



Knowledge management at the EC Raw Materials Information System (RMIS)

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EC Joint Research Centre

ERA-MIN 2 Final Conference and Final Seminar of Call 2017 projects
19th November 2021

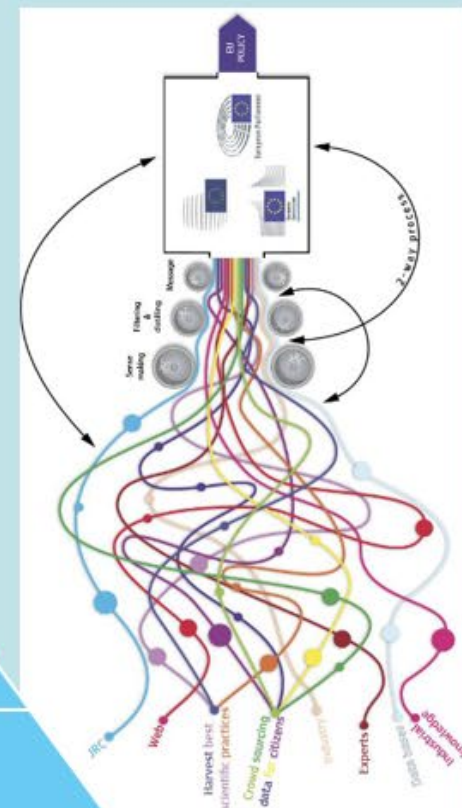
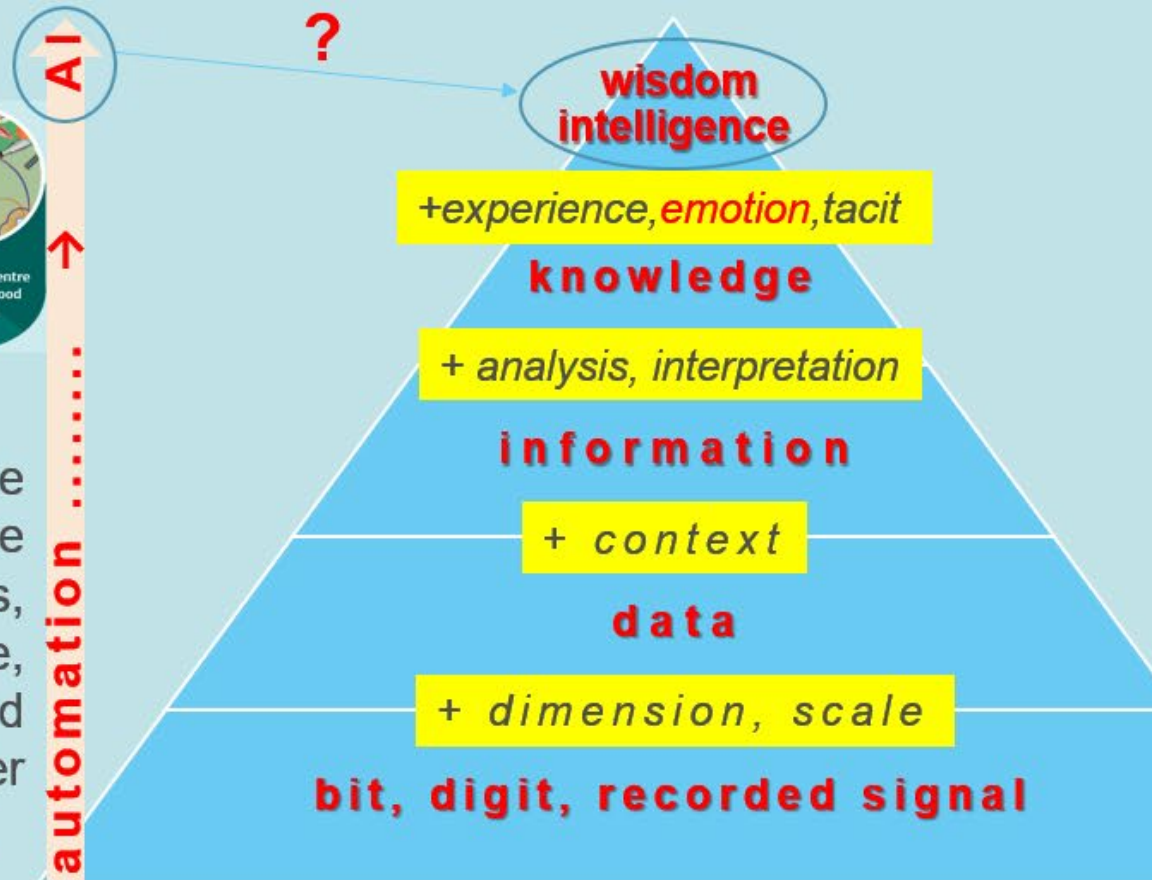
Outline

