



# EU Initiatives and Programmes on Raw Materials

## RMI, EIP, H2020

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- 1. Raw Materials Initiative**
- 2. European Innovation Partnership on Raw Materials**
- 3. Raw Materials in Horizon 2020**

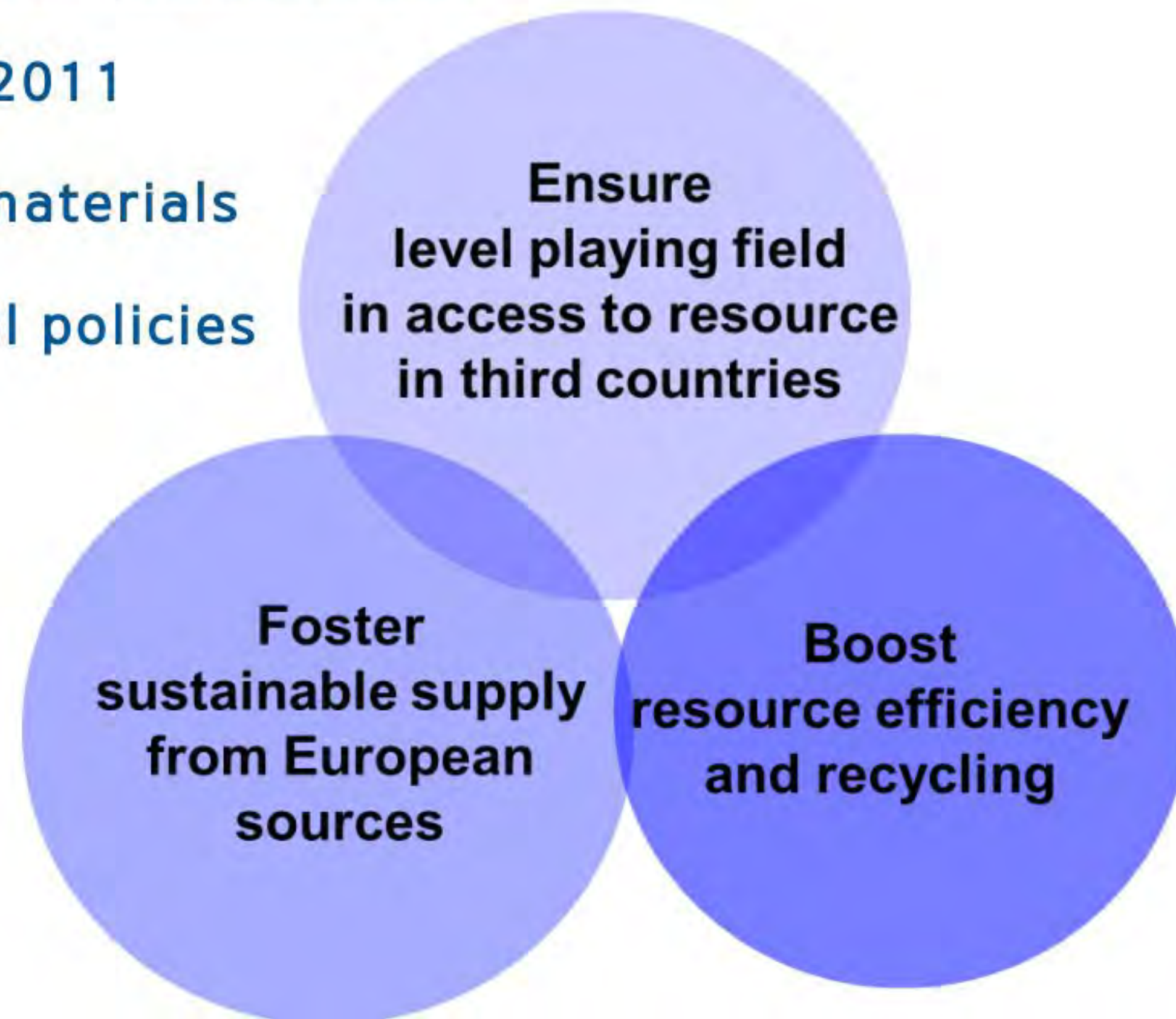


European  
Commission

# 1. Raw Materials Initiative

### EU “Raw Materials Initiative”

- Aim: securing sustainable supplies of raw materials
- Launched in 2008, consolidated in 2011
- Non-energy, non-agricultural raw materials
- Connecting EU external and internal policies
- Integrated strategy (3 pillars)
- Introduced list of Critical Raw Materials (CRM) in 2010, updated 20 CRMs in 2014





Annual report on the implementation of the Raw Materials Initiative – 26.05.2014

### **Fair and sustainable supply of raw materials from global markets (1<sup>st</sup> Pillar)**

- EU trade strategy for raw materials
- Raw materials diplomacy
- Assistance to developing countries

### **Fostering sustainable supply within the EU (2<sup>nd</sup> Pillar)**

- Exchange of good practice between EU Member States
- Enhancing EU knowledge base
- Promoting research and skills

### **Boosting resource efficiency and promoting recycling (3<sup>rd</sup> Pillar)**

- Better implementation and smarter EU waste legislation promoting resource-efficiency & recycling
- Strengthen the enforcement of the EU Waste Shipment Regulation



