Case Study
Yhteentoimivuus.fi semantic asset repository
Yhteentoimivuuus.fi Semantic Asset Repository

This case study presents the main figures and characteristics of Yhteentoimivuuus.fi as a semantic asset repository.

Yhteentoimivuuus.fi is an example of a semantic asset repository and infrastructure for Metadata Management. It is operated by the Finnish Government IT Shared Service Centre, owned and financed by the Ministry of Finance (Public Sector ICT) of Finland.

Metadata Management refers to the good practice of adopting policies, processes, and systems to plan, perform, evaluate, and improve the use and re-use of semantic assets. It ensures that reference models and reference data are treated as valuable assets, stored or documented, easily retrievable, and accessible in a reusable format under an open license.

Currently, other EU Members States as Germany (XRepository), Estonia (RIHA) and Denmark (Digitalisér.dk) have also implemented best practices in this area. Different EU Member States have different approaches implementing Metadata Management and semantic asset repositories.

The European Commission through the ISA Programme developed a series of Case Studies to present different approaches on Metadata Management in Europe. These Case Studies aim at promoting the awareness of proper Metadata Management as an instrument to facilitate semantic interoperability amongst the EU Member States.
Yhteentoimivuus.fi is the Finnish national portal and publishing platform for interoperability. It brings together relevant content for supporting the work of Finnish Public Administrations regarding interoperability and enterprise architecture.

Yhteentoimivuus.fi aims at providing a centralised infrastructure for sharing and re-using interoperability assets such as processes, information resources, systems and services. Thus, the platform is a tool that facilitates the work of public administration to meet interoperability and architecture requirements established by the Finnish “Act on Information Management Governance in Public Administration (9/2011)”.

Owners
Finnish Ministry of Finance
http://vm.fi

Target Audience
• Developers and architects of Information Processes, Reserves, Systems and Services of Public Administrations
• Any person who wants information about Interoperability and Common Architecture of Public Administrations in Finland

The main goal of Yhteentoimivuus.fi is to support the work of Finnish Public Administrations regarding interoperability and enterprise architecture.
Yhteentoimivuus.fi according to the EIF*

Yhteentoimivuus.fi was launched in October 2011 as a consequence of the Finnish "Act on Information Management Governance in Public Administration". The platform implementation re-uses the former SEMIC.EU open source platform. Yhteentoimivuus.fi has quickly grown in number of users and volume of content produced. The platform implements a co-production approach where content is produced in collaboration with the users. The platform also operates a formal quality assessment process mediated by an internal editorial team.

The EIF defines the following "Interoperability levels" which cover the different interoperability aspects to be addressed when designing a European Public Service and provides a common vocabulary for discussing issues encountered when establishing such a service:

- **Legal Interoperability**: Aligned legislation so that exchanged data is accorded proper legal weight.
- **Organisational Interoperability**: Coordinated processes in which different organisations achieve a previously agreed and mutually beneficial goal.
- **Semantic Interoperability**: Precise meaning of exchanged information which is preserved and understood by all parties.
- **Technical Interoperability**: Planning of technical issues involved in linking computer systems and services.

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**Legal Architecture**

- Documenting metadata is common practice but not enforced by law.
- Share and re-use of metadata of semantic assets by public administrations is not enforced by law.
- The right to use, distribute and modify an asset is defined by a licence which is chosen by the owner of the asset

**Organisational Architecture**

- National level with no policy domain restriction.
- Anyone can download and upload assets (registration required)
- Formal quality assurance process for publication of assets (moderated)
- Assets are categorised by the degree of their normative status (informational, recommended, mandatory)

**Semantic Architecture**

- Assets are available in human-readable format embedded in documents or links to other websites

**Technical Architecture**

- Re-use of the open-source software from the former SEMIC.EU platform
- Server: CentOS release 5.5
- Programming language: Java / Java EE
- Authentication and authorisation: User name and strong password
- API for exchange of metadata information is currently under development

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*EIF: European Interoperability Framework*
“Yhteentoimivuus.fi supports interoperability in public administration by promoting data design and enabling sharing and reuse of information, metadata and specifications. In practice, these may include the architectural and process descriptions, vocabularies, conceptual models, ontologies, codes, data definitions, guidelines and standards.

Yhteentoimivuus.fi also provides updated information about the overall architecture of public administration-related development work, training and services.”

What is Yhteentoimivuus.fi? By Yhteentoimivuus.fi website https://www.yhteentoimivuus.fi/view/snav/Tietoa_portaalista/Portaalin_esittely.xhtml?cid=66509

**Services provided**

- Semantic Interoperability assets repository enabling uploading and downloading of assets.
- Search engine to find interoperability assets.
- Information provision on common architecture work by Finnish Public Sector.
- Provision of training and support material for common architecture work and participate in discussion groups.
- Open forum for discussions on interoperability.
Strategic view on Yhteentoimivuus.fi and next steps towards the ADMS-based Federation

Opportunities for improvement

- Multilingualism
- Licensing Framework
- API for information exchange

What is ADMS?

The Asset Description Metadata Schema (ADMS) is a metadata vocabulary and a common way to describe semantic interoperability assets including metadata schemas, controlled vocabularies and code lists. Better documenting semantic assets can help to improve interoperability of e-Government initiatives across Europe, and possibly beyond. The ADMS is considered to be a key element of the federation of semantic asset repositories in Europe.

ADMS Added Value

- Discoverability of Yhteentoimivuus.fi content.
- Increase re-use of Yhteentoimivuus.fi semantic assets.
- Place Yhteentoimivuus.fi as part of the European semantic interoperability network.
- Common description of Yhteentoimivuus.fi content.

Onboarding the Federation

- Yhteentoimivuus.fi will not join the first wave of the federation.
- Map Yhteentoimivuus.fi internal model to the ADMS model.
- Evaluate changes and what the costs to become ADMS compliant.
- Yhteentoimivuus.fi aims to develop a internal data model to become interoperable with ADMS.
- It is part of Yhteentoimivuus.fi plans to join the federation once the platform is further developed.