- JRC & RMIS role in raw materials related knowledge management
- Current ways of integration
- Future ways of integration & co-operation
- Concluding remarks

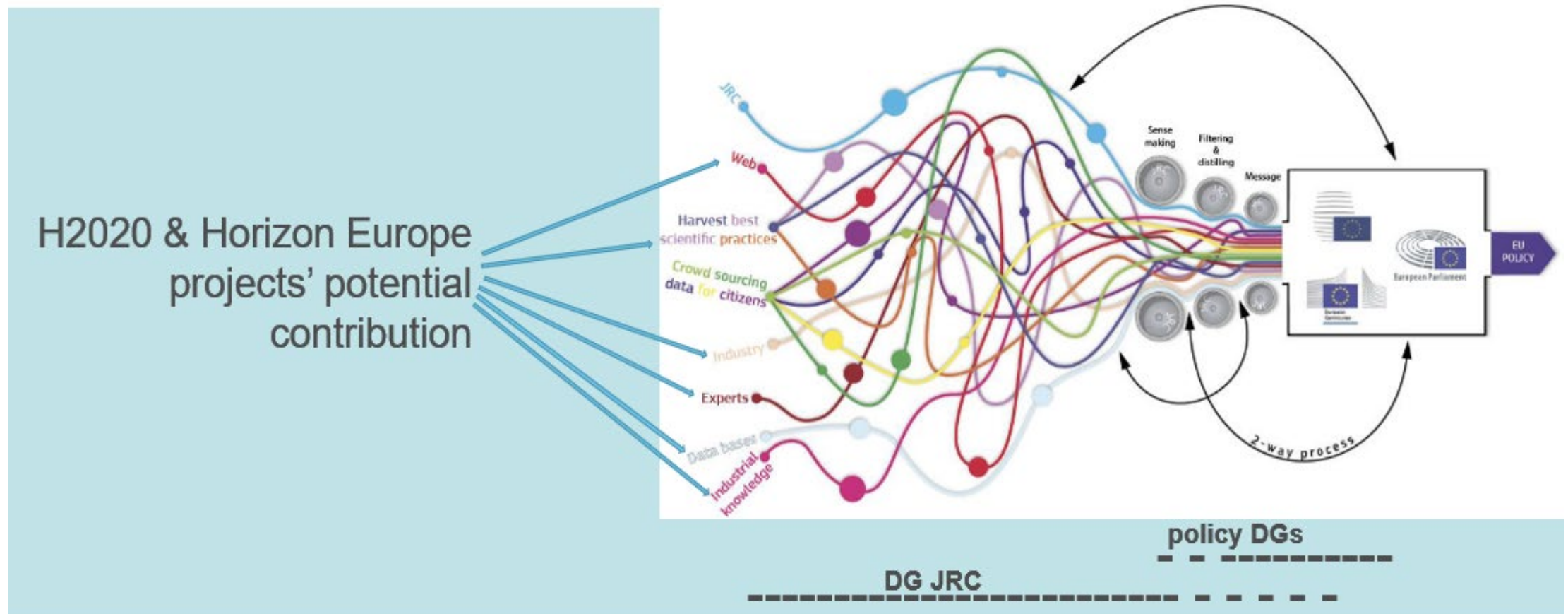
JRC & RMIS ROLE IN KNOWLEDGE MANAGEMENT



The Joint Research Centre is the European Commission's in-house science and knowledge service. It creates, manages and makes sense of knowledge, delivering the best scientific evidence and innovative tools for the policies that matter to citizens, businesses and governments.



JRC & RMIS & H2020 PROJECTS ROLE IN KNOWLEDGE MANAGEMENT



RMIS BASICS

Established: in 2015

Mandate: Circular Economy Action Plan, numerous more references in EC policy documents

Developed & operated by: JRC D3 Land Resources Unit, Raw Materials Team (15+ experts)

Structure: 12 chapters, 40 subchapters, numerous dynamic applications and more sub-subchapters

