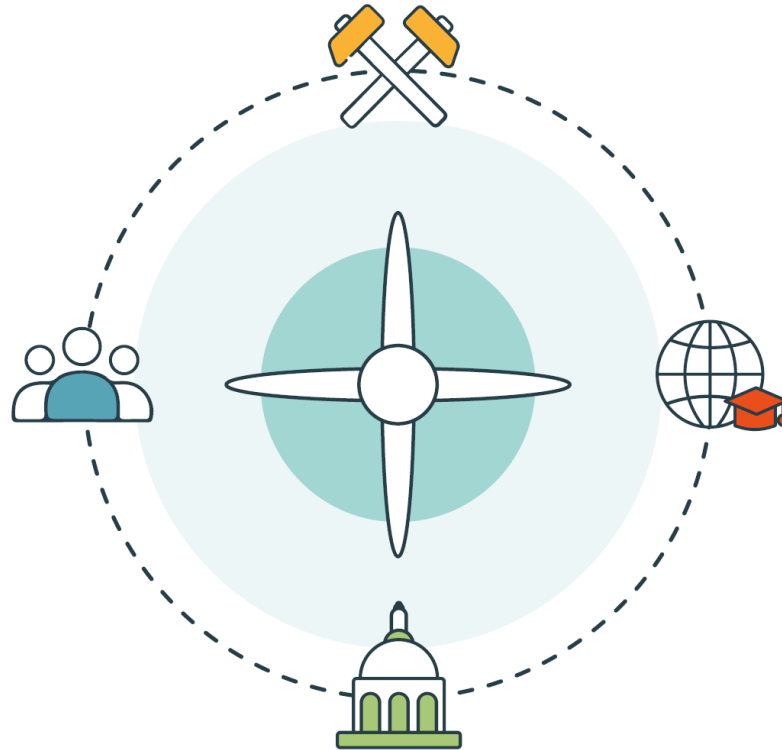


RAMP up!

Joining forces under the Raw Materials



Metals and minerals research & innovation – A Swedish success story

The Swedish mining industry:

- The Swedish mining industry accounts for 3% of Sweden's GDP. Goods are exported over the entire world and make up around 8% of Sweden's total exports.
- Sweden accounts for 93% of all iron ore produced within the EU.
- The mining industry is capital intensive and accounts for 13-20% of all industrial investments in Sweden.
- Sweden is also a world leader in mining equipment and machinery. As much as 60% of the world market for underground technology derives from two Swedish suppliers: Epiroc and Sandvik.

