



# Action 2.3.2 'Data and Service Linking simplification'

JRC INSPIRE Team

*Fifth Meeting - November 11, 2021*



# Meeting agenda

- Welcome (JRC)
- Consolidated proposal - an overview (JRC)
- Discussion on the proposal (all)
  - GitHub issues received
  - Additional input
- Way forward for the action (all)
- AOB (all)

The meeting is recorded, and the recording will be made available afterwards upon request.

# Consolidated proposal - an overview

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

## Data Service Linking Simplification: Good Practice guidelines

Version: draft 1.0 Date: 2021-10-21

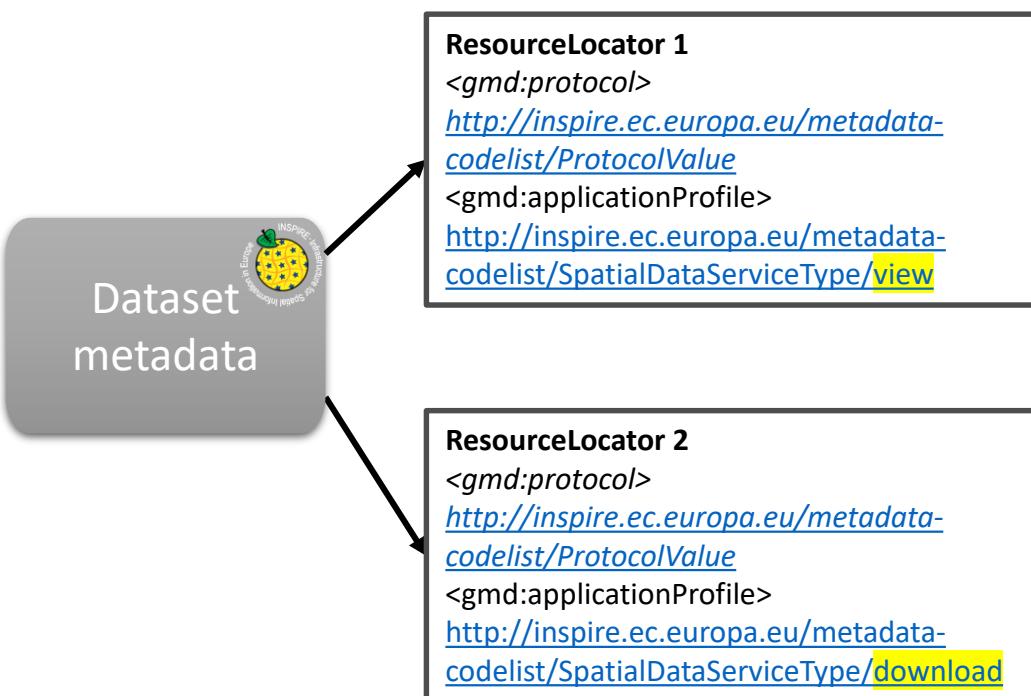
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# Data-service linking simplified approach

## Starting point: Dataset metadata



### 1.4. Resource locator

The resource locator defines the link(s) to the resource and/or the link to additional information about the resource.

The value domain of this metadata element is a character string, commonly expressed as uniform resource locator (URL).

The multiplicity of this element as defined in [Regulation 1205/2006], Part C, Table 1 is zero or more, and it is "mandatory if a URL is available to obtain more information on the resource, and/or access related services."

#### 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.

A Resource Locator encoded using the gmd:CI\_OnlineResource element may also include gmd:name, gmd:description, and gmd:function properties.

# Data-service linking simplified approach

## ResourceLocator element

```
ResourceLocator
<gmd:protocol>
http://inspire.ec.europa.eu/metadata-codelist/ProtocolValue
<gmd:applicationProfile>
http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType
```

INSPIRE Protocol values

Set of OGC and RFC services that are in the scope of INSPIRE. This list aims at the better identification of the network services described within the metadata records.

This code list is the result of the 'simplification of data-service linkages' activity performed in the context of the MIG-T data simplification action(2019.2).

Governance level: eu-technical  
Status: Valid

Other formats: [XML](#) [ISO 19135](#) [RDF/XML](#) [JSON](#) [Atom](#) [CSV](#)

Metadata code list values

Show only valid items

Filter Label	Filter Governance level	^Valid((?!Invalid).)*\$
Label	Governance level	Status
ATOM Syndication Format	eu-technical	Valid
OGC Catalogue Service for the Web	eu-technical	Valid
OGC Sensor Observation Service	eu-technical	Valid
OGC Web Coverage Service	eu-technical	Valid
OGC Web Feature Service	eu-technical	Valid
OGC Web Map Service	eu-technical	Valid
OGC Web Map Tile Service	eu-technical	Valid

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# Data-service linking simplified approach

