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EU Geological Subsurface Data: a resource to be mined



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The Geological Surveys of Europe

www.geologicalservice.eu



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

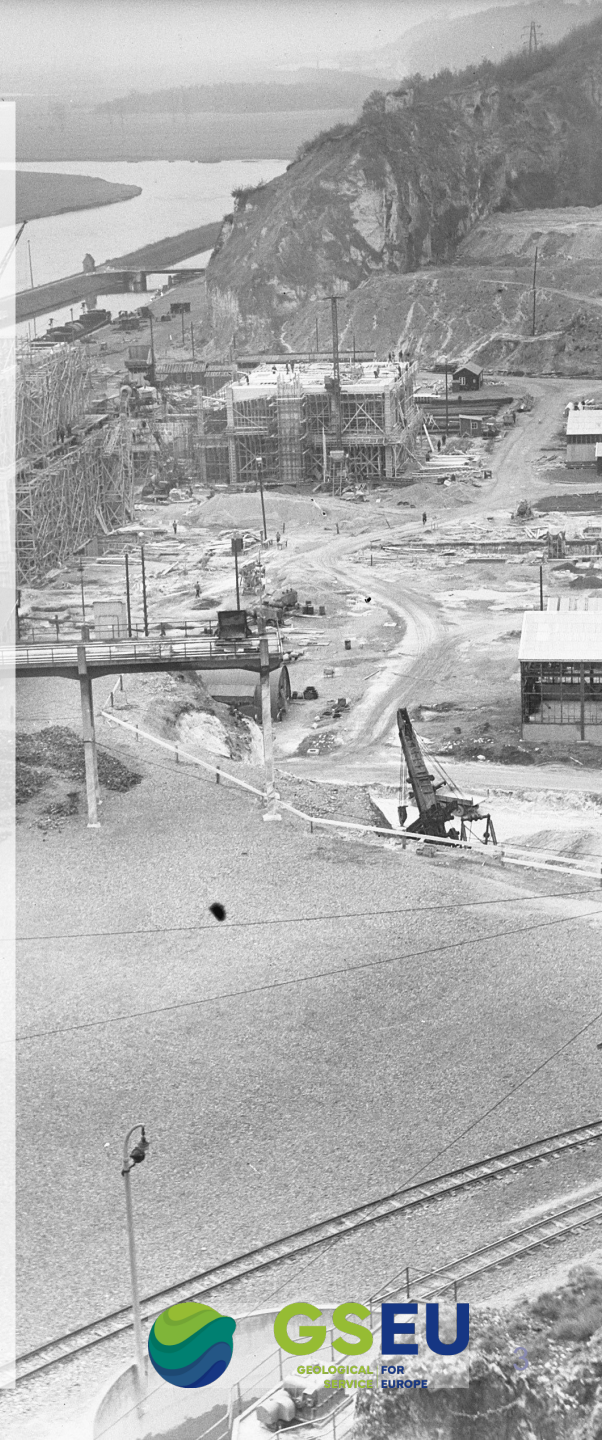
²⁾ Ing. F . H . G . Engelen-Sittard , 500 jaar winning van kalksteen in Zuid-Limburg





Mining in the Netherlands

...the finish line of a long distance walking trail 'Pieterpad'



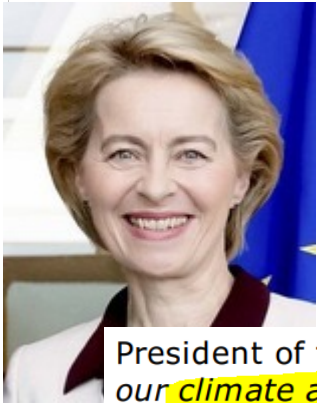


Mining in Europe

EU domestic capacities by 2030¹⁾:

