

DG-ETIP Project

Support to the activities of the European Technology and Innovation Platform on Deep Geothermal



ETIP-DG

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

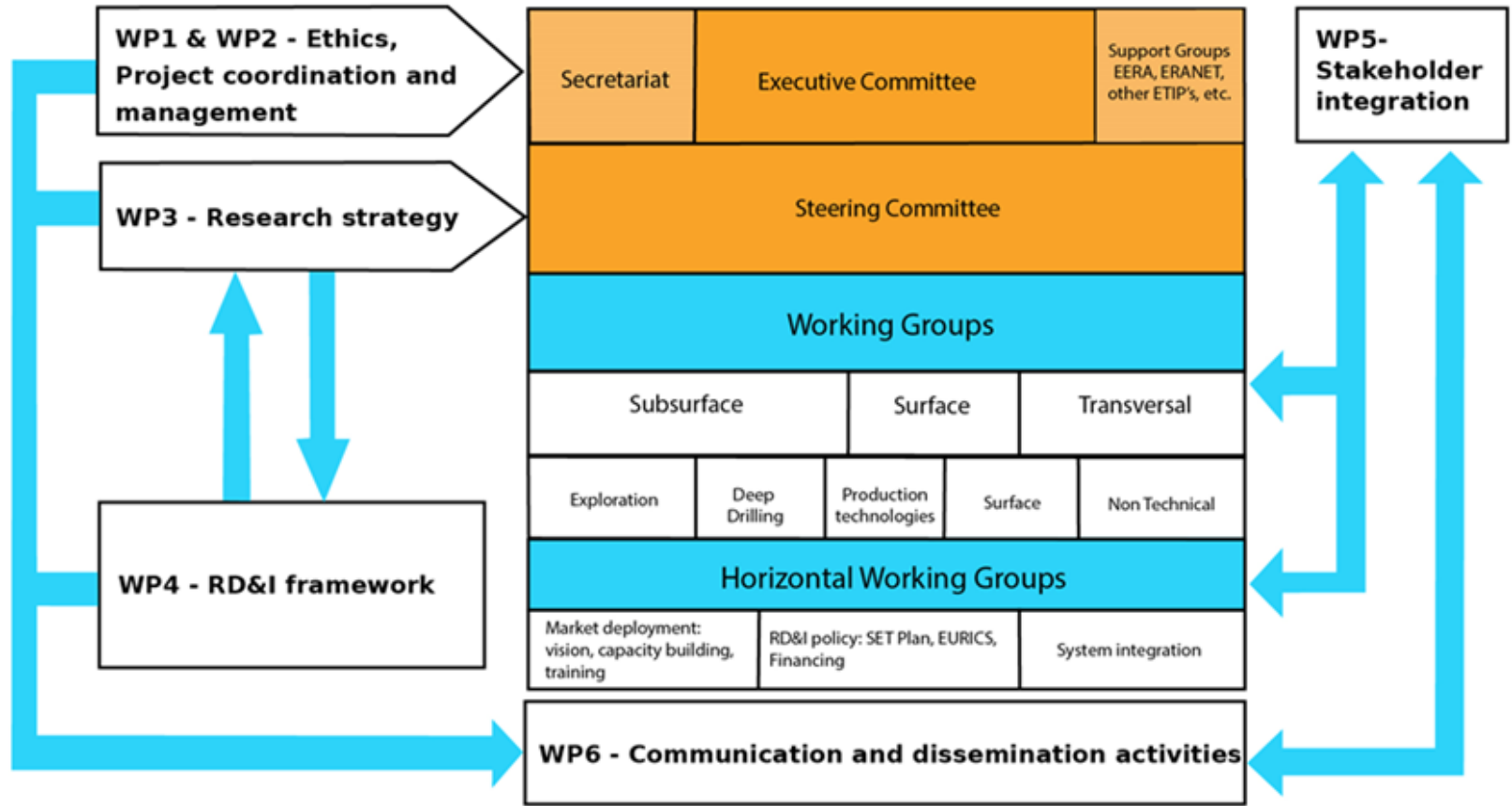
www.etip-dg.eu



Co-funded by the European Union's Horizon 2020 Research and Innovation Programme [GA. N. 773392]

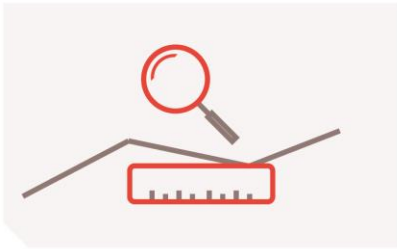
Support to the activities of the European Technology and Innovation Platform on Deep Geothermal

| Participant No* | Participant Organisation Name | Country |
|-----------------|--|---------|
| 1 (Coordinator) | European Geothermal Energy Council (EGEC) | Belgium |
| 2 | National Research Council of Italy – CNR | Italy |
| 3 | Vlaamse Instelling voor Technologisch Onderzoek N.V. - VITO | Belgium |

