



G E O F I T [®]

SMART GEOTHERMAL

Novel geothermal systems, technologies and tools for energy efficient building retrofitting

FACTS IN EUROPE > GEOFIT

Challenge: The building sector is responsible for the 40% of the total energy consumption and represents about a third of Europe's CO2 emissions. Heating and cooling accounts for 50% of this annual energy consumption. Almost half of the EU buildings have boilers installed before 1992, with an efficiency rate of below 60%. Refurbishment rate for energy renovation of existing buildings is currently below 1%. European targets for energy efficiency and renewable energy therefore call for strong improvements of existing buildings.

Opportunity: Shallow geothermal technology has a great potential in Europe, but its adoption is hindered by long installation time and cost, technical difficulty in coupling heat pumps with existing high temperature heating systems, and the risk of structural damages or disruption caused by drilling activities.

Solution: GEOFIT will develop a holistic and novel approach to geothermal retrofitting which is cost-competitive, easy to install, capable to provide high temperature heating and safe.

Tools and methods for viable and cost-effective geothermal retrofitting

Efficient geothermal systems and its components

IDDS Integrated retrofit management framework based on IDDS

Demonstration, exploitation and innovative business models

GEOTHERMAL RETROFITTING

GEOFIT is a 4-year, 24 partner, €10 million Horizon 2020 project aimed at the development and deployment of cost-effective enhanced geothermal systems on energy efficient building retrofitting. This entails the technical development of innovative technologies and tools as:

			Shallow-Earth Non-Standard Heat Exchanger Concepts Coupled to Innovative Drilling Techniques			GEOTHERMAL Systems as Flexible Assets, BIM at the Building Level and Linked into BIM at the City Information Modelling Level
			Ground Penetrating Radar and Structural Health Monitoring to Reduce Risk			Novel Technologies and Integrated System Concepts Delivering Ultra-Efficient Heating and Cooling Solutions

Pilots in Four EU Countries of Different Building Types with Different Soil Conditions

	<i>San Cugat Site Primary School</i>		<i>Talence Site Office Space</i>
	<i>Sant'Apollinare Site Historical Building Conference and Office Center</i>		<i>Galway Site NUIG Kingfisher Sport Center</i>
	<i>Aran Islands Site Residential Dwellings</i>		

PARTNERS



This project has received funding from the E.U. H2020 programme under Grant Agreement No. 792210



www.geofit-project.eu

SUSTAINABLE PLACES
2018
June 27-29, 2018
Aix-les Bains, France