



## Cooperation between European countries through the Geothermal ERA NET

#### Guðni A Jóhannesson Geothermal ERA NET Coordinator Orkustofnun, Director General

Final Meeting, 13-14. October 2016 Meeting Location: Moravske Toplice, VENUE: Hotel Livada Prestige

Geothermal ERA NET Coordination Office Orkustofnun, Iceland





The Geothermal ERA NET is supported by the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No 291866

Budget of the Geothermal ERA NET: € 2.2 mln (2012-2016)

# Geothermal ERA NET

- Minimize the fragmentation of geothermal research in Europe
- Build on European know-how and know-who to utilize geothermal energy
- Contribute to a framework to realise large opportunities in the utilization of geothermal energy through joint activities

## Geothermal ERA-NET Consortium



- Orkustofnun (National Energy Authority, Iceland)
- NL Rijksdienst voor Ondernemend Nederland
- CH Swiss Federal Office of Energy (SFOE)
  - National Research Council of Italy (CNR)
- D Jülich (PTJ)

IS

- F ADEME (BRGM as third party)
- IS Icelandic Centre for Research (RANNÍS)
- TR TÜBITAK (Scientific and Technological Research Council of Turkey)
- SVK Slovak Ministry of Education, Science, Research and Sport
- MFIG Hungarian Geological and Geophysical Institute
- SED Slovenian Energy Directorate
- EAD Electicidade dos Acores

Lead partner is Orkustofnun operating the Geothermal ERA NET Coordination Office

**Good geographical balance** (North-West to South-East Europe) Partner countries chosen a.o. on basis of their 2020/2050 geothermal ambitions



# Three important EU pillars to strengthen the geothermal sector in Europe



Industry

Public authority

Research

# Objectives

#### Exchange information *"Infex*"





European Geothermal Information Platform "EGIP"

# Recognize barriers and recommend practical solutions





#### Prepare the ground for the formulation of a common European action plan

for geothermal energy technology research, development, deployment and innovation supported by member states

#### **Prepare and implement Joint Activities**

(e.g. transnational funding activities)

