



INSPIRE Good Practice – Data-Service Linking Simplification

MIG-T Sub-group 2.3.2

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INSPIRE Good Practice – Data-Service Linking Simplification Webinar

November 21st, 2022

Programme

- Welcome
- Introduction ‘Data-Service Linking Simplification good practice’
- Implementations and support evidences
- Q/A session & Discussion
- Conclusions and next steps

Introduction ‘Data-Service Linking Simplification good practice’

- Context - MIWP Action 2.3.2
- Intended outcomes
- Summary of work
- Overview of the Data-service linking simplification specification
 - Part A: Data-Service Linking Simplification
 - Part B: Use of INSPIRE conformant standard capabilities documents
- Limitations

Context - workprogram

- INSPIRE MIWP 2021-2024
 - 3 areas of work & 6 actions
 1. A digital ecosystem for the environment and sustainability
 2. Towards a common implementation landing zone
 - 2.1 Need-driven data prioritisation
 - 2.2 Roadmap for priority-driven implementation
 - 2.3 Simplification of INSPIRE implementation
 - 2.3.1 Governance of INSPIRE artefacts
 - 2.3.2 Simplification of data-service linking
 - 2.4 Central infrastructure components
 3. GreenData4All

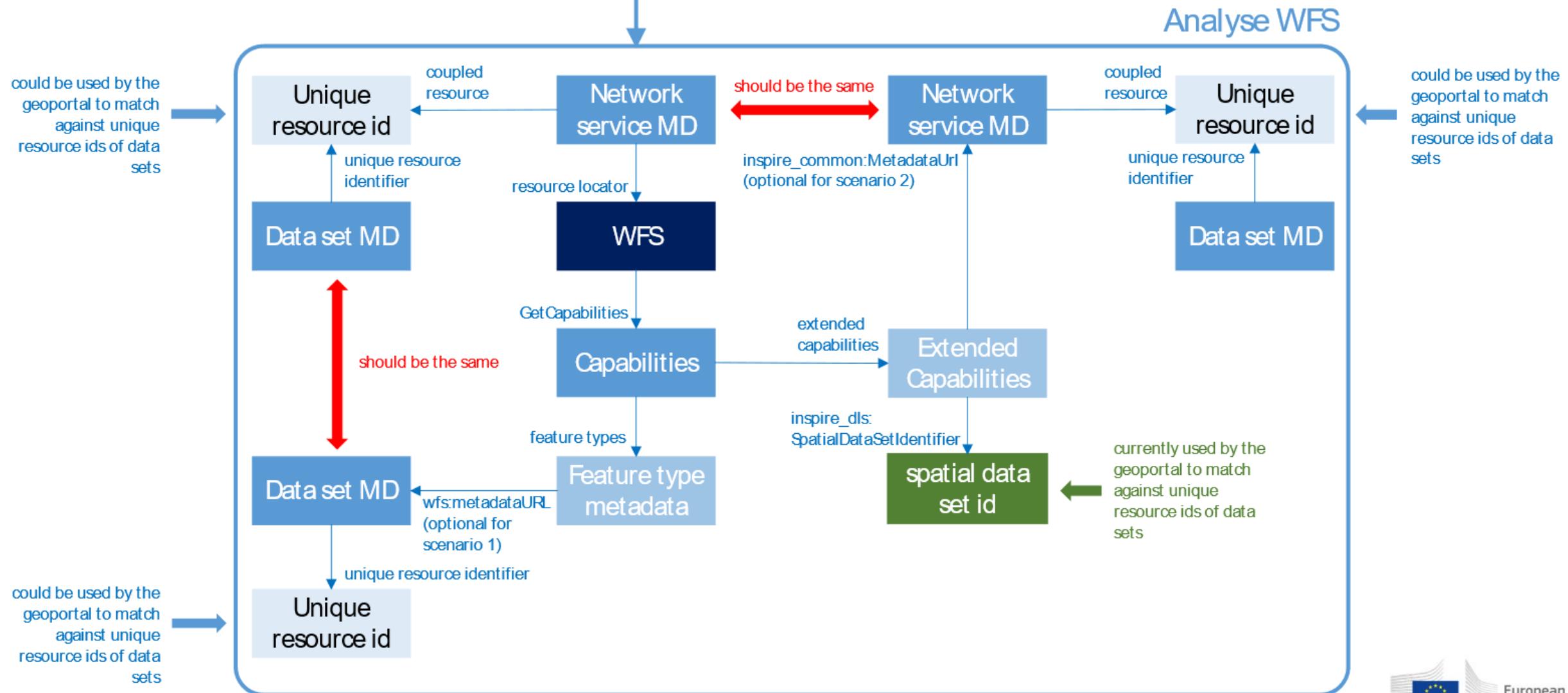
Context - MIWP Action 2.3.2

- Kick-off March 4th 2021
- Participants from AT, DE, DK, EL, ES, FR, IT, LT, NL, PL, SE, SK
- Starting from discussion paper created by action 2019.2

The initial version of the paper was drafted by a small MIG-T ad-hoc group with members from DK, FR, NL, JRC and DG ENV, 2018

- The sub-group will work on the following activities:
 - Develop an approach for simplification of data and service linking
 - Validate the proposed technical approach with widely used web applications
 - Follow the procedure for submitting an INSPIRE Good practice

Current data – service linking approach



Context - the issues (52nd MIG-T meeting)

- the **level of data-service linking** in INSPIRE **is insufficient**, and many organisations seem to have difficulties to provide implementations in line with the current TGs (even though almost all MS provide at least some data sets with correct data-service linking);
- this already has **negative impacts** on the accessibility of INSPIRE data sets (through the INSPIRE geoportal) and hence the overall usability of the INSPIRE infrastructure;
- this will also lead to **poor indicators** in the future (metadata-based) approach for monitoring and reporting;
- the **current approach** for data-service linking described in the TGs for metadata and network services **is complicated**, and there are different interpretations of the related requirements, even by implementation/standards experts;
- the current approach for service metadata, which requires **extensions to base standards**, is posing **an obstacle to the implementation of INSPIRE requirements for network services** (because the required extensions are not widely implemented in off-the-shelf software); and
- there is a clear overlap / **duplication of data set and service metadata** (e.g. bounding box, INSPIRE theme), which in some cases leads to inconsistencies.

Context – recommendations (52nd MIG-T meeting)

- The MIG-T **supports the new data-centric approach** (already underlying the new geoportal and the proposed revision of the M&R IRs), which focuses on data and how they can be accessed through network services rather than considering data and network services as stand-alone components of the infrastructure. However, it might still be useful for application developers to be able to access a directory/register of the services available in the infrastructure.
- The MIG-T further recommends that there should be **one "source of truth" for service metadata**, ideally as provided by the service itself (e.g. in its Capabilities document).
- The **alternative approach for documenting data-service linking** in the data set metadata (as proposed in the discussion paper) **should be further elaborated** and become the **preferred option in the Metadata TGs** (and/or in a stand-alone guidance document on data-service linking); this guidance should include an explanation how the IR requirements for network service metadata are mapped to the new approach;
- The **current approach should still be supported for a transition period** (to be determined by the MIG) as an alternative option that will be used by the geoportal if no links to network services can be established based on the data set metadata; at the end of the transition period the necessity to further support the current approach should be reviewed;

Context - the issue

Current approach (as per TGs):

- complicated and partly ambiguous
- duplication of information



Low level of accessibility of INSPIRE data sets
through view and download services



Negative impacts on the overall usability of the
INSPIRE infrastructure - Monitoring indicators

Intended outcome (1)

- **The users** of the INSPIRE infrastructure **can access all available data** via the view and download services.
When using this GP, data providers are not experiencing difficulties anymore to establish downloadable and viewable data sets, because:
- The requirements described in this good practice for documenting these links are **easy to be implemented and understood**, and therefore widely used and correctly implemented by MS.
- INSPIRE-specific extensions to existing standards that are not widely supported by existing software products. This GP makes them unnecessary from now onwards, since it allows implementer's organizations to access **off-the-shelf software** without worrying anymore about compliance to INSPIRE-specific extensions.

Intended outcome (2)

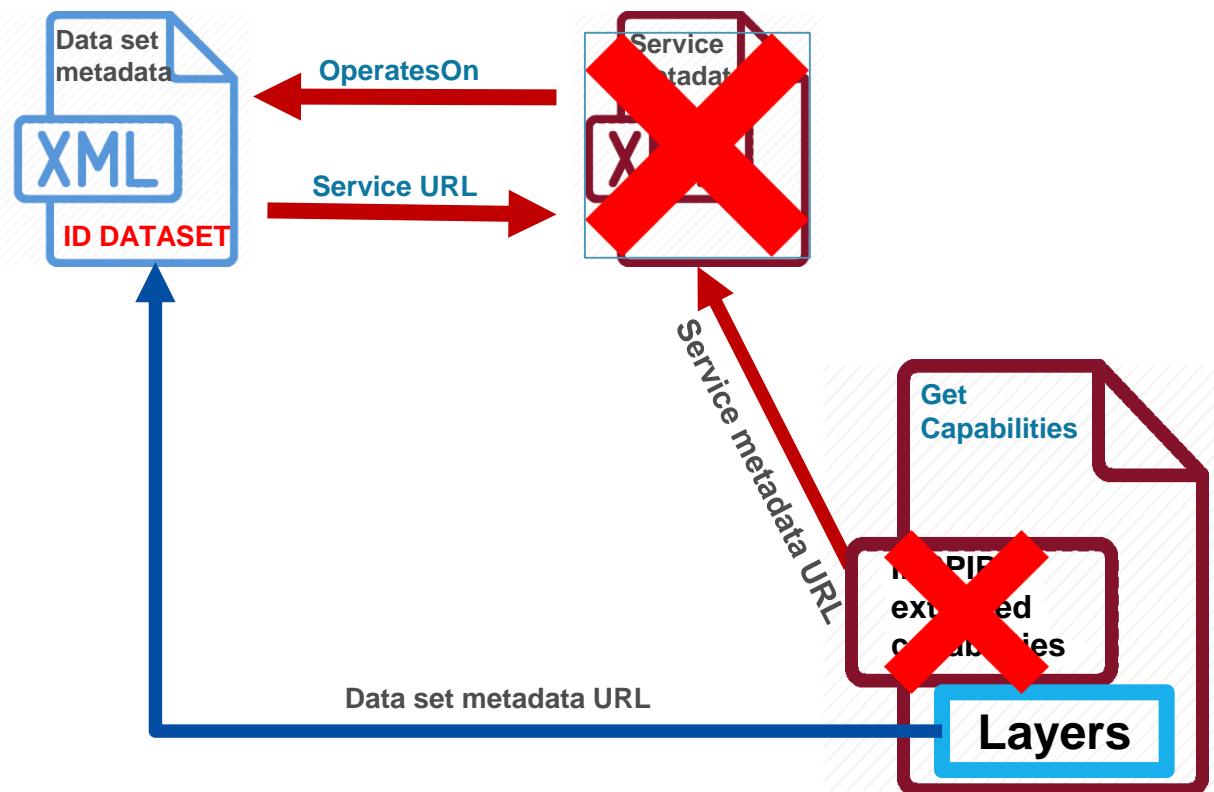
- The **duplication of metadata information is reduced**. Only one metadata record is required per data set, avoiding the need for documenting additional service metadata records (view, download and possibly direct access / WFS). Only the Capabilities document and service feed for ATOM's are used to document the service metadata, removing possible inconsistencies.
- The amount of metadata in the INSPIRE Geoportal and the national geoportals could be reduced, **making search easier** and reducing the size of information to be stored and indexed.
- For client applications, it becomes **easier to implement discovery of and access to data sets**. This helps implementers to focus on INSPIRE specificity following a data-centric approach, rather than devoting excessive time to documenting the resources, mainly services, and configuring them properly.

