

# How innovation can deliver solutions for raw materials and the EU's needs: **Objectives of the European Innovation Partnership on raw materials**



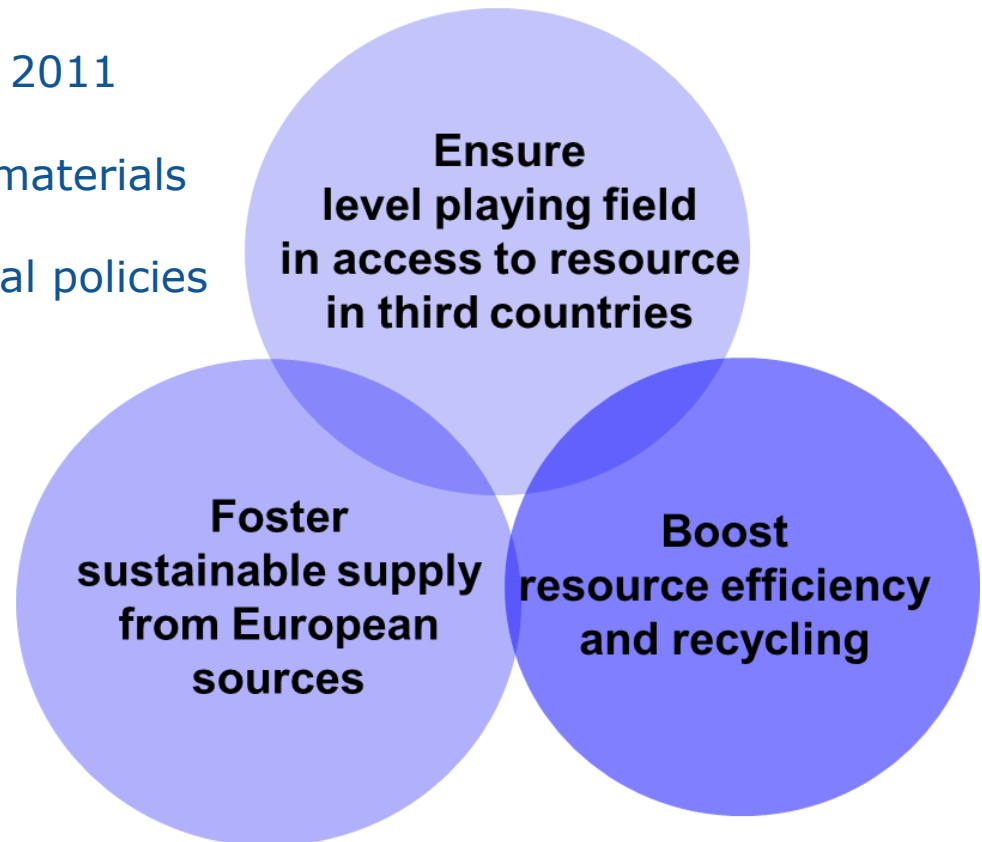
***Cobalt: Awareness. Learning. Dialogue***  
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*F3 - « Raw Materials, Metals, Minerals, and Forest-based industries »*

## 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



## Annual report on the implementation of the Raw Materials Initiative – 24.06.2013

### 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



## **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

- 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

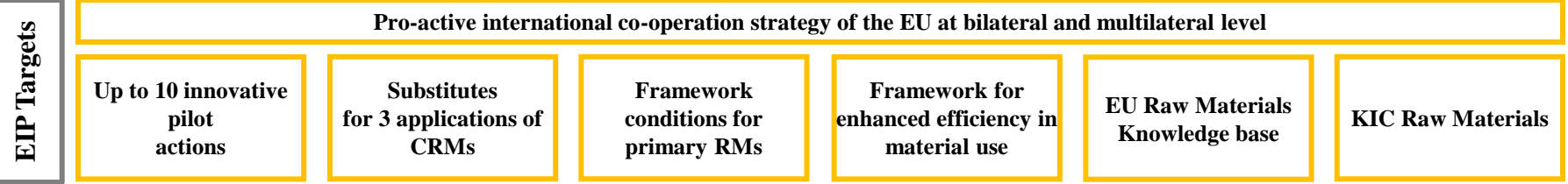


# EIP Scheme



European Innovation Partnership on raw materials

Objectives	To reduce dependency on imports To promote the production and exports				To put Europe at the forefront in RM sectors	
	To improve supply conditions from EU	To diversify raw materials sourcing	To improve resource efficiency (including recycling)	To find alternative raw materials	To make Europe a leader in the RM capabilities	To mitigate environmental, social and health impacts

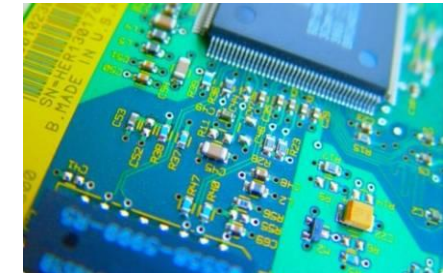


**Strategic Implementation Plan (adopted on 25 September 2013)**



## Developing a Strategic Implementation Plan

- **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



# How and where can Cobalt community contribute to EIP?





- mobilise **public awareness** on raw material issues,
  - facilitate **European and regional dialogues** on raw materials between civil society,
  - identify **shortages of skills and develop strategies** that would enable more sustainable use of raw materials
  - promote raw material **substitution**, replacement and **recycling**,
- All are relevant to the actions of the EIP



## Public Awareness, Acceptance and Trust

(Action area n° II.3)

- **industry-led initiative, supported by all concerned stakeholders** (communities, institutions and regulatory bodies at all levels – local, regional, national, European, media, NGOs, academia, schools, etc.)
- Clarifying **positive and negative impacts** of the raw materials sector, such as benefits for the society, wealth and transparency, but also possible trade-offs and mitigation measures (best practices) to increase awareness, acceptance and trust.



