Improving semantic interoperability in European eGovernment systems

→ When is this action of interest to you?

You work in the area of government metadata management and want to check upon and possibly reuse semantic assets (metadata and/or reference data), understand semantic interoperability requirements, approaches, tools, lessons learnt and case studies. You want to share your own semantic assets.

→ What is this action about?

The environment in which data exchange takes place amongst Member States is very complex, creating many barriers and challenges to the exchange of data during the execution of European Public Services. These barriers include divergent interpretations of the data, lack of commonly agreed and widely used metadata, absence of universal reference data (e.g. codelists, taxonomies), the multilingual challenge, etc. Due to these pressures, semantic interoperability becomes an important element in many eGovernment and interoperability national agendas and interesting experience and lessons-learnt can already be shared at a European level. The Action tries to reduce the consequences of semantic interoperability conflicts. The previous SEMIC.EU platform migrates to the new integrated ISA collaborative platform (Joinup). Enhanced indexing and browsing functionalities will become available to improve searchability and user-friendliness.

→ What are the objectives?

The main objectives include:
- documenting what is available in each Member State with regards to metadata policies and the management of semantic interoperability assets and raising awareness on the importance of metadata management[1];
- identifying opportunities for alignment on semantic definitions, metadata and reference data sources with special focus on identification and definitions of Core Concepts/Vocabularies[2];
- promoting, share and reuse of semantic assets, experiences and tools and facilitating agreements in key areas;
- promoting the Asset Description Metadata Schema (ADMS) as a common specifications for enabling federation of repositories storing semantic assets and OSS[3].

ISA CLUSTER • TRUSTED INFORMATION EXCHANGE

Key data
Project start/finish • Q3/2010 to Q4/2015
ISA contribution • EUR 5 550 000
Link • http://ec.europa.eu/isa
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What are the benefits?

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<th>Beneficiaries</th>
<th>Anticipated benefits</th>
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<td>Member States’ public administrations</td>
<td>• Access to a European repository of reusable semantic interoperability assets (via the Joinup platform).</td>
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<td>• Forum to identify opportunities for alignment at European level.</td>
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<td>IT services industry</td>
<td>• Reduced development costs due to reuse during the initial development phase and due to less interoperability conflicts while integrating systems or providing cross-agency/domain/country services.</td>
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<td>European Commission Services</td>
<td>• A platform and central point of reference for collecting, organising, storing and making available semantic interoperability assets which have been created by various EU entities.</td>
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<td>• An infrastructure that allows the Member States and the Commission services to identify conflicts, overlaps, duplication of work and possibilities for metadata and semantic assets.</td>
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What do our users say?

The Finnish Interoperability Portal
In autumn 2011 the Finnish Ministry of Finance launched Yhteentoimivuus.fi (Finnish for interoperability) – a new portal for sharing interoperability assets among public administrations in Finland. The portal reuses the open-source software from the former SEMIC.EU platform, which has been made publicly available by the former OSOR.EU. In the meantime both platforms have merged to Joinup.

What are the benefits?
• Yhteentoimivuus.fi enables the Finnish public administrations to share and reuse already existing semantic interoperability assets instead of re-inventing new ones.
• By reusing the technology from SEMIC.EU it was possible to reduce the development costs and risks compared to building a repository from scratch.

Which challenges did you face during the implementation phase?
The main challenge is to ensure that Yhteentoimivuus.fi has an impact on interoperability of electronic public services in Finland. Besides technical implementation challenges, decisions needed to be made on the nature of assets, their lifecycle and processes and the format in which the assets would be made available on the platform.

Have you reused existing software/tools/building blocks?
We used the SEMIC.EU platform available on the former OSOR.EU platform (in the meantime both platforms have merged under the new name Joinup). A key feature of SEMIC.EU is an ebXML Registry/Repository for managing so called ‘Semantic Interoperability Assets’. SEMIC.EU also contains a forum to enable operating a community network for eGovernment projects and initiatives.

Do you have any recommendations for other public administrations that would like to implement your measure?
Any national or regional government should be aware that the architecture models, data models, taxonomies, code lists, software, etc that it uses are of considerable value and should therefore be managed as interoperability assets. Consequently, governments should encourage public administrations to share and reuse these assets of interoperability at a level that surpasses the individual public administration.

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