



# **Geospatial IG**

**Suchith Anand, Peter Baumann,  
Andrea Perego, Luciene Delzari**

**research data sharing without barriers**  
**[rd-alliance.org](http://rd-alliance.org)**

# Meeting Agenda @RDA4

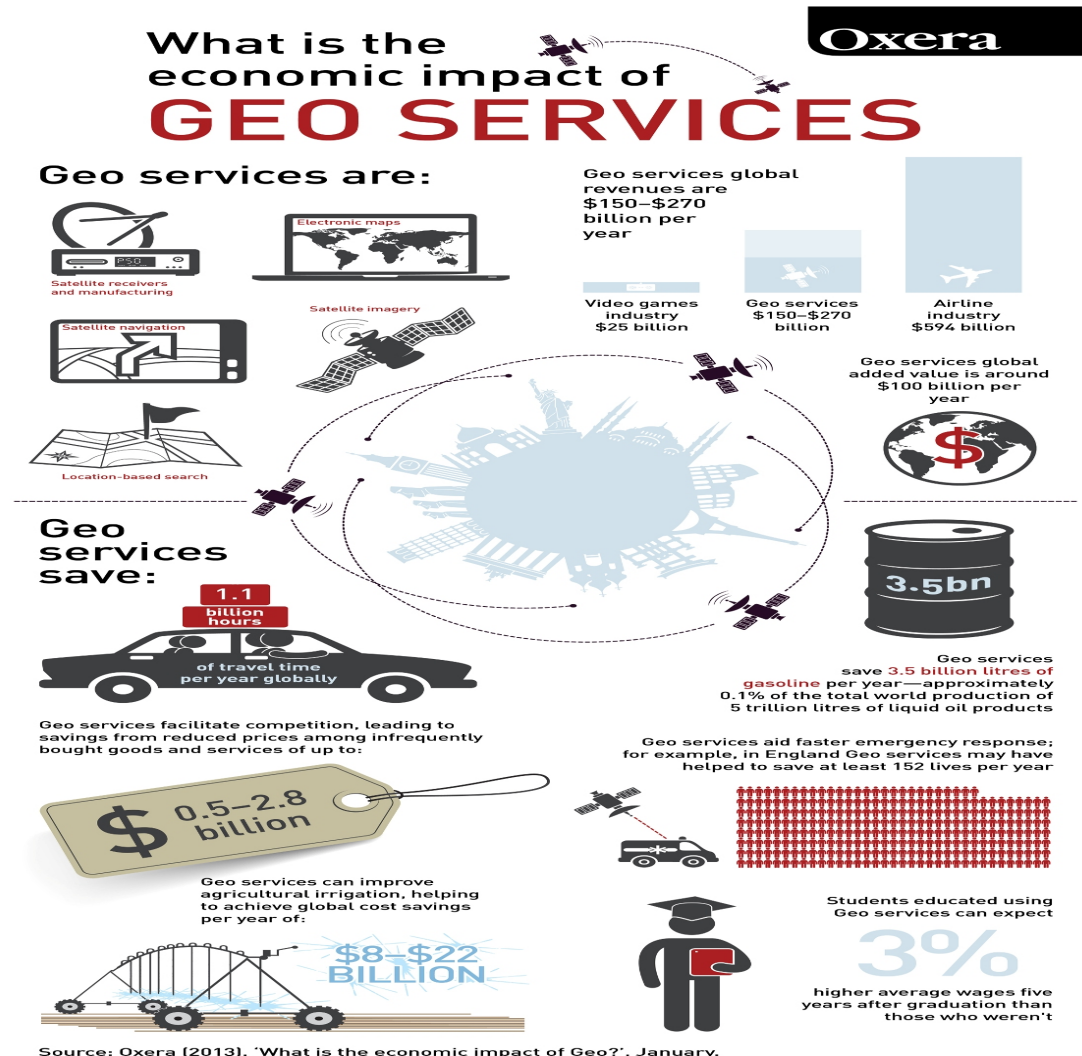
**Date & Time: BREAKOUT2 Monday 22 Sept 2014, 13.30 – 15.00**

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## **Draft agenda Geospatial IG**

- Introduction and welcome to new members
- Updates on current status of Geospatial IG & joint paper on Geospatial Data Science - [Suchith Anand](#) (University of Nottingham)
- Updates on Joint W3C/OGC Spatial Data on the Web WG - [Phil Archer](#) (W3C)
- Updates on Urban Quality of Life Indicators - [Chris Pettit](#) (University of Melbourne)
- Spatial ontology design patterns - [Gary Berg-Cross](#)
- Updates on INSPIRE and geospatial data in the EU - [Andrea Perego](#) (European Commission - Joint Research Centre)
- OGC Big Data standards - [Peter Baumann](#) (Jacobs University)
- Semantic Pathways for Building a Spatially Thinking Society: GEOTHNK - [Suchith Anand](#) (University of Nottingham)
- Ideas for WGs for specific actions in Geospatial IG - *All*

# Why is it important - Location is a key integrator for helping bring together data from different sources for helping solve global societal challenges



Source: Oxera (2013), 'What is the economic impact of Geo?', January.

