

Introduction to EPOS

This tutorial is an introduction to the European Plate Observing System (EPOS) and is a part of the level 1 tutorials which teaches you the basic functionalities that the EPOS Integrated Core Services (ICS) Portal has to offer. The level 1 tutorials include, in addition to this introduction tutorial, tutorials on “Data Search” and “Configuration of Services”. The information given in this tutorial, and the other level 1 tutorials, are also available as videos on our YouTube channel [“European Plate Observing System Training”](#).

In this introduction you will get a brief overview of what EPOS is, how EPOS can benefit you and the society and more specifically; what the EPOS ICS Portal can offer you.

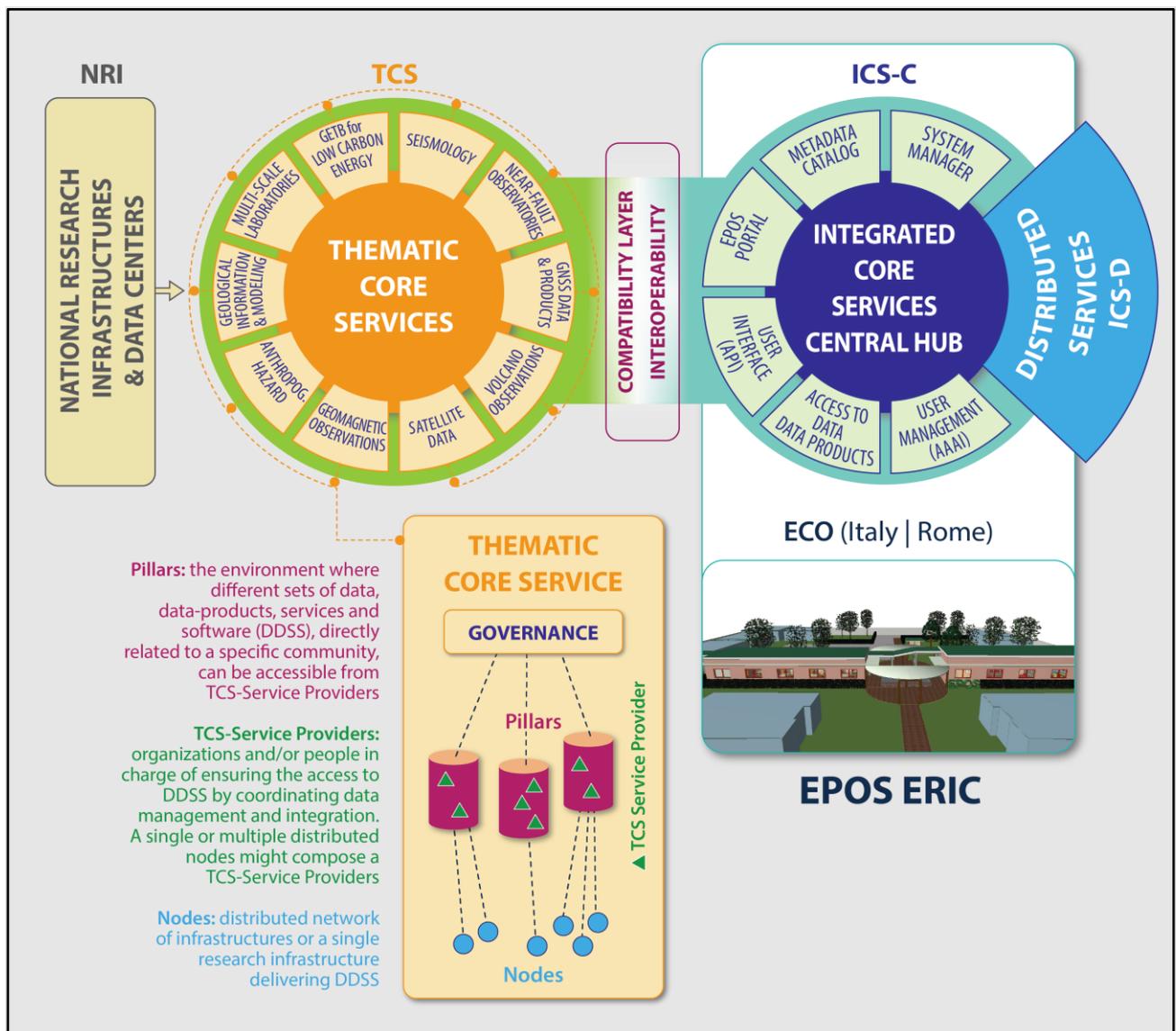


Figure 1: The internal structure of EPOS based on the three main components: National Research Infrastructures (NRI), Thematic Core Services (TCS) and Integrated Core Services (ICS).

What is EPOS?

EPOS, the European Plate Observing System is a European initiative to create and operate a sustainable, distributed and long-term access to solid Earth science data and services. Our vision is to support collaborative research in solid Earth science by making data and services universally accessible and usable.

