




InGeoCloudS: a cloud-based platform for the publication and dissemination of geographical scientific data


InGeoCloudS - Inspired Geodata Cloud Services - is a project, co-funded by the European Commission under the Information & Communication Technologies Policy Support Programme, that kicked off in February 2012 and will end in July 2014. It aims at demonstrating that a Cloud infrastructure can provide efficient and competitive solutions for creating, sharing, disseminating and aggregating spatial environmental data. On top of the implementation of INSPIRE-compliant services for the publication of public environmental data, InGeoCloudS is also interested in fostering the development of Linked Open Data approaches. It will thus be possible, not only to store and share data, but also to query and visualize different data from various data providers as if they were integrated in a single repository.


Based on the experience gained throughout the course of the project, InGeoCloudS will provide accurate guidelines to support organizations, such as geological surveys, in their efforts to move public data and services to the Cloud and make them available as well as interoperable.


The Team: almost 30 people from 8 organizations and 5 European countries

One of the added-values of InGeoCloudS lies in the successful collaboration between different partners, either IT leaders or major data and use case providers:

 **AKKA Informatique et Systèmes (AKKA, France)** is the coordinator of the project. AKKA bring its expertise regarding both the coordination of EC projects and the IT services. As an IT solution provider, it participates in defining and implementing the architecture and in leading the design, development and integration of the system for the pilot demonstrations.

 **The Bureau de Recherches Géologiques et Minières (BRGM, France)** is the French geological survey in charge of the management of geo-resources and subsurface domain. It contributes to the project as a data provider but also as a manager of information systems on the web and as a partner for administrations and local communities.

 **The Foundation for Research and Technology Hellas (FORTH, Greece)** is one of the largest research centers in Greece, carrying for instance R&D activities in the field of computer sciences. It participates in the implementation of the data management services and provides the infrastructure to publish geodata as Linked Data.

 **The Geološki Zavod Slovenije (GeoZS, Slovenia)** is the public research institute that provides and stores geoscientific information of the Republic of Slovenia. It acts as a data provider, a manager of information systems on the web and a demonstrator, providing the use case of dynamic landslide susceptibility mapping due to higher precipitation levels.




INSPIRE


The INSPIRE Directive defines a set of rules and requirements regarding the publication and sharing of environmental data by public organizations to ensure that these data are made fully accessible for public and available for re-use across Europe. To achieve this goal, the Directive requires common Implementing Rules (IR) to be adopted in a number of specific areas: Metadata, Data Specifications, Network Services, Data and Service Sharing, Monitoring and Reporting.

In order to help public bodies in their fulfilment of INSPIRE obligations, the European Commission supports, through various actions and initiatives, projects assessing cloud-based solutions for spatial information management.

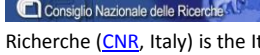


 **The Geological Survey of Denmark and Greenland (GEUS, Denmark)** is a research institute responsible for instance for geological mapping and data collection and storage. It is both a data provider and a demonstrator and it provided the use case dealing with pesticides in groundwater.




 **The Ethniko Kentro Viosimis & Aeiforou Anaptixis (EKBA-IGME, Greece)** is the national geological survey of Greece, supplying geosciences solutions and holding national geoscientific information databases. It contributes to the project by providing geodata and building bridges with local communities. Besides, it will publish a use case for the management of groundwater resources in granular aquifers.



 **The Consiglio Nazionale delle Ricerche (CNR, Italy)** is the Italian national research council in charge of carrying out various research and transfer activities to foster national scientific, technological, economic and social development. The Information Science and Technologies Institute of the CNR involved in the project acts a major specialist in Cloud technologies usage.



 **The Earthquake Planning and Protection Organization (Eppo, Greece)** is a multidisciplinary European research centre involved for example in the compilation of seismic hazard maps in Greece. It acts as a data provider, a manager of information systems on the web and a demonstrator. Their Shakemaps use case is featured in InGeoCloudS Pilots.

