SEMIC

SEMANTIC
INTEROPERABILITY
CONFERENCE

2017

Valletta, Malta
14 June 2017

Conference on Data and
Information Management

Highlights Report

Outline

1. **Introduction**

2. **Conference Figures**

3. **Conference Highlights**

4. **Stay tuned**

Conference Figures

220 participants from different sectors

Pie chart values:
- 56.87%
- 15.64%
- 0.95%
- 16.59%
- 4.27%
- 4.74%
- 0.95%

Legend:
- ☐ National, regional or local public administration
- ☐ European institutions
- ☐ Standardisation body
- ☐ Private sector
- ☐ Academia
- ☐ Non-profit organisation
- ☐ Other

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Participants from 35 countries

CONFERENCE HIGHLIGHTS

Welcoming speech

Gertrud Ingestad
Director-General of
DG Informatics, European Commission

> *We need to be efficient, resilient to change, transparent and trusted to offer the public services needed today.*

Within the ISA² Programme, we are working towards an **interoperable Europe** and beyond, with over 20 concrete solutions taken forward and available on Joinup, the platform of federated solutions from both the European Commission and participating countries.

The theme of the 7th SEMIC Conference was Data and Information Management. In this topic, there are several ISA² Actions supporting specifications for **open data**, **base registries**, **service catalogues**, geospatial information, data **standardisation** for efficient reporting and the use of data for policy-making. Since data is everywhere and its flows generate more economic value than trade of goods, we need to manage it properly; that is with with clear **governance**, **open specifications** to facilitate its **exchange** and avoid lock-ins, supporting **legislation**, and protection to maintain the trust and transparency.

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Opening-Maltese Presidency

Hon. Silvio Schembri

**Parliamentary Secretary for Financial Services,
Digital Economy and Innovation
at the Office of the Prime Minister, Malta**

Data is the fuel of the economy, essential for the achievement of the Digital Single Market.

- The Digital Strategy of Malta sets a vision to prosper by 2020 as a digitally enabled nation in all sectors of society. The strategy sets out policy direction on the adoption of digital means within three major areas: civil society, business and government.
- Efficient public administrations will bring IT solutions for less bureaucracy.
- Mobile public services satisfy the needs of citizens anytime and anywhere.

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ISA fostering semantic interoperability between public administrations in Europe

Natalia Aristimuño Pérez

Head of Interoperability Unit, ISA² Programme, DG Informatics, European Commission

Core Vocabularies provide the basis for interoperable data exchange and use in Europe.

- Semantic interoperability is one of the key layers of the European Interoperability Framework: data and information should be available in a way that is understandable and can be interpreted.
- Multilingualism is a challenging element for interoperability in Europe.
- The ISA² programme supports Member States with more efficient provision of public services, among others by providing data specifications, good practices and pilots.

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Data and information management from the end-user's point of view

Janek Rozov

Head of Department of Information Society Services Development, Ministry of Economic Affairs and Communications for Estonia

> *Interoperability makes sense only if it creates additional value for public services users.*

- Estonia's digital agenda started with small and concrete projects in the financial and tax sectors such as the application "e-tax board" which allows electronical individual tax declarations.
- Estonia developed a single environment for all the different e-services provided to end-users, called X-Road. It connects all the databases in a decentralised way. All the outgoing data are encrypted and digitally signed.
- The Estonian digitalisation journey required a change of mind-set as from the beginning for public administrations and citizens.
- Instead of describing the types of paper forms to be filled in, the legislation should prescribe what type of data is needed.

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The National Data Strategy of Malta

Dr. Joseph Saviour Azzopardi LL.D.

**Doctor of Laws / Data Advocacy,
Malta Information Technology Agency (MITA)**

Linked official registers are key to enterprise data governance

- The solution for the Once-Only principle is having official registers properly linked together.
- Linked official registers are the key to enterprise data governance. Malta implemented a number of registers interacting between each other in order to treat the information as one enterprise. One of the benefits is that it avoids systems being created with a silo mentality.
- There is a paradigm shift from systems and databases to registers and processes.

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Data, Information and Knowledge Management at the European Commission

Peter van Landegem

**Policy Officer on Corporate
Management and IT Governance, Secretariat-General,
European Commission**

Staff and management should build a culture of collaboration and knowledge sharing in the Commission.

- In order to successfully complete the complex journey of an administration in making valuable use of the huge amount of data available, everyone has to contribute to the culture of collaboration.

- There is a clear need for more cross-DG collaboration, to work with interoperable tools on the governance of several types of data.

- The European Commission did an official communication setting out a corporate strategy on data, information and knowledge management. This communication was prepared and agreed by the Information Management Steering Board composed of Director-Generals.

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The Luxembourg Experience

Gilles Feith
Luxembourg Government CIO and Director of Luxembourg's Government IT Center (CTIE)

> *Let's build the digital Schengen. Luxembourg wants to be within the first movers.*

- In a multilingual context, interoperability is key: our systems have to understand others without knowing their language.
- Luxembourg is reusing parts of the Estonian and Belgian e-services initiatives e.g. the Belgian business register's legislation or the Estonian open source dashboards. Member States should work together and reuse what already exists.
- A Digital Pole will be created in Luxembourg for the European Commission. It will enable the European Commission to collaborate with the Luxembourgish authorities and build on their existing activities related to digital services. The digital Pole will focus on policies and digital innovative solutions for all Europeans.

