



14 May
2024

Fourth Working Group webinar on the revision of GeoDCAT-AP

interoperable
europe
innovation ∞ govtech ∞ community

Agenda



Introduction



GeoDCAT-AP issues



Codelists



HVD, GeoDCAT-AP XSLT



Next steps

Workshop practicalities

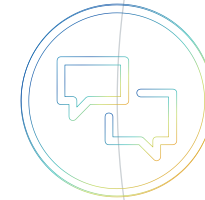
Audio

Click on 'connect audio' but please mute your microphones



Chat

You can also share your questions for the Q&A session via the chat



Recording

The workshop will be recorded



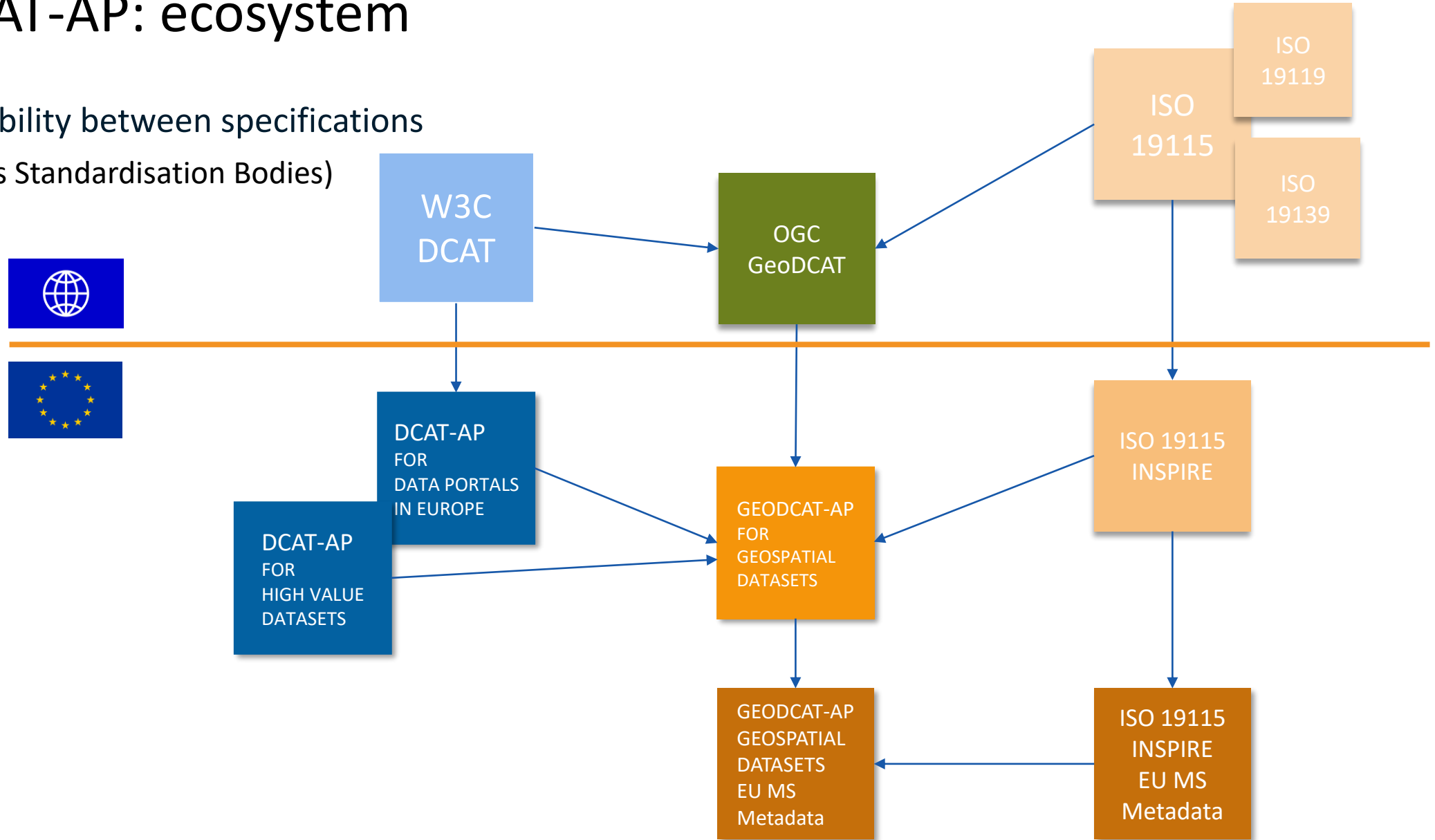


GeoDCAT-AP:
DCAT-AP for geographical
data



GeoDCAT-AP: ecosystem

Interoperability between specifications
(even across Standardisation Bodies)

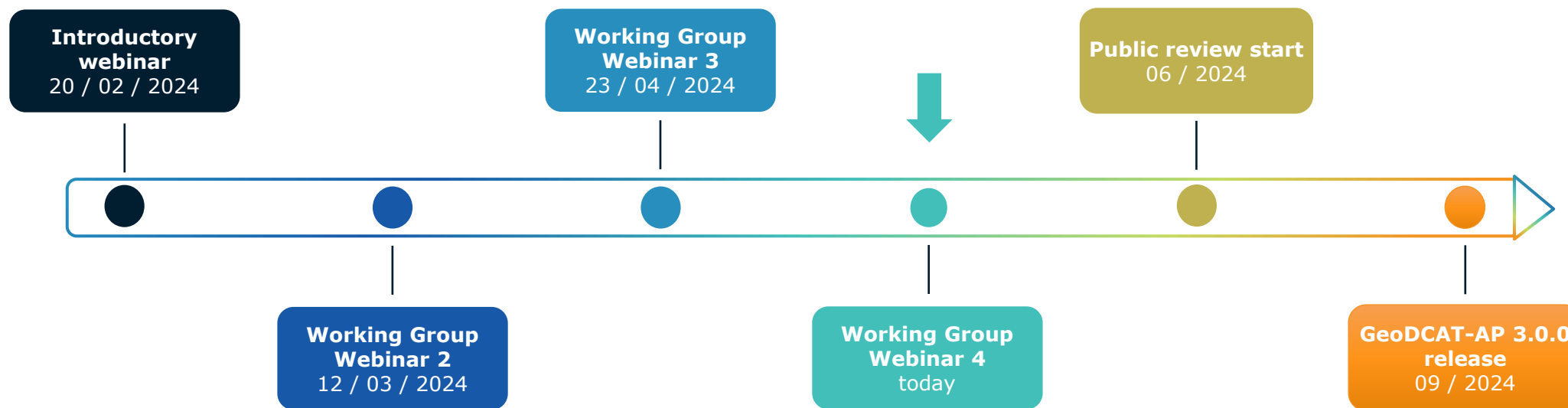




GeoDCAT-AP 3.0.0
revision plan



GeoDCAT-AP Timeline



GeoDCAT-AP 3.0.0: revision plan

Revision on-going in <https://github.com/SEMICeu/GeoDCAT-AP/issues>

Working Group Webinar 2 - Concerning generic organisation & findability (12/03/2024)

- Datasets, Distributions and their relationships
- Categories (alignment with DCAT-AP 3.0): keywords, categories, themes

Working Group Webinar 3 – specific geo-aspects (23/04/2024)

- Geospatial coverage & resolution
- Guest speakers on existing implementation of GeoDCAT-AP

Working Group Webinar 4 – relationship with INSPIRE (today)

- Discussion on Codelists
- HVD and remaining issues
- GeoDCAT-AP related tools: XSLT

We are interested in which issues you are facing and we encourage you to post them as issues on the [GeoDCAT-AP GitHub repository](#).