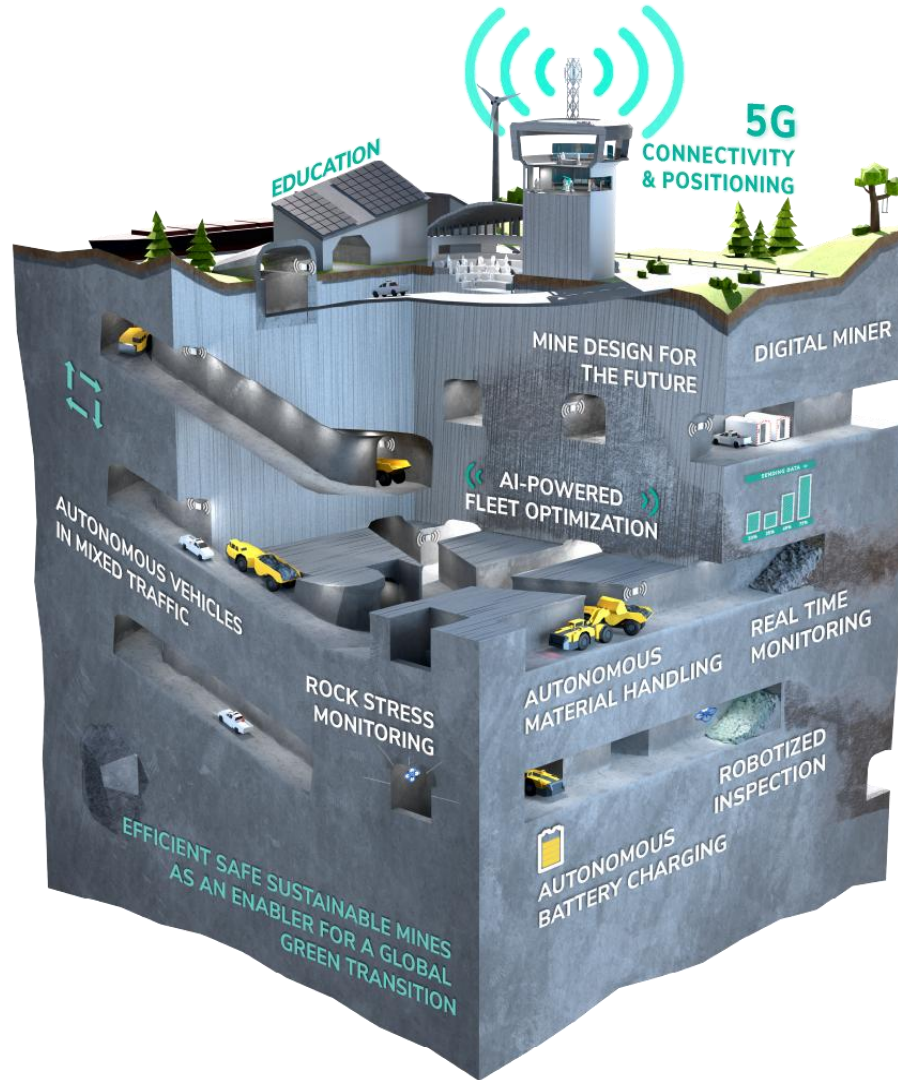
Swedish research & innovation:

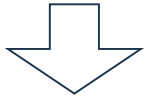
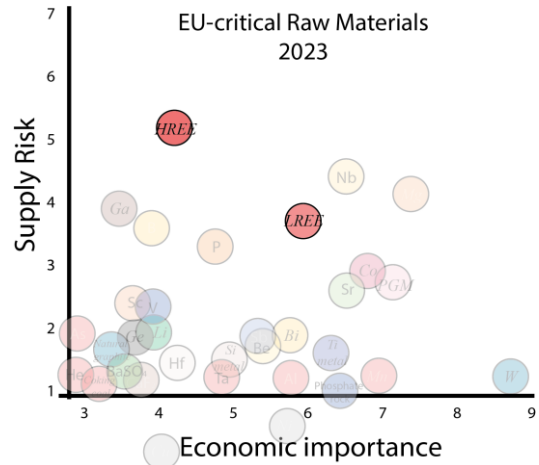
- Vinnova will coordinate RAMP. Time for Sweden to take an international lead role in this flagship sector.
- The Swedish R&I system is a strong backbone. More than a third of funded projects in ERA-MIN had Swedish partners. About half of the proposals in the latest ERA-MIN call had Swedish partners, and 8 of the top-10 ranked projects had Swedish participation.
- Strong value chain coverage and collaborative spirit in Sweden will be beneficial for being successful in the RAMP calls.

NEXGEN SIMS



Competitive technology advantage leading to unlocking substantial reserves of new or today unexploited resources within the EU





Country:
Spain
Partner 3:
Universitat de Barcelona (UB)



REE in Karst Bauxites

Country:
Czech Republic
Partner 4:
Czech Geological Survey (CGS)



REE in Laterites

Country:
Finland
Partner 5:
The Sokli Oy (SO)



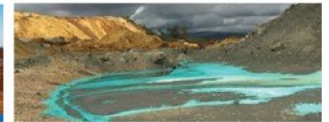
REE in Sokli Carbonatites

Country:
Sweden
Coordination:
Luleå University of Technology (LTH)
Partner 6:
LKAB