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Developing an Information Asset Catalogue at ECDC

Gaetan Guyodo

**Senior Expert Data Manager,
European Centre for Disease
Prevention and Control (ECDC)**

Information Asset Catalogue is the first pillar of our Information Governance and a single way to find our all resources!

- Information governance is often seen as a cost by the top management of public administrations as the benefits are not always easy to measure and not immediate.

- An important point for the uptake of the information governance framework is to create awareness, by informing the people and implicating them in practice. At ECDC, the staff was informed about the development of a centralised file gathering relevant information for their business, everyone was made accountable for the collection of information, and information stewards were clearly identified in each department as the persons of contact and the quality reviewers.

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Information Governance Framework at EFSA

Guido Zunino

**Programme Officer,
European Food Safety Authority (EFSA)**

Information is an important asset, we want to constantly improve its quality.

- From the complex business information infrastructure present at EFSA, with ten business areas for which 114 business information entities are used in 38 IT tools, clear needs were identified for a Corporate Information Governance. This information governance would be applied to each project handling EFSA's information. It could for example avoid duplicating information.

- In their information governance roadmap, the first two steps were the definition of a governance structure, and of information governance roles and responsibilities.

- The next steps of the roadmap of the information governance framework are raising awareness, managing the existing resistance within the organisation, and going into specific, short term practical projects to verify the benefits of the framework.

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Social Inclusion Big Data Pilot

Manuel Pérez Gómez

Advisor, Region of Madrid

> *To increase efficiency of public policies, we need new tools for Information Management.*

- The aim of the pilot project, supported by the ISA^2 programme, was to develop a model using data analytics to improve the social inclusion policies with reliable information about the chronological evolution of the causes and factors of the inclusion rate.

- The methodology used for the treatment of the information was CRIP-DM (Cross Industry Standard Process for Data Mining) a data mining process model describing commonly used approaches that experts use to guarantee the quality of the results.

- Data analytics enable more efficient, customised and combined insertion policies. Moreover, it improves the management of the administrations implementing the policies and the prevention of changes in the social inclusion causes and factors.

ISA^2

Text mining for policy making: a semantic tool to support evaluation of research proposals

Olivier Eulaerts

Data and Analytics at the Joint Research Centre, European Commission

Duplication of research in Europe should be reduced. Text mining can help!

- Many research grants are duplicated due to different factors such as the challenge to detect scientific overlap in research grant applications or to detect if an application was submitted to two or more funding sources. With this lack of knowledge, there are scientific overlaps and grounds already covered by other departments.

- Text mining tools allow to identify semantic similarity of proposals as well as when the applicants are the same.

- JRC is building a semantic similarity platform to help resolve the challenge of duplication of research grants. The platform is using existing text-mining tools to give the means to compare incoming applications to a set of grants and other documents.

Changes to IT architecture to enable Data Analytics within Eurostat

Titus Purdea

**Head of Unit IT Governance and
Service Management at Eurostat,
European Commission**

> *Unleash the power of data through your IT architecture.*

- In the current data context where data exchanges are fairly rigid and segregated between sectors, the IT architecture composed of different blocks integrating existing standards aim at: broading the range of data-sources usable, answering the demand for ad-hoc statistics, improving the way data is used for evidence-based decision-making, and disseminating the data to encourage its reuse.

- The role of the statistician in an environment in which the data available is growing exponentially, is shifting from the production of official statistics to the development of new indicators, methods and analytics.

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The Once Only Principle: Large Scale Pilot

Robert Krimmer

**Professor of e-Governance,
Tallinn University of Technology**

The Once-Only principle will help reduce administrative burden saving time and money of EU citizens.

- In their interpretation of the Once-Only principle, TOOP required that data could only be collected and stored once.
- The project will apply this interpretation of the principle to three different pilots in various domains.
- With the three pilots, TOOP wants to identify the barriers, drivers, costs and benefits implied by the Once-Only principle. The project will propose one federated solution and architecture to be implemented in the European Union data exchange layer.

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Tailoring ISA² Vocabularies to German GovData metadata federation needs

Sebastian Sklarß

Consultant, Init AG
(German National Open Data Portal)

Extending DCAT-AP as the German blue print to future (meta)data portals was a challenge that GovData.de managed to face.

- DCAT-AP, ADMS and other specifications from ISA² cover most of the needs of the German Open data portal.
- Joinup was very useful for creating a process of public participation.
- DCAT-AP, GeoDCAT-AP, ADMS and the Core Vocabularies were tailored to the needs of the German Open data portal in order to create DCAT-AP.de. Additionally, specific functionalities have been added to DCAT-AP.de, as the planned availability of the dataset described.
- The quality of the metadata has to be ensured as from the start, when the metadata is created.