Summary of work

- This good practice constitutes an **alternative way** to provide the data-service linking in INSPIRE - **Optional**, not mandatory.
- The data set metadata record shall include additional elements, already present in many national metadata profiles, related to view and download services;
- There is no need for view and download services to be documented through their stand-alone service metadata records. The metadata returned by the service itself, as a response to a Get View/Download Service Metadata request, is enough to provide the required information;
- The metadata returned by the OGC web services (OWS) can follow a structure supported by all implementing servers, no longer including the Extended Capabilities section (an optional element not supported by all implementing servers).

MIWP Action 2.3.2

Data Service Linking Simplification - Overview



Section 8

**Part A. Data - service linking simplification
Good practice guidelines**

Section 9

**Part B. Data - service linking simplification
Use of INSPIRE conformant standard capabilities documents**

Final specification:

<https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification/blob/main/good-practice/data-service-linking-simplification-spec.md>

Part A: Data-Service Linking Simplification

Data Service Linking Simplification: Good Practice guidelines

Version: Final 1.0 Date: 2022-11-20

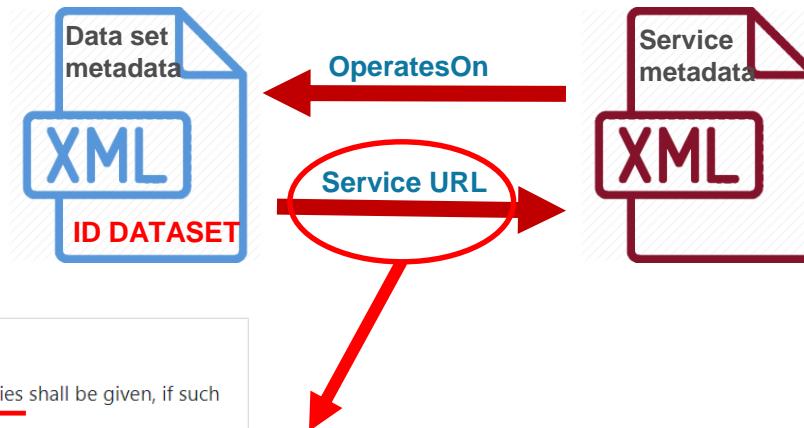
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 - 9.1. Mapping of INSPIRE elements in ExtendedCapabilities
 - 9.1.1. Resource type

<https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification/blob/main/good-practice/data-service-linking-simplification-spec.md#8-part-a-data-service-linking-simplification-requirements-classes->

Part A: Data-Service Linking Simplification

Current approach



TG Requirement 1.8: metadata/2.0/req/datasets-and-series/resource-locator

A Resource locator linking to the service(s) providing online access to the described data set or data set series shall be given, if such online access is available.

If no online access for the data set or data set series is available, but there is a publicly available online resource providing additional information about the described data set or data set series, the URL pointing to this resource shall be given instead.

These links shall be encoded using *gmd:transferOptions/gmd:MD_DigitalTransferOptions/gmd:onLine/gmd:CI_OnlineResource/gmd:linkage/gmd:URL* element.

The multiplicity of this element is 0..n.

View and Download services are required to make data sets available; this implies that at least two locators need to be expressed in the data set metadata

TG Recommendation 1.9: metadata/2.0/rec/datasets-and-series/resource-locator-additional-info

The *gmd:name*, *gmd:description*, and *gmd:function/gmd:CI_OnLineFunctionCode* child elements of *gmd:CI_OnlineResource* element containing the given *gmd:linkage* element should also be provided, if possible, to give additional information about the provided URL link. The *gmd:name* and the *gmd:description* elements should contain Non-empty Free Text Elements.

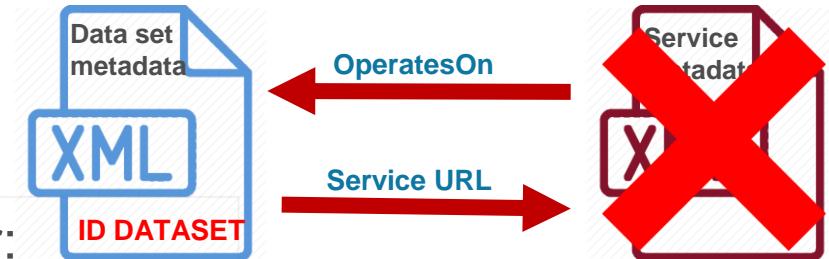
If provided, the *gmd:CI_OnLineFunctionCode* element should point to one of the values of the ISO 19139 code list *CI_OnLineFunctionCode*.

Part A: Data-Service Linking Simplification

Simplification approach (resource locator)

In case of **View and Download services**, for the resource locator:

- the element **gmd:URL** SHALL point to the response of the Get View/Download Service Metadata (GetCapabilities);
- the elements **gmd:protocol** and **gmd:applicationProfile** SHALL be present.



metadata element	Encoding
<gmd:protocol>	gmx:Anchor pointing to the URI coming from https://inspire.ec.europa.eu/metadata-codelist/ProtocolValue gco:CharacterString with the value of the label in the metadata language
<gmd:applicationProfile>	gmx:Anchor pointing to the URI https://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/view or https://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download gco:CharacterString with the value of the label in the metadata language

Part A: Data-Service Linking Simplification

Example for a view service

```
<gmd:transferOptions>
  <gmd:MD_DigitalTransferOptions>
    <gmd:onLine>
      <gmd:CI_OnlineResource>
        <gmd:linkage>
          <gmd:URL>https://geoservizi.regione.liguria.it/geoserver/M1743/wms?version=1.3.0&request=getcapabilities
        </gmd:URL>
      </gmd:linkage>
      <gmd:protocol>
        <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms">OGC Web Map Service</gmx:Anchor>
      </gmd:protocol>
      <gmd:applicationProfile>
        <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/view">consultazione</gmx:Anchor>
      </gmd:applicationProfile>
    </gmd:CI_OnlineResource>
  </gmd:onLine>
</gmd:MD_DigitalTransferOptions>
</gmd:transferOptions>
```

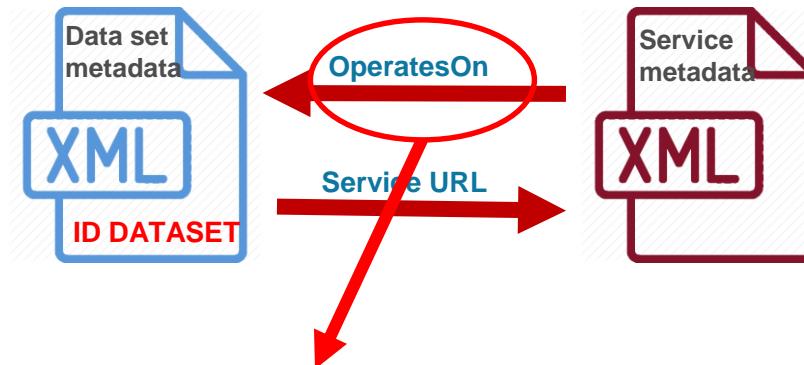
Part A: Data-Service Linking Simplification

Example for a download service

```
<gmd:transferOptions>
  <gmd:MD_DigitalTransferOptions>
    <gmd:onLine>
      <gmd:CI_OnlineResource>
        <gmd:linkage>
          <gmd:URL>https://geoservizi.regione.liguria.it/geoserver/M1241/wfs?version=2.0.0&request=getcapabilities
        </gmd:URL>
      </gmd:linkage>
      <gmd:protocol>
        <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wfs">OGC Web
Feature Service</gmx:Anchor>
      </gmd:protocol>
      <gmd:applicationProfile>
        <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-
codelist/SpatialDataServiceType/download">scaricamento</gmx:Anchor>
      </gmd:applicationProfile>
    </gmd:CI_OnlineResource>
  </gmd:onLine>
</gmd:MD_DigitalTransferOptions>
</gmd:transferOptions>
```

Part A: Data-Service Linking Simplification

Current approach



TG Requirement 3.6: metadata/2.0/req/sds/coupled-resource

Links pointing to the online metadata descriptions of data sets provided by the described service shall be given using *srv:operatesOn* element.

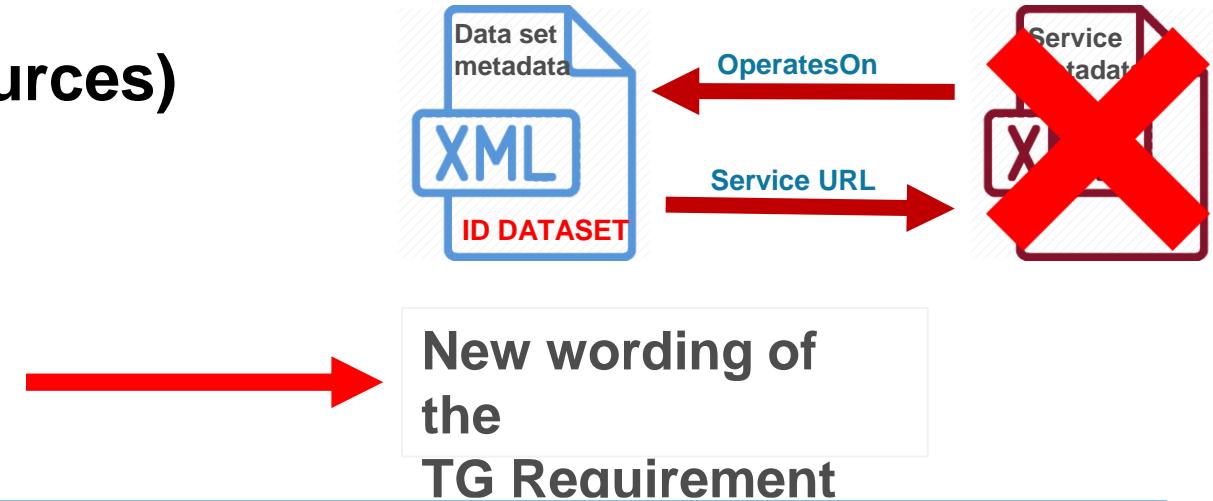
The multiplicity of this element is 0..n.

This property shall be implemented by reference. The *xlink:href* attribute of each of the *srv:operatesOn* elements shall contain a URI pointing to the *gmd:MD_DataIdentification* element of the metadata record of the provided the data set or data set series.