GeoDCAT-AP Issues



Currently 59 issues

- 34x applied in new draft
- 4x resolution provided
- 4x to be discussed today
- 2x closed (no feedback)
- 9x implementation evidence
- 3x postponed beyond 3.0.0

- 3x editorial

51 Open ✓ 29 Closed

Author ▾ Label ▾ Projects ▾ Milestones ▾ Assignee ▾ Sort ▾

- ⦿ Revise usage of Licenses and Rights release:3.0.0 type:improvement webinar:2024-05
#113 opened on Mar 8 by jakubklimek
- ⦿ Relation of various Agent classes used throughout the specification next-webinar release:3.0.0 status:resolution-provided type:improvement webinar:2024-04-23
#112 opened on Mar 8 by jakubklimek
- ⦿ Improve notes on using embedded objects vs. references feedback-requested release:3.0.0 status:postponed type:improvement webinar:2024-03-12
#111 opened on Mar 8 by jakubklimek
- ⦿ Remove example for Media Type as it is confusing next-webinar release:3.0.0 status:resolution-provided type:improvement webinar:2024-04-23
#110 opened on Mar 8 by jakubklimek
- ⦿ Required / Recommended properties of supporting classes feedback-requested release:3.0.0 status:postponed type:improvement webinar:2024-03-12
#109 opened on Mar 8 by jakubklimek
- ⦿ Change `rdfs:label` to `dct:description` for representation of potentially long texts release:3.0.0 status:resolution-provided type:improvement webinar:2024-03-12
#108 opened on Mar 8 by jakubklimek
- ⦿ Clarify the meaning of multiple values of spatial coverage next-webinar release:3.0.0 type:improvement webinar:2024-04-23
#107 opened on Mar 8 by jakubklimek
- ⦿ Clarify meaning of `DataService.language` release:3.0.0 status:resolution-provided type:improvement webinar:2024-03-12
#106 opened on Mar 8 by jakubklimek
- ⦿ Split current usage notes into definitions and usage notes as in DCAT-AP alignment:dcat-ap-3.0 next-webinar release:3.0.0 status:resolution-provided type:editorial webinar:2024-04-23
#105 opened on Mar 8 by jakubklimek
- ⦿ Geographic name optional, yet `1..n` next-webinar release:3.0.0 status:resolution-provided type:bug webinar:2024-04-23
#104 opened on Mar 6 by jakubklimek
- ⦿ Multiple character encodings for Catalogue Record next-webinar release:3.0.0 status:resolution-provided type:bug webinar:2024-04-23
#103 opened on Mar 6 by jakubklimek

GEODCAT-AP FOR GEOSPATIAL DATASETS



<https://github.com/SEMICeu/GeoDCAT-AP/issues>

Distributor agent role ([#81](#))

Description

Some of the GeoDCAT-AP agent roles may not make sense for all DCAT entities: Dataset, Dataset Series, Data Service, Distribution.

In Flanders, *distributor* on ISO “dataset” scope code is mapped to `geodcatap:distributor` of `dcap:Distribution` instead of `dcap:Dataset`.

Proposition

1. Clarify meaning of the distributor role on `dcap:Dataset`, or
2. Move the distributor from `dcap:Dataset` to `dcap:Distribution`, i.e.
 1. Remove distributor from `dcap:Dataset`, and
 2. Map distributor on Datasets always to corresponding `dcap:Distribution`.

§ 4.12.3 Optional properties for Dataset

Property	URI	Range	Usage note	Card.
+custodian	<code>geodcat:custodian</code>	<code>foaf:Agent</code>	Party that accepts accountability and responsibility for the data and ensures appropriate care and maintenance of the resource [ISO-19115] .	0..n
+distributor	<code>geodcat:distributor</code>	<code>foaf:Agent</code>	Party who distributes the resource [ISO-19115] .	0..n
+originator	<code>geodcat:originator</code>	<code>foaf:Agent</code>	Party who created the resource [ISO-19115] .	0..n
+principal investigator	<code>geodcat:principalInvestigator</code>	<code>foaf:Agent</code>	Key party responsible for gathering information and conducting research [ISO-19115] .	0..n
+processor	<code>geodcat:processor</code>	<code>foaf:Agent</code>	Party who has processed the data in a manner such that the resource has been modified [ISO-19115] .	0..n
+resource provider	<code>geodcat:resourceProvider</code>	<code>foaf:Agent</code>	Party that supplies the resource [ISO-19115] .	0..n
+user	<code>geodcat:user</code>	<code>foaf:Agent</code>	Party who uses the resource [ISO-19115] .	0..n

```
<> a dcap:Dataset ;
    geodcatap:distributor <#distributor> ;
    dcap:distribution <#distribution> .

<#distribution> a dcap:Distribution .
```



```
<> a dcap:Dataset ;
    dcap:distribution <#distribution> .

<#distribution> a dcap:Distribution;
    geodcatap:distributor <#distributor> .
```

Revise usage of Licenses and AccessRights – HVD context ([#113](#))

Description

GeoDCAT-AP 2.0.0 allows users to express a license document as a text.

This is **not allowed** in the context of HVDs.

In HVDs, [licences need to be structured and machine readable](#), i.e. identified by a dereferenceable URL, preferably from the [Licence EU NAL](#) or mapped to it.

Even besides HVDs, license documents should be properly structured documents, published somewhere, where they have a URL.

Therefore, a representation of a license document using a simple literal does not seem to be sufficient.

Should be like this:

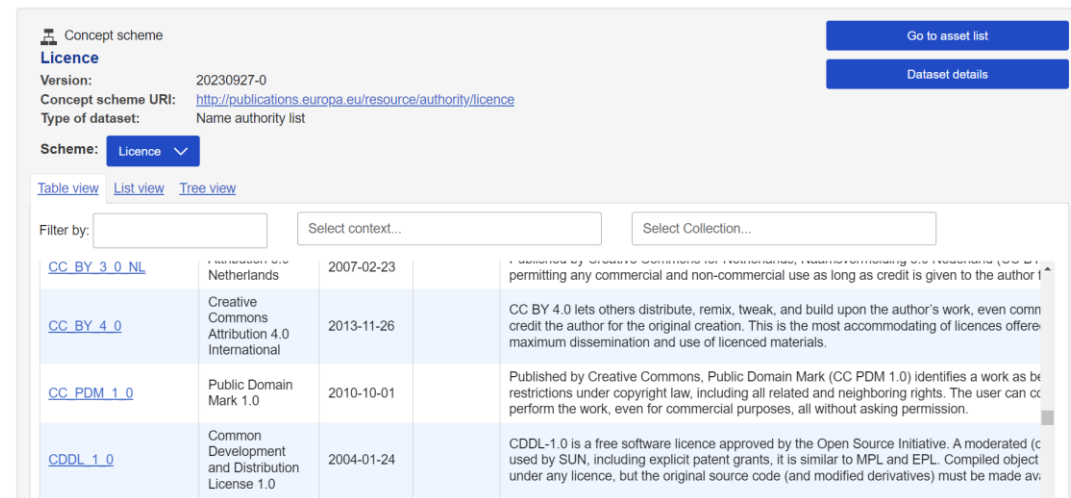
```
[ ] dct:license <http://publications.europa.eu/resource/authority/licence/CC_BY_4_0> .
```

Examples of usage in the GeoDCAT-AP 2.0.0 seem more like Rights statements than actual Licences:

```
[ ] dct:license [ a dct:LicenseDocument ;  
  rdfs:label "" ] ;
```

The dataset contains parts which are restricted by the data providers and not to be made public. For further information and specification regarding the use limitations and constraints please consult the file [WISE_WFD_ReferenceSpatialDataSets_2020-04-02.pdf](#) which is provided together with the data.

```
""@en ] ;
```



Concept scheme
Licence
Version: 20230927-0
Concept scheme URI: <http://publications.europa.eu/resource/authority/licence>
Type of dataset: Name authority list
Scheme: Licence

Table view | List view | Tree view

Filter by: Select context... Select Collection...