Joined-up Data Standards

Beata Lisowska

Ph.D., Data Scientist

> *The true potential of open data can only be achieved through interoperability of the open (meta)data portals.*

- Collecting data from different sources is important because it helps identify a problem in its entirety.
- Metadata helps establishing whether a dataset is trustworthy or not.
- There is a real need for a standardised way of publishing metadata by the open data portals to allow users to find the context of the data in a simpler way but also to allow federated search across platforms so that the power of machine-readable discoverability of data can be unleashed.

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Panel discussion: Semantically marking up government portals

Vassilios Peristeras

Assistant Professor at the International Hellenic University, School for Science and Technology in Thessaloniki, Greece

Use open data standards and metadata to transform unstructured web content to valuable and reusable public sector data.

- Even though huge amount of information is available for reuse in websites, base registries and many other systems as open data portals, potential users still face difficulties to find the exact information they are looking for and also struggle to give meaning to the data accessible. Semantic data standards are required to overcome these challenges.

- In their concrete semantic structured data initiatives, public administrations are looking for open, reliable standards which would enable them to develop interoperable solutions.

- Methodologies to prove and quantify the benefits of semantic interoperability solutions and initiatives are necessary.
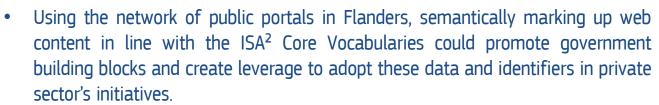
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Panel discussion: Semantically marking up government portals

Raf Buyle

Information Architect, Informatie Vlaanderen

For the public sector, Base Registries are a fundamental footprint like DNA for living organisms.

- Using the network of public portals in Flanders, semantically marking up web content in line with the ISA² Core Vocabularies could promote government building blocks and create leverage to adopt these data and identifiers in private sector's initiatives.

- The ISA² Programme, the City of Ghent, the region of Flanders and the region of Trentino are currently reviewing together the mapping between ISA² Core Vocabularies and schema.org. The next step consists in evaluating if the information is indexed in the search engine result pages. Then we will evaluate the impact on the structured information and how it affects the page ranking as a side effect.

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Panel discussion:
Semantically marking up government portals

Francesca Gleria

**Program Manager,
Provincia Autonoma di Trento**

> *Implementation of public services at the European level is mostly a question of cultural change and vision.*

- Trying to find shared solutions to the same needs of the public administrations (transparency, open date, etc.) has developed the idea that portals in themselves can play a crucial role in creating a unique digital space for European public administrations.

- One of the outcomes of our project is the publication of information on Public Organizations (Contact Points, Addresses, Opening Hours) in line with both the schema.org vocabulary and the ISA² Core Vocabularies at the same time, on 1 municipality website (Comune di Treville). Also, we are working collaboratively with Flanders, AgID and ANCI (National Association of Italian Municipalities).

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Panel discussion: Semantically marking up government portals

The EU Publications Office publishes reference metadata for a vast range of needs which can be reused for free.

Norbert Hohn

Head of Open Data Portal sector, The Publications Office of the European Union

- Once you start working with reference data, you quickly realise that it is transferrable and reusable in similar contexts in different domains.

- The use of Eurovoc, the multilingual and multidisciplinary thesaurus for indexing EU policies and activities, is expanding. It will be used for Europa.eu, but alignments are also ongoing to establish crosswalks with specialised thesauri, e.g. in the domains of agriculture, gender equality, and geospatial data. The Publications Office offers tools, processes and governance, such as VocBench 3 for managing codelists.

- One of the major challenges for public administrations with governance is to succumb to the temptation of finding a quick solution for their metadata referencing. They then encounter difficulties as soon as they need to maintain their metadata.

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Closing speech
Mr. Markku Markkula
President of the Committee of the Regions

> **The cities and regions have a key role as platforms for developing opportunities for innovative public processes**

- A bottom-up approach is required to achieve the Digital Single Market. Cities and regions need to keep changing and moving towards a European participative and data-driven culture where citizens actively contribute to the public sector services.

- Implementing data and information governance at national and institutional levels must be thought from a user perspective. Political decision-makers should be more enthusiastic to develop data management systems in their own countries or institutions.

- An ecosystem-thinking encourage regions to use the data and information available in order to extract the best knowledge out of it, not separately but collaboratively, and finally bring this knowledge as an instrument at the European level to build different partnerships.

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Stay tuned

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Visit our initiatives

ADMS ASSET DESCRIPTION METADATA SCHEMA

StatDCAT-AP FOR STATISTICAL DATASETS

GeoDCAT-AP FOR GEOSPATIAL DATASETS

DCAT-AP FOR DATA PORTALS IN EUROPE

CORE PUBLIC ORGANISATION VOCABULARY

CORE PERSON VOCABULARY

CORE BUSINESS VOCABULARY

CORE CRITERION & EVIDENCE VOCABULARY

CORE LOCATION VOCABULARY

CORE PUBLIC SERVICE VOCABULARY

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Join the **SEMIC community** on Joinup

For more information, visit the ISA² website: **ec.europa.eu/isa2**

See you all next year!
#SEMIC2018