MIWP Sub-group 2.3.2: Simplification of Data and Service linking

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Kick-off meeting – March 4, 2021

Meeting agenda

• Welcome (JRC)	10:00 – 10:05
• Tour de table (All)	10:05 – 10:20
• Introduction and scope of work (JRC)	10:20 – 10:30
• Technical challenges (JRC)	10:30 – 10:45
• Discussion (All)	10:45 – 11:10
• Organization of work (JRC, All)	11:10 – 11:20
• Q&A, discussion (All)	11:20 – 11:30

- The meeting is recorded and the recording will be made available afterwards.

Tour de table

Tour de table

- AT: Erik Obersteiner
- DE: Anja Litka
- DK: Marianne Wiese
- EL: Elena Grigoriou
- ES: Laura Alemany
- FR: Marie Lambois
- LT: Juliana Karčiauskienė
- NL: Ine de Visser
- PL: Paweł Soczewski
- SE: Michael Östling
- SK: Martin Koška
- SK: Radoslav Chudy
- SK: Martin Tuchyňa

- JRC: Lukasz Ziemba, Davide Artasensi, Daniele Francioli, Marco Minghini, Alex Kotsev

Introduction and scope of work

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INSPIRE MIWP 2021-2024

https://europa.eu/!Dq96FV

- Favourable political and technological context for the evolution and sustainability of INSPIRE within the Green Deal data space and beyond
- 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

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Data and service linking

Current approach (as per TGs):

- complicated and partly ambiguous
- duplication of information

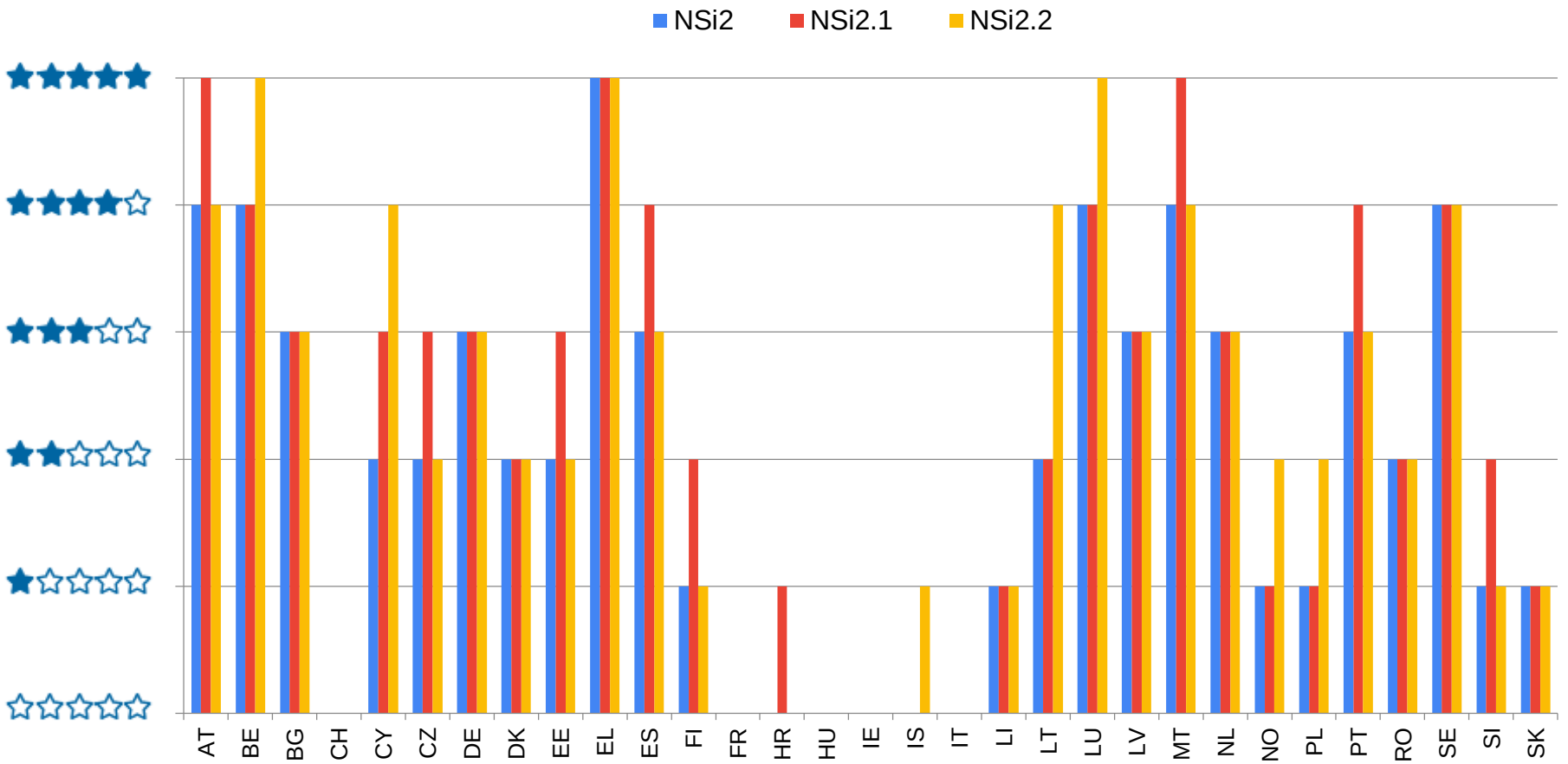
Low level of accessibility of INSPIRE data sets through view and download services

