CUSTOMIZATION AND IMPLEMENTATION OF A 3D DATA MODEL VIEWER FOR DISSEMINATION, DISTRIBUTION, AND REUTILIZATION OF GEOLOGICAL MODELS AT THE GEOLOGICAL SURVEY OF CATALONIA (ICGC): USE CASES FOR GEOTHERMAL ENERGY.

Ignasi Herms * (1), Montse Colomer (1), Laura Serra (2), Víctor Camps (1), Norbert Caldera (1), Georgina Arnó (1) and GiGa infosystems GmbH's Team (3)

The Geological Survey of Catalonia (within the Institut Cartogràfic i Geològic de Catalunya, ICGC) has been developing 3D geological models from regional to local scales focused on geological knowledge and georesources evaluation) for some years. The software used to build the 3D models were selected in each project based on their own needs, using one to several programs such as GOCAD SKUA, 3DGeoModeller, LeapfrogGEO3D to MOVE suite by Midland Valley.

In order to disseminate and make the data accessible for reuse by external users, in 2022 the ICGC implemented a new 3D viewer based on the GST platform developed by GiGa infosystems GmbH. The base appearance of the 3D data visualization platform and some other functionalities were slightly customized, the Catalan language was incorporated into the language selector and finally, it was put into service. The objective is to disseminate the geological models and outputs of the evaluations of their potential associated geological resources (e.g., geothermal energy), enabling data downloading, and on-the-fly reporting of virtual cross-sections and borehole profiles of the different geological models developed to date.

The presentation will briefly show the website and the platform where the information is published and will expose two use cases of 3D geological models re-used for shallow and deep geothermal potential assessment purposes in the framework of the GeoERA, HotLime and MUSE projects. The current research program of the ICGC plans to continue advancing in the development and publication of other 3D modeling projects in the coming years.