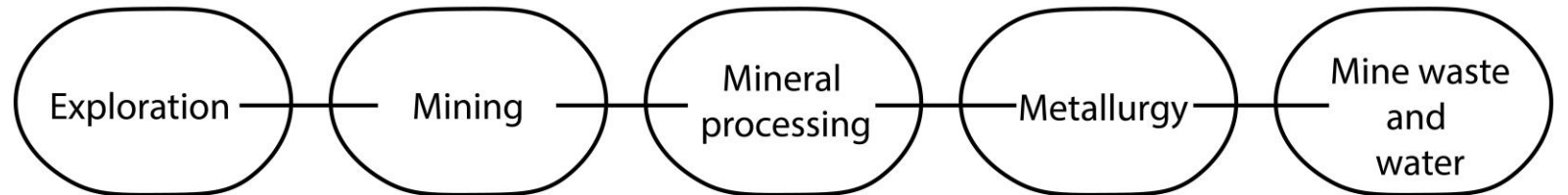


REE in Fe-apatite tailings

Country:
Spain
Partner 2:
Huelva university (UHU)



REE in Acid Mine Drainage



Economical, Environmental, Social Sustainability

The long-term goal of SuMREE is to contribute to sustainable mining of REE in Europe:

- ✓ Increase the competitiveness for REE mining in Europe
- ✓ Reduce the environmental footprint
- ✓ Indirectly improve the social acceptance towards REE mining.

Safe, sustainable transports in reindeer husbandry area 2.0

Business

VOLVO

WIST^{PI}

KAUNIS IRON

Sattajärvi Sameby

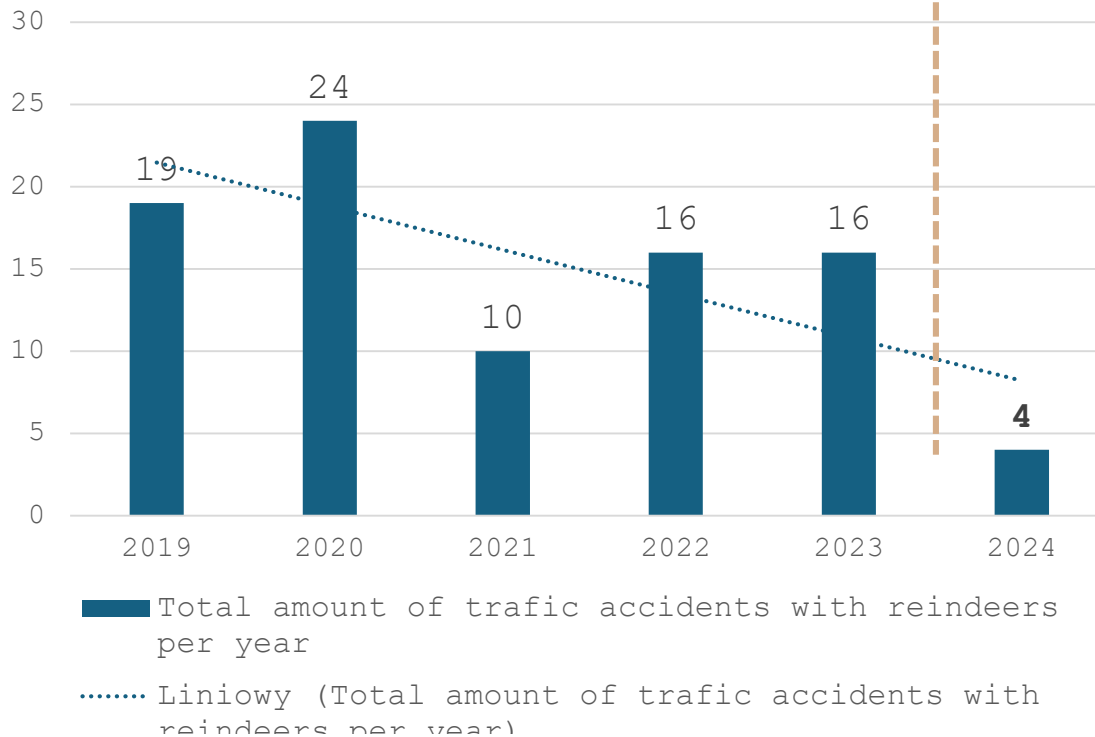
LULEÅ
UNIVERSITY
OF TECHNOLOGY

BOLIDEN

LKAB

TRAFIKVERKET

Total amount of traffic accidents with reindeers per year



- New trackers due to shutdown of existing 2G-3G net
- LoRaWAN-network – great range
- Better fit - less weight - longer batterytime – reflective band
- Traffic management system
- New ideas - Geofencing



