

GODRILL

Geo-Drill aims to reduce drilling costs through development of a novel DTH hammer, an advanced drill monitoring system with low-coat and 3D printed sensors and an improved component life through advanced materials and coatings.

Objectives

- risk mitigation for geothermal drilling and thereby reduce drilling cost.
- lifecycle assessment of Geo-Drill systems

Develop a new DTH mud hammer

Develop a Knowledge-based System to reduce technical, financial, and environmental risks and costs

DEVELOPHOLISTIC DRILLING TECHNOLOGY WITH POTENTIAL TO REDUCE COST OF DRILLING TO LARGE DEPTHS AND AT HIGH TEMPERATURE

Develop a drill monitoring system based on 3D printed sensors combined with simulators

Develop advanced materials and coatings to prolong lifetime of drilling components

- 40-50% increase in
- > 60% increase of lifetime for drill bit, hammers, drill stabilizer & drill string components.
- > 20%
 reduction in
 fuel
 consumptior
- 20-30% increase in average ROP due to the reduction of Non Productive Time (NPT) as there will be less triptimes
- 20-30% increase of lifetime for hammers, drill bit, drill stabilizer

Consortium

The Geo-Drill consortium comprises of 12 partners across Europe. All the partners have complementary expertise necessary to develop, disseminate and exploit Geo-Drill project.



PARTNERS



Services

low cost 3D printed sensors & cables



drill monitoring system

Socio-economic impacts

- approx, 29-60% CAPEX reduction for a 5MW deep geothermal plant installation
- reduce global warming potential (GWP) emission by 2,071-9,913 tonnes of CO2 equivalent during the installation of a 5MW deep geothermal plant and in the global context, the annualised saving will be as much as 11-48 million tonnes CO2

for the period 2027 to 2031

- create an annualised global market size of €222 million around Geo-Drill within 2027 to 2031
- create 4,000 to 5,000 new job opportunities around Geo-Drill within 2027 to 2031