# Revision of the list of Critical Raw Materials



**Council mandate of 2010 to update list of critical raw materials at least every 3 years**

## **2013 - Expand scope to other materials**

- 54 non-energy, non-food materials analysed; this extended candidate list includes seven new abiotic materials and three biotic materials
- Biotic materials are being assessed for the first time

## **Features:**

- The same methodology as the previous assessment
- Pragmatic approach
- Indicators-based
- Dynamic concept
- Primary and secondary Raw materials

# Assessment components

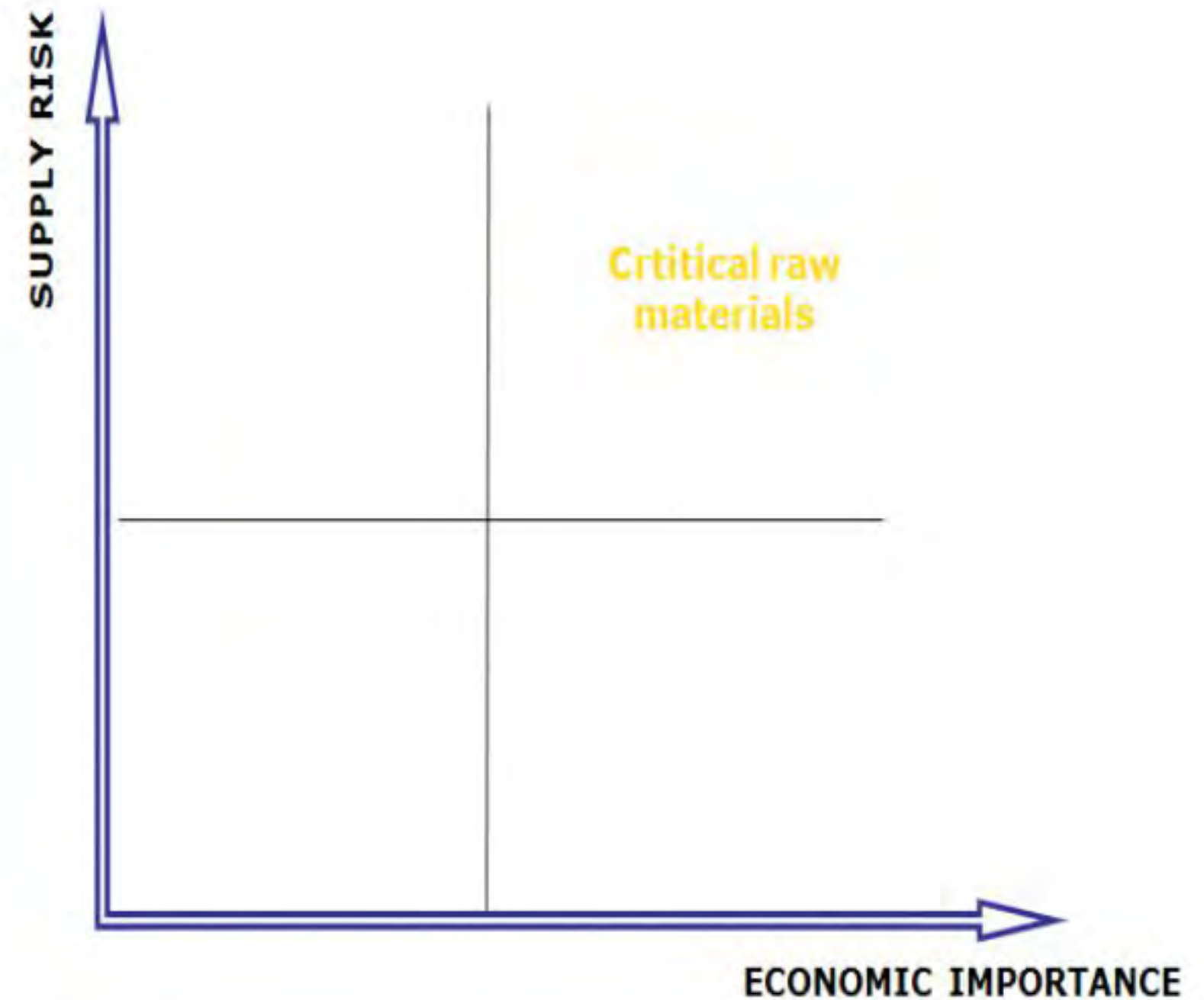


## Economic importance

- Importance of a raw material per economic sector & importance of the sector in the EU economy