With support from

VINNOVA
Sweden's Innovation Agency

Swedish
Energy Agency

FORMAS

Strategic
innovation
programmes

SWEDISH
MINING
INNOVATION

Sweden as an innovation partner

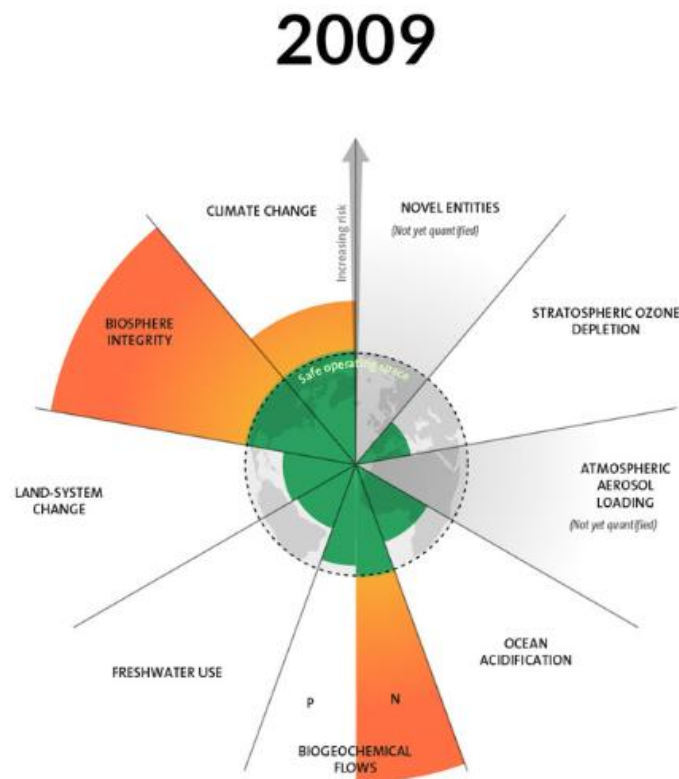


- Strong innovation focus
- Economy dominated by small- and medium-sized enterprises (start-up friendly)
- Globally leading companies
- Largely digitalized service and industry sectors, as well as society
- Independent government agencies
- Unique collaborative and informal culture across sectors and competitors
- Entire value chain coverage in many sectors
- Fossil-free energy
- Large-scale research infrastructure (ESS, Max IV)
- Great potential for test bed and demonstrator activity prior to upscaling to bigger economies

