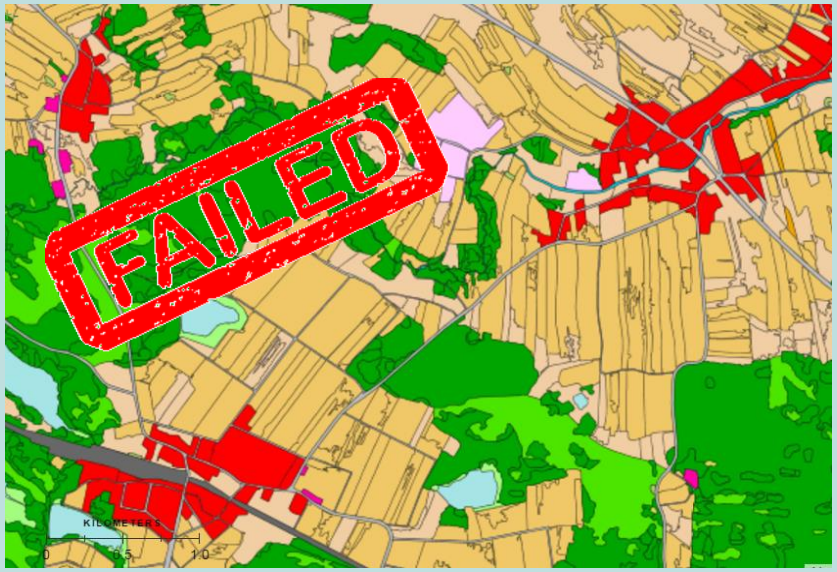


Sinn und Unsinn der Datenvalidierung

EEA-Auftrag: Harmonisierung CORINE Land Cover und Urban Atlas

Roland Grillmayer, Thomas Rosmann, Gebhard Banko

18. November 2015 Wien

Relation INSPIRE IR & TG

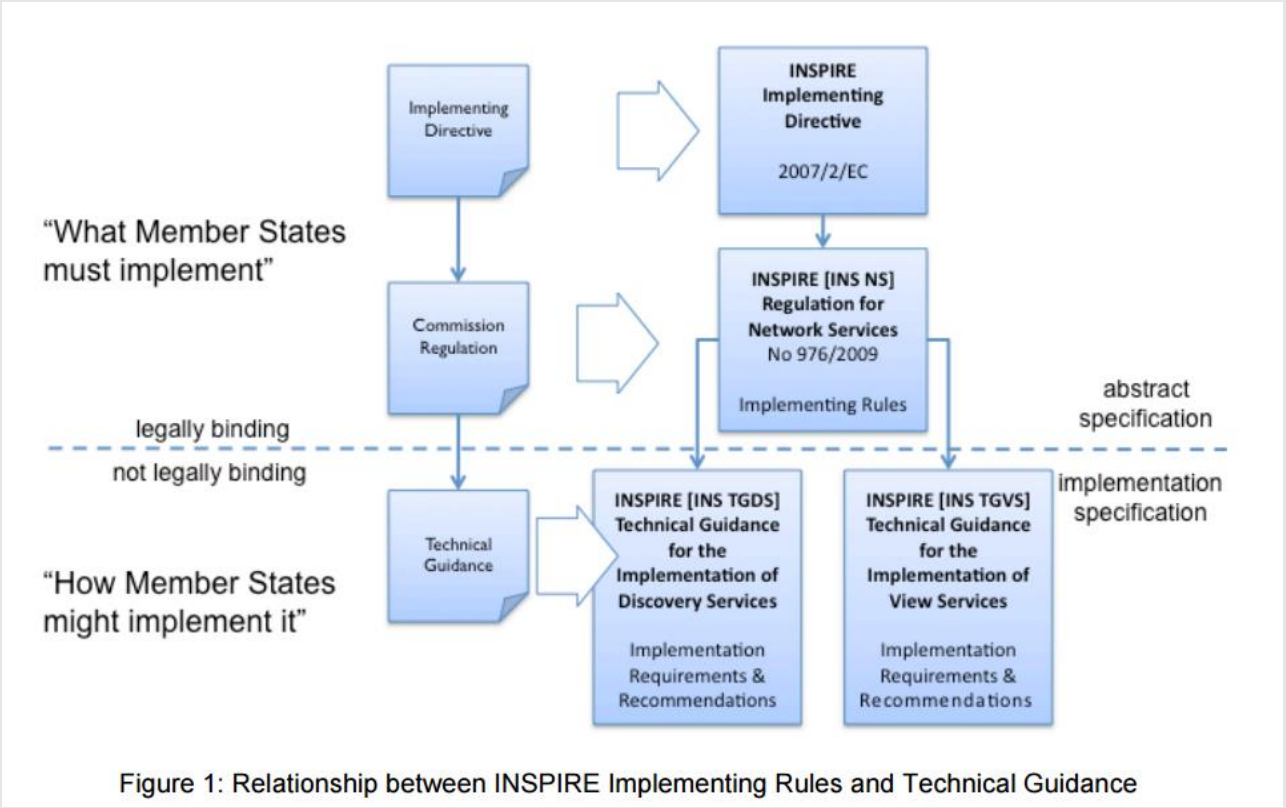


Figure 1: Relationship between INSPIRE Implementing Rules and Technical Guidance

Relation INSPIRE IR & TG

Legislation

- Commission Regulation (EU) No 1312/2014 of 10 December 2014 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data services 11.12.2014
- COMMISSION REGULATION (EU) No 1253/2013 of 21 October 2013 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services 10.12.2013
- COMMISSION REGULATION (EU) No 102/2011 of 4 February 2011 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services 05.02.2011
- 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 08.12.2010

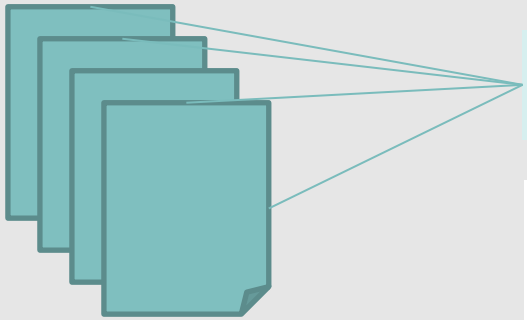
Technical Guidelines Annex I

- INSPIRE Data Specification on Addresses – Technical Guidelines 3.1 17.04.2014
- INSPIRE Data Specification on Administrative Units – Technical Guidelines 3.1 17.04.2014
- INSPIRE Data Specification on Cadastral Parcels – Technical Guidelines 3.1 17.04.2014
- INSPIRE Data Specification on Coordinate Reference Systems – Technical Guidelines 3.2 17.04.2014
- INSPIRE Data Specification on Geographical Grid Systems – Technical Guidelines 3.1 17.04.2014
- INSPIRE Data Specification on Geographical Names – Technical Guidelines 3.1 17.04.2014
- INSPIRE Data Specification on Hydrography – Technical Guidelines 3.1 17.04.2014
- INSPIRE Data Specification on Protected Sites – Technical Guidelines 3.2 17.04.2014
- INSPIRE Data Specification on Transport Networks – Technical Guidelines 3.2 17.04.2014