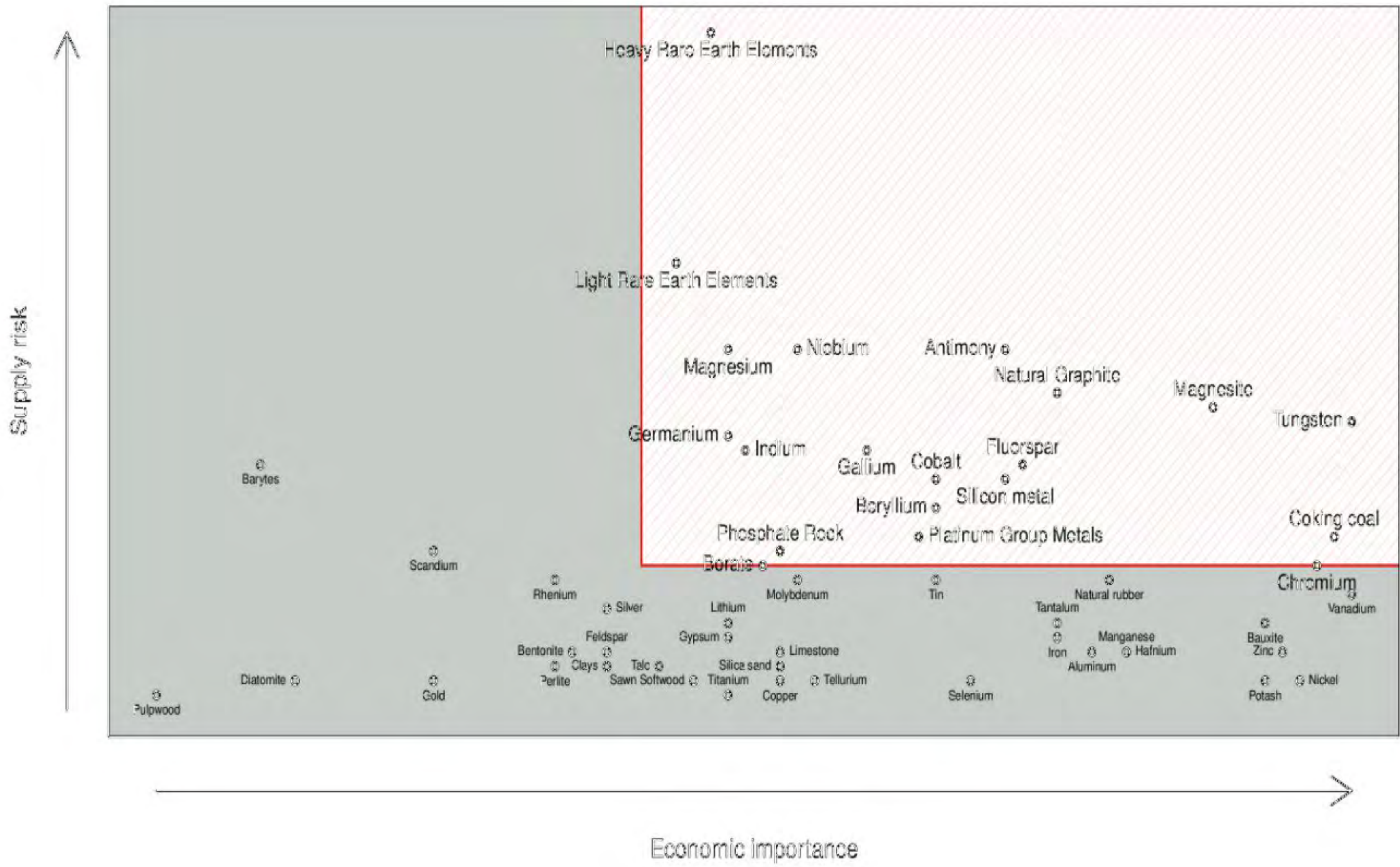
## Supply risk

- Political and economic stability
- Level of production concentration
- Potential for substitution
- Recycling rate

