



Vectors to Accessible Critical Raw Material Resources in Sedimentary Basins

Fact Sheet

Project Information

VECTOR

Grant agreement ID: 101058483

DOI

[10.3030/101058483](https://doi.org/10.3030/101058483)

EC signature date

22 May 2022

Start date

1 June 2022

End date

31 May 2025

Funded under

Digital, Industry and Space

Total cost

€ 5 606 679,71

EU contribution

€ 5 606 679,71

Coordinated by

HELMHOLTZ-ZENTRUM
DRESDEN-ROSSENDORF EV
Germany

Project description

Pathways towards responsible and sustainable mineral exploration in the EU

Achieving the EU's Green Deal targets will require more responsible use of, and a sharp increase in, the supply of critical raw materials. The EU is currently reliant on imports and is therefore vulnerable to changes in the geopolitical landscape and supply chain interruptions. Complex social, environmental and technical challenges need to be understood to explore the potential of domestic sourcing of metals and minerals. The EU-funded VECTOR project seeks to explore these challenges by bringing geosciences

and social sciences together. VECTOR aims at developing human-centred solutions for a socially acceptable, responsible and sustainable supply of critical raw materials in Europe and thus contribute to achieve the Green Deal.

Objective

The EU imports 80% of its industrial raw materials making European supply chains highly vulnerable to disruption and threatening the EU's ability to manufacture raw material-intensive technologies, such as electric cars, wind turbines, and ICT hardware, that are essential to the green and digital transformations. Europe possesses significant mineral potential but development is limited by the lack of sustainable, low-impact exploration methods and by social opposition to mineral projects. With VECTOR we will generate new knowledge to overcome these technical and social barriers, unlocking Europe's raw material potential and improving the resilience of EU raw materials supply chains. Overcoming issues will require major changes of the business models in the extractives industry and to integrate a more human-centred approach. The VECTOR project is based on the premise that a prerequisite to any sustainable human activity is to minimize the environmental and social costs and include all the stakeholders in the decision making processes around this.

VECTOR's overall objective is to deliver evidence-based and accessible knowledge that integrates the scientific and social pathways to successful mineral exploration and mining.

The first pillar of our approach is a geological prospectivity toolkit based on an entirely new workflow using machine learning-based integration of less invasive geological, geochemical and geophysical measurements. The workflow will be validated in three European sedimentary basins and will be transferable worldwide.

The second pillar is a social acceptance procedure that identifies, for the first time, the values that the European public invokes when deciding about mineral development. This will result in a Social Acceptance index and a new body of knowledge that reflects diverse values-based perspectives.

The third pillar is an integrated toolkit consisting of a unique, distributed, multimodal, self-learning, and interactive platform that will consider both geological exploration potential and socio-economic factors to yield a data-driven, quantitative and integrative assessment of regions more suitable for exploration and, eventually, mining. The results will be freely available via an engaging, web-based interface designed to support evidence-based decision making and the UNFC and UNRMS.

Fields of science

[engineering and technology](#) > [environmental engineering](#) > [mining and mineral processing](#)
[social sciences](#) > [economics and business](#) > [business and management](#) > [business models](#)
[social sciences](#) > [economics and business](#) > [economics](#) > [sustainable economy](#)

Keywords

[Exploration](#)

[Social Science](#)

Programme(s)

[HORIZON.2.4 - Digital, Industry and Space](#)

MAIN PROGRAMME

[HORIZON.2.4.8 - Circular Industries](#)

Topic(s)

[HORIZON-CL4-2021-RESILIENCE-01-06 - Innovation for responsible EU sourcing of primary raw materials, the foundation of the Green Deal \(RIA\)](#)

Call for proposal

[HORIZON-CL4-2021-RESILIENCE-01](#)

[See other projects for this call](#)

Funding Scheme

[HORIZON-RIA - HORIZON Research and Innovation Actions](#)

Coordinator



HELMHOLTZ-ZENTRUM DRESDEN-ROSSENDORF EV

Net EU contribution

€ 1 599 347,12

Address

Bautzner landstrasse 400
01328 Dresden
Germany 

Region

Sachsen > Dresden > Dresden, Kreisfreie Stadt

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Participants (11)



