

### RESEARCH & INNOVATION PROGRAMME ON RAW MATERIALS TO FOSTER CIRCULAR ECONOMY



Co-funded by the Horizon 2020 programme of the European Union

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> Workshop Finep 14<sup>th</sup> march 2017, Rio de Janeiro





→ Background – ERA-MIN (2011-2015)
 → ERA MIN 2 (2016-2021)
 → ERA-MIN Joint Call 2017

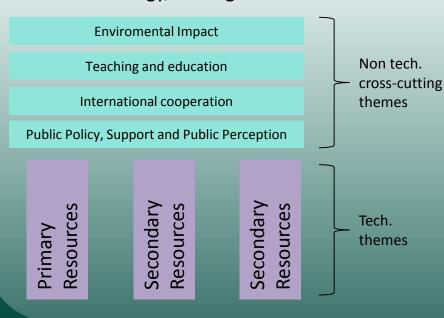




## BACKGROUND: ERA-MIN (2011-2015)

Industrial Handling of Raw Materials for European industries 21 partners from 15 EU Member-States + Argentina+ South Africa Main results:

#### **ERA-MIN Research Agenda (2013)** non-energy, non-agricultural raw materials



#### 3 joint calls 2013/2014/2015

- 13,0 M€ of total national public funds
- 17 total R&D funded projects
  - 13 projects on primary resources
  - 7 projects on secondary resources

**2** projects on **substitution** of Critical Raw Materials

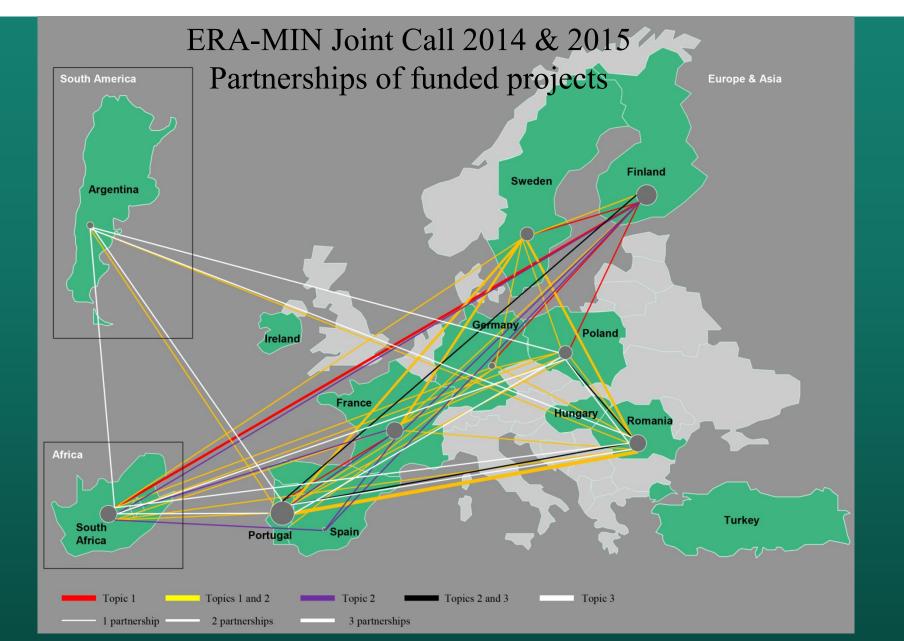




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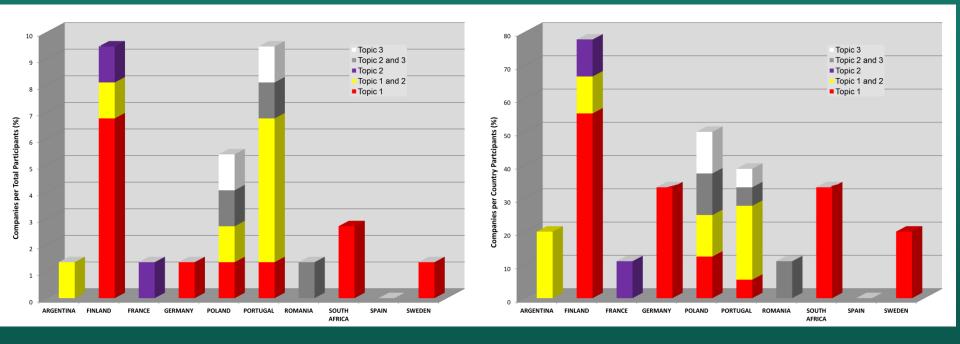
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## ERA-MIN Joint Call 2014&2015 Company distribution per country and per topic