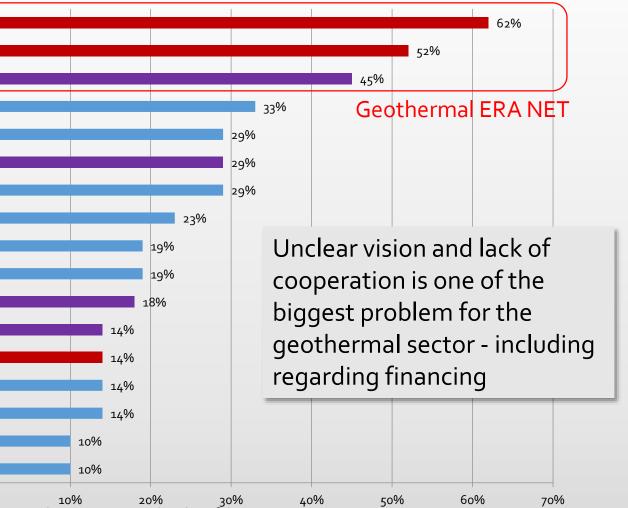
#### **Recommend measures**





Communicate with principal **stakeholders** and enhance **public awareness** 

# The Main Geothermal Problems

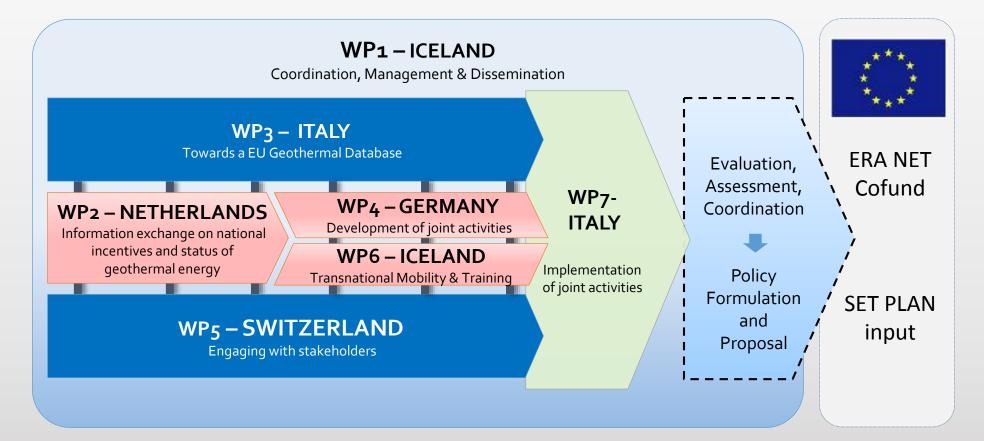


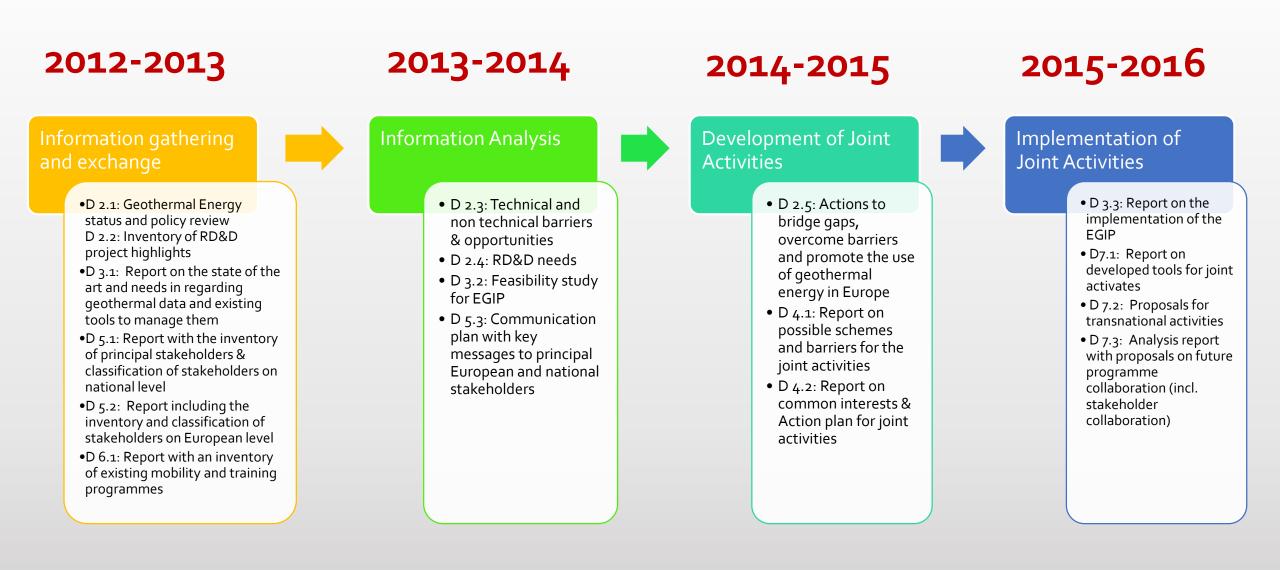
Unclear vision on geothermal issues at the European level Lack of commitment to the geothermal sector by national government Lack of collaboration and coordination between stakeholders (e.g. industry, academia... Lack of continuous education within the sector Too few geothermal training opportunities Unappealing operational environments for companies within the geothermal sector Lack of appropriate trainers Lack of national collaboration and coordination between educational and training. Lack of training opportunities for individuals within similar sectors that want to relocate... Unappealing image of the geothermal sector Too few geothermal courses at the tertiary level Unappealing working conditions of employees within the geothermal sector Lack of staff mobility opportunities Lack of international collaboration and coordination between educational and training. Little variety of geothermal courses at the tertiary level Lack of student mobility opportunities Little variety when it comes to geothermal training opportunities

Factors deemed of high importance as contributors to a lack of human resources within the geothermal sector. Educational factors are coloured green, policy/sectorial factors red and industry factors purple

## Objective and Task – Preparing Next Steps

Analysis -> Assessments -> Joint Activities -> Implementation -> Future Policy





# Joint Activities – Several Actions are in the process of implementation

As a result 7 Joint Activities (JA) on different topics were proposed:

- **NWW** New ways of working: Financial Instruments and Funding of RD&D and Geothermal Projects
- OpERA RD&D Knowledge Exchange on operational issues of geothermal installations in Europe
- **PRGeo** RD&D Knowledge Exchange on public relations for geothermal energy
- New Concepts for geothermal energy production and usage
- ReSus RD&D Knowledge Exchange on reservoir sustainability
- **Tuning EGIP** (European Geothermal Information Platform) for target users, EGIP expert group.
- Geostat Towards Consistency of geothermal data



# All Deliverables and Joint Activity Reports are published at: <u>www.geothermaleranet.eu</u>



ABOUT PUBLICATIONS WORK PACKAGES JOINT ACTIVITIES LINKS CONTACT Q





A 17"5 A 11"	AND EVENT	r
NEWS	AND EVENT	1
1. 2. 2. 7. 1. 1. 1.	A REAL PROPERTY OF A REAL PROPER	

#### 25.8.2016

#### Latin America Symposium at the GeoTHERM

IGA and IEA Geothermal offer a platform for strategic Latin America market information & technology cooperation EVENTS & INFORMATION

Geothermal Education Opportunities &

European Geothermal Council 🖉

Horizon 2020 @

Read more

## Follow-up: GEOTHERMICA ERA-NET Co-fund

• ERA-NET Cofund Action **GEOTHERMICA** (2017-2021)