To achieve our vision, EPOS is integrating a set of diverse European Earth Science National Research Infrastructures or NRIs into one single interoperable platform (**Figure 1**). The solid Earth science data, data products, software and services provided by NRIs are organized into different Thematic Core Services (TCSs). These are, as of now: Seismology, Near-Fault Observatories, GNSS Data and Products, Volcano Observations, Satellite Data, Geomagnetic Observations, Anthropogenic Hazard, Geological Information and Modelling, Multi-Scale Laboratories and Geo-Energy Test Beds for Low Carbon Energy. The TCSs are integrated into the Integrated Core Services Central hub (ICS-C) governed by the EPOS European Research Infrastructure Consortium (ERIC). From here, the data, data products, software and services can be accessed by users in the EPOS ICS Portal.

In other words, each TCS provides their own data, data products, software and services, but the user may easily access the assets services through the EPOS framework, such as the ICS portal.

WHY EPOS?

The distributed structure, briefly described above, makes the EPOS project a pan-European project involving more than 25 countries (Fig. 2), 138 research organizations and 5 international organizations.

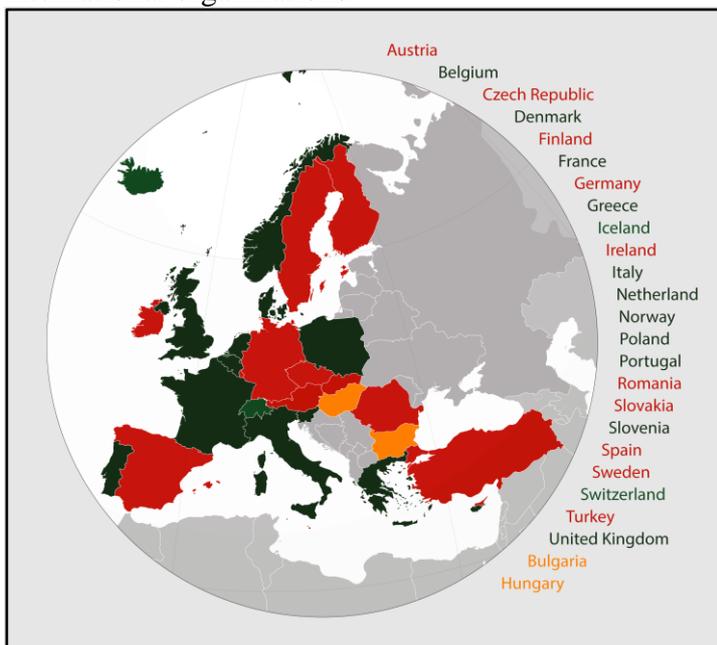


Figure 2: Countries involved in EPOS.

