INSPIRE and Open Data
Recent Developments and Best Practices

These documents are only complete, when used in connection with the verbal paper; any isolated use may lead to misunderstandings.

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AED-SICAD: Key Facts

- One of the biggest GIS-Software Application Companies in Europe
  - German Company (Offices Sites in Bonn, Munich and Berlin)
  - > 180 employees in AED-SICAD AG
  - 340 in the group
  - 80% in private ownership
  - 20% Esri Inc.
  - 30 years of experience
  - Esri Platinum Partner

- Our offering
  - COTS Software for Utilities and Land Management
  - Professional Services
  - International: Partner enabling
INSPIRE – almost there?

**INSPIRE Implementation Roadmap**

- **Annex I**
  - 03/12/2010
  - Discovery metadata shall be available for spatial data sets and services

- **Annex II**
  - 09/11/2011
  - Discovery and View Services shall be available (data does not yet need to be conformant to IR-ISDSS)

- **Annex III**
  - 23/11/2017
  - Download and Transformation Services shall be available (data does not yet need to be conformant to IR-ISDSS²)

- Autumn 2020
  - All spatial data sets shall be conformant to IR-ISDSS (incl. metadata for interoperability) and available through network services

- Autumn 2020
  - Newly collected and extensively restructured spatial data sets shall be conformant to IR-ISDSS and available through network services
EU-wide evaluation and analysis

- **INSPIRE Evaluation (Katholieke Universiteit Leuven (Belgium) [2014])**
  - Monitoring reports vs. EU GeoPortal

- **Results (extract)**
  - Six Member States have no catalog services in the GEO-portal, so that the INSPIRE relevant services and records can be searched
  - Only a fraction of the services meets the INSPIRE requirements
  - Many of the available spatial data services are not accessible due to firewalls or rights restrictions
  - Many data sets and services are available only in national geo portals but not in the European GeoPortal
  - Despite all the gaps in the implementation of INSPIRE, the large and growing number of available data sets and services provided is positively highlighted
Open Data – the Hype
Complexity in accessing data

- Data producers
  - Data sources: HDF, GeoTIFF, JPEG, GRIB, OGC, GML, esri SHP, RDF
- Data providers
  - Applications/Clients: OPeNDAP, W3C, SPARQL, OGC, WxS, SOS, CSW, OAI-PMH, Geo
- Overarching Initiatives
  - Copernicus, OGC, GEO, RDA, GALILEO

M Data sources
N Applications/Clients
M x N Adapter
Complexity in accessing data

Virtual Hub

M Data sources
N Applications/Clients

M + N Adapter
ENERGIC OD

- **ENERGIC OD:** European NEtwork for Redistributing Geospatial Information to user Communities – Open Data
- **Duration:** 01.10.2014 – 30.09.2017
- **Contact point and coordination:** CNR (Consiglio Nazionale delle Ricerche, Italy)
- Partially funded under the ICT Policy Support Programme (ICT PSP) as part of the Competitiveness and Innovation Framework Programme by the European Community
Project Objectives

- Development of “Virtual Hubs” to facilitate the use of
  - INSPIRE Data
  - GMES/Copernicus Data
  - Open Data
  - Various SDIs

- Providing VHs at different territorial scales (regions, member states, Europe)
  - Access for end-users via geoportals
  - Access for machines via APIs

- Development of new innovative applications
  - Set of ten applications in different domains
  - Demonstration of the validity of the concept
Technical Approach

- **Broker-Architecture**
  - Easy and central access to heterogeneous data sources
  - Basis for the development of innovative applications
Virtual Hub Architecture

Interfaces for Clients

Request Processing

Connection to Data Sources

Virtual Hub

- WMS Profiler
- WFS Profiler
- WCS Profiler
- FTP Accessor
- WMS Accessor
- WCS Accessor

Orchestrator

Format Transformer
CRS Transformer
Resampler
Subsetter

Interfaces for Clients
Connection to Data Sources
Request Processing
Virtual Hub
Mobile App: eye2eye

- **Mobile application to support the process of land consolidation**
  - Enable communication between citizens and administration
  - Shorten the long processing times and optimize citizen participation
  - eye2eye should bring added value to the already existing desktop solution

- **Technologies:**
  - Client: Esri WebAppBuilder, HTML5, CSS3, JavaScript, Dojo Framework
  - Service: Java, J2SE, ...
eye2eye – Specification

- **Data sources from the Virtual Hub:**
  - Cadastre data
  - Land consolidation data
  - Open Street Map data
  - Open Data, Copernikus Urban Atlas, specific INSPIRE themes

- **Functionalities**
  - Navigate in maps
  - Add relevant/interesting further information
  - Information on objects from map
  - Discussion of planned actions
  - Text notes, drawings, “Likes”
Website for further information

http://www.energic-od.eu/
Thank you for your attention!

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