Technical Guidelines Annex II & III

- INSPIRE Data Specifications – All v3.0 Technical Guidelines for Annexes II & III 13.12.2013
- INSPIRE Data Specification on Agricultural and Aquaculture Facilities – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Area Management/Restriction/Regulation Zones and Reporting Units – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Atmospheric Conditions and Meteorological Geographical Features – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Bio-geographical Regions – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Buildings – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Elevation – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Energy Resources – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Environmental Monitoring Facilities – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Geology – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Habitats and Biotopes – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Human Health and Safety – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Land Cover – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Land Use – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Mineral Resources – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Natural Risk Zones – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Oceanographic geographical features – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Orthoimagery – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Population Distribution – Technical Guidelines 10.12.2013
- INSPIRE Data Specification on Production and Industrial Facilities – Technical Guidelines 10.12.2013

Prozess der Validierung



Implementing Directive (normativ) &
Technical Guidance & Data Specifications (informativ)

Annex A
(normative)

Abstract Test Suite

Part 1
(normative)

Conformity with Commission Regulation No 1089/2010

A.1 Application Schema Conformance Class

Conformance classes:
http://inspire.ec.europa.eu/conformance-class/ir/lc/as/LandCoverNomenclature
http://inspire.ec.europa.eu/conformance-class/ir/lc/as/LandCoverVector
http://inspire.ec.europa.eu/conformance-class/ir/lc/as/LandCoverRaster

A.1.1 Schema element denomination test

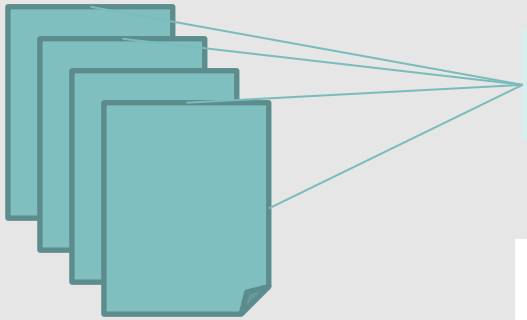
a) Purpose: Verification whether each element of the dataset under inspection carries a name specified in the target application schema(s).

b) Reference: Art. 3 and Art.4 of Commission Regulation No 1089/2010

c) Test Method: Examine whether the corresponding elements of the source schema (spatial object types, data types, attributes, association roles, code lists, and enumerations) are mapped to the target schema with the correct designation of mnemonic names.

NOTE Further technical information is in the Feature catalogue and UML diagram of the application schema(s) in section 5.2.

Prozess der Validierung



Implementing Directive (normativ) &
Technical Guidance & Data Specifications (informativ)

Annex A
(normative)

Abstract Test Suite

Part 2
(informative)

Conformity with the technical guideline (TG) Requirements

A.8 Technical Guideline Conformance Class

Conformance class:
http://inspire.ec.europa.eu/conformance-class/tg/lc/3.0rc3

A.8.1 Multiplicity test

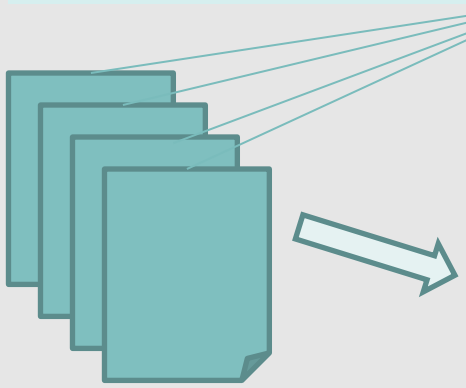
a) Purpose: Verify whether each instance of an attribute or association role specified in the application schema(s) does not include fewer or more occurrences than specified in section 5.

c) Reference: Feature catalogue and UML diagram of the application schema(s) in section 5 of this guideline.

b) Test Method: Examine that the number of occurrences of each attribute and/or association role for each instance of a spatial object type or data type provided in the dataset corresponds to the number of occurrences of the attribute / association role that is specified in the application schema(s) in section 5.

Prozess der Validierung

Implementing Directive (normativ) &
Technical Guidance & Data Specifications (informativ)



ATS

ETS

Mapping Table

Data HS

ATS - Ziele

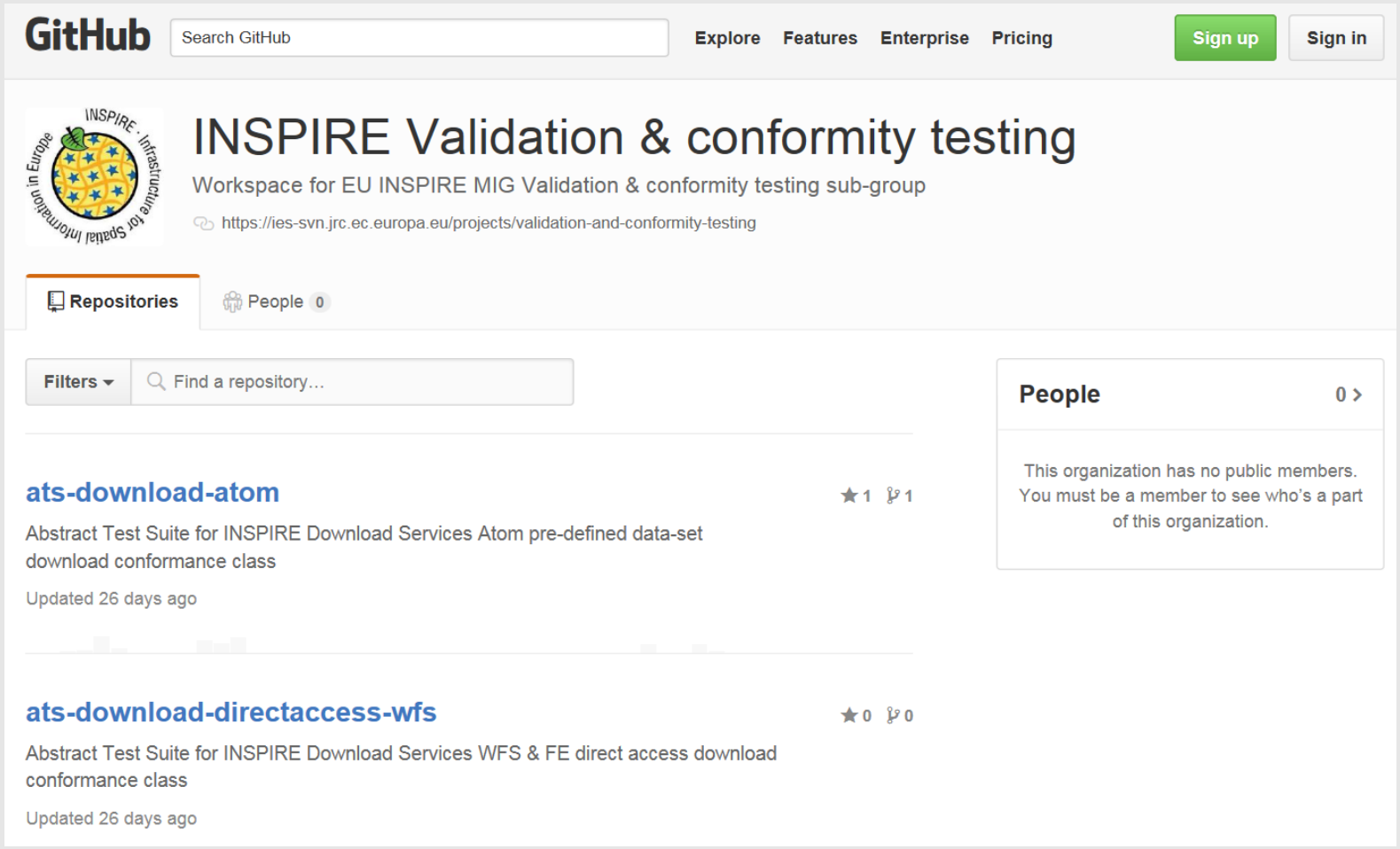
- Einheitliche Beschreibung von Validierungen für jede DS
- Abstrakt = Implementierungsunabhängig
  - Konkret genug um Implementierungsfreiheiten weitgehend einzuschränken
  - Inhalte
    - Ziel
    - Voraussetzungen
    - Test Methode
    - Referenzen
    - Anmerkungen
    - xPath Referenz

