



# Joint Activity OpERA

## Knowledge Exchange on Operational Issues

Coordination:  
Germany  
The Netherlands

## Overview

- › Why?
  - › Background
- › What?
  - › Proposed working plan & budget
- › Who?
  - › Participants
- › When?
  - › Time schedule

# OpERA

## Why?

- › WP2 identified several barriers and RD&D-Needs related to the operation of geothermal installations:

### › Barriers:

- › Resource exploitation
- › Operational issues
- › Environmental impact
- › Geochemistry & injectivity
- › Reinjection

### › RD&D-Needs:

- › Operational Issues
  - › Aggressive thermal water
  - › Pumps & components
  - › Well cleaning & completion
  - › High NCG concentrations
  - › Power plant Emmissions
  - › Gas treatment

## Why?

- › WP2 identified several barriers and RD&D-Needs related to the operation of geothermal installations:

- › RD&D-Needs:

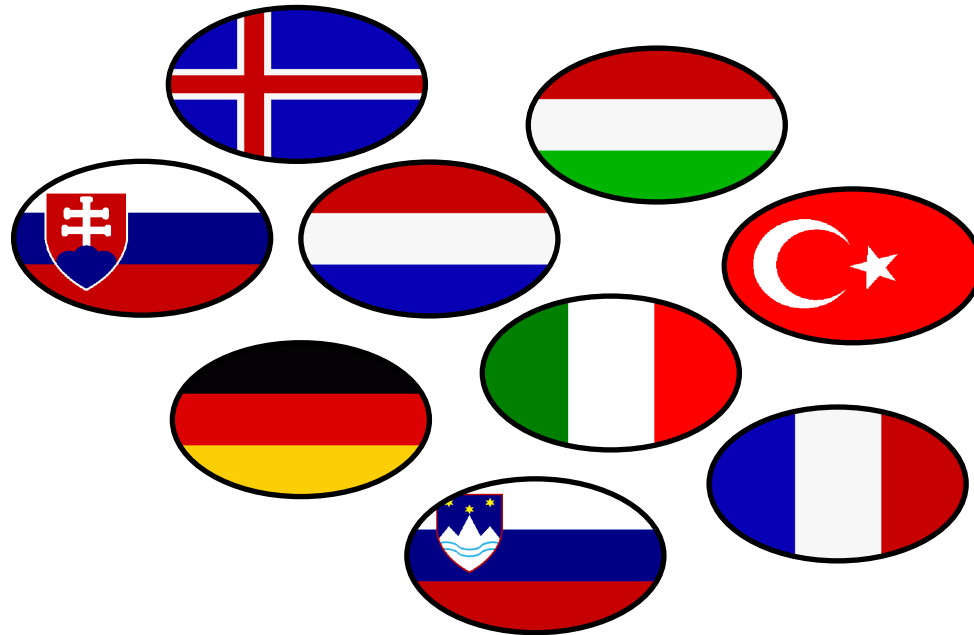
- › Injection Issues
  - › Re-injection (mentioned 3x)
  - › Underground storage
  - › Re-injection methods (binary)
  - › Geochemistry during Re-injection

- › RD&D-Needs:

- › Pumps & components
  - › Underground equipment
  - › Efficient & durable pumps
  - › Pumps

