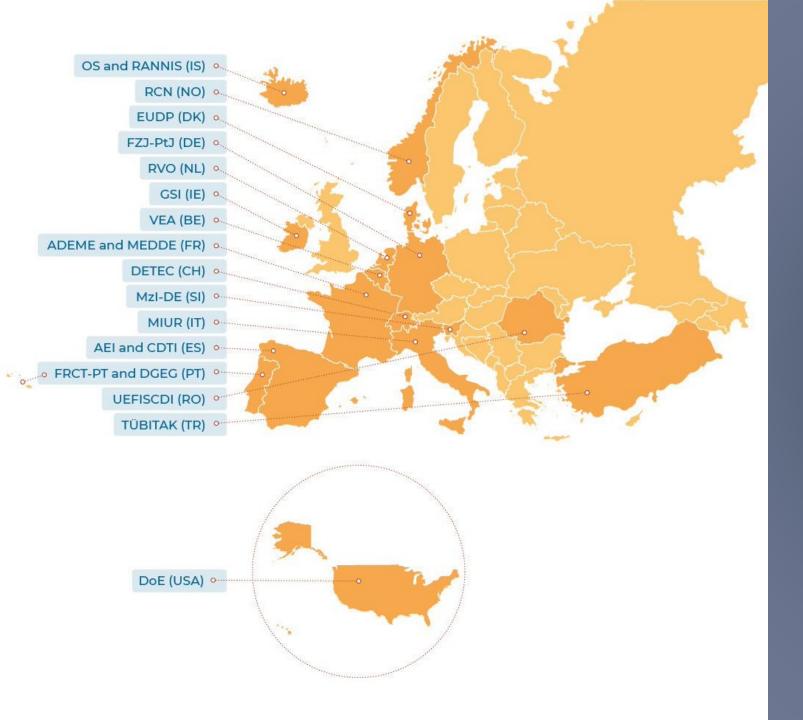
Innovation Fund Workshop & ETIP-DG Meeting
September 23rd, 2019
Brussels

Paul Ramsak GEOTHERMICA Project Office





GEOTHERMICA – state of play:

Coordinator: Iceland (IS)
Countries/regions participating: BE,
CH, DE, DK, ES, FR, IE, IS, IT, NL, PT, RO,
SI, TR, USA & NO
20 funding organizations from 16
countries

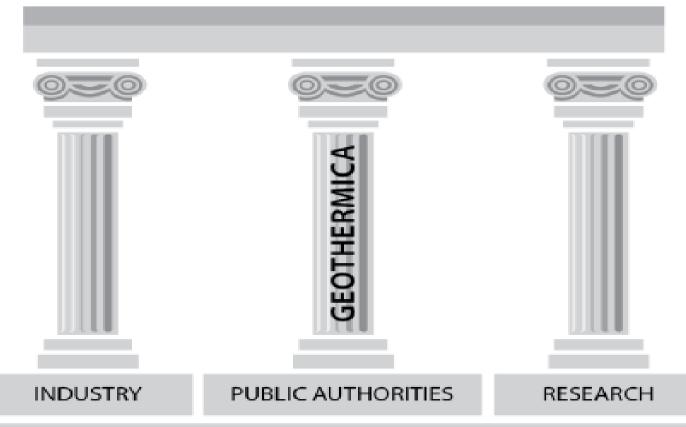
EC currently supports **GEOTHERMICA** as an **ERA-NET Co-fund**: 2017–2021



GEOTHERIMCA has received co-funding from the European Union's Horizon 2020 research and innovation program under grant agreement No 731117.

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TOWARDS A STRONGER EUROPEAN GEOTHERMAL SECTOR

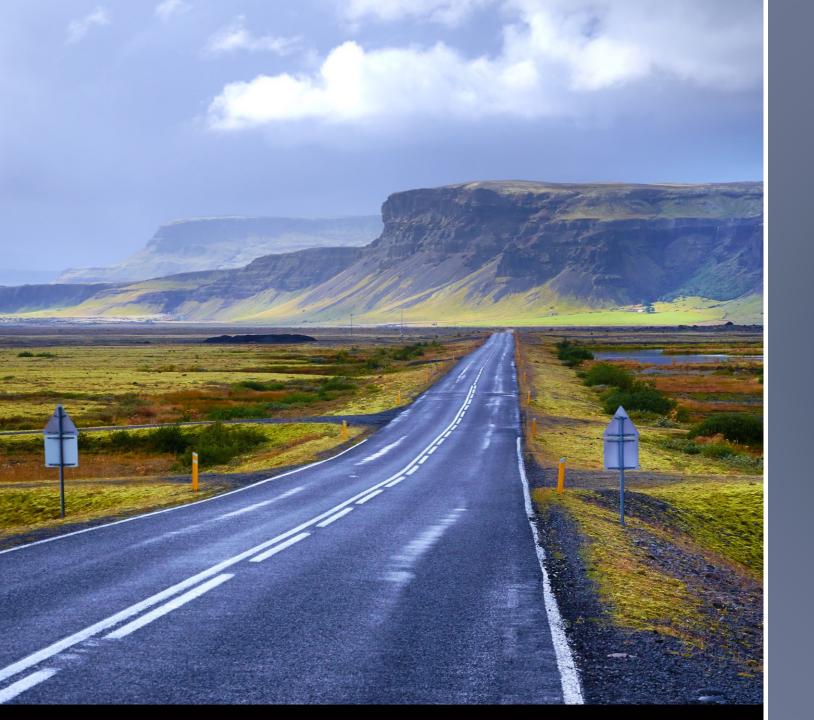




What is GEOTHERMICA?

GEOTHERMICA's objective is to combine the financial resources and know-how of 20 geothermal energy research and innovation programme owners and managers from 16 countries and their regions.

