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*Scoping Study for a
Pan-European Geological Data Infrastructure*

D 6.5

Report on final symposium

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Agenda

TUESDAY, May 20th (1st part)

10.00 – Preparatory meeting EGDI-Scope (*core team*)

*Directors of the Geological Surveys of Europe
EGS Expert Groups Chairs and Deputy Chairs
EGS-SI-EG Members*

12.30 – Registration and buffet lunch at Royal Belgian Institute of Natural Sciences
(Rue Vautier 29, Brussels)

13.30 – Welcome and Introduction – Geological Survey of Belgium

13.40 – EGS developments and strategy framework for EGS (Luca Demicheli, General secretary EGS)

13.55 – Status and key results of EGDI-Scope (Rob van der Krogt, Coordinator EGDI-Scope)

14.10 – Thematic presentations EGDI-Scope (core team/ WP leaders):

- Stakeholder Consultation and use cases (Mikael Pederson, Jørgen Tulstrup)
- Prioritisation of Datasets (Katy Lee, Matthew Harrison)
- Technical Design (Sylvain Grellet, François Robida)
- Legal aspects (Sara Hugelier)
- Governance (Rob van der Krogt)
- Communication (Claudia Delfini)

15.30 – Implementation Plan and Roadmap for follow-up (Rob van der Krogt)

15.45 – Statements from participating EGS-members and members of EGS Expert Groups

16.05 – Discussion and conclusions

**16.30 – Break, coffee and refreshments/
Welcome to stakeholder representatives**

TUESDAY, May 20th (2nd part)

**16.30 – Break, coffee and refreshments/
Welcome to EU-stakeholder representatives**

17.00 – Welcome to EU-stakeholder representatives

17.10 - EGS developments and strategy framework for EGS (Luca Demicheli, General secretary EGS)

17.20 – Key results, benefits and follow-up EGDI-Scope (Rob van der Krogt, Coordinator EGDI-Scope)

17.40 – Statements by EU-stakeholders

18.00 – Panel session & plenary discussion
(*Dumitru Fornea, Michelle Wyart-Remy, Iain Shepherd, Jerome Béquignon, Wim Jansen, Rob van der Krogt. Moderator: Luca Demicheli*)

Statements for panel session:

- European policy development can't do without geological information
- The Geological surveys of Europe are in the best position to manage the EGDI
- The EGDI is necessary to maintain and develop INSPIRE datamodels
- The Geological surveys can provide the liaison for integrated approach of on- and offshore issues
- Enhanced collaboration of geological survey organisations of Europe can strengthen the global position of European industry
-
-

18.30 – Cocktail

20.00 - Closure

Attendance List

Name	Organisation	Country
Jørgen Tulstrup	GEUS	Denmark
Mikael Pedersen	GEUS	Denmark
Luca Demicheli	EGS	Belgium
Claudia Delfini	EGS	Belgium
Sara Hugelier	KU Leuven	Belgium
Francois Robida	BRGM	France
Jean-Jacques Serrano	BRGM	France
Sylvain Grellet	BRGM	France
Matthew Harrison	BGS	UK
Kathryn Lee	BGS	UK
Rob van der Krogt	TNO	Netherlands
Francesca Siciliano	EGS	Belgium
Patrick Wall	EGS	Belgium
Adela Sanmartin	EGS	Belgium
Christeline Mottet	EGS	Belgium
Lars Kristian	SGU	Sweden
Ray Scanlon	GSI	Ireland
George Tudor	GIR	Romania
Tomasz Nalecz	PGI	Poland
Mateusz Hordejuk	PGI-NRI	Poland
Michiel Duser	GSB	Belgium

Name	Organisation	Country
Pierre-Yves Declercq	GSB	Belgium
Jasna Sinigoj	GEO-ZS	Slovenia
Carlo Cipolloni	ISPRA	Italy
Dana Capova	CGS	Czech Republic
Nikos Nikolaou	CGS	Greece
Tirza van Daalen	TNO	Netherlands
Jérôme Béquignon	ESA	Belgium
Bernard Francois	DG DEVCO	Belgium
Dr. Silvo Žlebir	DG ENTR	Belgium
Dumitru Fornea	CSN Meridian	Belgium
Sònia Clarena Barón	IMA	Belgium
Jossiane Masson	DG Environment	Belgium
Iain Shepherd	DG Mare	Belgium
Isabel Fernandez	EFG	Belgium
Slavko Solar	DG ENTR	Belgium
Robert Tomas	DG COMP	Belgium

Meeting summary

EGDI-Scope study for revitalising EU investments in geoscientific information

The EGDI-Scope final event was held in Brussels at the *Royal Belgian Institute of Natural Sciences* on the 20th of May. EuroGeoSurveys presented the main results of the EGDI-Scope project, feasibility study on the creation of a European Geological Data Infrastructure (EGDI). The study sets the basis for a Geological Service for Europe that will facilitate easy open access to digital geological data at the European scale. EGDI-Scope estimated the investments made in current and past EU-funded geoscientific research projects – for which results are no longer easily accessible – to be in the order of 400-700 million €, and proposes an e-infrastructure which gathers data from these projects, thereby contributing to European policies development in relevant domains such as mineral resources, soils, groundwater, energy and natural hazards.


