powered by ClimateKIC PYXERA Global

Localizing Critical Mineral Supply Chains
Circular Supply Chain Coalition

2026

The Circular Supply Chain Coalition

The Circular Supply Chain Coalition consists of the following partners:

Secretariat

Governing Partners

Ecosystem Partners

Insider Group Members

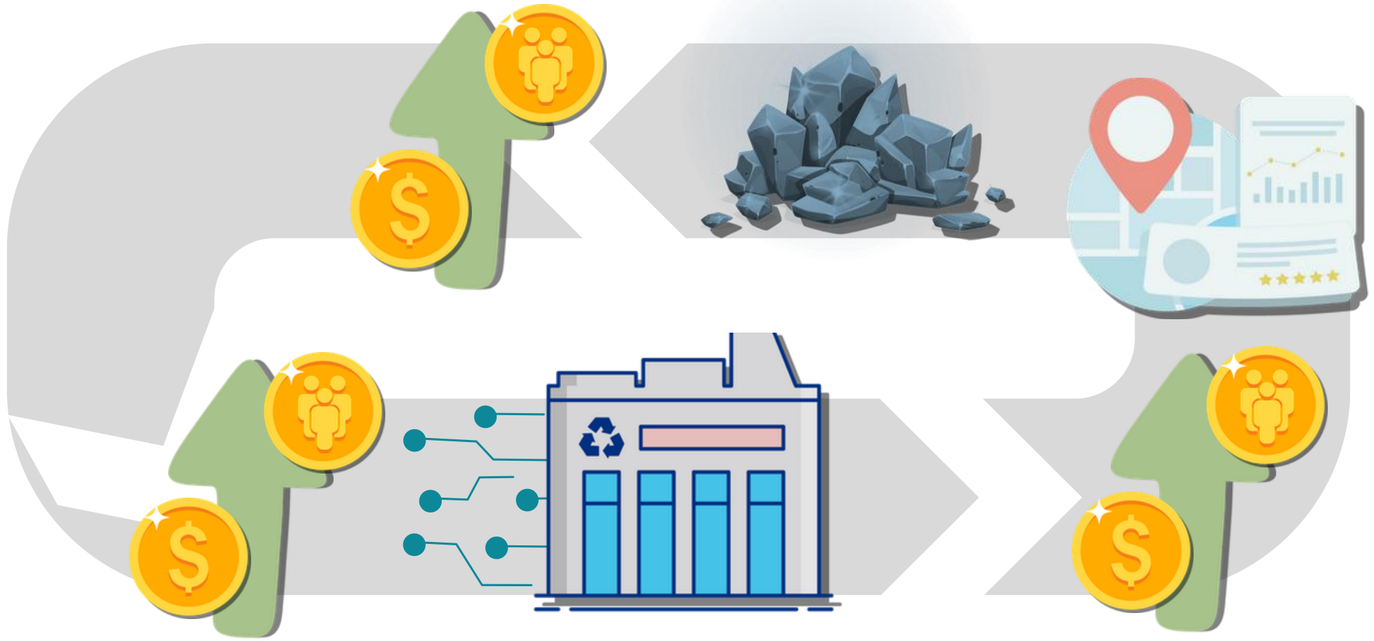
What is the CSCC?

What is the CSCC? It’s a global coalition powered by Climate KIC and PYXERA Global.

Aim and purpose: Its main aim is to increase supply chain resilience and implement circular supply chains for critical raw materials through the implementation of regional circular supply chain hubs.

The Opportunity

Create & Scale Resilient Regional Circular CRM Hubs



Why the CSCC?

What makes the CSCC different? Address structural tensions in EU CRM and WEEE systems.

- We aim to locate the point of maximum leverage, build the evidence base, and connect the actors who need to move together.
- **Output:** A positioned programme that can attract funding, anchor partnerships, and shift policy.

Why the CSCC, why now? The actors who collaborate early will likely help shape how the ecosystem evolves.