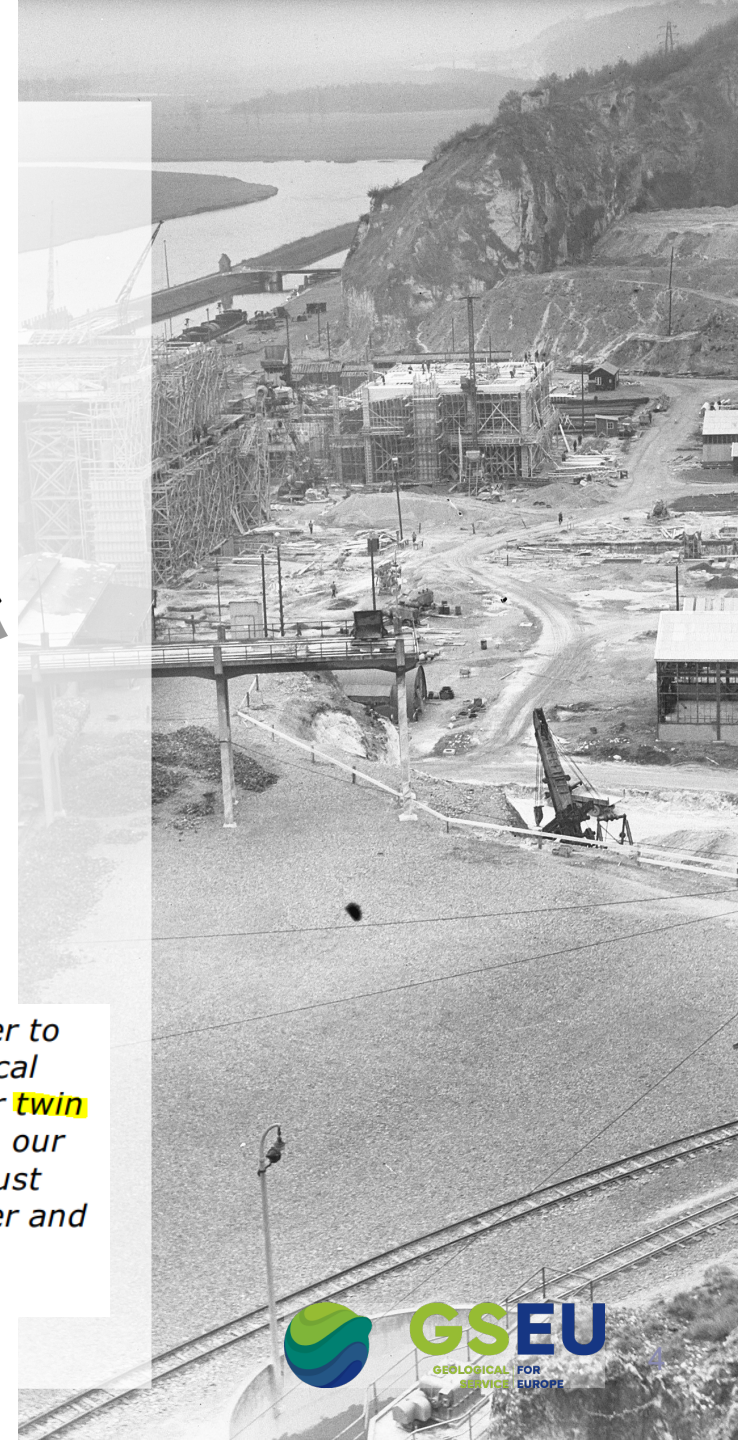
- At least 10% for extraction
- At least 40% for processing
- At least 15% for recycling

