

ICAMCYL

Centro internacional de materiales avanzados y materias primas
International center for advanced materials and raw materials



HEADQUARTERS

Polígono Industrial El Bayo, 19
24412 Cubillos del Sil (León), SPAIN

LEON OFFICE

Parque Tecnológico de León, Edificio
de Usos Múltiples
C/ Julia Morros S/N Primera Planta,
Oficinas 106-108
24009 Armunia (León), SPAIN

Dr. Santiago Cuesta Director General

FUNDACION ICAMCYL:

*Centro internacional en materiales avanzados y materias
primas de Castilla y León*

Contacto



(+34) 661 636 688 | (+34) 661 974 185



director.general@icamcyl.com | administracion@icamcyl.com



www.icamcyl.com

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Sustainable mining



Advanced materials



Circular economy



SD Goals





Mining and metallurgy regions of EU – H2020 project

Kaisa Turunen, Juha Kaija (coordinators)

Santiago Cuesta-López on behalf of the MIREU Team

REMIX 8th Peer Review meeting, 11th–12th December 2018,
Fundao, Portugal

MIREU – REMIX connections

EIP Raw Materials Commitment February 2016 lead by RCL:

•Regions involved started to work to improve raw materials value chain policies and are actively seeking synergies between regional development programmes and strategies such as smart specialisation (RIS3)

- REMIX is the main project that MIREU is clustering with – sister/brother project!
- Eight mutual partners in MIREU and REMIX, including the REMIX coordinator Regional Council of Lapland and **other supporting regions/Governments like Castilla y Leon**
- REMIX and MIREU are connected in many ways and should feed data to each other
- Clustering and cooperation is really natural!

MIREU figures

- Call: H2020-SC5-2016-2017 - Greening the Economy, CSA
- Total budget: 2 999 725 €, Person-months: 312
- Duration: 1.12.2017 – 30.11.2020
- Coordinator: GTK, Scientific Coordinator: Laura S. Lauri (Ore Geology and Mineral Economics) & Project Manager: Juha Kaija (Bedrock Construction and Site Assessment)
- 30 partners from 14 European countries + Chile, 16 European mining and metallurgy areas - more will be invited!
- **Kick-off meeting in Espoo 9.-10.1.2018**



What was behind the call?

- Europe has mining & metallurgy regions but real cooperation between them is largely lacking
- Decline in public acceptance of raw material extraction
- General lack of awareness of the importance of mineral raw materials in people's lives
- Socio-economic changes in mining and metallurgy regions → losing economic power and inhabitants
- **However, the importance of raw materials extraction is still well-recognised at European level and by the mining industry**



