SDIs in SEE

**Spatial Data Infrastructures in South-East Europe
Challenges and Solutions**

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AGISEE*

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Purpose and Outline

- Motivation of presentation
  - Stimulate and continue the discussion about SDIs in the region of SEE

- Outline
  - AGISEE – what is it and what do we do
  - Problems and challenges in the region
  - Priorities of SDI development
  - Best practice cases

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AGISEE
Association for Geospatial Information in South-East Europe

http://www.agisee.org

- Vision
  - enable sharing of geospatial data for the benefit of the economic and social development of the region
- Goals and Actions
  - Promote SDIs in South-East Europe
  - Support the GI community and interested parties to develop their own initiatives for data access and data sharing
  - Collaborate and cooperate with local, national and international organisations
    - Open Geospatial Consortium & its Global Advisory Council
    - EUROGI
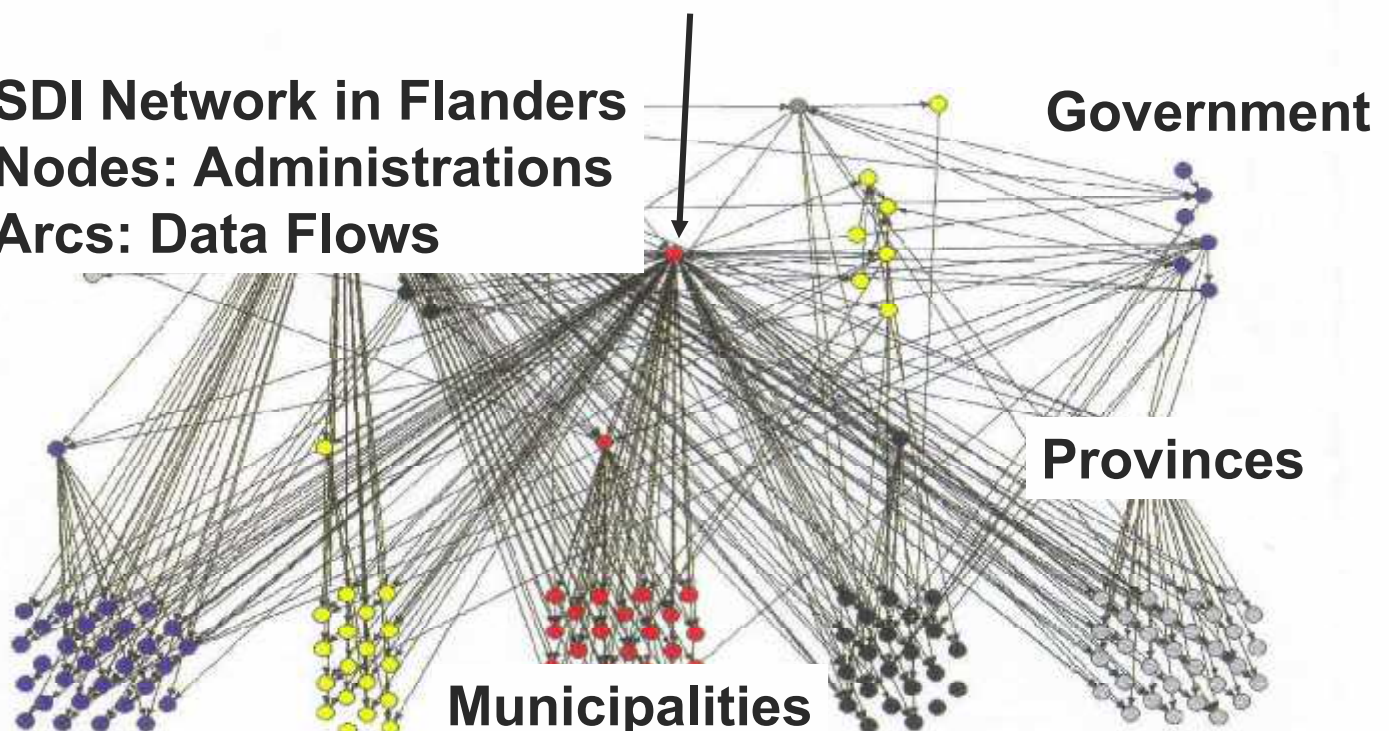 - Provide relevant information to members.

3 3rd Croatian NSDI and INSPIRE Day and 7th Conference Cartography and Geoinformation
Split, Croatia, September 14-16, 2011

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Instead of Introduction

Mapping and Cadastre Agency

SDI Network in Flanders
Nodes: Administrations
Arcs: Data Flows

Government

Provinces

Municipalities

Source: J.Crompvoets, GIM International May 2011

SDI defined

■ **SDI is about data sharing and cooperation**

■ 'INFORMAL' DEFINITION:
The basic arrangements for combining, processing and making available spatial data in forms and ways which meet user needs and capacities.