Max 65% of
EU annual
consumption
from a single
third country



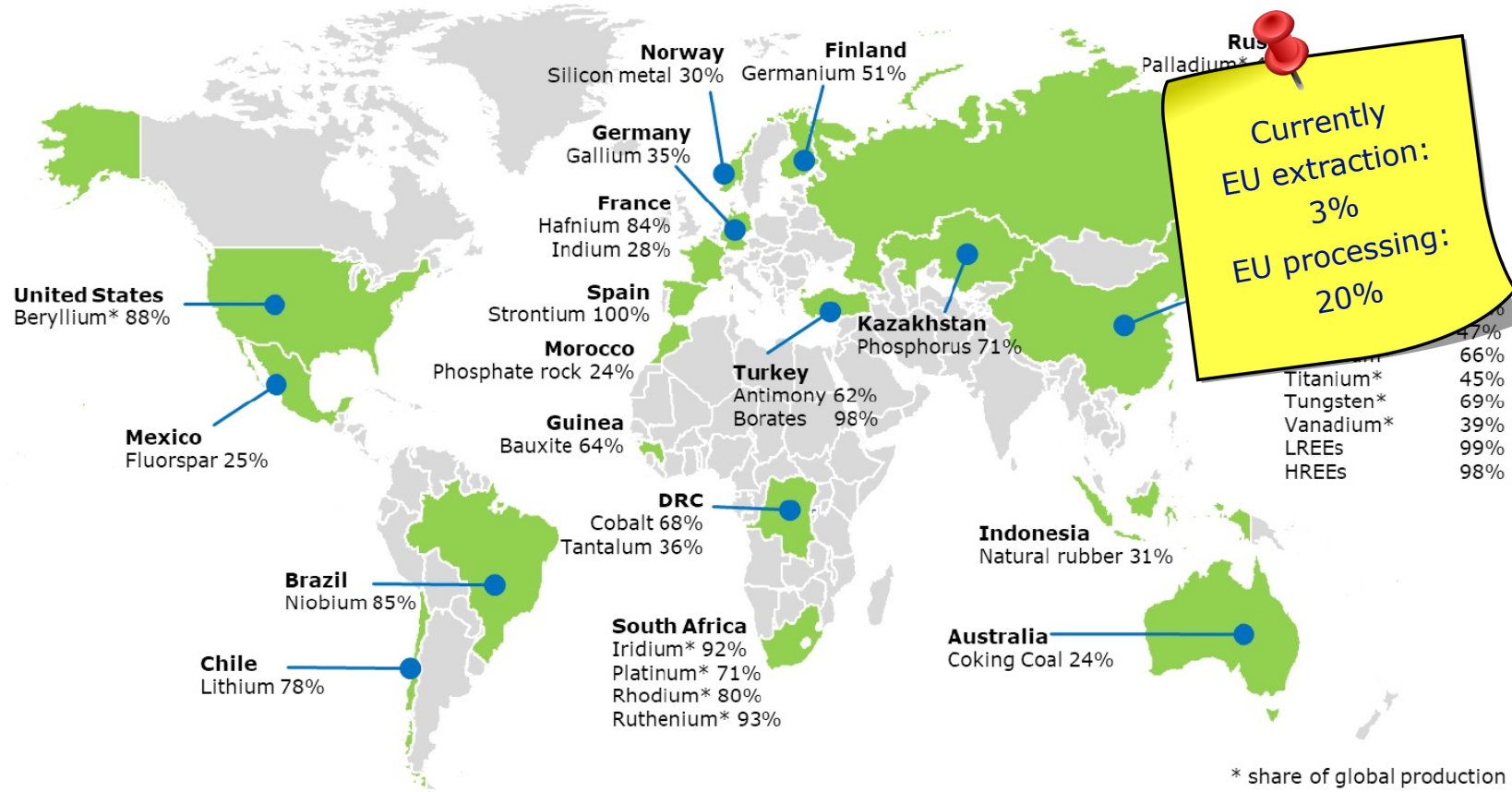
President of the European Commission, Ursula **von der Leyen** said: "This Act will bring us closer to our **climate ambitions**. It will significantly improve the refining, processing and recycling of critical raw materials here in Europe. Raw materials **are vital** for manufacturing key technologies 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 Europe¹⁾



Currently
EU extraction:
3%
EU processing:
20%



¹⁾ Study on the EU's list of Critical Raw Materials (2020) Final Report



Relevant questions for miners

Where to look

- Can it be found?