## ResourceLocator element

### ResourceLocator

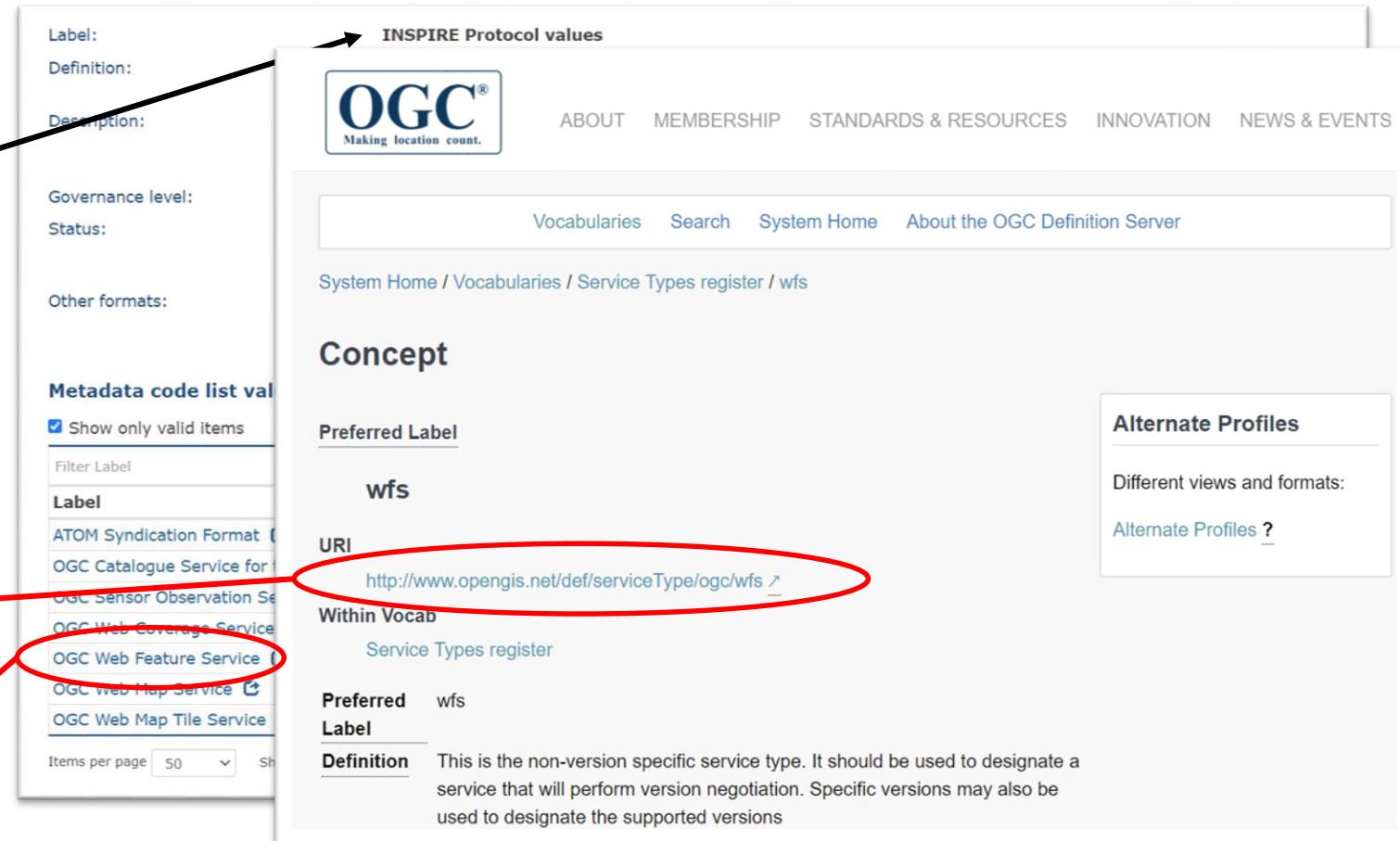
```
<gmd:protocol>  
http://inspire.ec.europa.eu/metadata-codelist/ProtocolValue  
<gmd:applicationProfile>  
http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType
```

### <gmd:protocol>

```
    <gmx:Anchor  
xlink:href="http://www.opengis.net/def/serviceType/ogc/wfs">OGC Web Feature Service</gmx:Anchor>  
</gmd:protocol>
```

### <gmd:protocol>

```
    <gco:CharacterString>OGC Web Feature Service</gco:CharacterString>  
</gmd:protocol>
```



The screenshot shows the OGC Definition Server interface for the 'wfs' service type. At the top, there's a navigation bar with links for ABOUT, MEMBERSHIP, STANDARDS & RESOURCES, INNOVATION, and NEWS & EVENTS. Below the navigation, there are links for Vocabularies, Search, System Home, and About the OGC Definition Server. The main content area is titled 'Concept' and shows the 'Preferred Label' as 'wfs'. The 'URI' is highlighted with a red oval and points to <http://www.opengis.net/def/serviceType/ogc/wfs>. The 'Within Vocab' section lists 'Service Types register'. The 'Preferred Label' is 'wfs'. The 'Definition' is described as: 'This is the non-version specific service type. It should be used to designate a service that will perform version negotiation. Specific versions may also be used to designate the supported versions'. On the right side, there's a 'Alternate Profiles' section with a link to 'Different views and formats' and 'Alternate Profiles ?'. A black arrow points from the 'Protocol' element in the XML code above to the 'INSPIRE Protocol values' section in the screenshot. A red arrow points from the 'Protocol' element in the XML code below to the 'URI' field in the screenshot.

# Data-service linking simplified approach

## ResourceLocator element

```
ResourceLocator
<gmd:protocol>
http://inspire.ec.europa.eu/metadata-codelist/ProtocolValue
<gmd:applicationProfile>
http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType
```

```
<gmd:applicationProfile>
  <gmx:Anchor
    xlink:href="http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download"
    >Download Service</gmx:Anchor>
</gmd:applicationProfile>
```

```
<gmd:applicationProfile >
  <gco:CharacterString>Download Service</gco:CharacterString>
</gmd:applicationProfile >
```

The screenshot shows the Re3gistry software interface for managing spatial data service types. A search bar at the top right contains the query "Spatial data service type". Below it, a table lists "Metadata code list values" for "Spatial data service type". The table includes columns for "Label", "Governance level", and "Status". A row for "eu-legal" is selected, indicated by a blue background. To the right of the table are download links for various formats: XML (Re3gistry), XML (ISO 19135), RDF/XML, JSON, and CSV.