■ 'FORMAL' DEFINITION:
The technology, policies, standards and human resources necessary to acquire, process, store, distribute and improve utilisation of geospatial data' (GSDI Cookbook).

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AGISEE – What we do

■ **Support building SDIs** in South-East Europe
■ Serve as a **point of contact** and **effectively represent** South-East European companies and institutions involved in the GI sector
■ **Support** the GI community and interested parties to develop their own initiatives for data access and data sharing
■ **Collaborate and cooperate** with local, national and international organisations
■ Support and provide relevant **information** to members
   ○ Web site and workshops
■ Act as enabler for new **opportunities** to members

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SDI Development in South-East Europe

- **Strong Points**
  - Good legislation
  - Users as driving force for data sharing
  - Important are cadastre and land registration, agriculture.
  - INSPIRE has become the driving force
- **Need and way forward**
  - Clear mandate and vision for SDI development
  - Independent civic committee or organization
  - Awareness creation, training, education
  - Learn from others
  - Be open to other approaches

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AGISEE Contribution

AGISEE does not have a formal mandate

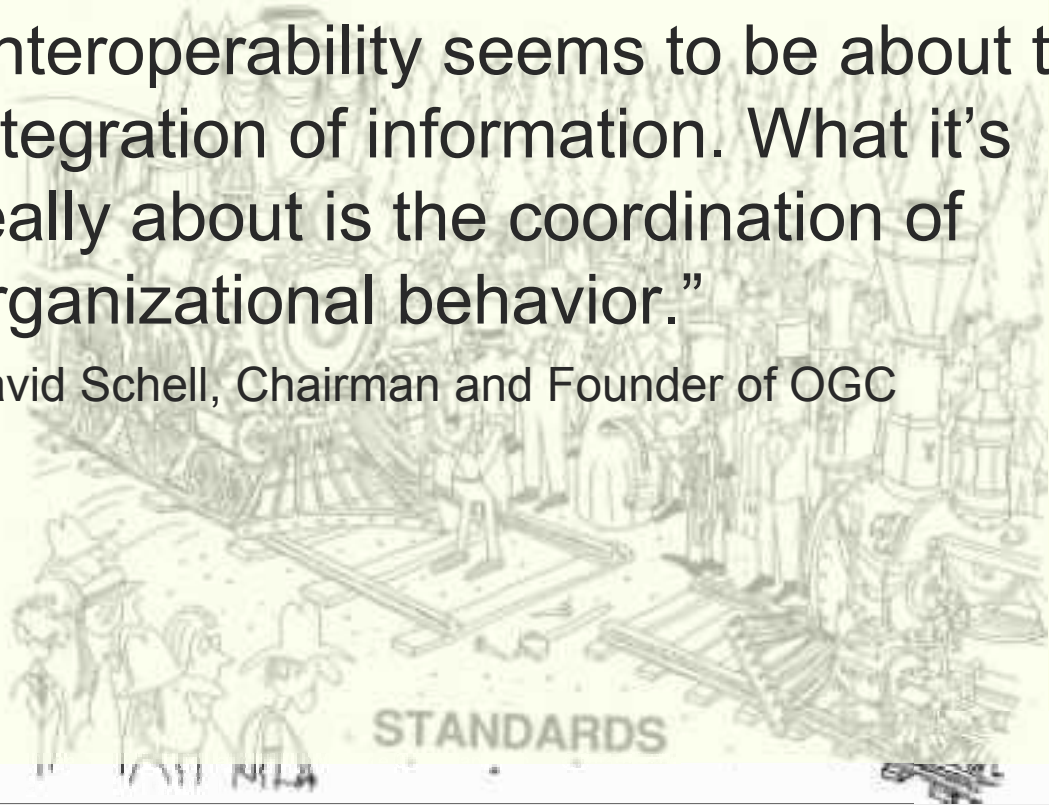*NGO and dialogue partner*

- **AGISEE priorities**
  - Interoperability and Standards
  - Open Source Software
  - Education and training
  - Financing of SDI

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Interoperability defined

- "Interoperability seems to be about the integration of information. What it's really about is the coordination of organizational behavior."

   David Schell, Chairman and Founder of OGC

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Standards for SDI

- Two main initiatives
   - INSPIRE – the European Directive
   - OGC – Standards for implementation
- Many other standards organizations
   - ISO/TC211
   - CEN TC 287
   - OASIS
   - W3C
   - IETF
   - National standards

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OGC from an Organizational Perspective

OGC in South-East Europe

- Cooperative relationship with AGISEE to promote the importance of open standards in the development of spatial data infrastructures and raise the awareness of interoperability in SEE
- AGISEE – OGC mailing list https://lists.opengeospatial.org/mailman/listinfo/agisee.forum
- OGC Regional Approaches – National Fora
  - Regional OGC Forum SEE
  - coordination mechanism to prioritize SEE interoperability requirements and communicate these requirements into the OGC standards process.
- GovFuture - new Membership Level for Local and Subnational Government
  - GovFuture Local Government   USD $200

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Why to become OGC member?