# Big Picture - Open Geospatial Science is key for innovation in GIS

science [sahy-uhns] [Show IPA](#)

**noun**

1. a branch of knowledge or study dealing with a body of facts or truths systematically arranged and showing the operation of general laws: *the mathematical sciences.*
2. systematic knowledge of the physical or material world gained through observation and experimentation.
3. any of the branches of natural or physical science.
4. systematized knowledge in general.
5. knowledge, as of facts or principles; knowledge gained by systematic study.

EXPAND

Ability for showing the operation of general laws is fundamental for scientific research

## Geospatial Standards (for ex. OGC spec.)



## Open Data

data.gov.uk <sup>BETA</sup>  
Opening up government



**OpenStreetMap**  
The Free Wiki World Map

**Search** [Where am I?](#)

examples: 'Alkmaar', 'Regent Street, Cambridge', 'CB2 5AQ', or 'post offices near Lünen' [more examples...](#)

OpenStreetMap is a free worldwide map, created by people like you.

The data is free to [download](#) and [use](#) under its [open license](#). [Create a user account](#) to improve the map.

## Maturity of open source software (for ex. OSGeo stack)

### OSGeo Projects

#### Web Mapping

- deegree
- Mapbender
- MapBuilder
- MapGuide Open Source
- MapServer
- OpenLayers