THEY TALK ABOUT US

◆ ERCIM NEWS MAGAZINE (July 2013)

"InGeoCloudS: A Cloud-Based Platform for Sharing Geodata Across Europe"

To read the article: [Ercim-news](#)

◆ INTERNATIONAL INNOVATION MAGAZINE (April 2013)

"The Sky is The Limit: Benoit Baurens describes InGeoCloudS, a cost-effective platform for data publication and services that is designed to promote collaboration and innovative development in the European environmental and geological science domain"

To read the article: [International innovation](#)

◆ EUROGEOSURVEYS NEWSLETTER (April 2013)

"The Inspired Geodata Cloud Services Project"

To read the article: [Eurogeosurveys](#)

◆ INGEOCLOUDS ON GREEK NATIONAL TV CHANNEL ET3 (April 2012)

To watch the interview (in Greek): [InGeoCloudS on Greek TV](#)

◆ EGD-SCOPE PROJECT WEBSITE

EGDI-Scope has identified InGeoCloudS, along with few other projects, as a related project worthy of interest.

To visit their website: [egdi-scope](#)

InGeoCloudS already in use

LATEST NEWS

◆ ScinetNatHaz project interested in the Linked Open Data InGeoCloudS conceptual model (GSOM)

ScinetNatHaz project wants to use InGeoCloudS conceptual model to manage datasets coming from Natural Hazards' scenarios including earthquakes, landslides and floods.

◆ INSPIRE Conference 2013, Florence

InGeoCloudS consortium gave a presentation entitled "From a Classical Web Mapping Publication to a INSPIRE Service Architecture in The Cloud". We described the technical architecture based on a set of scalable and independent components, from high-performance file system (glusterFS) to data publication WMS/WFS server (MapServer) including also elastic database (PostGres/PostGIS) and explained the deployment in the Amazon Web Service cloud infrastructure.

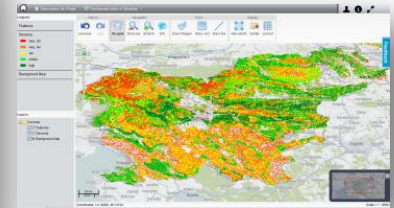
◆ Conference of the Geoscience Information Consortium

InGeoCloudS consortium attended the 28th Conference of the Geoscience Information Consortium that took place in Orleans in June 2013. We presented both the project as a whole and one of the use cases featured on the Pilot 1: "InGeoCloudS: open Cloud-based services for Geospatial Data management in an INSPIRE context" & "InGeoCloudS use case - Application for dynamic landslide hazard maps prognosis in Slovenia due rainfall forecast in the cloud".

Some significant results have already been achieved, materialized by a first pilot which has been running since March 2013. Four use cases are currently featured, dealing with groundwater management, landslide susceptibility mapping, earthquake shakemaps and the self-publication of geo-datasets.

The successful implementation of these use cases gives a first insight into the opportunities offered by pan-European collaboration in the field of environmental data. Coming Pilot2 shall soon offer new partners the possibility of joining this collaboration.

[Visit Pilot 1](#)



What's next?

It is a busy period that awaits for InGeoCloudS partners after the summer holidays.

Come and see us at major international events:

And stay tuned for upcoming news:

- ◆ **15th Annual Conference of the International Association for Mathematical Geosciences:** "Frontiers of mathematical geosciences, new approaches to understand the natural world" (2-6 September 2013, Madrid, Spain)
Presentation: *Inspired Geodata Cloud Services – Geohazard Use Case*
- ◆ **EGDI-SCOPE Stakeholder workshop** (10 September 2013, Malta)
- ◆ **FOSS4G conference:** Global conference for Open Source Geospatial Software (17-21 September 2013, Nottingham, England).
Presentation: *Open Geospatial Data and Services Publication on the Cloud: the INGEOCLOUDS open source approach*
- ◆ **ESA PV :** "Ensuring Long-Term Preservation and Adding Value to Scientific and Technical Data" (4-6 November 2013, Frascati, Italy).
Presentation: *InGeoCloudS : Cloud-based Services for Geospatial Data Publication and Access in an INSPIRE Context*

- ◆ **Using InGeoCloudS platform for publishing and linking your own data?** In September 2013, Pilot 2 will be opened to a wider audience. It will then be possible for you to try InGeoCloudS platform and services for free.
- ◆ **Attending a workshop of InGeoCloudS?** Right now, the project's consortium is planning a workshop that shall take place in November 2013. It will involve both the presentation of the second implementation of InGeoCloudS pilot and a training session on InGeoCloudS usage by data and application providers as well as end-users.
- ◆ **Testing your knowledge about InGeoCloudS and related domains on your mobile phone?** It will soon be possible with the release of a mobile application including information about the project and a quiz.

We will tell you more about all these exciting forthcoming events in our next Newsletter in September 2013.

In the meantime, the whole InGeoCloudS Team wishes you either good holidays or a good return if you are back at the office!