Aitik Mine, Sweden. Photo: Juhana Karija 2012



Copper Train Colera Las Cruces, Photo: Juhana Karija



Main objectives

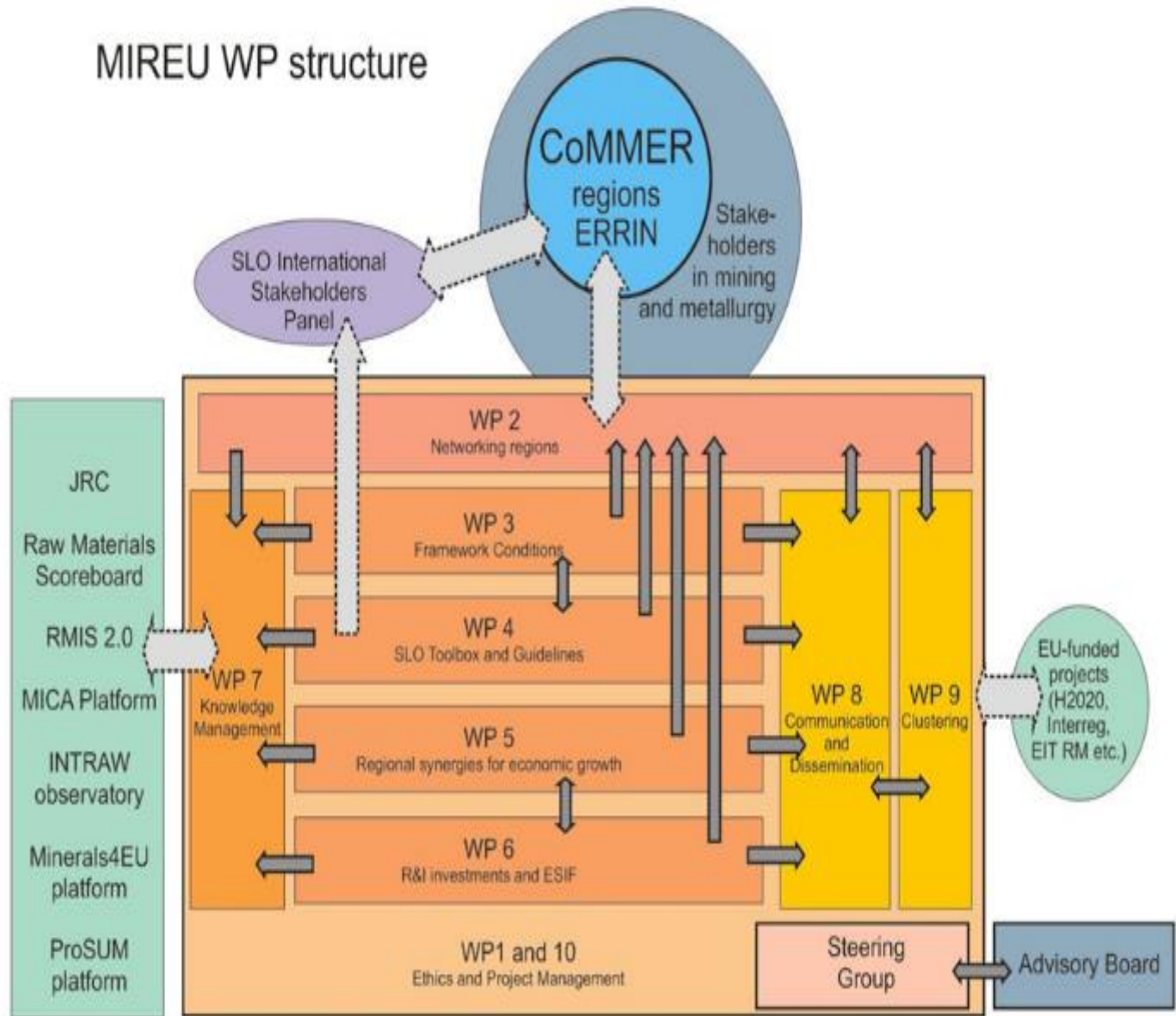
- **DESIGN A COMMON EU ROADMAP FOR SUSTAINABLE MINING ACROSS EU REGIONS**
- **IMPLEMENT RAW MATERIALS STRATEGY IN THEIR RIS3 AND ADAPT LOCAL POLICY TO SUSTAINABLE MINING POLICY**
- Enhance the cooperation between different mining & metallurgy regions
- Focus on improving the framework conditions, economic competence and social license to operate
- Establish **Council of Mining and Metallurgy Regions of Europe (CoMMER)**
 - Network will help the regions to share knowledge and experiences when facing the challenges to establish and maintain an extractive industry