The event was attended by European Institutions and EuroGeoSurveys representatives, as well as key stakeholders. Particularly, the **Panel session** engaged in a fervid debate on the benefits of an EGDI, the creation of a Geological Service for Europe, as well as the open access of geological data. Jérôme Béquignon, Senior Coordinator at the European Space Agency, highlighted that the reality is complex and the EGDI poses a technological challenge, but it represents indeed a strong contribution to EU earth observation programmes such as Copernicus. Luca Demicheli, part of the panelists, underlined the importance of making data accessible besides making them available. The Deputy Director of TNO Tirza van Daalen also remarked how the open data policy currently applied in The Netherlands increases business opportunities. Robert Tomas, Scientific Officer at DG JRC and Dumitru Fornea of CSN Meridian, said that from one side opening data helps to demonstrate the scientific expertise and on the other side it increases transparency. Finally, Iain Shepherd from DG MARE, highlighted that the benefits of data sharing are even more evident in the maritime environment: it favors the productivity of the operations by putting data together from different sources, it avoids mapping twice the same areas, it stimulates innovation by creating new products and open the market to new ideas, it reduces uncertainty.


The creation of a sustainable, long term European platform on geoscience disciplines (the EGDI), that will collect and provide high quality harmonized geological data for many cross-boundary applications, is seen as a necessity for the EU. In fact, despite the large investments made by the European Commission, the majority of the EU-funded projects and their resulting data have disappeared after only three years from completion, resulting in a huge loss of taxpayers' money. The EGDI will therefore facilitate continuity and sustainability of these EU projects by coordinating, collecting and archiving high quality data from geoscience disciplines making them available in the long term.

The EGDI will also set up an operational INSPIRE compliant EU Minerals Knowledge Data Platform that will allow all stakeholders to search, view and acquire standardised geo-resources and related data and foresight studies on non-energy raw materials. The system will support strategic decision processes related to Europe's societal and growth challenges and international initiatives such as GEOSS, the Global Earth Observation System of Systems.

EGDI-Scope sets the basis for a common **European Geological Service** to support national and EU institutions in effective decision-making and strategic planning related to the subsurface.

Key presentation (slides)




Co-funded by the European Union 

EGDI-Scope: towards a European Geological Data Infrastructure

EGDI-scope team

Final Event EGDI Scope
Brussels, 20th May 2014



European Geological Data Infrastructure

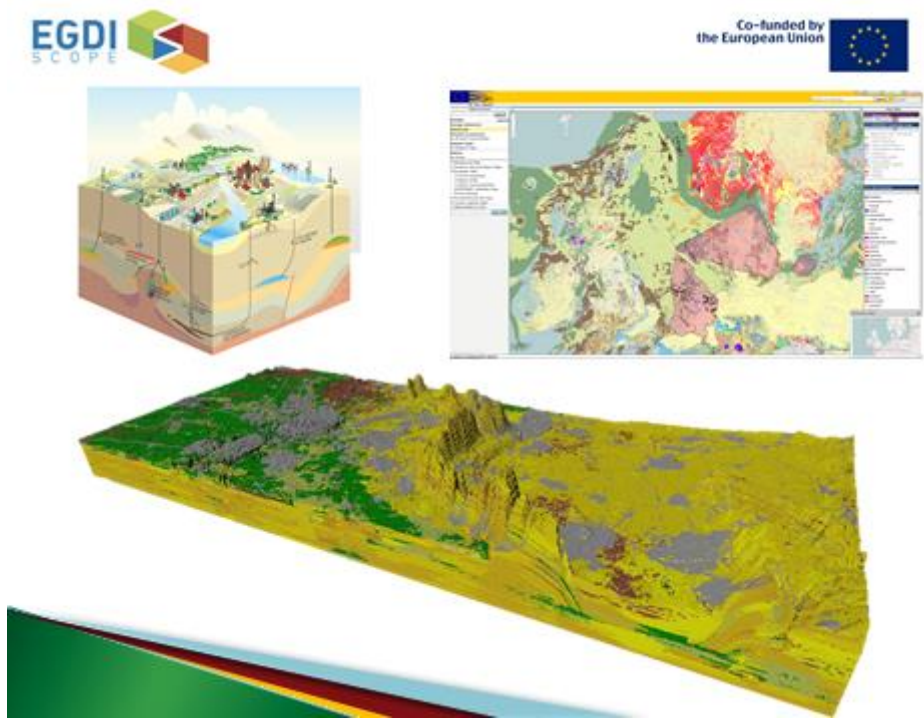
- Pan-European, interoperable, thematic data
- Mineral & energy resources, Groundwater, Soils, Hazards, marine geology, etc)
- Act on questions from society
- Implementing INSPIRE
- Sustaining on past EU projects
- Growing with on going and future projects

