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Provision of interoperable datasets to open GI to EU communities An European example of SIM

Dr. Szabolcs MIHÁLY and Pál LÉVAI, Hungary

FIG Congress 2010
Facing the Challenges – Building the Capacity
TS 7B – Regional and National Spatial Data Infrastructure
Sydney, Australia, 11-16 April 2010

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Location of Hungary

Main Statistics:

State: republic

State foundation: 25 December 1000

Member of EU: 1st May 2004

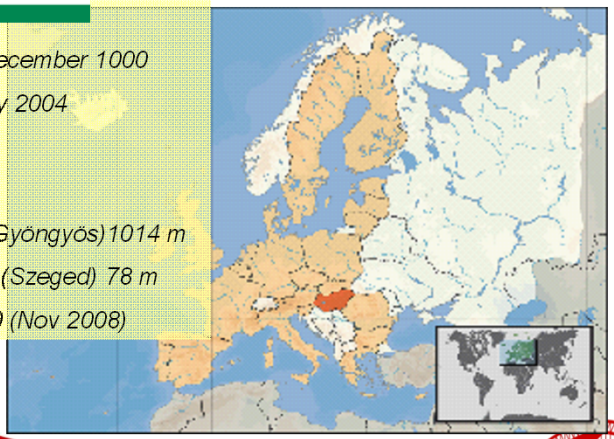
Capital: Budapest

Area: 93 030 km2

Highest point: Kékes (Gyöngyös) 1014 m

Lowest point: Gyálarét (Szeged) 78 m

Population: 10 033 000 (Nov 2008)



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Introduction page of the GIS4EU project

The project supports the INSPIRE (2007/2/EC) Directive

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Analysed problems

- Necessity of making interoperable the datasets provided by different data providers,
- Difficulties in introduction of INSPIRE Directive, as a legislative framework for all European Member States,
- Fragmentation of available datasets and data sources (time and scale),
- Duplication in gathering information (time-costs-results),
- Difficulty in the harmonisation at different spatial scales (also inside the same data source).

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The proposal

- To share base cartography in order for it to be accessible (INSPIRE compliance) and interoperable (cross-border/scale/language) for aggregation purposes and operationally validate the INSPIRE Implementation Rules,
- To provide reference data from the following themes: administrative units, transport network, hydrography, and elevation in a common format to allow their aggregation,
- To share data, without building a central database, but through services and standards, and create the GIS4EU server which will enable access through standard services to data from different sources, by applying on–the-fly harmonisation,
- To analyse lack of information and dataset level,
- To provide guidelines and training.

Spatial themes of work

The project will take into consideration some of the themes included in INSPIRE Directive, in particular:

- Administrative units (Annex I),
- Hydrography (Annex I),
- Transport Network (Annex I),
- “3D” elevation models (Annex II).

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Scales of reference

The project will work on the following scales for the integration of datasets:

- European,
- National,
- Regional,
- Local.

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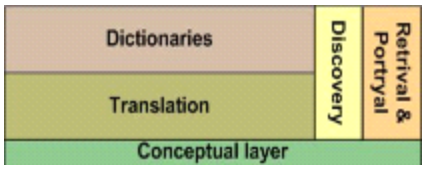
Focused aspects

- The following three aspects will be focused:
  - cross- scale,
  - cross- border,
  - cross- language.



Problem stack of the multilingual aspects for the project

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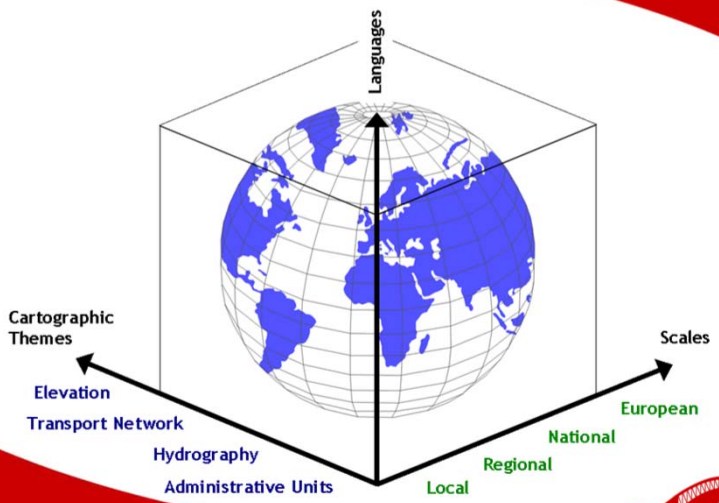
Themes of work



