



Extending INSPIRE Code Lists and Application Schemas

Astrid Feichtner¹ · Roland Wanninger² · Markus Seifert¹

¹Secretariat for Spatial Data Infrastructure in Bavaria

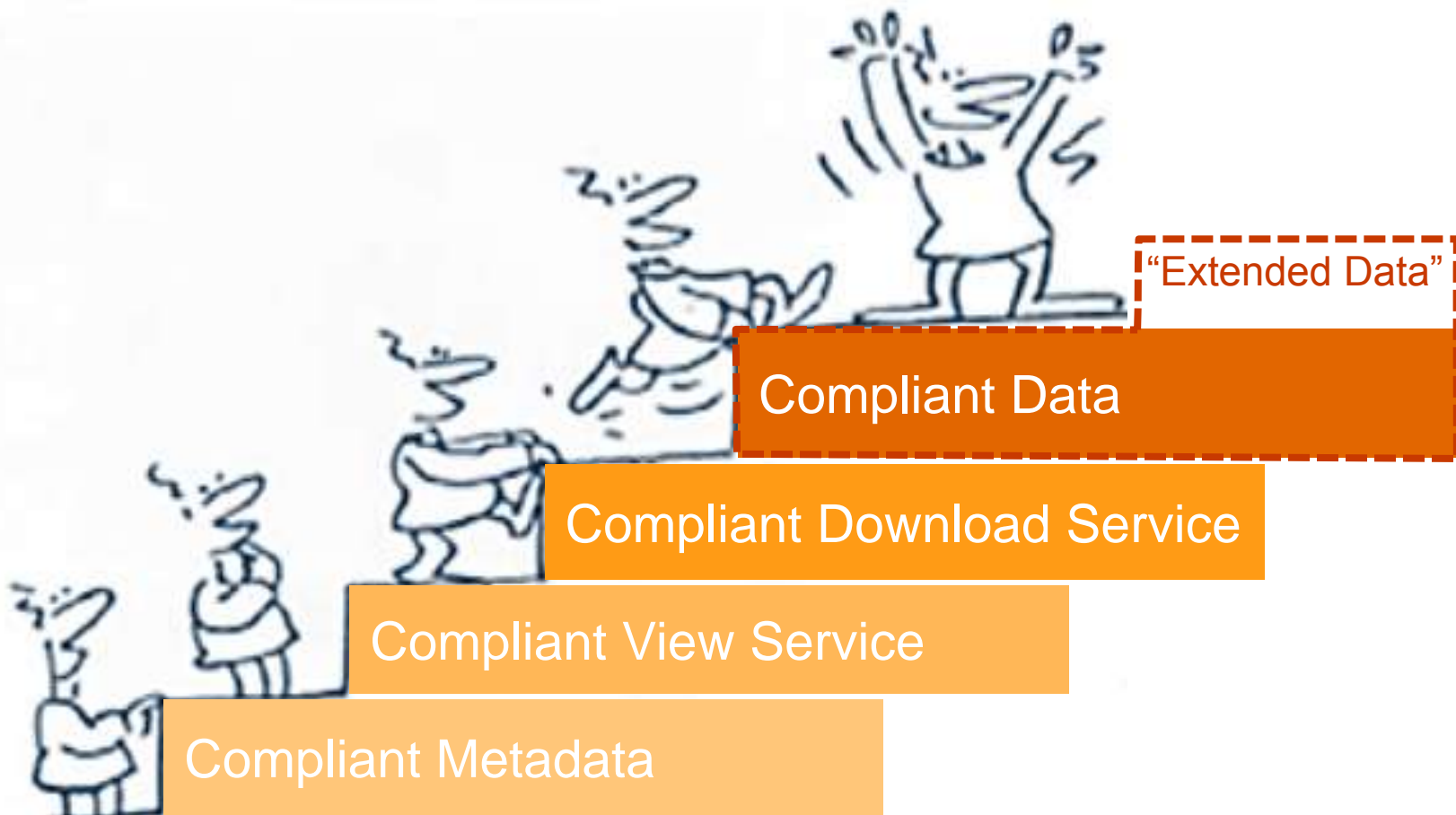
²Bavarian State Office for the Conservation and Preservation of Monuments and Archaeological Sites

