



GeoUS

Brochure II

VSB TECHNICAL
UNIVERSITY
OF OSTRAVA

 **Fraunhofer**



Vaasan yliopisto
UNIVERSITY OF VAASA

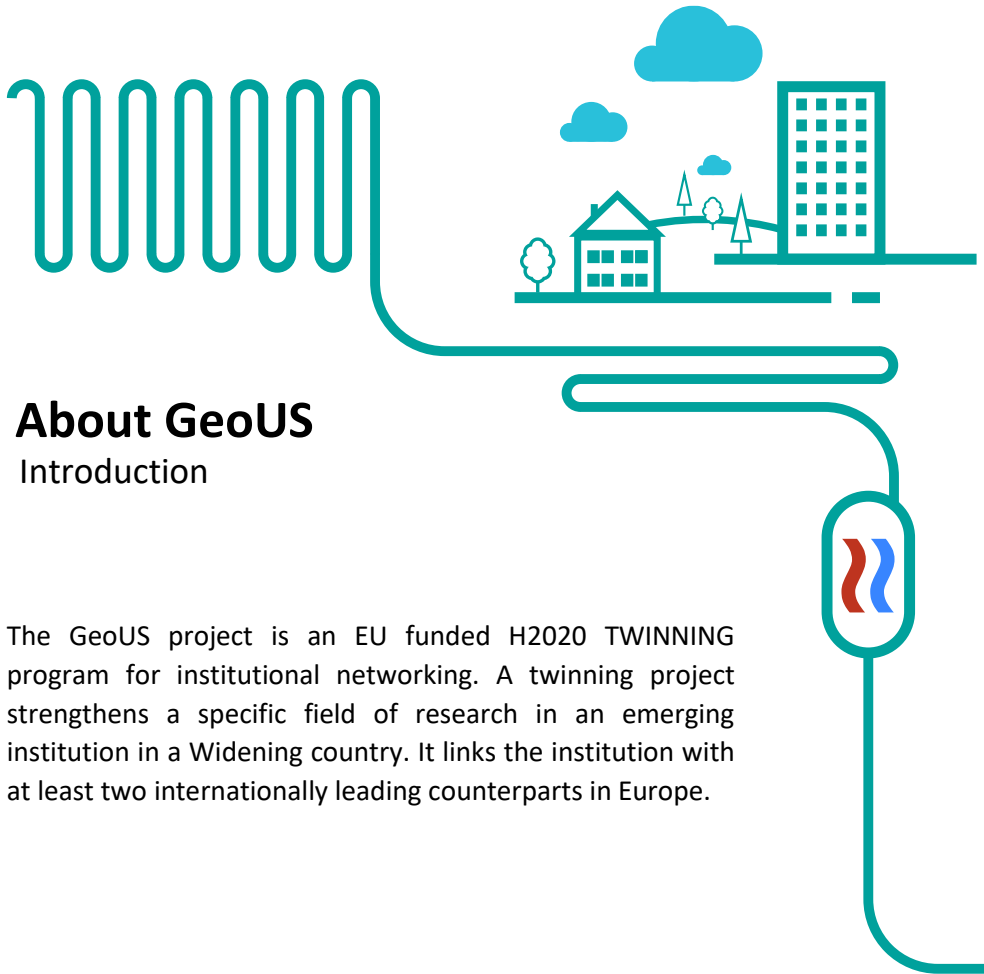


This project has received funding from the **European Union's Horizon 2020 research and innovation programme under grant agreement N°856670.**



OUTLINE

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About GeoUS

Introduction

The GeoUS project is an EU funded H2020 TWINNING program for institutional networking. A twinning project strengthens a specific field of research in an emerging institution in a Widening country. It links the institution with at least two internationally leading counterparts in Europe.

Objectives and Partners

The project's abbreviation GeoUS stands for Geothermal Energy in Special Underground Structures, which is also its main research focus. The consortium of this H2020 project includes three partner institutions:

- VSB – Technical University of Ostrava (VSB-TUO), Czech Republic
- Fraunhofer Institute for Machine Tools and Forming Technology IWU (Fraunhofer-IWU), Germany
- University of Vaasa (UVA), Finland

Its main aim is to support research growth at VSB-TUO (project coordinator) by cooperating with partners FRAUNHOFER and UVA. The GeoUS will enable VSB-TUO to expand its network with leading research organizations in geothermal energy. It also involves early-stage researchers to support future development of research activities impacting in the Moravia Region in line with the Regional and National Research and Innovation Strategy for Smart Specialization (RIS3 Strategy) and ESIF targets.

The project addresses following core objectives:

- Transver of knowledge through collaboration between VSB and two leading European institutions focused on geothermal energy;
- Increase of scientific excellence of VSB-TUO and its capacity to participate in future high-quality research activities and innovation in thermal energy in Central Europe;

- Increase of VSB-TUO's involvement in the scientific and industrial community of geothermal energy exploitation, with emphasis on supporting the international activities of young researchers and research teams;
- Widening the visibility of VSB as a center of excellence for thermal energy;
- Motivate Master's degree students and PhD candidates to develop their career in scientific area of geothermal energy;

Supported Activities

Activities like short-term staff exchanges, expert visits, on-site or virtual trainings, workshops, conference attendance, dissemination and outreach are supported. Within the project, we planned following:

- Webinars lead by experts from partner institutions (?x)
- Workshops at partner institutions (4x)
- Summer Schools at VSB-TUO (2x)
- Internships of students from VSB-TUO to partner institutions (4x)



Recapitulation

What was achieved so far

Our twinning project started on 1st January 2020. The COVID-19 pandemic complicated and delayed some of the activities we had planned, however we still managed to find our way through. This section provides a summary of what we have achieved so far.