Connecting thematic data from all Geological surveys across Europe



Co-funded by the European Union 

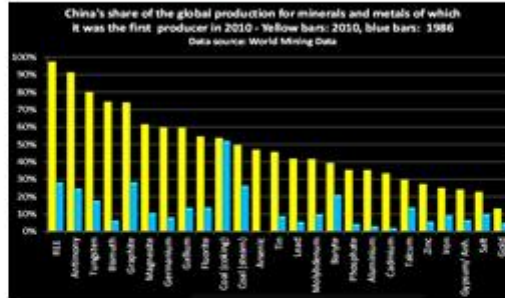
- ▶ **Status and results**
- ▶ **Exchange, include discussion**
- ▶ **Follow-up**







Example:
Minerals and (rare) metals resources in Europe



Engaged stakeholders and programs



EP Committee on Industry Research and Energy report "on an effective raw materials strategy for Europe" (2011/2056(INI)):

[...] welcomes [...] cooperation between national geological surveys; calls for increased collaboration between them and encourages the use of common standards and practices that would facilitate the exchange and exploitation of available geological data; [...]; asks the Commission to assess whether the creation of an EU Geological Service that pools the work of national surveys and works with international partners is necessary; supports the Commission's work in improving the EU's geological knowledge base".

EC "Proposal for a European Innovation Partnership on Raw Materials" (COM(2012) 82):

[...] the full benefits of an appropriate coordination or even integration of some of the activities of the EU's different 27 geological surveys has not been achieved. Yet, innovative thinking based on increased networking and cooperation offers a huge potential to move forward. Setting European standards will facilitate the creation of a uniform EU geological knowledge base, and can also lead to a more cost-effective development and use of required modern technologies, such as satellite-based resource information and advanced 4D computer modelling systems."

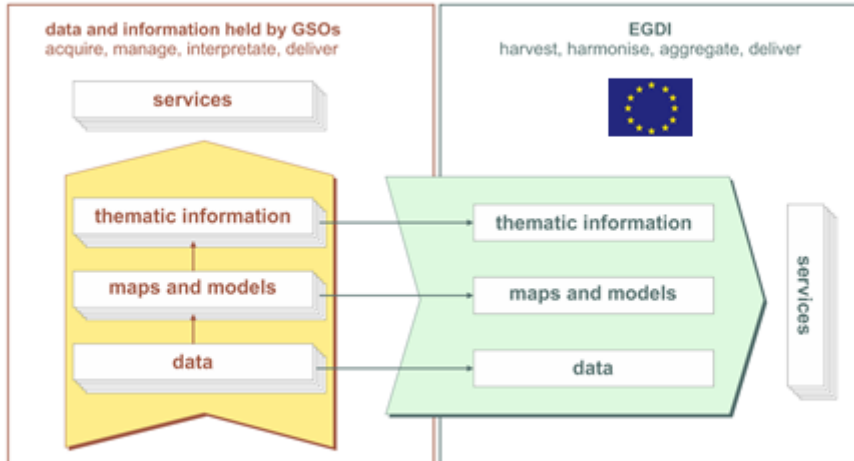


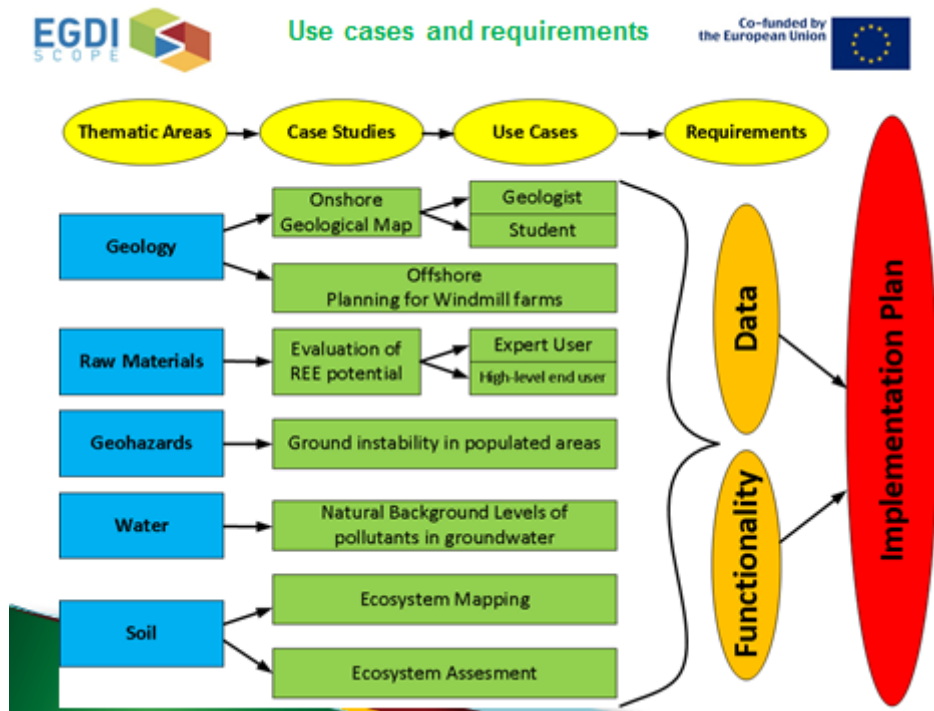
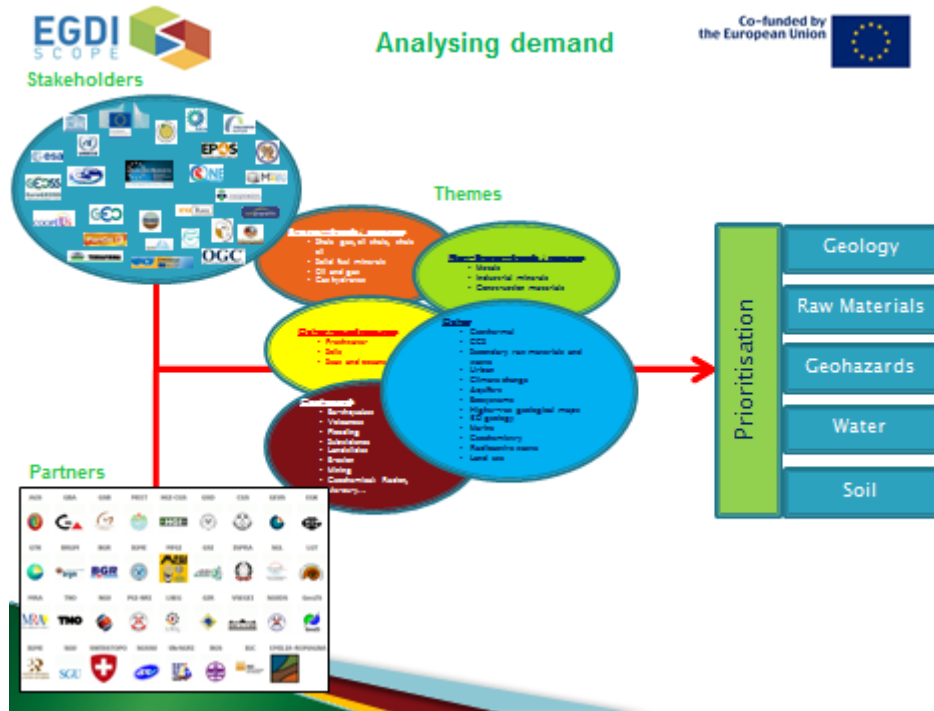
And collaborate to maintain and develop