CC BY 3 0 NL	Netherlands	2007-02-23	License by Creative Commons for Netherlands, permitting any commercial and non-commercial use as long as credit is given to the author
CC BY 4 0	Creative Commons Attribution 4.0 International	2013-11-26	CC BY 4.0 lets others distribute, remix, tweak, and build upon the author's work, even com credit the author for the original creation. This is the most accommodating of licences offere maximum dissemination and use of licenced materials.
CC PDM 1 0	Public Domain Mark 1.0	2010-10-01	Published by Creative Commons, Public Domain Mark (CC PDM 1.0) identifies a work as be restrictions under copyright law, including all related and neighboring rights. The user can ce perform the work, even for commercial purposes, all without asking permission.
CDDL 1 0	Common Development and Distribution License 1.0	2004-01-24	CDDL-1.0 is a free software licence approved by the Open Source Initiative. A moderated (c used by SUN, including explicit patent grants, it is similar to MPL and EPL. Compiled object under any licence, but the original source code (and modified derivatives) must be made av.

Revise usage of Licenses and AccessRights – HVD context ([#113](#))

Description

GeoDCAT-AP 2.0.0 allows users to express a license document as a text.

This is **not allowed** in the context of HVDs.

In HVDs, [licences need to be structured and machine readable](#), i.e. identified by a dereferenceable URL, preferably from the [Licence EU NAL](#) or mapped to it.

Even besides HVDs, license documents should be properly structured documents, published somewhere, where they have a URL.

Therefore, a representation of a license document using a simple literal does not seem to be sufficient.

According to DCAT-AP 3.0, it should be using a codelist value like this:

```
[ ] dct:accessRights <http://publications.europa.eu/resource/authority/access-right/PUBLIC> .
```

If free-text, then it should be using dct:rights like this:

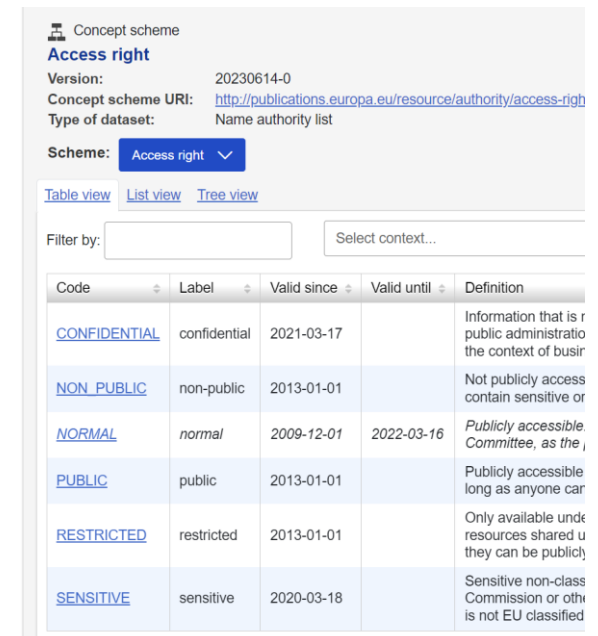
```
[ ] dct:rights [ a dct:RightsStatement ;
    dct:description ""
        public access limited according to Article 13(1)(b)
of the INSPIRE Directive
    ""@en ]
```

[Example 41](#) uses `dct:accessRights` without the code list that should be used to represent Access rights in DCAT-AP.

This seems incorrect and again is a more an example of `dct:rights`:

```
[ ] dct:accessRights [ a dct:RightsStatement ;
    rdfs:label ""
        public access limited according to Article 13(1)(b)
of the INSPIRE Directive
    ""@en ]
```

In DCAT-AP, codelist value is required:



The screenshot shows a web interface for a Concept scheme titled 'Access right'. It includes metadata such as Version (20230614-0), Concept scheme URI (http://publications.europa.eu/resource/authority/access-right), and Type of dataset (Name authority list). Below the metadata, there are tabs for 'Table view', 'List view', and 'Tree view'. A 'Filter by' field and a 'Select context...' dropdown are also present. The main content is a table with columns for Code, Label, Valid since, Valid until, and Definition.

Code	Label	Valid since	Valid until	Definition
CONFIDENTIAL	confidential	2021-03-17		Information that is r public administratio the context of busir
NON_PUBLIC	non-public	2013-01-01		Not publicly access contain sensitive or
NORMAL	normal	2009-12-01	2022-03-16	Publicly accessible Committee, as the ,
PUBLIC	public	2013-01-01		Publicly accessible long as anyone car
RESTRICTED	restricted	2013-01-01		Only available unde resources shared u they can be public)
SENSITIVE	sensitive	2020-03-18		Sensitive non-class Commission or oth is not EU classified

Revise usage of Licenses and AccessRights – HVD context ([#113](#))

Description

GeoDCAT-AP 2.0.0 allows users to express a license document as a text.

This is **not allowed** in the context of HVDs.

In HVDs, [licences need to be structured and machine readable](#), i.e. identified by a dereferenceable URL, preferably from the [Licence EU NAL](#) or mapped to it.

Even besides HVDs, license documents should be properly structured documents, published somewhere, where they have a URL.

Therefore, a representation of a license document using a simple literal does not seem to be sufficient.

Proposition

1. Remove [licence as text](#) and allow licence usage only with licence IRIs, and
2. Change mappings of non-IRI accessRights statements to `dct:RightsStatements` using `dct:rights`.

Examples of usage in the GeoDCAT-AP 2.0.0 seem more like Rights statements than actual Licences:

```
[ ] dct:license [ a dct:LicenseDocument ;  
  rdfs:label ""  
    The dataset contains parts which are restricted  
    by the data providers and not to be made public.  
    For further information and specification regarding  
    the use limitations and constraints please consult  
    the file WISE_WFD_ReferenceSpatialDataSets_2020-04-02.pdf  
    which is provided together with the data.  
  ""@en ] ;
```

[Example 41](#) uses `dct:accessRights` without the code list that should be used to represent Access rights in DCAT-AP.

This seems incorrect and again is a more an example of `dct:rights`:

```
[ ] dct:accessRights [ a dct:RightsStatement ;  
  rdfs:label ""  
    public access limited according to Article 13(1)(b)  
    of the INSPIRE Directive  
  ""@en ]
```

Relax *rights* max cardinality ([#82](#))

Description

In INSPIRE metadata, rights are expressed as multiple textual statements.

In DCAT-AP & GeoDCAT-AP, rights (on Catalogue and Distribution) have cardinality 0..1

Catalogue:

rights

dct:rights

dct:RightsStatement

This property refers to a statement that specifies rights associated with the Catalogue.

0..1

Distribution:

rights

dct:rights

dct:RightsStatement

This property refers to a statement that specifies rights associated with the Distribution.

0..1

Proposition

1. Relax rights max cardinality in both GeoDCAT-AP and DCAT-AP
2. In INSPIRE => GeoDCAT-AP mapping, merge multiple rights statements into one

Relation of spatial resolution on Dataset, Distribution and Data Service (#100)

Description

Spatial resolution – optional property on Dataset, Distribution, Data Service.

What are the relations of spatial resolution specifications on these classes?