- **Direct Contact**
  - Learn about and benefit first hand from new developments in geospatial technology and related solutions;
  - Liaise with government, with suppliers and universities through OGC meetings and channels for focused discussion and learn from others who are adopting standards-based approaches;
- **Direct Access**
  - to OGC resources such as white papers, international best practice reports, webinars, domain working groups, mailing lists;
- **Participate**
  - In Standards development;
  - in Interoperability Experiments;
  - In OGC Compliance Program.

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Which standards to choose from?

- **INSPIRE IRs and Guidelines**
- **Spatial Data Infrastructure Standards Suite: SDI 1.0 (2007)**
- **Classification according to the SDI Definition**
  - policies, organizational remits, data, technologies, standards, delivery mechanisms and financial and human resources
- **Classification according to RM-ODP Viewpoints**
- **Classification according to EIF Interoperability Levels**

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Spatial Data Infrastructure Standards Suite

SDI 1.0 core standards
OGC Web Map Service 1.1.1
OGC Web Feature Service 1.0
OGC Filter Encoding 1.1
OGC Web Coverage Service 1.0
OGC Geography Markup Language 2.1.2
OGC Catalogue Service 2.0 Z39.50 protocol binding
FGDC Content Standard for Digital Geospatial Metadata (CSDGM, 1998)

SDI 1.0 supplemental standards
ISO metadata standard 19115:2003 and ISO DTS 19139:2006
OGC Geography Markup Language 3.1.1
OGC Styled Layer Descriptor 1.0
OGC Web Map Context 1.1
OGC Catalogue Service 2.0 HTTP protocol binding, CS-W

Future candidate SDI core standards
OGC Web Map Service 1.3
OGC Web Feature Service 1.1
OGC GML 3.1.1
OGC Catalogue Service 2.0 HTTP protocol binding, CS-W
ISO DTS 19139:2006 metadata

Source: DOUG NEBERT, CARL REED, ROLAND M. WAGNER, ESRI Press 2007

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Priority 2: Open Source

- Need to stimulate competition against vendor lock in
- Much open source GIS/SDI software is available as base for developing solutions
- Open Source or licensed software?
  - No general answer
  - Total cost of ownership is important
  - Learn from OS implementations
- Open Source progressing in SEE
- AGISEE training and information sessions

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Priority 3: Education and Training

- Impact of technology and policy on profession

- Good university education

- Needs for improvement role of AGISEE
  - Create awareness for the importance of education
    - Continuous education
    - ECDL for GIS and SDI
  - Stimulate dialogue between countries and with international organizations such as : CLGE, FIG
  - Promote schemes for continuous education and European funding

AGISEE working group and white paper

Priority 4: Financing of SDI

- Financing provided by bilateral donors (Norway, GTZ, Japan, GSDI, e.a.)
- INSPIRATION project financed by EU

- **EU Policy needs SDI**
- Current EU programmes
  - FP7, CIP, Interreg, Pre-accession funds
- New programme period 2014-2020
  - HORIZON 2020 - the Framework Programme for Research and Innovation
- EU Programmes do not finance SDI directly
- Projects need to be defined in advance

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EU Programmes for SDI (1)

- **The South East Europe Transnational Cooperation Programme**
  - Fourth Call closes end of November 2011
  - Programme areas (examples)
    - water management and flood risk prevention;
    - environmental risk;
    - management of natural assets and protected areas;
    - transportation networks;
    - metropolitan areas and regional systems of settlements;
  - Budget allocation: 51,850,000 EUR
  - http://www.southeast-europe.net/en/

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EU Programmes for SDI (2)