## Optimised raw materials flows along value chains

(Action area n° II.10)

- To enhance the conditions of the raw materials value chain in order to **optimise raw materials flows** along value chains
- To improve the combined use of primary and secondary raw materials without the loss of quality through **improved cooperation of actors along different value chains**
- **Raw materials Partnerships** - common multi-stakeholder platforms focused on a limited number of key raw materials and partners from across value chains - mining, processing, recycling, application, public sectors (national/regional/local) and civil society,



## International - Global Raw Materials Governance and Dialogues

(Action area n° III.2)

- to ensure the fair and unrestricted access to raw materials worldwide, by improving supply conditions for EU companies, ensuring a level playing field of all actors present in the trade of raw material commodities.



## Possible EIT Knowledge and Innovation Community(KIC)

(Action area n° II.9)

- a **network of research, education and training centres** on sustainable raw materials could be created as an EIT Knowledge and Innovation Community
- to **boost excellence** in the raw materials sector,,
- involving the business community and bases on education, entrepreneurship and technology innovation).
- innovation applies to the **exploration and extraction** sector as well as to **processing/refining** and **recycling** technologies, including **substitution** when appropriate.



## International - Skills, Education and Knowledge

(Action area n° III.4)

- **mapping** of the raw materials areas where lack of experts in Europe is significant,
- **establishing cooperation with countries of high expertise** (e.g. mineral processing in Canada, Australia)
- developing a programme for educational cooperation with those countries.



## Recycling of raw materials from products, buildings and infrastructure

(Action area n° I.5)

- to **develop and demonstrate** cost-effective, resource and energy efficient and environmentally sound **solutions for recycling and recovery** of valuable raw materials from complex products, buildings and infrastructure, and other waste streams.



## Improving Europe's waste management framework conditions and excellence

(Priority Area II.B)

- **Product design** for optimised use of (critical) raw materials and increased quality of recycling
- **Optimised waste flows** for increased recycling
- **Prevention of illegal shipments** of waste
- **Optimised material recovery**





## International cooperation – Technology

(Action Area III.1)

- Dialogue with technologically advanced countries to develop an **exchange of information on recycling technologies**.
- **Outreach activities** on recycling with countries importing European waste – e.g. Africa, China, India.
- International dialogues in support of **export of European recycling technologies** including business support activities such as export promotion.
- Promotion of **international discussion** on recycling technologies in multilateral fora such as the OECD, UNEP, G20, G8.



## Substitution of raw materials

(Priority Area I.C)

- Materials for **green energy technologies**
- Materials for **electronic devices**
- **Materials under extreme conditions**
- Applications using materials in **large quantities**



## International cooperation – Technology

(Action Area III.1)

- Cooperation and best practice sharing in the area of Critical Raw Materials (CRM) by improving materials management of CRM, that concerns substitution, material saving.
- these actions should involve the entire value chain.

# **EIP actions in**

## **Horizon 2020:**

### **Societal Challenge 5 - Climate action, environment, resource efficiency and raw materials (SC5)**

**Objective of Societal Challenge 5** : *"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** (coming from Strategic Programme)

## 5.3 "Ensuring The Sustainable Supply Of Non-energy And Non-agricultural Raw Materials"

- New solutions for sustainable **production of raw materials**
- Innovative and sustainable solutions leading to **substitution of raw materials**
- **Coordinating and supporting** raw materials research and innovation

### Focus Area "Waste: A resource to recycle, reuse and recover raw materials"

- **Recycling of raw materials** from products and buildings
- Towards near-zero waste at European and global level
  - **Secondary raw materials inventory**
  - **Raw materials partnerships**



- **New solutions for sustainable production of raw materials**
  - Mining of small deposits and alternative mining (2014)
  - Flexible processing technologies (2014)
  - New exploration technologies and geomodels (2015)
  - Deep mining on continent and in sea-bed (2015)
  - New metallurgical systems (2015)
- **Innovative and sustainable solutions leading to substitution of raw materials**
  - Materials for electronic devices (2014)
  - Materials under extreme conditions (2015)



- **Coordinating and supporting raw materials research and innovation**
  - Mineral deposits of public importance (2014)
  - Strategic international dialogues and co-operation on raw materials with technologically advanced countries (2014)
  - Raw materials intelligence capacity (2015)
  - Innovation friendly minerals policy framework (2015)
  - Raw materials research and innovation coordination (2015)
  - Strategic international dialogues and cooperation with raw materials producing countries and industry (2015)
- **Cross-challenge topics**
  - Boosting the potential of small businesses for eco-innovation and a sustainable supply of raw materials (SME Instrument)





- **Recycling of raw materials from products and buildings**
  - Recycling of raw materials from products and buildings (2014)
- **Towards near-zero waste at European and global level**
  - Secondary raw materials inventory (2014)
  - Raw materials partnerships (2015)

# Important!



- **Call for Commitments:  
closing on 31 January 2014**
- **High Level Conference of the EIP on Raw  
Materials:  
5 December 2013**
- **Launch of H2020 first Call for Proposals:  
11 December 2013**



- 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:

[http://ec.europa.eu/enterprise/policies/raw-materials/innovation-partnership/index\\_en.htm](http://ec.europa.eu/enterprise/policies/raw-materials/innovation-partnership/index_en.htm)

- Horizon 2020:

<http://ec.europa.eu/research/horizon2020/>

**THANK YOU!**