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EPOS data and service provision to scientists and other stakeholders

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EPOS brings together European nations and combines solid Earth science infrastructures and their associated data and services together with the scientific expertise into one integrated delivery system for solid Earth science. By improving and facilitating the integration, access, use, and re-use of solid Earth science data, data products, services and facilities EPOS is developing a holistic, sustainable, multidisciplinary research platform to provide coordinated access to harmonized and quality controlled data from diverse Earth science disciplines, together with tools for their use in analysis and modelling. EPOS has been designed with the vision of creating a single distributed pan-European infrastructure for solid Earth science to support a safe and sustainable society. In accordance with this scientific vision, the EPOS mission is to integrate the diverse and advanced European Research Infrastructures for solid Earth relying on new e-science opportunities to monitor and unravel the dynamic and complex Earth System.

EPOS is presently in its implementation phase, which consists of the EPOS IP project and the legal establishment of EPOS-ERIC. The EPOS Implementation Phase builds on the achievements of the successful EPOS Preparatory Phase project. The EPOS implementation phase will last from 2015 to 2019. The key objectives of the project are: implementing Thematic Core Services (TCS), the domain-specific service hubs for coordinating and harmonizing national resources/plans with the European dimension of EPOS; building the Integrated Core Services (ICS) to provide a novel research platform to different stakeholders; designing the access to distributed computational resources (ICS-D); ensuring sustainability and governance of TCS and EPOS-ERIC.

Here we present the activities planned for the implementation phase focusing on the TCS, the ICS and on their interoperability. We will present and discuss the data and service provision focusing on the data, data-products, software and services (DDSS) presently under implementation, which will be validated and tested during the next eigheen months. To accomplish its mission, EPOS is engaging different stakeholders, not limited to scientists, to allow the Earth sciences to open new horizons in our understanding of the planet Earth and in contributing to prepare society for geo-hazards.

Understanding how the Earth works as a system is critically important to modern society. Society needs resources to support home life, industry and business and it needs security in the face of natural hazards. Volcanic eruptions, earthquakes, floods, landslides, tsunamis, weather, and global climate change are all Earth phenomena impacting on society. Solid Earth science by bringing together many diverse disciplines such as geology, seismology, geodesy, volcanology, geomagnetism as well as chemistry and physics as they all apply to the workings of Earth, is the place where to find answers on how to maintain the Earth a safe, prosperous, and habitable planet.