

# Deep Geothermal Technology Roadmap: Structure and content

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**ETIP-DG**

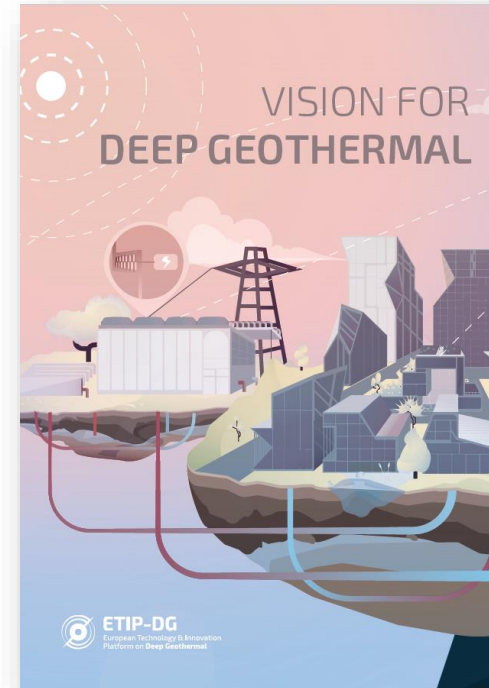
European Technology & Innovation  
Platform on **Deep Geothermal**

[www.etip-dg.eu](http://www.etip-dg.eu)



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# Primary objectives of ETIP-DG





## Summary of key aspects

- The Vision and SRA express our targets and R&D needs.
- The Implementation Roadmap describes *how we plan to achieve the targets*: activities and projects
- **Realistic, specific, consistent.**
- Draw support from a range of sources (not only Horizon Europe).
- Prove industry commitment.