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





# ERA MIN 2. Introduction ERA MIN 2 (2016-2021)

- Horizon 2020 funded project under Call 2016 (Societal Challenge 5)
- Title: Implement a European-wide coordination of research & innovation programs on raw materials to strengthen the industry competitiveness and the shift to a circular economy
- ERA-NET Cofund:
  - Where participants are research funding organizations (RFOs; Ministries, national and regional funding agencies).
  - Where European Commission grants up to 33% of the national/regional funds committed by the RFOs in the ERA-NET Cofund Call

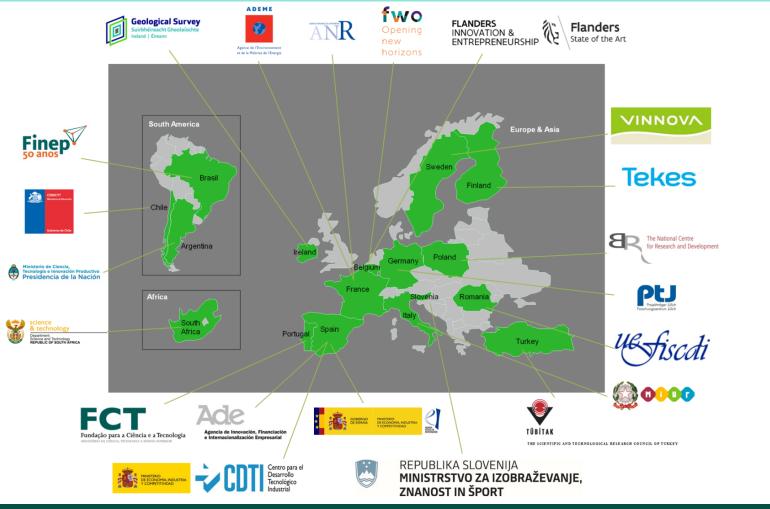
ERA-MIN 2 aims to develop the non-energy and non-agricultural raw materials sector: **construction**, **industrial and metallic minerals**.





### ERA MIN 2. Consortium

#### **21** public research and innovation funding organisations of EU and non-EU countries/regions







### ERA MIN 2 activities / objectives:

#### Co-funded Call 2017

- EU co-funding: ca. 5 M€
- Total call budget ca. 15 M€
- Launch: 1st February 2017
- Funding decision: Jan. 2018
- Projects start: May 2018
- Low TRLs targeted
- Centralised peer-review
   based on 3 H2020 evaluation
   criteria: Excellence, Impact
   and Implementation.
- Selection of projects following a ranking list recommended by the Scientific Evaluation Board.

### Additional Objectives/activities

- Two additional calls 2018 & 2019
   without EU co-funding
- Enhance and strengthen the synergies, coord. & collaboration of EU and non-EU RFOs
- Support and promote R&I cooperation
- Improve the efficiency and impact of human and financial investment in R&I activities
- In support of the EU integrated strategy "Raw Materials Initiative" (2008) and the European Innovation Partnership on Raw Materials (2012)





### **Future activities**

**2018** and **2019** – 2 joint calls for transnational by pooling only national/regional funds **OPEN** to participation of funding organisations from other countries and regions

