

ERA-MIN3 Background



ERA-MIN3 & Call Launch event

17 February, 2021



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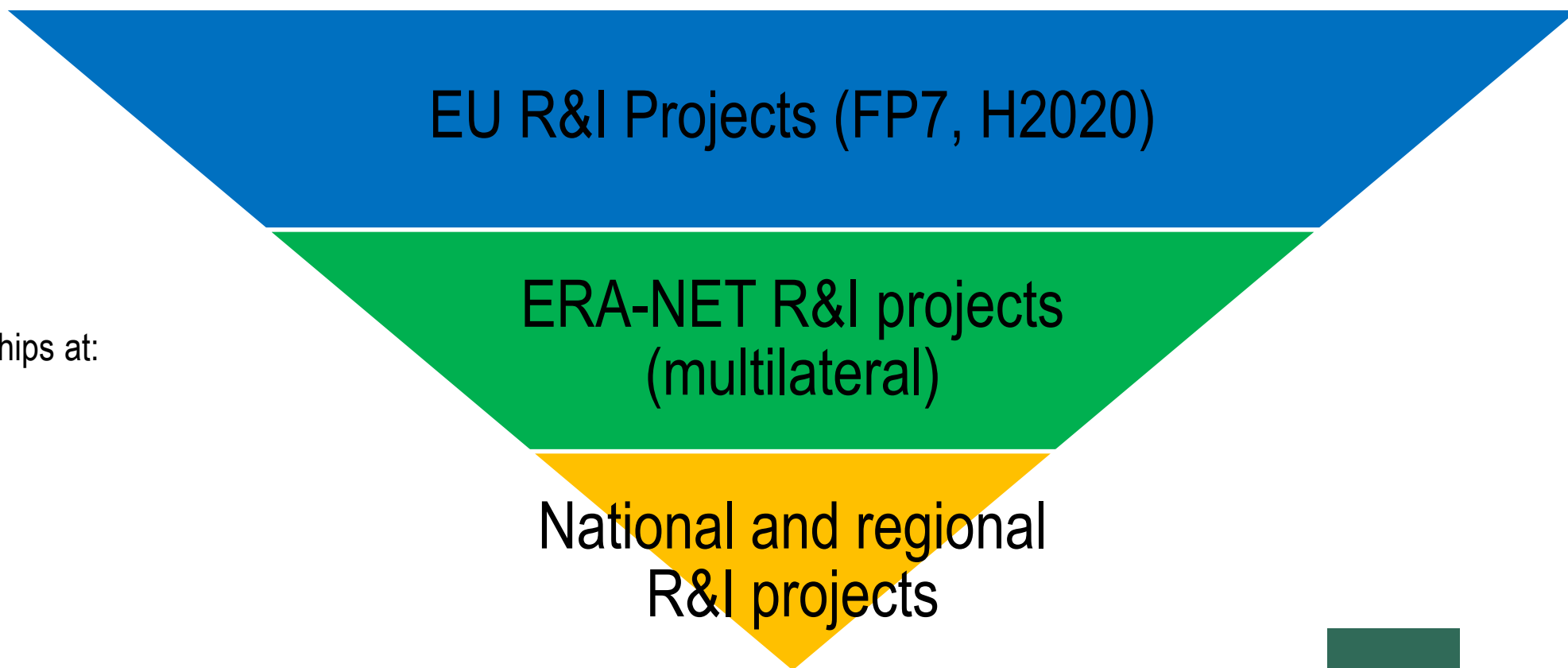
ERA-NET

Complements FP7/H2020 EU Programme and
national/regional research funding programmes