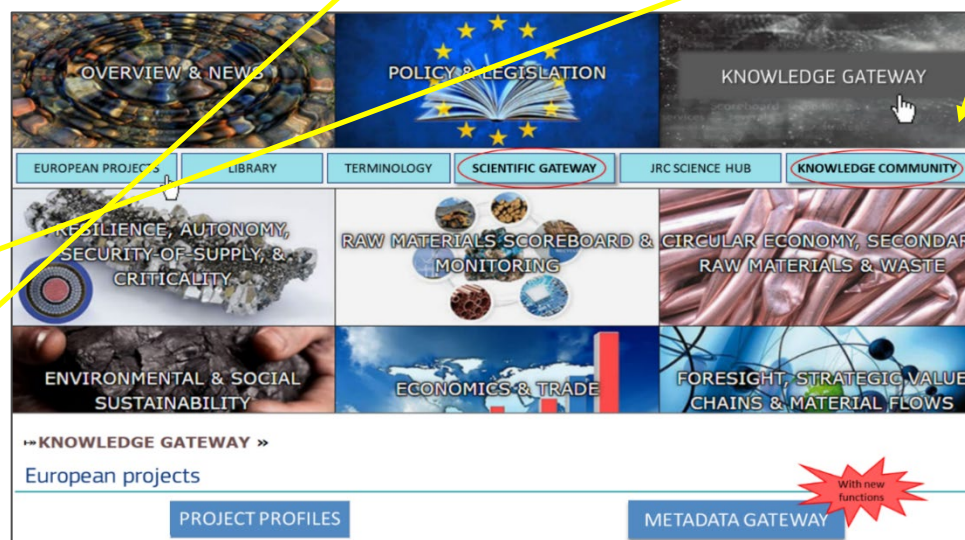
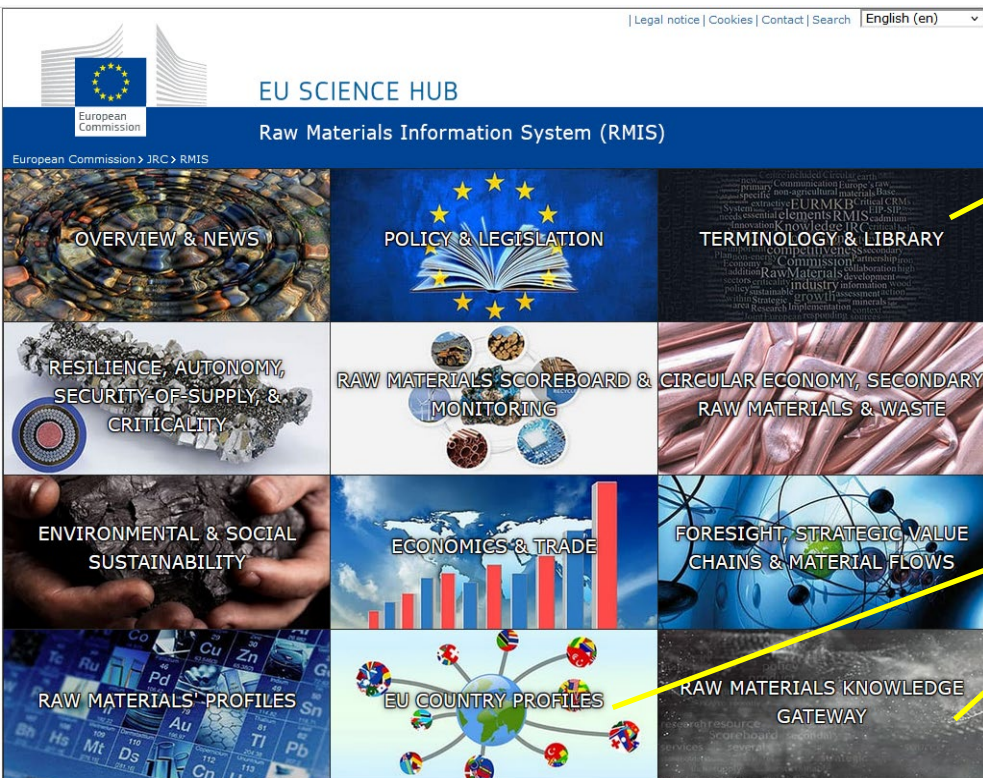
Core expert network: ca. 150-200