#### Desktop Applications

- GRASS GIS
- OSSIM
- Quantum GIS
- gvSIG

#### Geospatial Libraries

- FDO
- GDAL/OGR
- GEOS
- GeoTools
- MetaCRS

#### Metadata Catalog

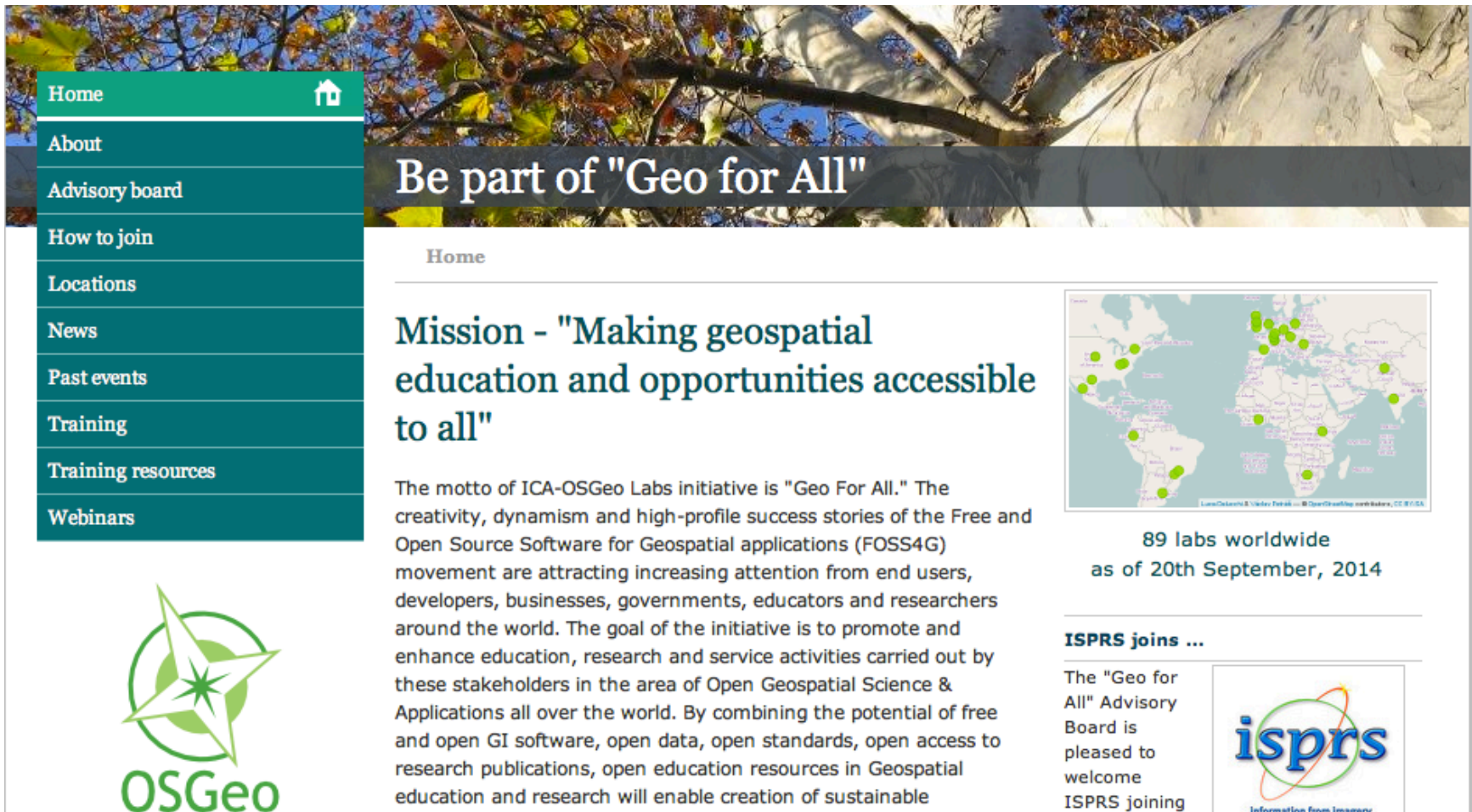
- GeoNetwork

#### Other Projects

- Public Geospatial Data Education and Curriculum

Project in incubation

# Some background



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About

Advisory board

How to join

Locations

News

Past events

Training

Training resources


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## Be part of "Geo for All"

Home

### Mission - "Making geospatial education and opportunities accessible to all"



The motto of ICA-OSGeo Labs initiative is "Geo For All." The creativity, dynamism and high-profile success stories of the Free and Open Source Software for Geospatial applications (FOSS4G) movement are attracting increasing attention from end users, developers, businesses, governments, educators and researchers around the world. The goal of the initiative is to promote and enhance education, research and service activities carried out by these stakeholders in the area of Open Geospatial Science & Applications all over the world. By combining the potential of free and open GI software, open data, open standards, open access to research publications, open education resources in Geospatial education and research will enable creation of sustainable



89 labs worldwide  
as of 20th September, 2014

#### ISPRS joins ...

The "Geo for All" Advisory Board is pleased to welcome ISPRS joining



<http://www.geoforall.org>



# How we started

- The BoF session on Geospatial Information, held on 26th March 2014 at the RDA 3rd Plenary in Dublin recognized the importance of addressing issues related to the interoperability and re-use of geospatial information in the framework of RDA.

<https://rd-alliance.org/blogs/bof-geospatial-information-meeting-rda3.html>

# Geospatial IG of Research Data Alliance

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## Geospatial IG



The Geospatial Interest Group is a domain oriented interest group to coordinate and build synergies on topics related to geospatial data. Though there has been lot of developments and advances in geo data collection through mobile communications, sensor platforms, spatial search, and pervasive computing but still, the inter-disciplinary research needed to transform raw data into useful intelligence, to improve the planet's environmental, economic and societal well being, remains constrained by a range of barriers - disciplinary, organisational, historical, and a non-existent or non-rigorous approach to quantifying uncertainty in collected datasets.

**Status:** Pending action

**Chair(s):** Suchith Anand, Peter Baumann, Luciene Delazari, Andrea Perego (tbc)

**Group Email:** [rda-geospatial-ig@rda-groups.org](mailto:rda-geospatial-ig@rda-groups.org)

**Case Statement:**





### Recent Activity

Filter the group's recent activity based on content type or author

Type

Author (username)

Surname

-  [Group Wiki](#)
-  [Forum](#)
-  [File Repository](#)
-  [Group Mailing list Archive](#)

### Web Conference Details

-  [Webconference Geospatial IG](#)



The Geospatial Interest Group will help to coordinate activities and promote good practices in areas including:

- geospatial data sharing policies;
- policies for documenting and sharing geospatial analytical models
- geospatial data management plans;
- quantify uncertainty in datasets;
- geospatial data re-use across domains, and cross-domain interoperability of location and place information.



