EPOS a long term integration plan of research infrastructures for solid Earth Science in Europe

Preparatory Phase Project (2010-2014)

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What is EPOS?

**EPOS** is a long-term integration plan that aims to create a single sustainable, permanent and distributed infrastructure that includes:

- geophysical monitoring networks
- local observatories (including permanent in-situ and volcano observatories)
- experimental & analogue laboratories in Europe

**EPOS** will give open access to geophysical and geological data and modelling tools, enabling a step change in multidisciplinary scientific research into different areas.
EPOS infrastructure concept

- Satellite observation infrastructure
  - Permanent Networks (ORFEUS)
  - In-situ observatories
  - Labs Rock Mechanics
  - Lab Analogue Modelling
  - Supersites
  - Satellite Data

- Geophysical repositories
- Volcano observatories
- Computational facilities
- Data mining, archives

- Ocean observation infrastructure
  - Ocean Bottom Seismometers – EMSO
  - Marine Geophysics (tsunami hazard, volcanology, and others)

- User Interface
- European Plate Observing System

- Space Observations DInSar – ESA, GEOSS, GMES, and others

- Users, science, education, public
EPOS: the Partnership

Who?

20 partners
18 countries

6 associate partners
5 countries

On going initiatives for integrating the partnership:
Bulgaria, Belgium, Russia, .....
The existing national research infrastructures are integrated into the EPOS Data Centres, which represent community specific services for data archiving and mining having their own computational resources.

Community specific data centres are further integrated by the EPOS Core Services, representing the infrastructure layer consisting of common data services.

EPOS data service infrastructure is going to serve multiple communities studying the solid Earth dynamics.

How?

The EPOS elements:
Progress of EPOS PP project (1\textsuperscript{st} year)

- We have completed the first inventory of RIs we are going to integrate in EPOS. Updating in process.

- Most of the monitoring infrastructures and existing facilities are operational. Data already available. \textbf{Existing Data Centers}. Web-services operational!

- We have involved the data providers and identified & partially involved users (stakeholders categories I & II)

- We are approaching Governmental stakeholders, funding agencies and industry (categories III & IV)

- The design of the EPOS Core Services is in progress
Thank you for attention

Possible links to JPIs

• Natural hazards
• Risk mitigation
• Contributing to increasing resilience to natural hazards
• Application of Early Warning Systems
• Data and tools for education and training
• Contribution to capacity building

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