

EU SUSTAINABLE ENERGY WEEK



CHPM2030



Multidisciplinary approach for geothermal resources

Innovative technology for CHPM

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04-08 JUNE 2018

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GA n° 654100

EU Challenge

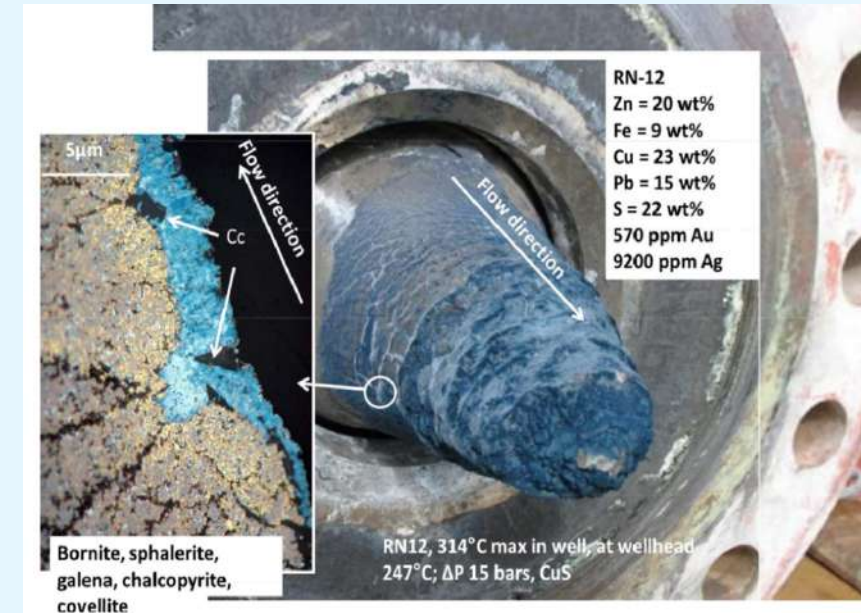
- EU needs clean energy – EGS is an option, but high operating costs
 - EU needs strategic raw materials - limited mining
- Developing a new technology for combining geothermal energy production and metal mining (reducing the costs of EGS)

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Why multidisciplinary?

- Break down the silos
- Create synergies
- See things from different aspects
- Involve mineral and geothermal sectors
- Combining geothermal energy production and mineral extraction



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Decarbonisation

- Low carbon footprint technology
- CHPM Geothermal project
 - Heat
 - Power
 - Metal
- Mission statement: Create a proof of concept of the technical and economic feasibility at laboratory scale, at TRL 4-5

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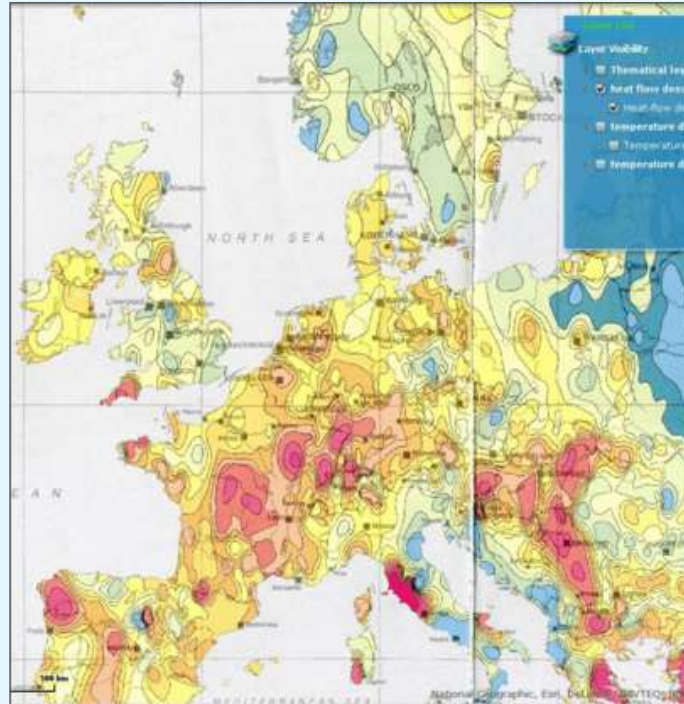
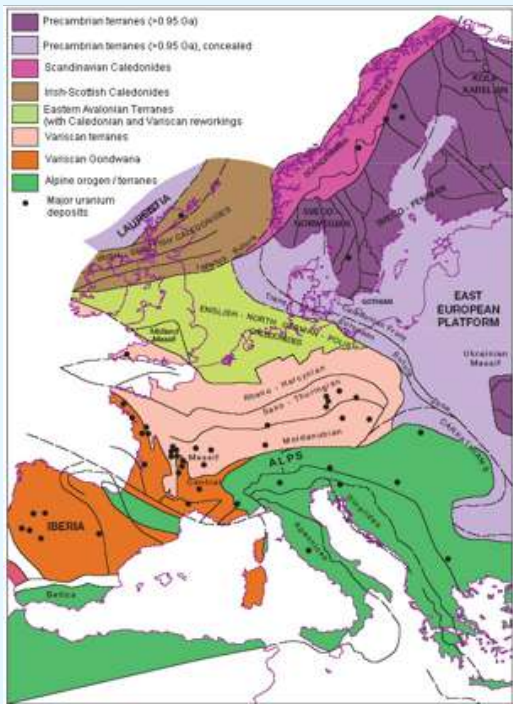