Funding scheme

Consortia/ Funding



Learn more about partnerships at:
ERA-LEARN website
<https://www.era-learn.eu/>



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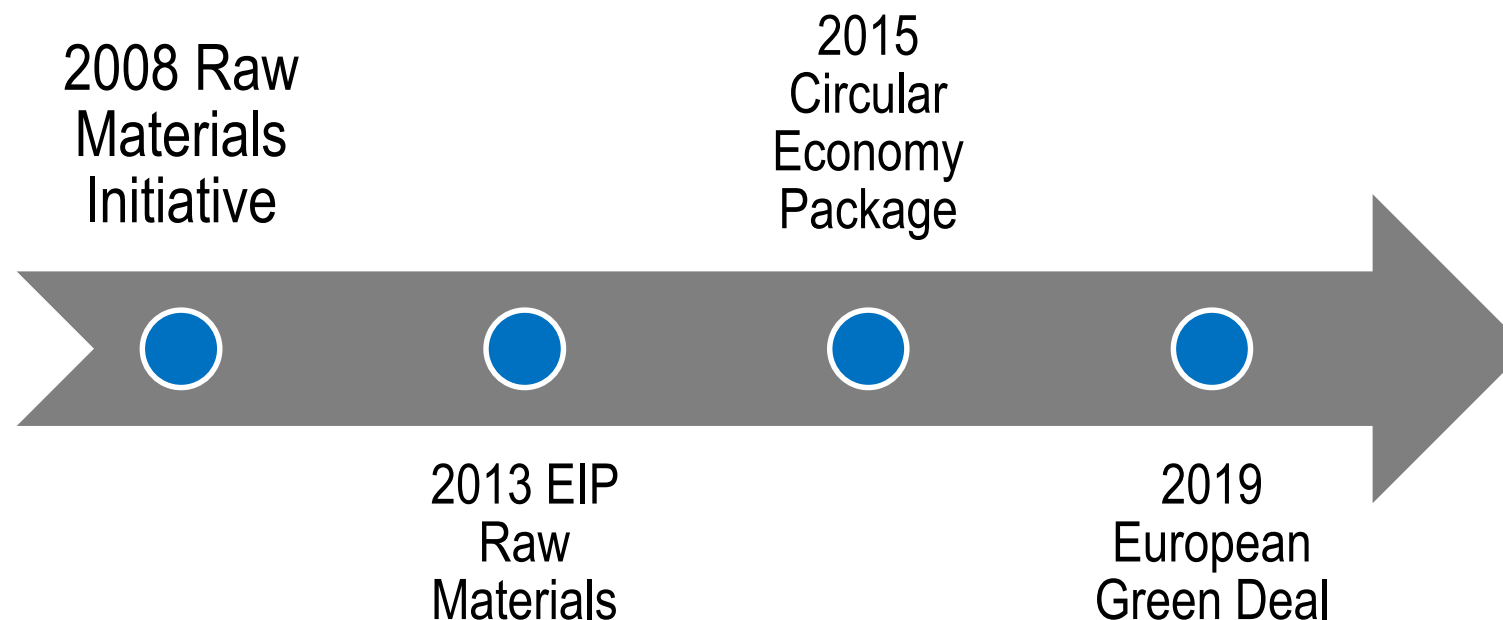
EU co-funded ERA-MIN Joint Call 2021
Raw Materials for the Sustainable Development and
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EU Raw Materials

ERA-MIN networks support EU RM policies



landscape
since 2008



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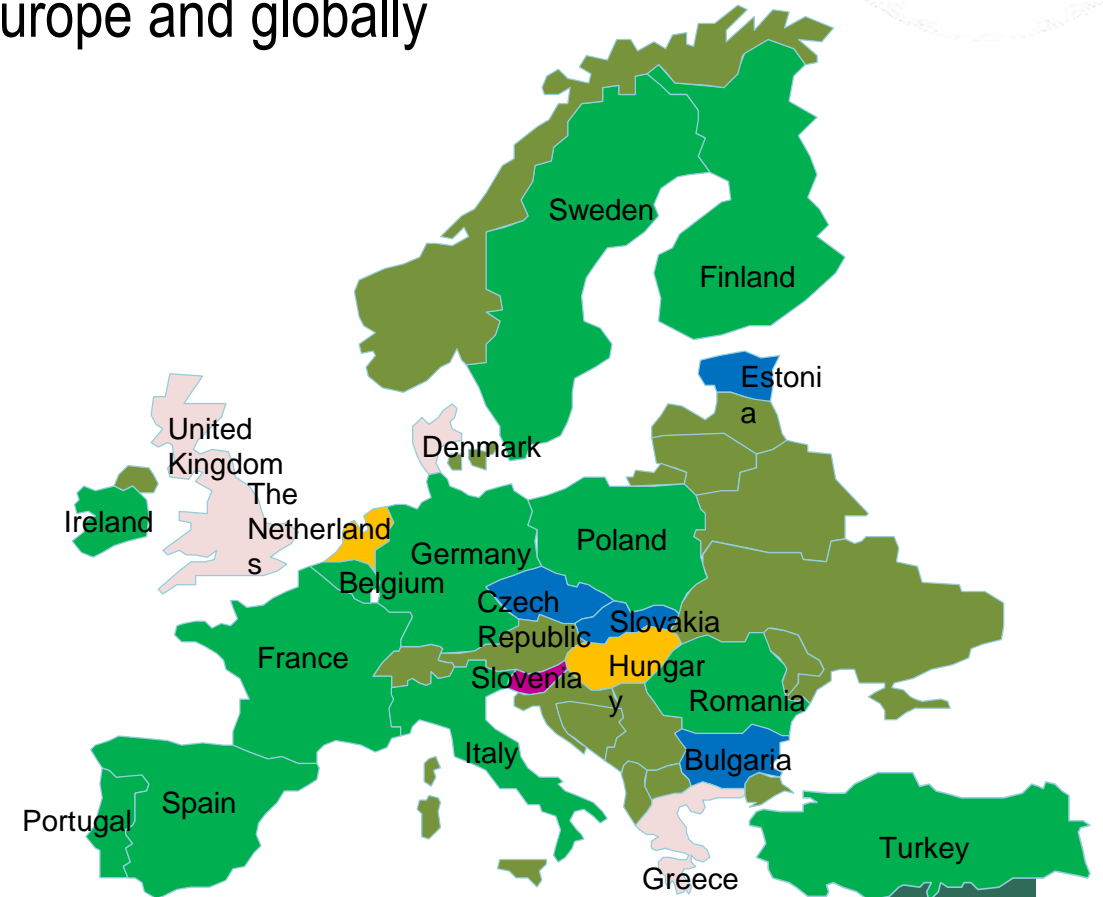
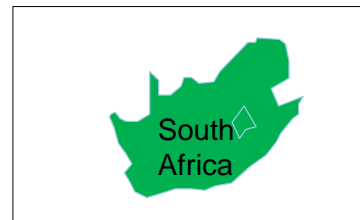
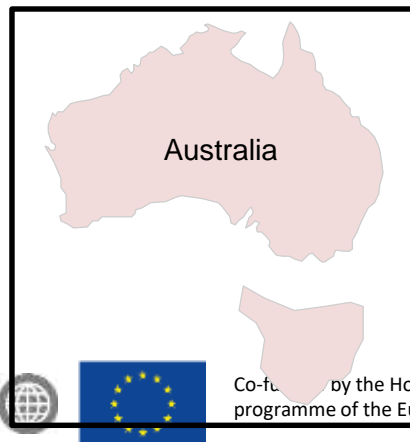
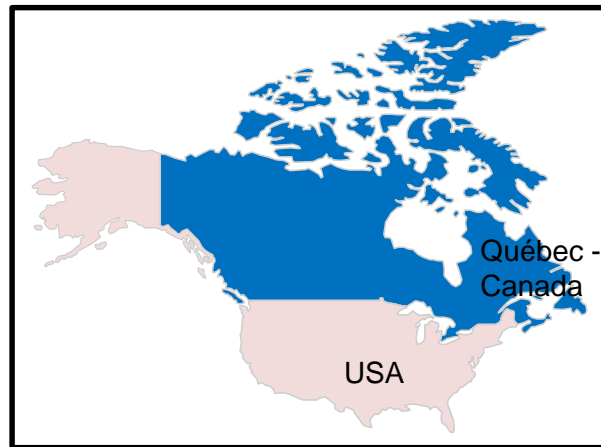
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ERA-MIN Consortium