**Spatial data service type**

eu-legal  
Valid

**Other formats:**

XML Re3gistry XML ISO 19135 RDF/XML JSON CSV

**Metadata code list values**

Show only valid items

Filter Label	Filter Governance level	Filter Status
Label	Governance level	Status
Discovery Service	eu-legal	Valid
Download Service		
Invoke Spatial Data Service		
Other Service		
Transformation Service		
View Service		

**Download Service**

Help us improving the Re3gistry software! Please fill our quick survey at <http://europa.eu/!Bn84Ct>

ID: <http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download>

This version: <http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download:1>

Latest version: <http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download>

Label: Download Service

Definition: Service that enables copies of spatial data sets, or parts of such sets, to be downloaded and, where practicable, accessed directly.

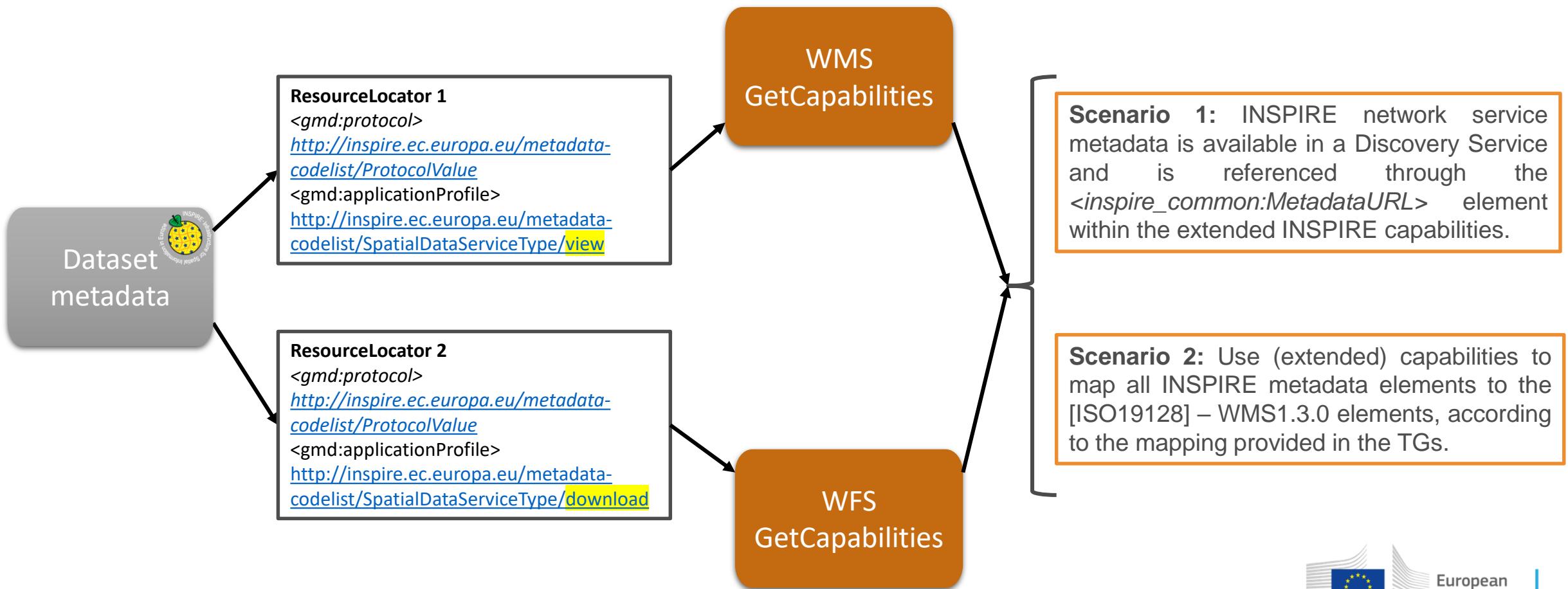
Governance level: eu-legal  
Status: Valid

**Other formats:**

XML Re3gistry XML ISO 19135 RDF/XML Atom

# Data-service linking simplified approach

Dataset metadata → Network services Capabilities → Service metadata



# Data-service linking simplified approach

## Service metadata (external metadata file or “embedded” in the capabilities)

### 4.1.2.4 Linking to provided data sets using coupled resource

This metadata element refers to, where relevant, the target spatial data set(s) of the described service. It is implemented by reference, i.e. through a URL that points to the metadata record of the data on which the service operates. It helps therefore linking services to the relevant datasets.

The element for giving this information is described in [Regulation 1205/2008], Part B 1.6:

#### 1.6. Coupled resource

*If the resource is a spatial data service, this metadata element identifies, where relevant, the target spatial data set(s) of the service through their unique resource identifiers (URI).*

*The value domain of this metadata element is a mandatory character string code, generally assigned by the data owner, and a character string namespace uniquely identifying the context of the identifier code (for example, the data owner).*

The multiplicity of this element as defined in [Regulation 1205/2008], Part C, Table 2 is zero or more, with the following condition: "Mandatory if linkage to data sets on which the service operates are available". According to [ISO 19119] the coupled resource is encoded using *operatesOn* property and its value is the *MD\_DataIdentification* element of the data set.