**Target EU countries**: Austria, Bulgaria, Czech Republic, Denmark, Netherlands, Norway, Switzerland and United Kingdom

**Target non-EU countries**: Australia, Brazil-regions, Canada, Colombia, Japan, Mexico, Peru and USA

**2017-2021** – Organise joint workshops, matchmaking events with other Ministries and funding agencies





### Economia Circular: Mudança e Inovação

Pacote para a Economia Circular revisto e adotado pela CE em Dez 2015 "Closing the loop – An EU action plan for the Circular Economy" COM (2015) 614/2 Objetivos:

- melhoria da gestão dos resíduos aumento da reciclagem
- redução da deposição em aterros

### Ações que cobrem todo o ciclo de valor:



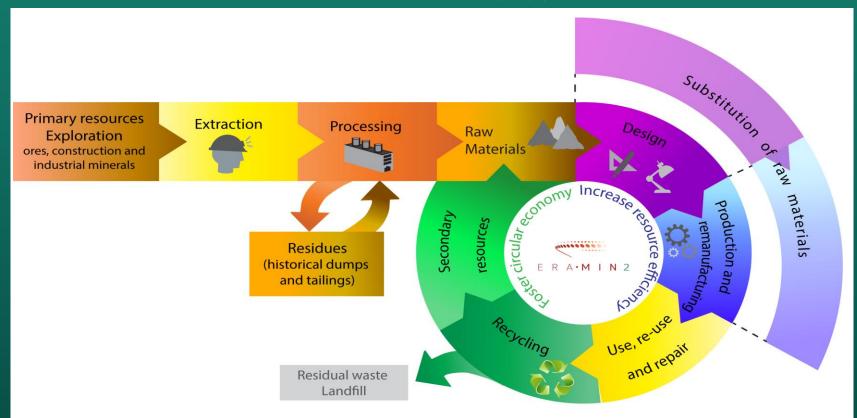
- produção (design de produto, processos sustentáveis,...)
- consumo (reutilização, mudanças de comportamento,...)
- **gestão de resíduos** (aumentar recilagem, diminuir incineração,...)
- mercado para matérias-primas secundárias
- setores prioritários (plásticos, resíduos alimentares, CRM, construção demolição, bio-recursos )





### ERA-MIN Joint Call 2017 – scope

supports **demand-driven** research and innovation on **primary** and **secondary resources** of **metallic, construction and industrial minerals** and **substitution of Critical Raw Materials** in a circular economy approach.







### ERA-MIN Joint Call 2017 – thematic areas

#### Five main topics:

- 1. Supply of raw materials from exploration and mining
- 2. Design
- 3. Processing, Production and Remanufacturing
- 4. Recycling of End-of-Life Products
- 5. Cross-cutting topics:

### 5.1. New business models

- 5.2. Improvement of methods or data for environmental impact assessment
- 5.3. **Social acceptance** and trust/public perception of raw materials





### ERA-MIN Joint Call 2017 – main topics and sub-topics

#### 1. Supply of raw materials from exploration and mining

- 1.1. Exploration
- 1.2. Mining operations
- 1.3. Mine closure & reclamation

### 2. Design

- 2.1. Product design for increased raw material efficiency
- 2.2. Product design for reuse or extended durability of product
- 2.3. Product design to promote recycling
- 2.4. Product design for critical material substitution





### ERA-MIN Joint Call 2017 – main topics and sub-topics

#### 3. Processing, Production and Remanufacturing

- 3.1. Increase resource efficiency in resource intensive production processes
- 3.2. Increase resource efficiency through recycling of residues or manufacturing
- 3.3. Increase resource efficiency using information & communication technologies (ICT)

### 4. Recycling of End-of-life products

- 4.1. End-of-life products collection and logistic
- 4.2. End-of-life products pre-processing
- 4.3. Recovery of raw materials from End-of-life products
- 4.4. Increase recycling of End-of –Life products information & communications technologies (ICT)