Countries involved in ERA-MIN network

Evolution since 2011

since 2011, the network was expanded to more countries across Europe and globally



EU co-funded ERA-MIN Joint Call 2021

Legend	ERA-MIN 1, 2 and 3	ERA-MIN 2 and 3	ERA-MIN 3	ERA-MIN 2 and 3	ERA-MIN 1 and 2	ERA-MIN 1	Observer
	Green	Pink	Blue	Pink	White	Yellow	Pink



FP7 ERA-MIN

Industrial Handling of Raw Materials for European industries

2011-2015



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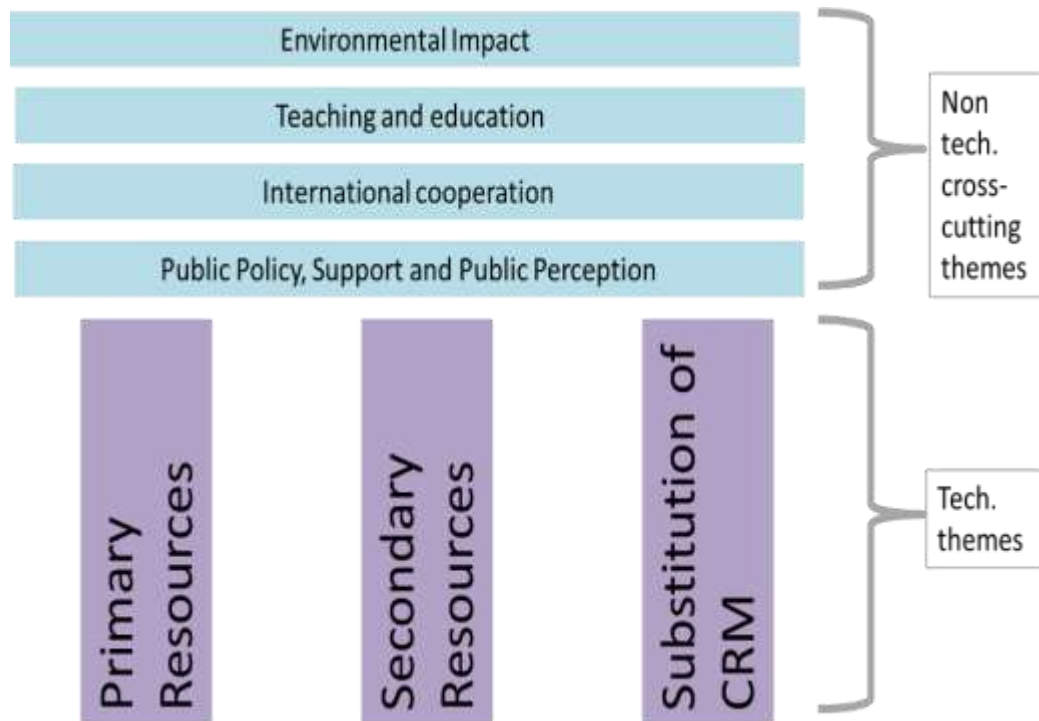
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Success outcomes of FP7 ERA-MIN (2011-2015)



➔ **Consortium:** 15 partners | 15 EU countries + Argentina + South Africa

➔ **ERA-MIN Research Agenda (2013)**



- 150 experts
- Background document of SIP of EIP Raw Materials
- Thematic areas of 3 Joint Transnational Calls
- *ERA-MIN 2 scope and topics defined by following this agenda*