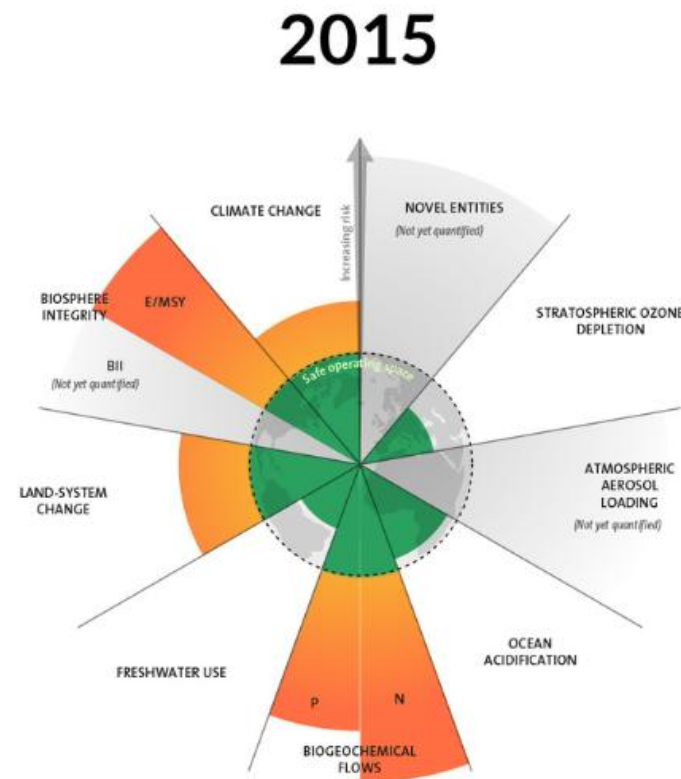


The big picture

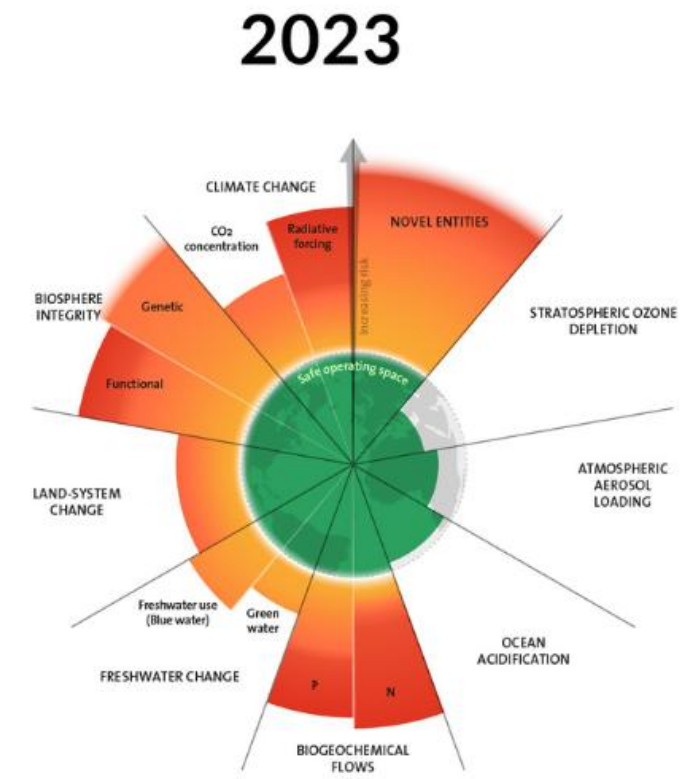
OECD April 2023:
Supply of critical raw materials risks
jeopardizing the green transition ([link](#))



