



Implementing the EPOS Thematic Core Services for Seismology - EPOS-S

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<http://www.epos-eu.org/preparatory-phase/working-groups/wg1-seismological-obs.html>

During the EPOS Preparatory Phase (2010-2014) the European community of seismological data and service providers prepared an implementation and development plan for the EPOS Thematic Core Services for Seismology, EPOS-S. Building upon the existing seismological service infrastructures in Europe and a long history of multilateral infrastructure development projects, EPOS-S organizes the services handling data, data products, tools, and software in four pillars: "Waveform Data", "Earthquake Products", "Seismic Hazard and Risk", and "Computational Seismology". The first pillar encompasses continuous and event-based waveforms, metadata from permanent and temporary stations, but also includes historical waveforms; an increased distribution of strong-motion data is envisioned. The second pillar "Earthquake Products" includes for example earthquake bulletins and catalogues and moment tensor solutions, but also other earthquake products not yet routinely distributed such as finite-fault models, or shake maps. The third pillar "Seismic Hazard and Risk" envisions the distribution of hazard relevant products: obviously seismic hazard maps but also fault databases, and ground motion prediction relations for different areas. "Computational Seismology" finally deals with massive data applications including the challenges of data staging but also with the development of tools, standard and distribution mechanisms for research products such as large tomographic models.

In addition, an "e-seismology and common services" component will be formed in order to serve the more basic visualization, discovery and access portal functions across EPOS-S, closely integrated with the EPOS Integrated Core Services. This component will also provide a framework for expert groups and standards bodies (e.g. on community specific data or metadata formats, procedures and guidelines, or agreed methods for specific products).

The implementation and development plan establishes a roadmap for the adaptation of existing and build-up of identified missing service components over the years 2015-2020, in line with the overall build-up of EPOS and ensuring inter-operability and coordination across all EPOS services. This presentation will further reflect our current state of discussion in key issues such as governance structures, access to services (anonymous and authenticated), intellectual property rights considerations and stakeholder interaction, or metadata structures and the data-metadata boundary.