Vorhandene ATS

MIG Validation & conformity testing sub-group

- ats-metadata for INSPIRE Metadata Technical Guidance,
- ats-interoperability-metadata for INSPIRE Metadata for Interoperability of Spatial Datasets and Services,
- ats-view-wms for INSPIRE View Service using ISO 19128 (WMS 1.3.0),
- ats-view-wmts for INSPIRE View Service using WMTS 1.0.0,
- ats-download-atom for INSPIRE pre-defined dataset Download Service using Atom,
- ats-download-directaccess-wfs for INSPIRE direct access Download Service using Web Feature Service and Filter Encoding, and
- ats-download-predefined-wfs for INSPIRE pre-defined dataset Download Service using Web Feature Service and Filter Encoding.

ATS - Ziele



https://github.com/inspire-eu-validation

ATS – Abstract Test Suite

A.35.IR39.harmonized.layer.name

Purpose: It must be unambiguous to find out which of the layers provided by the service visualize the INSPIRE spatial data sets given in the Data Specifications for each INSPIRE theme. These layers must be named according to the INSPIRE Harmonised layer names defined in IR IOP

Prerequisites

- A.03.IR05.schema.validation

Test method

The identifiers of the WMTS layers portraying INSPIRE datasets must be INSPIRE harmonised names. To determine if a layer is portraying an INSPIRE dataset, the metadata record describing the portrayed dataset must be available for validator.

ATS – Abstract Test Suite

For each Layer element provided by the service according to it's Service Metadata:

- For each MetadataURL element of the layer as `metadata`:
  - Check that `metadata` contains an OnlineResource element. If yes,
    - Check that OnlineResource element contains a non-empty href attribute. If it does,
      - Check that the href attribute value is a valid URL and fetch the document it refers to. If not valid URL or the document cannot be fetched mark this layer as failed. If a document fetch is successful:
        - Check that the fetched document contains is a valid INSPIRE metadata record for a dataset at it's document root. If yes, then

```
<wms:WMS_Capabilities version="1.3.0"
 xmlns:wms="http://www.opengis.net/wms>
  <wms:Service>
    ...
  </wms:Service>
  <wms:Capability>
    ...
    <wms:Layer>
      ...
      <MetadataURL type="ISO19115:2003">
        <Format>text/xml</Format>
          <OnlineResource xmlns:xlink="http://www.w3.org/1999/xlink"
            xlink:type="simple"
            xlink:href="
http://.../discovery?Service=CSW&Request=GetRecordById&Version=2.0.2&id=[ME
```

ATS – Abstract Test Suite

- Check if the Specification contains one of the official translations of the names of IR IOP and that the value of Pass equals "true".
- If no valid INSPIRE dataset metadata record is found or Specification condition above is not met, mark this layer skipped as a non-harmonised or non-INSPIRE layer. Otherwise:
  - Check that the trimmed string content of the Name element matches one the harmonised layer names given in IR IOP or it's amendments. If matched, mark layer as passed.

- If in the end each of the layers is either skipped or passed, the test passes.
- If there are more than one layer with the MetadataURL element pointing to the same INSPIRE metadata record, the Name element of only one of them needs to match one of the harmonised layer names in order for the test to pass for all of those layers.

```
<wms:WMS_Capabilities version="1.3.0"
 xmlns:wms="http://www.opengis.net/wms>
  <wms:Service>
     ...
  </wms:Service>
  <wms:Capability>
     ...
     <wms:Layer>
        <wms:Name>TN.RoadTransportNetwork.RoadArea</wms:Name>
        <wms:Title> Transport networks : Road Area</wms:Title>
        <wms:Abstract>As defined by TWG</wms:Abstract>
        <wms:KeywordList>
          <wms:Keyword vocabulary="GEMET"> GEMET keyword</wms:Keyword>
```

ATS – Abstract Test Suite

Reference(s)

- IR IOP Article 14
- TG VS, chapters 5.2.3.3.4.5 and 5.2.3.3.4.6

Test type: Automated

Notes

Note 1: The harmonised names only apply to the harmonised INSPIRE datasets provided according to the INSPIRE Data Specifications.

Note 2: The use and usefulness of the harmonised layer names and titles is under discussion, see https://ies-svn.jrc.ec.europa.eu/issues/2172 and https://ies-svn.jrc.ec.europa.eu/projects/miwp-20

Note 3: It's assumed that there may be layers providing portrayals for both the INSPIRE datasets and non-INSPIRE data sets in the same service. Also it's assumed, that there may be more than one layer portraying the same dataset and thus pointing to the same metadata record using the MetadataURL element.

Note 4: This test should be kept harmonized with the corresponding WMTS profile test A.04.layer.name.id

ATS – Abstract Test Suite

Contextual XPath references

The namespace prefixes used as described in README.md.

Abbreviation	
Layer	/wms:WMS_Capabilities/wms:Capability//wms:Layer
MetadataURL OnlineResource element	./wms:MetadataURL
OnlineResource element	./wms:OnlineResource
href attribute	./@xlink:href
Name element	./wms:Name
Specification	/csw:GetRecordByIdResponse/gmd:MD_Metadata/gmd:dataQualityInfo/gmd:DQ_DataQuality/gmd:
Pass	/csw:GetRecordByIdResponse/gmd:MD_Metadata/gmd:dataQualityInfo/gmd:DQ_DataQuality/gmd:

ATS – Abstract Test Suite

4.2.3.3.4.6 NAME

The harmonised name of a layer for an INSPIRE spatial data theme as defined by **[INS DS]**.

