



## **EPOS: from the conceptual phase to a new ERIC with an integrated legal, governance and financial framework**

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EPOS – European Plate Observing System – is a new European infrastructure that will provide access to standardized solid Earth data and products hosted by national research infrastructures and organisations in Europe. To organize the EPOS catalogue of services, ten Thematic Core Services (TCS) have been defined in the fields of seismology, near-fault observatories, GNSS data and products, volcano observations, satellite data, geomagnetic observations, anthropogenic hazards, geological information modelling, multiscale laboratories and geo-energy test beds for low carbon energy. The EPOS Integrated Core Services Central Hub (ICS-C) will give interdisciplinary access to all data, data products, services and software across all the TCS. Currently, EPOS is structured around 115 services provided by TCS through Service Providers that are responsible for virtual and transnational access.

In October 2018, EPOS was granted ERIC status (European Research Infrastructure Consortium) by the EC, with the support of ten European member-states and three observers. The statutory seat of EPOS will be in Rome, Italy, while the ICS-C will be jointly operated by UK and France with technical support from Denmark.

Achieving the level of integration needed to operate EPOS required preparatory work at the legal, governance, and financial level, that has been supported by the FP7 EPOS-PP and H2020 EPOS-IP projects, including harmonization with national strategies.

From a legal and governance point of view, EPOS can be seen as a three-layer model. The ERIC is the legal body which will host the Executive Coordination Office, and which will manage all of the integrated and transdisciplinary services (ICS-C). The TCS, organized in the form of consortia composed of research organisations, are responsible for the disciplinary services directly accessible through the TCS and the ICS-C. Finally, the national Research Infrastructures, who provide data and/or data products to EPOS through TCS, formalize and acknowledge their contribution and terms of data use through Supplier Letters in the framework of Consortium Agreements. The main challenge is to keep a harmonized framework across all of the EPOS delivery framework, all whilst allowing for disciplinary and national constraints in terms of data policy, access rules and licensing of data and products.

From the financial standpoint, EPOS developed a financial plan relying on membership fees and host premiums by the countries represented at the EPOS ERIC General Assembly, and in-kind contributions by all participating countries through national and international research organisations. EPOS is a distributed research infrastructure and its delivery framework is composed of the ERIC and the TCS external to the ERIC. Building a financial plan for such an infrastructure requires an accurate assessment of the costs of the distributed components (the EPOS Cost Book). Tackling the challenge of financial viability of a distributed research infrastructure, whose costs are largely outside the ERIC perimeter, requires the harmonization between direct funding to the ERIC and national funding to the nodes forming the delivery framework. EPOS experience for financial viability can be of interest to other research infrastructures in the perspective of addressing long-term sustainability.