FP7 ERA-MIN Joint Calls

<https://www.era-min.eu/results>



3 joint calls & 17 funded multidisciplinary projects

€13 million funding
€19 million total costs

- ✓ **13** projects on **primary resources** (sub-topics 1)
- ✓ **7** projects on **secondary resources** (sub-topics 2)
- ✓ **2** projects on **substitution** of CRM (sub-topics 3)

2013

- 5 Funding organisations/**5 countries**
- Topic: **Primary resources**
- Preliminary budget EUR 3.9 million
- **4** proposals selected for funding
- Allocated public funding: €2.8 million

2014

- 13 organisations/**11 countries**
- Topics: **Primary resources, recycling and substitution**
- Preliminary budget EUR 7.7 million
- **7** proposals selected for funding
- Allocated public funding: €5.1 million

2015

- 12 organisations/**12 countries**
- Topics: **Primary resources, recycling and substitution**
- Preliminary budget EUR 8 million
- **6** proposals selected for funding
- Allocated public funding: €5.1 million



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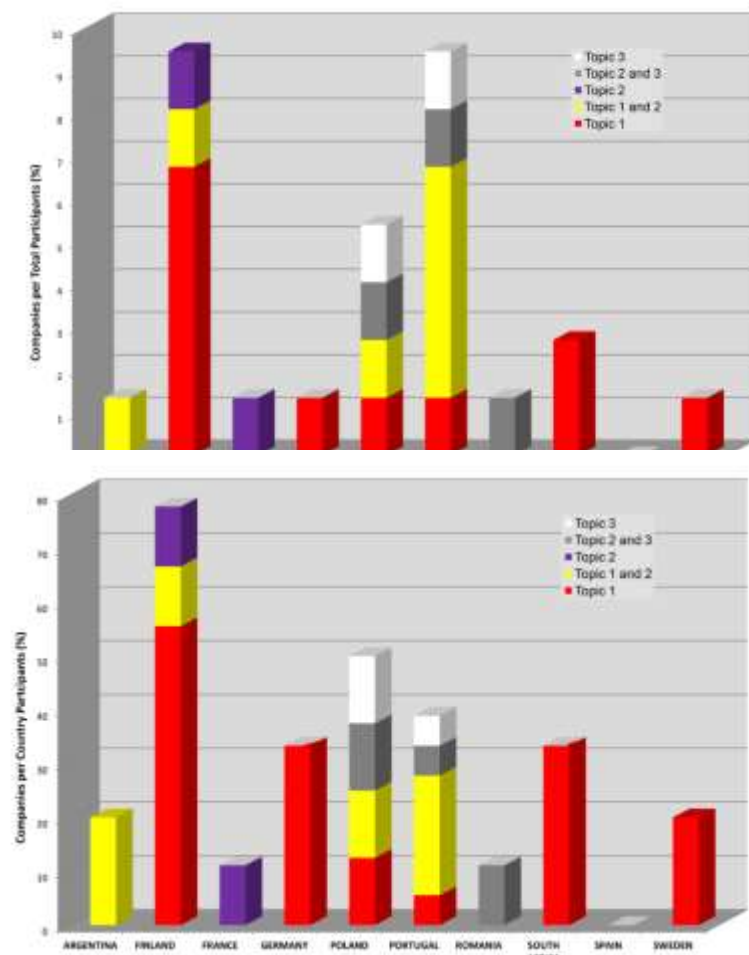
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FP7 ERA-MIN Joint Calls