#### 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.

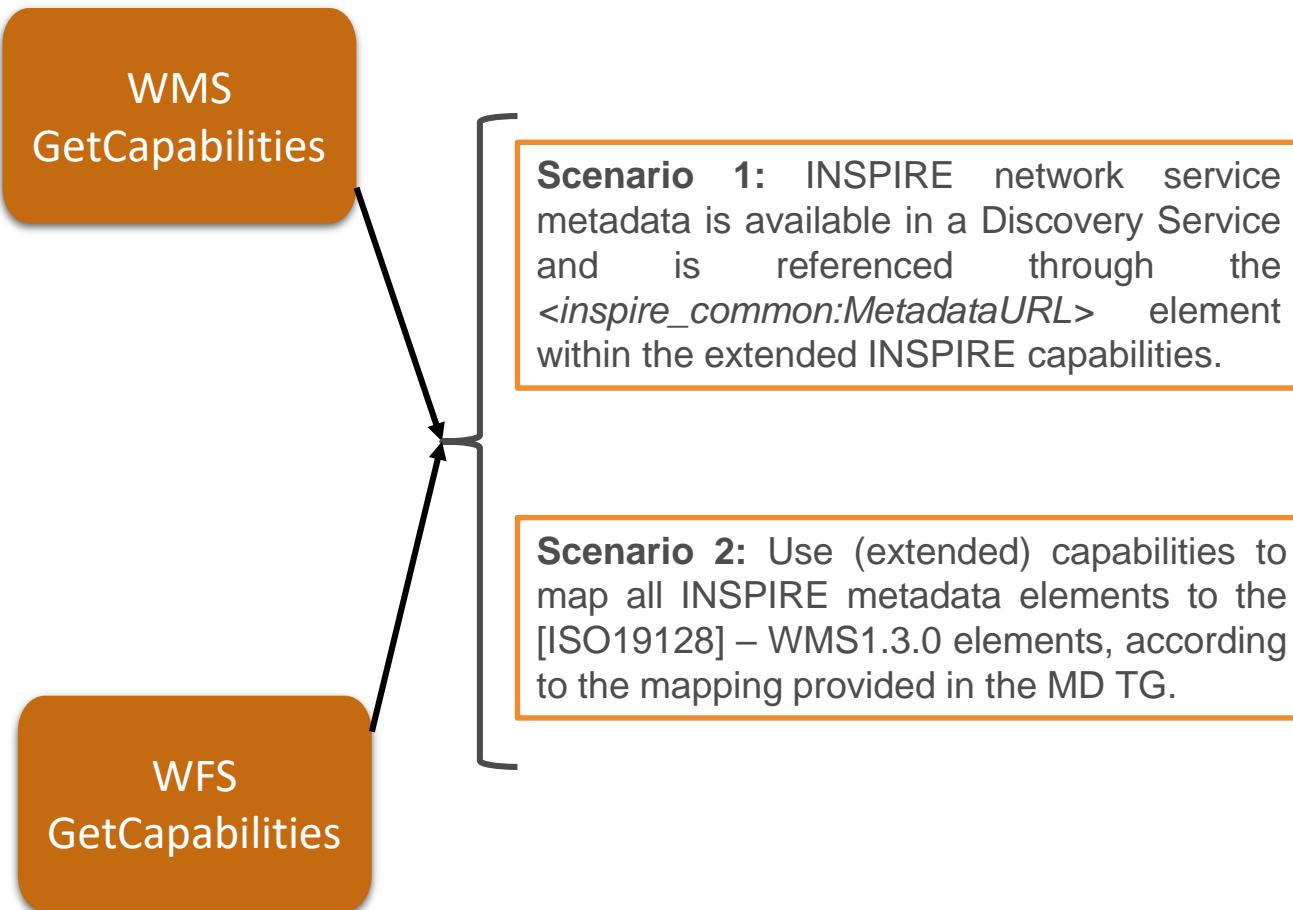
This property shall be implemented by reference. The *xlink:href* attribute of each of the *srv:operatesOn* elements shall contain a URI pointing to the *gmd:MD\_DataIdentification* element of the metadata record of the provided data set or data set series.

## Simplification

Simple use of the dataset metadata URL (e.g., CSW request) for the “Coupled resource” element

# Data-service linking simplified approach

Service metadata (external metadata file or “embedded” in the capabilities)



## Coupled resource

/gmd:MD\_Metadata/gmd:identificationInfo/srv:  
SV\_ServicelIdentification/srv:operatesOn

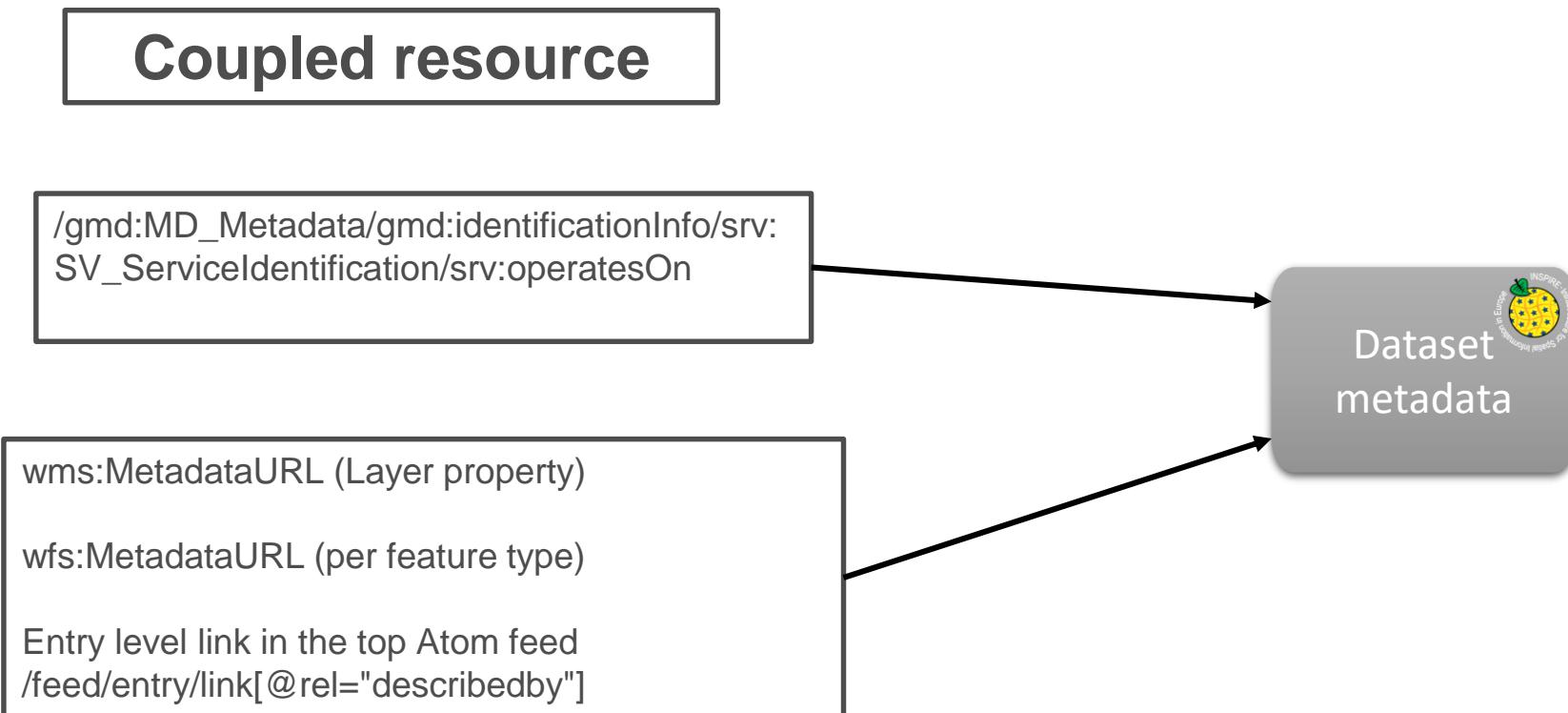
wms:MetadataURL (Layer property)