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Methodology framework definition



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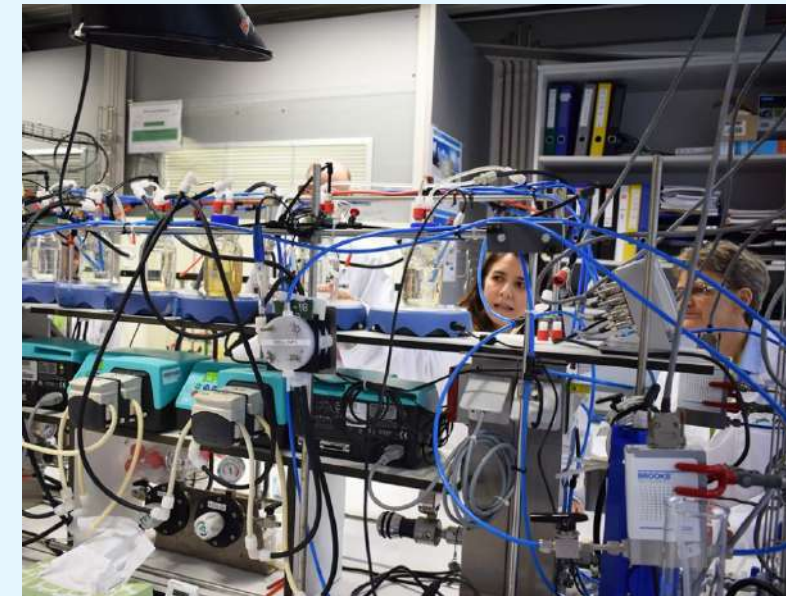
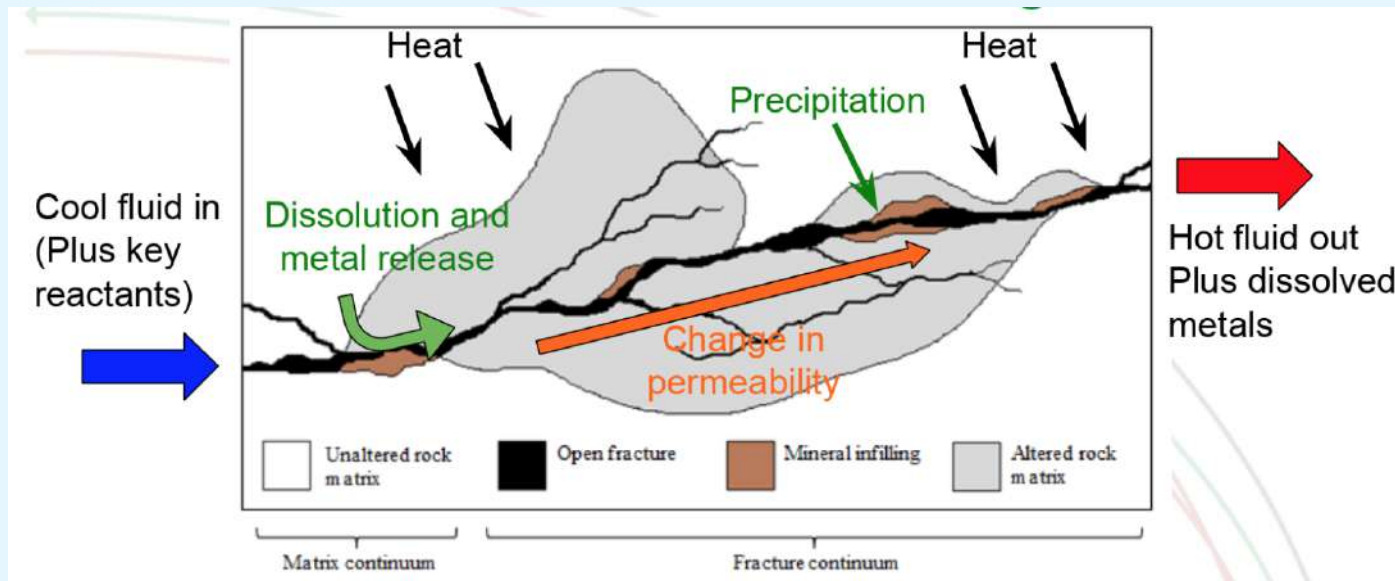