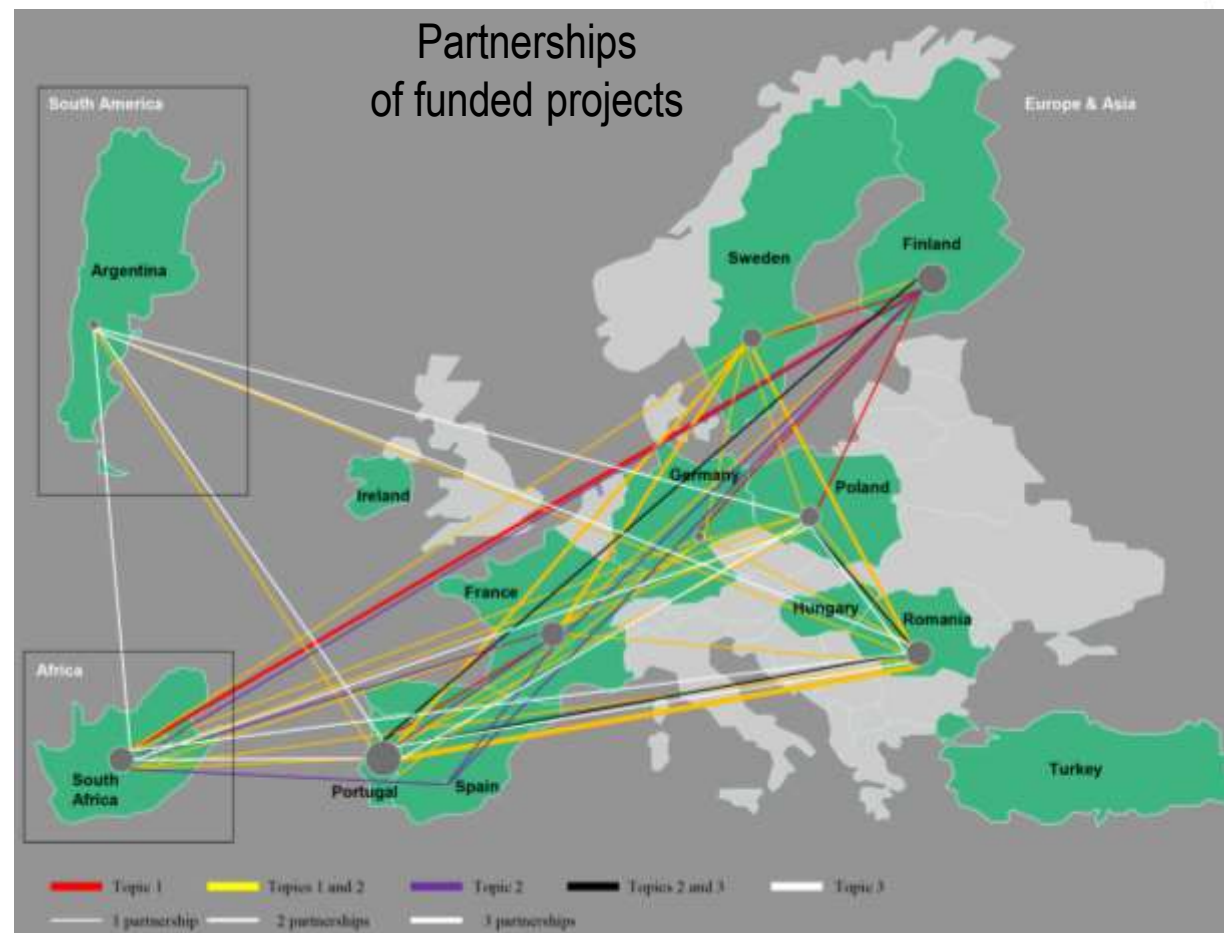
Joint calls 2014 & 2015



Companies in funded projects



Partnerships of funded projects



Source: Dina Carrilho (2016) "Stepping up the international cooperation for the sustainable supply of raw materials", *European Geologists*, 42: 33-36



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H2020 ERA-MIN 2

Implement a European-wide coordination of research and innovation programs on raw materials to strengthen the industry competitiveness and the shift to a circular economy

2016-2022



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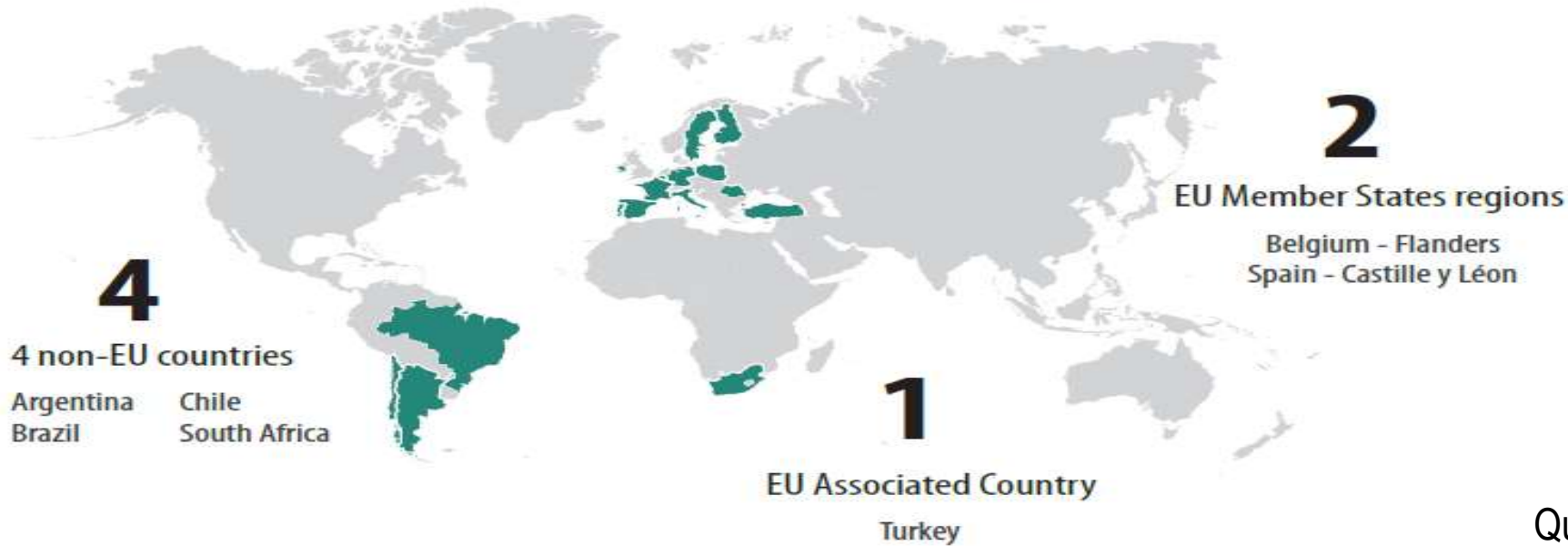
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H2020 ERA-MIN 2