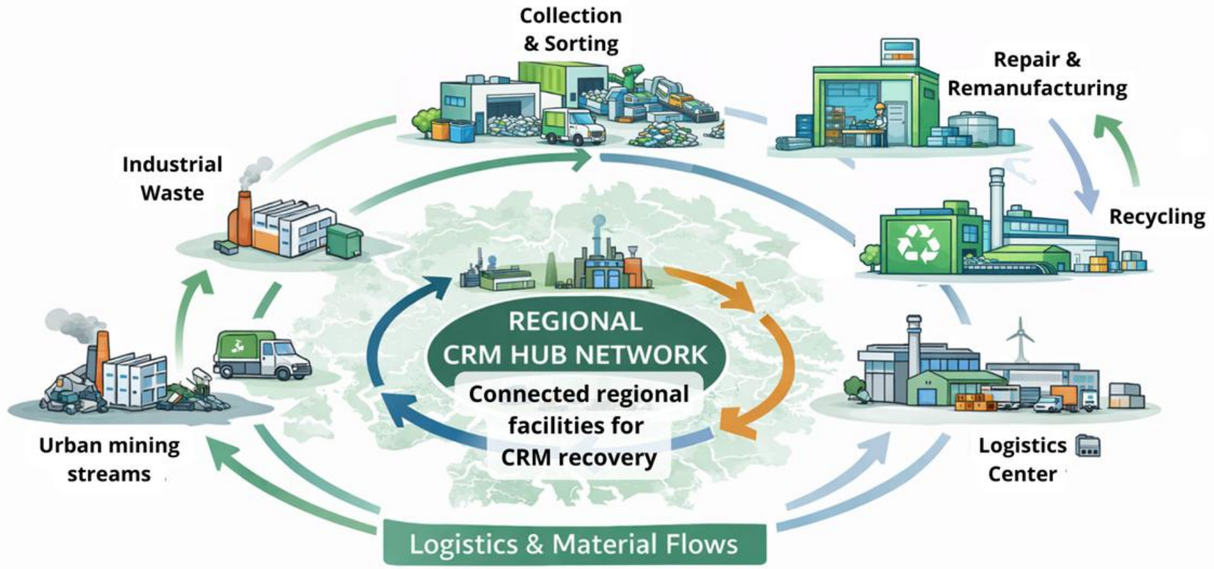
- **Reach –** Need for systems that span the full chain and beyond.
- **Solid building points –** Links with CCRI, CRM pilots, links industry and regions.
- **The window is closing –** China's REE export controls are escalating**.** Upcoming feestock reaching EoL, CE Act incoming, and CRMA round 2 closing.

What is a CRM Hub?

A **network** of physical places (at a regional scale) where collection, sorting, processing, recycling, remanufacturing of CRM are taking place including additional logistics flows for reuse, repair, takeback systems, and reverse logistics.

Goals:

1. Secure domestic supply and reduce reliance.
2. Yield new standards and practices for material recovery and circularity.
3. Foster circular innovation, skills and technologies.
4. Achieve collection and processing volume and efficiencies necessary for major market viability.



These regional Hubs could focus on specific materials and products based on regional needs and opportunities

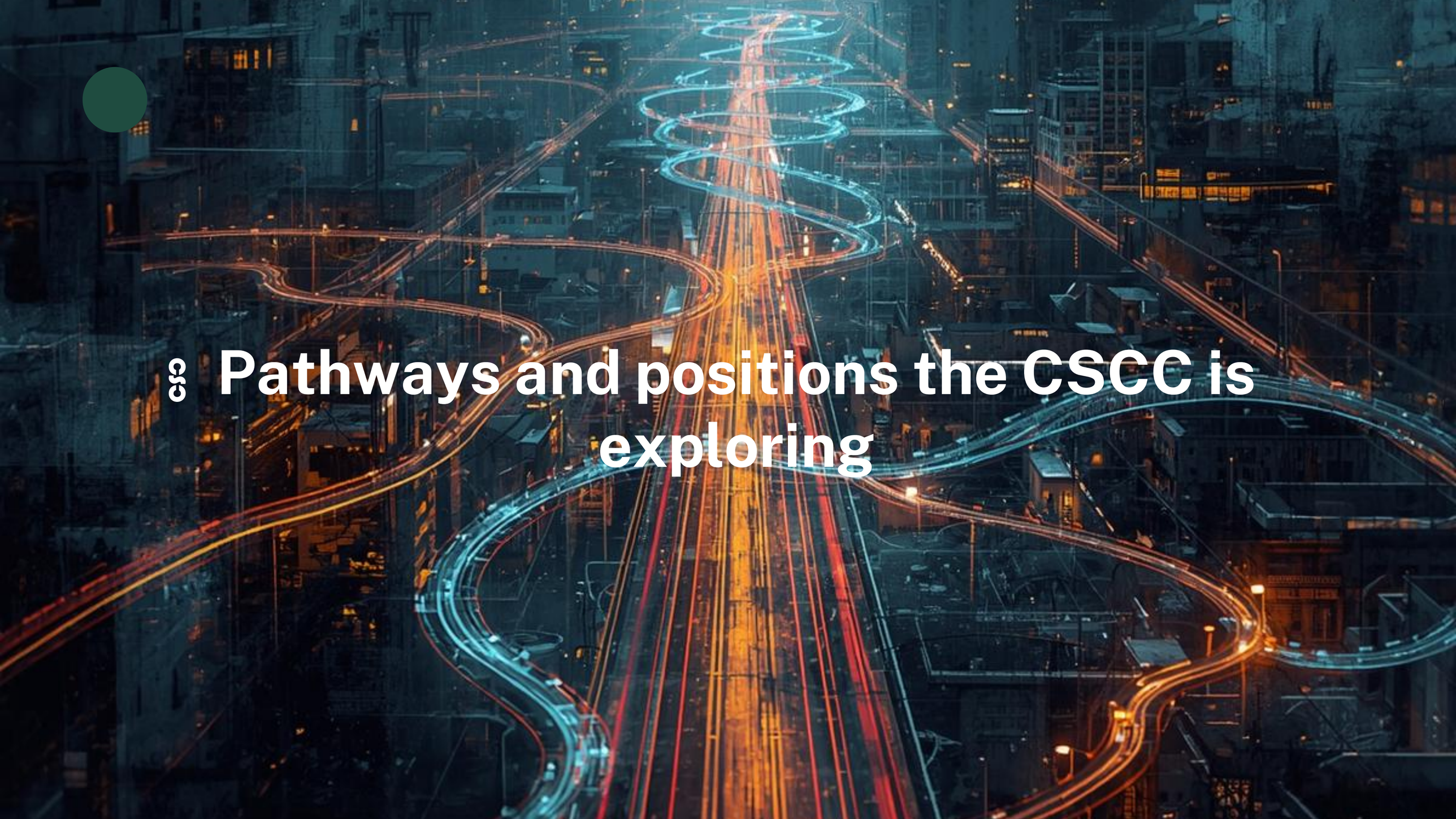
Who we aim to bring together?