Part A: Data-Service Linking Simplification

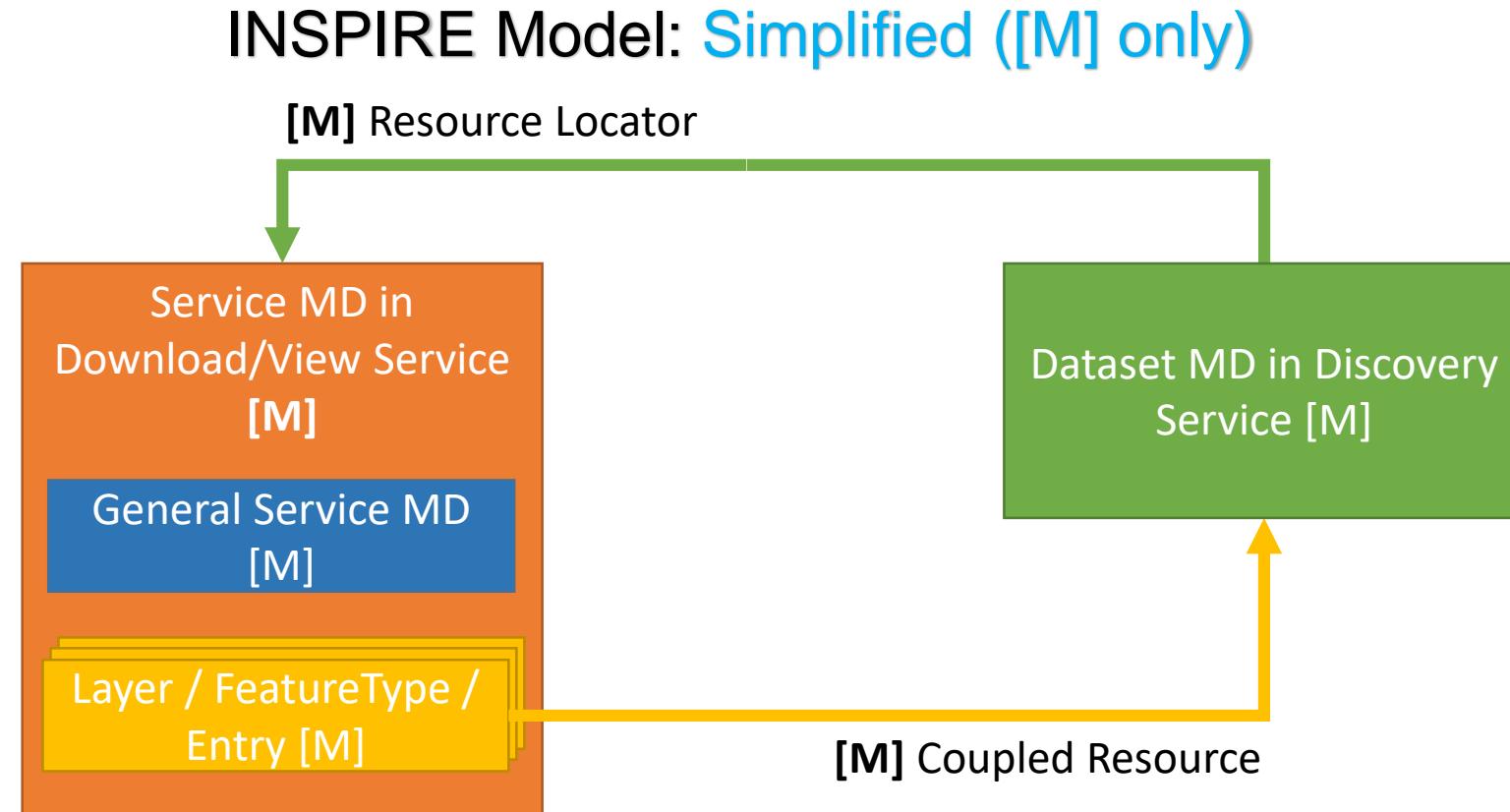
Simplification approach (coupled resources)

relax the implementation of the Coupled Resource by making the linkage to the <gmd:MD_DataIdentification> element of the data set metadata an optional feature, just pointing to the URL of the metadata

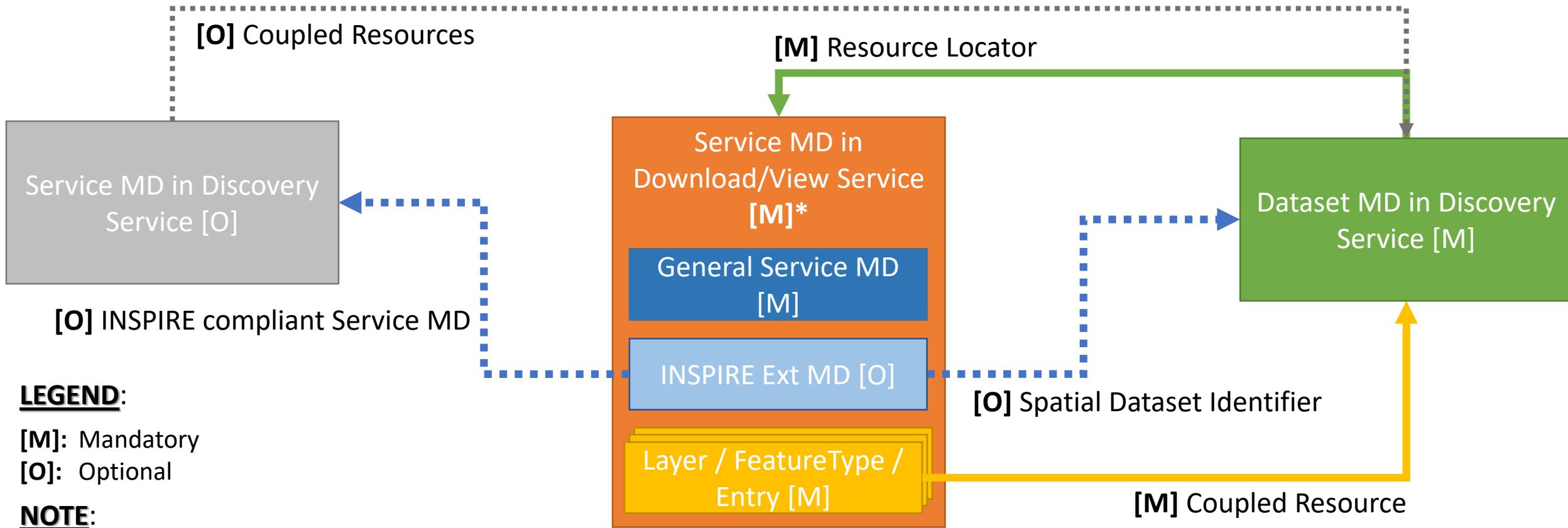


metadata element	Encoding
<wms:MetadataURL> (in Layer)	pointing to the metadata record of the provided data set or data set series, available in a Discovery Service catalog
<wfs:MetadataURL> (in Feature type)	pointing to the metadata record of the provided data set or data set series, available in a Discovery Service catalog
/feed/entry/link	containing a link to a data set metadata record with attributes @rel="describedby" and @type=«application/xml»

Proposed data – service linking approach



INSPIRE Model: Simplified



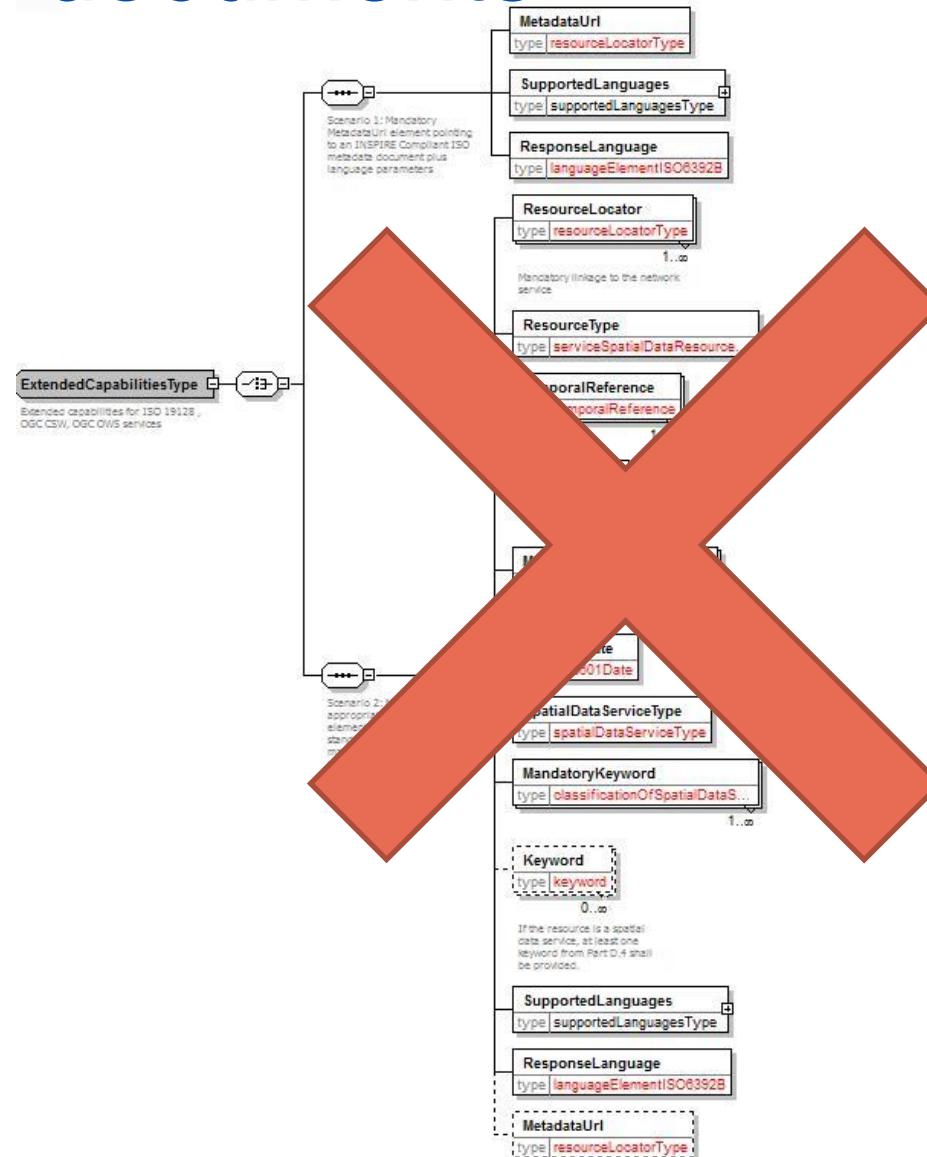
- **Regarding the INSPIRE compliant Service MD** - In an INSPIRE Network Service Scenario 1 implementation, the Service MD will not contain all INSPIRE metadata elements but contain a link to the Service MD in the Discovery Service; An Scenario 2 implementation have no separate Service MD in the Discovery Service. Instead, all metadata elements are provided in the extended capabilities section of the capabilities document of the service; An Scenario 3 implementation (new scenario considered if the good practice candidate on Data-Service Linking Simplification is endorsed) also have no separate Service MD in the Discovery. Instead, the metadata elements are remapped to existing elements in the capabilities document of the service and in the dataset metadata.
- **Regarding the Spatial Data Set Identifier** - The IR on Metadata is not including the Unique resource identifier as a required metadata element to be applied to services. The TG for Download and View services specify a WxS/Atom metadata element that contains the Unique Resource Identifier of the Spatial Data Set. In the current INSPIRE Geoportal this is used, in some cases, to establish a link between data and service for quality control purposes. The Coupled resource would be enough for data-service linking purposes, as is used e.g. in case of a WMS in the current INSPIRE Geoportal.

