

We aim to promote sustainable exploration of Critical Raw Materials in the EU securing the continued supply for our industries.

## Our motivation

Critical Raw Materials are key to feed the EU strategic sectors and the **green energy transition**. The EU aims to boost the internal production of Critical Raw Materials to secure its autonomy and ensure the responsible sourcing of these commodities for the environment and populations.



## Current EU Raw Materials own supply

## Where do metals come from?

### From mineral ore deposits



**Discovering new ore deposits** requires improving our understanding on the processes that form them and the more favourable locations hosting them.

Orthomagmatic mineral systems in mantle-derived magmas **carry important critical raw materials**: Nickel (Ni), Copper (Cu), Cobalt (Co), Vanadium (V), Titanium (Ti), Chromium (Cr) and platinum-group metals (PGM).

There are currently only 2 mines producing these metals in the EU, but there is **potential for more**.

## Main Goals

This project aims at developing socially and environmentally sustainable means of finding (=exploration) orthomagmatic Critical Raw Materials applying the **Mineral Systems Approach** to guide exploration and deliver our main goals:



**1 Improved formation models for orthomagmatic mineral deposits.**



**2 Develop new exploration methods to identify areas of higher potential, from regional to local scale.**



**3 Promoting social awareness on the importance of responsible exploration and mining through collaboration between geosciences and social sciences.**

## Location & Team

Our research will be conducted at **5 reference sites in 4 countries** representing different geological, social and environmental conditions.

Our team gathers **specialists from the academia and industry** in the orthomagmatic deposit field, including geology, geophysics, geochemistry, mathematical and resource modelling, artificial intelligence, geoinformatics and social sciences.



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