Implementation Requirement 39 Name shall be mapped with the `<wms:Name>` element. The harmonised name of a layer shall comply with the Layer requirements of the **[INS DS,** Article 14]

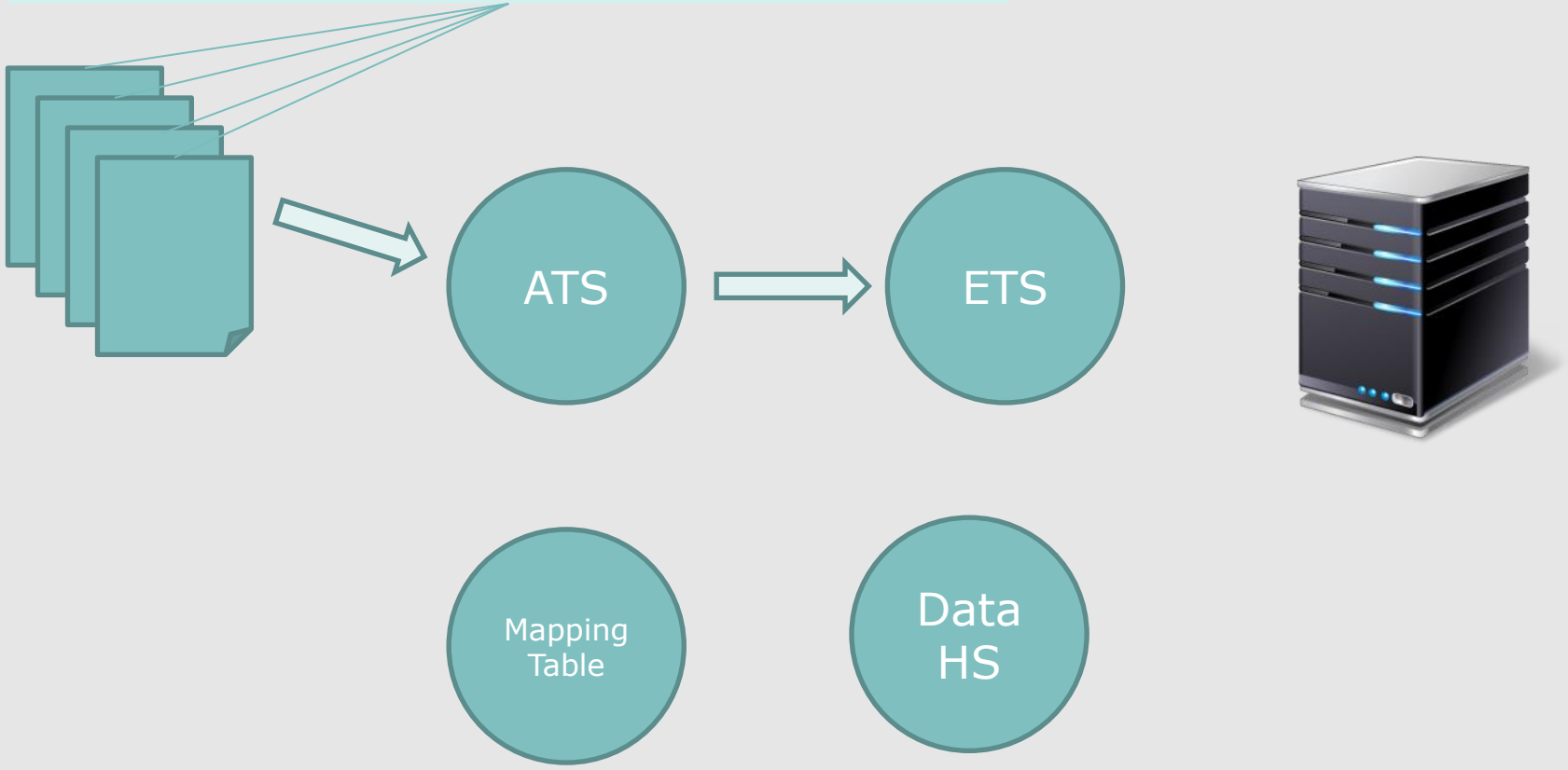
Table 5: Annexes I harmonised name examples

Theme	Examples of layer names
Geographical names	`GN.GeographicalNames`
Administrative units	`AU.AdministrativeUnit`
Addresses	`AD.Address`
Cadastral parcels	`CP.CadastralParcel`
Transport networks	`TN.RoadTransportNetwork.RoadArea`
Hydrography	`HY.Network`
Protected sites	`PS.ProtectedSite`

Quelle: http://inspire.ec.europa.eu/documents/Network_Services/TechnicalGuidance_ViewServices_v3.1.pdf

Prozess der Validierung

Implementing Directive (normativ) &
Technical Guidance & Data Specifications (informativ)



ETS - Executable Test Suite

Harmonised layer name – ETS Beispiel anhand Schematron

```
<pattern>
   <rule context="MetadataURL">
      <assert test="descendant::OnlineResource">MetadataURL does not contain
         OnlineRessource element!</assert>
   </rule>
   <rule context="OnlineResource">
      <assert test="xlink:href">OnlineRessource does not contain xlink:href
         element!</assert>
   </rule>
   <rule context="wms:Layer">
      <assert test="wms:Name =
         ('GN.GeographicalNames','AU.AdministrativeUnit','AD.Address','CP.CadastralParcel',
         'HY.Network','PS.ProtectedSite')">
         Name "<value-of select="wms:Name"/>" is not a harmonized Name!
      </assert>
   </rule>
</pattern>
```

39.1 - error - **Not a harmonised layer name** - TG_Req#39

The names of the folowing layers are not harmonised.

Layers: MS, laser_1m_surface, laser_1m_terrain, Orthofoto, FWP-Flaechen, FWP-Umwidmungen, FWP-L
landschaftsschutzgebiet, gesch_landschaftsteil, pflanzenschutzgebiet, oertliches_schutzgebiet, natura20
grundwasserfelder, wasserschutzundschongebiete, bruecken, galerie, tunnel, unterfuehrung, forstwege,
auwald, ufergehoelz, waldentwicklungsplan, waldregionen, almkataster, laermkarteLDEN, laermkarteLN
NiederschlagMessstellen, GrundwasserMessstellen, fischereikataster, jagdreviere

ETS - Executable Test Suite

- Beispiel Schematron

```
<?xml version="1.0" encoding="UTF-8"?>
<schema xmlns="http://purl.oclc.org/dsdl/schematron" queryBinding="xslt2">

    <!-- Define all namespaces to use -->
    <ns uri="urn:x-inspire:specification:gmlas:ProtectedSites:3.0" prefix="ps"/>
    <ns uri="http://www.opengis.net/gml/3.2" prefix="gml"/>

    <diagnostics>
        <diagnostic id="ir-ps-as-ps-A21-failure-en"
            xml:lang="en">
            '<value-of select="$srsName"/>'
            was not found in the list of valid SRS in feature
            '<value-of select="$featureId"/>'.
        </diagnostic>
    </diagnostics>

    <pattern id="A.2.1">
        <title>A.2.1 Datum test</title>
        <let name="listOfValidSrs" value="('urn:ogc:def:crs:EPSG::4258', 'urn:ogc:def:crs:EPSG::4326')"/>
        <rule context="ps:geometry/gml:*">
            <!-- Get a reference for the current feature tested.
      It's nice to have this reference in reporting failure
      so user could easily find the features to be fixed.
      -->
            <let name="featureId" value="ancestor::ps:ProtectedSite/@gml:id"/>

            <let name="srsName" value="@srsName"/>
            <let name="isValidSrs" value="exists($listOfValidSrs[. = $srsName])"/>
            <!-- Could be also written using $listOfValidSrs = $srsName -->

            <assert test="$isValidSrs" diagnostics="ir-ps-as-ps-A21-failure-en"/>
        </rule>
    </pattern>
</schema>
```