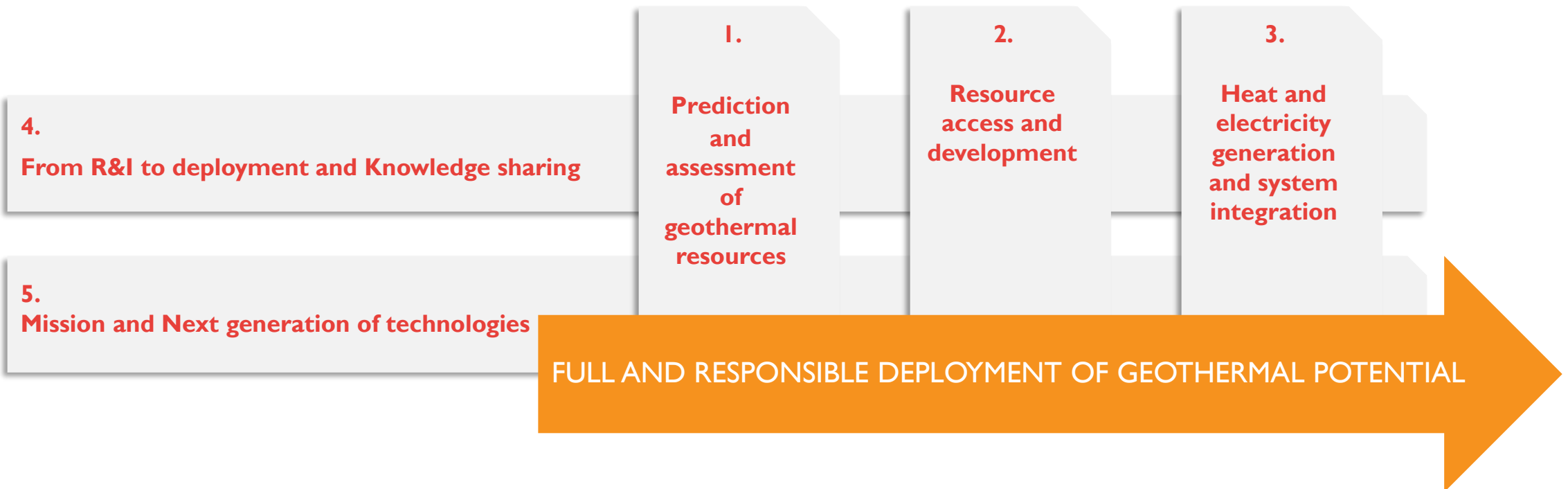
## Summary of key aspects

- Define technology objectives.
- Estimate their costs
- Present indicative key performance indicators: technology cost reduction, improve efficiency & lifetime.
- Funding repartition at EU, National levels and industry contribution
- Draw a flowchart 2020-2030

# Novel technologies for full and responsible deployment of geothermal potential

> Technologies beyond H2020

> While targeting the EU long-term goal of **reducing costs** and **increase performance** of geothermal technologies and installations, RD&I pursue all opportunities for complete deployment of geothermal resources, aiming at various advancements



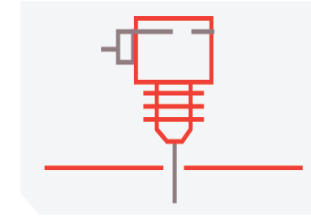
# Objectives of the WGs for the Roadmap

## Objectives of the WGs for the Technology roadmap

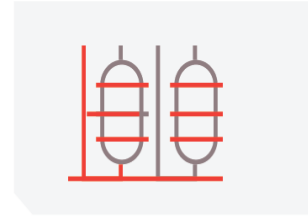
- **Phase 1 (January 2019 - March 2019): Collect data and discuss RD&I priorities for the relevant theme of the WG, taking the SRA as a basis.**
- Phase 2 (March 2019 - May 2019): SC prepare a list of topics to be included in the Roadmap.
- Phase 3 (June 2019). Validation of the Roadmap during an open consultation process and publication.