7 boundaries assessed,
3 crossed



7 boundaries assessed,
4 crossed



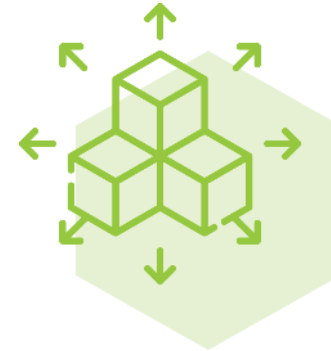
9 boundaries assessed,
6 crossed

European Critical Raw Materials Act

Ensuring a secure and sustainable supply of critical raw materials for the Union



*Improve
EU capacity to
monitor and
mitigate risks of
disruption to CRM
supply*



*Diversify EU CRM
imports to reduce
strategic
dependencies*

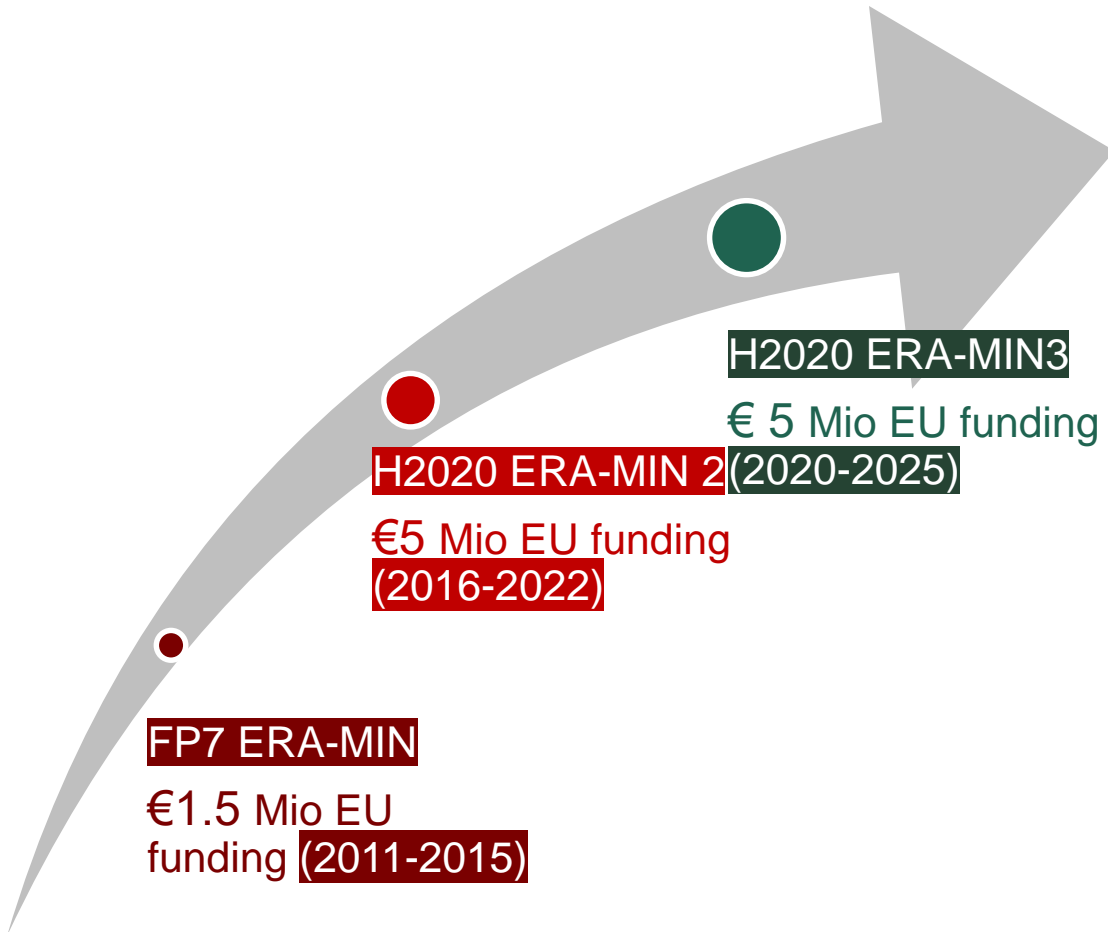


*Strengthen all
stages of the
European CRM
value chain*



*Improve CRM
circularity
and sustainability*

Background



**Beyond 2025 - Co-funded European
partnership on raw materials for the green and
digital transition**



Read the **SRIA**
here



www.era-min.eu/ri-agenda

Mission



The SRIA's mission is to enable the green and digital transition by focusing on the Raw Materials value chain. To achieve this there are pathways that need to be addressed, such as:



Creation and improvement of the sustainable and resilient value chains needed to supply the transition;



Guidelines for the needed research and its funding to systematically increase the knowledge of the Raw Materials value chain (how to locate RM, how to process them, use them more efficiently, and manage them responsibly in a circular economy);



Capitalization on created and gained knowledge into solutions related to challenges within industry, governance structures, ecosystems, and society;



Work along the whole value chain focusing on sustainable supply and use of raw materials to meet the climate change benchmarks.

CORE THEMES

Core targets

- » Technical innovation
- » Close to business
- » Focus within economic activity