Part B: Use of INSPIRE conformant standard capabilities documents

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<https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification/blob/main/good-practice/data-service-linking-simplification-spec.md#9-part-b-use-of-inspire-conformant-standard-capabilities-documents->

Part B: Use of INSPIRE conformant standard capabilities documents



Part B. Remapping of Extended Capabilities

Aim of the work

- Define an alternative mapping of INSPIRE service metadata elements to elements available in the Capabilities document of OGC OWS standard services (WMS, WFS) and Atom feeds.
- Avoid (as an option) the need for the INSPIRE Extended Capabilities section.
- Remove remaining obstacles in the implementation of INSPIRE requirements for network services due to the extensions required to software tools available in the market.

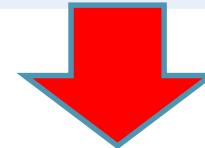
Part B. Remapping of Extended Capabilities

Resource Type and Resource Locator

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Resource Type	inspire_common:ResourceType	WMS - WFS
Resource Type	not mapped	Atom
Resource Locator	inspire_common:ResourceLocator	WMS - WFS
Resource Locator	Feed level link in the top Atom feed /feed/link[@rel="self"]	Atom

- Agreed new mapping



INSPIRE metadata elements	New allocation	Applicable on Service type
Resource Type	No element mapped	WMS - WFS - Atom
Resource Locator	No element mapped	WMS - WFS - Atom

In case of view and download services, when the service metadata is provided as response to a Get Download/View Service Metadata request, then the resource type is implicit and shall not be documented.

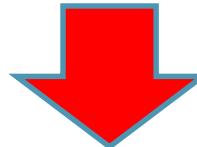
Part B. Remapping of Extended Capabilities

Spatial data service type

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Spatial Data Service Type	inspire_common:ServiceProviderType	WMS - WFS
Spatial Data Service Type	not mapped	Atom

- Agreed new mapping



INSPIRE metadata elements	New allocation	Applicable on Service type
Spatial Data Service Type	gmd:applicationProfile element (in data set metadata record)	WMS - WFS - Atom

D

Part B. Remapping of Extended Capabilities

Temporal reference

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Temporal Reference	inspire_common:TemporalReference	WMS - WFS
Temporal Reference	not mapped	Atom

- Agreed new mapping



INSPIRE metadata elements	New allocation	Applicable on Service type	
Temporal Reference	updateSequence attribute in the WMS_Capabilities/WFS_Capabilities root element.	WMS - WFS	S
Temporal Reference	feed/updated element in the Atom feed	Atom	S
Temporal Reference	Otherwise, gmd:citation/gmd:CI_Citation/gmd:date/gmd:CI_Date/ gmd:date element in the data set metadata record, with one of the following prioritised date types:- <i>publication</i> , - <i>revision</i> or - <i>creation</i>	WMS – WFS - Atom	D

Part B. Remapping of Extended Capabilities

Conformity

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Conformity	inspire_common:Conformity	WMS - WFS
Conformity	not mapped	Atom

- Agreed new mapping

INSPIRE metadata elements	New allocation	Applicable on Service type
Conformity	wms:Keyword element for each specification against the service is conformant, included within an specific wms:KeywordList group.	WMS 
Conformity	ows:Keyword element for each specification against the service is conformant, included within an specific ows:Keywords group including an ows:Type element of type URI.	WFS 
Conformity	atom:category element for each specification against which the service is conformant.	Atom 

In order to reference a specific INSPIRE regulation as specification to which a spatial data service may declare its conformity, its URL of publication in EUR-Lex shall be used as a common interoperable URI value

Part B. Remapping of Extended Capabilities

Metadata point of contact

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Metadata Point of Contact	inspire_common:MetadataPointOfContact	WMS - WFS
Metadata Point of Contact	not mapped	Atom

- Agreed new mapping

INSPIRE metadata elements	New allocation	Applicable on Service type
Metadata Point of Contact	WMS_Capabilities/Service/ContactInformation/ContactPersonPrimary/ContactOrganization and WMS_Capabilities/Service/ContactInformation/ContactElectronicMailAddress	WMS 
Metadata Point of Contact	WFS_Capabilities/ows:ServiceProvider/ows:ProviderName and WFS_Capabilities/ows:ServiceProvider/ows:ServiceContact/ows:ContactInfo/ows:Address/ows:ElectronicEmailAddress	WFS 
Metadata Point of Contact	<feed><author><name> and <feed><author><email>	Atom 

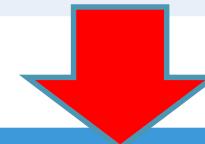
Part B. Remapping of Extended Capabilities

Metadata date

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Metadata Date	inspire_common:MetadataDate	WMS - WFS
Metadata Date	Feed level link in the top Atom feed /feed/updated	Atom

- Agreed new mapping



INSPIRE metadata elements	New allocation	Applicable on Service type	
Metadata Date	updateSequence parameter in the WMS_Capabilities/WFS_Capabilitiesroot element.	WMS - WFS	S
Metadata Date	<updated> element in the Atom feed.	Atom	S
Metadata Date	Otherwise, gmd:citation/gmd:CI_Citation/gmd:date/gmd:CI_Date/gmd:date element in the data set metadata record, with one of the following prioritised date types: - publication, - revision or - creation	WMS – WFS - Atom	D

Part B. Remapping of Extended Capabilities

Supported languages

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Metadata Language	inspire_common:SupportedLanguages	WMS - WFS
Metadata Language	Feed level link in the top Atom feed /feed/link[@rel="self"]/@hreflang	Atom

- Agreed new mapping

INSPIRE metadata elements	New allocation	Applicable on Service type
Metadata Language	gmd:MD_Metadata/gmd:language/gmd:LanguageCode element in the data set metadata record for default language. xml:lang attribute for supported languages	WFS - Atom

```
<ows:ServiceIdentification>
    <ows:Title xml:lang="en">My WFS</ows:Title>
    <ows:Title xml:lang="da">Min WFS</ows:Title>
    <ows:Abstract xml:lang="en">My abstract</ows:Abstract>
    <ows:Abstract xml:lang="da">Min abstrakt</ows:Abstract>
...

```

This doesn't work for WMS, it is not based on the (newer) OWS specification.
In this case keep the possibility to include the (optional) ExtendedCapabilities section, including the SupportedLanguages elements

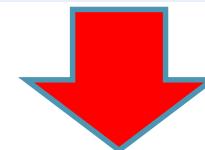
Part B. Remapping of Extended Capabilities

Unique Resource Identifier (referring to data set)

- Current mapping (in INSPIRE NS - View/Download Service TGs)

INSPIRE metadata elements	Elements of INSPIRE Extended Capabilities/Atom feed	Applicable on Service type
Unique Resource Identifier	inspire_dls:SpatialDataSetIdentifier/inspire_common:Code inspire_dls:SpatialDataSetIdentifier/inspire_common:Namespace	WFS
Unique Resource Identifier	<i>spatial_dataset_identifier_code</i> and <i>spatial_dataset_identifier_namespace</i>	Atom

- **Mapping proposed**



INSPIRE metadata elements	New allocation	Applicable on Service type
Unique Resource Identifier	not mapped as Unique resource identifier is not relevant for services	WMS - WFS - Atom

The IR on metadata is not including the Unique resource identifier as a required metadata element to be applied to services.

Limitations

- This GP is not yet applicable for services based on the [OGC API family of standards](#).
This is because a mapping between the INSPIRE metadata elements and the [OpenAPI Specification](#) has not yet been agreed. See also the [Technical guidelines for setting up an INSPIRE Download service based on the OGC API-Features standard](#).
- Complying with this GP and providing metadata for services in the discovery service will result in the duplication of certain INSPIRE metadata elements, which can lead to inconsistencies if the metadata elements are not kept in sync by means of automated processes.

Programme

- Welcome
- Introduction ‘Data-Service Linking Simplification good practice’
 - Implementations and support evidences
- Q/A session & Discussion
- Conclusions and next steps

Implementations and support evidences

- The Netherlands
- Italy
- France
- Revamped INSPIRE Geoportal (GeoNetwork)



Dutch implementation example

INSPIRE Good Practice – Data-
Service Linking Simplification
Webinar

Auteur Ine de Visser

Datum 20th November



Dutch metadata profile

docs.geostandaarden.nl/md/mdprofiel-iso19115/

Geonovum Vastgestelde versie

INHOUDSOPGAVE

- 1. Inleiding
- 1.1 Afbakening
- 1.2 Scope
- 1.3 Context
- 1.4 Leeswijzer
- 2. Normatieve verwijzing
- 3. Structuur en schema's
 - 3.1 relevante-xsd-schemas
 - 3.2 Structuur
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- 4. Termen en definities
- 5. Verplichte en conditionele metadata elementen
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 - 5.2.11 Verantwoordelijke organisatie bron: e-mail
 - 5.2.12 Verantwoordelijke organisatie bron rol
 - 5.2.13 Trefwoord
 - 5.2.14 Thesaurus
 - 5.2.15 Thesaurusdatum

Nederlands metadata profiel op ISO 19115 voor geografie versie 2.1.0

Geonovum Standaard
Vastgestelde versie 30 juni 2020



Deze versie:

<https://docs.geostandaarden.nl/md/def-st-mdprofiel-iso19115-20200630/>

Laatst gepubliceerde versie:

<https://docs.geostandaarden.nl/md/mdprofiel-iso19115/>

Vorige versie:

<https://docs.geostandaarden.nl/md/vv-st-mdprofiel-iso19115-20200602/>

Laatste werkversie:

<https://geonovum.github.io/Metadata-ISO19115/>

Redacteur:

[Geonovum](#)

Doe mee:

[GitHub Geonovum/Metadata-ISO19115](#)

[Dien een melding in](#)

[Revisiehistorie](#)

[Pull requests](#)

Rechtenbeleid:



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Samenvatting

Geonovum ontwikkelt en [beheert](#) de Nederlandse metadata profielen. Deze profielen zijn een verbijzondering van de internationale metadastandaarden van ISO en zijn bedoeld om de interoperabiliteit binnen Nederland te bevorderen. De volgende metadata profielen worden ondersteund en gebruikt:

Protocol element

Geonovum Vastgestelde versie

- 5.2.24 Temporele referentiesysteem
- 5.2.25 Omgrenzende rechthoek
- 5.2.26 Naam distributie formaat
- 5.2.27 Versie distributie formaat
- 5.2.28 Specificatie distributie formaat
- 5.2.29 URL
- 5.2.30 Protocol**
- 5.2.31 Naam
- 5.2.32 Omschrijving
- 5.2.33 Niveau kwaliteitsbeschrijving
- 5.2.34 Algemene beschrijving herkomst
- 5.2.35 Specificatie
- 5.2.36 Specificatiедatum
- 5.2.37 Specificatiедatum type
- 5.2.38 Verklaring
- 5.2.39 Conformiteit indicatie met de specificatie
- 5.2.40 Waarde topologische samenhang
- 5.2.41 Type waarde topologische samenhang
- 5.2.42 Metadata unieke identifier
- 5.2.43 Metadatadatum
- 5.2.44 Taal van de metadata
- 5.2.45 Parent unieke identifier
- 5.2.46 Hiërarchieniveau
- 5.2.47 Hiërarchieniveau naam
- 5.2.48 Verantwoordelijke organisatie metadata
- 5.2.49 Verantwoordelijke organisatie metadata rol
- 5.2.50 Verantwoordelijke organisatie metadata e-mail
- 5.2.51 Metadata standaard naam
- 5.2.52 Metadata standaard versie
- 5.2.53 Unieke identifier van de identificatie sectie

6. Optionele set metadata

- 6.1 Identifier gebied
- 6.2 Temporele dekking

5.2.30 Protocol

distributionInfo//transferOptions/*/onLine/*/protocol* [ISO 19139:2007]

Dit element is conditioneel. Het is verplicht als er een URL is opgegeven. Bijvoorbeeld naar een bestand, WFS of webpagina.

Indien de URL een 'endPoint' betreft dan dient een waarde geselecteerd te worden uit de [codelijst MediaType](#).

Indien de URL een 'accessPoint' betreft, dient een waarde geselecteerd te worden uit de [codelijst Protocol](#).

Data type of Domein	Voorbeeld
Anchor, domein: MediaType	<pre><gmx:Anchor xlink:href="https://www.iana.org/assignments/ media-types/application/gml+xml"> GML</gmx:Anchor></pre>
String, domein: MediaType	GML
Anchor, domein: Protocol	<pre><gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms"> OGC:WMS</gmx:Anchor></pre>
String, domein: Protocol	OGC:WMS

Toelichting

Het element Protocol, is van belang voor het automatisch kunnen downloaden van de dataset en/of het benaderen van de service die deze dataset ontsluit. Het maakt gebruik van algemene codelijsten van servicetypes en media-types. Door data aan te bieden op basis van waarden uit deze codelijsten is de ontsluiting software onafhankelijk en daardoor breder toegankelijk.

Optional application profile element

docs.geostandaarden.nl/md/mdprofiel-iso19115/#optionele-set-metadata

Geonovum Vastgestelde versie	5.2.45	Parent unieke identifier	Orderprocedure	geleverd door de distributeur.
	5.2.46	Hiërarchieniveau	Doorlooptijd orderprocedure	Doorlooptijd van de aanvraag.
	5.2.47	Hiërarchieniveau naam	Leverings-/gebruikseenheid	Leverings-/gebruikseenheid Eenheid waarin de data wordt geleverd.
	5.2.48	Verantwoordelijke organisatie metadata	Bestandsgrootte	Verwachte grote van een eenheid van het bestand in genoemd formaat in Megabyte.
	5.2.49	Verantwoordelijke organisatie metadata rol	applicatie profiel	Naam van het applicatieprofiel van de online bron.
	5.2.50	Verantwoordelijke organisatie metadata e-mail	Functie	Functie die de online resource heeft
	5.2.51	Metadata standaard naam	Naam medium	Naam van het medium waarop de data ontvangen kan worden.
	5.2.52	Metadatastandaard versie	Features	Naam van de ruimtelijke object types
	5.2.53	Unieke identifier van de identificatie sectie	Geometrische nauwkeurigheid	Indien bij kwantitatieve waarde geen numerieke waarde wordt ingevuld, mag de waarde 'tekst' ingevuld worden.
	6.	Optionele set metadata		Afwijking van de x- en y-coördinaten ten opzichte van de werkelijke plaats op aarde.
	6.1	Identifier gebied	Compleetheid	Indien bij kwantitatieve waarde geen numerieke waarde wordt ingevuld, mag de waarde 'tekst' ingevuld worden.
	6.2	temporele dekking		Omschrijving in hoeverre een dataset compleet is, of anders gezegd, een inschatting van wat er nog ontbreekt.
	7.	Meertaligheid metadata	Beschrijving uitgevoerde bewerkingen	Beschrijving uitgevoerde bewerkingen.
	8.	Object- en attribuutinformatie	Beschrijving uitgevoerde bewerkingen	Beschrijving uitgevoerde bewerkingen.
	9.	Richtlijnen voor sectoren		
	A.	Codelijsten		
	A.1	Codelijst DateType		
	A.2	Codelijst OnLineFunction		
	A.3	Codelijst Role		
	A.4	Codelijst AssociationType		
	A.5	Codelijst CharacterSet		
	A.6	Codelijst Classification		
	A.7	Codelijst MaintenanceFrequency		

Protocol codelist

← → ⌂ docs.geostandaarden.nl/md/mdprofiel-iso19115/#codelist-protocol

Geonovum Vastgestelde versie

- 6.1 Identifier gebied
- 6.2 Temporele dekking
- 7. Meertaligheid metadata**
- 8. Object- en attribuutinformatie**
- 9. Richtlijnen voor sectoren**
 - A. Codelijsten**
 - A.1 Codelijst DateType
 - A.2 Codelijst OnLineFunction
 - A.3 Codelijst Role
 - A.4 Codelijst AssociationType
 - A.5 Codelijst CharacterSet
 - A.6 Codelijst Classification
 - A.7 Codelijst MaintenanceFrequency
 - A.8 Codelijst MediumName
 - A.9 Codelijst Progress
 - A.10 Codelijst Restriction
 - A.11 Codelijst Scope
 - A.12 Codelijst SpatialRepresentationType
 - A.13 Codelijst TopicCategory
 - A.14 Codelijst OnLineDescription
 - A.15 Codelijst ConditionsApplyingToAccessAndUse
 - A.16 Codelijst LimitationsOnPublicAccess
 - A.17 Codelijst SpatialDataServiceType
 - A.18 Codelijst Taal
 - A.19 Codelijst Protocol
 - A.20 Codelijst MediaType
 - A.21 Codelijst DataLicentie
 - B. Elementen overzicht**

A.19 Codelijst Protocol

Protocol

[INSPIRE metadata codelijst register]

De codelijst is een extensie van de INSPIRE codelijst

URI	Waarde	Beschrijving
http://www.opengis.net/def/serviceType/ogc/csw	OGC:CSW	Web Catalog service
http://www.opengis.net/def/serviceType/ogc/wms	OGC:WMS	Web Map service
http://www.opengis.net/def/serviceType/ogc/wmts	OGC:WMTS	Web Map Tile Service
http://www.opengis.net/def/serviceType/ogc/wfs	OGC:WFS	Web Feature Service
http://www.opengis.net/def/serviceType/ogc/wcs	OGC:WCS	Web Coverage Service
http://www.opengis.net/def/serviceType/ogc/sos	OGC:SOS	Sensor Observation Service
https://tools.ietf.org/html/rfc4287	INSPIRE Atom	Atom Service Feed
http://www.opengis.net/def/interface/ogcapi-features	OGC:API features	OGC API features
http://www.opengeospatial.org/standards/ols	OGC:OLS	OpenLS Service
http://www.opengeospatial.org/standards/sensorthings	OGC:SensorThings	SensorThings API
https://www.w3.org/TR/rdf-sparql-query/	W3C:SPARQL	SPARQL Query Language for RDF
https://www.oasis-open.org/committees/odata	OASIS:OData	Open data protocol
https://github.com/OAI/OpenAPI-Specification/	OAS	Open API Specification
https://www.w3.org/TR/vocab-dcat-2/#Property:resource_landing_page	landingpage	Een webpagina die toegang geeft tot de dataset of overige informatie bevat
https://www.w3.org/TR/vocab-dcat-2/#ProprietaryDatasetDataset	dataset	Referentie naar een lokale dataset locatie

Dutch INSPIRE guide

docs.geostandaarden.nl/eu/INSPIRE-handreiking/#dataset-metadata

Geonovum Werkversie

INHOUDSOPGAVE

- 1. [Introductie](#)
 - 1.1 [Doelgroep](#)
 - 1.1.1 [Uitvoerders](#)
 - 1.1.2 [Beleidmakers](#)
- 1.2 [Processtappen](#)
- 1.3 [Deadlines](#)
 - 1.3.1 [Deadline actualisatie van de INSPIRE gegevens](#)
- 1.4 [Bronnen](#)
 - 1.4.1 [Europese INSPIRE website](#)
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 - 1.4.3 [INSPIRE registry](#)
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- 1.5 [Over deze handreiking](#)
 - 1.5.1 [INSPIRE is nog steeds in beweging](#)
 - 1.5.2 [Taal en Terminologie](#)
 - 1.5.3 [INSPIRE Helpdesk](#)
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 - 2.2.1 [Aanmerkingsregister](#)
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 - 2.2.3 [Aanmerken en versies van datasets](#)
 - 2.3 [Inrichten organisatie](#)
 - 2.4 [Soorten INSPIRE data: as-is, geharmoniseerd, prioritair](#)
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 - 2.4.1.1 [Extensies](#)
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 - 2.4.2.1 [Prioritaire datasets voor e-reporting](#)
 - 2.4.2.2 [Uitbreiding prioritaire datasets](#)
 - 2.4.2.3 [IACS-datasets](#)
 - 3. [Dataharmonisatie](#)
 - 3.1 [Documentatie dataharmonisatie](#)
 - 3.2 [Generic Conceptual Model](#)

Aan de slag met INSPIRE

Aan de slag met INSPIRE

Geonovum Handreiking
Werkversie 25 oktober 2022

Deze versie: <https://geonovum.github.io/inspire-handreiking/>

Laatst gepubliceerde versie: <https://docs.geostandaarden.nl/eu/INSPIRE-handreiking/>

Laatste werkversie: <https://geonovum.github.io/inspire-handreiking/>

Redacteur: Geonovum INSPIRE team, [Geonovum](#)

Doe mee: [GitHub Geonovum/inspire-handreiking](#)
[Dien een melding in](#)
[Revisiehistorie](#)
[Pull requests](#)

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Samenvatting

Welkom bij de handreiking "Aan de slag met INSPIRE". Deze handreiking is bedoeld voor de INSPIRE-dataproviders en geeft informatie om te voldoen aan de (technische) INSPIRE-verplichtingen.

De opbouw van de INSPIRE-handreiking is gebaseerd op de verschillende [processtappen](#) die dataproviders doorlopen en enkele meer algemene hoofdstukken.

