Semantic Interoperability Conference 2016

Data standards for interconnected Public Administrations

Highlights Report

12 May 2016
Rome, Italy
Introduction

Gertrud Ingestad, Conference Chair
Director General, DG Informatics, European Commission

ISA² is the main Commission vehicle where the Digital Single Market, and interoperability and standardisation for the public sector are met. ISA² will have an instrumental role to play in the development of interoperability in the next 5 years. It will do so by building on the success of its predecessor ISA Programme but will also go a step further, to reach the last link between public administrations, businesses and citizens.

In its sixth edition, the SEMIC conference welcomed over 200 participants from more than 30 countries, which came with the purpose of improving cross-border and cross-sector services in public administrations with the support of semantic interoperability.

To ensure effective communication between digital components and applications, devices and networks, to connect better along the supply-chain and between the industry and the public administrations, in other words, to be interoperable, standardisation is a “must”. Standardisation at the information level was the main topic of the conference this year, where we explored the benefits and the challenges of using data standards for improving information exchange, access and reuse, through the experiences of their implementation in both private and public sectors.

The biggest challenge is to raise awareness around which standards exist and how to connect them.
SEMIC 2016 Conference Figures

206 participants from 32 countries
Conference Highlights

Welcome

Stefano Quintarelli
Deputy of the Italian Parliament and chairman of the Steering Committee of Agenzia per l’Italia Digitale – AgID, Italy

Stefano Quintarelli is a member of the Italian Parliament (Scelta Civica Group) a member of the Commission of Internet Rights at the Chamber of Deputies, and Chairman of the steering committee of Italy’s Digital Agency. He is also a professor of information systems, network services and security.

- The Italian Strategic Model of Public Administration ICT helps implementing the Digital Agenda by bringing together ICT Governance, Infrastructure and domains of public administration (education, health, etc.).
- The model contains several semantic interoperability elements, such as domain ontologies, the metadata profile for national catalogues (data, GeoData, services), the ontologies of the national metadata profile, and the use of controlled vocabularies.

The Italian Digital Agenda implementation

Antonio Samaritani
General Director, Agenzia per l’Italia Digitale – AgID, Italy

Antonio Samaritani is AgID’s General Director since May 2015, and worked as the CIO of Regione Lombardia between 2010 and 2015.

- The data ecosystem must be seen at EU level. Such an ecosystem requires cooperation between public and private sectors.
Conference Highlights
Global Standards enabling interoperability – a case study

Feargal Mc Groarty
National Haemophilia System Project Manager, St. James’s Hospital, Ireland

Feargal Mc Groarty has a medical laboratory background and has worked in the public sector healthcare system for 20 years, in both medical laboratory and project management roles as well as a leader in change management. His current project has seen the implementation of GS1 barcoding on medication, allowing real-time track and trace of a drug from the manufacturer through to the patient’s home, including the use of a smartphone app for patients to scan their medication at home, which is the first of its kind.

- Standards are needed to prevent communication misunderstanding.
- Supply chain efficiencies and patient safety are enhanced by adopting a single global supply chain standard in healthcare.
- The main barriers are the awareness about what the standards are, and the low interest from the governments.
Conference Highlights
Core vocabulary project in Japan - Corporate information portal website

Kenji Hiramoto
Chief Strategist, National strategy office of IT, Cabinet Secretariat, Government of Japan

Kenji Hiramoto is in charge of IT strategy, eGovernment and disaster risk management at the Japanese National office of IT. He is also the executive advisor to the CIO of METI (Ministry of Economy, Trade and Industry).

- Infrastructure for Multilayer Interoperability (IMI) core vocabularies improve interoperability, open data and data search.
- IMI’s Corporate Information aims to provide homogenised access to master data to all ministries in Japan.

Enabling Information Interoperability

Steve Ambrosini
Executive Director, Integrated Justice Information Systems Institute (IJIS Institute), USA

Steve Ambrosini is the Executive Director of the IJIS Institute, that helps state and local governments develop ways to share information among the disciplines engaged in homeland security, justice, and public safety.

- **Sustainability** – we need sustainable implementations – and **trust** – we need to bring organisations together – are crucial in order to achieve project interoperability.
- Standards ensure that all the parties working towards information sharing are doing so in the same way, using the same terminology, and working towards the same goals.
Conference Highlights
The role of Data Standards in semantic interoperability

Vassilios Peristeras
Programme Manager, ISA² programme of DG Informatics (DIGIT), European Commission

Vassilios Peristeras works as a Programme Manager at the Interoperability Solutions for European Public Administrations (ISA) unit within DG Informatics at the European Commission. He has also been appointed as an assistant professor at the International Hellenic University in Thessaloniki, Greece. He has worked as researcher and consultant in various organisations, and has initiated and coordinated several international projects in the area of eGovernment.

- It is necessary to refocus on the “I” part of your “Information System”. IT is a means to an end, not an end in itself.
- We need universal data standards in a similar way we need universal technology standards. We need universal data standards that go beyond national borders, building on national progress.
- Data standards are social agreements on how we describe the world.