- **FP 7 – Cooperation Programme**
  - ICT call 8, deadline 17 January 2012, Budget: EUR 787 million
  - Smart Cities and Communities, deadline 01 December 2011, Budget: EUR 40 million
  - ENVIRONMENT 2012, deadline 20 October 2011, Budget EUR 217 million
- **FP 7 – Capacities Programme**
  - FP7-INFRASTRUCTURES-2012-1, Deadline 23 November 2011
- **… more calls availalble …**
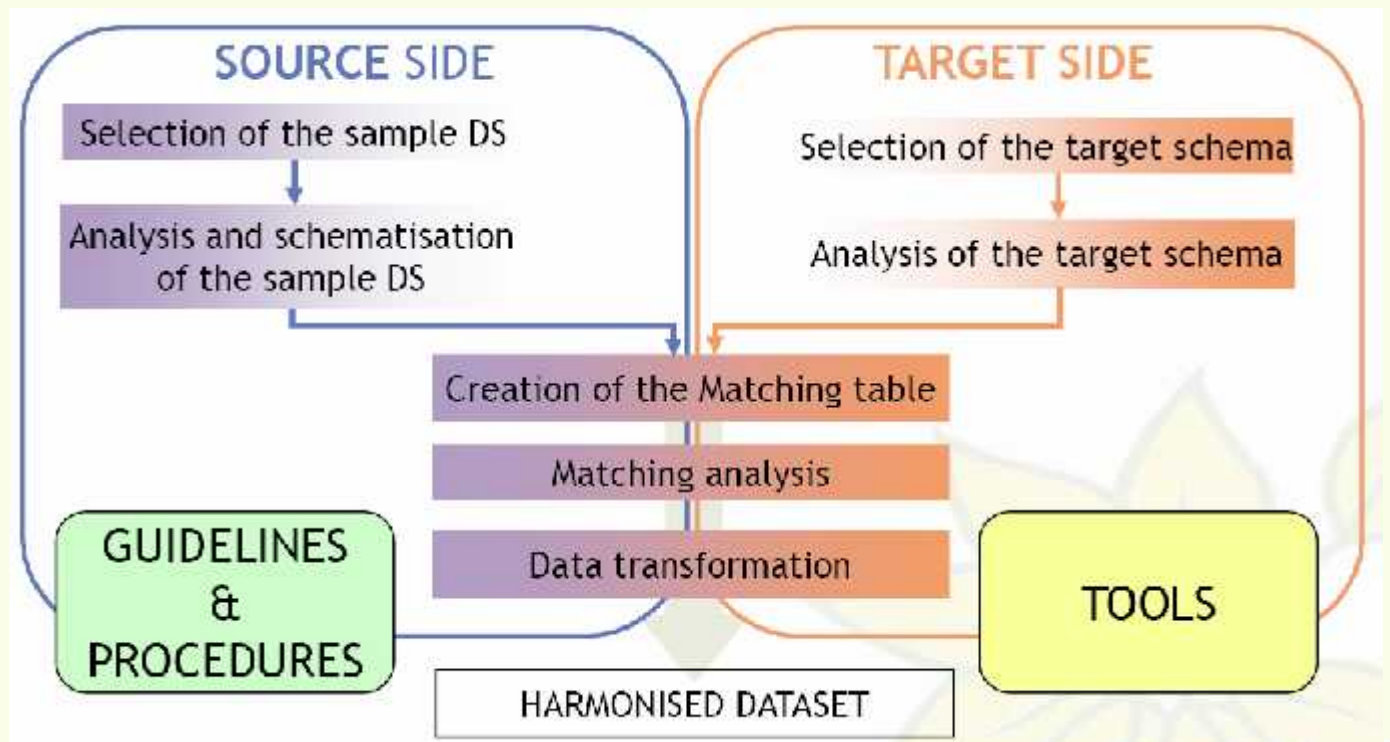
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AGISEE and Financing of SDI

- **Support to members for their participation in grants and funded projects**
  - Regular information
  - Overview of funding possibilities for SDI
  - Consulting
  - Cooperation opportunties,
    also in cooperation with partners
  - Financing white paper:
    guidelines for financing of SDI in SEE
  - AGISEE working group on Financing SDI

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From Policy to Implementation

- **EU financing supports the implementation of EU policy.**

- **Best Practices financed by the European Union**
  - **Nature-SDIplus**: INSPIRE implementation for protected areas in Europe.
  - **eSDI-Net+**: Networking and analysis of sub-national SDIs
  - … many other projects

- **EUROGI** best practice award 2011

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Example: Nature-SDIplus

The overall DH methodology

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Example: Nature-SDIplus

Training course on Nature Conservation and INSPIRE

- Web based distance learning training course on "Nature Conservation and INSPIRE".
  - Result of Nature SDI-plus
- Training material developed on a variety of formats: Presentations with voice, screencasts, plain text lectures, exercises, etc.
- Topics
  - Nature Conservation and Natura 2000 Network
  - The INSPIRE Directive
  - Metadata, Concepts and Standards

http://www.nature-sdi.eu/training/

  - Data Harmonisation
  - Procedures and Tools for Data and Metadata Harmonisation

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Concluding thoughts

- AGISEE
  - focus on priorities
  - Addressing all aspects of SDI development
- Dialogue and cooperation
  - Stronger collaboration with EU and international organizations
- Best practice and learning from others
  - **EUROGI/eSDI-Net Awards 2011**
- Congratulations to the status of SDI & INSPIRE developments in several countries of the region
  - Need for integration into the INSPIRE state of play

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Hvala na pažnji !

Thank you for your attention !

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