wfs:MetadataURL (per feature type)

Entry level link in the top Atom feed  
/feed/entry/link[@rel="describedby"]

# Data-service linking simplified approach

Service metadata → Coupled resource → Dataset metadata



# Data-service linking simplified approach

## Pros/cons of the proposed approach

- Pros:
  - The relation between data and service is clear and easy to manage.
  - Approach similar to what is already in place in many countries.
  - Use of existing codelists and metadata elements included in the INSPIRE TG.
  - It is independent of the scenario chosen to implement the service metadata.
  - It would still be applicable in case of “simplification/removal” of the service metadata - *i.e., removal of the ExtendedCapabilities* - since only standard GetCapabilities elements are used.
- Cons:
  - The “Unique resource identifier” is not used as it should be.

# Discussion

# Review comments - #20 and #22

- #20 Implementation of service linking: evidence, concerns, and recommendation
- #22 Distinguish between requirements and recommendation

## Requirement: <gmd:protocol> element

- For this element, the INSPIRE Registry offers a set of external codelist values from the register <https://inspire.ec.europa.eu/metadata-codelist/ProtocolValue>.
- Regarding the label of a codelist, the INSPIRE Registry specifies the text to be used, which should follow the metadata language.
- The INSPIRE MD TG already recommends the use of the `gmx:Anchor` element when the provided text is a term or code, instead of `gco:CharacterString`. This requirements class enforces the use of this element.
- The existence of the element `gco:CharacterString` is allowed only for backward compatibility with an existing Resource Locator description that might be already compliant with this simplification approach.

Requirement	/req/resource-locator-protocol
A	The element <code>protocol</code> SHALL be present in the Resource Locator.
B	The element <code>protocol</code> SHALL use the values from the <code>ProtocolValue</code> codelist.
C	The element <code>protocol</code> SHOULD be encoded with <code>gmx:Anchor</code> . The attribute <code>xlink:href</code> should point to a valid unique resource identifier of the <code>ProtocolValue</code> codelist. The text value should match the related codelist label, expressed in the metadata language.
D	The element <code>protocol</code> MAY be encoded with <code>gco:CharacterString</code> . In this case, the text value SHALL match the related codelist label, expressed in the metadata language.

# Review comments - #20 and #22

## PR #31 - Fix #20 and #22

### Requirement: <gmd:protocol> element

- For this element, the INSPIRE Registry offers a set of external codelist values from the register <https://inspire.ec.europa.eu/metadata-codelist/ProtocolValue>.
- For this element, the INSPIRE Registry offers a set of external codelist values from the ProtocolValue codelist.
- Regarding the label of a codelist, the INSPIRE Registry specifies the text to be used, which should follow the metadata language.
- The INSPIRE MD TG already recommends the use of the gmx:Anchor element when the provided text is a term or code, instead of gco:CharacterString. This requirements class enforces the use of this element.
- The existence of the element gco:CharacterString is allowed only for backward compatibility with an existing Resource Locator description that might be already compliant with this simplification approach.

Requirement	/req/resource-locator-protocol
A	The protocol element protocol SHALL be present in the Resource Locator, encoded as either gmx:Anchor or gco:CharacterString .
B	The protocol element protocol SHALL use the values from the ProtocolValue codelist.
C	If the element protocol SHOULD be encoded with gmx:Anchor as gco:CharacterString , The attribute xlink:href should point to a valid unique resource identifier of its value SHALL match the ProtocolValue related codelist The text value should match label specified in the related codelist INSPIRE registry, label, expressed in the metadata language where available.
D	The element protocol MAY be encoded with gco:CharacterString . In this case, the text value SHALL match the related codelist label, expressed in the metadata language.

Recommendation	/rec/resource-locator-protocol
A	The protocol element SHOULD be encoded as gmx:Anchor . The attribute xlink:href should point to a valid unique resource identifier of the ProtocolValue codelist. The text value should match the related codelist label, expressed in the metadata language where available.