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Laboratory experiments and orebody investigations
Metal recovery and electrochemical power generation



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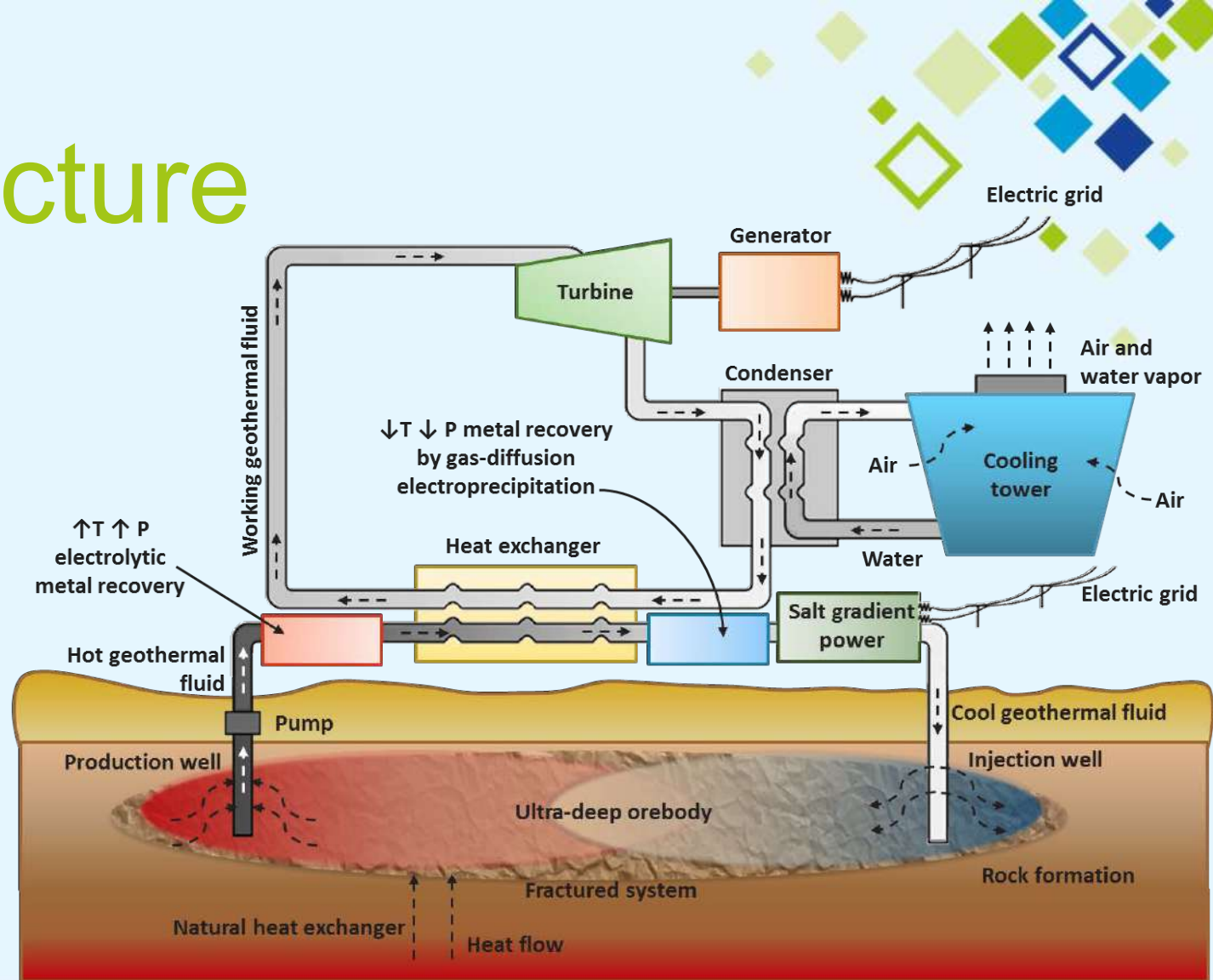
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System integration (ISOR)

Integrated sustainability assessment (USZ)



