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Virtual Hubs for facilitating access to Open Data

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In October 2014 the ENERGIC-OD (European NEtwork for Redistributing Geospatial Information to user Communities - Open Data) project, funded by the European Union under the Competitiveness and Innovation framework Programme (CIP), has started.
In response to the EU call, the general objective of the project is to "facilitate the use of open (freely available) geographic data from different sources for the creation of innovative applications and services through the creation of Virtual Hubs".

In ENERGIC-OD, Virtual Hubs are conceived as information systems supporting the full life cycle of Open Data: publishing, discovery and access. They facilitate the use of Open Data by lowering and possibly removing the main barriers which hampers geo-information (GI) usage by end-users and application developers. Data and data services heterogeneity is recognized as one of the major barriers to Open Data (re-)use. It imposes end-users and developers to spend a lot of effort in accessing different infrastructures and harmonizing datasets. Such heterogeneity cannot be completely removed through the adoption of standard specifications for service interfaces, metadata and data models, since different infrastructures adopt different standards to answer to specific challenges and to address specific use-cases. Thus, beyond a certain extent, heterogeneity is irreducible especially in interdisciplinary contexts. ENERGIC-OD Virtual Hubs address heterogeneity adopting a mediation and brokering approach: specific components (brokers) are dedicated to harmonize service interfaces, metadata and data models, enabling seamless discovery and access to heterogeneous infrastructures and datasets.

As an innovation project, ENERGIC-OD will integrate several existing technologies to implement Virtual Hubs as single points of access to geospatial datasets provided by new or existing platforms and infrastructures, including INSPIRE-compliant systems and Copernicus services. ENERGIC OD will deploy a set of five Virtual Hubs (VHs) at national level in France, Germany, Italy, Poland, Spain and an additional one at the European level. VHs will be provided according to the cloud Software-as-a-Services model.

The main expected impact of VHs is the creation of new business opportunities opening up access to Research Data and Public Sector Information. Therefore, ENERGIC-OD addresses not only end-users, who will have the opportunity to access the VH through a geo-portal, but also application developers who will be able to access VH functionalities through simple Application Programming Interfaces (API).

ENERGIC-OD Consortium will develop ten different applications on top of the deployed VHs. They aim to demonstrate how VHs facilitate the development of new and multidisciplinary applications based on the full exploitation of (open) GI, hence stimulating innovation and business activities.