Quelle: https://github.com/titellus/inspire-executable-test-suite

ETS - Executable Test Suite

- Beispiel xQuery

```
declare namespace ps = "urn:x-inspire:specification:gmlas:ProtectedSites:3.0";
declare namespace gn = "urn:x-inspire:specification:gmlas:GeographicalNames:3.0";
declare namespace gml = "http://www.opengis.net/gml/3.2";

declare variable $listOfValidSrs := ('urn:ogc:def:crs:EPSG::4258', 'urn:ogc:def:crs:EPSG::4326');

<html>
  <head/>
  <body>
    <h1>List of protected sites:</h1>
    <div>
      <ul>
       {
       for $protectedSite in doc("../../data/NOR/NOR_4258.gml")//ps:ProtectedSite
       (: this is a comment :)

       return
           <li>{
           $protectedSite//gn:SpellingOfName/gn:text/text()}
           ({string($protectedSite/@gml:id)})

           {
            let $srsName := $protectedSite/ps:geometry/gml:*/@srsName,
            $isValidSrs := exists($listOfValidSrs[. = $srsName])

            return if (not($isValidSrs))
              then <b>Wrong SRS: {string($srsName)}</b>
              else <span/>
           }
           </li>
       }
      </ul>
    </div>
  </body>
</html>
```

Quelle: https://github.com/titellus/inspire-executable-test-suite

ETS - Executable Test Suite

- Schematron Validierung in Oxygen

```
<sch:pattern>
    <sch:rule context="lcv:beginLifespanVersion">
        <sch:assert test="@xsi:nil='true' or normalize-space(.) castable as xs:dateTime">ERROR: [lcv:beginLifespanVersion] invalid date format !!</sch:assert>
    </sch:rule>

    <sch:rule context="lcv:endLifespanVersion">
        <sch:assert test="@xsi:nil='true' or normalize-space(.) castable as xs:dateTime">ERROR: [lcv:endLifespanVersion] invalid date format !!</sch:assert>
    </sch:rule>

    <sch:rule context="lcv:observationDate">
        <sch:assert test="@xsi:nil='true' or normalize-space(.) castable as xs:dateTime">ERROR: [lcv:observationDate] invalid date format !!</sch:assert>
    </sch:rule>
</sch:pattern>
```

```
224                     <lcv:geometry>
225                         <gml:Surface gml:id="SE001L1-54-0" srsName="EPSG:3035" srsDimension="2">
226                             <gml:patches>
227                                 <gml:PolygonPatch>
228                                     <gml:exterior>
229                                         <gml:LinearRing>
230                                             <gml:posList>4047905.537 4782815.891 4047902.847 4782780
230 4047935.774 4782811.272 4047905.537 4782815.891</gml:posList>
231                                         </gml:LinearRing>
232
233
```

E [ISO Schematron] ERROR: [lcv:geometry @ srsN

t Raster Autor

	Info	Beschreibung - 2545 Elemente
tockholm_neu.gml, schema "LandCoverVector_		
	–	E [ISO Schematron] ERROR: [lcv:geom
	–	E [ISO Schematron] ERROR: [lcv:geom
	–	E [ISO Schematron] ERROR: [lcv:geom

```
1484                     </lcv:inspireId>
1485                     <lcv:beginLifespanVersion nilReason="unpopulated"/>
1486                     <lcv:endLifespanVersion nilReason="unpopulated"/>
1487                     <lcv:geometry>
1488                         <gml:Surface gml:id="FR001L1-22850-0" srsName="EPSG:3035" srsDimension="2">
```

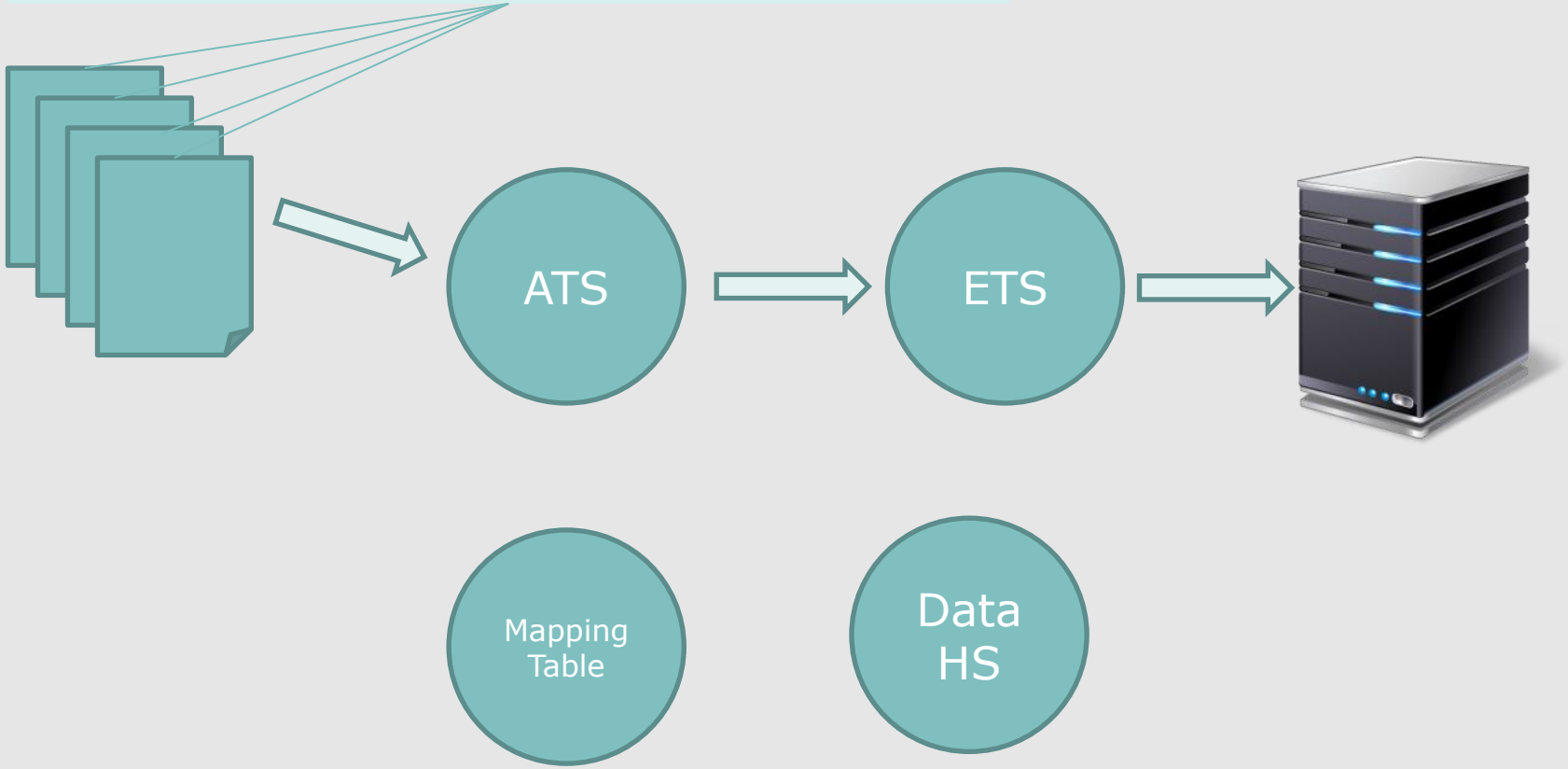
E [ISO Schematron] ERROR: [lcv:geometry @ srsName] invalid coordinate reference system.