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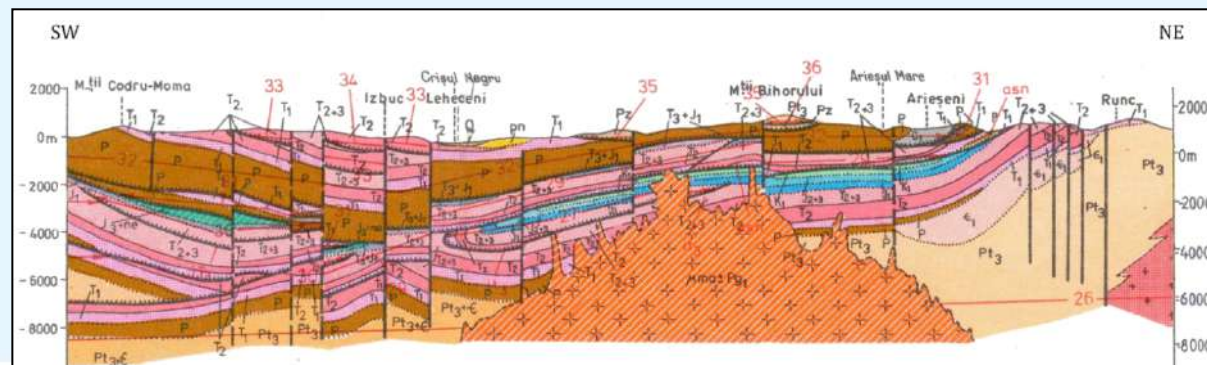
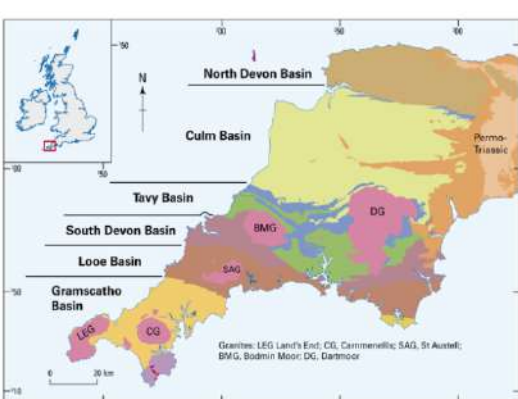
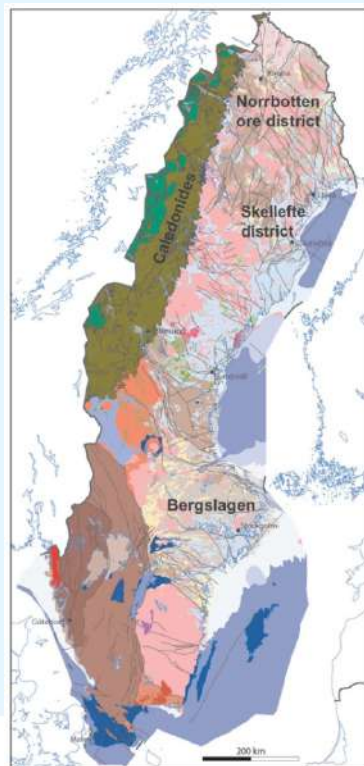
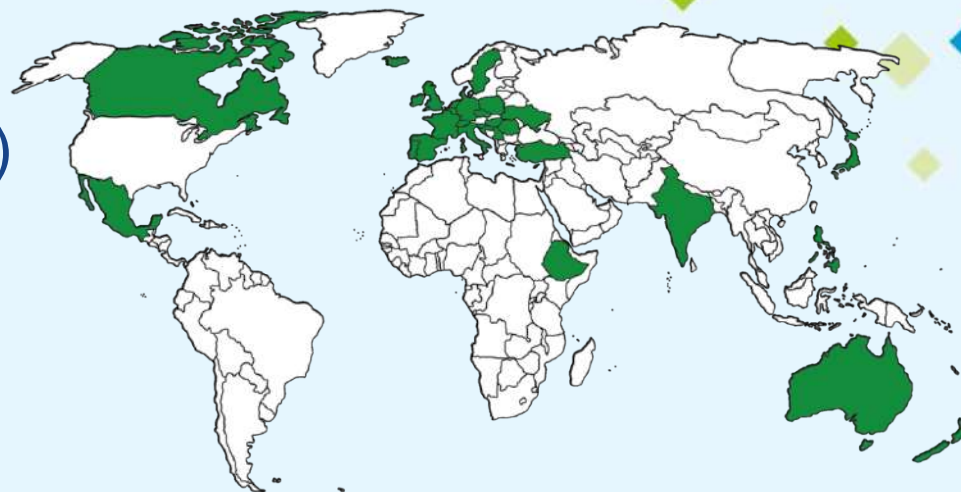
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CHPM2030 Delphi survey 1st round

Roadmapping and preparation for pilots (LPRC)



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Take away message

1. The EU needs

The EU needs **clean energy** and critical raw materials. EGS costs are high and European mining is limited.

2. The Project Solution

Developing a new technology for combining geothermal energy production and metal mining.



4. How will this happen?

Create a proof of concept of technical and economic feasibility at laboratory scale → next research project with higher TRL.

3. Value to Europe

- Increased financial feasibility for geothermal projects.
- Decarbonization of the heating sector
- Less dependent on mineral raw material import.

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