Stakeholder network: ca. 1400

Users: thousands of unique visitors /month

RMIS – PRESENT & FUTURE

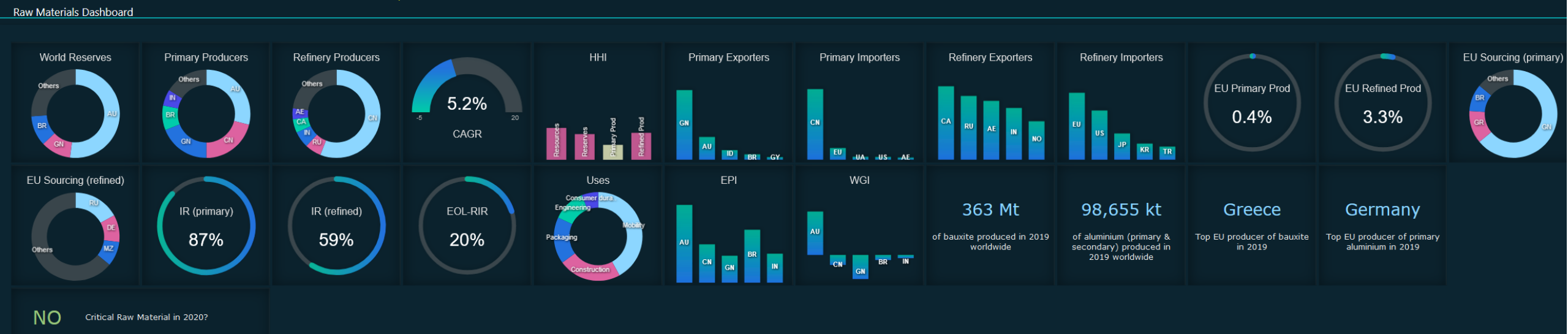
<https://rmis.jrc.ec.europa.eu/>



RMIS – NEW FEATURES



RMIS – Raw Materials Profiles - Aluminium



CURRENT WAYS OF INTEGRATION – DIRECT INTEGRATION



Responsible Sourcing (RS) is becoming a reality for more and more businesses, NGOs, and policymakers. Everyone is striving to keep ahead of rapidly evolving ecological and social needs, company practices, business models, government regulations, and initiatives spearheaded by civil society, etc.

In response to the growing challenge of responsible sourcing, **the RE-SOURCING Global Stakeholder Platform has been started in 2020.**

RE-SOURCING, funded under the EU Horizon 2020 programme, is a four-year project coordinated by the Institute for Managing Sustainability, at the Vienna University of Economics and Business. The project's consortium consists of 12 international partners in- and outside the EU working together to create the RE-SOURCING Platform. The project's vision is to **advance and establish Responsible Sourcing as a minimum requirement among EU and international stakeholders.** The project will foster the development of a globally accepted definition of Responsible Sourcing, facilitate the implementation of RS practices through direct knowledge exchange within its network and beyond, and advocate for Responsible Sourcing in international political forums.

To guarantee a thorough and comprehensive Responsible Sourcing framework, RE-SOURCING will take a holistic approach by integrating firms and industries (up- and downstream) **across the mineral value chains of three sectors: Renewable Energy, Mobility and Electronics** – all which play a decisive role in the EU Green Deal and the clean energy transition. As such, RE-SOURCING equally takes into account traditional minerals, conflict minerals and green tech minerals in its approach. The main target groups of the project will be EU and international industry stakeholders, EU policy makers and civil society.

To achieve its intended aims, a variety of physical and virtual events and facilitation tools will be rolled out during the project:

An opening and closing conference will raise large-scale awareness for Responsible Sourcing and convene the international community on pressing issues of needs, implementation, regulation, obstacles & opportunities, etc..

Three sectoral roadmap workshops to provide industry, policy and civil society stakeholders with concrete courses of action and milestones in their uptake of Responsible Sourcing.

Three sectoral peer-learning events (flagship Labs) will foster direct sharing of experiences on challenges and solutions for the implementation of actual RS practices between industry and other players of all sizes.

The agendas of both the roadmap workshops and flagship labs will be set through the publication of **sectoral roadmaps** (one for each sector) as well as the elaboration of **good practice flagship cases.**

The project will organise **three international advocacy forums** for Responsible Sourcing, aimed at connecting actors beyond Europe across global value chains (Latin America, Sub-Saharan Africa and China).

Website: <https://www.re-sourcing.eu/>

To receive the newest information on the RE-SOURCING project [subscribe here](#)



