Results of WP 2
Information Exchange
on national incentives and status of Geothermal Energy

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Geothermal ERA NET
SB Meeting – Leiden
4 December 2014
Organisational structure / work packages

**WP1 – ICELAND**
Coordination, Management & Dissemination

**WP2 – NETHERLANDS**
Information exchange on national incentives and status of geothermal energy

**WP3 – ITALY**
Towards a EU Geothermal Database

**WP4 – GERMANY**
Development of joint activities

**WP5 – SWITZERLAND**
Engaging with stakeholders

**WP6 – ICELAND**
Transnational Mobility & Training

**WP7 – ITALY**
Implementation of joint activities

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Focus on energy and climate change

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Paul Ramsak 4/12/2014
Task 2.1 Initial Information Exchange

D2.1 December 2013 >ready

Geothermal energy status and policy review

Geothermal ERA NET Participating countries
PART A Analysis

D2.2 October 2013 >ready

Inventory of RD&D project highlights
Technical & non-technical barriers & opportunities (task 2.2a CNR/RvO)

10-bullet lists (per country)

clustering workshop

Report (barriers & opportunities)

Paul Ramsak 4/12/2014

Focus on energy and climate change
# Technical/non-tech. barriers & opportunities

## 7 B&O clusters

| A1 Regulations |  |
| A2 Economics & risk-mitigation | a investment  
| | b operational support  
| | c risk mitigation  
| A3 New/innovative concepts and applications |  |
| A4 Operational issues |  |
| A5 Sub-surface knowledge/data |  |
| A6 Structuring the geothermal sector |  |
| A7 Public and education | a public acceptance  
| | b visibility & dissemination  
| | c education and training  |

Report D2.3 > ready sep’14
RD&D needs

RD&D clusters

<table>
<thead>
<tr>
<th>Category</th>
<th>Cluster</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1 Reservoirs</td>
<td>A</td>
<td>reservoirs (general)</td>
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<tr>
<td></td>
<td>B</td>
<td>reservoir modelling</td>
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<tr>
<td></td>
<td>C</td>
<td>reservoir exploration</td>
</tr>
<tr>
<td>B2 Operation</td>
<td>A</td>
<td>operational issues</td>
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<tr>
<td></td>
<td>B</td>
<td>injection issues</td>
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<tr>
<td></td>
<td>C</td>
<td>pumps &amp; components</td>
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<tr>
<td>B3 PR &amp; data</td>
<td>A</td>
<td>dissemination</td>
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<tr>
<td></td>
<td>B</td>
<td>acceptance</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>reporting code/statistics</td>
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<tr>
<td>B4 New concepts</td>
<td>A</td>
<td>innovative concepts</td>
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<tr>
<td></td>
<td>B</td>
<td>heat</td>
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<tr>
<td></td>
<td>C</td>
<td>power cycle</td>
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<tr>
<td>B5 Anthropogenic influence</td>
<td>A</td>
<td>reservoir creation</td>
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<tr>
<td></td>
<td>B</td>
<td>seismicity</td>
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<td>B6 Drilling</td>
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report D2.4
> ready
sep’14
Actions

to bridge gaps, overcome barriers and promote the use of geothermal energy in Europe (task 2.2c)

Report D2.5
> ready nov ‘14

wp2.2 > Basis for wp4: development of joint activities
# Common Challenges in Geothermal EraNet countries

## 9 clusters

1. Regulations (A1)
2. Economics & Risk-mitigation (A2)
3. New/innovative concepts & applications (A3/B4)
4. Operation (A4/B2)
5. Subsurface/reservoir knowledge (A5/B1)
6. Structuring the geothermal sector (A6)
7. Public & Education (A7/B3)
8. Anthropogenic Influence (B5)
9. Drilling (B6)

All clusters are relevant for the progression of geothermal energy in Europe
How to collaborate?

**JA1** Information exchange (groups)
- regular meetings, workshops, visits, idea factories, etc.

**JA2** Joint work
- Joint assignment: detailed study on specific issue

**JA3** Joint call
- Jointly developing new insights, new systems

- Appropriate (and feasible) JA-type should be chosen for a specific challenge
- JA’s can evolve from JA1 > JA2 > JA3
- Effectiveness/Impact more important than amount of €’s
How to start/organise joint activities?

• Bottom-up
• Bi- or multilateral
• Based on countries preferences (within the clusters)

At least two countries to take the initiative

The Geothermal Era Network as a continuing vehicle to launch JA’s also after the project period!
Let’s work together!

It might be fun...
Dank voor uw aandacht!