GEOTHERMICA has launched joint projects that demonstrate and validate novel concepts of geothermal energy deployment within the energy system, and that identify paths to commercial large-scale implementation.



What will GEOTHERMICA do?

- 1) GEOTHERMICA has launched joint projects that demonstrate and validate novel concepts of geothermal energy deployment within the energy system, and that identify paths to commercial largescale implementation.
- **2)** Continue the joint collaboration work from previous Geothermal ERA NET project and other additional activities

Joint Actions (OpERA, JoProShow etc...)

Information exchange Work workshops Policy work...

Cofund call results

- Heat storage,
- Managing induced seismicity,
- EGS drilling and completion,
- Production operations,
- Composite casing
- Integrated applications of geothermal heat.

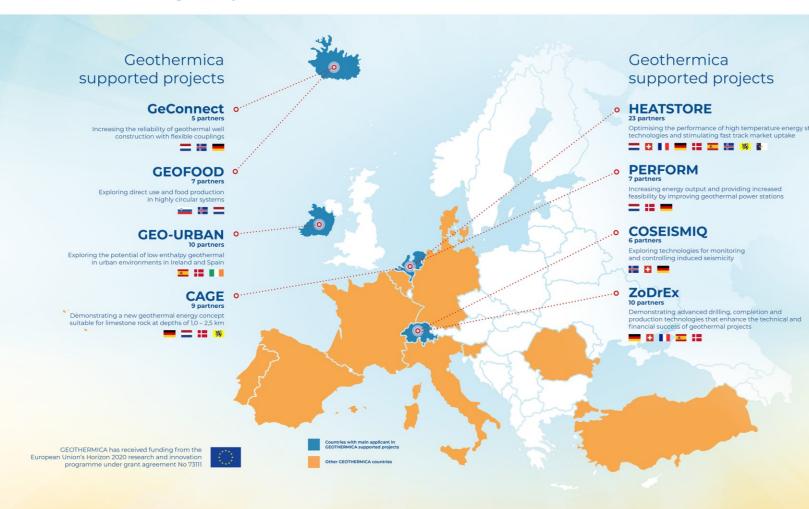
Financing:		
	Geothermica Financing	Total Cost
CAGE	5.834.888 €	13.457.698€
COSEISMIQ	1.148.958 €	2.479.458€
GeoConnect	889.891 €	1.196.126€
GEOFOOD	1.249.204 €	1.749.656€
GEO-URBAN	539.275 €	737.233€
HEATSTORE	8.305.268 €	16.265.971€
PERFORM	2.236.825 €	3.011.717€
ZoDrEx	2.860.282 €	4.890.706€
Total	23.064.591 €	43.788.565€

Accelerating

the development of geothermal energy globally



www.geothermica.e



Thematic structure GEOTHERMICA – ERA NET Cofund



assessment of geothermal resources

Identification &

Geothermal resource development (drilling, completion materials and equipment) Supply & smart integration into the energy system and Operations

Innovation and development
Integration in the energy system
New approaches – New concepts
Demonstrations and validations

GEOTHERMICA,

Policy, economy & risk mitigation, regulatory framework

Environmental, social and

economical sustainability

Public awareness, education

& strengthening the sector

Data/statistics,

knowledge sharing

National commitment ~16M€

EC "top up" ~7M€ Estimated industry commitment ~20M€

GEOTHERMICA

Resources required to operate GEOTHERMICA over 5 years:

From Partners: 120 person months + € 1.8 mln cash/cash-equivalent; partners account for time and operational budget spent, and GEOTHERMICA re-balances internally

In addition from EC: a "unit cost contribution" for "additional" activities

Achievements:

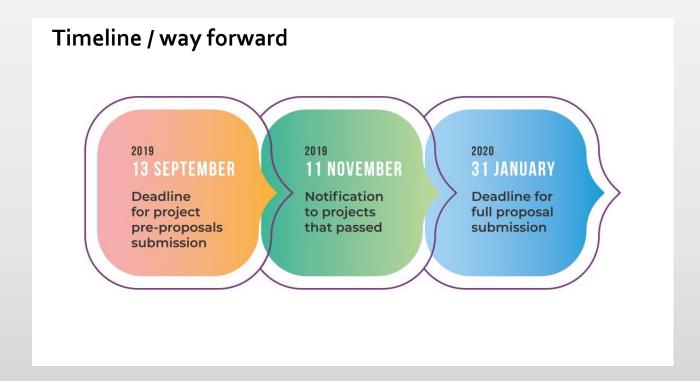
- Set-up of pan-European platforms for geothermal topics of interest
- Coordination of R&I programming resulting in:
- Call 1 with a total investment: € 43.8 mln (2017-2021)
 - Of which GEOTHERMICA (incl. EC): € 23.0 mln
 - Top 5 publ. investors: NL, EC, CH, D, IS
- **Call 2 pre-proposals already in (2019-2023**); fully accounts for the 8 "Research and Innovation Activities" and 2 "Non-Technical Barriers and Enablers" as identified in the Deep Geothermal Implementation Plan (DG-IP)

OPEN FOR ADDITIONAL COUNTRIES TO PARTICIPATE

GEOTHERMICA 2 CALL - FIRST RESULTS

- Altogether 17 applications were submitted involving 11 partner countries.
- Total amount of GEOTHERMICA financing asked for is €38million with a total cost of €64million.

Country with Main Applicants	mronosal	Tot # of proposals main and co- applciants
United States	5	7
Germany	3	13
Netherlands	3	6
Turkey	2	3
Iceland	1	3
Romania	1	2
Switzerland	1	6
Spain	1	2









WORLD
GEOTHERMAL
CONGRESS
2020 REYKJAVIK
ICELAND