+spatial
resolution

dqv:hasQualityMeasurement

dqv:QualityMeasurement

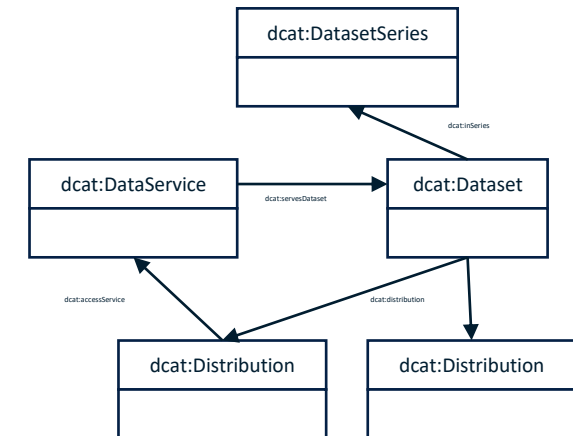
Refers to the performed quality measurements.

In GeoDCAT-AP, this property is used to specify "spatial resolution", as defined in [\[INSPIRE-MD-REG\]](#), [\[ISO-19115\]](#), and [\[ISO-19115-1\]](#).

0..n

Proposition

1. For Distribution, spatial resolution [0..1] represents the spatial resolution of the described file.
2. For Data Service – spatial resolution [0..n] describes the capabilities of the data service, i.e. in which spatial resolutions it can serve data.
3. For Dataset – spatial resolution [0..1] describes the spatial resolution the data is managed in in the dataset, i.e. regardless of how it is distributed using distributions.
4. For Dataset Series – unclear what spatial resolution of a dataset series means.





Resolved issues

Resolved issues

webinar:2024-05-14

status:resolution-provided

1. CRS support in GeoJSON ([#6](#))
2. Required / Recommended properties of supporting classes ([#109](#))



<https://github.com/SEMICeu/GeoDCAT-AP/issues>

Closed issues

status:wont-fix

1. Support 1-to-many mappings for responsible party roles ([#39](#))
2. Relationships between GeoDCAT-AP and DCTERMS agent roles ([#57](#))



<https://github.com/SEMICeu/GeoDCAT-AP/issues>



Break



Codelists

Codelist Qualifier

Problem statement

Establishing a common *interpretation* for the sentence:

*“The property **MUST** use as range values codes from {codelist} which are transferred from one specification to another.”*

Other qualifiers (MUST, IS RECOMMENDED, MAY) and cardinalities (0..N, 1..N, 0..1, 1..1)

Codelist Example

Example

```
ns:codelist1 a skos:ConceptScheme.
```

```
ns:codelist1 skos:prefLabel "Example Codelist1"@en.
```

```
codelist1:x2 a skos:Concept.
```

```
codelist1:x2 skos:prefLabel "Code x2"@en.
```

```
codelist1:x2 skos:inScheme ns:codelist1.
```

```
codelist1:x2 skos:topConceptOf ns:codelist1.
```

The screenshot shows the INSPIRE registry theme register page. At the top, there is the European Commission logo and a search bar. The breadcrumb trail is: European Commission > INSPIRE > INSPIRE registry > INSPIRE theme register. The main heading is "INSPIRE registry" and the sub-heading is "INSPIRE theme register".

The page displays a list of metadata for the "INSPIRE theme register".

URI	http://inspire.ec.europa.eu/theme
Label	INSPIRE theme register
Content summary	The INSPIRE theme register contains all spatial data themes, as defined in the Annexes of the INSPIRE Directive (Directive 2007/2/EC of the European Parliament and of the Council of 14 March 2007 establishing an Infrastructure for Spatial Information in the European Community (INSPIRE)). The descriptions of the themes are based on version 3.0 of the "Definition of Annex Themes and Scope (D 2.3)" by the data specifications drafting team and subsequent updates by the INSPIRE Thematic Working Groups (TWGs).
Register Manager	European Commission, Joint Research Centre
Register Owner	European Union
Control Body	Control body for the central INSPIRE registers and INSPIRE register federation
Submitting Organization	Nominated submitting organisations for the central INSPIRE registers and INSPIRE register federation
Contact Point	JRC INSPIRE Registry Team
License	Europa Legal Notice
Insert date	2013-03-25 14:14 PM CET
Available formats:	XML Registry XML ISO 19135 RDF/XML JSON CSV ATOM ROR

Available items

Show entries Showing 1 to 10 of 35 entries Filter:

Label	Status
Addresses	Valid
Administrative units	Valid
Agricultural and aquaculture facilities	Valid
Area management/restriction/regulation zones and reporting units	Valid
Atmospheric conditions	Valid
Atmospheric Conditions and meteorological geographical features	Invalid
Bio-geographical regions	Valid
Buildings	Valid
Cadastral parcels	Valid
Coordinate reference systems	Valid

1 2 3 4 Next >

Codelist Qualifier

Example

The property **MUST** use as range values codes from EU vocabularies Data theme.

Example 1

```
_:d dcat:theme nal:AGRI.
```



Example 2

```
_:d dcat:theme inspire:au.
```



Example 3

```
_:d dcat:theme nal:AGRI.  
_:d dcat:theme inspire:au.
```



Codelist Qualifier

Example

The property **MAY** use as range values codes from EU vocabularies Data theme.

Example 1

```
_:d dcat:theme nal:AGRI.
```



Example 2

```
_:d dcat:theme inspire:au.
```



Example 3

```
_:d dcat:theme nal:AGRI.  
_:d dcat:theme inspire:au.
```



Codelist Qualifier: possible outcome

Example

The property **MUST** use as range values codes from EU vocabularies Data theme.

Example 1

```
_:d dcat:theme nal:AGRI.
```



Example 2

```
_:d dcat:theme inspire:au.
```



Example 3

```
_:d dcat:theme nal:AGRI.
```

```
_:d dcat:theme inspire:au.
```



Codelist Qualifier: possible outcome

Example

The property **MAY** use as range values codes from EU vocabularies Data theme.