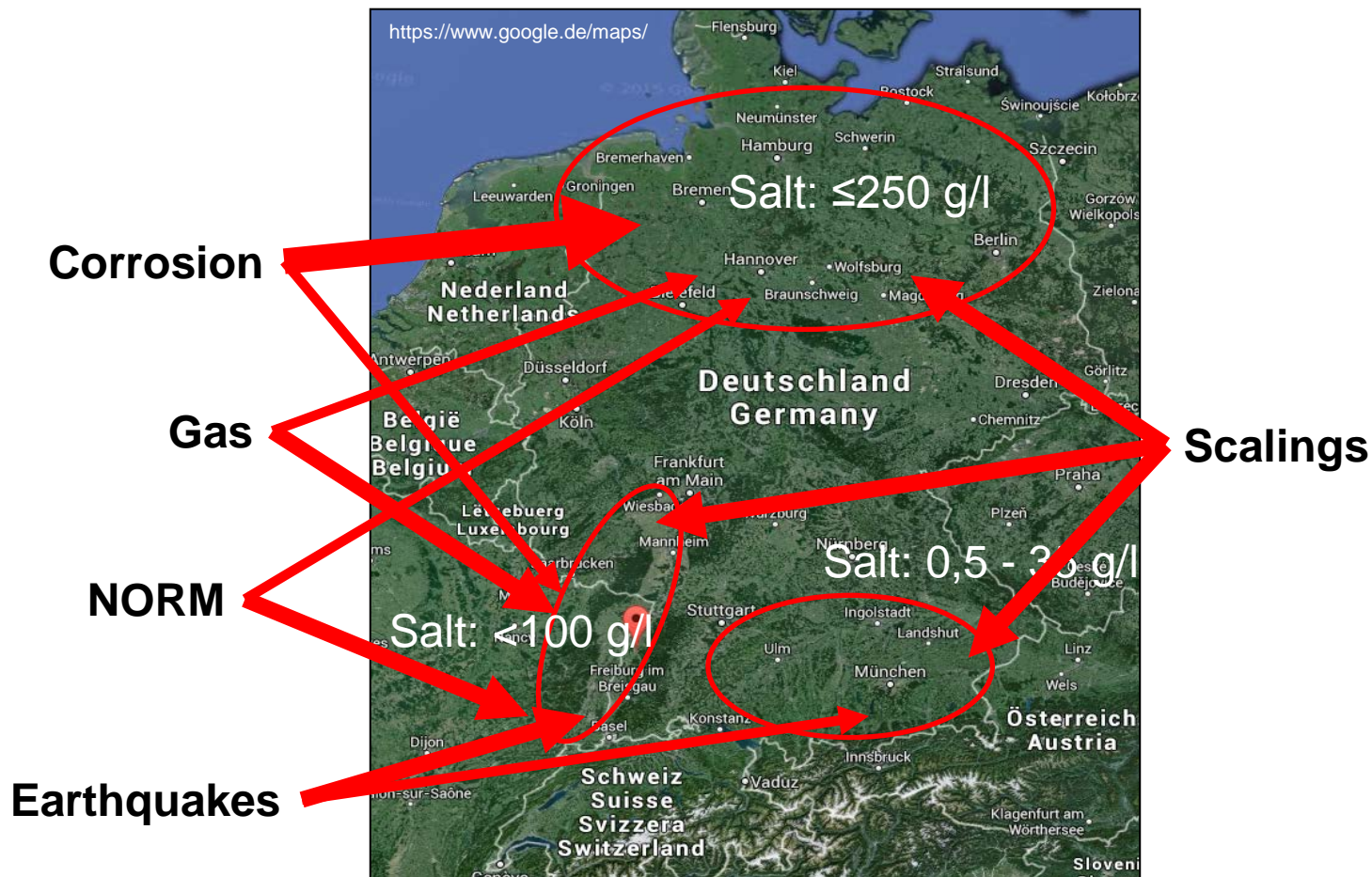
## Why?

› Mentioned by:



- › Therefore: Knowledge exchange on operational issues can help to:
- › Cluster research efforts
  - › Merge budgets for a higher output
  - › Use knowledge on already solved problems European-wide

## Why? : Example Germany



## What?

### › Identification phase:

- › Identification of the main technical issues in the operation of geothermal installations.
- › Identification of affected plant owners in the participating countries.
- › Identification of leading experts in this field.
- › Selection of a specific topic for the first working cycle.
- › Organization of a first Workshop on a specific topic.
- › Publication of Workshop Proceedings.



### › Expert phase:

- › Nomination of experts for a round table discussion and formulation of best-practice recommendations.
- › Support of expert-working group.
- › Publication of results from expert- working group

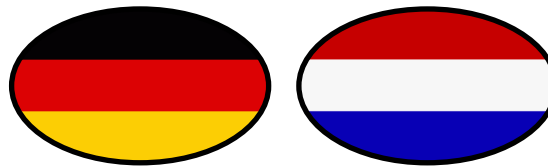
## What?

- › Estimated budget:
  - › 10.000 € for the 1st workshop, the expert round table and publication.
  - › Possible 6.000 € for expenses of the participants
  
- › Estimated workload:
  - › 1 PM for each coordinating country
  - › 0,33-0,5 PM for each participating country

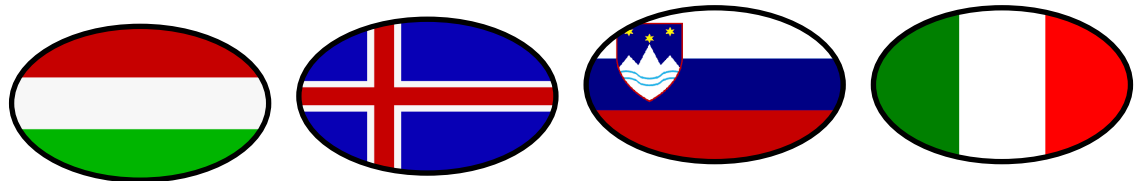


## Who?

› Coordination:



› Participation:



## When?

	03/15	04/15	05/15	06/15	07/15	08/15	09/15	10/15	11/15	12/15	01/16	02/16	03/16	04/16
Pre-Kick-Off TC	X													
Kick-Off Meeting		X												
WS Organisation														
1st WS														
WS Proceedings														
Nomination of experts									X					
Expert Round table														
Expert WG														
Best Practice Recomm.														X

- › Duration at least 13 month,
- › further phases possible after the ERA-NET
- › Proposal of a topic for a possible JC during the identification phase

**Thank you for your attention  
and...What do you think?**