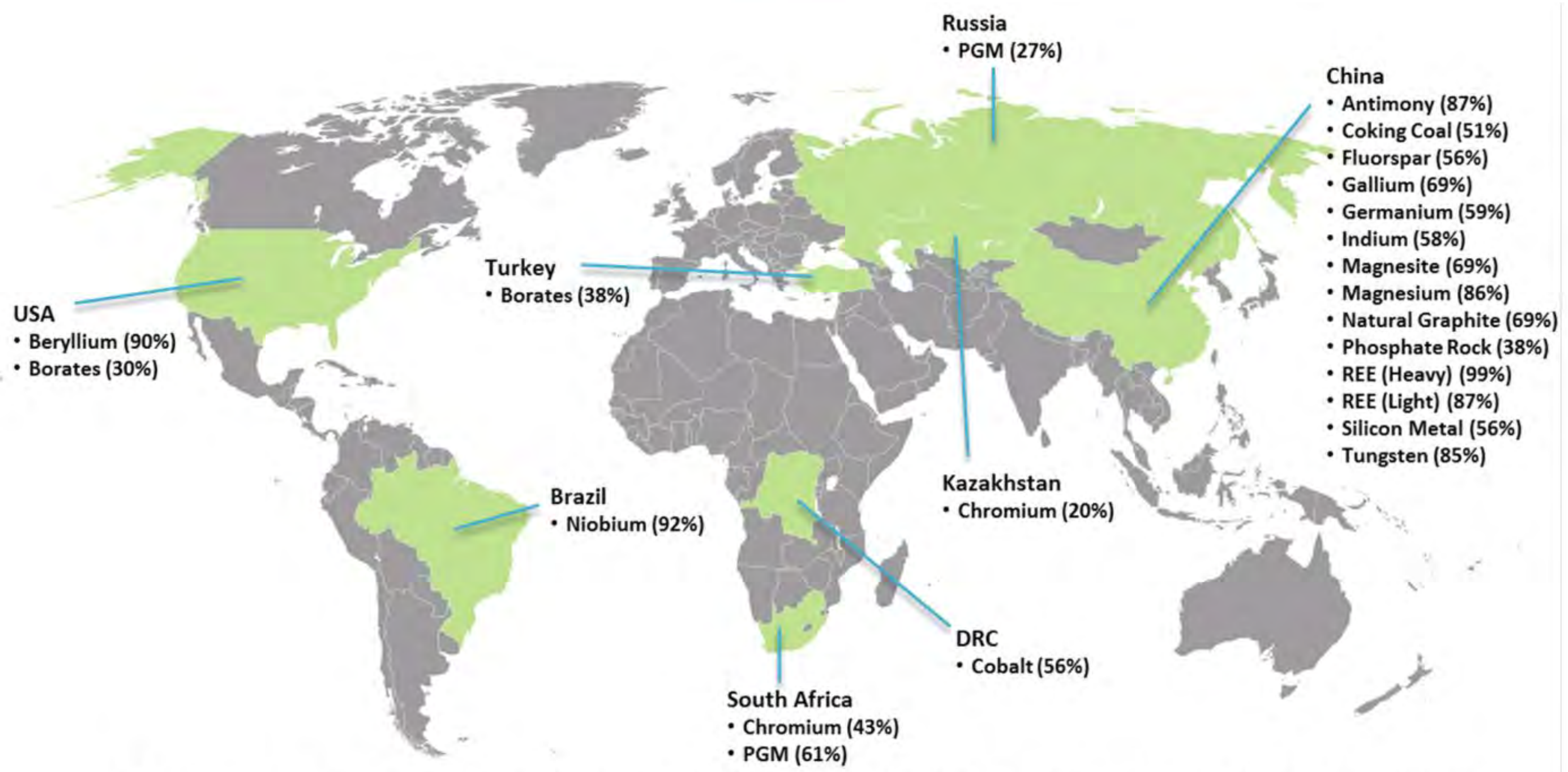




# Outcome 2014



# Critical raw materials



\* Communication on the review of the list of critical raw materials for the EU and the implementation of the Raw Materials Initiative - COM(2014) 297, 26.5.2014

## 2. European Innovation Partnership on Raw Materials



# INNOVATION UNION

## A Europe 2020 Initiative

European Commission > Innovation Union > European Innovation Partnerships

[Home](#) [About IU](#) [What we do](#) [Prizes](#) [Events](#) [Documents](#) [Press](#) [Funding](#) [Convention](#)

## European Innovation Partnerships

European Innovation Partnerships (EIPs) are a new approach to EU research and innovation.

EIPs are challenge-driven, focusing on societal benefits and a rapid modernisation of the associated sectors and markets.

EIPs act across the whole research and innovation chain, bringing together all relevant actors at EU, national and regional levels in order to: (i) step up research and development efforts; (ii) coordinate investments in demonstration and pilots; (iii) anticipate and fast-track any necessary regulation and standards; and (iv) mobilise 'demand' in particular through better coordinated public procurement to ensure that any breakthroughs are quickly brought to market. Rather than taking the above steps independently, as is currently the case, the aim of the EIPs is to design and implement them in parallel to cut lead times.

EIPs streamline, simplify and better coordinate existing instruments and initiatives and complement them with new actions where necessary. This should make it easier for partners to co-operate and achieve better and faster results compared to what exists already. Therefore, they build upon relevant existing tools and actions and, where this makes sense, they integrate them into a single coherent policy framework. Flexibility is important; there is not a 'one-size-fits-all' framework.

EIPs are launched only in areas, and consist only of activities, in which government intervention is clearly justified and where combining EU, national and regional efforts in R&D and demand-side measures will achieve the target quicker and more efficiently.

European Innovation  
Partnership  
**Active & Healthy  
Ageing**

European Innovation  
Partnership  
on Agricultural Sustainability  
and Productivity

European Innovation  
Partnership  
on **Smart Cities and  
Communities**

European Innovation  
Partnership  
on **Water**

European Innovation  
Partnership  
**Raw Materials**



- **Speed up breakthrough innovations**
  - by pooling resources through a challenge-driven approach
  - and acting across research and innovation cycle
  - bringing together all relevant actors to connect supply and demand side for a societal challenge, covering much more than R&D
- **Innovation required for the entire value chain of raw materials – industrial approach**
  - Exploration, exploitation, processing, using, recycling, substitution, etc.
  - *Sectors*: mining, engineering, pulp and paper, product design, robotics, etc.



Commission adopted the **proposal for an Innovation Partnership on raw materials** on **29 February 2012**  
COM(2012) 82 final

### Overall objective:

Contribute to the 2020 objectives of the EU Industrial Policy (to increase the share of industry in GDP to 20%), the Innovation Union and the Resource Efficiency 'flagships'



### Specific objectives:

Reduce import dependency

Improve supply conditions from European and other sources

Push Europe to the forefront in raw materials sectors

Provide alternatives in supply

Mitigate negative environmental and social impacts



# EIP targets 2020



European Innovation Partnership  
on Raw Materials

Up to 10 innovative pilot actions e.g. demonstration pilot plants for exploration, mining, processing, collecting and recycling

Substitutes for at least 3 applications of critical raw materials

Regulatory framework for primary raw materials

Regulatory framework for secondary raw materials

Raw materials knowledge base with raw materials flows and trends

Raw materials network of Research, Education and Training Centres

Pro-active international cooperation strategy of EU at bilateral and multilateral level