Example 1

```
_:d dcat:theme nal:AGRI.
```



Example 2

```
_:d dcat:theme inspire:au.
```



Example 3

```
_:d dcat:theme nal:AGRI.
```

```
_:d dcat:theme inspire:au.
```



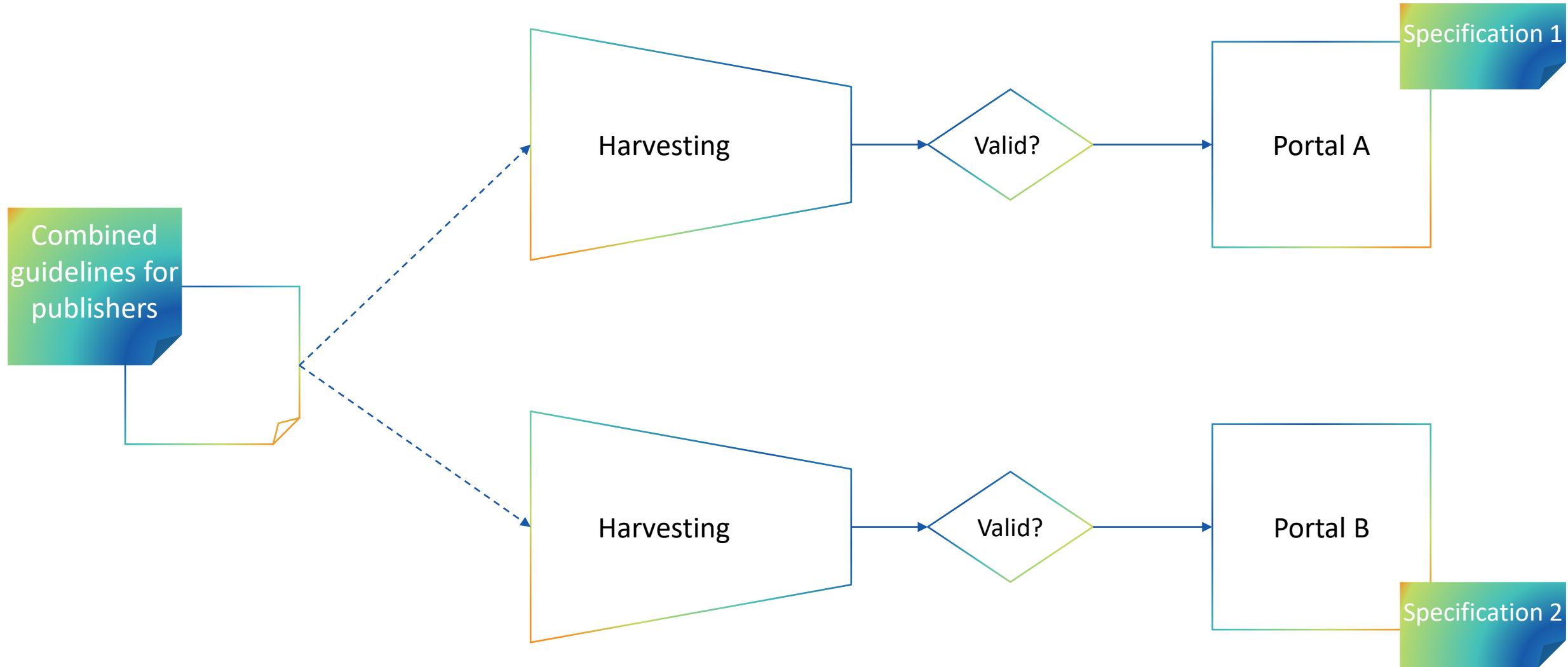
SHACL shapes: as-is

```
:Codelist1Restriction
  a sh:NodeShape ;
  rdfs:comment "Codelist1 restriction" ;
  sh:property [
    sh:hasValue ns:codelist1;
    sh:minCount 1 ;
    sh:nodeKind sh:IRI ;
    sh:path skos:inScheme
  ] .
```

```
:PropertyShape
  a sh:NodeShape ;
  sh:property [
    sh:node :CodelistRestriction ;
    sh:nodeKind sh:IRI ;
    sh:path dct:subject ;
    sh:severity sh:Violation
  ] ;
  sh:targetClass dcat:Dataset.
```

In case of MANDATORY the severity is a **'Violation'**,
in all other cases the severity is a **'Warning'**.