ext Raster Autor

	Info	Beschreibung - 5816 Elemente
	–	E [ISO Schematron] ERROR: [lcv:beginLifespanVersion] invalid date format !!
	–	E [ISO Schematron] ERROR: [lcv:endLifespanVersion] invalid date format !!
	–	E [ISO Schematron] ERROR: [lcv:beginLifespanVersion] invalid date format !!
	–	E [ISO Schematron] ERROR: [lcv:endLifespanVersion] invalid date format !!
	–	E [ISO Schematron] ERROR: [lcv:beginLifespanVersion] invalid date format !!

Prozess der Validierung

Implementing Directive (normativ) &
Technical Guidance & Data Specifications (informativ)



Übersicht Validierungstool

	License	Test Engine		
GDI-DE	Mozilla Public License 1.1	TEAM Engine	CTL	1,2,3,4,7
INSPIRE Geoportal Pilot validator	European Public License	Own development	XSLT / JAVA	1,2,3,4,
Geonovum Validation Tools	--	SoapUI	Schematron	1,3,4,5,7
eENVplus Validation Service	--	TEAM Engine	CTL, Schematron	5

Verfügbare Validierungsarten	
1 - Metadata	4 - Download Services
2 - Discovery Services	5 – Data specification
3 - Viewing Services	6 – Spatial Data Service
7 - Quality of Service	

PERSPEKTIVEN FÜR UMWELT & GESELLSCHAFT umweltbundesamt

eENVplus

eENVplus Validation Service

The **eENVplus Validation Service** provides **Executable Test Suites (ETS)** implementing the Abstract Test Suites **(ATS)** which are included in the **Annex A** of the **INSPIRE Data Specifications** and contain a set of tests to be applied on a dataset to evaluate whether it fulfils the INSPIRE requirements.

ATS

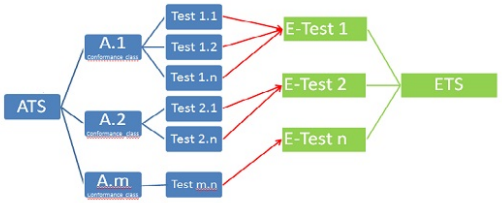
Annex A - Part 1: includes tests aiming at assessing the conformity of GML datasets to "COMMISSION REGULATION (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial datasets and services" and its successive amendment "COMMISSION REGULATION (EU) No 1253/2013 of 21 October 2013".

Annex A - Part 2: includes tests aiming at assessing conformity of GML datasets to relevant INSPIRE Data Specifications - Technical Guidelines (TG) requirements.

The requirements to be tested are grouped in several **Conformance Classes**.
Each of these classes covers a specific aspect: for example A.1 conformance class contains tests related to the requirements on the application schema, A.2 conformance class contains tests related to the requirements on the reference systems, etc …
In order to be **conformant** to a specific Conformance Class, a dataset has **to pass all tests defined for that Conformance Class**.
If a dataset is not yet conformant with all requirements of the Data Specification, **conformity to individual Conformance Classes can be claimed**.

ETS

In order to execute abstract tests associated to Conformance Classes, an **Executable Test Suite(ETS)**, containing a physical implementation of the abstract tests, has to be derived from the ATS.
For those tests that cannot be automated the ETS contains guidelines to manual execution.
A single executable test can cover different abstract tests.



Tests included in the **ATS** vary according to the different data themes.
Select the **INSPIRE Theme** from the underlying dropdown list to display the **ATS** included in the Annex A of the relevant **INSPIRE Data Specifications** and have access to the associated **ETS**.

eENVplus

eENVplus Validation Service

The ATS table below contains a detailed list of the abstract tests included in the **ATS** for the **Land Cover** and relevant **Executable Tests (ET)** provided by the **eENVplus Validation Service**.
Abstract tests marked by "*" make use of schematron files developed by eENVplus team.
Click links in the list of **Available Executable Tests of the GML Data Validation ETS** to access the relevant **Executable Tests** or **Click** the arrow icon to go back to the HOME page

ATS	Conformance classes	Abstract Tests	Related ET
Part 1 (normative)	A.1 Application Schema Conformance Class	A.1.1 Schema element denomination test	E.1
		A.1.2 Value type test	E.1
		A.1.3 Value test *	E.1
		A.1.4 Attributes/Associations completeness test	E.1
		A.1.5 Abstract spatial object test	E.1
		A.1.6 Constraints test *	E.1
		A.1.7 Geometry representation test*	E.1
	A.2 Reference Systems Conformance Class	A.2.1 Datum test *	E.1
		A.2.2 Coordinate reference system test *	E.1
		A.2.3 Grid test	E.2
		A.2.4 View service CRS test	E.2
		A.2.5 Temporal reference system test	E.2
		A.2.6 Units of measurements test	E.2
	A.3 Data Consistency Conformance Class	A.3.1 Unique identifier persistency test	E.3
		A.3.2 Version consistency test	E.3
		A.3.3 Life cycle time sequence test*	E.1
		A.3.4 Validity time sequence test *	E.1
		A.3.5 Update frequency test	E.3
	A.4 Metadata IR Conformance Class	A.4.1 Metadata for interoperability test	E.4
	A.5 Information Accessibility Conformance Class	A.5.1 Code list publication test	E.5
		A.5.2 CRS publication test *	E.1
		A.5.3 CRS identification test *	E.1
		A.5.4 Grid identification test	E.5
	A.6 Data Delivery Conformance Class	A.6.1 Encoding compliance test	E.1
	A.7 Portrayal Conformance Class	A.7.1 Layer designation test	E.6
		A.8.1 Multiplicity test	E.1