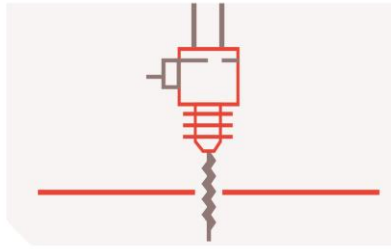


Technologies

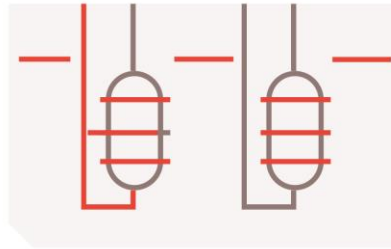
Exploration



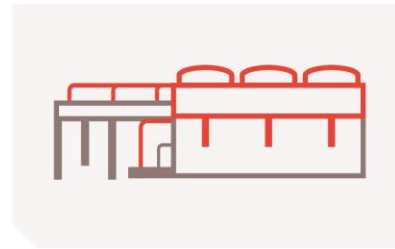
Deep Drilling



Production Technologies



Surface



Non -Technical



Schedule of activities: Gantt chart of DG-ETIP

| Phase / Duration of the action (in months) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Work package 1: Ethics requirements | | | | | | | | | | | | | | | | | | | | | | | | |
| Work package 2: Management | | | | | | | | | | | | | | | | | | | | | | | | |
| Work package 3: Research strategy | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 3.1 data collection&sharing | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 3.2 strategic document | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 3.3. engaging with EC and MS | | | | | | | | | | | | | | | | | | | | | | | | |
| Work package 4 – Framework RD&I | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 4.1. research and innovation policy | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 4.2. financing research | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 4.3. competitiveness | | | | | | | | | | | | | | | | | | | | | | | | |
| Work package 5 – Stakeholder engagement and integration | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 5.1. Engaging | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 5.2. Involving | | | | | | | | | | | | | | | | | | | | | | | | |
| Task 5.3. Outreach | | | | | | | | | | | | | | | | | | | | | | | | |
| Work package 6 – communication | | | | | | | | | | | | | | | | | | | | | | | | |

WP3: Research strategy

- Identifying technical and non-technical barriers to the delivery of innovation to the energy market; meetings and workshops
- Assisting the European Commission and Member States in defining the research programmes, and addressing the mentioned barriers;
- Channels to R&D decision makers

Data sharing platform (up, running and optimised) (month 6)

Vision of Deep Geothermal RD&I – dec 2017

Strategic Research Agenda of Deep Geothermal RD&I (month 18)

Roadmap of Deep Geothermal RD&I (month 24)

Task 3.1 - Data collection, organization and sharing

To build an information platform to support the identification of the most relevant **research priorities**:

- Implementation of a Geothermal Research Search Engine for documents and/or references
 - Geothermal project deliverables library (i.e., H2020, FP7, FP6, ...)
 - Geothermal documents library (e.g., SET-Plan, National roadmaps, market reports, energy sector status, social acceptance documents, regulatory aspects, policies, ...)
- Description of each resource (i.e. metadata)
- Definition of controlled keywords and category
- Interoperable by using international standards
- Organization in a database of the information gathered from documents/projects for strategic analysis (e.g., programme, received funds, topic, coordinator, partners, status, ...)

Geothermal Research Search Engine

ZENODO will act as **back-end** and it guarantees:

- **Safety:** the resources are stored safely for the future in the same cloud infrastructure as CERN's own (Large Hadron Collider) LHC research
- **Funding assignment:** it allows to identify grants, integrated in reporting lines for research funded by the EC via OpenAir
- **Communities:** it is possible to create own complete digital repository accepting or rejecting uploads by creating 'Communities'
- **Citable-Discoverable:** uploading allows to get a Digital Object Identifier (DOI) to make them easily and uniquely citable



A screenshot of the Zenodo search engine interface. The top navigation bar is blue with the Zenodo logo on the left, a search bar containing the text "geothermal", and buttons for "Upload", "Communities", "Log in", and "Sign up". Below the navigation bar, the search results are displayed. On the left, there are filters for "Access Right" (Open: 73, Closed: 14, Restricted: 2), "File Type" (Pdf: 60, Zip: 4, Docx: 3, Jpg: 2, Png: 2, Csv: 1, R: 1, Xlsx: 1), and "Keywords" (Geothermal: 39, Energy: 22, Biodiversity: 16). The main content area shows "Found 89 results." and a list of search results. The first result is "Potential of geothermal systems in Picardy" by Dourlat, Estelle, dated May 18, 2017, with a "View" button. The second result is "European Geothermal Information Platform EGIP - An overview to prepare the implementation" by Calcagno, Philippe; Bragasson, Thorvaldur; Minning, Christian; Sörös, László; Trumphy, Eugenio, dated September 30, 2016, with a "View" button. The third result is "The Development and Deployment of Deep Geothermal Single Well (DGSW) Technology in the United Kingdom" by Collins, Michael A.; Law, Ryan, dated May 18, 2017, with a "View" button.