We need to focus on Information management, not only on Information Technology management.
Conference Highlights
Panel discussion: Data Standards – Experience from practical implementations at national and international level

**Patrocinio Nieto Moreno**
Service Manager, Ministry of Finance and Public Administration, the Government of Spain

Patrocinio Nieto Moreno has been involved in the Spanish Point of Single Contact (www.eugo.es), the EUGO network group in Brussels, the TAIEX mission of the European Commission for electronic administration optimisation in Ukraine, and the eBusiness Life Cycle pilot Spanish team (under the eSens project of the CEF programme from the European Commission).

- The lack of alignment between legislation and IT teams is one of the key challenges for data standards implementation.
- Some of the key benefits of data standards are usability, interconnection of systems and economic benefits coming from services and products of high quality that are shared and maintained.

**Lutz Rabe**
Desk Officer, IT-Standards Coordination Office (KoSIT), Germany

Lutz Rabe is responsible for governance and operation of the XÖV framework for standardising data exchange metadata for the German federal and state government.

- The implementation goes faster if the stakeholders are in a challenging situation and need a new solution for their domain.
- Legal enforcement is a means, not the end. There are other options, such as effectively communicating the benefits to the domain experts and the stakeholders.
Conference Highlights

Panel discussion: Data Standards – Experience from practical implementations at national and international level

Marc Kuster
Head of sector “Storage and electronic archive”, EU Publications Office

Marc Kuster has been involved in the European Legislation Identifier (ELI) and IMMC projects from their beginnings, and serves now as a technical contact point for both activities.

- For greater engagement, you need to know your stakeholders and get them to cooperate.
- The mandate of a standard is feasible if we define a clear scope together with specific working groups. The European Commission’s INSPIRE project is a good example of such good practice.

John Dann
Director at the Central Legislation Service at the Ministry of State in Luxembourg, and Chair of the “ELI Task Force” of the EU Council on the implementation of the “European Legislation Identifier” (ELI), Government of Luxembourg

John Dann acts as the European correspondent for the EU Council’s Working Party on “e-Law (e-Justice)”.

- Legislation Linked Open Data (LLOD) makes legislation more user-friendly and generates efficiency gains for governments and businesses.
- Resistance to change is in the nature of human beings. Standards cannot be imposed to governments and businesses, standards are social agreements.
- Informing stakeholders about the benefits of the standards and building a cooperating community is essential for its uptake.
Conference Highlights
Panel discussion: Data Standards – Experience from practical implementations at national and international level

Steve Ambrosini
Executive Director, Integrated Justice Information Systems Institute (IJIS Institute), USA

Steve Ambrosini is the Executive Director of the IJIS Institute, a non-profit corporation formed to help state and local governments develop ways to share information among the disciplines engaged in homeland security, justice, and public safety.

- No standard fits all requirements.
- There is a need to globalise data, break silos and connect them.
- We need to reply and conform to the customer needs.

Shuichi Tashiro
General Manager, Information Promotion Agency (IPA), Japan

Dr Shuichi Tashiro is driving an IMI project to enhance the semantic interoperability of eGovernment systems.

- Companies have their own historic solutions and it is difficult to change their mind-set.
- Mandating standardisation is not recommended: data standards are not mature enough.

Before establishing legal enforcement, good and mature standards should be developed and get the market buy-in.
Conference Highlights
A Corporate Information Management Framework for the European public sector - the sine qua non for Information Interoperability

Declan Deasy
Former Director, DG Informatics (DIGIT), European Commission

Declan Deasy retired in December 2012 as Director for “Information Systems and Interoperability Solutions” at the Directorate General for Informatics of the European Commission. He was responsible for managing the e-Commission initiative.

- Information management needs to move from vertical to horizontal, from departmental to corporate and from technology focus to information focus.
- Public administrations should perceive data and information as a public asset which should be appropriately generated, collected, managed, shared, protected and preserved.
- Public administrations should put in place an information management strategy at the highest possible level to avoid fragmentation and duplication. Metadata, master data and reference data management should be prioritised.
Conference Highlights

The Legal Entity Identifier: an industry standard providing open and reliable data for unique identification management

Clare Rowley
Head of Business Operations, Global Legal Entity Identifier Foundation (GLEIF), Switzerland

Prior to working with GLEIF, Clare Rowley worked at the United States Federal Deposit Insurance Corporation where she led technology initiatives improving bank resolution programmes and contributed to research on subprime mortgages.

- Global recognition: with the assignment of an LEI, a legal entity becomes a digital entity recognizable globally.
- The LEI may act as an easy means to link to other value-added reference data, but the focus of the LEI is to provide best in class quality management for this basic reference data.
Conference Highlights
Base Registries Data Management, the importance of semantics and the challenges ahead of us

Peter Burian
Programme Manager, ISA² programme of DG Informatics (DIGIT), European Commission

Peter Burian has led several projects dealing with various aspects of interoperability, including base registries and the Catalogue of Services, architecture and strategy.