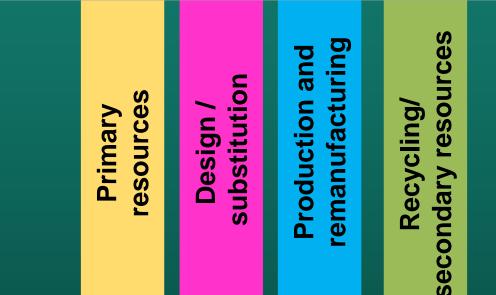




### ERA-MIN Joint Call 2017 – scope and thematic areas

#### **Increase resource efficiency**

Social License to operate/ public awareness, acceptance and trust



**IT based solutions** for the management of primary and secondary resources

Public and environmental policy





### ERA-MIN Joint Call 2017

#### Joint application & evaluation but **national/regional funding**

- National/regional funding rules and regulations apply:
  - topics and sub-topics eligible for funding
  - **eligible partners** from academia, industry, SMEs, NGOs, public authorities from the participating countries/regions
  - Eligible type of research: fundamental and applied research (Technology Readiness Level TRL 1-9)



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 E R A·M I N 2
 TO FOSTER CIRCULAR ECONOMY

### ERA-MIN Joint Call 2017. National and regional priorities

Country/region	Funding Organisation	Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
Argentina	MINCyT	▲	x		▲	
Belgium / Flanders	FWO	x	x	x	x	x
Belgium /Flanders	Hermesfonds	×	x	x	x	
Brazil	Finep	x	x	x	x	x
Chile	CONICYT	×				×
Finland	Tekes	x	x	x	x	x
France	ADEME		x	x	×	x
France	ANR		x	x	x	
Germany	BMBF	▲	x	×	×	x
Ireland	GSI	x	x			
Italy	MIUR	×	x	x	x	x
Poland	NCBR	x	x	x	x	
Portugal	FCT	x	x	x	x	x
Romania	UEFISCDI	×	x	x	x	x
Slovenia	MIZS	×	x	x	×	x
South Africa	DST	×				x
Spain	CDTI	×	x	×	x	
Spain	MINECO	x	x	x	x	
Spain / Castilla y Léon	ADE	x	x	×	×	
Sweden	Vinnova	x	x	x	x	x
Turkey	TUBITAK	x	x	x	x	x

Not all topics are supported by all funding organisations

Five main topics: 1. Supply of raw materials from exploration and mining 2. Design 3. Processing, Production and Remanufacturing 4. Recycling of End-of-Life Products 5. Cross-cutting topics





### ERA-MIN Joint Call 2017. Funding rules

Country/Region	Funding Organisation	Large Enterprises	Medium Enterprises	Small Enterprises	Universities and research organisations	Private non- profit organisations
Argentina	MINCyT		Х	Х	Х	X
Belgium / Flanders	FWO				X	
Belgium /Flanders	Hermesfonds	Х	Х	X		
Brazil	Finep	Х	Х	X	X	X
Chile	CONICYT				Х	X
Finland	Tekes	Х	Х	Х	X	
France	ADEME	Х	Х	Х	Х	Х
France	ANR	Х	Х	X	Х	1
Germany	BMBF/JUELICH	Х	Х	Х	Х	X
Ireland	GSI	Х	Х	X	Х	
Italy	MIUR	Х	Х	Х	Х	X
Poland	NCBR	Х	Х	Х	X	
Portugal	FCT	Х	Х	Х	Х	X
Romania	UEFISCDI	Х	Х	Х	X	X
Slovenia	MIZS	Х	Х	Х	Х	X
South Africa	DST	Х	Х	Х	X	X
Spain	CDTI	Х	Х	Х		
Spain	MINECO				X	X
Spain / Castilla y Léon	ADE	Х	Х	Х		
Sweden	Vinnova	Х	Х	Х	X	X
Turkey	TUBITAK	Х	Х	Х	Х	Х