Multiple systems

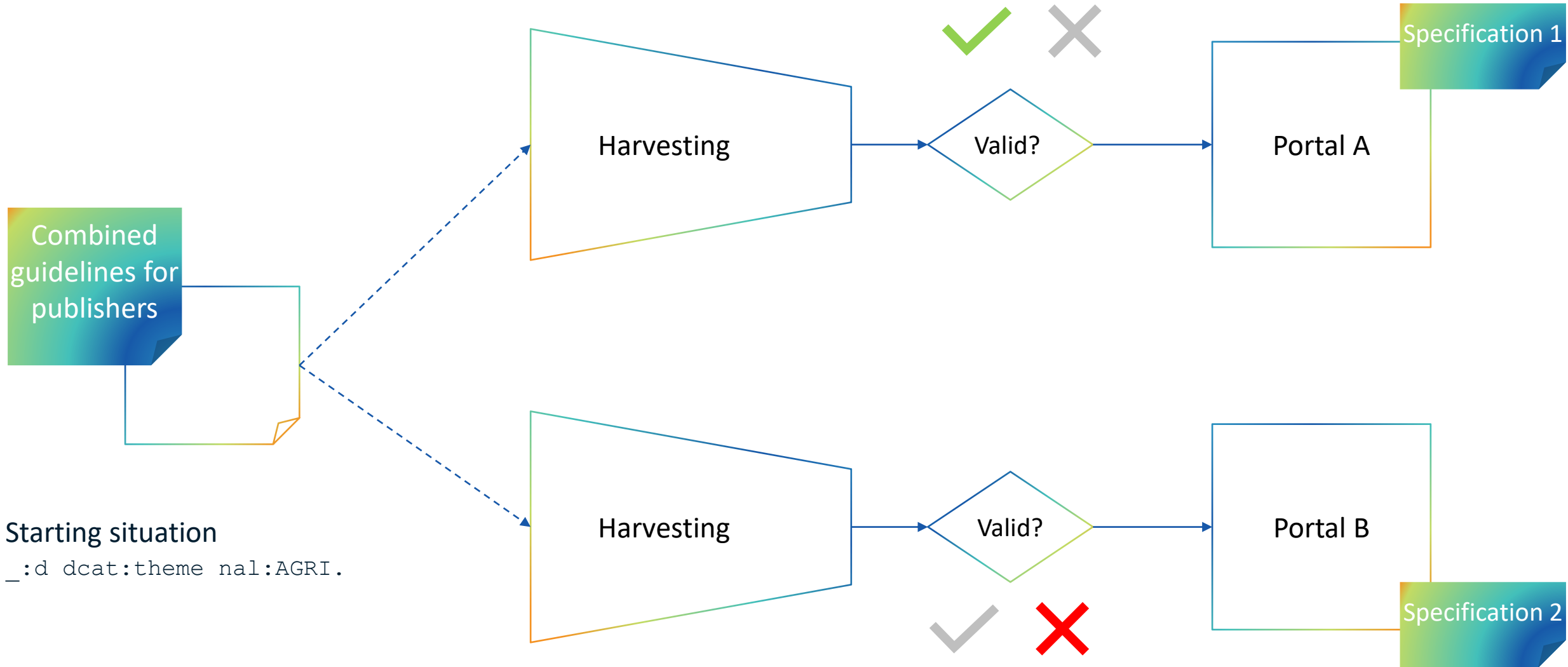


Example scenario

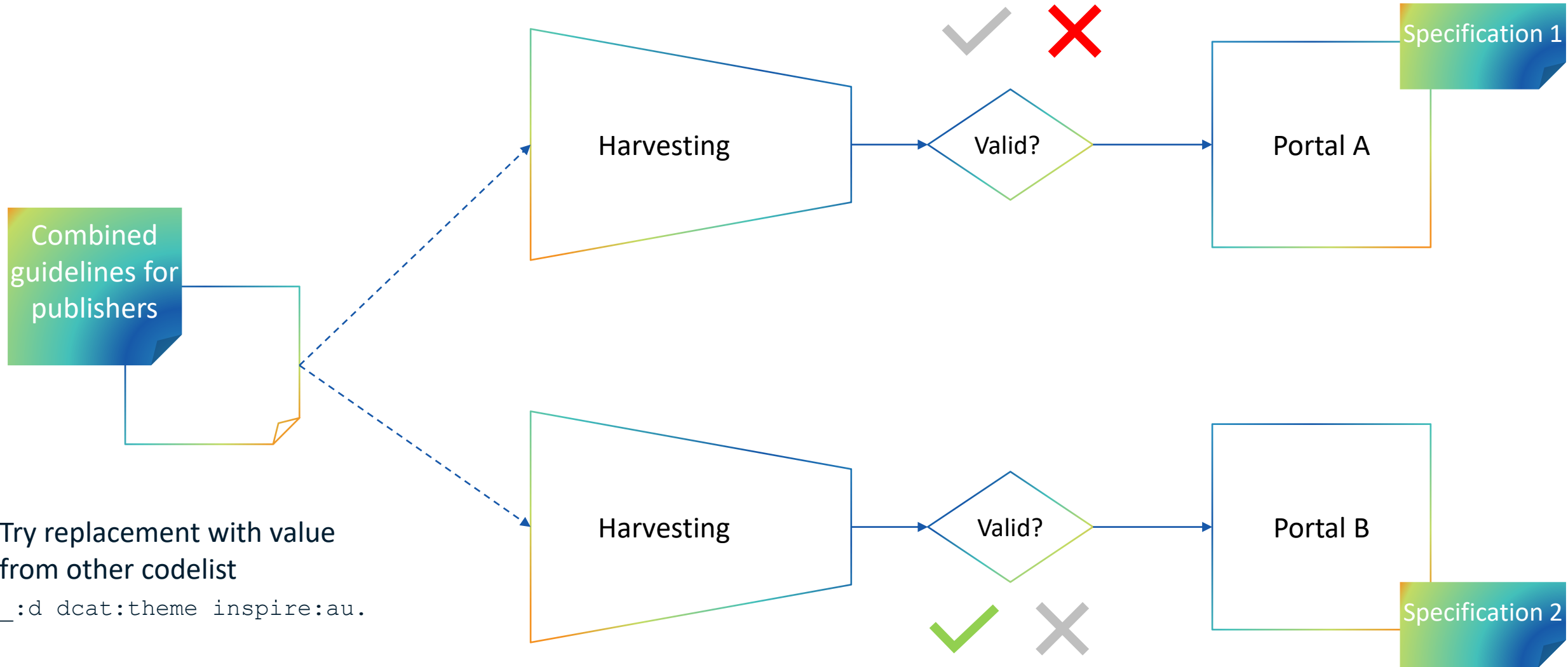
- Publisher publishes **successfully** for System 1.
- Publisher gets request to publish on System 2.



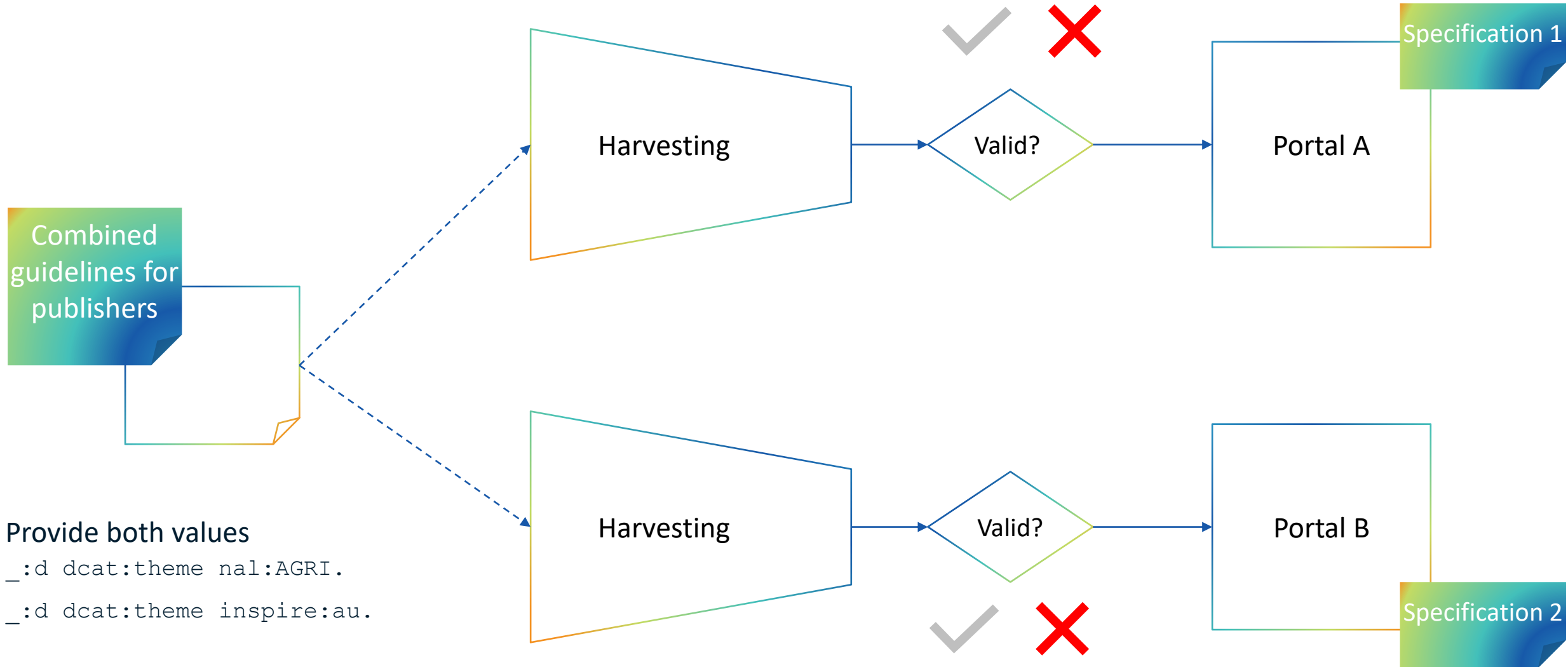
Multiple systems









Multiple systems



Multiple systems



Typical scenario

- Publisher publishes **successfully** for System 1.  
- Publisher gets request to publish on System 2.
- Publisher tries with existing data on System 2 but **fails**.  
- Publisher add extra value to satisfy System 2 but the publishing on **both** Systems **fails**.  

→ The codelist restriction is *not additive*.

Two interpretations for mandatory codelist

Interpretation 1: The value space is closed under the codelist.

Interpretation 2: At least 1 value from the codelist.

Interpretation 1

- Cardinality and value space constraints are independent.
- Restricts the freedom of compatible (sub)profiles to reenforcing the cardinalities or further restricting the possible codelist values (e.g. to a single value).

Interpretation 2

- Cardinality and value space constraint are made dependent.
- Compatible (sub)profiles may freely add other codelist constraints.
- Cannot be used in case the property is optional (cardinality 0 means optional).

Application assessment

- Interpretation 1:
 - Conformant to the way literal value spaces are expressed.
 - Most naturally for programming languages and most software systems.
- Interpretation 2:
 - Of interest in cases where there is a need for aggregation (at the level of properties) in the specification.

Validation assessment

- Interpretation 1:
 - **Existing** SHACL shapes **can** be used as-is:
 - Validation is simple and direct.
 - As it is closing the value space, violations drive the feedback.
- Interpretation 2:
 - **Existing** SHACL shapes **cannot** be used as-is:
 - requires to define a **filtering** process as inherent part of the processing and conformance building Such filtering process is non-trivial to standardise and imposed in all implementations.
 - As it is not closing the value space, poor usages will be harder to detect.
 - Matching SHACL shapes can be designed.

Cross-profile assessment

- Interpretation 1 is more strict than Interpretation 2.
 - e.g.: When profiles DCAT-AP use Interpretation 2 and GeoDCAT-AP uses Interpretation 1 then the usage in DCAT)AP is also Interpretation 1.
- As datasets are subject to multiple profiles, profiles influence each other.
 - e.g.: mobilityDCAT-AP and healthDCAT-AP are siblings, but may influence each other because there are datasets that are expressed under both profiles.
- note that this kind of influence is not limited to codelist constraints but also for other constraints such as max-cardinality constraints
- Conclusion: **coordination is required.**

Proposal: make the interpretation explicit



A) *The property **MUST** use as range values codes from {codelist}*

= interpretation 1: The value space is closed under the codelist (**validation results: violations**)

All (sub)profiles must avoid conflicts by creating subproperties.