Proposed research topics	Health, demographic change and wellbeing	Food, Agriculture, Marine research, Bio-economy	Secure, clean and efficient energy	Smart, green and integrated transport	Climate, Environment, Resource efficiency, Raw materials	Inclusive, innovative and reflective societies	Secure Societies
Mineral Resources		X	X	X	X	X	X
Geo-Energy			X		X	X	X
Marine Geology		X	X	X	X		
Geohazards	X		X		X		X
Geochemistry	X	X			X		
Water resources	X				X		
Superficial Deposits	X	X		X	X		X
Spatial Information	Harmonised and interoperable datasets and information services						
International Cooperation and Development	Engage and collaborate with the international geological community						
Subsurface modelling	Systematic characterization to support sustainable management and use of subsurface space						

Strategic Research Agenda: Scope





(INSPIRE)
Extensions

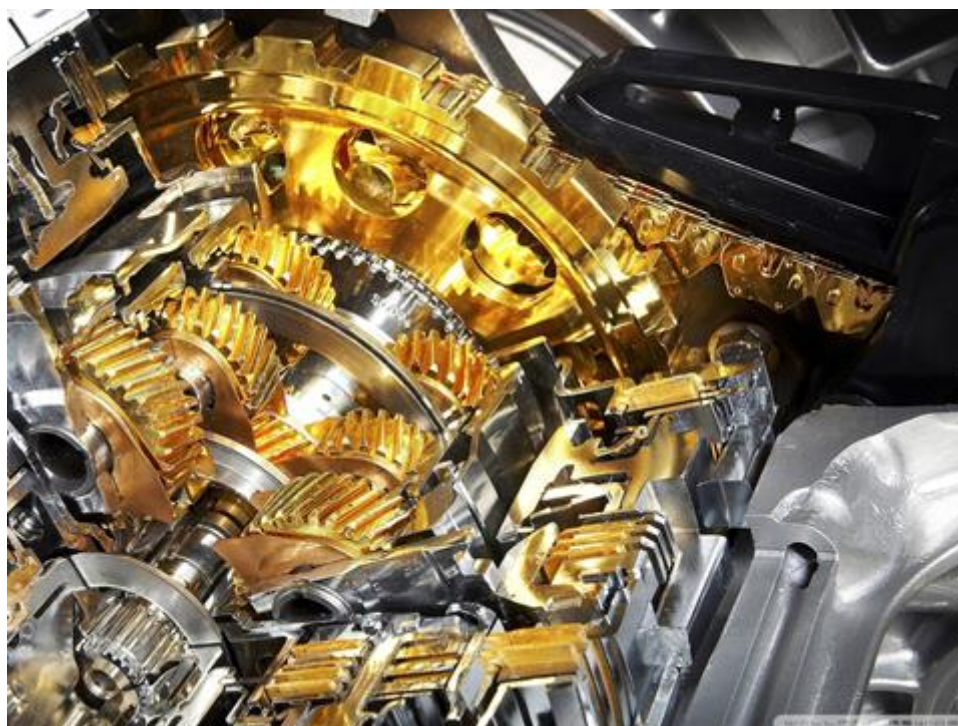
INSPIRE
'Voluntary'