CURRENT WAYS OF INTEGRATION – DIRECT INTEGRATION



↔ RAW MATERIALS' PROFILES ↔

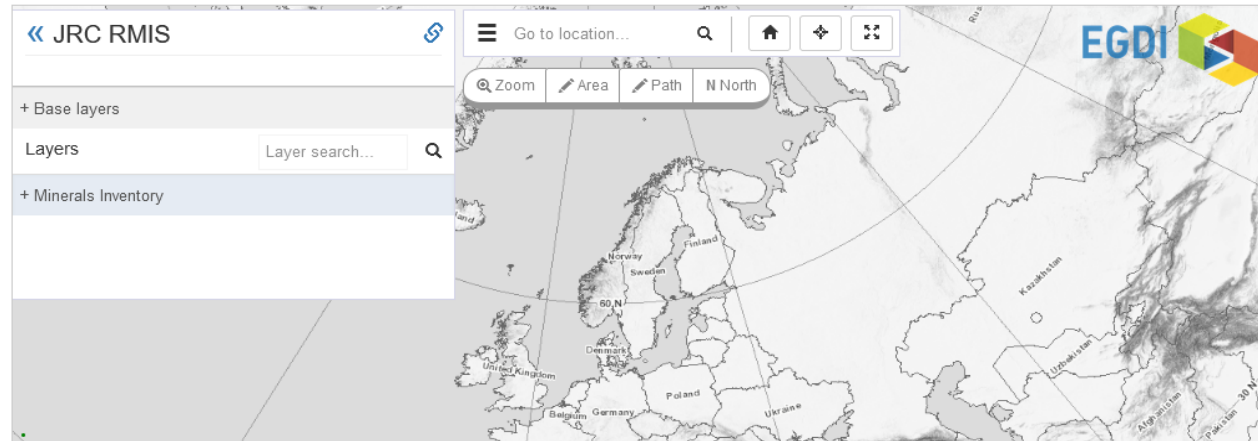
Mineral Inventory

The interactive map shows in two separate layers mineral occurrences and mine locations with basic attributes throughout the European Union (partial coverage of 21 EU Member States). To view the mineral occurrences and/or the mining sites for a specific raw material and EU country, please click on the **"Minerals Inventory"** to see the sub-layers **"Mineral Occurrences"** and **"Mines"**.

The layer **"Mineral Occurrences"** shows the location of individual or several minerals potentially suited for raw material extraction. They are shown per raw material (commodity) and classified according to the importance of the deposit.

The layer **"Mines"** shows mining sites of any operational status (operating, under development, or not operating). The data differentiates the various mining activities, like underground mining, open pit mining etc.

The map is an adapted version of EuroGeoSurveys' European Geological Data Infrastructure (EGDI) Mineral Resources dataset developed by GeoERA project Mineral Intelligence for Europe (Mintell4EU).



RMIS can embed an external web application or page, hosted on the partner's website, using web embedded content - html embedding technologies based on nested browsing contexts.

CURRENT WAYS OF INTEGRATION – DIRECT INTEGRATION



Member States Legislation



Minerals policy, regulatory framework, relevant legislation in Germany

Minerals policy profile (MIN-GUIDE)

Minerals permitting profile (MINLEX)

Mining Act in English

Raw Materials Strategy in English

Other relevant legislation in original are accessible at:

<https://rosys.dera.bgr.de/mapapps/resources/apps/rosys/index.html?lang=en>

<https://www.juris.de/jportal/index.jsp>

www.gesetze-im-internet.de

<http://www.rohstoffwissen.org/>

The MINVENTORY database provides more information on the topic.

CURRENT WAYS OF INTEGRATION – ARCHIVATION



2018 survey result

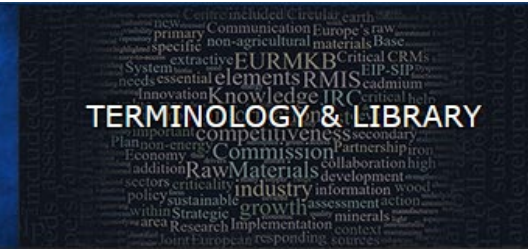
The scale of potential input (also beyond SC5):

- ORAMA mapped ca. **600** projects, selected 40-50 with relevant info (ie. network and/or database)
- EIT RM: **200** projects (+EIT Innoenergy?)
- EIP RM commitment consortia: **100+**
- ERAMIN, ERAMIN2, GEOERA, ERAMET: **50+**
- Interreg, ERC, RFCS, NER300 ...: **50+**
- Member States: **???**

IN TOTAL: >1000 projects (4-5000 reports)

CURRENT WAYS OF INTEGRATION – ARCHIVATION

RMIS Library



Title of the document

Document type

Publisher

Authors

ISBN/Code

Year

Advanced search - additional filters

Geographical coverage

- Belgium
- Bulgaria
- Czechia
- Denmark
- Germany
- Estonia
- Ireland
- Greece

Thematic coverage along value chain

- exploration (incl. survey, prospection too)
- extraction
- primary and secondary processing
- mine closure (incl. remediation, aftercare)
- production (incl. fabrication, design, material efficiency, substitution, replacement)
- distribution (incl. sustainable consumption, material dissipation)

EIP SIP relevance

- research & innovation
- technologies for raw materials production (exploration, extraction, processing, recycling)
- substitution (materials for green energy technologies, for electronics, for extreme conditions, for large streams)
- improving EU RM framework (policy, access to deposits, public awareness)
- improving EU waste management framework (product design, quality recycling, illegal waste shipment, optimized recovery)
- knowledge & skills & Material Flows (knowledge base, EIT Community, optimized material flows)
- international cooperation (technology, governance, dialogues, health & safety & environment, skills & education & knowledge, investments)

