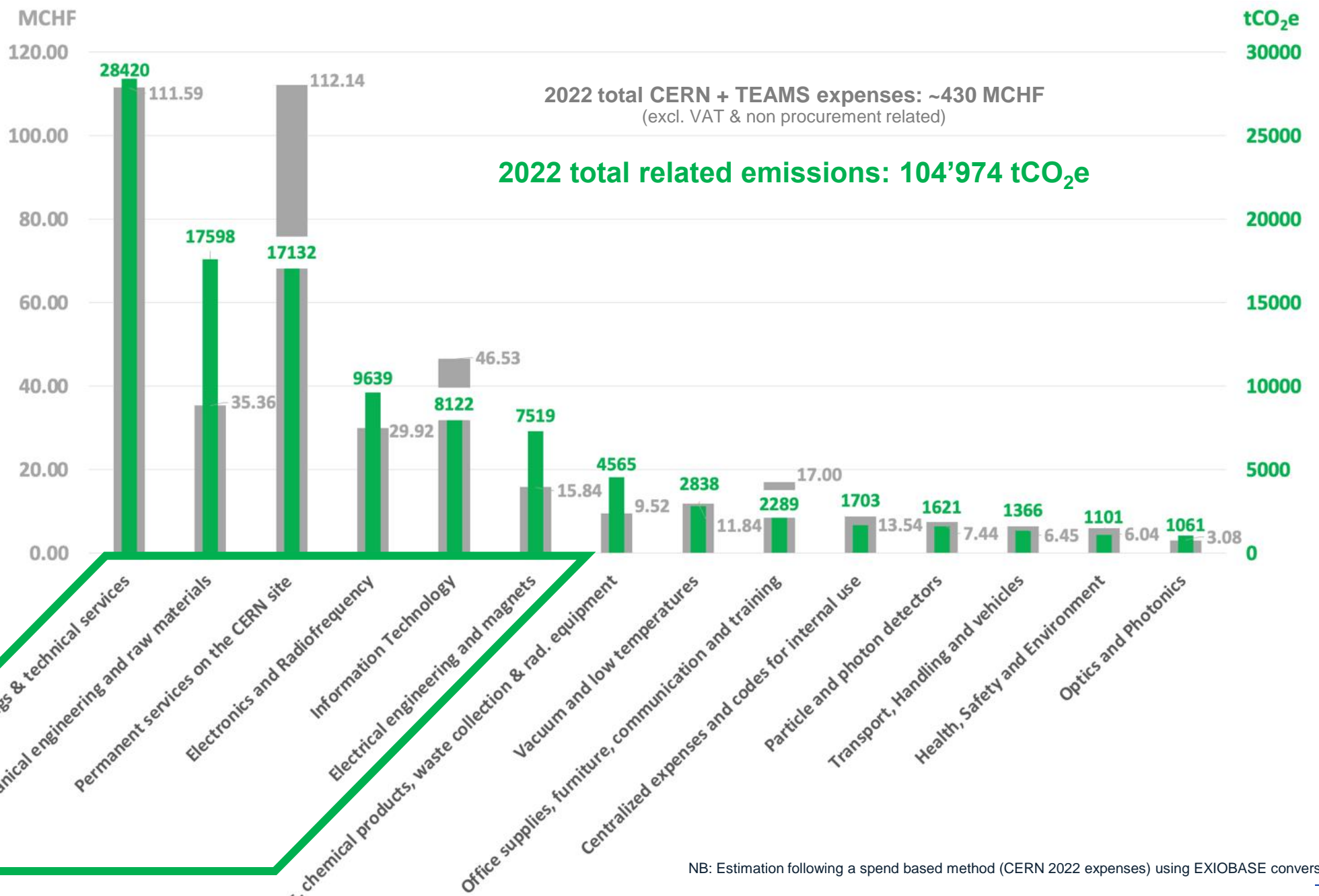


- Align procurement activities with CERN environmental goals.
- Mitigate risks associated with environmental impacts.

## Preventing the risk of supply disruption



- Partnership with strategic suppliers to face the highest risks.
- Enhance sustainability across the supply chain.



NB: Estimation following a spend based method (CERN 2022 expenses) using EXIOBASE conversion factors.

# Location-based vs. Market-based Scope 2 estimation

These are two different methods of calculating carbon emissions associated with electricity consumption.

**Location-based Scope 2 estimates** are based on the average emissions intensity of the electricity grid in a particular location.

- It considers the emissions from all electricity sources in that location, regardless of the contractual agreements or specific electricity purchases made by the consumer.
- This method assumes that consumers are using the average mix of electricity sources in their region.
- Location-based estimates may not accurately reflect the emissions impact of consumers who have made efforts to support renewable energy.

**Market-based Scope 2 estimates** consider the specific contractual agreements and electricity purchases made by the consumer.

- It considers the emissions associated with specific renewable energy certificates (RECs) or power purchase agreements (PPAs) that the consumer has invested in.
- This method allows consumers to track the emissions associated with their own electricity choices and helps support the development of renewable energy projects.
- Market-based estimates are more conservative because they provide a more accurate reflection of the emissions impact of individual consumers.

**In summary:**

- **Location-based estimates provide a general overview of the emissions intensity of the electricity grid in a specific location, while market-based estimates reflect the specific choices and investments of the consumer.**
- **Market-based estimates can give consumers more accurate information about their own emissions impact and allow them to support renewable energy projects directly.**