GEOTeCH is co-funded by the European Community Horizon 2020 Program for European Research and Technological Development (2014-2020) and has received research funding from the European Union.
1. Project Description
2. Partners
3. Results
4. KPI
GEOTeCH tries to stimulate and promote greater utilization of renewable heating and cooling using shallow geothermal GSHP systems through advancement of innovative drilling and ground heat exchanger technologies that are significantly more cost-effective, affordable and efficient than current technology.
RESULTS

4 Demos
http://www.geotech-project.eu/demo-site/

Small-scale BHX demos
- Amsterdam
- Leicester
- Padova

Large-scale FHX demo
- Barcelona

BHX - Borehole Heat Exchangers
FHX – Foundation Heat Exchangers
Hollow Stem Auger Drill Rig
RESULTS

Dual Source Heat Pump
RESULTS

Spiral-Coaxial Borehole Heat Exchanger
RESULTS

Energy Wall – Foundation Heat Exchanger
Monitor initial objectives of GEOTeCH project periodically.

Technical perspectives:

- Drilling Technologies (Dry auger, Drill rig)
- GHX Technologies (BHX, FHX)
- HP Technologies (DSHP)
- EMS Technologies (BEMS)

- Measure and monitor progress towards the objectives
- Creating communication among consortium about current situation of all initial objectives
<table>
<thead>
<tr>
<th>Objectives</th>
<th>KPI IDs</th>
<th>Key Performance Indicators (KPIs) Measures</th>
<th>Measuring unit</th>
<th>Frequency of measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Emissions</td>
<td>DRILL001</td>
<td>Percentage of reduction emissions (baseline previous measurement time) - CO2 emission</td>
<td>if it is CO2 : tCO2eq could be other CO2 emission measurement unit</td>
<td>Continuous</td>
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<tr>
<td>Low noise</td>
<td>DRILL002</td>
<td>Percentage of reduction noise pollutant (baseline previous measurement time)</td>
<td>dBd, dBp, dBf, dBc</td>
<td>Continuous</td>
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<td>Drilling speed</td>
<td>DRILL003*</td>
<td>The speed of the borehole drilling</td>
<td>m/s</td>
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<td>Less capital-intensive equipment</td>
<td>DRILL004</td>
<td>Reduction of cost</td>
<td>Euro/kW device</td>
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<td>Payback Period</td>
<td>DRILL005</td>
<td></td>
<td>years</td>
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<td>Transport costs</td>
<td>DRILL006</td>
<td>Transport costs reduction</td>
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<tr>
<td>Maintenance costs reduction</td>
<td>DRILL007</td>
<td>Reduction of maintenance costs</td>
<td>Euro/year</td>
<td>Yearly</td>
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