SIP adopted on 25 September 2013

### •I. Technology Pillar

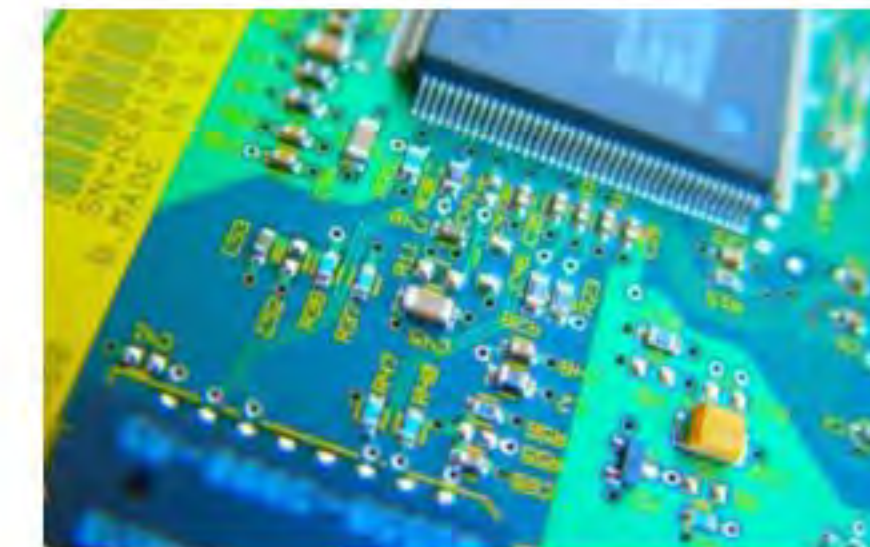
- I.A Raw materials research and innovation coordination
- I.B Technologies for primary and secondary raw materials' production
- I.C Substitution of raw materials

### •II. Non-Technology Policy Pillar

- II.A Improving Europe's raw materials framework conditions
- II.B Improving Europe's waste management framework conditions and excellence
- II.C Knowledge, skills and raw materials flows

### •III International Cooperation Pillar

- III.1 Technology
- III.2 Global Raw Materials Governance and Dialogues
- III.3 Health, Safety and Environment
- III.4 Skills, Education and Knowledge
- III.5 Investment activities



