EU Geological Subsurface Data: a resource to be mined

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Funded by the European Union
Mining in the Netherlands

Energy

› Peat¹) (~16th century until 1960)
› Coal¹) (from 1900 until 1975)

Building materials

› Limestone – building material ²) (~1st century until ~ 1980)
› Cement ²) (~19th century until 2020)
› Sand, gravel (~1950 – present)
› Clay (~1st century - present)

¹) Wikipedia
²) Ing. F. H. G. Engelen-Sittard, 500 jaar winning van kalksteen in Zuid-Limburg
Mining in the Netherlands

…the finish line of a long distance walking trail ‘Pieterpad’
Mining in Europe

EU domestic capacities by 2030\(^1\):

- At least 10% for extraction
- At least 40% for processing
- At least 15% for recycling

President of the European Commission, Ursula von der Leyen said: "This Act will bring us closer to our climate ambitions. It will significantly improve the refining, processing and recycling of critical raw materials here in Europe. Raw materials are vital for manufacturing key technologies for our twin transition – like wind power generation, hydrogen storage or batteries. And we’re strengthening our cooperation with reliable trading partners globally to reduce the EU’s current dependencies on just one or a few countries. It’s in our mutual interest to ramp up production in a sustainable manner and at the same time ensure the highest level of diversification of supply chains for our European businesses."

\(^1\) Critical raw materials act
Mining in Europe

Currently EU extraction: 3%
EU processing: 20%

* share of global production

Relevant questions for miners

Where to look

- Can it be found?

Economic potential

- Can it be mined?
Relevant answers: EGDI

What is it?

- Data infrastructure

What does it do?

- Access to pan-European harmonised, standardised data
  - Ritch multilingual search capability
  - Map viewer
- Harvest open spatial data(sets) (structured and non-structured)
- Upload and manage metadata

1) European Geological Data Infrastructure
Relevant answers: EGDI

1) European Geological Data Infrastructure
What will it become?

- Data platform and Knowledge infrastructure

What will be added?

- Additional data for existing datasets (completeness and up to date)
- New datasets
- Additional visualisation functionality
- Decision support for societal challenges
  - added value information portals
  - share knowledge

Relevant answers: EGDI

Data providers: EGDI

Input | Storage | Dissimination

Data users

1) European Geological Data Infrastructure

Access to even more research results!
It starts with data: EGDI

Data as the oxygen that fuels the fire of the Fourth Industrial Revolution *)

Data is key
- Structured, transparent, traceable, trustable

Access is essential
- Open, findable, re-usable

*) Federated Data Systems: Balancing Innovation and Trust in the Use of Sensitive Data, World Economic Forum, 2019
towards data use: EGDI

- Digital data
- Internal use of data
- Open data
- Standardised data
- Fair data
- Open data use

- Having data
- Selling data
- Sharing data
- Combining data
- Selling data-use

EGDI Data as a service

EGDI Data & software as a service
To make this work: EGDI

Be relevant

- Make sure the data is complete and up to date
- Make sure the data is easy to use
- Make sure the tools you offer are
  - fit for purpose
  - easy to use

Open up to new techniques

- Process more data, release updates more frequent
- Be flexible with scales: provide more detail where it is needed
- Be creative in finding new ways of visualisation
- Think 4D: what will happen if ... changes
- Translate Geology into the language of the users
Thank you for your attention!