### ERA-MIN Joint Call 2017. Funding rules

Country/Region	Funding organisations	Fundamental /Basic Research	Industrial/Applied Research			Experimental development	
		TRL 1-3	TRL 4-5	TRL 5-6	TRL 6-7	TRL 7-8	TRL 8-9
Argentina	MINCyT	х	Х	Х	Х	X	Х
Belgium / Flanders	FWO						
Belgium /Flanders	Hermesfonds/ VLAIO	x	х	x	х	x	x
Brazil	Finep	Х	X	X	Х	X	Х
Chile	CONICYT	Х	Х	Х	Х		
Finland	Tekes		X	X	X	X	Х
France	ADEME		х	Х	Х		
France	ANR	х	Х				
Germany	BMBF/JUELICH		Х	Х	Х	X	Х
Ireland	GSI	Х	Х	X	Х	X	Х
Italy	MIUR	х	x	х			
Poland	NCBR		Х	X	Х	X	Х
Portugal	FCT	Х	Х	Х	Х	Х	
Romania	UEFISCDI	Х	X	X	X	X	Х
Slovenia	MIZS	х	х				
South Africa	DST	Х	Х	Х	Х	X	Х
Spain	CDTI	х	х	х	х	х	1
Spain	MINECO	х	Х	Х			
Spain / Castilla y Léon	ADE		х	х	х		
Sweden	Vinnova	x	х	х	х		
Turkey	TUBITAK	Х	Х	Х	Х	Х	Х





### ERA-MIN Joint Call 2017 - eligibility criteria

Each consortium must be composed of, at least, **two** independent legal entities eligible to request funding from the Funding Organisations of, at least, **two different EU Member States** or Associated Countries participating in this Call.

Applicants not requesting funding can be partners of the consortium, on the condition that they provide evidence of the availability of their own funds **(Form C)**.

All applicants requesting funding must provide a **statement of commitment** (Form B) as an annex of the pre-proposal)

Project duration: between 12 and 36 months. See national requirements

The pre-proposal has to be submitted by the coordinator via the **ERA-MIN Electronic Proposal Submission System.** 

One person can only participate as lead researcher representing the **coordinator** in one proposal, must be eligible for funding and from a country or region participating in the Call.





### ERA-MIN Joint Call 2017 – recommendations to applicants

The applicants must liaise with the **local contact person of their country/region** and confirm that the national/regional priorities, funding criteria and regulations are met.

Partnerships **academia-industry** are particularly encouraged to apply. Other types of consortia (e.g. purely industrial or academic) may also apply.

A proposal may cover more than one of the topics and sub-topics. Not all topics and sub-topics are supported by all participating funding organisations.

Consortia of 2-7 partners from 2-7 countries (indicative maximum)

**If required, national/regional submission forms or documents** should be submitted to the respective Funding Organisation within the specified deadline, no later than one week after the proposal submission deadline

The **expected size of a proposal** in terms of total funding is typically in the range of **0.3** to **1.5 million Euro**.





### ERA-MIN Joint Call 2017 - Call timeline

### **Joint Call Publication**

• 1 February 2017

### **Pre-proposal Submission**

• 5 May 2017, 17:00 CEST

#### **Full-proposal Submission**

28 September 2017, 17:00 CEST

#### **Feedback to applicants**

15 January 2018

#### **Projects Starting Date**

1 May 2018 (latest date)





### **Call documents**

Further information on the objectives and expected impacts of the five topics?

Please read the "Call text".

Further information on the submission, evaluation, selection, funding procedures, eligibility criteria, topics and sub-topics covered by each funding organisation and the pre-proposal template? Please refer to the "**Guidelines for Applicants**".

Looking for the specific national and regional funding regulations and rules? Please read the "**National/Regional Funding regulations**".

All call documents available at: www.era-min.eu/call





### Partner search tool

Searching for partners and build consortia? Please refer to the online tool available on the NCPs-CaRE website (http://partnersearch.ncps-care.eu/).

More details on the ERA-MIN Joint Call 2017 Webinar on 30<sup>th</sup> March at 12:00 CEST Will be available at ERA-MIN 2 website Obrigado! Thank you!



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JCS - Joint Call Secretariat FCT- Fundação para a Ciência e a Tecnologia <u>eramin@fct.pt</u> <u>www.era-min.eu</u>