



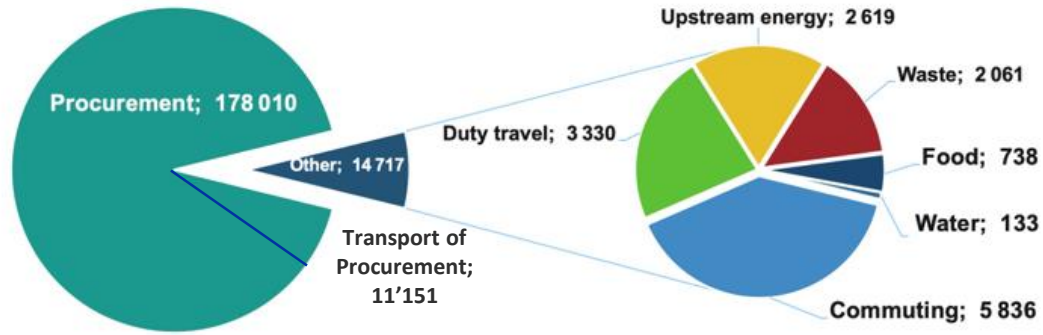
# Environmental initiatives in procurement and Knowledge Transfer

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15.09.2022

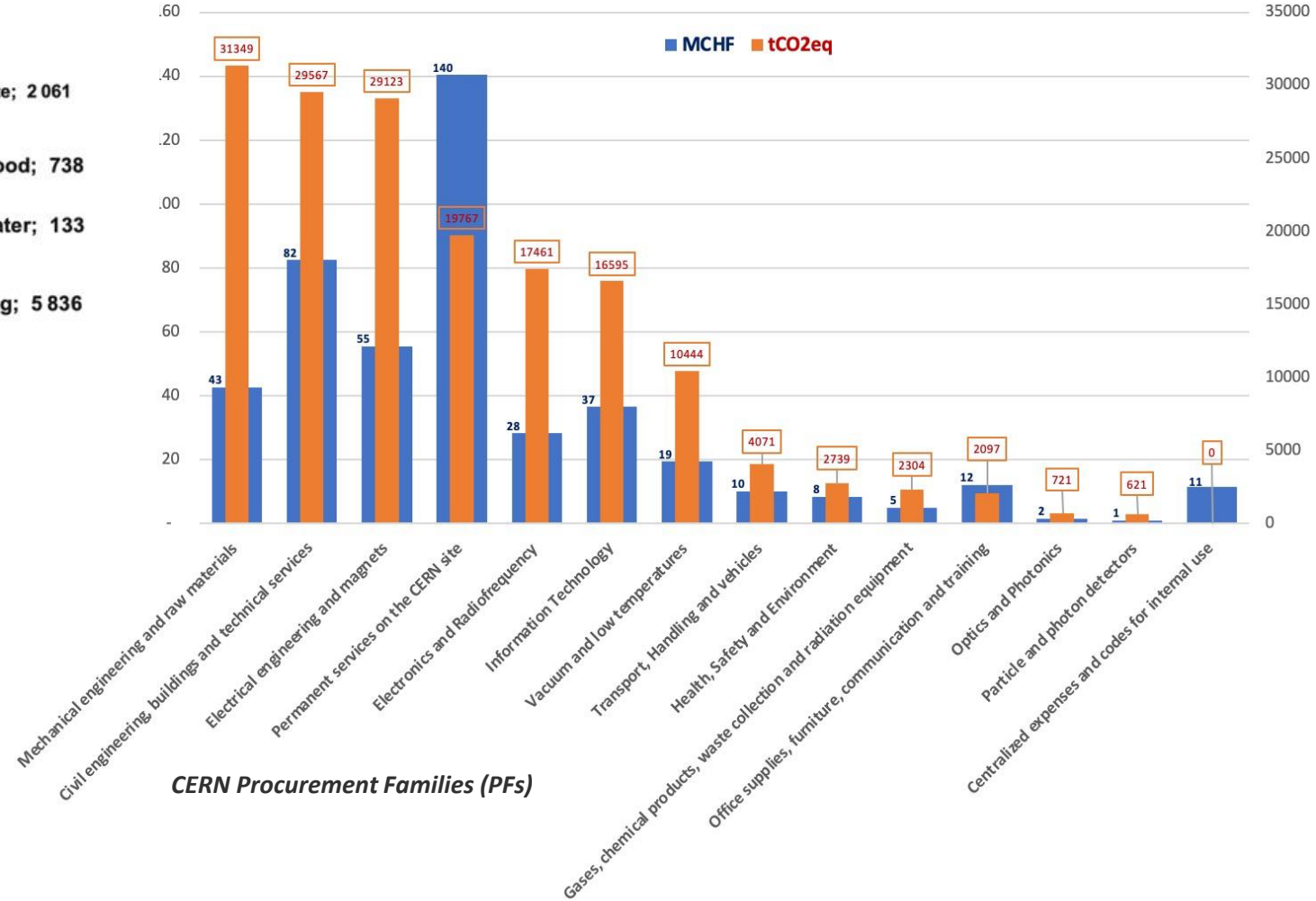
# Focus on CERN indirect (Scope 3) emissions

