INSPIRE Shared Service

Creation and operation out of the box

Petra Fritz (HZD), Michael Voigtländer (Esri Deutschland GmbH)
INSPIRE Shared Service

Agenda

- HZD backbone for a geodata infrastructure
- Implementing INSPIRE Shared Service (IIS)
- HZD INSPIRE Solution
- Current projects
- How does HZD expand and use INSPIRE?
HZD - backbone for a geodata infrastructure

- Hessian Center of Data Processing (HZD)

- More than 45 years a reliable partner of the Hessian state administration and other IT-co-operations.
  - 2017 > 800 people in the staff
  - Bundling key IT know-how

- HZD stands for innovative, high-quality and competitive IT system development and operation (e.g. Data Center, HessenPC, IT-Fabrik, Hessian wide-network, IT-Security, …)

- The HZD strength is the professional, quality-assured IT service from one source

- HZD operates as a provider for geodata infrastructure in Hesse and ensures customer-, operational- and support-oriented solutions around the topic of geoinformation
Implementing INSPIRE Shared Service (IIS)

Implementation of the INSPIRE Directive

- Data provision and metadata (different formats, data model harmonized or original)
- Data storage and file organization
- Transformation of INSPIRE data model and coordinate system
- Service delivery via WMS/WFS

- Interoperable use over the internet
- Registration via Geoportal
- EU monitoring
Implementing INSPIRE Shared Service (IIS)

- **High profitability**
  - Avoiding high investment costs for decentralized IT technology
  - Retrieval of centrally held special GIS know-how

- **High operating safety**
  - Use of all the advantages of the modern data center HZD
  - Secure data storage - no data transfer to uncertain data-clouds

- **High availability**
  - Securing the INSPIRE requirements regarding availability and performance
  - 99% availability (7/24), max. 15 minutes of failure, etc.

- **High level service**
  - Unified, annual basic package for the use of the ISS – including the costs for: Server, DB, licenses, updates, monitoring, IT-security, ticket system, ...
Implementing INSPIRE Shared Service (IIS)

5 steps to put your geodata services into operation

1. **Contact**
   Call/E-Mail the HZD

2. **Content**
   Specify your issue:
   - Harmonization
   - Data format
   - Data volume ... 

3. **Contract**
   Assignment with simple pricing:
   - a. for the service
   - b. for the initial creation

4. **Creation**
   Implementation of Service wms/wfs on the ISS test-platform in tight consultation with the customer

5. **Operation**
   Provision and operation wms/wfs on the ISS production platform
HZD INSPIRE Solution

- **INSPIRE Shared Service (ISS)**

  1. Spatial data authorities
     - Identifying potential INSPIRE data
     - Data delivery
     - State and municipal level

  2. HZD ISS-Platform
     - Operation and spatial data expertise
     - Server and database resource
     - Implements application schema
     - Publishing network services
     - Optional: data harmonization

  3. Using INSPIRE data
     - Portals, Viewers, Apps
     - Open data initiatives

  Data transfer
  - non-harmonized / harmonized

  Publish network services
  - View / Download
HZD INSPIRE Solution

Technical workflow within the ISS Solution

1. Data harmonization
2. Storing non-harmonized and harmonized data in geodatabases which implements the application schema
3. Publishing View (WMS) and Download Services (WFS)
4. Creating metadata via external Discovery Services e.g. Geoportal Hessen

14.09.2017
INSPIRE Solution Pack for FME

- Making the harmonization process as easy as possible
- Using FME standard functionality (ETL)
- Extending FME with INSPIRE specific information and functionality
**HZD INSPIRE Solution**

- **INSPIRE Solution Pack for FME**

- **Original data model**
  - Meta Information
  - Data history
  - Data quality
  - Expertise

- **INSPIRE Specification**
  - INSPIRE directive
  - INSPIRE requirements
  - Know-How (Annex I, II, III)
HZD INSPIRE Solution

- **ArcGIS for INSPIRE**

  - **ArcGIS Desktop Extension**
    - (Data-management and create network services and metadata)

  - **ArcGIS for Inspire Server Extension**
    - (View und Download Services)

  - **Geodatabase Templates**

  - **Portals, Apps, Viewer**
HZD INSPIRE Solution

- Options for implementation

- Datasets in multiple formats (fgdb, shp, gml,...)
- INSPIRE ATOM & OpenSearch

- Publish
- INSPIRE View & Download
- Publish as-is
- Geodatabase Templates
- Harmonize
- Publish

INSPiRE Network
HZD INSPIRE Solution

- ISO metadata
- Esri geodatabase
- Service Level Agreement
- OGC profiles (WMS, WMTS, WFS)
- ATOM
- GML
Current projects

Topics of the first stage of the ISS development:

- Hessian State Office for Regional Planning
  - Regional development plan and others
- Hessian State Office for the Preservation of Monuments
  - Complete facilities, individual cultural monuments, natural monuments
- Hessen Mobil (road and traffic management)
  - Road network, network nodes, etc.
- Hessian State Office for Land Management and Geo-Information
  - ALKIS, BasisDLM, DLM50, etc.

In progress: ISS for the municipalities
How does the HZD expand and use the INSPIRE Shared Service?

- Increase the benefits for geodata-providers and -users

  - Expanding **highly available geodata** from administrative geodata-providers as a potential for “Open-Geodata”

  - Geodata provision for the optimization of **open (government) data** (environment, transport, statistics ...) and as a base for **mobile apps** in Hesse

  - Geodata integration into **application-specific theme portals** (e.g. "Basisauftritt Land Hessen", see [https://landesplanung.hessen.de/lep-hessen-0](https://landesplanung.hessen.de/lep-hessen-0))

  - **ISS as a service not limited** on Hesse and open for municipalities

  - **ISS-geodata-partnership** - the HZD has a long history in IT co-operation with municipalities and other federal states. Sharing IT processes, IT infrastructure and resources, reduces single costs and the public budgets are relieved.
Thank you for your attention!

More information about the HZD you will find on our homepage:

www.hzd.hessen.de

or write to:

Petra.Fritz@hzd.hessen.de