B) *The property **MUST** have at least one value from {codelist}*

= interpretation 2: The value space is minimally constrained (**validation results: warnings**)

All (sub)profiles must adopt this interpretation in case they want to restrict the value space.



C) *The property **IS RECOMMENDED** to use as range values codes from {codelist}*

= interpretation 1: The value space is closed under the codelist, but other values are tolerated (**validation results: warnings**)



D) *The property **MAY** use as range values codes from {codelist}*

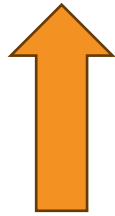
= interpretation 1: The value space is closed under the codelist, but other values are accepted (**no validation required**)



XSLT and tooling

XSLT – topicCategory subproperty

```
<!-- GeoDCAT-AP 2.0.0 output -->  
<rdf:Description>  
  < dct:subject rdf:resource="http://inspire.ec.europa.eu/metadata-codelist/TopicCategory/Environment"/>  
</rdf:Description>
```



```
<!-- INSPIRE MD input from www.nationaalgeoregister.nl -->  
<gmd:topicCategory>  
  <gmd:MD_TopicCategoryCode>Environment</gmd:MD_TopicCategoryCode>  
</gmd:topicCategory>
```



```
<!-- GeoDCAT-AP 3.0.0 output -->  
<rdf:Description>  
  <geodcatap:topicCategory rdf:resource="http://inspire.ec.europa.eu/metadata-codelist/TopicCategory/Environment"/>  
</rdf:Description>
```

XSLT – referenceSystem subproperty

```
<!-- INSPIRE MD input from www.nationaalgeoregister.nl -->
<gmd:referenceSystemInfo>
  <gmd:MD_ReferenceSystem>
    <gmd:referenceSystemIdentifier>
      <gmd:RS_Identifier>
        <gmd:code>
          <gco:CharacterString xmlns:gco="http://www.isotc211.org/2005/gco">5709</gco:CharacterString>
        </gmd:code>
        <gmd:codeSpace>
          <gco:CharacterString xmlns:gco="http://www.isotc211.org/2005/gco">EPSG</gco:CharacterString>
        </gmd:codeSpace>
      </gmd:RS_Identifier>
    </gmd:referenceSystemIdentifier>
  </gmd:MD_ReferenceSystem>
</gmd:referenceSystemInfo>
```



```
<!-- GeoDCAT-AP 2.0.0 output -->
< dct:conformsTo>
  <rdf:Description rdf:about="http://www.opengis.net/def/crs/EPSSG/0/5709">
    <rdf:type rdf:resource="http://purl.org/dc/terms/Standard"/>
    <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>
    < dct:type rdf:resource="http://inspire.ec.europa.eu/glossary/SpatialReferenceSystem"/>
    < dct:identifier
rdf:datatype="http://www.w3.org/2001/XMLSchema#anyURI">urn:ogc:def:crs:EPSSG::5709</dct:identifier>
    <skos:notation
rdf:datatype="http://www.w3.org/2001/XMLSchema#anyURI">urn:ogc:def:crs:EPSSG::5709</skos:notation>
    <skos:inScheme>
      <skos:ConceptScheme rdf:about="http://www.opengis.net/def/crs/EPSSG/0">
        < dct:title xml:lang="en">EPSSG Coordinate Reference Systems</dct:title>
      </skos:ConceptScheme>
    </skos:inScheme>
  </rdf:Description>
</dct:conformsTo>
```

```
<!-- GeoDCAT-AP 3.0.0 output -->
<geodcatap:referenceSystem>
  <rdf:Description rdf:about="http://www.opengis.net/def/crs/EPSSG/0/5709">
    <rdf:type rdf:resource="http://purl.org/dc/terms/Standard"/>
    <rdf:type rdf:resource="http://www.w3.org/2004/02/skos/core#Concept"/>
    < dct:type rdf:resource="http://inspire.ec.europa.eu/glossary/SpatialReferenceSystem"/>
    < dct:identifier rdf:datatype="http://www.w3.org/2001/XMLSchema#anyURI">urn:ogc:def:crs:EPSSG::5709</dct:identifier>
    <skos:notation rdf:datatype="http://www.w3.org/2001/XMLSchema#anyURI">urn:ogc:def:crs:EPSSG::5709</skos:notation>
    <skos:inScheme>
      <skos:ConceptScheme rdf:about="http://www.opengis.net/def/crs/EPSSG/0">
        < dct:title xml:lang="en">EPSSG Coordinate Reference Systems</dct:title>
      </skos:ConceptScheme>
    </skos:inScheme>
  </rdf:Description>
</geodcatap:referenceSystem>
```



High-value datasets (HVDs)



HVD and GeoDCAT-AP

1. June 4th - Webinar on HVD reporting by DG CNECT
2. April 25th meeting of Action 2.5 subgroup
 - Outcome – 2 options of identifying HVDs
 1. Either adapt INSPIRE metadata to indicate HVDs, or
 2. Automatically map every dataset from the INSPIRE themes mentioned in HVD IR based on mapping to HVD Categories
 - Unclear what to do in XSLT - SEMIC is awaiting resolution from the subgroup
 - Poll to be held on Friday, May 17th

HVD and GeoDCAT-AP – HVD categories

3. HVD categories NAL to be finer-grained

- not only the 6 categories
- June 2024 release of EU Vocabularies

2. EARTH OBSERVATION AND ENVIRONMENT

2.1. Datasets in scope

The earth observation and environmental category includes earth observation datasets defined in Annexes I-III to Directive 2007/2/EC, and datasets produced or available up to the scale of 1:5 000 covering the entire Member State when available. Furthermore, consistent with and without affecting the relevant access rules of the European Parliament and of the Council ⁽¹⁴⁾, and the environmental information list

→	Hydrography (I)
→	Protected sites (I)
→	Elevation (II)
→	Geology (II)
→	Land cover (II)
→	Orthoimagery (II)
→	Area management / restriction / regulation zones & reporting units (III)
→	Bio-geographical regions (III)
→	Energy Resources (III)
→	Environmental monitoring Facilities (III)
→	Habitats and biotopes (III)
→	Land Use (III)
→	Mineral Resources (III)
→	Natural risk zones (III)
→	Oceanographic geographical features (III)
→	Production and industrial facilities (III)
→	Sea regions (III)
→	Soil (III)
→	Species distribution (III)

ANNEX

1. GEOSPATIAL

1.1. Datasets in scope

The geospatial thematic category includes datasets within the scope of the INSPIRE data themes Administrative units, Geographical names, Addresses, Buildings and Cadastral parcels as defined in Annex I and Annex III to Directive 2007/2/EC of the European Parliament and of the Council ⁽¹⁾. In addition, it includes Reference parcels and Agricultural parcels as defined in Regulation (EU) No 1306/2013 of the European Parliament and of the Council ⁽²⁾ and of Regulation (EU) No 1307/2013 of the European Parliament and of the Council ⁽³⁾ and of Regulation (EU) No 1308/2013 of the European Parliament and of the Council ⁽⁴⁾. Their granularity, geographical coverage and the key attributes are listed in the table below. If datasets are not available at the scale indicated in the table below, but are available at higher spatial resolution(s) ⁽⁵⁾, the spatial resolution.

Datasets	Administrative units	Geographical names	Addresses	Buildings	Cadastral parcels	Reference parcels
Granularity	All levels of generalisation available with a granularity up to the scale of 1:5 000 . From municipalities to countries; maritime units.	N/A	N/A	All levels of generalisation available with a granularity up to the scale of 1:5 000 .	All levels of generalisation available with a granularity up to the scale of 1:5 000 .	A level of accuracy that is at least equivalent to that of cartography at a scale of 1:10 000 and, as from 2016, at a scale of 1:5 000 , as referred to in Article 70(1) of Regulation (EU) 1306/2013.