# RDA groups which have synergies

- Metadata IG
- Metadata Standards Directory WG
- Data in Context IG
- Big Data Analytics IG
- Agriculture IG
- Urban Quality of Life Indicators WG
- Defining Urban Data Exchange for Science IG
- Publishing Data IG
- Data Citation WG

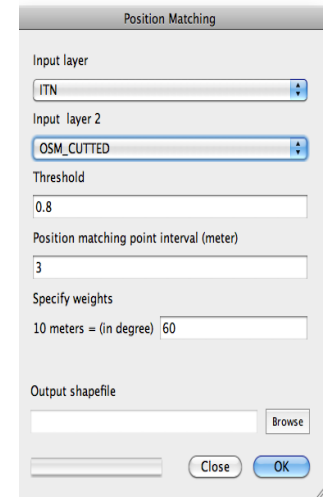
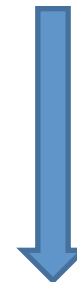
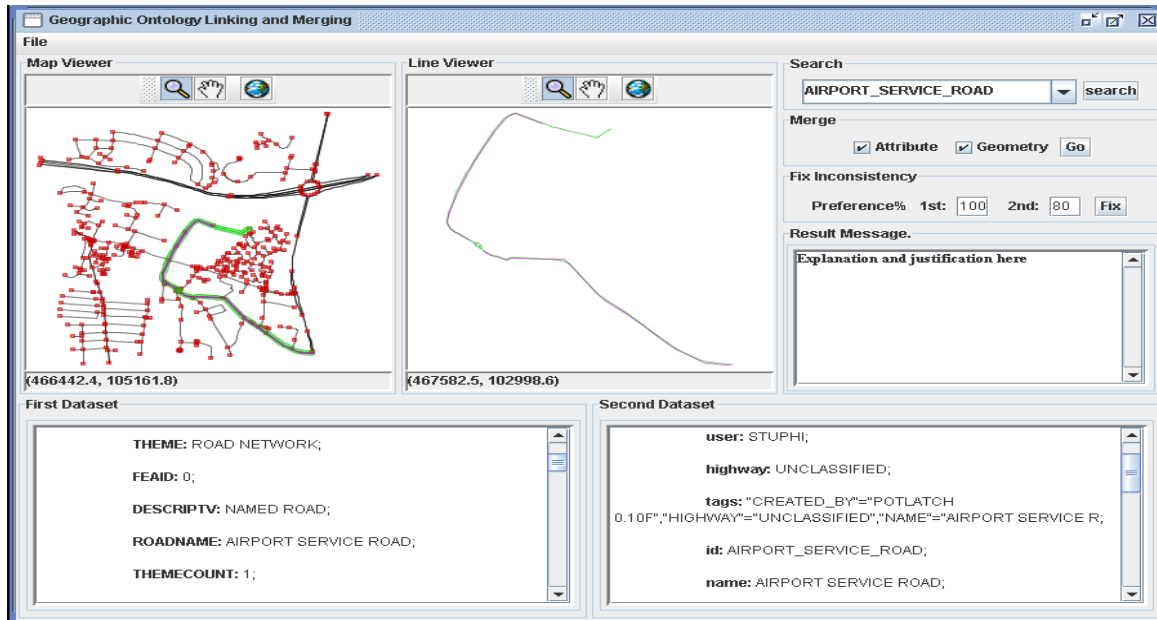
# Where are we now?

- Will be updating our Case statement following review by TAB
- We have over 50 members
- Working on joint paper on Geospatial Data Science
- Working with WG on Urban QoL indicators (Chris, Max et.al)

We welcome ideas/inputs for collaborations

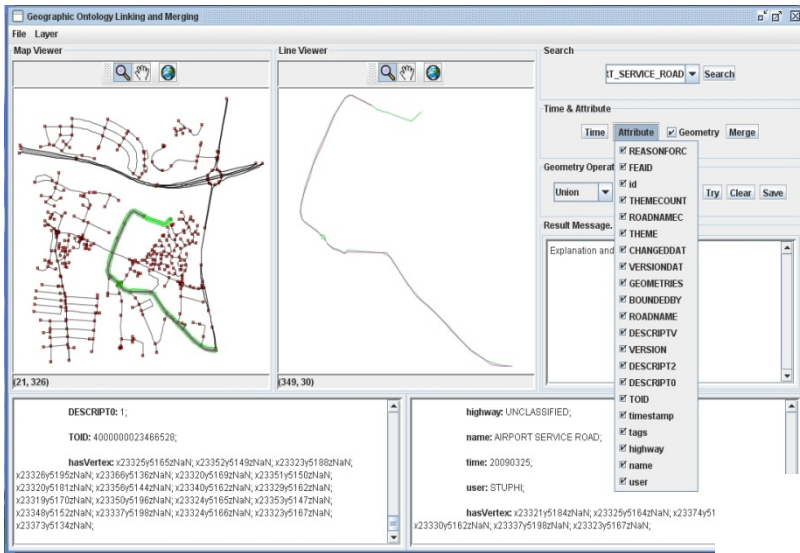
# Future of Geo Data?