INSPIRE Geospatial World Forum

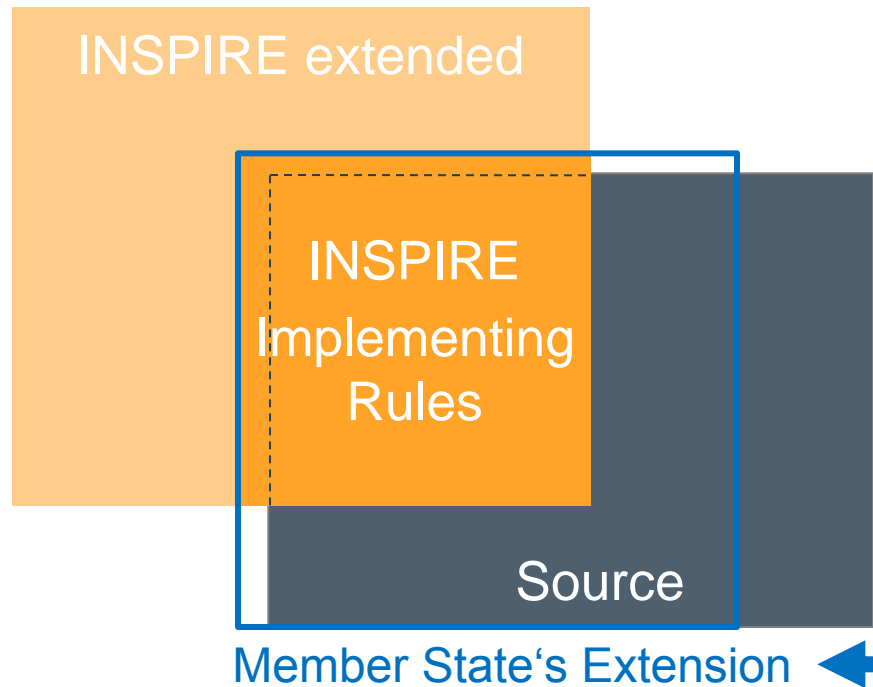
May 26th, 2015



INSPIRE Implementation Steps



Schemas in INSPIRE



Objective of schema transformation

a) only fulfil legal (Implementing Rules) requirements

b) maximise information output

Example: Protected Sites



Protected Sites Simple Schema (excerpt) [1]

«featureType» ProtectedSite
+geometry :GM_Object +siteDesignation :DesignationType [1..*] +...

«dataType» DesignationType
+designation :DesignationValue +designationScheme :DesignationSchemeValue +...

«codeList» DesignationSchemeValue
+emeraldNetwork +IUCN +nationalMonumentsRecord +natura2000 +ramsar +UNESCOManAndBiosphereProgramme +UNESCOWorldHeritage



German
Monuments and
Archaeological
Sites

Extending INSPIRE Code Lists



Types of code lists ([2], Art. 6):

- a) not extensible
- b) extensible using narrower values
- c) extensible using additional values at any level
- d) any values allowed

→ **Extended values and their definitions shall be made available in a register**

INSPIRE Code List Principles [3], [4]