Economic potential

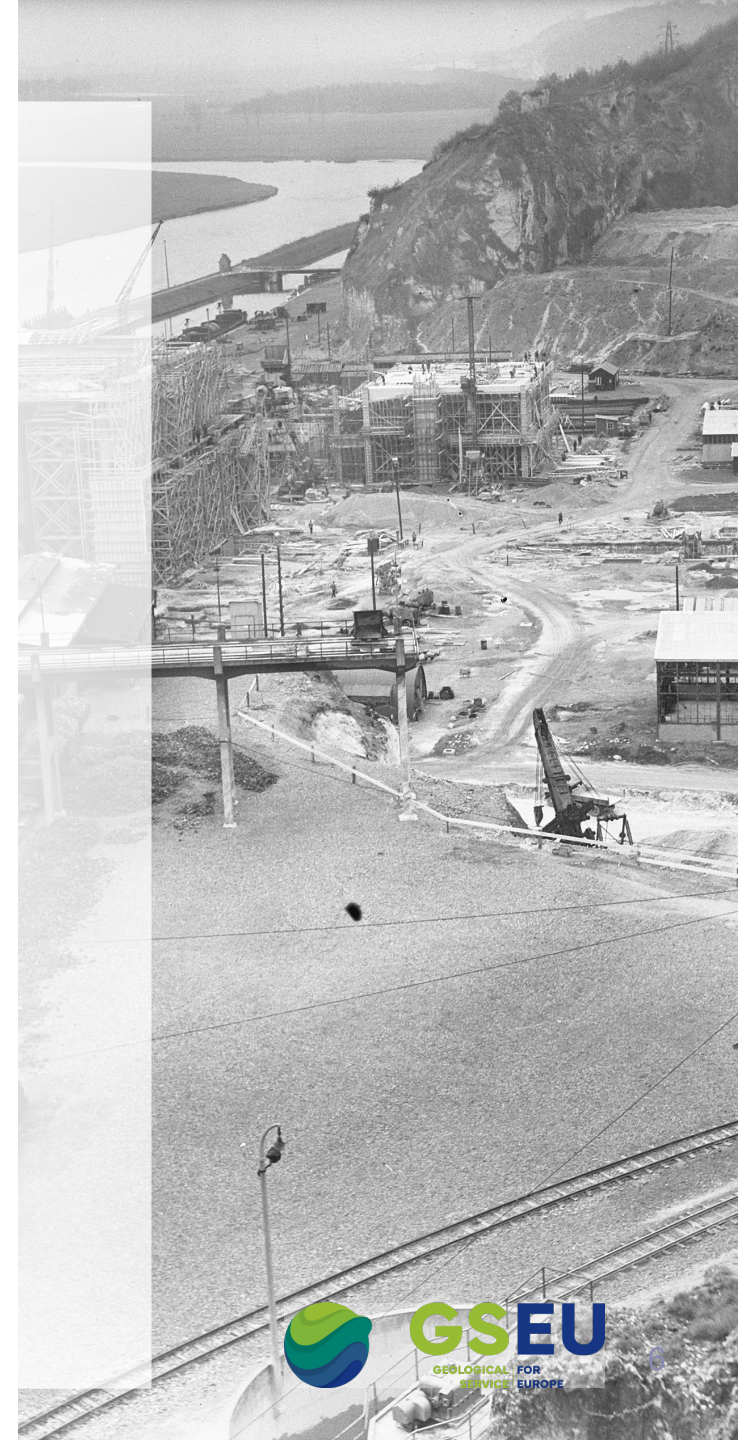
- Can it be mined?



Europe's Largest Deposit of Rare Earth Metals Found in Northern Sweden



Jan Moström, CEO of LKAB, and Ebba Busch, Swedish Deputy Prime Minister and Minister for Energy, Business and Industry, presented important news for European self-sufficiency of critical raw materials. This happened on the same day the EU Commission visits Kiruna due to Sweden's presidency of the Council of the EU. (Photo: Westley Overklitt/LKAB)





Relevant answers: EGDI

What is it?

- Data infrastructure

What does it do?