TRANSVERSAL THEMES

Enabling targets

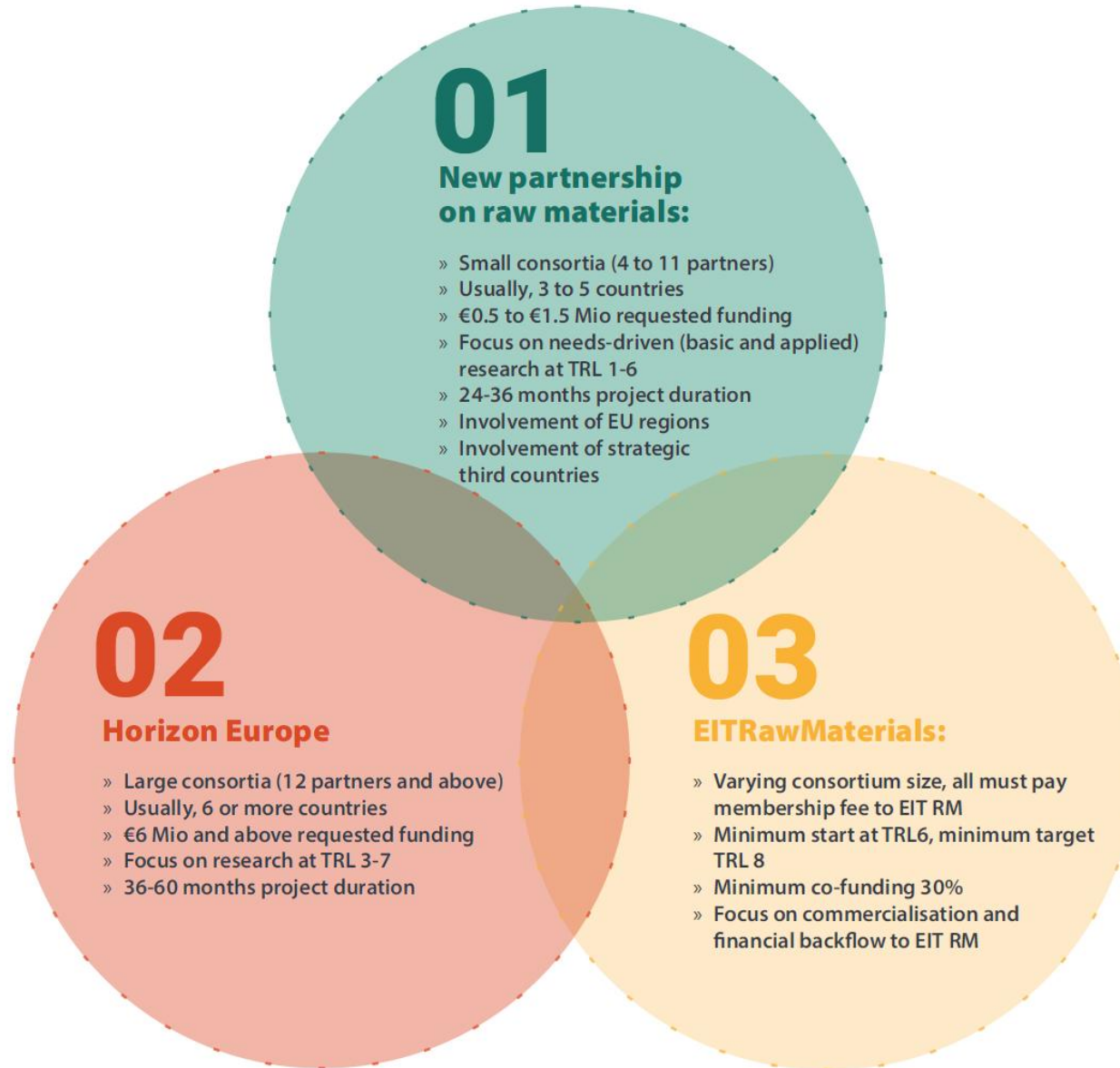
- » Social innovation
- » Human centric
- » Focus on social and ecological sustainability



1. Resilient primary and secondary raw materials supply
2. Efficient use of raw materials in design and production
3. Sustainable use and reuse of products

