Geological Information and Modeling

Overview

Processing and the use of simulation and visualisation tools will subsequently support the integrated analysis and characterisation of complex subsurface structures and their inherent dynamic processes. This will provide future virtual research environments with means to facilitate the use of existing information for future applications.

In addition, workflows will be established that allow the integration of other existing and new data and applications. This will in turn aid in the overall understanding of complex multi-scale geo-scientific questions. This TCS will work alongside other EPOS TCSs to create an efficient and comprehensive multidisciplinary research platform for the Earth Sciences in Europe.

Objectives

- To design and implement an efficient and sustainable access to geological multi-scale data assets. This is done through the integration of distributed infrastructure components (nodes) governed by the EPOS Geology domain (geological surveys and research organisations communities). These nodes offer a broad range of resources including: geological maps, borehole data, chemical and other analyses, geological models (3D, 4D).
- To provide a shared infrastructure to secure availability of services.
- To promote and implement standards for geological information and 3D models (INSPIRE, IUGS/CGI, OGC, W3C, ISO).
- To ensure integration with EPOS ICS.
- To define future operational governance for the TCS “geology”.

Our services ready for 2019

Virtual Access to data/products/services relying mainly on existing organisations (EuroGeoSurveys-OneGeologyEurope/EGDI)

Geological multi-scale data (e.g. borehole data, sample and analysis data, geophysical data) (Level 1, 2)

Geological maps, subsurface (e.g. temperature, aquifers) and geo-hazard (e.g. landslides, surface faulting) data (Level 3)
Virtual Access to dissemination and exploitation platforms/s

(i) Borehole visualization, including visualization of logs, sampling/coring intervals, analyses; (ii) Geological 3D-4D models, including structural geology models