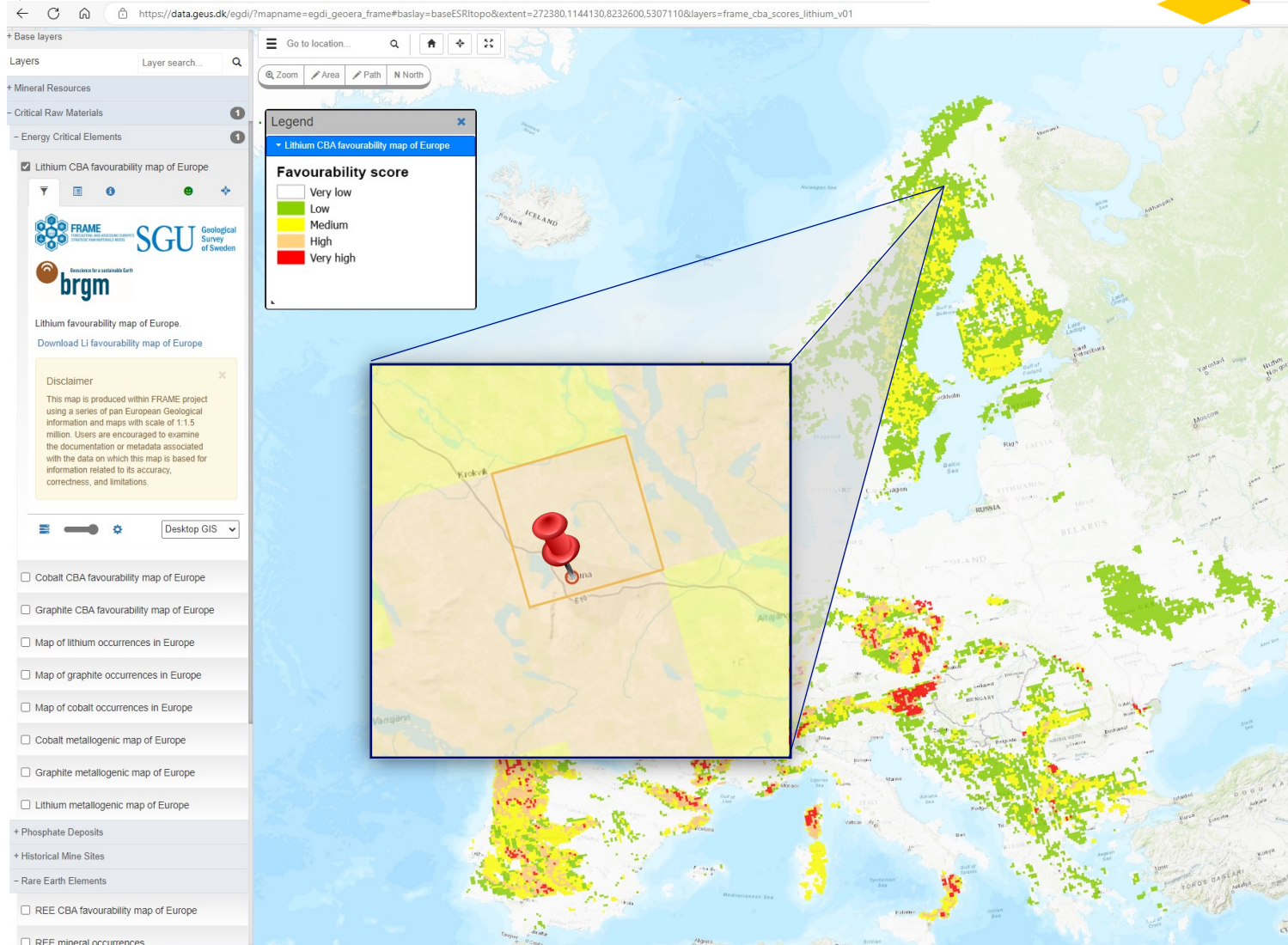
- Access to pan-European harmonised, standardised data
 - Rich multilingual search capability
 - map viewer
- Harvest open spatial data(sets) (structured and non-structured)
- Upload and manage metadata



¹⁾ [European Geological Data Infrastructure](#)



Relevant answers: EGDI



1) European Geological Data Infrastructure



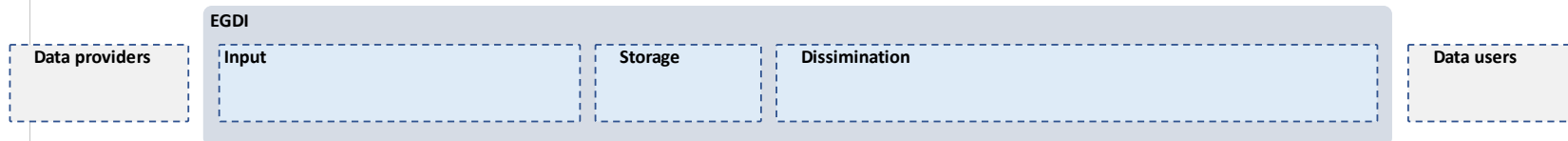
Relevant answers: EGDI

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



¹⁾ [European Geological Data Infrastructure](#)