Because of this vast collaboration, EPOS can provide a unique data collection, a collaborating environment and a network of (nearly) all research institutions providing solid Earth Data. Through this, EPOS hopes to boost scientific productivity and creativity through easy open access to data, data products, software and services via integrated e-infrastructures, encouraging multidisciplinary research and international collaborations. EPOS work to enable

researchers, early career scientists and students as well as stakeholders from the public and private sector to become a part of the vast multi-disciplinary network of sharing and accessing data, data products, software and services.

EPOS ICS Portal

The EPOS ICS Portal is available at www.ics-c.epos-eu.org. From the landing page you can click on the different TCSs to access TCS community specific links to e.g. external community portals, (Fig. 3, box 1). Along the bottom line of the landing page, we find four more services that EPOS provides, (Fig. 3, box 3).

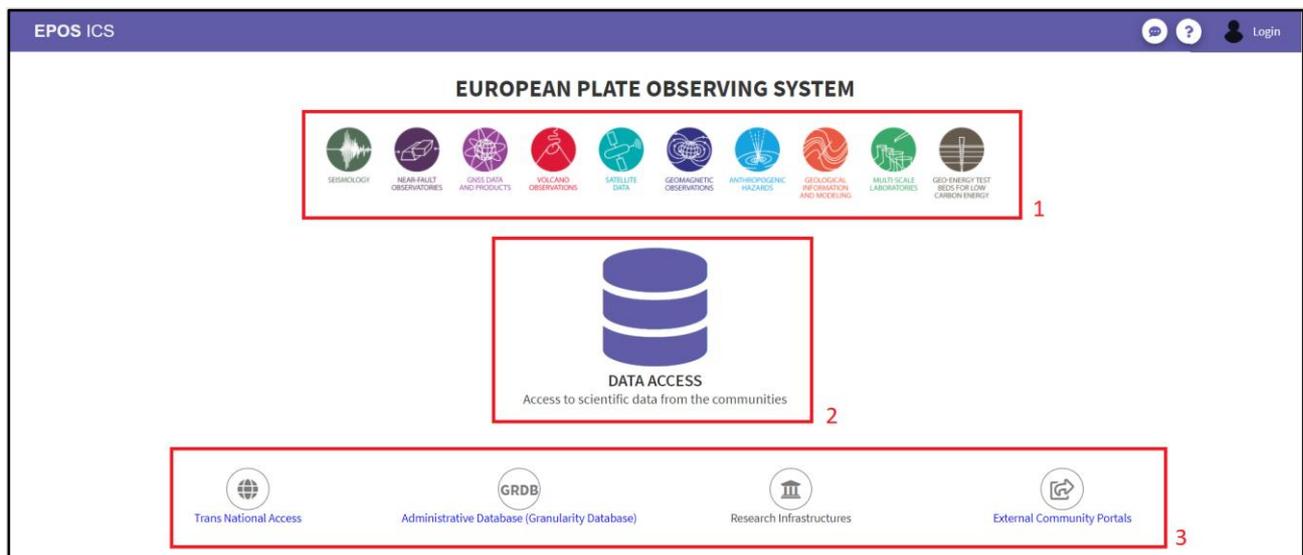


Figure 3: The landing page of the ICS Portal.

The first service is the Transnational Access which aims to give access to the wide range of world class laboratory infrastructures available among the TCSs, including high pressure-temperature rock and fault mechanics and rock physics facilities, to electron microscopy, micro-beam analysis, analogue modelling and paleomagnetic laboratories. The second service is the Granularity Database which is a web-application for the TCSs to manage information about their data, data products, software and services. The third item is currently marked by a placeholder for the planned service on giving access to existing Research Infrastructures. Under the fourth item, the External Community Portals, you can find links to several portals provided by different institutions integrated in the TCSs.

In the middle of the page, a link to the main EPOS ICS web portal is provided for accessing Solid Earth data in Europe, (Fig. 3, box 2). Currently, EPOS is in the pre-operational phase and the portal is still under development. The current version allows for search, exploration and download of datasets from different scientific domains in solid Earth science. To find out how to use the ICS Portal, and what it offers, please check out the video or written basic level 1 tutorial on “data search”.