INSPIRE

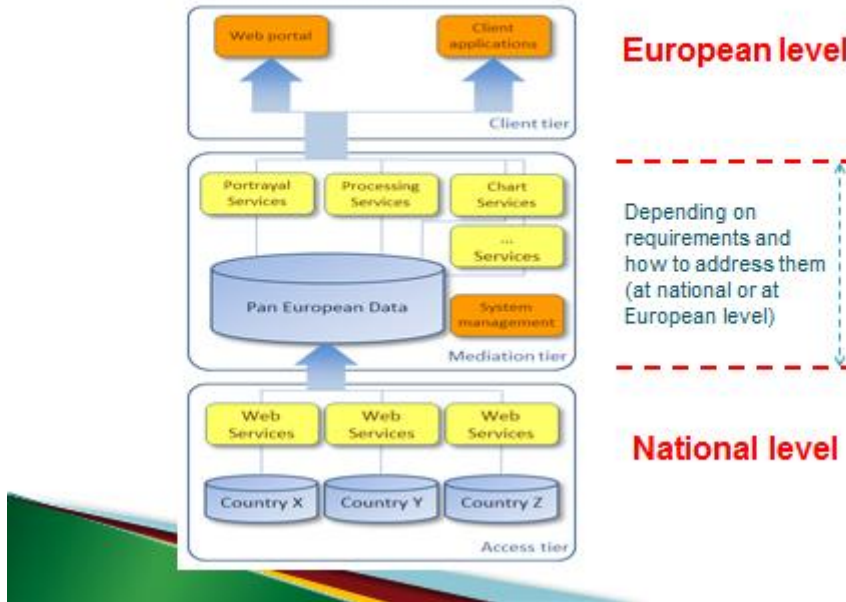
INSPIRE + Use cases for thematic areas:

- 1. Geology**
(OneGeologyEurope / EMODNet – forward)
- 2. Mineral resources**
(Minerals4EU/ EuroGeoSource, Promine, EURare,...)
- 3. Geohazards/ ground instability**
(TerraFirma, PanGeo, Doris, SubCoast, SHARE....)
- 4. Water resources**
(IHME)
- 5. Soil/ Superficial deposits**
(GEMAS, ...)

→ Immediate → Quick-wins → Longer-term...



EGDI architecture

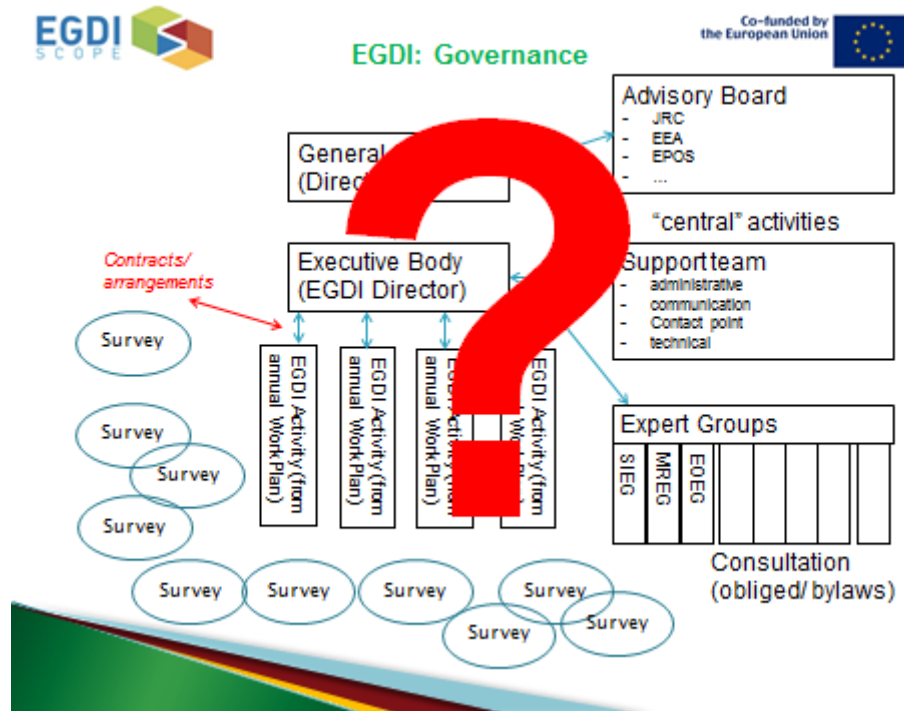


Legal complications



- Overview of legal and organisational barriers for the development of the EGDI
 - Licensing and data policy
 - Trust and authentication
 - Governance
- Guidelines for legal and organisational framework