- Recyclers & startups – frontline innovators
- Feedstock providers
- Industry consumers – OEMs, battery makers

- European regions
- Communities

- Policy makers – advocacy, policy design
- NGOs, universities

- Funders



Pathways and positions the CSCC is exploring

CSCC positions

Magnets and REEs

The bottleneck:

- Fragmented feedstock
- Inconsistent collection and poor dismantling
- Missing traceability and weak demand aggregation
- Uncertain policy signals, and lack of coordinated infrastructure.

Specific aim: The CSCC aims to support Europe's magnet ecosystem. It aims to connect feedstock, industry, and policy into a scalable European magnet value chain.

Circular windfarms - European energy resilience

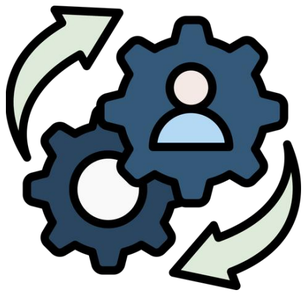
The Problem

- 64,000+ EU turbines decommissioned by 2035.
- High-value tower alloys are currently downcycled.
- ~€2B in premium material value is lost.

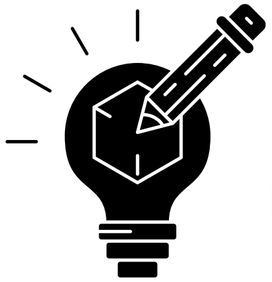
The Opportunity

- Towards 2035 – Large magnet/REEs feedstock incoming – High potential for several circular pathways
- Grade-separated recovery preserves value in: HSLA tower steel, CrNiMo bolts, and forged flanges.
- Market potential through 2035: 13.5M t HSLA steel
- Certification + traceability adds: €10k–20k value per turbine

What Role Climate KIC Plays



Ecosystem enablement & alignment



Supporting hub co-design

Support regional transformation

Cross-sector convening & network building

Supporting access to funding and policy

Next steps for the Hub and Call to action/VP for the magnet world

- Validate the scope
- Identify and select region/s
- Validate regional feedstock and industrial flows
- Build the enabling layer around existing initiatives
- Work towards implementing the CSCC hub

Many of the technical and industrial capabilities already exist in Europe. The challenge now is how we connect and scale them across regions and value chains.

What we are looking for: Collaboration, not duplication!

circular supply chain coalition

Thank You

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Aerospace Alloy Circularity

The Problem

- Advanced alloys are the most CRM-intensive material class
- Recycling technologies largely exist at TRL 4–7
- Product design still ignores end-of-life recovery
- Collection and material separation remain weak
- Export controls on Ga, Ge, and In are increasing supply risk

The Opportunity

- Move from commodity recycling → certified CRM recovery.
- Feedstock of nickel superalloys and Titanium is available, with Ti recovery already starting, NdFeB & SemCo magnets also present (high potential for circular pathways).
- Build European advantage in high-value secondary materials.
- Align aerospace, energy, and mobility supply chains around circular alloys.

Lightweight WEEE

The Problem

- E-bikes, tools, and drones contain both:
- NdFeB magnets (REEs)
- Magnesium alloy structures
- Europe remains heavily dependent on Chinese imports
- Policy is moving faster than recycling infrastructure

The Opportunity

- Recovering both streams together improves economics
- Lightweight WEEE could supply: 80–140 t Nd/year by 2030
- Micromobility take-back pilots & circular tool disassembly clusters