HVD and GeoDCAT-AP – XSLT and its limitations

[ISO 19139 to GeoDCAT-AP XSLT](#) will be revised, but **it will not be enough to cover HVD needs**

4. HVD requirement: Usage of / Mapping to [Licence NAL](#)

- e.g. http://publications.europa.eu/resource/authority/licence/CC_BY_4_0
- However, usage of licenses in INSPIRE is inconsistent, e.g. in NL:

```
<gmd:resourceConstraints>
  <gmd:MD_LegalConstraints>
    <gmd:accessConstraints>
      <gmd:MD_RestrictionCode
codeList="http://www.isotc211.org/2005/resources/codelist.xml#MD_RestrictionCode"
codeListValue="otherRestrictions"/>
    </gmd:accessConstraints>
    <gmd:otherConstraints>
      <gco:CharacterString>Geen
beperkingen</gco:CharacterString>
    </gmd:otherConstraints>
    <gmd:otherConstraints>
      <gco:CharacterString>http://creativecommons.org/publicdomain/mark/1.0/deed.nl</gco:CharacterString>
    </gmd:otherConstraints>
  </gmd:MD_LegalConstraints>
</gmd:resourceConstraints>
```

XSLT

```
@prefix rdf: <http://www.w3.org/1999/02/22-rdf-syntax-ns#> .
@prefix dcat: <http://www.w3.org/ns/dcat#> .
@prefix dcterms: <http://purl.org/dc/terms/> .
@prefix geodcatap: <http://data.europa.eu/930/> .

[] a dcat:DataService ;
  geodcatap:resourceType <http://inspire.ec.europa.eu/metadata-codelist/ResourceType/service> ;
  dcterms:accessRights [
    a dcterms:RightsStatement ;
    dcterms:description "http://creativecommons.org/publicdomain/mark/1.0/deed.nl"@nl ;
  ] .
```

1. Not recognized as Licence IRI
2. Unknown relation to CC0 in the EU NAL

HVD and GeoDCAT-AP – XSLT and its limitations

[ISO 19139 to GeoDCAT-AP XSLT](#) will be revised, but **it will not be enough to cover HVD needs**

5. Identifiers

- Need to provide context
- e.g. <https://www.nationaalgeoregister.nl/geonetwork/srv/api/records/229a081d-5c6b-4181-8410-6f07d9b55437> instead of just the uuid
- Make them **Persistent**

```
<gmd:fileIdentifier>  
  <gco:CharacterString>229a081d-5c6b-4181-8410-6f07d9b55437</gco:CharacterString>  
</gmd:fileIdentifier>
```



```
@prefix dcat: <http://www.w3.org/ns/dcat#> .  
@prefix dcterms: <http://purl.org/dc/terms/> .  
@prefix geodcatap: <http://data.europa.eu/930/> .  
  
[] a dcat:DataService ;  
   geodcatap:resourceType <http://inspire.ec.europa.eu/metadata-codelist/ResourceType/service> ;  
   dcterms:identifier "229a081d-5c6b-4181-8410-6f07d9b55437" .
```

HVD and GeoDCAT-AP – XSLT and its limitations

[ISO 19139 to GeoDCAT-AP XSLT](#) will be revised, but **it will not be enough to cover HVD needs**

6. Data Service – simplified INSPIRE metadata no longer provides data services independently
 - Indistinguishable from other distributions
 - Metadata accessible only by dereferencing the endpoint URL – XSLT does not do this
 - XSLT needs to be individually adapted here as well for HVD, where APIs are prominent
 - For HVD reporting, the output would have to be manually enhanced

XSLT summary



XSLT can be found and discussed on GitHub.

<https://github.com/SEMICeu/iso-19139-to-dcat-ap>, dev branch



XSLT is being updated to GeoDCAT-AP 3.0.0



XSLT is limited in context of HVD reporting – needs to be adjusted by each publisher, e.g. for Licenses, Identifiers, DataServices



GeoDCAT-AP 3.0.0 overview of changes

High-level overview of changes in GeoDCAT-AP 3.0.0

1. New subproperties

- `dcterms:conformsTo`
 - `geodcatap:serviceProtocol`
 - `geodcatap:referenceSystem`
- `dct:subject`
 - `geodcatap:topicCategory`
- `dct:type`
 - `geodcatap:serviceType`
 - `geodcatap:resourceType`
 - `geodcatap:serviceCategory`

2. Introduction of DatasetSeries

- Contains all properties of Dataset
 - Unclear what some of them mean for DatasetSeries

3. Clarification of usage notes, cardinalities

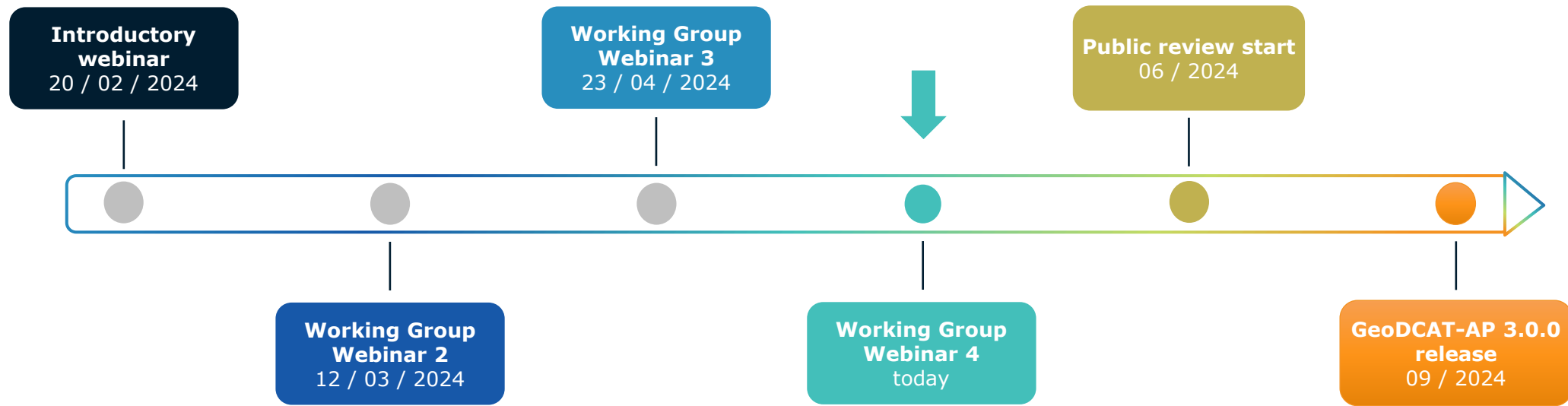
4. License/Rights mappings, label mappings

5. If DCAT-AP 3.0 already implemented, only minor effort required



Next steps

GeoDCAT-AP Timeline



Next steps



Please provide your additional feedback on GitHub.

<https://github.com/SEMICeu/GeoDCAT-AP/issues>



A new editor's draft will be created at

<https://semiceu.github.io/GeoDCAT-AP/drafts/latest/>



XSLT can be found and discussed on GitHub.

<https://github.com/SEMICeu/iso-19139-to-dcat-ap>, dev branch

A network visualization on a dark blue background. A central node is highlighted in bright orange. From this central node, numerous lines radiate outwards, connecting to other nodes. The lines are primarily green and blue, with some yellow and orange near the center. The overall structure is symmetrical and resembles a star or a complex network graph.

Thank you



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<https://joinup.ec.europa.eu/collection/interoperable-europe/interoperable-europe>