CONSORTIUM

Pan-European network of
21 public research and innovation
funding organisations from:



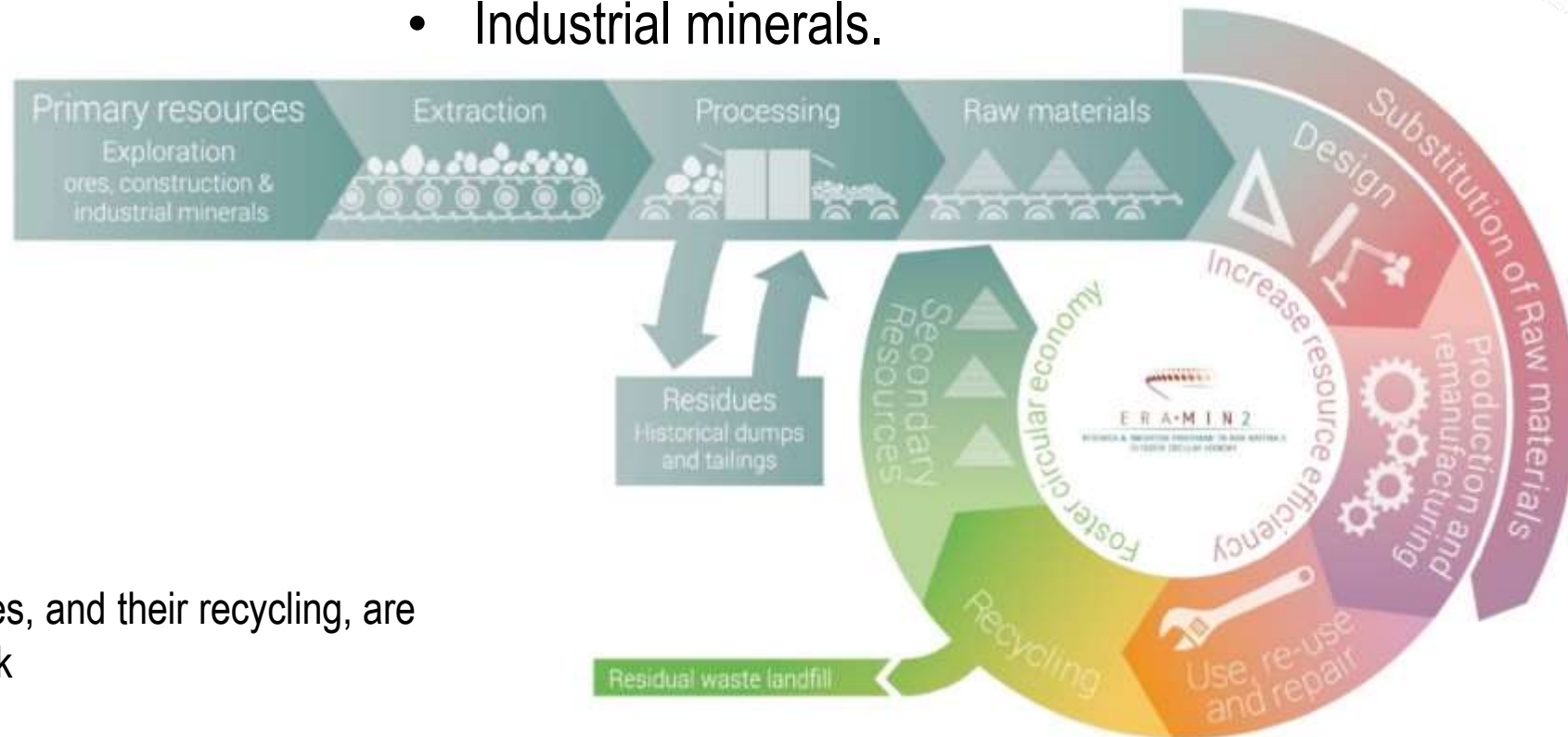
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H2020 ERA-MIN 2

Non-fuel non-food raw materials

- Metallic,
- Construction,
- Industrial minerals.