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

Accessibility of spatial data sets - Monitoring

	NSi2	NSi2.1	NSi2.2
Median	32%	44%	42%

0 ≤ X < 10%
10% ≤ X < 30%
30% ≤ X < 50%
50% ≤ X < 70%
70% ≤ X < 90%
90% ≤ X ≤ 100%



	NSi2	NSi2.1	NSi2.2
AT	83%	93%	85%
BE	86%	89%	90%
BG	58%	60%	58%
CH	1%	2%	1%
CY	40%	53%	80%
CZ	37%	62%	40%
DE	61%	64%	63%
DK	32%	44%	40%
EE	42%	56%	42%
EL	100%	100%	100%
ES	65%	76%	68%
FI	15%	40%	20%
FR	0%	5%	1%
HR	2%	16%	6%
HU	4%	5%	8%
IE	0%	0%	0%
IS	0%	0%	21%
IT	1%	3%	1%
LI	15%	20%	17%
LT	31%	31%	89%
LU	84%	88%	94%
LV	53%	59%	55%
MT	81%	98%	83%
NL	57%	63%	61%
NO	14%	17%	42%
PL	16%	17%	34%
PT	56%	80%	64%
RO	30%	33%	30%
SE	72%	81%	81%
SI	12%	40%	16%
SK	21%	27%	24%

Scope of work

- Elaboration and submission of an INSPIRE Good Practice
- Consensus-based simplified approach for data and service linkages
- Proven to be implementable by de facto standard web applications
- An alternative to the current approach, to be used in parallel

Outside the scope (should happen at a later stage):

- Update of the current TGs
- Abstract and Executable test suites of INSPIRE Reference Validator

Technical Challenges

MIWP 2021/2024 - 2.3.2

- Starting from the proposal in the discussion paper [1]
- Pros/cons of a simplification approach
  - Pros: reduced efforts on metadata authoring and revisioning (*one metadata to rule them all*)
  - Pros: reduced overlap of information when defining the same resources (one single consistent definition for lineage, bbox, languages, etc.)
  - Cons: aggregation of multiple combinations of CRS, output formats, direct and indirect access URLs within the dataset MD could negatively affect the purpose of simplification, with an impact on the readability and size of the MD itself
  - Cons: potential disruption on discoverability of services and increased difficulty on exploring sibling data served by the same service

[1] Discussion Paper (draft) v0.5.docx

Action 2019.2 – Recap

- Provision of valid feedback and proposals from the participants (CZ, FR, IT, NL, PL, SE)
- Agreement on the creation and use of new elements and related codelists ("applicationProfile", "description" and "protocol") inside the MD Resource Locator element
- Agreement on an "opt-in" approach, still maintaining the current approach for more complex scenarios
- Doubts on codelists scope and how to handle "restricted data access" scenarios

Current proposal

- Use of the “protocol” element
  - Expressed through an agreed codelist, it shall define the type of service protocol (e.g. WMTS/WFS/ATOM) and possibly the level of access (i.e. towards a GetCapabilities response or a direct access to the data)
- Use of the “applicationProfile” element
  - Expressed through an INSPIRE metadata codelist, it shall indicate the INSPIRE Network Service implementation (e.g. “View Service”)

Current proposal

- Example:

```
<!-- Link to View service -->
<gmd:onLine>
  <gmd:CI_OnlineResource>
    <gmd:linkage>
      <gmd:URL>https://inspire.xxx.xxx/wms?request=GetCapabilities&amp;version=1.3.0&amp;service=wms</gmd:URL>
    </gmd:linkage>
    <gmd:protocol>
      <gmx:Anchor xlink:href="http://www.opengis.net/def/serviceType/ogc/wms">OGC Web Map Service</gmx:Anchor>
      <!-- alternative: define a dedicated INSPIRE codelist, for more resolution -->
      <!--
      <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/ProtocolValue/ogc:wms-1.3.0"></gmx:Anchor>
      -->
    </gmd:protocol>
    <gmd:applicationProfile>
      <!-- reuse of the SDS codelist, currently used for Service Metadata definition -->
      <gmx:Anchor xlink:href="http://inspire.ec.europa.eu/metadata-codelist/SpatialDataServiceType/view">View Service</gmx:Anchor>
    </gmd:applicationProfile>
    <gmd:name>
      <gco:CharacterString>National INSPIRE View Network service xxx</gco:CharacterString>
    </gmd:name>
    <gmd:description>
      <gco:CharacterString>xxx</gco:CharacterString>
    </gmd:description>
  </gmd:CI_OnlineResource>
</gmd:onLine>
```