### Requirement: <gmd:applicationProfile> element

- For this element, the INSPIRE Registry provides the values from the SpatialDataServiceType codelist.
- Regarding the label of a codelist, the INSPIRE Registry specifies the text to be used, which should follow the metadata language.
- The INSPIRE MD TG already recommends the use of the gmx:Anchor element when the provided text is a term or code, instead of gco:CharacterString . This requirements class enforces the use of this element.
- The existence of the element gco:CharacterString is allowed only for backward compatibility with an existing Resource Locator description that might be already compliant with this simplification.

Requirement	/req/resource-locator-application-profile
A	The element applicationProfile SHALL be present in the Resource Locator, encoded either as gmx:Anchor or gco:CharacterString .
B	The element applicationProfile SHALL use the values from the SpatialDataServiceType codelist.
C	If the element applicationProfile SHOULD be encoded with gmx:Anchor as gco:CharacterString , The attribute xlink:href should point to a valid unique resource identifier of its value SHALL match the SpatialDataServiceType related codelist The text value should match label specified in the related codelist INSPIRE registry, label, expressed in the metadata language where available.
D	The element applicationProfile MAY be encoded with gco:CharacterString . The text value SHALL match the related codelist label, expressed in the metadata language.

Recommendation	/rec/resource-locator-application-profile
A	The element applicationProfile SHOULD be encoded with gmx:Anchor . The attribute xlink:href should point to a valid unique resource identifier of the SpatialDataServiceType codelist. The text value should match the related codelist label, expressed in the metadata language where available.

# Review comments - #21

- #21 Wrong reference to the TG Requirement 1.8

## 8.1. Requirements class “INSPIRE-Data-Set-Metadata-Resource-Locator”

Requirements class	<a href="http://inspire.ec.europa.eu/id/spec/ds-linking-simplification/1.0/ds-md-resource-locator">http://inspire.ec.europa.eu/id/spec/ds-linking-simplification/1.0/ds-md-resource-locator</a>
Target type	Data set metadata
Dependency	N/A

The Resource Locator element of a data set metadata record shall point to the URL where the service can be contacted.

Setting up the correct resource locators is important for the connection between the data sets and the services that provide access to them or for providing additional information concerning the data sets.

In particular, TG Requirement 1.8 of [INSPIRE MD TG](#) expresses the obligation to provide online access, if available, to the described data set or data set series.

Furthermore, it suggests that at least two locators need to be expressed in the data set metadata: one for a View Service and one for a Download Service.

# Review comments - #21

- PR #32 – Fix #21

In particular, **TG Requirement 1.8** of **INSPIRE MD TG** expresses the obligation to provide online access, if available, to the described data set or data set series.

Furthermore, ~~it suggests~~ the INSPIRE legal framework requires that data sets are made available through View and Download services, which in turn implies that at least two locators need to be expressed in the data set metadata: one for a View Service and one for a Download Service.

The following requirements are also an enforcement of **TG Recommendation 1.9** in **INSPIRE MD TG** for the data set metadata record.

# Review comments - #23 and #24

- #23 Clarify what label to use for <gmd:protocol> element
- #24 Labels expressed in the metadata language

**Metadata code list values**

Show only valid items

Filter Label

Label	Code	Status
ATOM Syndication Format	atom	Valid
OGC Catalogue Service for the Web	ogc-csw	Valid
OGC Sensor Observation Service	ogc-sos	Valid
OGC Web Coverage Service	ogc-wcs	Valid
OGC Web Feature Service	ogc-wfs	Valid
OGC Web Map Service	ogc-wms	Valid
OGC Web Map Tile Service	ogc-wmts	Valid

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Example of a View Service locator with <gmx:Anchor> encoding

```
<gmd:protocol>
  <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms">wms</gmx:Anchor>
</gmd:protocol>
```

Example of a View Service locator with <gco:CharacterString> encoding

```
<gmd:protocol>
  <gco:CharacterString>wms</gco:CharacterString>
</gmd:protocol>
```

# Review comments - #23 and #24

- PR #31 - Fix #20 and #22

## Example of a Download Service locator with `<gmx:Anchor>` encoding

```
<gmd:applicationProfile>
  <gmx:Anchor xlink:href="https://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download">Downloaddienst</gmx:Anchor>
</gmd:applicationProfile>
```

## Example of a Download Service locator with a `<gco:CharacterString>` encoding

```
<gmd:applicationProfile>
  <gco:CharacterString>Downloaddienst</gco:CharacterString>
</gmd:applicationProfile>
```

NOTE: At the time of writing, the above examples use `dut` as metadata language, and they express the codelist <https://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/download> with the label "Downloaddienst". Please, check and use always the codelist label currently in force within the INSPIRE Registry.

## Example of a View Service locator with `<gmx:Anchor>` encoding

```
<gmd:protocol>
  <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms">OGC Web Map Service</gmx:Anchor>
  <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms">wms</gmx:Anchor>
</gmd:protocol>
```

## Example of a View Service locator with `<gco:CharacterString>` encoding

```
<gmd:protocol>
  <gco:CharacterString>OGC Web Map Service</gco:CharacterString>
  <gco:CharacterString>wms</gco:CharacterString>
</gmd:protocol>
```

NOTE: At the time of writing, the above examples use `eng` as metadata language, and they express the codelist <http://www.opengis.net/def/serviceType/ogc/wms> with the label "OGC Web Map Service". Please, check and use always the codelist label currently in force within the INSPIRE Registry.

# Review comments - #23 and #24

- PR #31 - Fix #20 and #22

## Requirement: <gmd:protocol> element

- For this element, the INSPIRE Registry offers a set of external codelist values from the register <https://inspire.ec.europa.eu/metadata-codelist/ProtocolValue>.
- For this element, the INSPIRE Registry offers a set of external codelist values from the ProtocolValue codelist.
- Regarding the label of a codelist, the INSPIRE Registry specifies the text to be used, which should follow the metadata language.
- The INSPIRE MD TG already recommends the use of the gmx:Anchor element when the provided text is a term or code, instead of gco:CharacterString . This requirements class enforces the use of this element.
- The existence of the element gco:CharacterString is allowed only for backward compatibility with an existing Resource Locator description that might be already compliant with this simplification approach.

