INSPIRE, OPEN DATA - WHAT COMES NEXT AND HOW SHOULD ALL THIS WORK TOGETHER?

Armin Retterath / German Working Group for Network Services, Frankfurt, Germany
OVERVIEW

1. Introduction
2. Occuring Problems
3. Some Conclusions
4. Practical example
5. Lessons Learned
OUR DOMAIN PUZZLE

Open Data  Freedom of Information

eGovernment  INSPIRE
FOCUS ON THE MOST EVOLVED DOMAINS
FACTSHEET

- Architecture based on metadata exchange
- Existing legislation at all relevant levels
- Existing technical framework based on international standards
- Well-orchestrated data model
- More than 10 years of experience on implementation
- Not in the political focus
FACTSHEET

- Architecture based on metadata exchange
- No legislation - most initiatives are based on political decisions
- No consistent technical framework for accessing datasets
- Most Open Data portals worldwide are built up on the Comprehensive Knowledge Archive Network
- Metadata model (DCAT / DCAT-AP) based on semantic web standards
- Possibility to re-use vocabularies from other domains
- Currently in the political focus
COMMON TO BOTH INITIATIVES

- Architectures are based on metadata exchange
- Many datasets are both relevant for INSPIRE and also published under a open data compatible license
SOME EFFORTS THAT WERE TAKEN, TO ALLOW AN EXCHANGE OF METADATA BETWEEN OPENDATA- AND GEOPORTALS

- GB (2012 - ): Development of ckan-plugins (csw harvester, pycsw interface)
- EU (2015 - 2016): Development of GeoDCAT-AP to allow an integration of INSPIRE Metadata into general data portals
- GER (2013 - ): Development of an export handler to transform ISO19139 files into ckan json files
PROBLEM 1

THERE ARE MANY DIFFERENT PORTALS, WHICH PUBLISH THE SAME METADATA.
PROBLEM 2

THE METADATA ITSELF IS NOT IN SYNC, CAUSE THE EXCHANGE PROCESS IS NOT COORDINATED.
PROBLEM 3

LICENSES IN THE OPEN DATA DOMAIN ARE MANAGED BY CODELISTS, WHEREAS INSPIRE HANDLES THEM IN TEXTFIELDS. A CONSISTENT MAPPING IS NOT POSSIBLE.
PROBLEM 4

Many Open Data portals manage the publishing organizations as entities. In the INSPIRE metadata model, there is no equivalent construct. For that reason it is not easy to implement a provider filter in SDI's.
PROBLEM 5

The **Freedom of Information** domain gets more and more in the political focus and there are initial requirements for transparency platforms which integrate Open Data, Spatial Data and many other documents types which are of public interest.

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SOME CONCLUSIONS AND TODOS (1)

- The INSPIRE metadata model should be adopted to allow referencing licenses and organizations by usage of external vocabularies.
- A pan-european organization ontology should be developed to allow referencing interoperable organization descriptions from different metadata delivery systems.
- It makes sense to develop a consistent history model for skos files which should be used to publish codelisters.
SOME CONCLUSIONS AND TODOS (2)

• Consideration should be given to glue the different domains together by creating semantic interoperability. Only if we achieve this, it will be possible to integrate INSPIRE data in other eGovernment processes.

• The required actuality of metadata can only be achieved, if the metadata exchange process will be altered from pull (harvest) to push methods.
PRACTICAL EXAMPLE

Metadata exchange via **push** methods - assumptions

- Management of licenses as entities
- Management of organizations as entities
- Coordinated authorization system (ckan / geoportal)
- Use of identical identifiers in both systems
- create / update / delete by comparing identifiers / categories and timestamps
- Usage of ckan resource views to integrate geoportal components in ckan
PRACTICAL EXAMPLE

Metadata exchange via **push** methods - alter spatial metadata
# Practical Example

Metadata exchange via **push** methods - using sync module

<table>
<thead>
<tr>
<th>Ckan sync module</th>
<th>Mapbender group</th>
<th>Ckan organization</th>
<th># delete</th>
<th># update</th>
<th># create</th>
<th>Action</th>
<th>External catalogues</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Struktur- und</td>
<td>75a70e39-b9b3-4d66-9ab6-e2c860a59b6a (24)</td>
<td></td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
PRACTICAL EXAMPLE

Metadata exchange via push methods - result
PRACTICAL EXAMPLE

ckan resource view - preview
PRACTICAL EXAMPLE

ckan resource view - spatial metadata
PRACTICAL EXAMPLE

ckan resource view - INSPIRE ATOM Feed client
LESSONS LEARNED

- It is possible to build up one central metadata portal which meets all requirements of the spatial, open data, egovernment and freedom of information domains.
- Use as few metadata elements as possible.
- A close cooperation between eGovernment and SDI is crucial for the success.
- Keep it simple ;-)
QUESTIONS?
THE END

Armin Retterath
German Working Group for Network Services, Frankfurt, Germany

armin.rettarath@vermkv.rlp.de

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