De INSPIRE-handreiking is als volgt opgebouwd:

1. Introductie

Instructions data service linking

docs.geostandaarden.nl/eu/INSPIRE-handreiking/#dataset-metadata

Geonovum Werktversie

- 3.0
 - 3.8.1 Uitbreidbaarheid van codelijsten
 - 3.8.2 Codelijstregister
 - 3.9 Portrayal
 - 3.10 Data capture
 - 3.11 Geometrie
 - 3.11.1 Aansluitende netwerken
 - 3.11.2 Cross-boundary harmonisatie
 - 3.12 CRS
 - 3.12.1 Hoogterefentie systeem
 - 3.13 Data validatie
- 4. Metadata
 - 4.1 Metadata aanmaken en publiceren
 - 4.1.1 Eisen metadata
 - 4.1.2 Metadata van prioritaire datasets
 - 4.1.3 Metadata en taal
 - 4.1.4 Gebruiksvoorwaarden
 - 4.2 Dataset metadata
 - 4.2.1 Invulinstructie dataset metadata
 - 4.2.2 Hoe om te gaan met anchor en URI
 - 4.2.3 Voorbeeld metadatabestand (XML) voor INSPIRE dataset
 - 4.3 Service metadata
 - 4.3.1 Invulinstructie service metadata
 - 4.3.2 Voorbeeldbestand XML voor INSPIRE service-metadata
 - 4.4 Spatial data services (SDS) metadata
 - 4.4.1 Invulinstructie invocable SDS metadata
 - 4.4.2 Invulinstructie interoperable SDS metadata
 - 4.4.3 Invulinstructie harmonised SDS metadata
 - 4.4.4 Voorbeeld metadatabestand (XML) voor INSPIRE Spatial Data Service (SDS)
 - 4.5 Metadata validatie
 - 4.6 Metadata publiceren
 - 4.6.1 Publiceren INSPIRE-aanduiding
- 5. Services
 - 5.1 Soorten Spatial Data Services
 - 5.2 Network services
 - 5.2.1 Wetgeving

4.2 Dataset metadata

In de Invulinstructie dataset metadata zijn de INSPIRE specifieke instructies opgenomen, die als aanvulling gelden op Nederlands metadata profiel op ISO 19115. Daarnaast is er een voorbeeld bestand beschikbaar.

4.2.1 Invulinstructie dataset metadata

De onderstaande tabel geeft invulinstructies die van belang zijn bij INSPIRE-metadata-elementen. Let erop, dat er zowel verplichte ('Ja') als conditionele ('C') elementen in voorkomen. Zo kan bijvoorbeeld een aantal elementen pas worden ingevuld wanneer de dataharmonisatie is voltooid.

Voor prioritaire datasets voor e-reporting is de aanvullende instructie over het gebruik van anchors bij het opnemen van de trefwoorden in de metadata ook in de invulinstructies meegenomen. Voor de IACS-datasets staat in een aparte technische specificatie de aanvullende instructie vanuit DG AGRI.

Metadata-element	Longname	INSPIRE-verplicht	Omschrijving	Voorbeeldwaarde
URL	MD_Metadata.distributionInfo> MD_Distribution.transferOptions> MD_DigitalTransferOptions.onLine> CI_OnlineResource.linkage	Ja	Voor INSPIRE wordt hier ten minste de URL van de view- en de downloadservice opgenomen naar het accesspoint (voor WMS en WFS is dat de capabilities). Als er meerdere datasets in één service worden ontsloten wordt hier ook het endpoint van elke dataset (zowel view als download) opgenomen.	http://inspirelab.geonovum.nl/test/rws/wms?request=GetCapabilities
Protocol	MD_Metadata.distributionInfo> MD_Distribution.transferOptions> MD_DigitalTransferOptions.onLine> CI_OnlineResource.protocol	Ja	Verplicht als er een URL is opgegeven	xlink:href=" http://www.opengis.net/def/serviceType/ogc/wms " OGC:WMS
Applicatieprofiel	MD_Metadata.distributionInfo> MD_Distribution.transferOptions> MD_DigitalTransferOptions.onLine> CI_OnlineResource.applicationProfile	Ja	Aanbevolen voor eenvoudigere dataservice-koppeling INSPIRE, hiermee wordt aangegeven dat aan betreffende technische specificatie wordt voldaan. Dit alleen opnemen voor het accesspoint (voor WMS en WFS is dat de capabilities). Kies een waarde uit http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download Downloaddienst	http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download

XML example

```
<gmd:transferOptions>
  <gmd:MD_DigitalTransferOptions>
    <gmd:onLine>
      <gmd:CI_OnlineResource>
        <!-- Verwijzing naar het Capabilities document van de service-->
        <gmd:linkage>
          <gmd:URL>http://inspirelab.geonovum.nl/test/rws/wms?request=GetCapabilities&service=WMS</gmd:URL>
        </gmd:linkage>
        <gmd:protocol>
          <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms">OGC:WMS</gmx:Anchor>
        </gmd:protocol>
        <!-- Alleen opnemen voor de service die als view service voor INSPIRE dient-->
        <gmd:applicationProfile>
          <gmx:Anchor
            xlink:href="http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/view">Raadpleegdienst</gmx:Anchor>
        </gmd:applicationProfile>
        <gmd:name>
          <gco:CharacterString>Naam van de view service</gco:CharacterString>
        </gmd:name>
        <gmd:description>
          <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/OnLineDescriptionCode/accessPoint">accessPoint</gmx:Anchor>
        </gmd:description>
      </gmd:CI_OnlineResource>
    </gmd:onLine>
```

Validation warnings data service linking



Test step: Waarschuwingen - INSPIRE dataservice koppeling

Assertions:

Er is minimaal een applicationProfile opgegeven voor een View en Download service

Requirement Minimaal_applicationProfile_View_Download

Short description	Not available
Name	Not available
Reference	Not available

Messages

Files: 1.

File 'testje': 1 messages:

Voor de INSPIRE dataservice koppeling is het verplicht dat tenminste voor een View en Download service het applicatie profiel is opgegeven, met een waarde uit de codelijst ServiceType (<http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/>). Het applicatie profiel moet opgegeven zijn via een Anchor.

Example of linked view and download service



National Georegister

Contact Help

Home Zoeken Kaart Over NGR Voor ontwikkelaars Actueel Inloggen

Home / Zoeken / Geografische Namens - Geographical Names (INSPIRE geharmoniseerd)

Terug naar zoeken < Vorig Volgende > Download Weergave

Geografische Namens - Geographical Names (INSPIRE geharmoniseerd)

Brontype: Dataset

INSPIRE Geografische Namens (Geographical Names) themalaag, geharmoniseerd, gevuld met relevante objecten uit TOP10NL (onderdeel van de Basisregistratie Topografie (BRT)), geproduceerd en beheerd door het Kadaster. Het is een referentie naar natuurlijke, culturele en kunstmatige objecten. Het bevat de namen van gebieden, regio's, plaatsen, steden of nederzettingen, of elk geografische of topografische object dat van publieke of historische waarde.

Beschrijving Contact gegevens Downloads, views en links INSPIRE

Downloads, views en links

Geografische namen - Geographical Names (INSPIRE geharmoniseerd) WMS Voeg aan kaart toe

accessPoint

De laag 'Geografische namen - Geographical Names (INSPIRE geharmoniseerd)' is/zijn gepubliceerd in de Web Map Service https://service.pdok.nl/kadaster/gn/wms/v1_0?request=GetCapabilities&service=WMS. Lees meer over het WMS protocol.",

Geografische namen - Geographical Names (INSPIRE geharmoniseerd) Atom

Deze dataset is gepubliceerd in de Atom Feed https://service.pdok.nl/kadaster/gn/atom/v1_0/index.xml met de naam Geografische namen - Geographical Names (INSPIRE geharmoniseerd) Atom

Overzicht

thumbail

Ruimtelijke dekking

- Nederland



Links

The (minor) changes in the data set metadata needed on the resource locator elements is implemented in:

- The Dutch metadata profile (<https://docs.geostandaarden.nl/md/mdprofiel-iso19115/>)
- INSPIRE guide <https://docs.geostandaarden.nl/eu/INSPIRE-handreiking/#dataset-metadata>.
- The validator (<http://validatie.geostandaarden.nl/etf-webapp/testprojects>) returns warnings if the requirements on data service linking are not met.
- The INSPIRE data is available via view and download services in the Dutch Nationaal Georegister:
https://www.nationaalgeoregister.nl/geonetwork/srv/dut/catalog.search#/search?facet.q=category%2Finspire&resultType=details&sortBy=relevance&fast=index&_content_type=json&from=1&to=50

Bedankt!

Geonovum

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Simplification implementation in Italy

Antonio Rotundo

21/11/2022



AGID | Agenzia per
l'Italia Digitale

The national metadata profile

← → ⌂   <https://agid.github.io/geodocs/rndt-lg/2.0.1/>     

SOMMARIO

AgID - Linee Guida

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- [Sintesi delle modifiche](#)
- [Gruppo di lavoro](#)
- [Stato di questo documento](#)
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 - 3.2 Contenuto del Repertorio
 - 3.3 Efficacia della pubblicazione nel Repertorio

Linee Guida RNDT 2.0.1

Art. 59 c. 5 D.Lgs. n. 82/2005 e s.m.i.

AgID Linee Guida 28 Febbraio 2022

Questa versione:
<https://agid.github.io/geodocs/rndt-lg/2.0.1/>

Ultima versione pubblicata:
<https://agid.github.io/geodocs/rndt-lg/2.0.1/>

Versione precedente:
<https://agid.github.io/geodocs/rndt-lg/2.0/>

Precedenti Linee Guida:
<https://www.gazzettaufficiale.it/eli/id/2012/02/27/12A01801/sg>

Editore:
[Agenzia per l'Italia Digitale](#)

Partecipa:

[GitHub AgID/geodocs](#)
[File a bug](#)
[Commit history](#)
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 **AGID**
Agenzia per
l'Italia Digitale

aligned to and extending INSPIRE
metadata TGS 2.0

Implementation of part A

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	4.2 Dizionario dei dati		
	4.2.1 Glossario		
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	4.2.4 Dizionario dei metadati relativi ai servizi		
	4.2.5 Elenchi di codici ed enumerazioni per i		
		Gestione dei dati	
		44 Frequenza di aggiornamento	

metadata elements proposed in the Part A of the good practice already included as mandatory elements in the national profile:

- Protocol
- Application profile

Example

```
-<gmd:transferOptions>
-<gmd:MD_DigitalTransferOptions>
-<gmd:onLine>
-<gmd:CI_OnlineResource>
-<gmd:linkage>
-<gmd:URL>
    https://geoservizi.regione.liguria.it/geoserver/M1441/wms?version=1.3.0&request=getcapabilities
-</gmd:URL>
-</gmd:linkage>
-<gmd:protocol>
    <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms">Web Map Service (WMS)</gmx:Anchor>
-</gmd:protocol>
-<gmd:applicationProfile>
    <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/view">view</gmx:Anchor>
-</gmd:applicationProfile>
-<gmd:description>
    <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/OnLineDescriptionCode/accessPoint">accessPoint</gmx:Anchor>
-</gmd:description>
-</gmd:CI_OnlineResource>
-</gmd:onLine>
-</gmd:MD_DigitalTransferOptions>
-</gmd:transferOptions>
```

