Introduction of an EIT Raw Materials upscaling project proposal: AREAS Advanced Resource Exploration & Assessment Solutions

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EIT Raw Materials
Innovation Community developing raw materials into a major strength for Europe. Minerals, metals and advanced materials are key enablers to achieve the objectives of the European Green Deal.

KAVA 8. Call for projects 2022
Funding project proposals that will generate a significant impact on European industrial competitiveness, innovation capacity and human capital, as well as empower students and entrepreneurs.
- Education projects
- Regional Innovation Scheme projects
- Upscaling projects

https://eitrawmaterials.eu/
- **Market need addressed**
  Lack of a service / tool for assessing and communicating the viability of material recovery from mining and metallurgical residues

- **Project aim**
  
  *Create integrated resource exploration and assessment solutions* (SW, technological products and services), turning stored residues into "measured resources"

  *Introduce a standardised (UNFC-based) approach and decision support tool* to allow for a seamless and integrated analysis of multidisciplinary datasets and assessment methods
Objectives

Provide innovative solutions to:

- map the potential supply of secondary RMs from EU stocks and wastes;
- exploit EU Earth Observation data for exploration and identification of residues;
- provide a comprehensive yet easy to use decision support and control tool for mining/metallurgical operations;
- unlock the RMs recovery potential of mining/metallurgical residues;
- reduce the environmental impact of waste originating and accumulating at mining sites.
AREAS approach
### Outputs

1. **An innovative and highly specialised resource exploration & assessment service**, addressing all the steps of resource assessment *(characterization, evaluation, classification)*

2. **A resource assessment and asset management software** providing decision support features;

3. **Innovative technological solutions** for spectral imaging-based materials composition mapping;

4. **Training programs** for MC students, PhD, Professionals
### Impacts

**Improve:**
- knowledge on availability of RMs in EU countries;
- industrial symbiosis in disadvantaged areas;

**Reduce:**
- import of RMs from non-EU countries through residues / waste valorisation;
- consumption of land and soil;
- greenhouse gases emission;
- environmental impact of mining / extractive operations;
- storage facilities management costs;
- environmental compensation fees;
- investment risk
**Partners**

CNR (IGAG & ISTEC dept.)
SERENEGEO
Fondazione Bruno Kessler (FBK)
Ferrara University
Worldsensing
Leiden University (CML)
SGA Graniti
VITO
Thank you!

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