Total: 192'727 tCO<sub>2</sub>e in 2019



Activities under Scope 3	% of Scope 3
Procurement	86 6 = 92
Transport of Procurement	
Communting	3
Duty travels	2
Upstream energy	1
Waste	1
Others (Food, Water)	<1

2019 CERN Procurement expenses and associated CO<sub>2</sub>e emissions

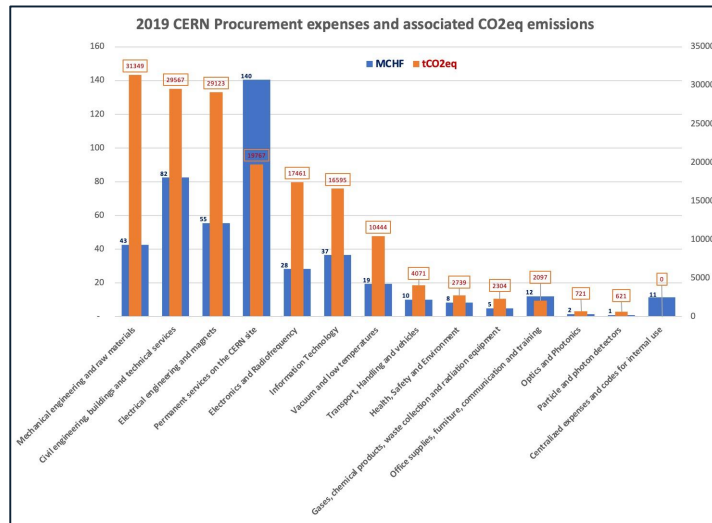


# Environmental initiatives in Procurement

**CERN Environmental Responsible Procurement Policy Project – CERP3**  
Started September 1<sup>st</sup>, 2021.

## Main objectives:

- Propose an environmentally responsible procurement policy to reduce CERN Scope 3 emissions.
- Revise/adapt CERN Procurement Policy and Rules if needed.
- Commit MPEs/MPAs/Users/stakeholders to environmentally responsible procurement and sustainability in general.
- Engaging the market intelligence about potential sustainable solutions.
- Create and equitably distribute value and balanced industrial return across CERN supply chains.
- Define KPIs and monitor performance.
- Feed CERN public-facing environmental reports.

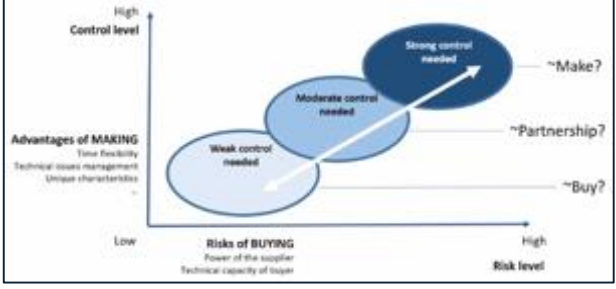


➤ Contribution to the ongoing ISO 50001 certification on Energy management led by N. Bellegarde.

# CERN Environmentally Responsible Procurement Policy Key Concepts

IF,  
WHY buying?