Requirement	/req/resource-locator-protocol
A	The protocol element protocol SHALL be present in the Resource Locator, encoded as either gmx:Anchor or gco:CharacterString .
B	The protocol element protocol SHALL use the values from the ProtocolValue codelist.
C	If the element protocol SHOULD be encoded with gmx:Anchor as gco:CharacterString , The attribute xlink:href should point to a valid unique resource identifier. If its value SHALL match the ProtocolValue related codelist The text value should match label specified in the related codelist INSPIRE registry, label, expressed in the metadata language where available.
D	The element protocol MAY be encoded with gco:CharacterString . In this case, the text value SHALL match the related codelist label, expressed in the metadata language.

Recommendation	/rec/resource-locator-protocol
A	The protocol element SHOULD be encoded as gmx:Anchor . The attribute xlink:href should point to a valid unique resource identifier of the ProtocolValue codelist. The text value should match the related codelist label, expressed in the metadata language where available.

## Requirement: <gmd:applicationProfile> element

- For this element, the INSPIRE Registry provides the values from the SpatialDataServiceType codelist.
- Regarding the label of a codelist, the INSPIRE Registry specifies the text to be used, which should follow the metadata language. The INSPIRE MD TG already recommends the use of the gmx:Anchor element when the provided text is a term or code, instead of gco:CharacterString . This requirements class enforces the use of this element. The existence of the element gco:CharacterString is allowed only for backward compatibility with an existing Resource Locator description that might be already compliant with this simplification.

Requirement	/req/resource-locator-application-profile
	The element applicationProfile SHALL be present in the Resource Locator, encoded either as gmx:Anchor or gco:CharacterString .
	The element applicationProfile SHALL use the values from the SpatialDataServiceType codelist.
	If the element applicationProfile SHOULD be encoded with gmx:Anchor as gco:CharacterString , The attribute xlink:href should point to a valid unique resource identifier. If its value SHALL match the mentioned related codelist The text value should match label specified in the related codelist INSPIRE registry, label, expressed in the metadata language where available.
	The element applicationProfile MAY be encoded with gco:CharacterString . The text value SHALL match the related codelist label, expressed in the metadata language.
Recommendation	/rec/resource-locator-application-profile
	The element applicationProfile SHOULD be encoded with gmx:Anchor . The attribute xlink:href should point to a valid unique resource identifier of the mentioned codelist. The text value should match the related codelist label, expressed in the metadata language where available.

# Review comments - #27

- #27 Normative references → PR #34 - Fix #27

## 4. Normative references

- [ISO 19115-2:2019](#) - ISO 19115-2:2019, *Geographic information — Metadata — Part 2: Extensions for acquisition and processing*
- [ISO 19115:2005](#) - EN ISO 19115:2005, *Geographic information — Metadata*
- [ISO/TS 19139:2007](#) - ISO/TS 19139:2007, *Geographic information — Metadata — XML schema implementation*
- [IRs for NS](#) - Commission Regulation (EC) No 976/2009 of 19 October 2009 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards the Network Services
- [IRs for ISDSS](#) - 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
- [INSPIRE MD TG](#) - JRC. *Technical Guidance for the implementation of INSPIRE dataset and service metadata based on ISO/TS 19139:2007. v2.0.1* - 2017-03-02
- [INSPIRE NS - Download Service TG](#) - JRC. *Technical Guidance for the implementation of INSPIRE Download Services. v3.1* - 2013-08-09
- [INSPIRE NS - View Service TG](#) - JRC. *Technical Guidance for the implementation of INSPIRE View Services. v3.11* - 2013-04-04
- [RFC 4287](#) - Internet Engineering Task Force (IETF). RFC 4287, *The Atom Syndication Format*. Initial release: December 2005
- [OAPIF GP](#) - Good Practice: INSPIRE download services based on OGC API - Features

# Review comments - #28

- #28 Requirement: <srv:operatesOn> element and Requirement: <wms:MetadataURL> and <wfs:MetadataURL> elements

## Requirement: <srv:operatesOn> element

Requirement	/req/coupled-resource-operateson-locator
A	The <code>xlink:href</code> attribute of each of the <code>srv:operatesOn</code> elements SHALL contain a URI pointing to the metadata record of the provided data set or data set series.

## 8.2.2 INSPIRE Network service - Scenario 2

- In Scenario 2, the [INSPIRE NS - Download Service TG](#) maps all INSPIRE metadata elements to the applicable elements in the service (i.e. ATOM feed elements or OGC Capabilities), and for OGC services, it currently relies on the ExtendedCapabilities section for the remaining elements. [Annex B](#), which is subject to future work proposes an approach for the revision of the mapping of the INSPIRE requirements with the aim to possibly remove the Extended Capabilities section.
- The data set metadata URL may point to a Discovery Service different from the national reference catalog. This may apply especially for federated Discovery Service catalogues.

## Requirement: <wms:MetadataURL> and <wfs:MetadataURL> elements

Requirement	/req/coupled-resource-metadataurl-locator
A	The URL expressed within the element <code>metadataURL</code> SHALL resolve to the metadata record of the data set or data set series, available in a Discovery Service catalog.

# Review comments - #28

- PR #35 - Fix #28

## Requirement: <srv:operatesOn> element

Requirement	/req/coupled-resource-operateson-locator
A	The <code>xlink:href</code> attribute of each of the <code>srv:operatesOn</code> elements SHALL contain a <code>URI</code> pointing to the metadata record of the provided data set or data set series, available in a Discovery Service catalog.