RMIS topics covered

- Overview
- Policy & Legislation
- Terminology & Library
- Critical Raw Materials
- Raw Materials Scoreboard & Monitoring
- Secondary Raw Materials & Circular Economy
- Environmental & Social Sustainability
- Economic & Trade

Raw material coverage

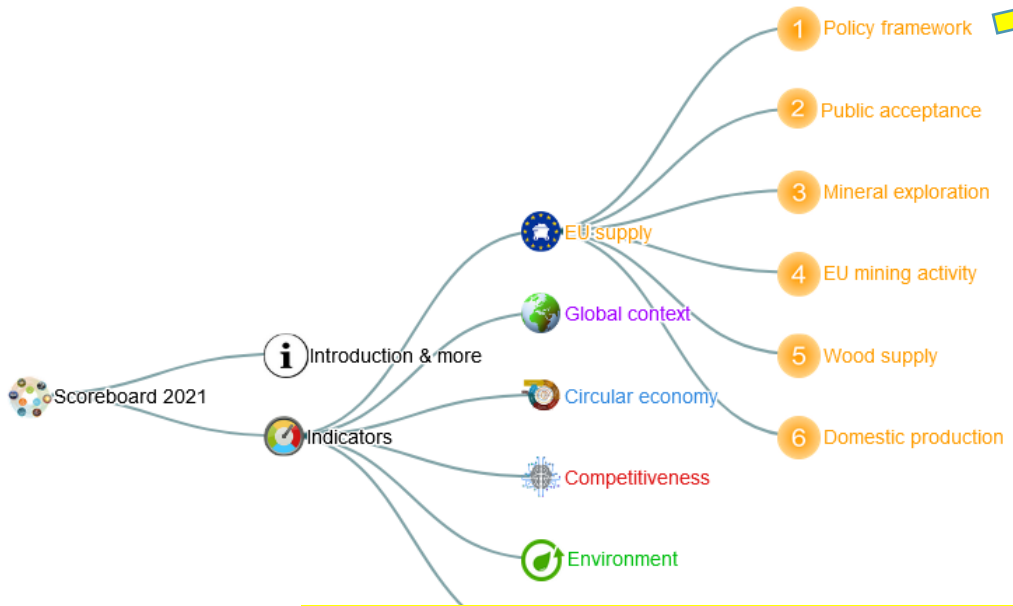
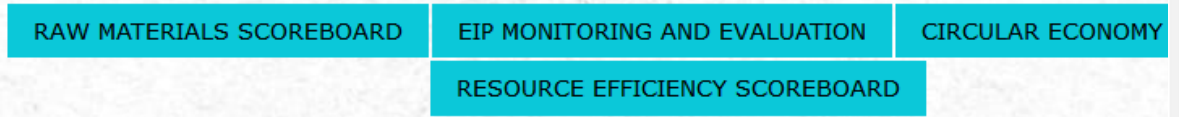
- 3.7 – Paper waste
- 3.8 – Urban and hazardous (other unspecified industry) waste
- 3.9 – WEEE
- 3.1 – EoL vehicle waste
- 3.11 – Batteries
- 4 – Energy commodities (fossil fuels (incl. uranium)), renewables, energy recovery from waste

[Hide filters](#)

[Clear search fields and filters](#)

[Search for documents](#)