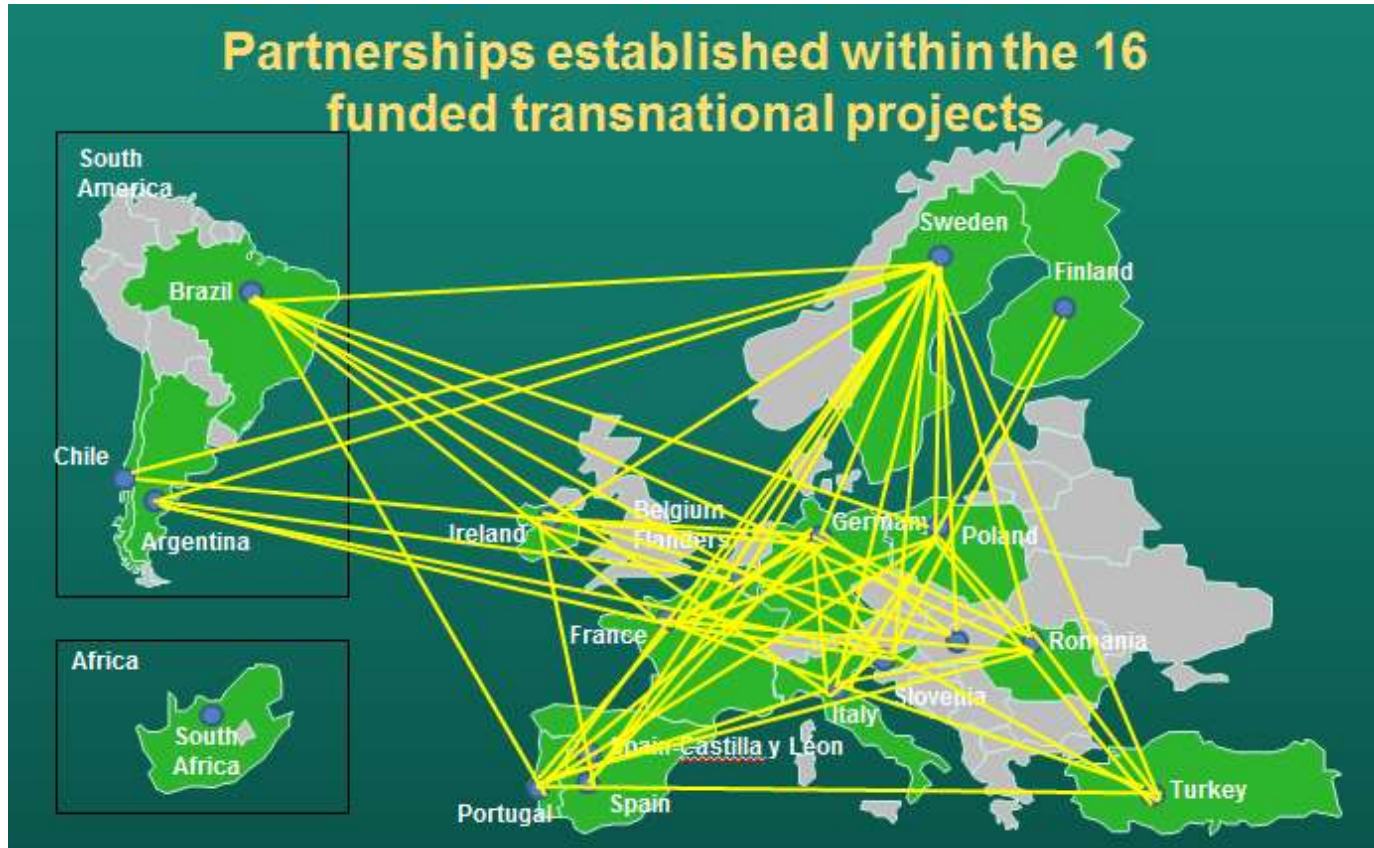


Raw materials for batteries, and their recycling, are included in this framework



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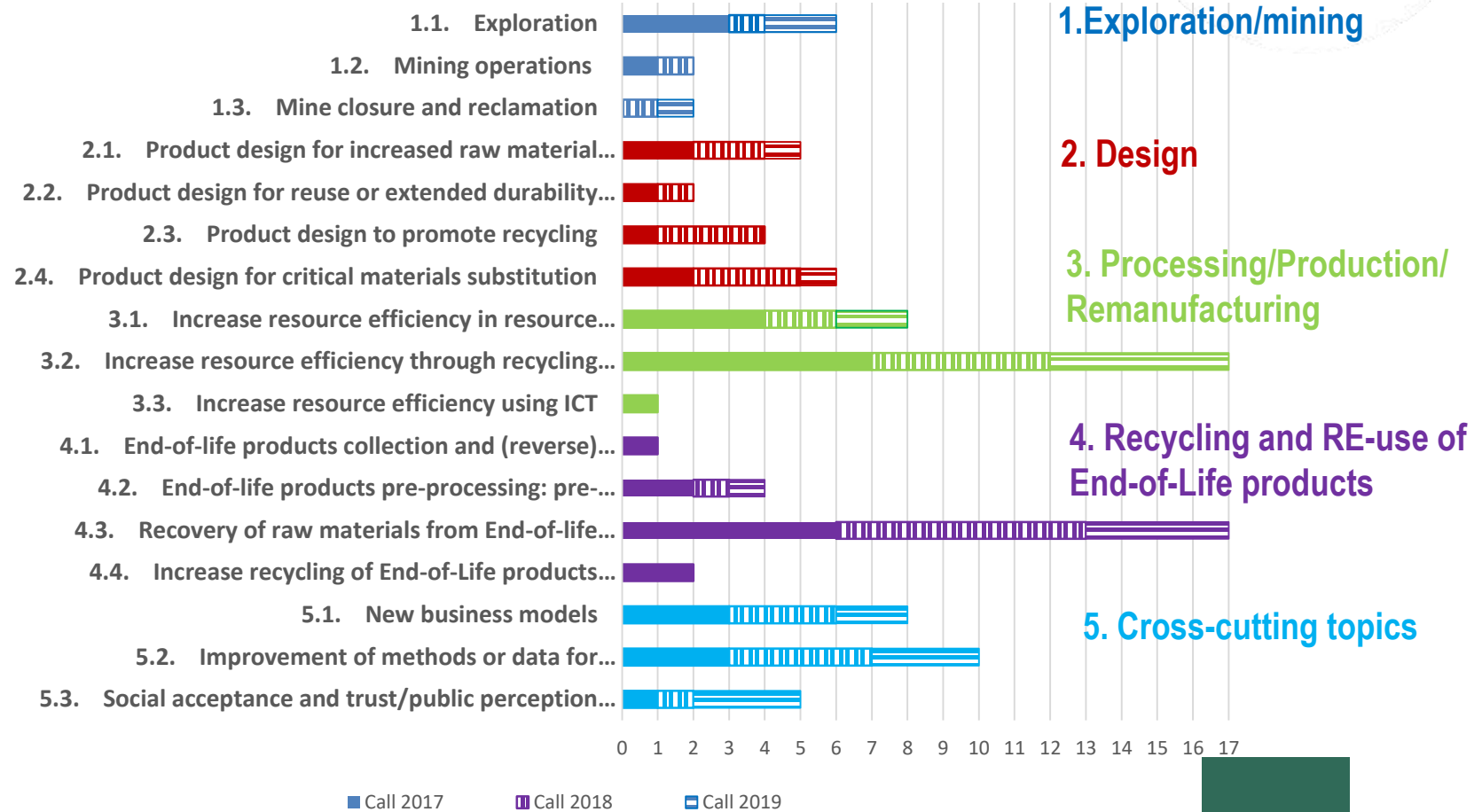