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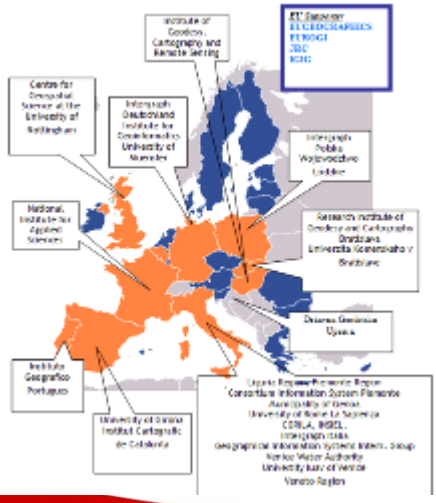
European countries involved



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Partners

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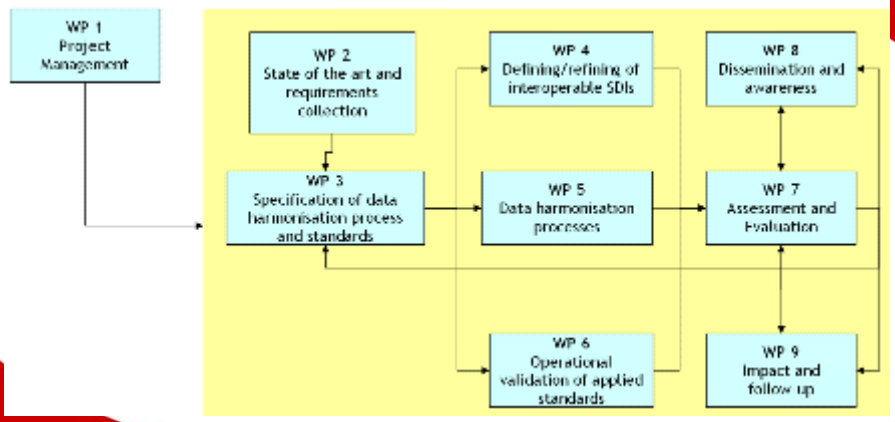
Workplan



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Conceptual phase

- State of the art, also in accordance with the results achieved by other projects,
- Requirements collection,
- Specifications of data harmonisation process and standards validation,
- Multilingual and multicultural aspects :
  - Conceptual layer,
  - Translation and Dictionaries,
  - Ontology,
  - Research criteria.

Implementation phase

- Definition/refinement of interoperable SDI:
  - Common data model,
  - Guidelines.
- Operational validation of applied standards:
  - Definition of validation processes,
  - Guidelines.
- Evaluation and improvement:
  - Preparation of workflow specifications (a part from technology, enlargeable, flexible),
  - Quality assurance.

Disssemination phase

- Public impact:
  - Creation of a community,
  - Conferences, discussion/working groups, seminars,…
  - Reports, scientific publications,…
- Evaluation and impact:
  - Data availability and interoperability,
  - Accessibility and usability,
  - Dissemination of standards,
  - Common data model,
  - Guidelines.

Thematic Working Groups

Rules for the composition of TWGs:

- One for each theme,
- TWGs define for the corresponding theme:
  - Common data model (definition),
  - Aggregation rules (relation),
- Strict involvement in the provided themes,
- Each data provider is included in at least 2 TWG,
- Different composition of TWG for definition and relation,
- Composed by Data providers + Research partners +Technological partners.

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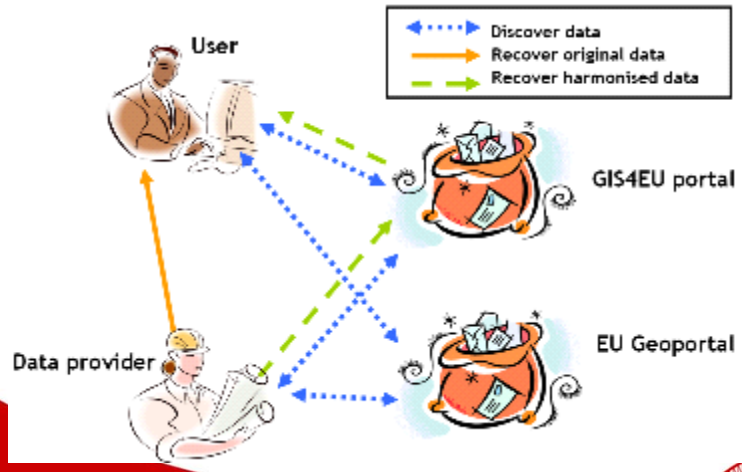
Conceptual goals



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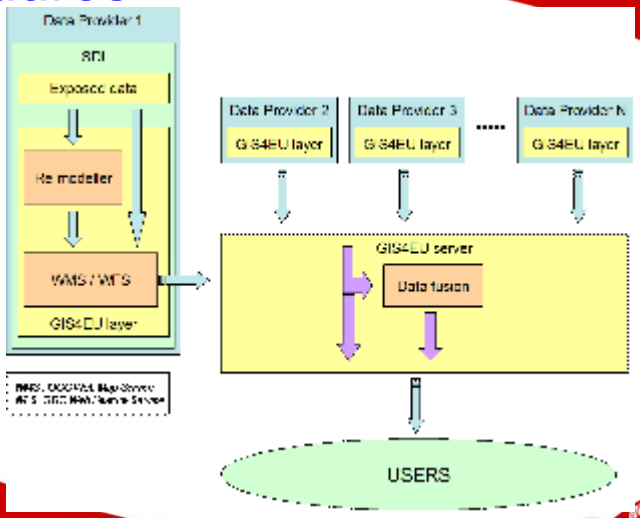
Procedures