CURRENT WAYS OF INTEGRATION – INFORMATION USED IN RMIS OUTPUTS



MINING GUIDE

+ a number of other references on ORAMA, ProSUM, STRADE, MINLAND

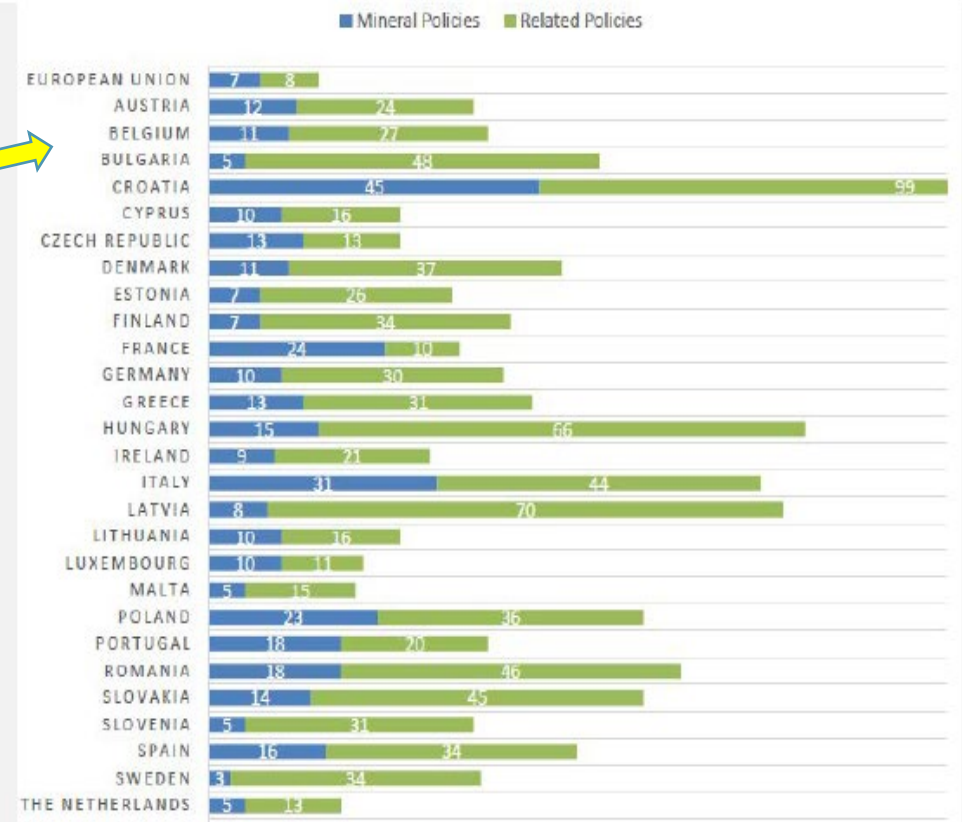


Figure 1.2: Number of mineral policy documents and other related policy documents in EU countries in 2018⁶⁸.

The recently finished MINLAND project studied national minerals policies in the context of spatial development and land use planning. The sterilisation, i.e. becoming inaccessible, of minerals

CURRENT WAYS OF INTEGRATION – DATA & INFORMATION USED

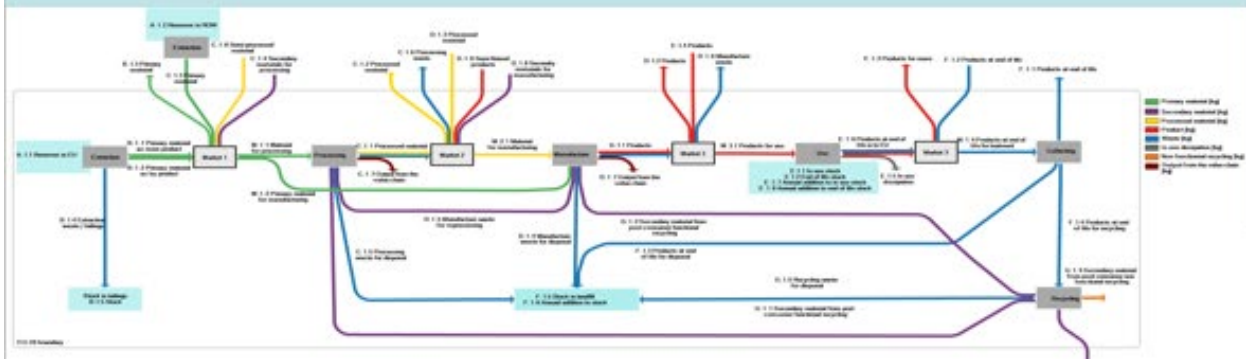


WHAT ARE CRMS WHAT THE EC DOES THE CRM LIST CRM DASHBOARD MATERIAL FACTSHEETS

Criticality is a **screening tool** to highlight issues of concern, which can subsequently be followed up with more detailed studies and assessments. The results of criticality assessments should therefore be considered a call for attention, not a source of "panic". In such a context, it is very unlikely that all aspects that could influence criticality can be included in a screening methodology, while keeping the calculation equations short, simple, and objective. For the above reasons, the EC has developed single **raw materials factsheets**, where the detailed information and data used in the 2011, 2014, 2017 and 2020 CRMs lists are available in a structured and systematic form. **Raw materials factsheets** equally bring together further information and data that third parties might want to use in their ad hoc criticality assessments.

FACTSHEETS 2020 FACTSHEETS 2017 FACTSHEETS 2014 FACTSHEETS 2011

+ MSAs



Minerals4EU, SCREEN, CRM_InnoNet, etc.

Study on the EU's list of Critical Raw Materials (2020)
Critical Raw Materials Factsheets (Final)



Study on the EU's list of Critical Raw Materials (2020)
Non-Critical Raw Materials Factsheets (Final)



CURRENT WAYS OF INTEGRATION – KNOWLEDGE GATEWAY



➔ RAW MATERIALS KNOWLEDGE GATEWAY »

Raw Materials Knowledge Gateway

This module of the RMIS with serving information on selected EU funded raw materials project is developed in close cooperation with HaDEA and the EIT Raw Materials.

