Modernising SDIs within the context of the European Strategy for Data – a technological and organisational perspective

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Multiple perspectives on data

Paradigm shift: from open data to shared data
The EU policy on data

- **European Strategy for Data**
  - Establishment of a **single market for data** through sector-specific data spaces.
  - Bringing **together** different actors (public sector, businesses, citizens, and academia).
  - **Sector-specific data spaces**
  - Common horizontal/reusable elements
    - Infrastructures
    - Standards
    - Technologies
    - Architectures
    - Governance approaches
  - Unprecedented resource for the implementation (DEP, RRF, HE)

Common European Data Space

- **Large sectoral data spaces**
  - Health
  - Manufacturing
  - Agriculture
  - Finance
  - Mobility
  - Environment
  - Energy

- Rich pool of data with varying degree of accessibility
- Free flow of data across sectors and countries
- Full respect of GDPR
- Framework for data access and governance
- High-value data sets from the public sector (e.g., weather, geospatial, statistics)
- Personal data platforms (PIMS)
### European Strategy for Data: Legal Instruments (in the making)

#### Overview of data actions

<table>
<thead>
<tr>
<th>Question</th>
<th>Data</th>
<th>Who holds such data?</th>
<th>Policy Intervention?</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Q4 20</strong> Data governance Act</td>
<td>Data voluntarily made available by data holders</td>
<td>Public sector, business, individuals, researchers</td>
<td>Make such data easier to share in a controlled manner (technical, legal and with organisational support); Build trust in data sharing; Ensure data interoperability across sectors</td>
</tr>
<tr>
<td><strong>Q4 20</strong> Digital Market Act</td>
<td>Data held by online platforms originating from the users (both businesses and individuals)</td>
<td>Online platforms</td>
<td>Among other policy options, identify appropriate data access and data portability remedies</td>
</tr>
<tr>
<td><strong>Q1 21</strong> Implementing Act under Open Data Directive</td>
<td>High-value Open Government Data (core reference data)</td>
<td>Public sector</td>
<td>Make such data available for re-use free of charge</td>
</tr>
<tr>
<td><strong>Q3 2021</strong> Data Act</td>
<td>Co-generated, IoT data from industry and individuals; Big Data sources held by business</td>
<td>Business</td>
<td>Ensure flexible use of Big Data sources by government for the common good; Establish fairness in use of co-generated, IoT data; Make sure that Europeans stay in control over their data vis-à-vis third country jurisdictions; Examine IPR legislation for possible obstacles</td>
</tr>
</tbody>
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The role of Geospatial information

- There is no explicit geospatial dimension of the European data spaces.
- However, geospatial data underpins almost all (if not all) data spaces.
- Capabilities for data fusion, analysis and visualisation are extremely powerful.
Spatial Data Infrastructures in the EU

• 20+ years in the making
• Solid legal framework
  • INSPIRE Directive (in force since 2007)
    • Establishing a European SDI based on national SDIs
  • Transposed in national legislations
  • Legally-binding Implementing Acts
  • Nin-binding technical provisions for data, metadata, services
• Modernising approaches in INSPIRE on the agenda
Vision for the future

• INSPIRE (resp. SDIs) should ‘blend in’ with the broader ecosystem of spatial and non-spatial data, infrastructures, technologies and policies.

• This will mean opening up to a broader community of implementers and users and to a wider range of applications and use cases.

• Making the INSPIRE framework more flexible and agile will significantly lower the entry level to the sharing and utilisation of data.

• Technical approaches need to be simplified by reusing well-adopted standards and technologies.
Well-established governance mechanisms

• Unified helpdesks
• Transparent approach for governance of the artefacts
  • Sub-group and facilitators.
• Decision tree and release plan:
  • Know how to approach each issue
  • 2 Releases per year
  • Voting process established
Sustainable open source components

• Ensure long-term sustainability of the components

• Build strategic partnerships with communities:
  • GeoNetwork as geoportal backend
  • Registry in OSGeo

• Decouple tools from infrastructure

• Extensive use of the cloud
Community-driven good practices

- Procedure for endorsement:
  - Step 1. Initiation
  - Step 2. Submission as good practice candidate
  - Step 3. Outreach
  - Step 4. Submission
  - Step 5. Legal scrutiny
  - Step 6. Feedback

Complementary data sources

Source: Sarretta, Minghini 2021

Figure 1: Example of distribution of address data in an area of Helsinki, Finland: OSM addresses associated to nodes (white points) and ways (black polygons); NLS addressed (red points). Background map: © OpenStreetMap contributors.
Thank you

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