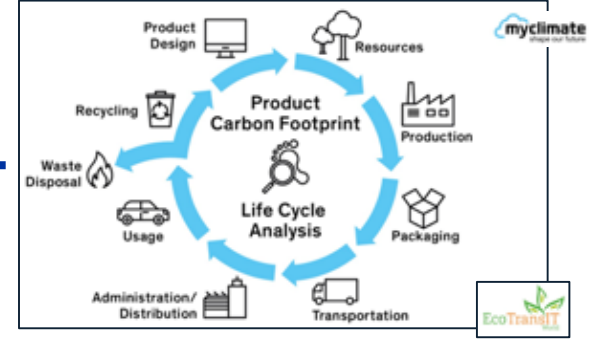
As user/owner?  
Functional approach  
KPIs e.g. % recycled  
**Challenge the need!**



WHAT do I buy?

Eco-design/Life Cycle Analysis  
Resource optimization (water/energy)  
Total Cost of Ownership (TCO)

**Polluting materials?**  
**Carbon footprint?**  
**Social impact?**



WHO I buy from?

(Very) Poorly balanced Countries  
Labels/Certification  
Local purchase/Diversity

**Countries/people exposed**  
**Duty of vigilance/Compliance**



HOW do I buy?

Reasoned negotiation  
Suppliers' performance  
Respect of commitments

**Fair competition**  
**Payment deadline**

# Roll out in 2023 and how we will engage with CERN community in procurements

➤ Mitigation/optimization objectives analysed in 2022 with Departments will define prioritised action plans.

**CERN should explore the market offering for cement alternatives with lower embodied carbon than traditional Portland cement**

**Opportunity**: 'Green concrete'

**Spend Area**: 'Civil engineering'

**Description**: Cement is the largest component of carbon emissions from infrastructure construction. Alternatives to traditional Ordinary Portland Cement (OPC) such as Geopolymer Cement (GPC) offer a significantly reduced embodied carbon profile.

**Potential**: GPC can have ca. 80-90% lower CO2 emissions in comparison to an equivalent amount of OPC. Stating a minimum partial replacement is an alternative to a total switch of cement types. Studies have shown the cost of OPC concrete is higher than the cost of production of GPC for higher grades and marginally lower at lower grades.

**Next Steps**: Obtain a 'green concrete' specification to use in future procurement exercises. Understand market offerings for lower-CO2 alternatives. Consider pricing differences and potential CO2e reduction through use of alternatives.

**CERN should include requirements related to EcoLabels for IT Hardware in Market Survey's and then, if it does not limit competition, tenders**

**Opportunity**: EcoLabels

**Spend Area**: 'IT Hardware'

**Description**: During the Market Survey process, CERN should ask if Hardware is available with at least one of the following: EPEAT Registered, ENERGY STAR Certified, and TCO Certified. If this requirement does not significantly limit the competitiveness of bids then it should be used as a requirement.

**Potential**: EcoLabels are well-developed in IT Hardware and comprehensively review a number of Environmental issues.

**Next Steps**: Review EcoLabels with IT Technical Officers to verify their suitability. Begin including questions about EcoLabels in IT Market Survey's.

**Examples**

Source: International Case Study

	ENERGY STAR	EPEAT	TCO Certified	ClimatePartner	GreenScreen	GreenGuard	Blue Angel
Description	Product category: Information technology equipment. Criteria: Energy consumption, environmental friendliness, and other criteria.	Product category: Information technology equipment. Criteria: Environmental friendliness, energy consumption, and other criteria.	Product category: Information technology equipment. Criteria: Environmental friendliness, energy consumption, and other criteria.	Product category: Information technology equipment. Criteria: Environmental friendliness, energy consumption, and other criteria.	Product category: Information technology equipment. Criteria: Environmental friendliness, energy consumption, and other criteria.	Product category: Information technology equipment. Criteria: Environmental friendliness, energy consumption, and other criteria.	Product category: Information technology equipment. Criteria: Environmental friendliness, energy consumption, and other criteria.
Standards	✓	✓	✓	✓	✓	✓	✓
Hardware	✓	✓	✓	✓	✓	✓	✓
Workstations	✓	✓	✓	✓	✓	✓	✓
Monitors	✓	✓	✓	✓	✓	✓	✓
Laptop printers	✓	✓	✓	✓	✓	✓	✓
ink printers	✓	✓	✓	✓	✓	✓	✓
Scanners	✓	✓	✓	✓	✓	✓	✓

Source: HP IT Sustainable Purchasing Guide

➤ Procurement Category Decarbonization Strategies will be formalized in a guide for Procurement/Technical Officers.