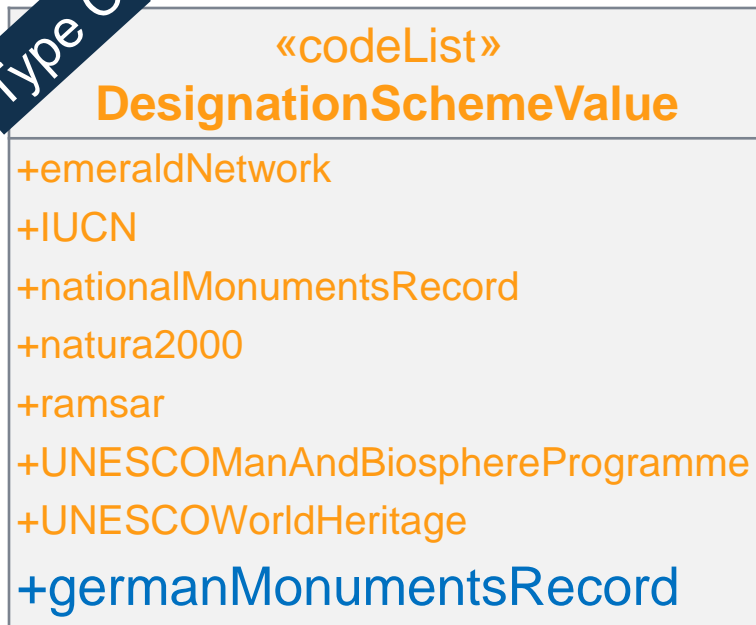


- Reuse over recreation of codes
- Management of code list values
 - outside of application schema
 - rules for maintenance
 - versioning
 - open and free online publication
- Code list and each of its values referenceable through a persistent http URI
- Additional human-readable label recommended
- Encoding
 - SKOS
 - GML 3.2: gml:CodeType; GML 3.3: gml:ReferenceType + xlink:href [5]

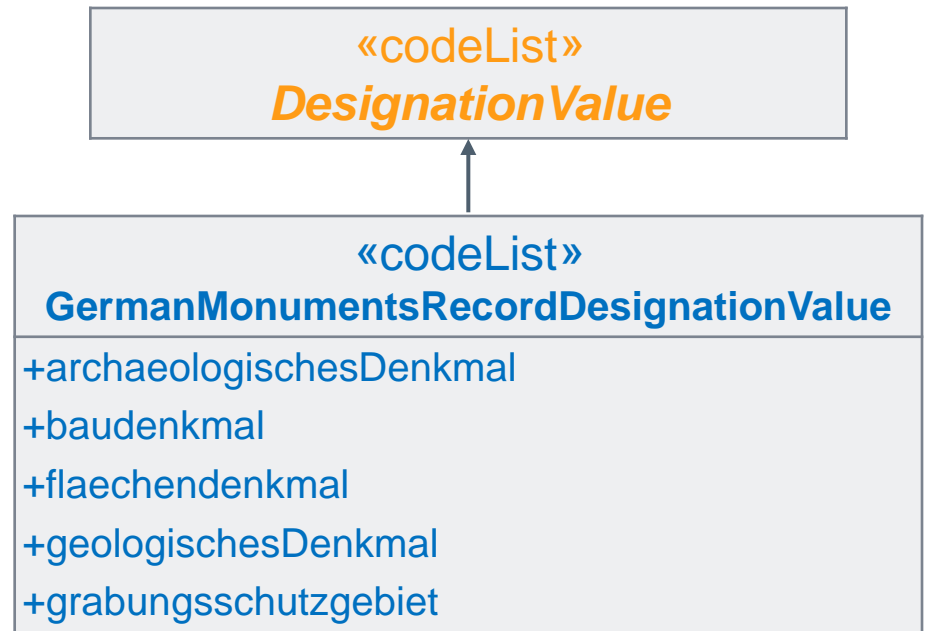
Example: Protected Sites



Type C



additional (German) value



new (German) code list

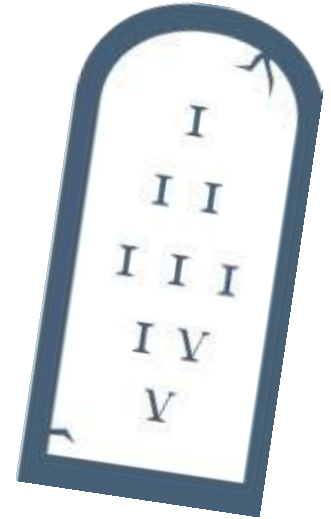
→ where to provide: national and / or INSPIRE Registry?