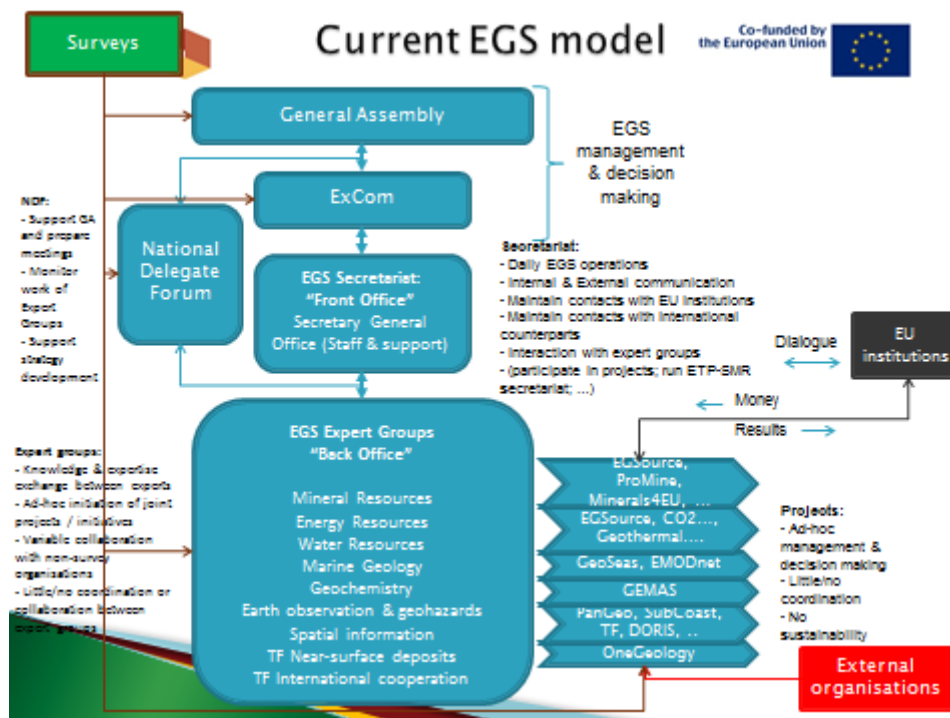




Current EGS model

- Connections between different elements are fairly loose;
 - EGS Office & Secretary General:
 - Organizes internal EGS affairs
 - Is main liaison with EU institutions, other European associations and international organizations
 - Sometimes participates in projects
 - Runs ETP-SMR secretariat
 - Expert Groups:
 - Are created or disbanded on decision by the General Assembly
 - And report regularly to the Secretary General (?) and once per year to the National Delegate Forum
 - But otherwise operate fairly autonomously
 - National Delegates:
 - Have a monitoring role
- Projects are (often) initiated through Expert Groups,

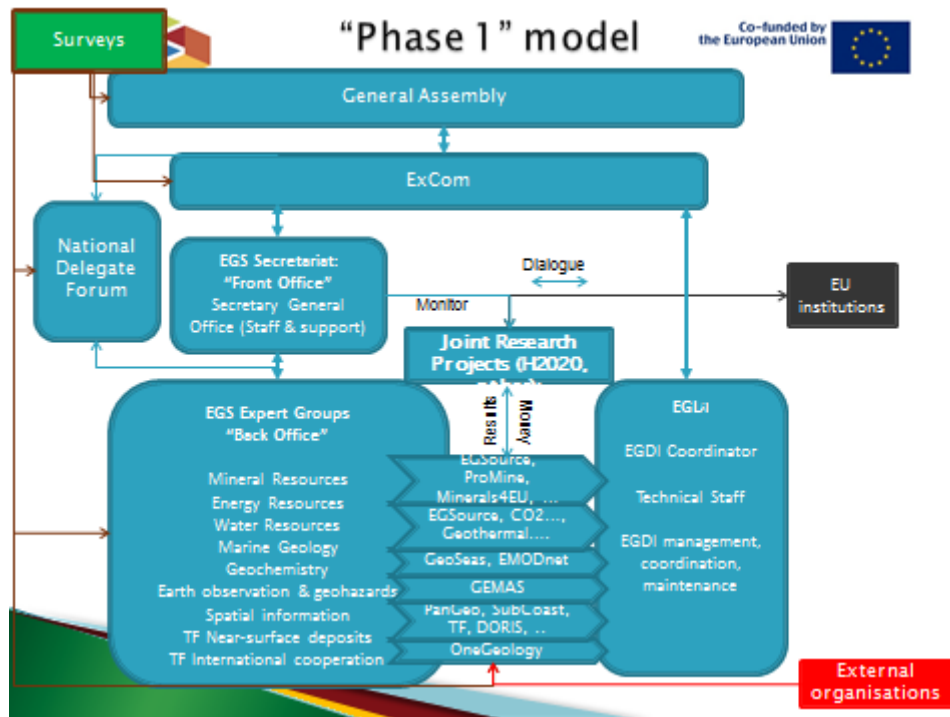




"Phase 1" model

- Based on current EGS organisation;
- EGDI Staff and management added
- Stronger rules on development and execution of joint research projects:
 - Obligation on projects to share results on EGDI
 - Clear project engagement policy:
 - Decision beforehand what (type of) projects this applies to (pan-European information projects mostly)
 - Rules on formation of consortium, etc.
 - Find organizational solution to allow EGS / EGDI to engage in projects on behalf of surveys? (possibility to subcontract)
 - SG (?) gets role in monitoring progress and compliance with funder's expectations, and mandate to take corrective action if necessary (NB: Should EGS then participate in project, or not??)





