



# Raw materials enabling European battery value chains

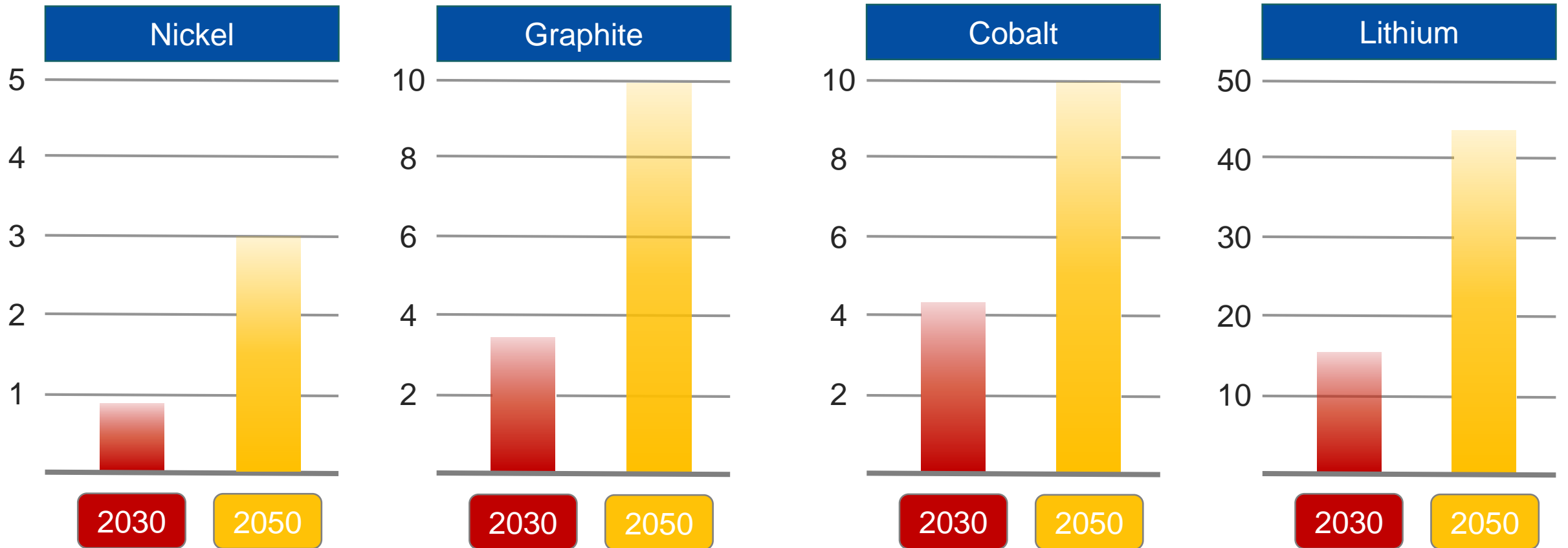
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and Raw Materials*

# The demand for battery raw materials will increase



**Source:**

*Critical Raw Materials for Strategic Technologies and Sectors in the EU; A Foresight Study.*  
Joint Research Centre, European Commission, 2020

# EU Critical Raw Materials

Critical Raw Materials for Strategic Technologies and Sectors in the EU  
- A Foresight Study

Final report: Study on the EU's list of critical raw materials

Critical raw materials factsheets

Non-critical raw materials factsheets

Critical Raw Materials Resilience: Charting a Path towards greater Security  
and Sustainability, COM(2020) 474 final

# EU Critical Raw Materials List 2020

Antimony	Hafnium	Phosphorus
Baryte	Heavy Rare Earths	Scandium
Beryllium	Light Rare Earths	Silicon metal
Bismuth	Indium	Tantalum
Borate	Magnesium	Tungsten
Cobalt	Natural Graphite	Vanadium
Coking Coal	Natural Rubber	Bauxite
Fluorspar	Niobium	Lithium
Gallium	Platinum Group Metals	Titanium
Germanium	Phosphate Rock	Strontium

# EU Action Plan on Critical Raw Materials

- 1 Launch the European Raw Materials Alliance
- 2 Develop sustainable financing criteria for mining
- 3 Develop R&I on waste processing, advanced materials and substitution
- 4 Map the potential supply of secondary CRM from EU stocks and wastes
- 5 Identify investment needs for mining projects that can be operational in 2025
- 6 Develop expertise and skills in mining
- 7 Deploy Earth observation programmes for exploration, operation and post-closure environmental management
- 8 Develop R&I projects on exploitation and processing of CRMs
- 9 Promote responsible mining practices for CRMs
- 10 Develop strategic international partnerships to secure CRMs supply

# Raw Materials in Horizon 2020 (2014-2020)

**~ EUR 600 mln budget**

Exploration	9 projects	EUR 55 mln
Extraction	17 projects	EUR 146 mln
Processing	23 projects	EUR 191 mln
Substitution	6 projects	EUR 36 mln
Reuse, recycling, recovery	10 projects	EUR 97 mln
Policy support	24 projects	EUR 48 mln

## Sample topic:

Raw materials innovation for the circular economy: sustainable processing, reuse, recycling and recovery schemes

TOPIC ID:

CE-SC5-07-2018-2019-2020

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/ce-sc5-07-2018-2019-2020;callCode=H2020-SC5-2018-2019-2020;freeTextSearchKeyword=;matchWholeText=true;typeCodes=1;statusCodes=31094501,31094502,31094503;programmePeriod=null;programCcm2Id=31045243;programDivisionCode=31047972;focusAreaCode=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=submissionStatus;orderBy=asc;onlyTenders=false;topicListKey=topicSearchTablePageState>

# Horizon Europe structure (2021-2027)

## Pillar 1 Excellent Science

European Research Council

Marie Skłodowska-Curie

Research Infrastructures

## Pillar 2 Global Challenges and European Industrial Competitiveness

1 Health

2 Culture, Creativity & Inclusive Society

3 Civil Security for Society

4 Digital, Industry & Space

5 Climate, Energy & Mobility

6 Food, Bioeconomy, Natural  
Resources, Agriculture &  
Environment

Joint Research Centre

## Pillar 3 Innovative Europe

European Innovation Council

European Innovation Ecosystems

European Institute of Innovation  
& Technology

# Raw Materials in Cluster 4

Three **policy objectives** will be pursued across the cluster, in synergy with other EU instruments and initiatives:

1

Ensuring the competitive edge and autonomy of EU industry

2

Fostering climate-neutral, circular and clean industry

3

A major contribution to inclusiveness

## 10 Key R&I Orientations

9

Circular Industries

10

Low-carbon and Clean Industries



# Critical Raw Materials action plan on R&I

## Action 3

Launch critical raw materials research and innovation in 2021 on **waste processing, advanced materials** and **substitution**

## Action 4

Map the potential **supply of secondary** critical raw materials from EU stocks and wastes and identify viable recovery projects by 2022

## Action 7

Deploy **Earth-observation** programmes and **remote sensing** for resource exploration, operations and post-closure environmental management

## Action 8

Develop Horizon Europe R&I projects on processes for **exploitation** and **processing** of critical raw materials to **reduce environmental impacts** starting in 2021

## Action 9

Develop strategic **international partnerships** to secure a diversified and sustainable supply of critical raw materials

## Action 10

Promote **responsible mining** practices for critical raw materials

# Thank you

# Kiitos paljon



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