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Enlargement of the working group

- Groups and institutions which will support the project:
  - EUROGI,
  - EUROGEOGRAPHICS
  - IGIG,
  - JRC.
- Moreover, the project intends to involve further data providers for increasing the area of European datasets.

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International appearances of GIS4EU

- **11th GSDI Word Conference** Rotterdam, The Netherlands June 15, 2009. *GIS4EU Workshop 2.3 - Tools and Experiences in Implementing INSPIRE Data Specifications II: GIS4EU and Operational Validation of the INSPIRE Common Data Models*
- **GISOpen2009 Conference** Székesfehérvár, Hungary, March 18-19, 2009. *GIS4EU International Workshop - Towards INSPIRE*
- **ESIG2010 Conference**, Lisbon, Portugal, February 10, 2010. *GIS4EU Workshop - When European Countries meet to share the Geographic Information*

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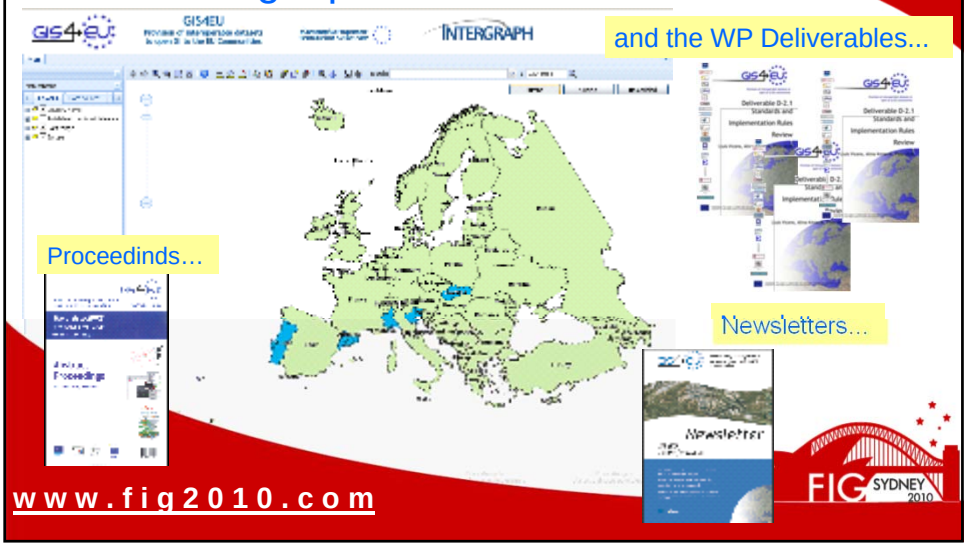
Results:
the thematic geoportal



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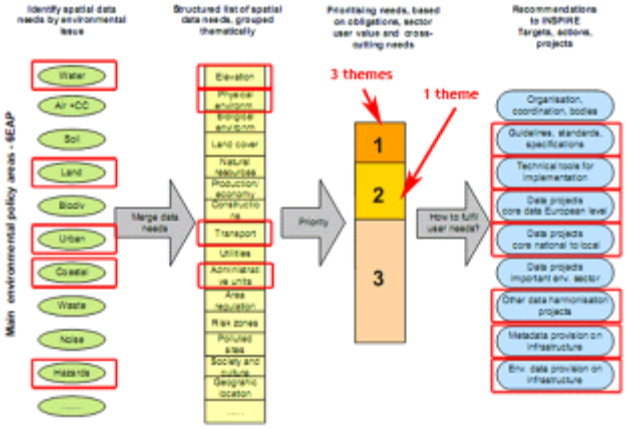
User Requirements vs GIS4EU results



INSPIRE Environmental Thematic User Needs Position Paper

Meetings

- **Kick-Off** Venice, 3-4. **December 2007**,
- 7 Technical meetings (Turin, Munich, Barcelona, Székesfehérvár, Cracow, Nottingham, Lisbon),
- Mid-Term Project Review Meeting (Luxembourg),
- 5 National workshops (Venice, Genoa, Bari),
- 2 trainings (Munich, Milan),
- 3 international workshops (Székesfehérvár, Rotterdam, Lisbon),
- **Closing** 30. **April 2010.**

GIS4EU
Provision of interoperable datasets to open GI to EU communities
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Information Society and Media
Project funded by eContentplus Programme
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