Fully Integrated Model

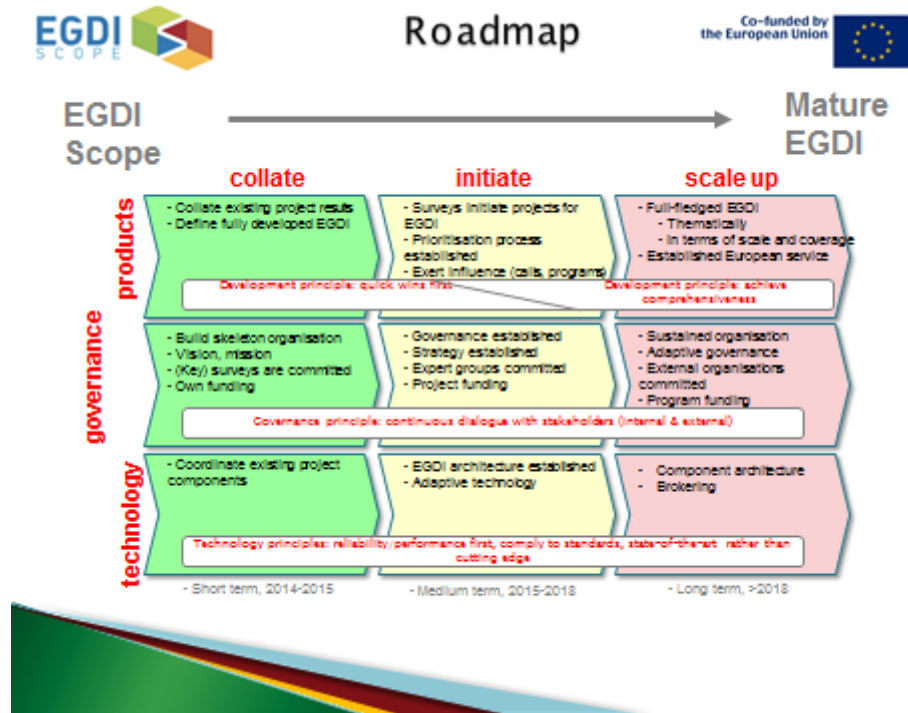
- Organisational model according to the three pillars of the EGS Strategy
- Includes operational EGDI and operational Joint Research Programme
- Clearer definition of roles and responsibilities
- Research programme manager, EGDI manager, Principal Scientist and Secretary General have clear own responsibilities, together form management board



Overview of possible governance models

- European Research Infrastructure (ERIC)
 - European Economic Interest Grouping (EEIG)
 - European Grouping of Territorial Cooperation (EGTC)
 - Non-Profit Organization (for example, VZW/ASBL under Belgian Law)
-
- ERANET → Article 185





Work plan (1)

EGDI follow-up project

- > **Main tasks:**
 - o Co-ordinate between most relevant current and future projects, e.g. Min4EU
 - o Prepare operational and decisive structure EGD wrt surveys, EGS, Expert Groups, stakeholders, etc.
 - o Further investigation of technical, legal topics
 - o Keeping engaged with external stakeholders
 - o Investigate and act on funding opportunities: incl. prepare for call
- > **Needed resources: up to 30 Man months**
- > **Time span: approx. 18 months (mid 2014 - end 2015)**





Work plan (2)