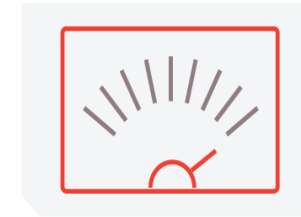
Exploration



Deep Drilling



Production technologies



Surface systems



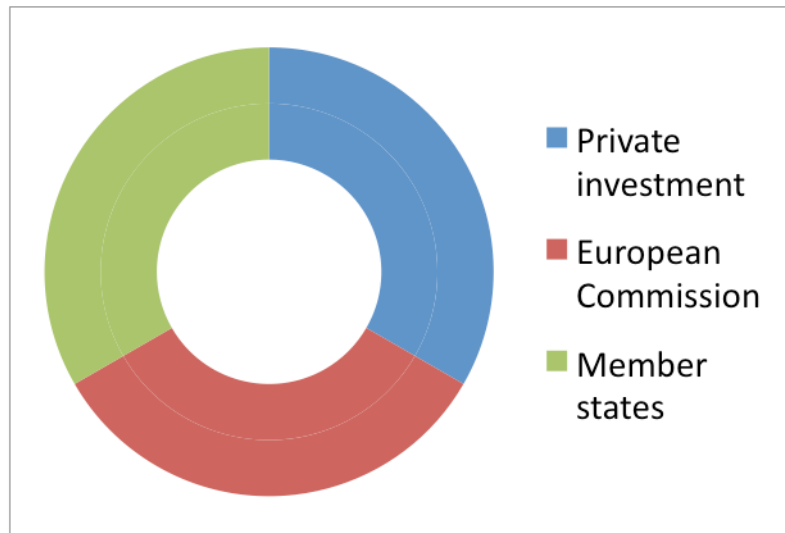
Non-Technical

# Technology Roadmap 2013-2020



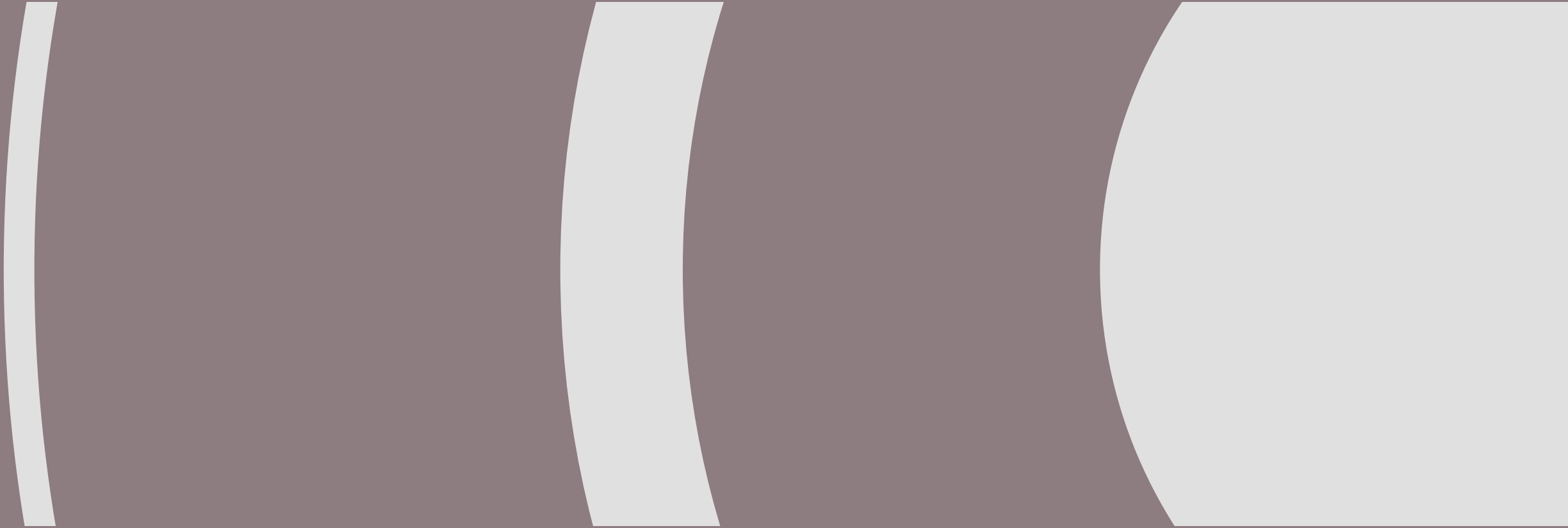


# Budget overview to implement the geothermal's SRA between 2014 and 2020



The total amount of R&D money spent by industry within Horizon 2020 (2014-2020):	Around 400 Mio EUR
Horizon 2020 and member states	Around 740 Mio EUR
Total R&D investment needed between 2014 and 2020:	1140 Mio EUR

	Implementation Roadmap 2020	Status 2018
<b>Budget</b>	<p>Industry: ca 400€mio</p> <p>Public (regional, national and European): ca 740 €mio</p>	<p>H2020:</p> <ul style="list-style-type: none"> <li>- EU – contribution: 160,675 €mio</li> <li>- Private contribution: 85 €mio</li> </ul> <p>Geothermica (ERANET): 50mio€, half public and half private funding</p> <p><b>around 300 €mio</b> + Industry, regional and other national instruments</p>
<b>Number of projects</b>	<p>32 on deep GT 30 on shallow GT</p> <p>= a total of 62 projects co-funded by public money</p>	<p>36 projects co-funded by public money from H2020 calls on RES&amp;EE, Industrial leadership ; from SME-instrument; from INTERREG and ERASMUS+.</p>



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## Panel debate:

- What are the key R&D priorities in Geothermal in the coming year?
- Which demonstration and deployment projects could implement the SRP?
- What resources are necessary to achieve that? How to finance the roadmap
- Which R&D should be done on European level, and which on national level?
- What are the key R&D priorities in GT in the coming years ?
- Performance improvement & costs reduction