



## **Achieving integration through EPOS**

Keith Jeffery (1), Daniele Bailo (2), and the EPOS IT team

(1) Keith Jeffery Consultants, (2) EPOS - INGV - Istituto Nazionale di Geofisica e Vulcanologia, Roma, Italy  
(daniele.bailo@ingv.it)

EPOS (European Plate Observing System) is a large scale research infrastructure within the ESFRI (European Strategic Forum for Research Infrastructures) roadmap. EPOS is now in IP (implementation phase) after a successful PP (preparatory phase). EPOS consists of essentially two components, one ICS (Integrated Core Services) representing the integrating ICT (Information and Communication Technology) and many TCS (Thematic Core Services) representing the scientific domains. The architecture developed, demonstrated and agreed within the project during the PP is now being developed utilising co-design with the TCS teams and agile, spiral methods within the ICS team.

EPOS has now demonstrated, with a prototype GUI (graphical user interface) access to – and search and retrieval from – a rich metadata catalog based on CERIF (Common European Research Information Format: an EU recommendation to Member States). Furthermore the selected services – themselves operating within the TCSs on distributed heterogeneous systems – are activated to return results as defined by each service. This achieves the first goal; to provide homogeneous access over heterogeneous services.

Current work has several threads: populating the catalog with more assets to provide a richer research environment; improving the GUI including more sophisticated trust, security and privacy; laying the basis for composition, editing and deployment of workflows across distributed heterogeneous systems and the provision of a rich set of services for data analytics, simulation and visualisation.

EPOS depends on the rich metadata catalog which (a) provides the user interface – and hence users – with a homogeneous view over the heterogeneous assets; (b) defines the ‘view of the world’ for an EPOS user. Research communities choose which assets to expose in the catalog based on their own criteria and management considerations. EPOS makes them available.