Technical challenges

- Open questions (1/2):
  - Access to data: direct or indirect (through service APIs) or mixed?
  - Access to data: should the use of a dedicated INSPIRE codelist define the presence of INSPIRE-harmonised data sets only?
  - Approach: as opt-in, to be recommended only for simple scenarios?
    - Def: a simple scenario involves a 1:1 data service relationship (ie. no hybrid ATOM+WFS architecture)

Technical challenges

- Open questions (2/2):
  - Aggregation of local/regional data sets as "national": should the simplification be able to handle it, or is a dedicated "aggregator" service at national level preferred?
  - Conformity: how to handle the conformity definition in case of mixed distributions and aggregations within the metadata?
  - Network service metadata: if the service metadata in the Discovery service will be redundant, should its metadata information kept in the INSPIRE extensions of the "Get Service Metadata" request, or also these extensions could be dismissed?

Organization of work

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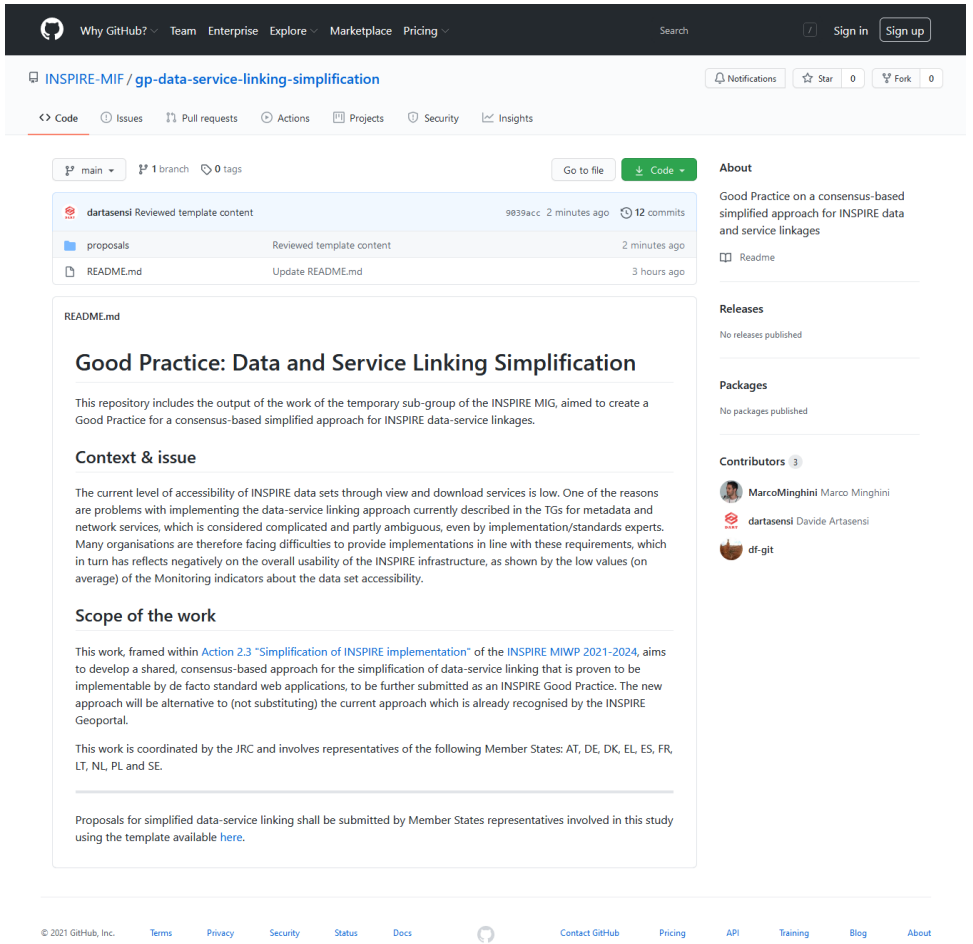
Indicative roadmap

Task	March	April	May	June	July	November
Collect proposals for technical approaches	X					
Evaluate the advantages and disadvantages of the proposals		X	X			
Draft a Technical Guideline proposal			X	X		
Set up a showcase discovery service			X	X		
Present the results at 66th MIG-T meeting					X	
Submit Good Practice for endorsement at 14th MIG meeting						X

GitHub space

- https://github.com/INSPIRE-MIF/gp-data-service-linking-simplification
- Collection of the proposals – under subfolders
- Discussion - "Issues" section



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Organization of work

- Engagement of relevant communities (e.g. representatives of the GeoNetwork community)
- Next meeting – after the collection of proposals – beginning of April

Q&A, discussion

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Thank you!

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