Internships

The GeoUS project involves the internships of the students from VSB-TUO at the partner institutions. One of them was an internship of our PhD student Tereza Paterova at Fraunhofer-IWU. The internship involved machine learning applications in several research projects that Tereza participated on. This year, 3 more internships are going to take place - 2 in UVA and 1 in Fraunhofer-IWU.

Summer School

As part of the GeoUS project, VSB-TUO hosted the *1st International Summer School on Scientific writing* with lecturers from UVA and Fraunhofer-IWU. The summer school was attended by a total of 25 students from seven different countries. The lectures focused on the basics of academic writing, literature search, work with selected portals, international cooperation, the mobility opportunities, or the basics of project work.



Figure 1: Photos from the GeoUS activities: Summer School (left), Internship at Fraunhofer-IWU (Right)

Workshops

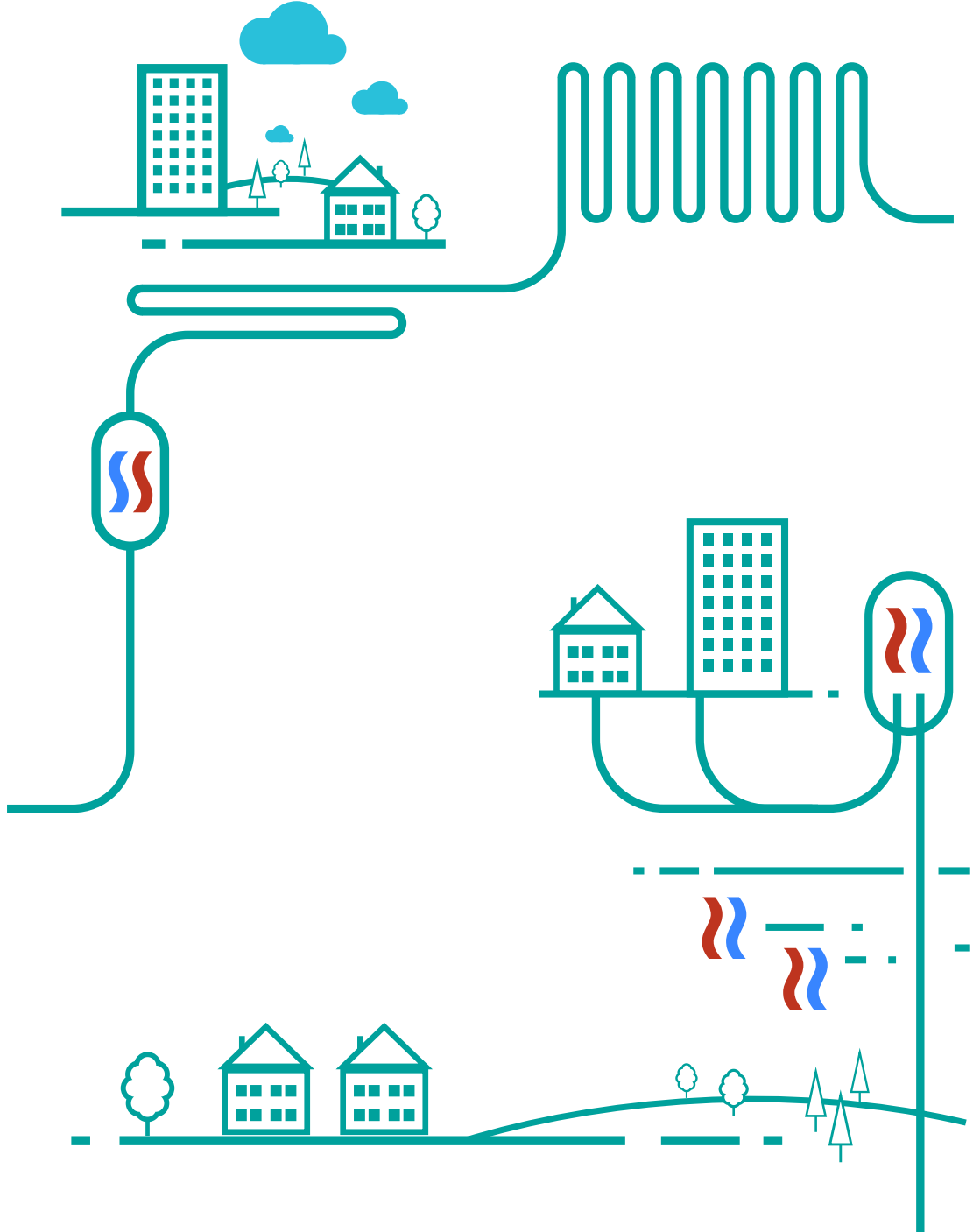
Two workshops took place: one at each of the partners. The first one took place at Fraunhofer-IWU (September 2021) and the second at UVA (December 2021). The programs included guided tours in the partners' facilities, lectures of the experts, presentations of the companies involved in the field of geothermal energy, and discussions regarding future research projects.



Figure 2: Photos from the workshops at partner institutions: Fraunhofer-IWU (left), UVA (right)

Webinars

As part of the project, we carry out regular online courses (webinars) for students and early-stage researchers. In total of 6 Webinars took place. Each was lead by an expert from one of the partners' institutions and covered following topics: 1) Scientific presentation writing and speaking, 2) Proposal writing, 3) Leadership, 4) Responsible Research and Innovation, 5) Citizen engagement, and 6) Creating commercial opportunities from research.



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