➤ A web-based CERN Supplier' Sustainability Rating Platform (CO<sub>2</sub> reduction oriented) will be made available.

**Environmental, social and circularity ratings**

The data and ratings are summarized in an intuitive supplier profile

**Use the ratings to easily compare suppliers during sourcing or spend allocation**

Create scorecards to compare groups of prospective and current suppliers

**Drill-down to a detailed sustainability comparison of two or more actors**



# Roll out in 2023 and how we will engage with CERN community in procurements

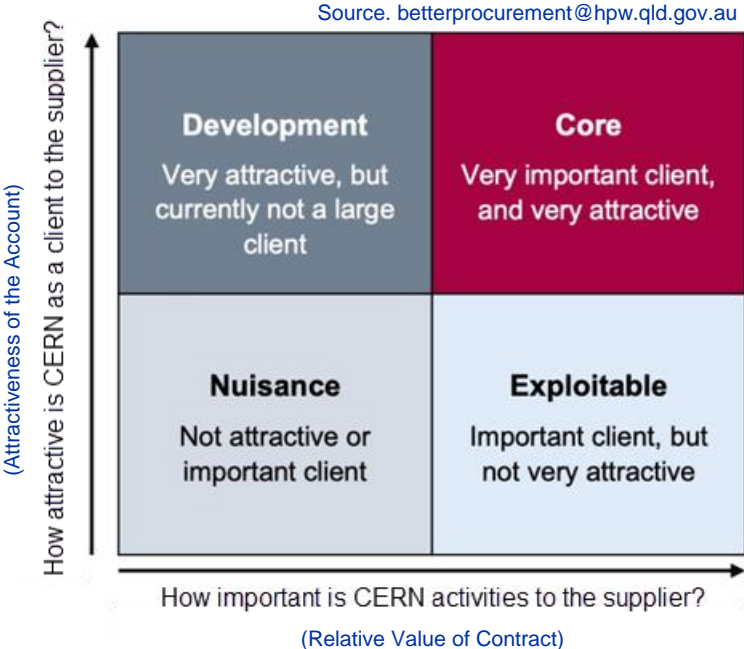
► **Supplier Engagement Programme.**

- *Get actual GHG data from the top 80% of CERN’s suppliers by Scope 3 Emission (350 suppliers).*
- *Understand if the 350 CERN suppliers are setting/progressing towards GHG reduction targets.*
- *Organize educational workshop with suppliers to encourage them to do so.*

► **Target on suppliers with the highest potential to drive sustainability issues:**

*Supplier seeking to grow their business with CERN are more receptive to sustainability requests.  
Opportunity for supplier in the development in terms of sustainability and innovation.*

*Low potential to drive sustainability issues.  
If possible consider changing the supply base.*



- *Open to change and to sustainability requests.*
- *Focus on driving sustainability objectives and influencing the supply market.*

- *Focus on improving CERN relationship with the supplier.*
- *Potential in pushing sustainability agenda through building attractiveness as a client.*



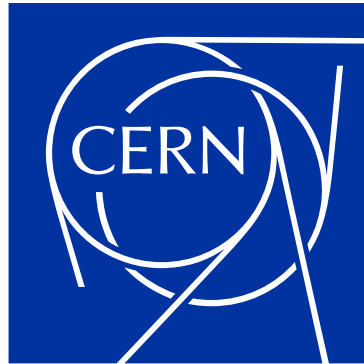
# Knowledge Transfer – Environmental Focus

- Environment selected as a focus area for KT
- CERN is comparatively active and well placed in environmental aspects
- Identify and develop CERN's technologies that may mitigate the impact of society on the environment



- Many exciting proposals have been received and discussed, selection for funding is the next step – more news will then follow

**THANK YOU FOR YOUR ATTENTION!**



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