How do we combine data from authoritative data sets with feature-rich, informal data, recognizing the variable coverage of informal data while capturing the best of both worlds?

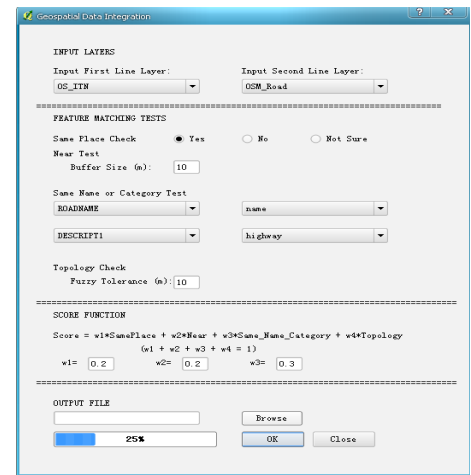


Research based on study funded by Ordnance Survey

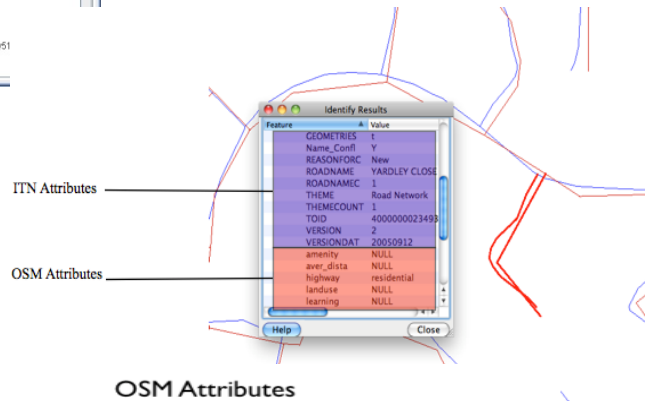




# Fully build on Open Source



Du H, **Anand S**, Alechina N, Morley J, Hart, G, Leibovici, D, Jackson, M, Ware J M . (2012) "Geospatial Information Integration for Authoritative and Crowd Sourced Road Vector Data", Transactions in GIS, Wiley-Blackwell Publishing

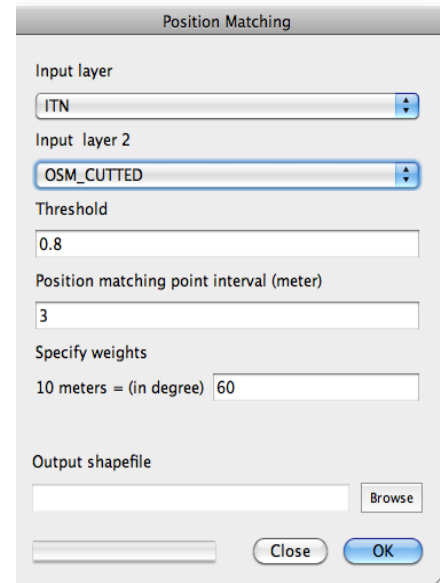


ITN Attributes

OSM Attributes

Attribute table - 8\_60

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1	1	NULL	0	MARAZAN ...	1	t	466507.0,1...	2010-06-0...	stuphi	"highway"...	Marazan Road	NULL	uncln
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# Joint paper on Geospatial Data Science

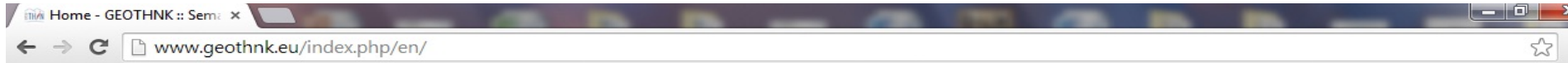
Why – to bring together perspectives in geo data from different themes (hydrology, earth sciences, transport, environment...)