- ~100 submitted pre-proposals
- ~500 applicants (27% enterprises)
- 4 to 11 partners
- 2 to 8 countries
- €0.5 to €1.5 Mio requested funding
- 80% academia-industry projects
- TRL 4-7 (average)
- 24-36 months project duration

ERA-MIN 2 Joint Calls

All thematic areas were covered

Sub-topics addressed by funded projects



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ERA-MIN 2

Outcomes of 3 Joint Calls



Ambition

30 R&I funded projects

€30 Mio public funding

&



Results

40 R&I funded projects

€29 Mio public funding



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ERA-MIN Joint Calls

Previous calls & funded projects

ERA-MIN & ERA- MIN 2 Joint Calls

FP7 ERA-MIN Joint Calls			H2020 ERA-MIN 2 Joint Calls		
2013	2014	2015	2017 (EU co-funded)	2018	2019
57 R&I transnational projects (total)					
30% enterprises (average)					
€42 Million total public funding					
€60 Million total project costs					

8 Battery related projects (€6 million) from ERA-MIN Calls (2015, 2017, 2018, 2019)



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ERA-MIN Joint Calls

Project summaries and final reports

Rare Earth Elements from secondary sources

<https://www.era-min.eu/results>

57 collaborative R&I projects - examples

- **Improve Resource Efficiency** and Minimize Environmental Footprint
- **New Eco-innovative Materials** for Mining Infra
- Application of nano-bubble **technologies** to mining industry operations
- **Environmentally friendly and efficient methods** for extraction of Rare Earth Elements from secondary sources
- **Optimization** of bottom ash treatment for an improved recovery of valuable fractions
- A **novel circular economy** for **sustainable** RE-based magnets
- **Re-generating** (raw) materials and end-of-life products for **re-use** in Cement/Concrete
- **Recycling of End-of-Life Products** (PCB, ASR, LCD)
- **Design** of a product for **SUBSTITUTION** of phosphate rocks
-



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H2020 ERA-MIN3

Raw Materials for the Sustainable Development and the Circular Economy

2020-2025



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ERA-MIN3 Consortium

7 New partners to ERA-MIN 3 network



In ERA-MIN3, Quebec in Canada, Bulgaria, Czech Republic, Estonia, Slovakia, Wallonia and Navarra joined the ERA-MIN network for the first time

15
EU Member States
countries

Bulgaria
Czech Republic
Estonia
Finland
France
Germany
Ireland
Italy
Poland
Portugal
Romania
Slovakia
Slovenia
Spain
Sweden

3
EU Member States
regions

Belgium-Flanders
Belgium-Wallonia
Spain-Navarra

2

non-EU countries
Canada-Québec
South Africa

1

EU Associated
Country

Turkey

Brazil intends to
join the network



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Raw Materials for the Sustainable Development and
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Objectives

1. Secure the sustainable and responsible supply of **non-food, non-fuel mineral raw materials** for a **carbon-neutral and a circular economy**
2. Promote **world-wide** research and innovation (R&I) cooperation through **coordinated funding**
3. **Reduce the fragmentation of R&I** funding across Europe and globally
4. Implement **Joint Calls** for transnational R&I projects on “**Raw materials for the sustainable development and the circular economy**”
5. Support international R&I projects between **universities, research institutes, small, medium and large enterprises**, NGOs, public authorities, etc

Joint Calls

Raw Materials for the Sustainable Development and the Circular Economy



1. Launch two, or more, joint calls for transnational R&I proposals to support peer-reviewed **excellent transnational R&I projects**.
2. The EU co-funded call for R&I proposals in **2021** with a total budget of €19.5 Mio.
3. A second joint call for transnational R&I proposals is planned in **2023 only with national and regional funds**.