Available Executable Tests of the GML Data Validation ETS
E.1- Automated Validation : A.1 All tests -A.2.1 Datum test - A.2.2 Coordinate reference system test - A.3.3 Life cycle time sequence test - A.3.4 Validity time sequence test - A.5.2 CRS publication test - A.5.3 CRS identification test - A.6.1: Encoding compliance test - A.8.1: Multiplicity test - A.8.6 Encoding schema validation test
E.2- Guideline to Manual Validation : A.2.3 Grid test A.2.4: View service CRS test, A.2.5:Temporal reference system test, A.2.6:Units of measurements test
E.3- Guideline to Manual Validation : A.3.1 Unique identifier persistency test - A.3.2 Version consistency test - A.3.5 Update frequency test
E.4- Guideline to Manual Validation : A.4: all tests
E.5- Guideline to Manual Validation : A.5.1: Code list publication test - A.5.4 Grid identification Test
E.6- Guideline to Manual Validation : A.7: all tests
E.7- Guideline to Manual Validation : A.8.2: CRS http URI test
E.8- Guideline to Manual Validation : A.8.3: Metadata encoding schema validation test - A.8.4: Metadata occurrence test - A.8.5: Metadata consistency test
E.9- Guideline to Manual Validation : A.8.7: Coverage multipart representation test - A.8.8 Coverage domain consistency test
E.10- Guideline to Manual Validation : A.8.9: Style test

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OGC® Making location count.

eENVplus Validation Service

User:
Logout

TEAM Engine v4

Test Sessions

Session	Test suite name	Description
s0001	OGC_Geography Markup Language (GML)_3.2.1_3.2.1-r17	LandCover

Create a new session

If you have any questions or suggestions, feel free to contact the eENVplus team.

TEAM Engine 4.0.5

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Test run in progress...
Stop

GML 3.2.1 (ISO 19136:2007) Conformance Test Suite

This executable test suite (ETS)

- verifies the conformance of GML dataset with respect to ISO 19136:2007 (GML 3.2.1)
- performs the validation of GML dataset against the xsd application schema declared in the *'xsi:schemalocation'* attribute of the GML file.
  - For INSPIRE datasets the xsd shall be expressed by means of the relevant http link to the official schema repository *http://inspire.ec.europa.eu/schemas/*
  - For AQD datasets the xsd must be *http://dd.eionet.europa.eu/schemas/id2011850eu-1.0/AirQualityReporting.xsd*
- performs the validation of supplementary data constraints if user selects the relevant (INSPIRE theme OR AQD dataflow) schematron file from underlying schematron drop down list. Be aware that specified version refers to the version of the INSPIRE application schema

Location of GML dataset file

To upload the GML dataset file as web resource, insert here the http URL OR the relevant WFS GetFeature request

To upload the GML dataset from a local resource Click the button below

Durchsuchen...

Select relevant INSPIRE theme OR AQD dataflow for Schematron Validation: Skip Schematron test

Start | Clear

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Results for session s0001

Test Suite: GML 3.2 (ISO 19136:2007) Conformance Test Suite

Test tns:Main (View Details): Failed

Summary of results

Best Practice	Passed	Continue	Not Tested	Warning	Skipped	Failed	Failed (Inherited)
0	0	0	0	0	0	1	0

Execute this session again | Delete this session | Download log Files | Create execution log report file

Sessions list

If you have any questions or suggestions, feel free to contact the eENVplus team.

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Results for session s0001

Test Suite: GML 3.2 (ISO 19136:2007) Conformance Test Suite

Test tns:Main (View Details): Passed

Summary of results

Best Practice	Passed	Continue	Not Tested	Warning	Skipped	Failed	Failed (Inherited)
0	1	0	0	0	0	0	0

See the detailed test report.

Execute this session again | Delete this session | Download log Files | Create execution log report file

Sessions list

If you have any questions or suggestions, feel free to contact the eENVplus team.

TEAM Engine 4.0.5

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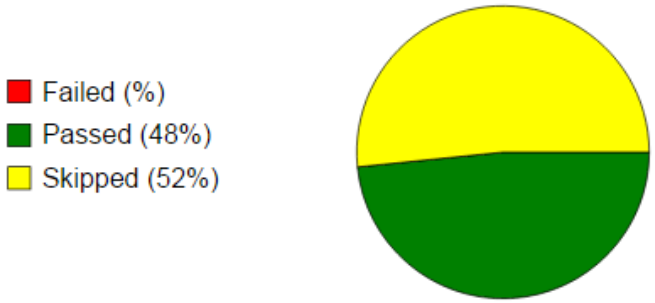
TestNG Results

Results overview
Reporter output

gml32-3.2.1-r18 48%
0 Groups
0 / 15 / 16 / 31

- All GML application schemas
- GML application schemas defining features and feature collections
- GML application schemas defining spatial geometries
- GML application schemas defining time
- GML application schemas defining spatial topologies
- GML Documents

Test suites overview



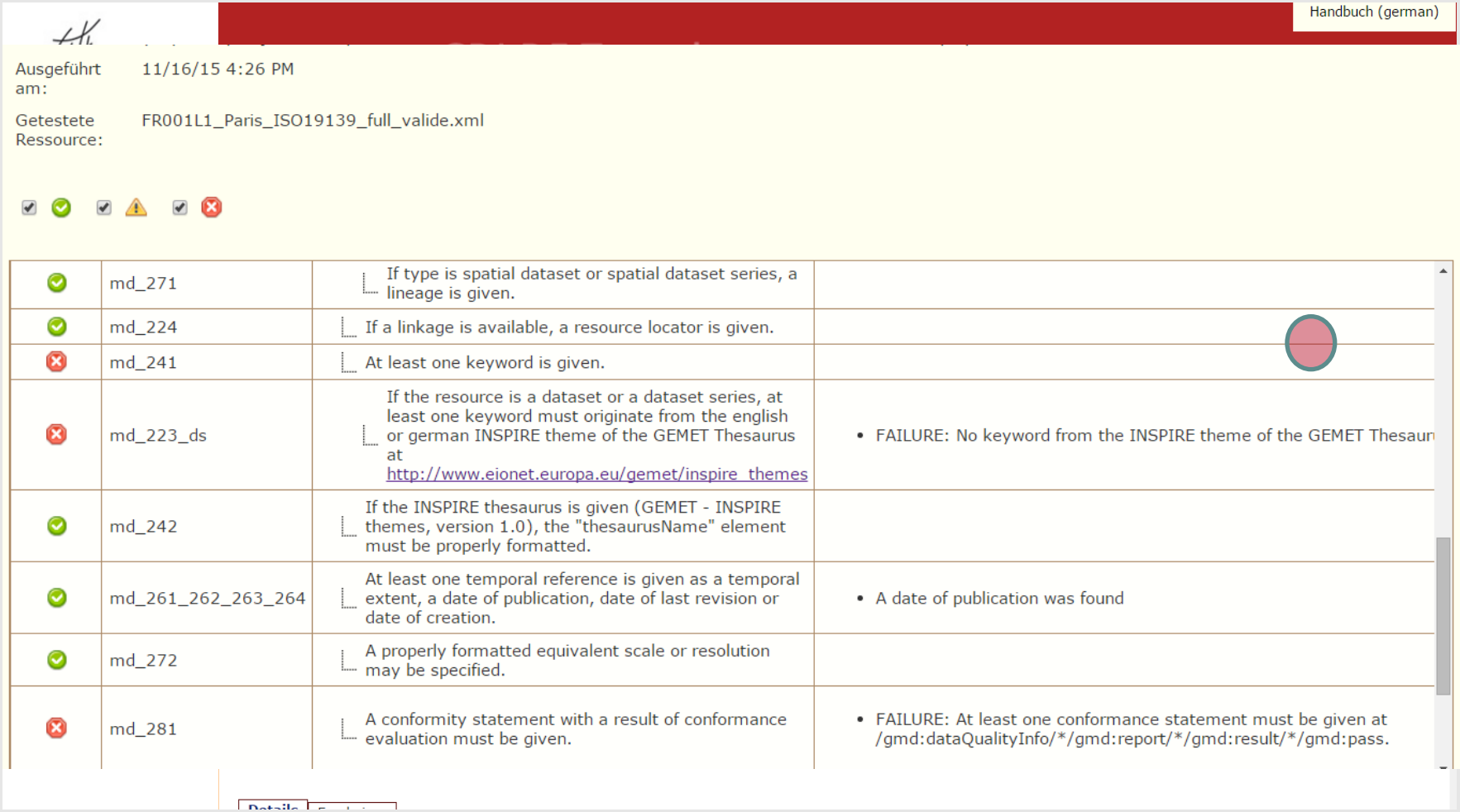
gml32-3.2.1-r18	0	15	16	31	48%
All GML application schemas	0	7	0	7	100%
GML application schemas defining features and feature collections	0	2	0	2	100%
GML application schemas defining spatial geometries	0	0	2	2	%
GML application schemas defining time	0	0	2	2	%
GML application schemas defining spatial topologies	0	0	2	2	%
GML Documents	0	6	10	16	38%