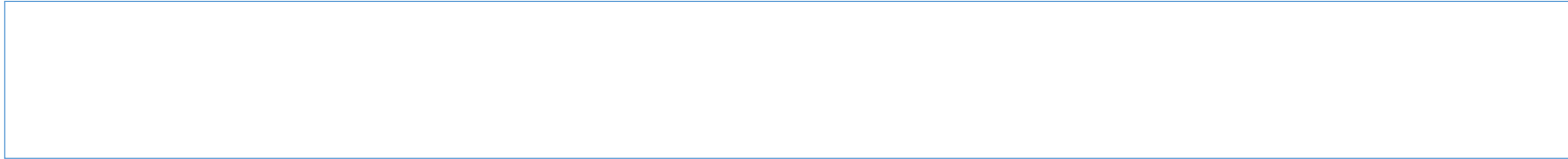


Region and country	Raw Material Commodities in terms of EIP RM
Alentejo PT	Cu, Zn, Ag, Sn, Au, U
Andalucía ES	Cu, Zn, Pb, Sn, Sr, Au, Ag, Fe, F, Ba, industrial minerals
Aragon ES	C, NaCl, KCl
Castilla y Leon ES	W, Mg, Fe, U, Cu, Pb, Zn, Au, industrial minerals
Cornwall UK	Sn, W, Li, In, industrial minerals
Czech Republic CZ	Li, W, U, Industrial minerals
Ireland IE	Zn, Pb, Cu, Au, Ag, Li, Sn, Ta, PGE, REE, Fe, gemstones, industrial minerals
Kosice SR	Mgs, Au, Cu, Fe
Lapland FI	Au, Cr, Ni, Cu, Co, PGM, industrial minerals, gemstones
Lower Silesia PL	Cu, Pb, Zn, Ag, Ni, Co, Mo, Pb, V, Re, rock salt, industrial minerals
Maramures RO	Pb, Zn, Cu, Au, Ag
Northern Karelia FI	Cu, Zn, Tlc, Dol, Au, Ag, Ni, Co, industrial minerals
Occitanie FR	W, industrial minerals
Saxony DE	Sn, W, Li, F, Ga, In, REE, industrial minerals
Stereia Ellada GR	Al, Ni, Cr, industrial minerals
Styria AT	Fe, industrial minerals
Västerbotten SE	Au, Zn, Cu, Ag, industrial minerals

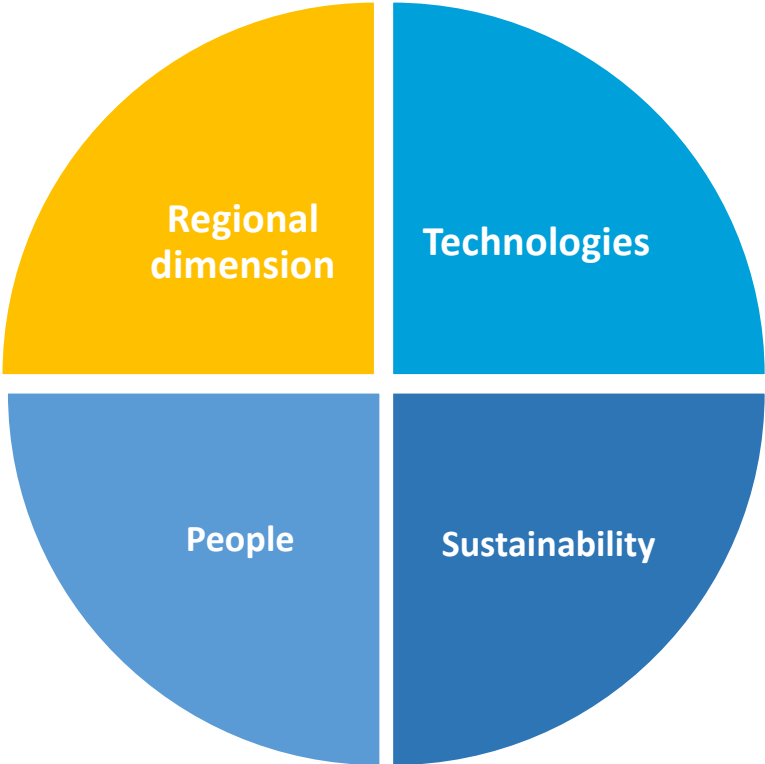


MIREU WP structure





Regional Innovation ecosystems as pillars of Industrial development



Focus on Industrial uptake of Enabling Technologies , invest in pilot plants & demonstrators

Reinforce Human Capital, Skills and Cluster policy for Industrial development

Use the “challenge approach” to combine industrial development and sustainability



Actions and vehicles to promote mining & processing under a regional strategy

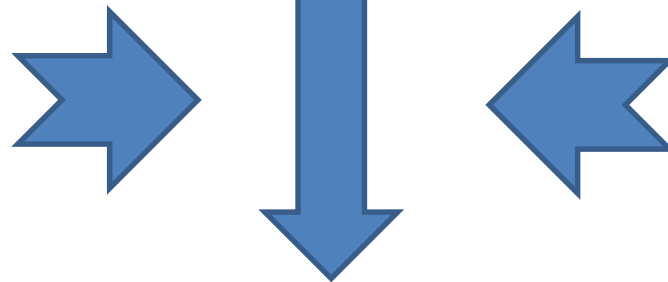
- Plan structural investment funds accordingly. Develop an ad-hoc strategy well associated to a reliable policy.
- Invest in R+D+I infrastructures for excellence and singular capacities. Promote competence centers.
- Promotion of Companies' that invest seriously on R&i. Create and promote industrial clusters in the thematic.
- Development of links and synergies between companies, technological centers and Universities, especially relating to the investment on new products and services development.
- Open innovation through smart specialization and support to mining and processing pilot lines
- Valorization: from mining raw materials towards advanced manufacturing and components.
- *Impulse and promo. on R&I ac. vi. es by enterprises and support the crea. on and consolida. on of innova. ve enterprises:* Grants for companies to develop R&D projects for the improvement or creation of new processes or products.
- Catalysis of ad-hoc + smart technologies (applied to the needs of the mining sites within the territory)
- Certification strategy, linked to environmental plan -> sustainability -> Social License to Operate.
- Work for social acceptance:
 - Development of infrastructure projects and restoration projects of degraded zones.
 - Training for unemployed people formerly mining workers to prepare them for new jobs.
 - Entrepreneurial Dynamization. Looking for entrepreneurial alternatives for formerly mining lands.