## 8.2.2 INSPIRE Network service - Scenario 2

- In Scenario 2, the INSPIRE NS - Download Service TG maps all INSPIRE metadata elements to the applicable elements in the service (i.e. ATOM feed elements or OGC Capabilities), and for OGC services, it currently relies on the ExtendedCapabilities section for the remaining elements. Annex B, which is subject to future work proposes an approach for the revision of the mapping of the INSPIRE requirements with the aim to possibly remove the Extended Capabilities section.
- The data set metadata URL may point to a Discovery Service different from the national reference catalog. This may apply especially for federated Discovery Service catalogues.

## Requirement: <wms:MetadataURL> and <wfs:MetadataURL> elements

Requirement	/req/coupled-resource-metadataurl-locator
A	The URL expressed within the element <code>metadataURL</code> SHALL <del>resolve</del> point to the metadata record of the provided data set or data set series, available in a Discovery Service catalog.

# Additional rec

- PR #36

Requirement: `<srv:operatesOn>` element

Recommendation: `<srv:operatesOn>` element priority over `<wms:MetadataURL>` and `<wfs:MetadataURL>` elements

Recommendation	/rec/coupled-resource-operateson-match-metadataurl
A	Within the Scenario 1 implementation, the references described with these optional <code>metadataURL</code> elements should match each of the <code>srv:operatesOn</code> elements contained in the service metadata record. In case of discrepancies, the references expressed with <code>srv:operatesOn</code> prevail over the other associations.

## 8.2.2 INSPIRE Network service - Scenario 2

- In Scenario 2, the INSPIRE NS - Download Service TG maps all INSPIRE metadata elements to the applicable elements in the service (i.e.

## NS Scenario 1 Coupled Resources: recommendation for duplication of CR #36

**Open** dartasensi wants to merge 1 commit into [INSPIRE-MIF:main](#) from [dartasensi:main](#)

Conversation 0 Commits 1 Checks 0 Files changed 1

dartasensi commented Nov 10, 2021

Scenario1 publish a minimal amount of metadata within the service, limited to the language (or languages) supported by the service, together with a link to a Download Service metadata record (e.g. from a discovery service). The MD TG requirement 3.6, focused on service metadata, specifies to provide links to the data set metadata using `srv:operatesOn`.

In case the data provider (or the service implementer) decides to incorporate the CoupledResources elements, as defined by Scenario2, duplication may occur, and therefore discrepancies.

This recommendation aim to resolve, with a declared prioritization, this issue.

Update ds-linking-simplification-good-practice.md (#4) 2ba5a7d

fabiovin linked an issue that may be closed by this pull request Nov 10, 2021

coupled resources #5

**Open**

Reviewers  
No reviews

Assignees  
No one assigned

Labels  
None yet

Projects  
None yet

Milestone  
No milestone

# Review comments - #29

- #29 example WFS downloadable dataset

*Note: this example covers the WFS definition. For a WCS/SOS service, use the proper codelist for the protocol element*

```
<gmd:transferOptions>
  <gmd:MD_DigitalTransferOptions>
    [...]
    <gmd:onLine>
      <gmd:CI_OnlineResource>
        <gmd:linkage>
          <gmd:URL>http://.../wfs?service=wfs&version=2.0.0&request=GetFeature&storedquery_id=http://inspire.ec.europa.eu/wfs</gmd:URL>
        </gmd:linkage>
        <gmd:protocol>
          <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wfs">WFS</gm>
        </gmd:protocol>
        <gmd:applicationProfile>
          <gm>
```



```
          <gm>
```

# Review comments - #29

- PR #33 - Update Annex A

## Additional Resource Locator to a "Download Service - Get Spatial Data Set" operation - WFS Get Feature

*Note: this example covers the WFS definition. For a WCS/SOS service, use the proper codelist for the `protocol` element*

```
<gmd:transferOptions>
  <gmd:MD_DigitalTransferOptions>
    [...]
    <gmd:onLine>
      <gmd:CI_OnlineResource>
        <gmd:linkage>
          <gmd:URL>http://.../wfs?service=wfs&version=2.0.0&request=GetFeature&storedquery_id=http://inspire.ec.europa.eu/-/getfeature&storedquery_id=1</gmd:URL>
        </gmd:linkage>
        <gmd:protocol>
          <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wfs">OGC Web Feature Service</gmx:Anchor>
          <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wfs">WFS</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:name>
          <gco:CharacterString>WFS GetFeature request to an INSPIRE pre-defined dataset</gco:CharacterString>
          <geo:CharacterString>INSPIRE Dataset</geo:CharacterString>
        </gmd:name>
        </gmd:CI_OnlineResource>
      </gmd:onLine>
      [...]
    </gmd:MD_DigitalTransferOptions>
  </gmd:transferOptions>
```

# Next steps

- 1) **Endorsement of the consolidated proposal** (after addressing the comments as discussed)
- 2) **Short-term work group** for addressing the topic related to “Service simplification” (especially for removal of the Extended capabilities section).
  - Who would be interested in leading?
  - Volunteers?
- 3) Assessment of the needs/opportunities to **develop a specific conformance class in the INSPIRE Reference Validator** to check the implementation of the simplified approach.

# Thank you!



[fabio.vinci@ext.ec.europa.eu](mailto:fabio.vinci@ext.ec.europa.eu)

[davide.artasensi@ext.ec.europa.eu](mailto:davide.artasensi@ext.ec.europa.eu)

[JRC-INSPIRE-SUPPORT@ec.europa.eu](mailto:JRC-INSPIRE-SUPPORT@ec.europa.eu)



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