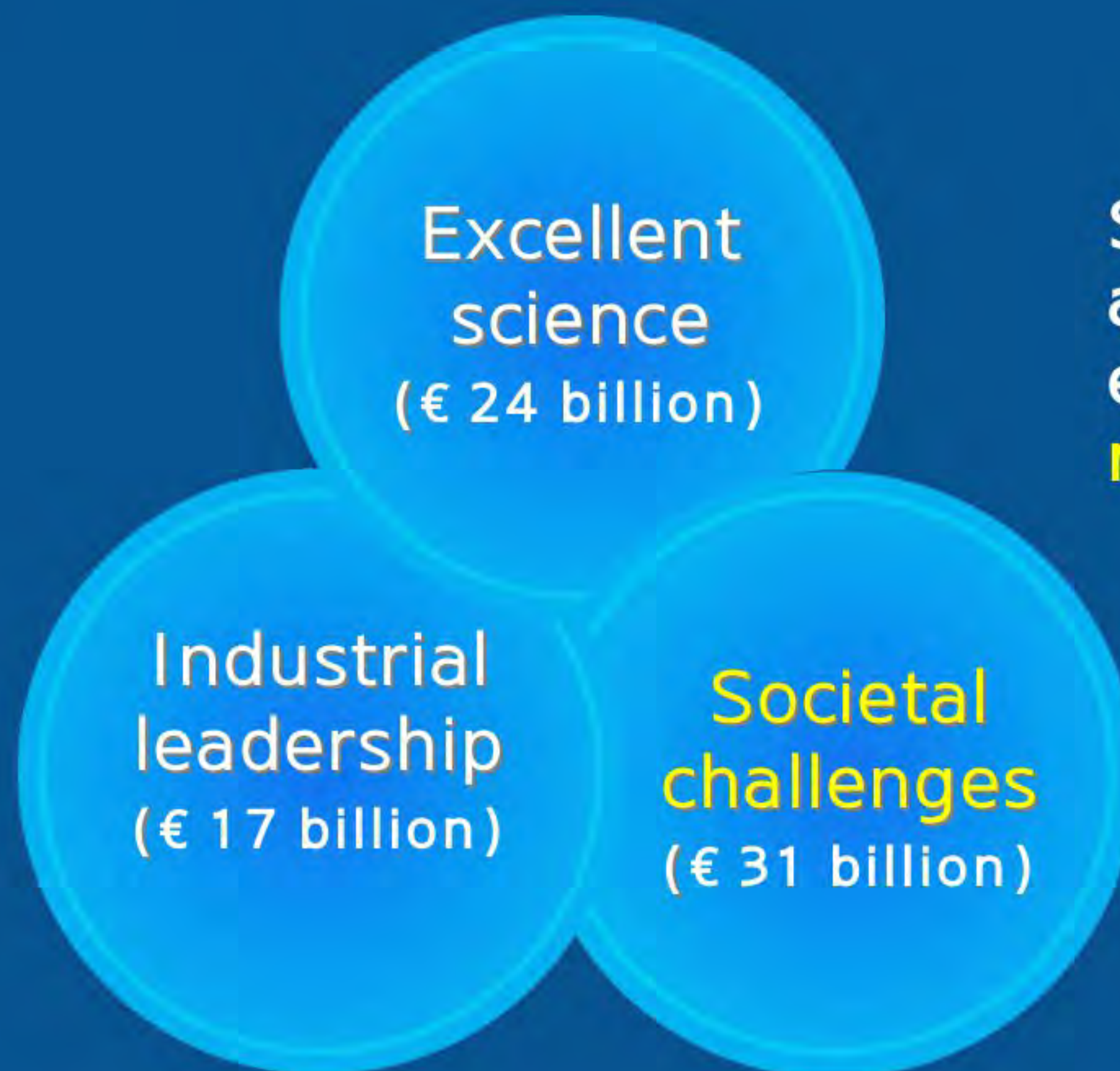


# 3. Raw Materials in Horizon 2020

## Societal Challenge 5 - Climate action, environment, resource efficiency and raw materials

# Horizon 2020 Context and overview

## 3. Raw Materials in Horizon 2020



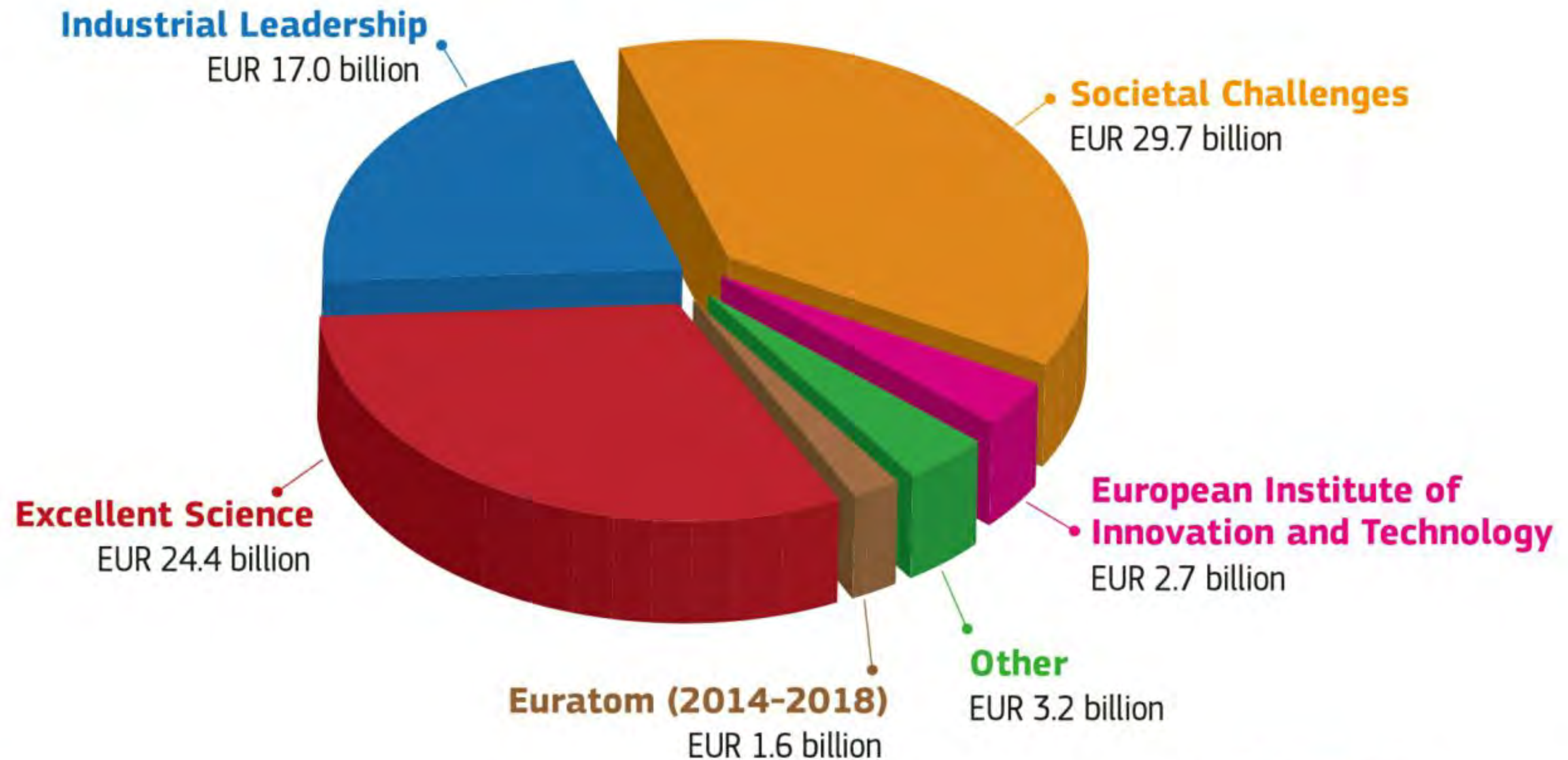
SC5. Climate action, resource efficiency and **raw materials**

\* the numbers are based on European Council conclusions, 8 February 2013 and are subject to the approval of the Multiannual Financial Framework Regulation by the European Parliament and the Council



# HORIZON 2020 BUDGET (in current prices)

## € 79 billion from 2014 to 2020





|  |              |
|--|--------------|
| 1. Health, demographic change and wellbeing  | 7 472        |
| 2. Food security, sustainable agriculture, marine and maritime research & the Bioeconomy | 3 851        |
| 3. Secure, clean and efficient energy *  | 5 931        |
| 4. Smart, green and integrated transport   | 6 339        |
| <b>5. Climate action, environment, resource efficiency and raw materials</b>             | <b>3 081</b> |
| 6. Inclusive and reflective societies  | 1 309        |
| 7. Secure societies  | 1 695        |
| <i>Science with and for society</i>  | 462          |
| <i>Spreading excellence and widening participation</i>                                   | 816          |

Additional funding for nuclear safety and security from the Euratom Treaty activities (2014-2018)



Objective: "to achieve a resource – and water – efficient and climate change resilient economy and society, the protection and sustainable management of natural resources and ecosystems, and a **sustainable supply and use of raw materials**, in order to meet the needs of a growing global population within the sustainable limits of the planet's natural resources and eco-systems."