1. Effective policy development and governance
2. Maximizing societal benefit
3. World-class innovation capacity

Complementarity and synergies with other raw material funding schemes

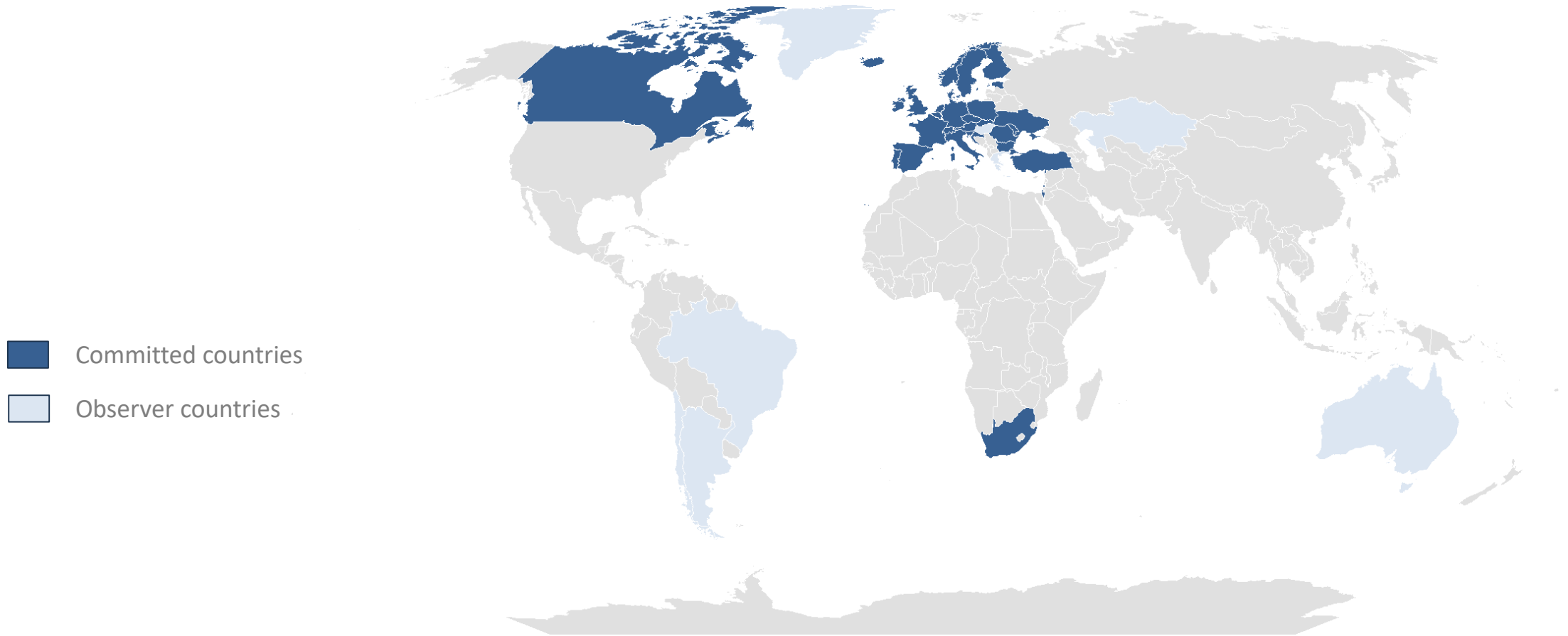


Partnership on Raw Materials for the Green and Digital Transition

- **Co-funded EU Funding Scheme for Research & Innovation (R&I) Projects**
- EU contribution of €90M and total funds of €300M, i.e. 30% co-funding rate
- **Consortium** composed of mainly national/regional Research Funding Organisations
- Duration of 7 years (11 years total for finalizing all calls and projects), starting early 2026
- Regular news and updates: <https://www.era-min.eu/partnership>

Partnership consortium

The consortium of the Raw Materials Partnership consists currently of organizations from the following countries:



Partnership timeline

- **Timeline:**

- RFOs from MS sign a financial commitment per call or for the total of 7 calls (e.g. €500k per call, €3.5M total)
- Q2 & Q3 of 2025 > proposal writing to be submitted for assessment by experts from European Commission
- Q2 – Q4 of 2025 > development and preparation of the first Joint Transnational Call for proposals
- Q1 & Q2 of 2026 > Grant Agreement signature and Partnership launch
- **Q2 of 2026 > Launch of first Joint Transnational EU co-funded Call for Proposals**
- **Q2 of 2027 > Communication of results of the call**
- **Q3 – Q4 of 2027 > Start of selected R&I funded projects**
- **2027 and beyond > annual call cycles and additional activities**