Addressing the needs of INSPIRE: The Challenges of improving Interoperability within the European Union

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INSPIRE Objective

Combine spatial datasets from the EU member states in a consistent way and share them between multiple users and applications.
Components of INSPIRE

• Discovery Metadata Specification;
• Interoperability and harmonisation of spatial data and services for selected themes;
• Network services and technologies;
• Measures to promote sharing spatial data and services;
• Coordination and monitoring measures.
Priority Themes

• Cadastral Parcels;
• Administrative Units;
• Geographical Names;
• Transport Networks;
• Addresses;
• Hydrography;
• Protected sites;

and their Coordinate Reference Systems
Figure 5 – The process of developing INSPIRE data specifications
<table>
<thead>
<tr>
<th></th>
<th>INSPIRE Principles</th>
<th>Terminology</th>
<th>Reference model</th>
</tr>
</thead>
<tbody>
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<td>A</td>
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<td>(B)</td>
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<td>D</td>
<td>Rules for application Schemas and feature catalogues</td>
<td>(E) Spatial and temporal aspects</td>
<td>(F) Multi-lingual text and cultural adaptability</td>
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<tr>
<td>G</td>
<td>Coordinate referencing and units model</td>
<td>(H) Object referencing modelling</td>
<td>(I) Data translation model/guidelines</td>
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<td>J</td>
<td>Portrayal model</td>
<td>(K) Identifier Management</td>
<td>(L) Registers and registries</td>
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<td>M</td>
<td>Metadata</td>
<td>(N) Maintenance</td>
<td>(O) Quality</td>
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<td>P</td>
<td>Data Transformation</td>
<td>(Q) Consistency between data</td>
<td>(R) Multiple representations</td>
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<td>S</td>
<td>Data capturing</td>
<td>(T) Conformance</td>
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**Figure 3 - Data harmonisation components**
Successes

• Quality of Experts represented on TWG
• Team Building – very positive experience
• Support from Commission
• Reference materials – lots!
• Methodology
  – ISO Standard Adoption
  – UML
  – Enterprise Architect
Challenges

• Technical Language
• Working Methods
• User Requirements
• Cross-theme overlaps
Conclusions

• Process is an important step in building a pan-European SDI;

• A technical consensus on the data specification will be achieved;

• Implementation will need:
  – Political will;
  – Sustained funding;

*These are less certain!*