The metadata elements `gmd:protocol` and `gmd:applicationProfile` are encoded by using the mandatory element `gmx:Anchor` with the URIs coming from the INSPIRE registers:

- INSPIRE Protocol value register
- Spatial data service type register

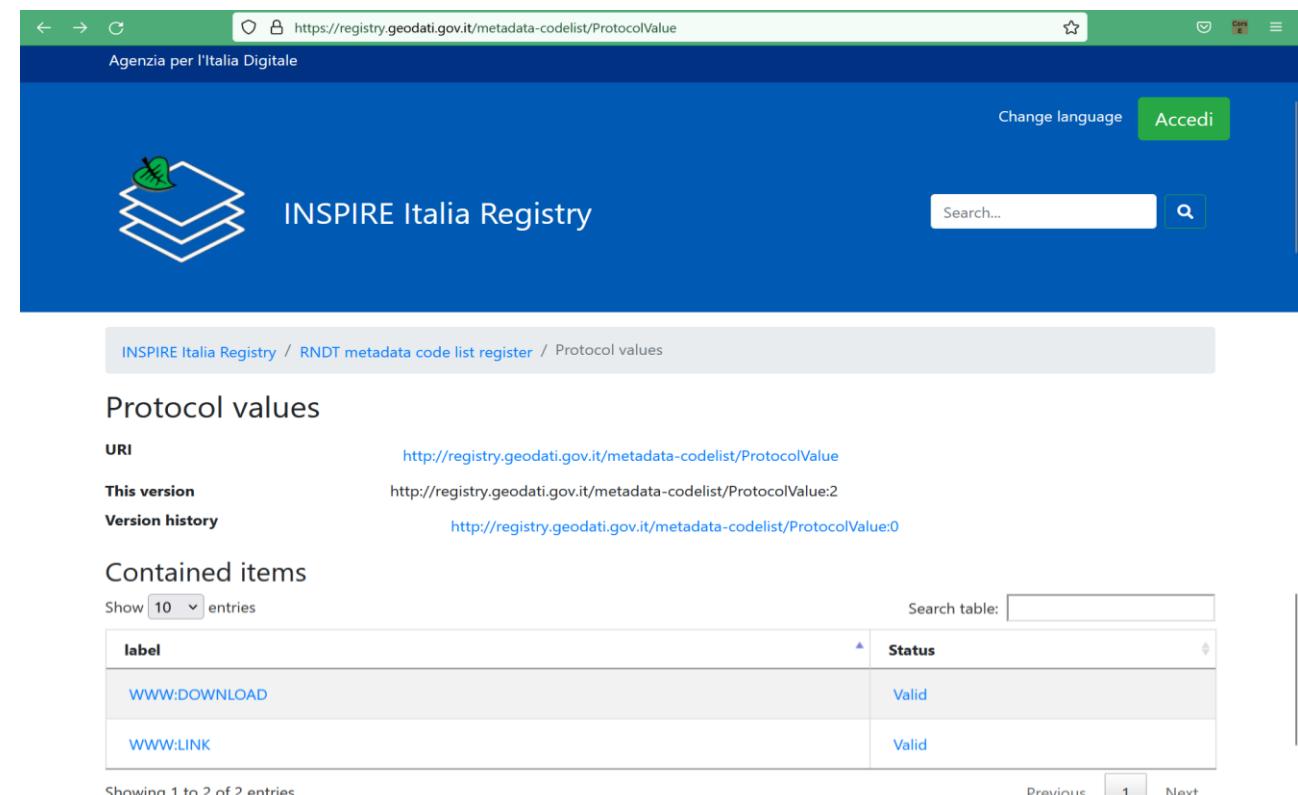
Extensions to INSPIRE registers

As the metadata elements **protocol** and **applicationProfile** are required for all types of online resource (and not only for view and download services as in Part A of the good practice), some extensions in the INSPIRE Protocol value register have been needed.

Those extensions are published in the national registry.

The extensions cover the following cases:

- a web page with further instructions for accessing the data set described through metadata (→ (external) URI: <https://www.w3.org/TR/xlink/>);
- direct access for downloading the data set described through metadata (→ URI: <https://registry.geodati.gov.it/metadata-codelist/ProtocolValue/www-download>).



The screenshot shows the 'INSPIRE Italia Registry' website. The header includes the Agenzia per l'Italia Digitale logo, a search bar, and language selection options. The main content area displays the 'Protocol values' section. It lists two entries under 'URI': <http://registry.geodati.gov.it/metadata-codelist/ProtocolValue> (Status: Valid) and <http://registry.geodati.gov.it/metadata-codelist/ProtocolValue:2>. Below this is a table titled 'Contained items' with two rows:

label	Status
WWW:DOWNLOAD	Valid
WWW:LINK	Valid

At the bottom, it says 'Showing 1 to 2 of 2 entries' and has navigation links for 'Previous' (page 1), 'Next', and a search input field.

Example

```
-<gmd:transferOptions>
  -<gmd:MD_DigitalTransferOptions>
    -<gmd:onLine>
      -<gmd:CI_OnlineResource>
        -<gmd:linkage>
          -<gmd:URL>
            https://srvcarto.regione.liguria.it/geoservices/apps/viewer/pages/apps/download/index.html?id=1441
          </gmd:URL>
        </gmd:linkage>
      -<gmd:protocol>
        <gmx:Anchor xlink:href="https://registry.geodati.gov.it/metadata-codelist/ProtocolValue/www-download">WWW:DOWNLOAD-1.0-http--download</gmx:Anchor>
      </gmd:protocol>
      -<gmd:applicationProfile>
        <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/other">other</gmx:Anchor>
      </gmd:applicationProfile>
      -<gmd:description>
        <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/OnLineDescriptionCode/accessPoint">accessPoint</gmx:Anchor>
      </gmd:description>
    </gmd:CI_OnlineResource>
  </gmd:onLine>
-</gmd:MD_DigitalTransferOptions>
-</gmd:transferOptions>
```

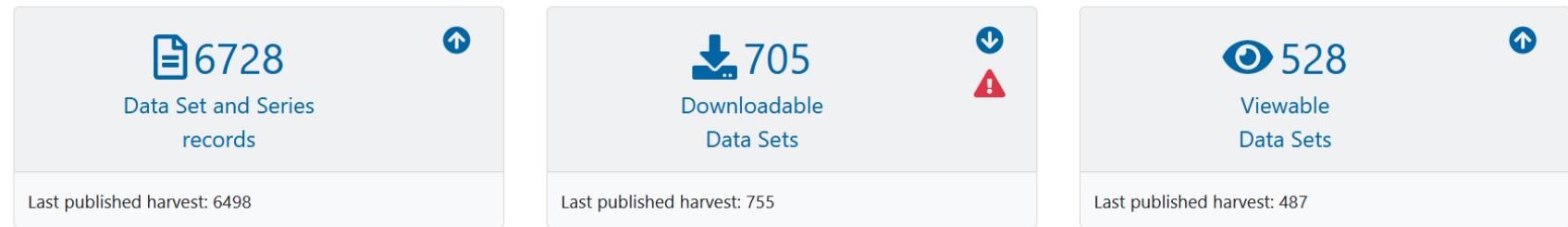
Implementation of the Part B

Not implemented yet, but data and service providers look forward to using the new approach

Why?

Low level of accessibility to Italian INSPIRE data sets with the current approach

Complete overview of the harvest session



But the number of services documented is relevant

2115
Services



CONCLUSIONS: with the simplification approach, a considerable increase in the level of accessibility is expected



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SIMPLIFICATION IMPLEMENTATION IN FRANCE

Why and how ?

Marie Lambois

Why simplification ?



Priority dataset provider announcing that he has successfully created a dataset metadata that fully validates against the validator.

Why simplification ?



Same priority dataset provider when I announced him that now he has to create a download service with extended capabilities (so he cannot use his current software solution), a view service with extended capabilities and then he has to create a metadata for each service and in each metadata reference the dataset metadata so that the Inspire Geoportal understands that this service is serving this data and thus his data is advertised as downloadable/viewable.

Image by kues1 on Freepik

Why simplification ?

- **While in the meantime:**

★ **Catégories des routes du C**

Catégories des routes du Conseil
<https://data.eurelien.fr/explore/d>



- **Data is shown as downloadable/viewable in the national data portal**
 - Simplified approach has been used for years !

National Guidelines

- <http://cnig.gouv.fr/wp-content/uploads/2019/12/Guide-de-saisie-des-%C3%A9ments-de-m%C3%A9tadonn%C3%A9es-INSPIRE-v2.0-1.pdf>

→ Cas particulier du lien vers les services

Quand il est connu, le localisateur de la ressource mentionne le lien vers les services diffusant la ressource.

RECOMMANDATIONS NATIONALES :

Le lien vers le service doit comporter les éléments suivants:

- URL : lien vers le service. A minima, renseigner le lien vers le point d'entrée/les capacités du service (GetCapabilities par exemple).
- protocole : le protocole doit préciser le type de service concerné selon une liste de valeurs prédéfinie (cf. tableau ci-dessous)
- profil d'application : permet de préciser le type de service INSPIRE
- description : fixée à « access point » (point d'accès).

- **Based on URL, protocol, applicationProfile**
- **A currently very slightly different solution**
 - (French guidelines published in 2019)
 - Will be aligned soon with the good practice simplification

Xpath ISO 19113	distributionInfo / transferOptions / online / linkage
Exemple XML	<pre> <gmd:MD_Metadata ...> ... <gmd:distributionInfo> <gmd:MD_Distribution> ... <gmd:transferOptions> <gmd:MD_DigitalTransferOptions> <gmd:onLine> <gmd:CI_OnlineResource> <gmd:linkage> </pre>

Guide de saisie des éléments de métadonnées INSPIRE – Appliqués aux données v2.0

```

<gmd:URL>http://xxx.xxx.xxx/atom.xml</gmd:URL>
</gmd:linkage>
<gmd:protocol>
  <gmx:Anchor
xlink:href="http://tools.ietf.org/html/rfc5023">
ATOM Syndication Format
</gmx:Anchor>
</gmd:protocol>
<gmd:applicationProfile>
  <gmx:Anchor xlink:href="
http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download ">
Download Service </gmx:Anchor>
  </gmd:applicationProfile>
<gmd:description>
  <gmx:Anchor xlink:href="
http://inspire.ec.europa.eu/metadata-
codelist/OnLineDescriptionCode/accessPoint"> Access Point </gmx:Anchor>
  </gmd:description>

  </gmd:CI_OnlineResource>
  <gmd:onLine>
  </gmd:MD_DigitalTransferOptions>
  <gmd:transferOptions>
    <gmd:MD_Distribution>
  </gmd:transferOptions>
  </gmd:MD_Distribution>
</gmd:distributionInfo>

```



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Links to MIWP Action 2.4
Central INSPIRE Infrastructure Components

Revamped INSPIRE Geoportal (GeoNetwork)

JRC INSPIRE Team

INSPIRE Good Practice – Data-Service Linking Simplification Webinar
November 21st, 2022

INSPIRE Geoportal Revamp

<https://inspire-geoportal.ec.europa.eu>

Main access point to
INSPIRE Infrastructure tools
and resources.