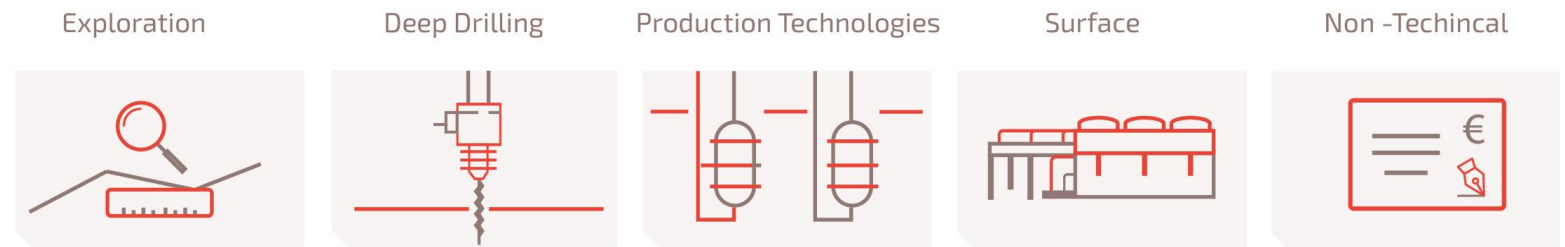
Geothermal Research Search Engine

An easy to use **front-end** will be specially designed and developed.

The front-end will be fully integrated in the ETIP-DG website but it will exploit the features and power of ZENODO repository.

Key feature will be the search engine which will rely on a strategic and controlled assignment of the categories and keywords.

- Suggested categories are the 5 ETIP-DG Working Groups
- Fields available for search: type of resource, publication type, title, authors, language, keywords, communities, grants, others...
- Keywords suggestions:
 - WG category
 - Country/ies of reference
 - ...



WP4: RD&I framework

- Contributing to the SET-Plan activities and strategy;
- Helping define priorities, strategies, R&I investment decisions and programmes
- Financial instruments, 8 case studies
- Competitiveness

Mapping of relevant policy and regulatory issues (month 9)

Strategic planning document for policy activities (month 9)

Position papers, recommendations and strategy papers (month 12)

Policy events (month 15)

Factsheets to present financial instruments for deep geothermal demonstration projects (month 20)

Report on competitiveness of the geothermal industry (month 24)

WP5: Stakeholder integration

- Collaborating between stakeholders in addressing energy system integration challenges

Database of internal stakeholders (month 3)

Recruitment material: booklet (250 ex.) explaining the benefits of DG and describing the objectives and timing of the DG-ETIP (month 4)

Report on common and cross-thematic RD&I needs and complementary RD&I actions (month 8)

Internal stakeholder workshops (month 10 &18)

WP6: Communication

- Conferences
- Website
- Promotional material

Communication strategy and media plan (month 3)

Two Platform flyers (month 6)

Electronic Newsletter for external distribution (month 24)

Upgrade Platform website (month 3)

Annual conference (month 12 & 24)

Short promotional movie (month 18)

Presentation at international conferences

New logo & Website



ETIP-DG

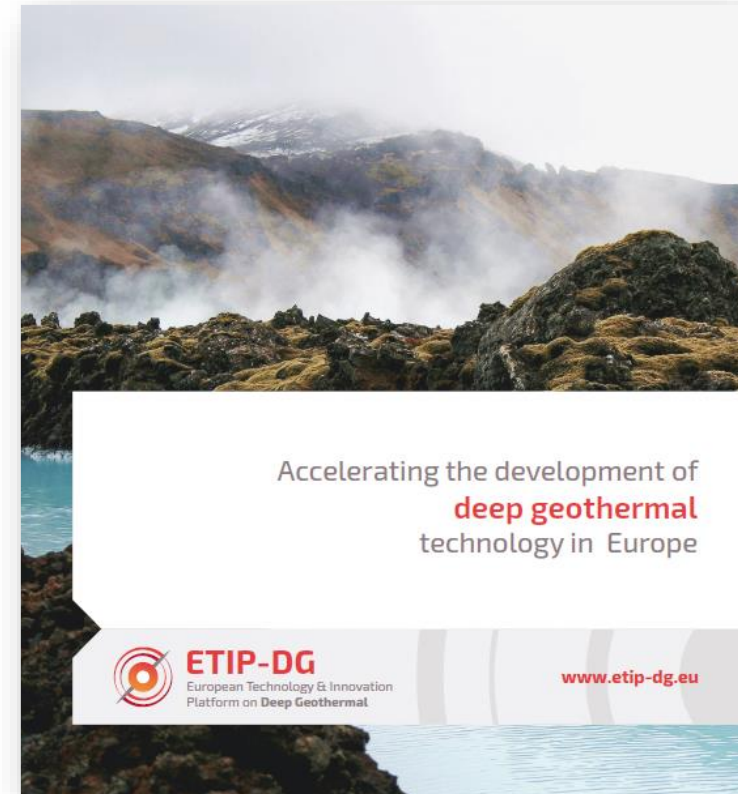
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Temporary landing page online
Full website up by December

Promotional materials

For recruitment and display at fairs & events



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