Co-funded by
the European Union

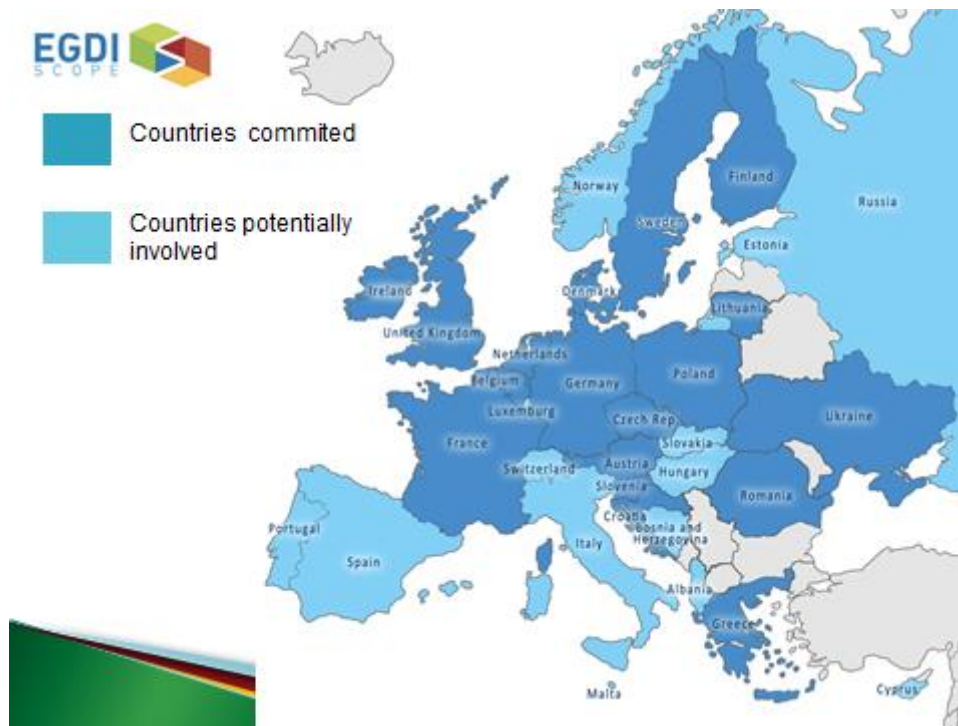


<i>Functions/ tasks of (central) operational structure</i>		
<i>Estimations required ANNUAL capacity</i>	<i>Operational structure: (distributed) activities central level (estimated capacity in full time equivalents (fte))</i>	<i>Rt surveys (estimated capacity in full time equivalents (fte) or days (d)/ per survey (R21))</i>
o Annual EGDI Workplan	0,2	
o Maintenance technical infrastructure	0,9	5d
o Specify requirements techn. infrastructure (+tender)	<0,1	
o Data & standard management (maintain, coordinate, influence: INSPIRE, OGC, ...)	0,2 – 2,0	0-0,2 fte
o "Central" database management	0,1-2,0	
o Connection EGDI – new projects (R4): technical, process, content	0,5	
o Portal management (including software tools)	1,0	
o Quality control (content/delivery)		0,1 fte
o Legal tasks (monitoring, communication, license)	0,1 (legal officer)	
o Central contact point	<0,1	
o Helpdesk (technical support, advisory on IT and content)	1,0	
o Survey contacts EGDI		5d
o Operational management	0,5	
o Secretariat/ communication	1,0	
Total (4 core projects)	5 – 7 fte	0,2-0,4 fte (x21)
Total (200000 surveys)	8 – 10 fte	-0,6 fte (x21)



Results (summary)

1. Relevant use cases
2. Support from EU stakeholders
3. Functional and technical requirements
4. Envisaged content:
 - a. Quick wins
 - b. Implementation
 - c. Extensions (growth model)
5. System architecture
6. Overview of legal barriers
 - a. Solutions for 1st steps
7. Very high visibility through dissemination
8. Governance solutions
9. Roadmap approach
10. Work plans
11. Extensive support from suppliers (NGSO's) for follow-up!



Pictures meeting





Press Release



PRESS RELEASE

A new study revitalizes EU investments in geoscientific information

Brussels, 20 May – Today, at the Royal Belgian Institute of Natural Sciences, EuroGeoSurveys presented the final results of EGDI-Scope, a 2 year feasibility study on the creation of a European Geological Data Infrastructure (EGDI). The study sets the basis for a Geological Service for Europe that will facilitate easy open access to digital geological data at the European scale. EGDI-Scope estimated the investments made in current and past EU-funded geoscientific research projects – for which results are no longer easily accessible – to be in the order of 400-700 million €, and proposes an e-infrastructure which gathers data from these projects, thereby contributing to European policies development in relevant domains such as mineral resources, soils, groundwater, energy and natural hazards.

At the EGDI-Scope final event, EuroGeoSurveys and representatives of the European Institutions discussed the results of the study with key stakeholders. The creation of a sustainable, long term European platform on geoscience disciplines (the EGDI), that will collect and provide high quality harmonized geological data for many cross-boundary applications, is seen as a necessity for the EU.

Most importantly, EGDI-Scope has identified a methodology to sustain results from past, on-going and future EU projects having a direct impact on EU policies, such as the Raw Materials Initiative, the Strategic Energy Technology Plan (SET Plan), the Soil Thematic Strategy, the Water Framework Directive and the INSPIRE Directive. In fact, despite the large investments made by the European Commission, the majority of the EU-funded projects and their resulting data have disappeared after only three years from completion, resulting in a huge loss of taxpayers' money. The EGDI will therefore facilitate continuity and sustainability of these EU projects by coordinating, collecting and archiving high quality data from geoscience disciplines making them available in the long term.

Robert Tomas, EU & EEA INSPIRE Coordination Team at the DG Joint Research Centre, declared: "*The realization of the EGDI, that builds upon INSPIRE, from an ICT point of view poses a technological challenge that goes beyond the current scope of the INSPIRE Directive. The EGDI will open up the wealth of geoscience information held by the National Geological Surveys to other scientific communities for addressing complex environmental or natural resource related phenomena*".

The system will support strategic decision processes related to Europe's societal and growth challenges and international initiatives such as GEOSS, the Global Earth Observation System of Systems. EGDI-Scope sets the basis for a common European Geological Service to support national and EU institutions in effective decision-making and strategic planning related to the subsurface.

Background - EGDI-Scope was co-financed by the European Commission under the 7th Framework Programme for Research and Technological Development, and was administered by the European Commission's DG Connect and executed by a project consortium of four National Geological Surveys (NL, UK, FR, DK), the Catholic University of Leuven (BE) and EuroGeoSurveys with the direct contribution of the 32 member European Geological Surveys.

EuroGeoSurveys (EGS), The Geological Surveys of Europe, is a not-for-profit organisation representing 32 National Geological Surveys in Europe, with an overall workforce of several thousand scientists.

Links	http://www.eurogeosurveys.org	http://www.egdi-scope.eu/
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