- Based on own development.
- Main focus: INSPIRE M&R.
- Being revamped using a
GeoNetwork-based backend.

INSPIRE GEOPORTAL
Enhancing access to European spatial data

European Commission > INSPIRE > Geoportal

Home Priority Data Sets Viewer Thematic Viewer Harvesting status Find out more about

INSPIRE Data Sets - EU & EFTA Country overview

The map displays the spatial coverage of INSPIRE data sets across Europe and the EFTA countries. Each country is colored according to its data set statistics, with labels for major cities and borders. A legend on the right indicates the color coding for different data set counts.

INSPIRE Geoportal Data Set Statistics

Category	Count
Metadata records	84729
Downloadable Data Sets	57494
Viewable Data Sets	57704

Spatial scope coverage: National Regional

Select a COUNTRY

Country	Metadata records	Downloadable Data Sets	Viewable Data Sets
Austria	692	461	447
Belgium	593	521	525
Bulgaria	305	110	103
Croatia	147	42	95
Cyprus	42	32	34
Czech Republic	91	74	79
Denmark	202	95	98
Estonia	88	54	59
Finland	651	268	238
France	218	75	17
Germany	71854	53004	53644
Greece	45	43	44
Hungary	121	23	20
Iceland	95	47	0
Ireland	80	52	51
Italy	6498	755	487
Latvia	157	99	96
Liechtenstein	70	11	12
Lithuania	132	132	60
Luxembourg	309	288	277
Malta	150	145	148
Netherlands	217	131	135
Norway	161	71	28
Poland	147	83	80
Portugal	503	257	272
Romania	103	38	39
Slovakia	257	164	167
Slovenia	98	48	59
Spain	242	183	186
Sweden	243	191	200
Switzerland	218	2	4

Select the whole **EUROPE** [Download stats](#)

INSPIRE Geoportal Version: 1.6.2

INSPIRE Geoportal

Revamp – User interface

User interface

- **Available** – Filtering by High Value Datasets (HVDs).

To be launched when the Implementing Act on HVDs is entering into force.

- **Ready to be launch** – Additional developments to integrate the new user interface with the new backend: GeoNetwork.

The screenshot shows the European Commission's INSPIRE Geoportal homepage. At the top, there is a navigation bar with the European Commission logo and a link to the English version. Below the navigation bar, the page title is "ENHANCING ACCESS TO EUROPEAN SPATIAL DATA" and "INSPIRE GEOPORTAL". A main menu includes "Home", "High-Value Data Sets", "Thematic Data", "Harvesting status", and "Find out more about". The main content area features a section titled "Welcome to the INSPIRE Geoportal" which describes the portal as the central European access point to data from EU Member States and EFTA countries under the INSPIRE Directive. It lists monitoring availability, discovering suitable datasets, and accessing selected datasets through view or download services. Below this, there are two main sections: "High-Value Data Sets" and "INSPIRE Thematic Data", each with a map icon and a "Browse" button. The "High-Value Data Sets" section also includes credits for Google Map data and SnazzyMap icons. The "INSPIRE Thematic Data" section includes credits for Mapnik, OpenStreetMap, and SnazzyMap icons. At the bottom, there is a section for the "INSPIRE Reference Validator" with a "Go to INSPIRE Reference Validator" button.

INSPIRE Geoportal

Revamp – Backend: GeoNetwork (AWS cloud)

The screenshot shows the GeoNetwork interface for managing harvesters. On the left, the 'Catalog harvesters' section lists various remote harvesters, with 'BE-GEOBRU' highlighted. On the right, the 'Harvest status' section shows details for 'BE-GEOBRU', including its identification, group assignment, and configuration for the OGC CSW 2.0.2 protocol.

Harvester

- AT (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date
- BE-GEO (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date
- BE-GEOBRU (OGC CSW 2.0.2 (remote harvester))**
Last run : Invalid date
- BE-VLAANDEREN (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date
- BE-WALLONIE (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date
- BG (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date
- CH (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date
- CY (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date
- CZ (OGC CSW 2.0.2 (remote harvester))
Last run : Invalid date

Harvest status

Update harvester **BE-GEOBRU**

Identification	Schedule
Node name and logo BE-GEOBRU (Belgium)	Enable disable
The name describing the remote node.	
Group Belgium	Group which owns the harvested records. Only the catalog administrator or user admin of this group can manage this node.
User admin admin (admin)	User who owns the harvested records

Configuration for protocol OGC CSW 2.0.2 (remote harvester)

Service URL
https://geobru-geonetwork.irisnet.be/geonetwork/inspire/fre/csw
CSW URL with or without GetCapabilities parameters

Process CSW endpoints in the service metadata
Harvest the metadata of the CSW endpoints referenced by the service metadata.

Number of records to retrieve per request
20



- Prototype:
Available and revised
- Working system:
Delivered
JRC Testing finished
Working in the launch

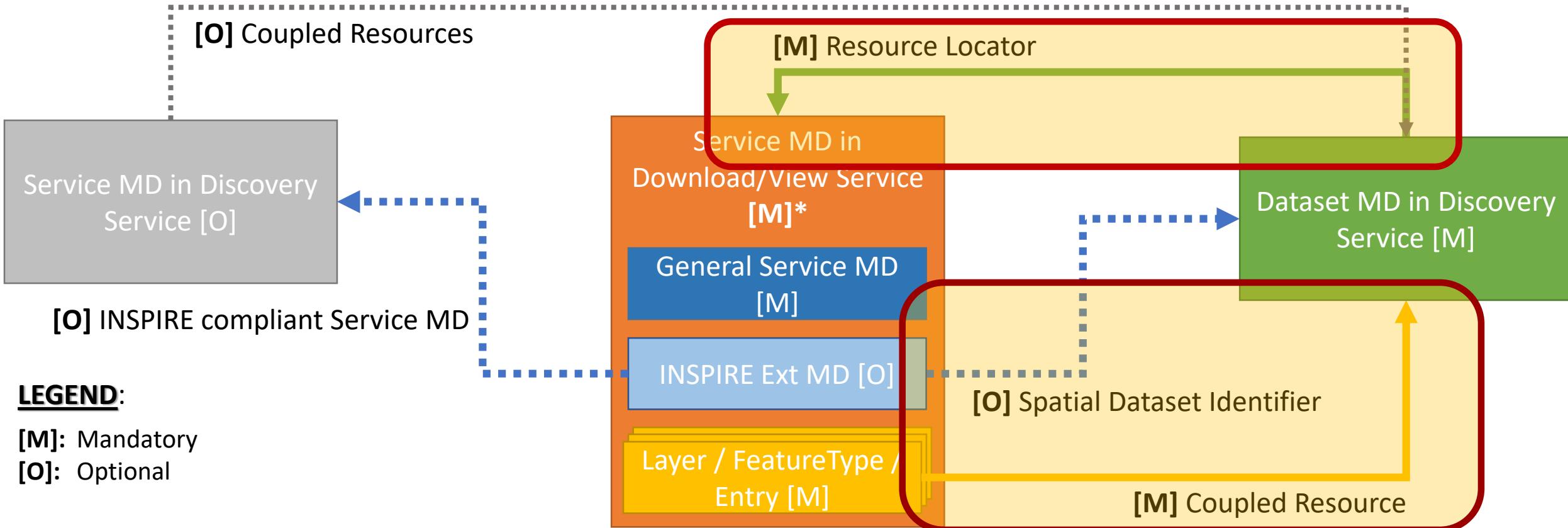
INSPIRE Geoportal revamp

Overview

- **70 MIG-T – Beta-testing plan announcement.**
[7th July 2022](#)
- **1st Training session - Revamped INSPIRE Geoportal backend.**
[15th July 2022](#)
- **Ad-hoc Online Survey** (beta-testing feedback).
[22nd July 2022 - 15th October 2002](#)
- **2nd Q&A Training session - Revamped INSPIRE Geoportal backend.**
[5th October \(today\)](#)
- **3rd Training session – Revamped INSPIRE Geoportal (backend + frontend/UI).**
[Beginning November 2022 – **DELAYED**](#)
- **INSPIRE Geoportal revamp.**
[End November 2022](#)
- **M&R round 2022.**
[15th December 2022](#)

Revamped INSPIRE Geoportal (GeoNetwork) Data-Service Linking Simplification Implementation

INSPIRE Model: Simplified



Revamped INSPIRE Geoportal (GeoNetwork) Data-Service Linking Simplification Implementation

- Implementation of the Data-Service Simplification good practice Part A has been taken into account in the current developments for the GeoNetwork backend.
- Not completed. Lack of a final good practice specification (not achieved till now, end November 2022).
- Further tests of the revamped INSPIRE Geoportal are needed to check which is the current functionality achieved.
- Part B pending.
- Implementation of the good practice will need future developments. Funding options to be explored from end 2023.
- Meanwhile, are any MS/countries interested in co-funding?

Thank you!



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Programme

- Welcome
- Introduction ‘Data-Service Linking Simplification good practice’
- Implementations and support evidences
- Q/A session & Discussion
- Conclusions and next steps

Q/A session & Discussion



<https://app.sli.do/event/eNPZqBKmorFjmCuMhCU7Hr>

Programme

- Welcome
 - Introduction ‘Data-Service Linking Simplification good practice’
 - Implementations and support evidences
 - Q/A session & Discussion
- Conclusions and next steps

Conclusions and next steps

Data-Service Linking Simplification good practice candidate

- Outreach webinar (today)
 - Presentation of the final good practice specification.
 - Implementation evidences.
- Ready for MIG-T / MIG endorsement.
 - November 25th 2022

Procedure for proposing & endorsing good practices and progress overview
<https://inspire.ec.europa.eu/portfolio/good-practice-library>

The procedure includes the following six steps	Progress until 21.11.2022
Step 1. Initiation	GitHub: https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification Collection of issues: https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification/issues Support organisations and proposals: https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification/tree/main/proposals Initiation fiche: https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification/blob/main/good-practice/good-practice-fiche.md Final good practice specification: https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification/blob/main/good-practice/data-service-linking-simplification-spec.md
Step 2. Submission as good practice candidate	Data Service Linking Simplification https://inspire.ec.europa.eu/good-practice/data-service-linking-simplification
Step 3. Outreach	Webinar 21.11.2022 16:00 – 17:30 (CET) https://inspire.ec.europa.eu/events/inspire-good-practice-data-service-linking-simplification-webinar
Step 4. Submission	Scheduled: <ul style="list-style-type: none">– 16th INSPIRE MIG - November 24.– 72nd INSPIRE MIG-T - November 25.
Step 5. Legal scrutiny	
Step 6. Feedback	

Thank you!



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