1. Fighting and adapting to climate change
2. Sustainably managing natural resources and ecosystems
- 3. Sustainable supply of non-energy and non-agricultural raw materials**
4. Transition towards a green economy through eco-innovation
5. Global environmental observation and information systems
6. Cultural heritage

+ Focus Area Waste 2014-2016 (coming from Strategic Programme)



## **SPIRE 7-2015: Recovery technologies for metals and other minerals**

- New approaches or alternative solutions for major cost-effective improvements in the efficiency of recovery operations for metals and other minerals, leading to waste reduction and minimising the environmental impact of industrial operations.
- Innovation actions, TRL 5-7, EUR 6 and 10 million

## **NMP 23 – 2015: Novel materials by design for substituting critical materials**

- International cooperation, in particular with Japan and the United States of America
- Research and Innovation actions, TRL 3-4, EUR 3 and 5 million



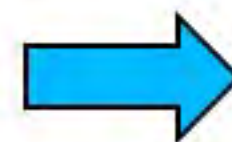
## ➤ Juncker Commission. 10 Priorities:

- *Europe is finding it is often ill-prepared for the global challenges ahead, be it with regard to ... the scarcity of natural resources...*

## ➤ "Juncker Plan". EFSI. € 315 bn.

- The final report of the special task force (Member States, Commission, EIB) on investment in the EU issued in December 2014 explicitly called for **investments to secure the supply of raw materials**. There is a potential for projects in the field of raw materials, which needs to be explored. → *"European Minerals Investment Platform". Commitments...*

**Unit G4**  
**"Raw Materials, Metals, Minerals, and Forest-based industries"**



**Unit C2**  
**"Resource Efficiency and Raw Materials"**



# Horizon 2020: Knowledge and Innovation Community(KIC) on raw materials

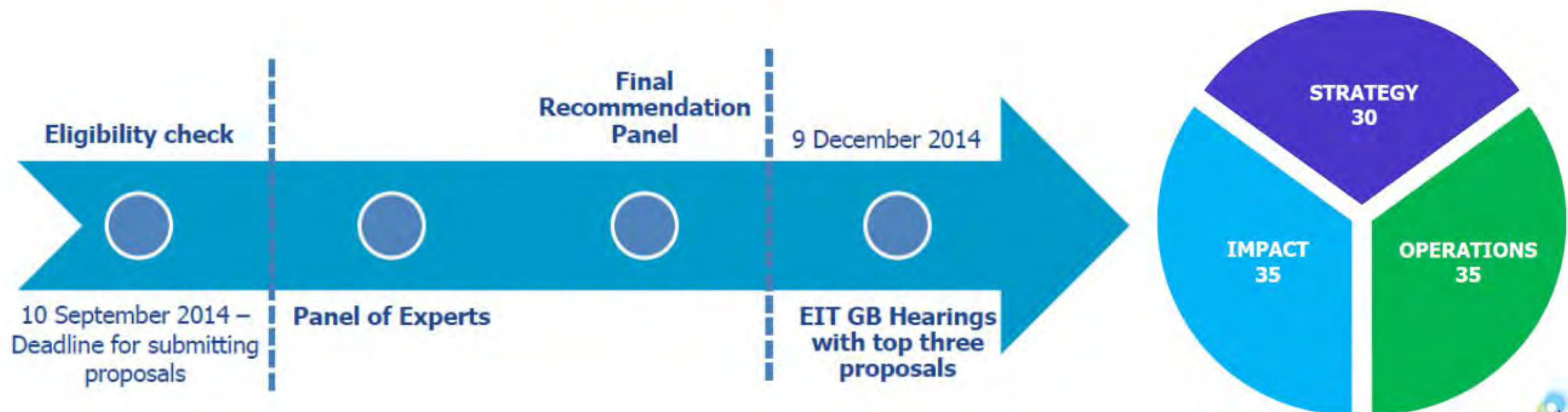




## Call on KIC on Raw materials – 10/9/2014

How it can contribute to the EU policy and initiatives?