What is the key geodata issues in your research

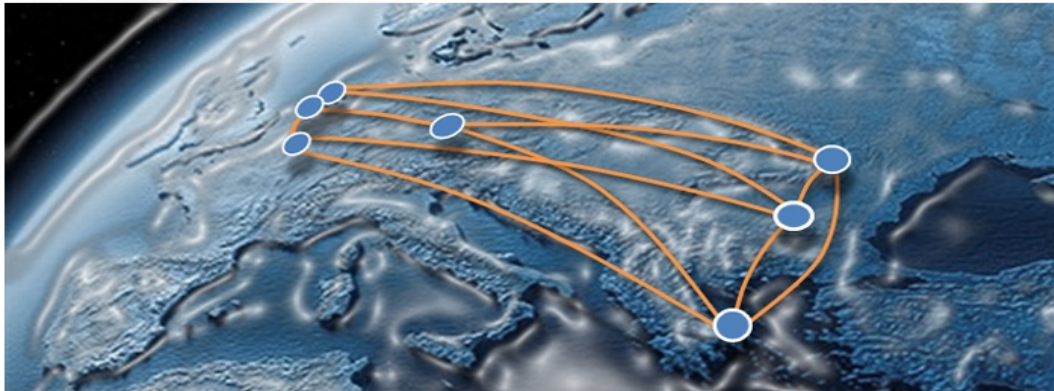
What are the solutions

What are the challenges (not just technical )

# Why Geospatial Data important for Geoeducation



Geothnk Community   



## SEMANTIC PATHWAYS FOR BUILDING A SPATIALLY-THINKING SOCIETY

**GEOTHNK** brings together many different organisations who have decided to join forces in a European effort to propose a scientifically grounded, technologically sustainable, and organisationally disruptive framework to meet the challenge for the development of .....

[READ MORE +](#)



### TARGET GROUPS



For **science center educators**, GEOTHNK provides open interfacing solutions to easily prepare learning pathways for their communities, construct their virtual didactic counterparts, and share them with teachers and researchers in the field.

### GEOTHNK LATEST NEWS

#### 9th National Conference of Bulgarian Ast...

16-05-2014

May 16-18, 2014, Shumen, Bulgaria  
The 9th National Conference of Bulgarian Astronomical Society (BAS) organized by BAS [http://nao-rozhen.org/news/pdf\\_documents/...](http://nao-rozhen.org/news/pdf_documents/...)

[Read more](#)

### TWITTER HERE! @GEOTHNK



About 2 months ago From Facebook  
One of the many aspects of spatial thinking  
<http://t.co/A3pTbPniuV>  
<http://t.co/6XOaTDV4Zi>



About 3 months ago From Facebook  
17th AGILE Conference on Geographic Information Science starting tomorrow. Visit... <http://t.co/q7Skied9b7>



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# GEOTHNK Target audience

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## STUDENTS



For **students**, GEOTHNK offers the opportunity to be involved in innovative learning activities in pedagogically structured and scaffolded learning spaces that are extended with social communication facilities.

## SCIENCE CENTER EDUCATORS



For **science center educators**, GEOTHNK provides open interfacing solutions to easily prepare learning pathways for their communities, construct their virtual didactic counterparts, and share them with teachers and researchers in the field.

## TEACHERS



For **teachers, teachers trainers** and **university students**, GEOTHNK offers pedagogical "plug, share, and play" through a Web-based interface and a community framework to disseminate best practices and find mutual support. A modular approach and innovative pathways that crosscut the boundaries between formal and informal learning settings promote a seamless incorporation of numerous open educational resources into the classroom.

## ADULT LEARNERS



For **adult learners** (e.g. science centres visitors), GEOTHNK offers the opportunity to be involved in innovative learning activities that builds on the strengths of both formal and informal learning that are extended with social communication facilities.



# GEOTHINK Community

Parent/Child Communities

Share this

The aim of this Community is to support educators to develop innovative pathways that will demonstrate learners innovative ways to associate geospatial concepts with concepts from other domains (e.g. Environment, Earth Sciences, Social Sciences, etc.) and infer and associate knowledge.

With the support of the Lifelong Learning Programme of the European Union Pr. no 543451-LLP-1-2013-1-GR-KA3-KA3MP

Tags

geospatial

geography

24 1 0 0

## Resources

### Search in the Community

Options

Search...

### Share to the Community



Educational Content



Learning Pathways



Reasoning Tool

## Build your Community



GROUPS

There are no available groups.



ACTIVITIES

There is no content.



EVENTS

1

From Geospatial Thinking to Teaching...  
2014.03.04

The Summer School is a course centred on the

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