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

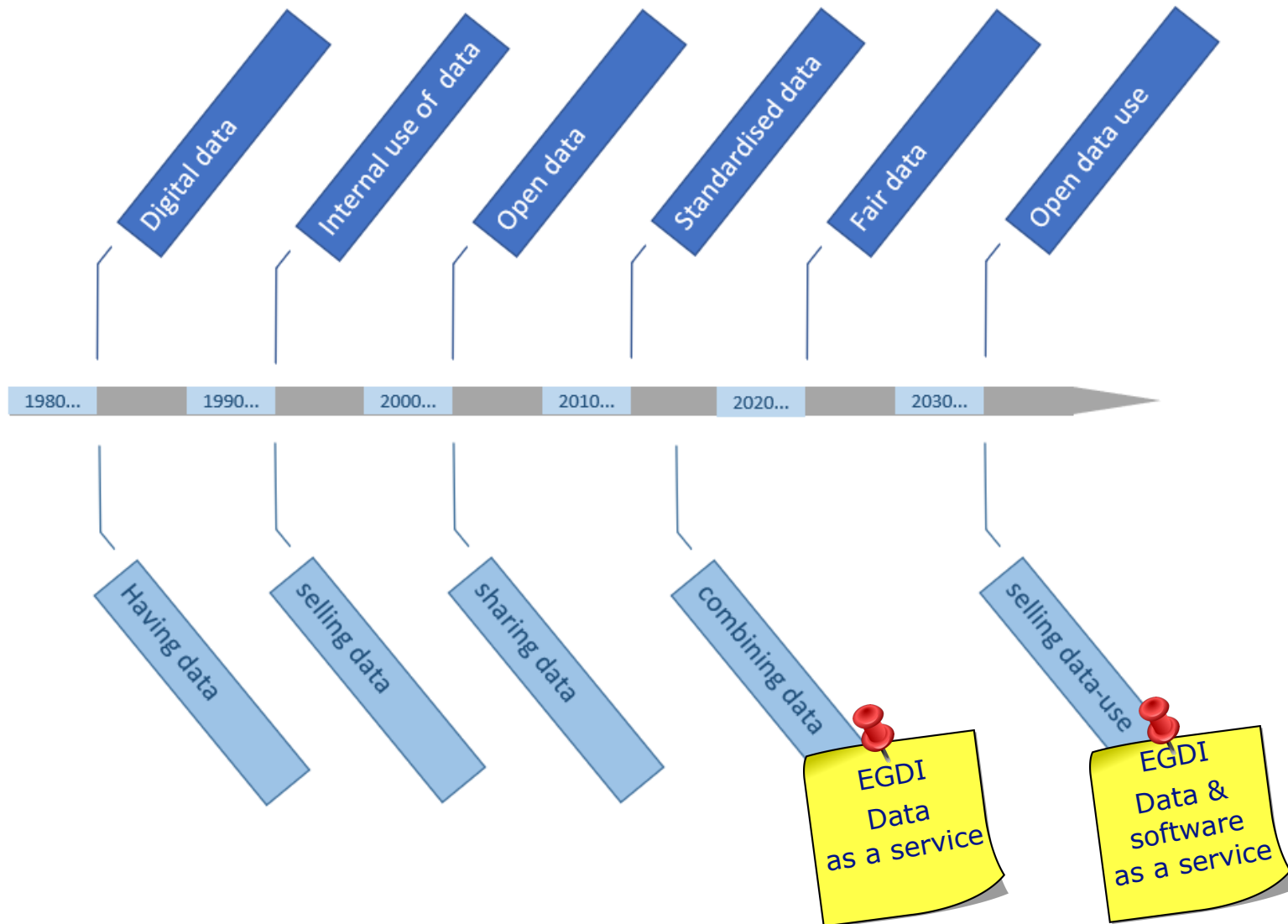
Access is essential

- 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





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



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Thank you for you attention!



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