(1) COMPEDIA & DATABASE OF REGIONS AND THEIR S3 PLANS FOR THE SPECIFIC TARGETS OF MIREU

(2) LIST OF REGIONS WITH SIMILARITIES AND OPPORTUNITIES

(3) MODEL RIS3 including lessons learnt and existing frameworks, roadmaps and activities, that can potentially be transferred between regions, while simultaneously promoting the use of other vehicles to further opportunities and economic growth in the context of raw materials.

Inputs from other WPs (i.e. 1 & 6)



Identification of stakeholders and key actors

Basis for a MIRRORING ACTION

MIRRORING ACTION

Vehicles:

- Constitution of High-level group
- Group of stakeholders/actors
- S3 platform sustainable mining
 - ERRIN, EURADA

A pilot plan of actions, implemented in a mirror-core group of regions

This will constitute the proof-of-concept for a possible future large-scale demonstrator and the creation of a common EU roadmap for EU mining and metallurgy regions.



SAVE THE DATE

Governance and Policy within Mining and Metallurgy EU Regions

15 January 2019 | Parque Tecnológico de León, León, Spain | Hosted by Fundacion ICAMCYL

This will be the first in a series of high-level policy workshops, focusing on the future of the mining and metallurgy sectors in European Regions. The two-day event will provide a platform for the exchange of best practices between high-level representatives of EU regions, with the aim of exploring ways for a common mining approach to raw materials in Europe and fostering discussions on sustainable mining strategies. Furthermore, it will explore links with existing EU initiatives on raw materials, mining and metallurgy at regional level.

OBJECTIVES:

- Discuss a European roadmap by exchanging best practices on how to foster sustainable mining through Smart Specialisation Strategy (RIS3).
- Set up a European-wide mirror of regions considering mining and metallurgy within their Smart Specialisation Strategy (RIS3).
- Create a large-scale demonstrator between EU regions boosting mining and metallurgy, covering everything from primary to end-user applications, to ensure the main industrial value chains' core of the economic engine.
- Cluster and interlink present EU initiatives on raw materials, mining and metallurgy at regional level



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MIREU
MINING AND METALLURGY REGIONS OF EU



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No. 776811 | **Topic: SC5-15-2016-2017**



MIREU Internet and social media

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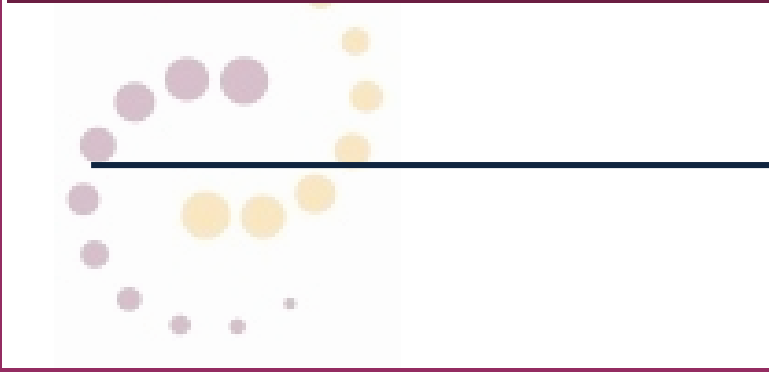


Thank you for your attention!



Santiago Cuesta López
DIRECTOR GENERAL

505 11 22 33
director.general@icamcy.com
www.icamcy.com



Santiago Cuesta López
GENERAL MANAGER en FUNDACION ICAMCYL:
International Center in Advanced Materials and raw
materials of Castilla y Leon
León Area, Spain

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General Manager of the private non-profit Fundacion ICAMCYL: International Research Center in Advanced Materials and Raw Materials of Castilla y Leon. Founder and former Director of the ICCRAM: Int. Research Center in Critical Raw Materials for Advanced Industrial Technologies within University ...

ICAMCYL links raw materials and environment

Promoting 21th Century sustainable mining