



Scientific Subsurface data for EPOS – integration of 3D and 4D data services

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The provision of efficient and easy access to scientific subsurface data sets obtained from field studies and scientific observatories or by geological 3D/4D-modeling is an important contribution to modern research infrastructures as they can facilitate the integrated analysis and evaluation as well as the exchange of scientific data.

Within the project EPOS – European Plate Observing System, access to 3D and 4D data sets will be provided by ‘WP15 – Geological information and modeling’ and include structural geology models as well as numerical models, e.g., temperature, aquifers, and velocity. This also includes validated raw data, e.g., seismic profiles, from which the models were derived. All these datasets are of high quality and of unique scientific value as the process of modeling is time and cost intensive. However, these models are currently not easily accessible for the wider scientific community, much less to the public.

For the provision of these data sets a data management platform based on common and standardized data models, protocols, and encodings as well as on a predominant use of Free and Open Source Software (FOSS) has been devised. The interoperability for disciplinary and domain applications thus highly depends on the adoption of generally agreed technologies and standards (OGC, ISO. . .) originating from Spatial Data Infrastructure related efforts (e.g., INSPIRE). However, since not many standards for 3D and 4D geological data exist, this work also includes new approaches for project data management, interfaces for tools used by the researchers, and interfaces for the sharing and reusing of data.