NATIONAL LEVEL

EUROPEAN LEVEL

European Institutions

European Data Services

European Industry Associations

EU Funded Projects

EU Funded Projects

Select a data provider from the drop-down

- BIORECOVER
- INTERMIN
- MICA
- MIN-GUIDE Minerals Policy Guidance for Europe
- MinLand
- ORAMA
- STRADE – Strategic Dialogue on Sustainable Raw Materials for Europe
- TARANTULA**
- Urban Mine Platform (ProSUM)

TARANTULA



🏠 TARANTULA homepage

Overview

Raw materials knowledge

Research and innovation

Links and contacts

CURRENT WAYS OF INTEGRATION – STAKEHOLDERS LIST

OVERVIEW & NEWS **POLICY & LEGISLATION** **TERMINOLOGY & LIBRARY**

OVERVIEW NEWS & EVENTS KNOWLEDGE NEEDS **STAKEHOLDERS** FUTURE FORESIGHT FUNDING OPTIONS

A wide spectrum of stakeholders is involved at most stages of the raw material value chain. This section focuses on stakeholders interested in R&I activities and in the permitting of relevant new installations.

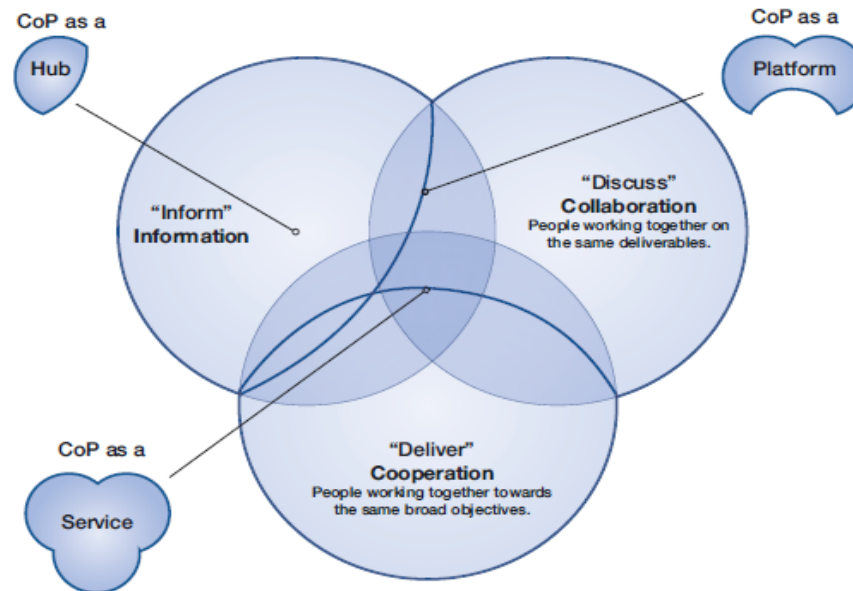
NATIONAL R&I ENTITIES **INDUSTRY ASSOCIATIONS** CERTIFIED PROFESSIONAL EXPERTS

European Rare Earth Competency Network	ERECON	http://ec.europa.eu/growth/sectors/raw-materials/specific-interest/erecon/	Network
FORAM Project - Towards a World Forum on Raw Materials	FORAM	www.foramproject.net	Project
Global Material Flows and Demand-supply Forecasting for Mineral Strategies	MinFuture	http://cordis.europa.eu/project/rcn/206335_en.html	Project
International Raw Materials Observatory	INTRAW	www.intraw.eu	Project

FUTURE WAYS OF INTEGRATION & CO-OPERATION

Beyond the current practices, new ways to be considered:

- transfer/gateway to „ready made applications”
- database transfer and update through established APIs
- advanced knowledge management options



PRACTICAL STEPS

- assess which form(s) of integration you prefer
- the easy way:
 - - send major reports (pdf) and their searchable attributes (xls)
 - - send project profile for the Gateway (preferred for sustainable consortia)
- think about & consult us for other sophisticated ways
- use rmis@ec.europa.eu for contact
- register for the RMIS newsletter

CONCLUDING REMARKS

- **RMIS is a sustainable information system with sound legal mandate, stable infrastructure and expert capacity to host your data and information free of charge.**
- **RMIS is a popular website with lots of information coming from H2020 projects, it complements well HaDEA's data hub <https://sc5.easme-web.eu/?theme=green>.**
- **Co-operation and joint efforts with consortia are needed to develop new, enhanced ways of integration of information.**

Thank you!

Website: rmis.jrc.ec.europa.eu

Contact: ec-rmis@ec.europa.eu



EU Science Hub: ec.europa.eu/jrc



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