Extending INSPIRE Schemas



Rules ([3], Annex F):

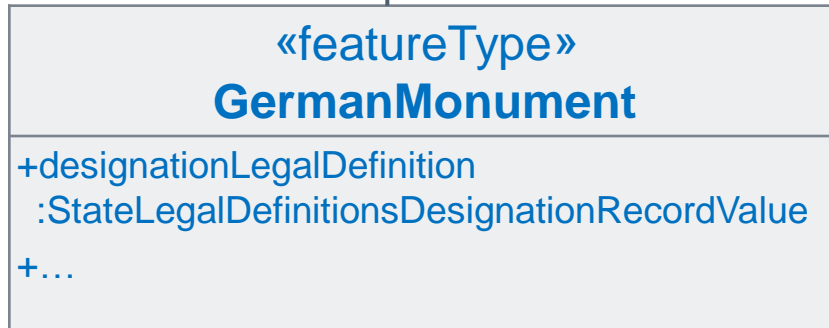
- Thou shalt not
 - change anything in the INSPIRE data specification
 - add a requirement that breaks any requirement of the INSPIRE data specification
- You may
 - add new application schemas importing INSPIRE or other schemas
 - add new types and new constraints in your own application schemas



Example: Protected Sites



German Extension to Protected Sites Simple Schema (excerpt)



actual legal definition of the designation in the laws of the 16 German “Länder” (states) → new codelist

→ where to provide: national and / or INSPIRE Registry?



- Missing **governance rules** (which types of extensions shall be managed in national registers and/or INSPIRE Registry?)
- Missing **link** between national registers and INSPIRE Registry

→ Ongoing work in MIWP-6 [6]:

- guidelines how to extend INSPIRE registers and how to link national registers/extensions to the INSPIRE Registry
- setting up INSPIRE Register Federation

→ Presentations:

- Dominique Laurent in Workshop “Supporting INSPIRE implementation: the Thematic Clusters for topographic and cadastral reference data”, Thursday, 28 May 2015, 13:30 – 15:00
- Michael Lutz in Workshop “Registries – a crucial component for interoperability” Friday, 29 May 2015, 15:30 – 17:00

Open Issues



- Requirement in [3]: code lists (...) referenced from an INSPIRE application schema shall be **multi-lingual** and use a language-independent code for every entry
→ applicable to Member States' extensions?
 - Code list support in GIS clients
 - external references (xlink:href + URI)?
 - hierarchical codelists?
- Experiences in Member States?

Questions



Contact:

Astrid Feichtner

Geschäftsstelle Geodateninfrastruktur Bayern
(Secretariat for Spatial Data Infrastructure in Bavaria)

Munich, Germany

astrid.feichtner@ldbv.bayern.de

References



- [1] INSPIRE Thematic Working Group Protected Sites: Data Specification on Protected Sites. Technical Guidelines (D2.8.I.9_v3.2). URL http://inspire.jrc.ec.europa.eu/documents/Data_Specifications/INSPIRE_DataSpecification_PS_v3.2.pdf
- [2] Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services (OJ L 323, 8.12.2010, p.11), incl. amendments. URL <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02010R1089-20141231&qid=1432105843382&from=EN>
- [3] INSPIRE Drafting Team Data Specifications: INSPIRE Generic Conceptual Model (D2.5_v3.4). URL http://inspire.jrc.ec.europa.eu/documents/Data_Specifications/D2.5_v3.4.pdf
- [4] INSPIRE Drafting Team Data Specifications: INSPIRE Guidelines for the encoding of spatial data (D2.7_v3.3). URL http://inspire.jrc.ec.europa.eu/documents/Data_Specifications/D2.7_v3.3.pdf
- [5] OGC® Geography Markup Language (GML) — Extended schemas and encoding rules. Version 3.3.0 (OGC 10-129r1). URL https://portal.opengeospatial.org/files/?artifact_id=46568
- [6] von Dömming, Andreas et al.: Proposal for an INSPIRE Register Federation Architecture. D.2 Final Study Report. URL <https://ies-svn.jrc.ec.europa.eu/attachments/download/1101/Study-Register-Federation-D2-Final-Report.pdf>