Generated with TestNG XSLT

eENVplus

- Validierung unter http://showcase.eenvplus.eu/client/validation.htm
- Funktioniert unter IE und Google Chrome (nicht in Firefox)
- Viele Clicks nötig, um weiterzukommen
- Oft verwirrend und unvollständig

GDI-DE Suite



http://testsuite.gdi-de.org/gdi/

GDI-DE Suite

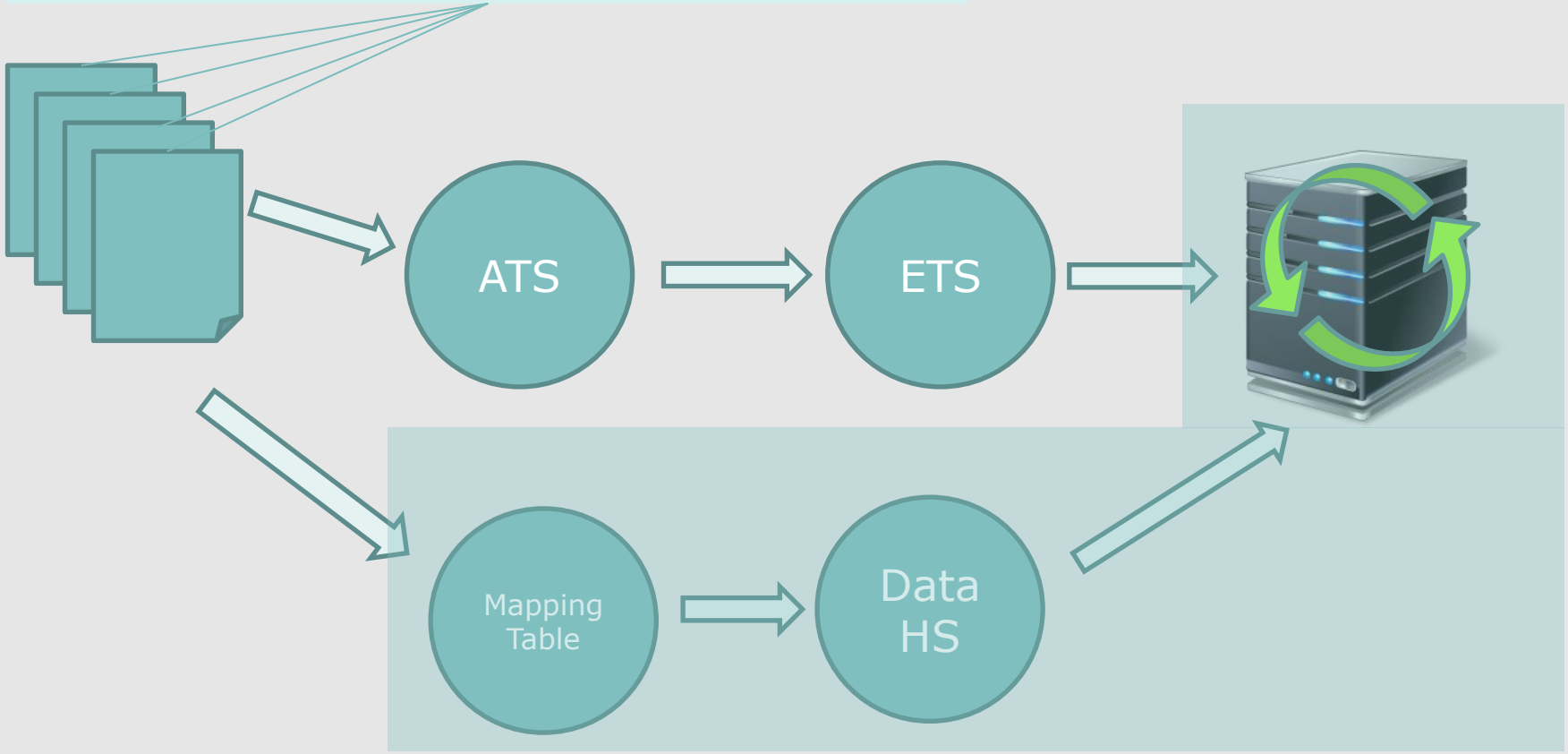
- Validierung unter http://testsuite.gdi-de.org/gdi
- Sehr übersichtlich, einfache Handhabung, sehr gute Dokumentation der nicht erfolgreich absolvierten Tests
- Keine Referenzierung auf die entsprechenden normativen und informativen Dokumente!
- Am weitersten operative fortgeschrittene Zentrale Validierungsplatform

The good news are

- Ausschreibung für die Entwicklung eines zentralen Validierungsportals in Arbeit (JRC)
- Validierung nur von GML Datensätzen möglich

Prozess der Validierung

Implementing Directive (normativ) &
Technical Guidance & Data Specifications (informativ)



Validierung integraler Prozess im Rahmen der Datenharmonisierung

Sinn und Unsinn der Validierung

- Priorisierung der Validierungsregeln für die unterschiedlichen Datenspezifikationen
- Zentrales von der Kommission akkordiertes Validierungssystem
- Konsolidierung der existierenden Datenspezifiaktionen muss so rasch wie möglich abgeschlossen werden
- Integration der Validierung in existierenden Softwarelösungen (FME, ArcGIS4Inspire, HALE….)

Kontakt

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