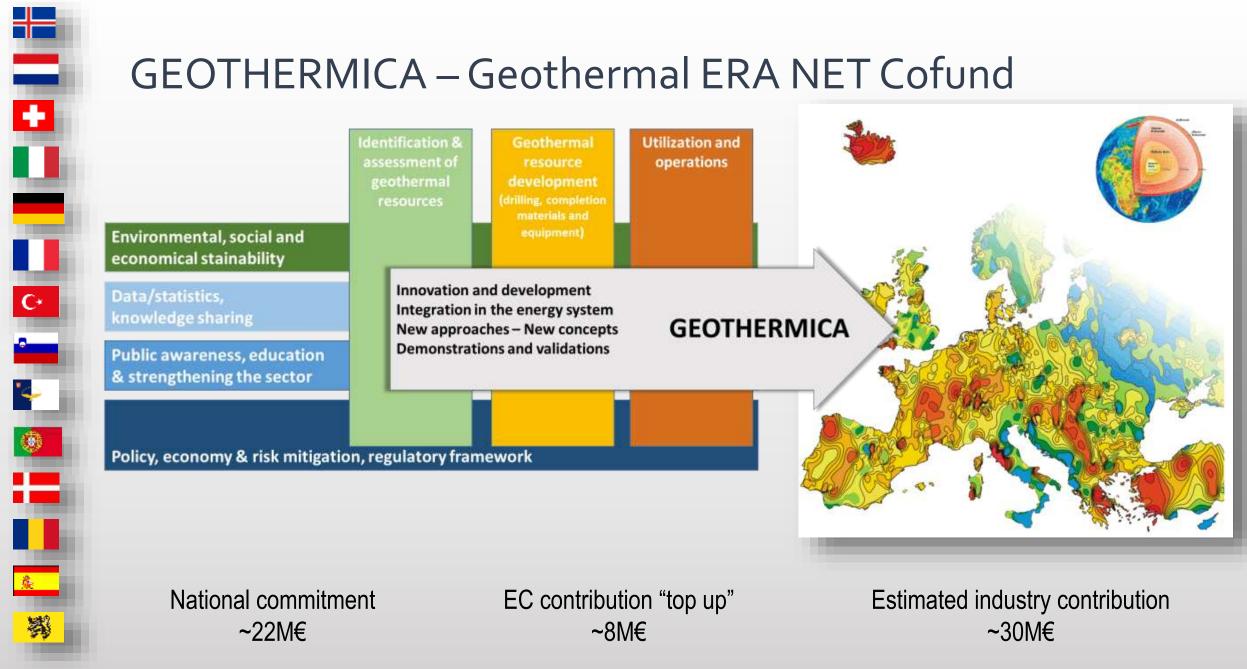
## •16 «Research Program Owners and Managers» from **13** european countries

•Targeted funds for 1<sup>st</sup> Call: € 25-30 million (33% EU contribution, 67% input from partners)

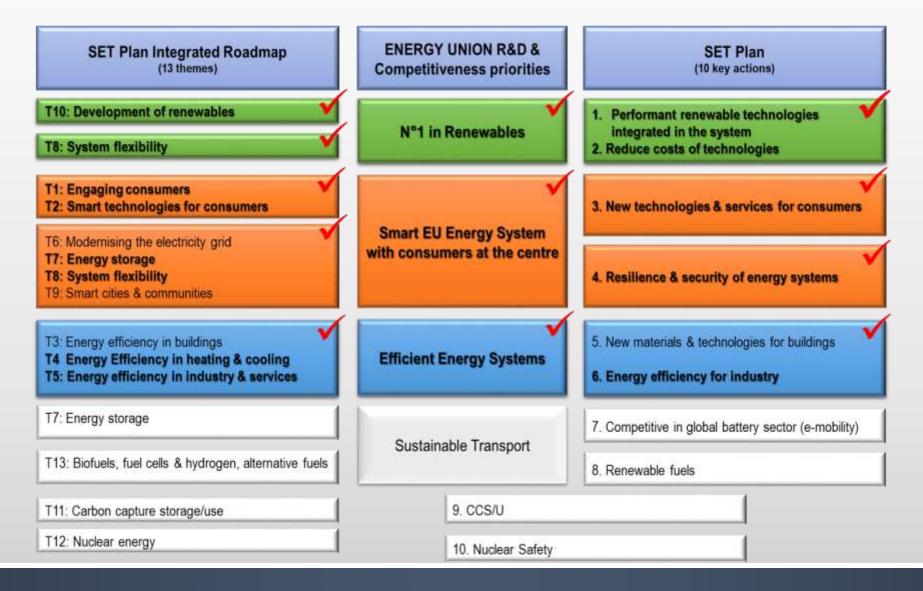


- «Transnational Call» for Pilot- and Demonstration Projects with very strong industry participation
- Target «Direct use & power generation embedded in an energy system» more specified during the Call
- Decision of the European Commission expected for Q4-2016
- 1<sup>st</sup> Call (to be launced and evaluated by GEOTHERMICA): Q2-2017 (two-stage process: 1) project concept, 2) full proposals; award of contracts mid-2018)





# GEOTHERMICA contribution to Energy Union and the SET Plan Integrated Roadmap



# **Geothermal**

Giving the Geothermal Sector in Europe the tools and support it needs to grow and prosper...

Let's take off ...



Project coordinator: Gudni A Jóhannesson (gudni.a.johannesson@os.is) Project manager: Hjalti Páll Ingólfsson (hjalti.p.ingolfsson@orkugardur.is)

Leader Information Exchange: Paul Ramsak (paul.ramsak@rvo.nl)