- Pan-European character
- Cover the entire value-chain
- Focus on non-energy and non-agriculture Raw Materials

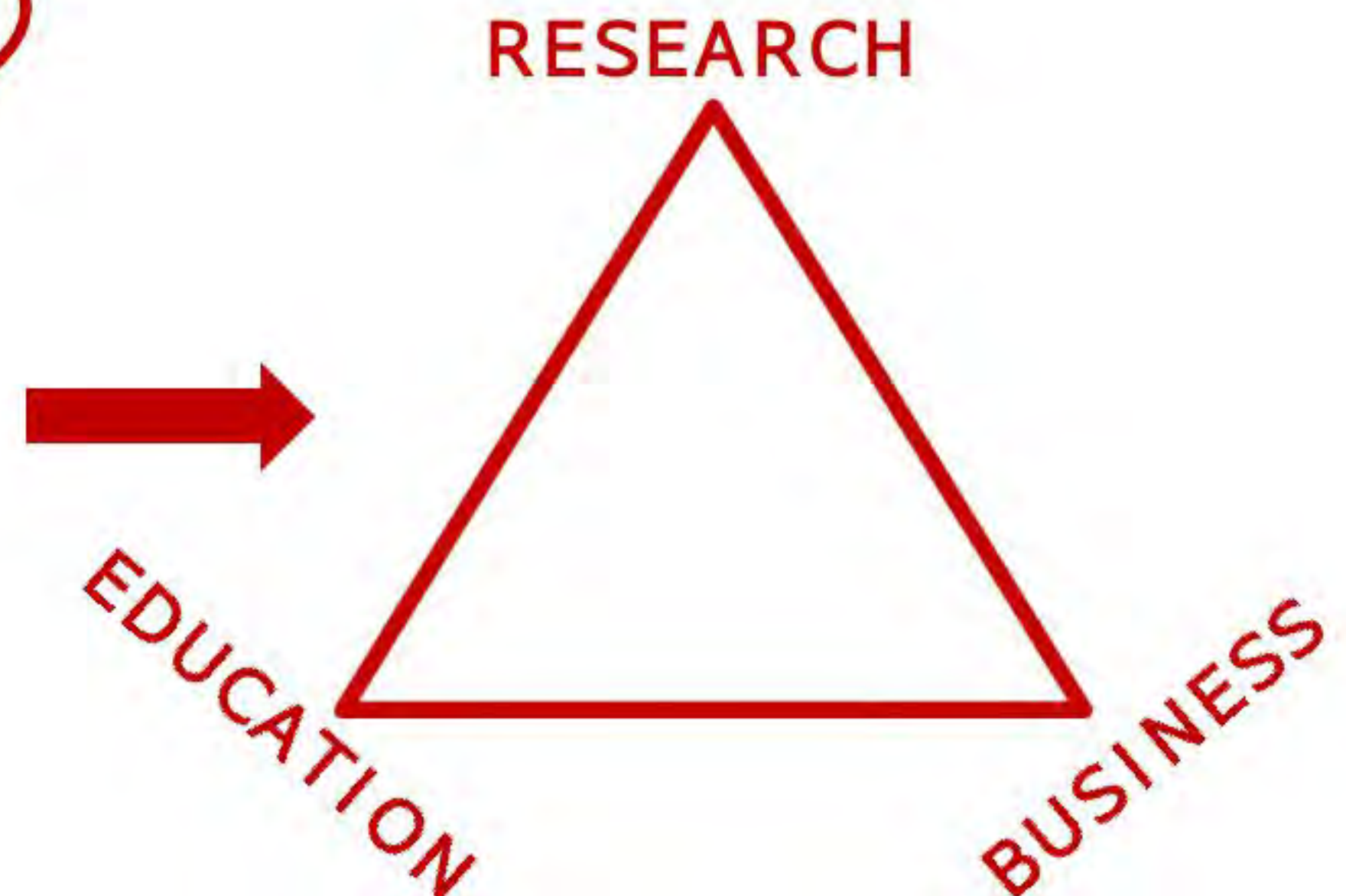


**European Institute of Innovation and Technology (EIT):** body of the European Union based in Budapest

**KIC:** is the independent but operational part of the EIT

KICs define their own legal status, internal organisation and working method

**KIC partners:** key actors from the three sides of the knowledge triangle



**Two new KICs launched on the 14<sup>th</sup> of February:**

- 1. Raw materials: sustainable exploration, extraction, processing, recycling and substitution**
- 2. Innovation for healthy living and active ageing**

As set in the EIT Regulation, the **EIT funding** on average may not exceed **25%** of a KIC's overall funding





## Establishing a pan-European network of excellence



RawMaterials

Well-balanced  
consortium with  
116 partners

Partners in 22 EU  
countries with special  
focus on ESEE

Full coverage of  
value chains and  
commodities  
(especially CRMs)

Business partners  
represent  
>700,000 jobs  
>200 billion €  
turnover

Partners' roles in EIP  
RM commitments:  
>75% participation  
40% coordination





- **EU raw materials webpage:**  
[http://ec.europa.eu/enterprise/non\\_energy\\_extractive\\_industries/raw\\_materials.htm](http://ec.europa.eu/enterprise/non_energy_extractive_industries/raw_materials.htm)
- **European Innovation Partnership on Raw Materials:**  
<https://ec.europa.eu/eip/raw-materials/en>
- **Horizon 2020:**  
<http://ec.europa.eu/research/horizon2020/>
  - first H2020 Call for Proposals - 11 Dec 2013  
<http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/index.html>
  - Call for experts for H2020  
(OJ of the EU, C 342, Volume 56, 22 November 2013)  
<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>
  - National NCP SC5 support and events  
[http://ec.europa.eu/research/participants/portal/desktop/en/support/national\\_contact\\_points.html](http://ec.europa.eu/research/participants/portal/desktop/en/support/national_contact_points.html)



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# Thank You!