**HELMHOLTZ ZENTRUM POTSDAM DEUTSCHES
GEOFORSCHUNGSZENTRUM GFZ**

Germany

Net EU contribution

€ 1 145 532,60

Address

Telegrafenberg
14473 Potsdam 

Region

Brandenburg > Brandenburg > Potsdam

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



UNIVERSITY COLLEGE DUBLIN, NATIONAL UNIVERSITY OF IRELAND, DUBLIN

Ireland

Net EU contribution

€ 1 308 727,50

Address

Belfield

4 Dublin 

Region

Ireland > Eastern and Midland > Dublin

Activity type

Higher or Secondary Education Establishments

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS

Spain

Net EU contribution

€ 411 000,00

Address

Calle serrano 117

28006 Madrid 

Region

Comunidad de Madrid > Comunidad de Madrid > Madrid

Activity type

Research Organisations

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



TERRANIGMA SOLUTIONS GMBH

Germany

Net EU contribution

€ 613 332,28

Address

Lauretiusstrasse 59
52072 Aachen 

SME 

Yes

Region

Nordrhein-Westfalen > Köln > Städteregion Aachen

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



ASISTENCIAS TECNICAS CLAVE SL

Spain

Net EU contribution

€ 88 950,00

Address

Calle progreso, num 5**41013 Seville** SME **Yes**

Region

Sur > Andalucía > Sevilla

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) [Participation in EU R&I programmes](#) [HORIZON collaboration network](#) 

Other funding

€ 0,00**KSL KUPFERSCHIEFER LAUSITZ GMBH**

Germany

Net EU contribution

€ 10 000,00

Address

Forster landstr 5-7**03130 Spremberg** SME **Yes**

Region

Brandenburg > Brandenburg > Spree-Neiße

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) [Participation in EU R&I programmes](#) [HORIZON collaboration network](#) 

Other funding

€ 0,00



GROUP ELEVEN MINING & EXPLORATION LIMITED

Ireland

Net EU contribution

€ 10 000,00

Address

Ballypreacus bunclody
Y21 PC43 Wexford 

Region

Ireland > Southern > South-East

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00




EIT RAW MATERIALS GMBH

Germany

Net EU contribution

€ 62 000,00

Address

Europaplatz 2
10557 Berlin 

Region

Berlin > Berlin > Berlin

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



RIO SAVA EXPLORATION DOO BEOGRAD

Serbia

Net EU contribution

€ 10 000,00

Address

Boulevard milutina milankovica 1i

11070 Belgrade

Region

Србија - север > Београдски регион > Београдска област

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)

[Participation in EU R&I programmes](#)

[HORIZON collaboration network](#)

Other funding

€ 0,00



FOUNDATION INSTITULE FOR THE STUDYOF CHANGE

Bulgaria

Net EU contribution

€ 39 950,00

Address

Bul vitosha 25 fl 3

1000 Sofia

Region

Югозападна и Южна централна България > Югозападен > София (столица)

Activity type

Other

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00



TERRANTA GMBH

Germany

Net EU contribution

€ 307 840,21

Address

Rathausstrasse 371
52072 Aachen 

SME 

Yes

Region

Nordrhein-Westfalen > Köln > Städteregion Aachen

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

€ 0,00

Partners (6)



SRK EXPLORATION SERVICES LIMITED

United Kingdom

Net EU contribution

€ 0,00

Address

21 gold tops

NP20 4PG Newport 

SME 

Yes

Region

Wales > East Wales > Monmouthshire and Newport

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

No data



SATARLA LTD

United Kingdom

Net EU contribution

€ 0,00

Address

71-75 shelton street covent garden

WC2H9JQ London 

Region

London > Inner London — West > Camden and City of London

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

No data




SAZANI ASSOCIATES

United Kingdom

Net EU contribution

€ 0,00

Address

**Unit dark gate offices 3 red street
SA31 1QL Carmarthen** 

SME 

Yes

Region

Wales > West Wales and The Valleys > South West Wales

Activity type

Research Organisations

Links

[Contact the organisation](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

No data



NATURAL HISTORY MUSEUM

United Kingdom

Net EU contribution

€ 0,00

Address

**Cromwell road
SW7 5BD London** 

Region

London > Inner London — West > Kensington & Chelsea and Hammersmith & Fulham

Activity type

Public bodies (excluding Research Organisations and Secondary or Higher Education Establishments)

Links

[Contact the organisation](#)  [Website](#) [Participation in EU R&I programmes](#) [HORIZON collaboration network](#) 

Other funding

No data**TECK IRELAND LTD**

Canada

Net EU contribution

€ 0,00

Address

Suite 3300 bentall 5 550 burrand st**V6C0B3 Vancouver** 

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#) [Participation in EU R&I programmes](#) [HORIZON collaboration network](#) 

Other funding

No data**BOLIDEN TARA MINES LIMITED**

Ireland

Net EU contribution

€ 0,00

Address

Knockumber house - knockumber road**N/A Navan meath** 

Region

Ireland > Northern and Western > West

Activity type

Private for-profit entities (excluding Higher or Secondary Education Establishments)

Links

[Contact the organisation](#)  [Website](#) 

[Participation in EU R&I programmes](#) 

[HORIZON collaboration network](#) 

Other funding

No data

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