- Information interoperability is improved when data is perceived as a valuable public asset.
- Public Administrations should put in place an information management strategy applying to all public data.
- The Core Data Models and Vocabularies developed by ISA are a good starting point to develop the information interoperability layer of the National and European Interoperability Frameworks.
Conference Highlights
Linked Base Registries as a key enabler for eGovernment in Flanders

Ziggy Vanlishout
Programme Manager Flemish Base Registries, The Flemish Information Agency (AIV), Belgium

Ziggy Vanlishout is currently coordinating the ‘Base registries for Flanders’ programme. This programme aims at developing an integrated and harmonised set of base registers for persons, organisations, addresses, buildings, parcels, roads and large scale topography.

- We need to move from ‘open standards for local administrations’ to ‘open standards for linked organisations’.
- Semantic interoperability in line with ISA/INSPIRE establishes a regional foundation for interoperability.
- Linked Base Registries are a key enabler for eGovernment in Flanders.

We need simplicity and correctly designed ontology: this is our challenge.
Conference Highlights

ISA Action on Catalogue of Services: A common vocabulary for linking-up and exchanging information about public services

Miguel Álvarez Rodriguez
Programme Manager, ISA² programme of DG Informatics (DIGIT), European Commission

Miguel Álvarez Rodriguez is responsible for several actions related to implementing interoperable solutions for public services, particularly in the areas of electronic identification and signatures, access to base registries, Catalogue of Public Services and eDOC.

- Public services' catalogues increase the use and efficiency of digital public services.
- CPSV-AP helps public administrations organise and interlink public services.

The Italian PSI infrastructure: The National Public Service Catalogue

Giorgia Lodi
Agenzia per l’Italia Digitale – AgID, Italy

Giorgia Lodi works for “Agenzia per l’Italia Digitale” on topics such as technical and semantic interoperability, (linked) open data, cloud computing. She also works as research assistant at the CNR (National Council of Research), in the Semantic Technology Laboratory (STLab).

- You need feedback from end users for creating landing pages of a service, this facilitates their navigation and purpose of being there.
- CPSV-AP has been reused and extended to fit the needs of Italian users.
Conference Highlights

EIRA semantic interoperability specifications based on standards

Raúl Mario Abril Jiménez
Programme Manager, ISA² programme of DG Informatics (DIGIT), European Commission

Raúl Mario Abril Jiménez works in the ISA unit as Programme Manager. His knowledge domains are Research Methods (Quantitative and Qualitative Analysis), Marketing (Research, IS), IT R&D (Portfolio Mgmt, Product Management), Project Management, and IS and Technology (Knowledge Management, DSS, BI, Data Warehousing, DBMS, IS Design).

- EIRA uses Interoperability (IOP) specifications to prescribe interoperability in Architectural Building Blocks (ABBs) and to document interoperability in Solution Building Blocks (SBBs).
- The objective is not to “re-invent the wheel”, but to use existing IOP specifications, such as DCAT-AP.
Conference Highlights

Linked Open Economy: take full advantage of economic data

Michalis Vafopoulos
Affiliate Researcher, National Centre for Scientific Research DEMOKRITOS, Greece

Michalis Vafopoulos is an affiliate researcher at the Software and Knowledge Engineering Laboratory (SKEL) of the Institute of Informatics & Telecommunications of the National Center for Scientific Research “Demokritos”. His research and speeches are focused on Web economics and business, economic networks, linked open data, Web philosophy and Web literacy.

- It is necessary to open and link economic data in: budget, spending, and procurement.
- Member states already make available economic data, but the lack of a good data structure and representation hamper the reuse of such data.

Open public finance is key for achieving public transparency and or gaining citizens’ trust.
Conference Highlights
Use of International Standards in the Financial Industry

Paul Janssens has been leading the LEI initiative from the early stages of developing the standard, through to the implementation of the largest LEI issuer to date (the GMEI Utility), in partnership with DTCC. He manages the BIC standard registration authority, and is now also actively involved in the adoption of the ISO 20022 standard for regulatory reporting.

- The stakeholders’ engagement is vital for standards’ development and uptake.
- The increasing volume of financial transactions generated the need to move from proprietary, paper-based standards to global, electronic standards.
- SWIFT’s “MyStandards” platform helps people share standards’ guidelines and suggestions.
Conference Highlights
Access to re-usable public sector information: the European Data Portal and the CEF programme

Daniele Rizzi
Policy Officer, DG for Communications Networks, Content & Technology (DG CONNECT), European Commission

Daniele Rizzi has been contributing to the development of Open Data policies in DG Communications Networks, Content and Technology, working in particular on the deployment of Open Data Portals.

- Open data generates economic opportunities, improves governance and citizen empowerment, addresses societal challenges and accelerates scientific progress. Moreover, it increases transparency, citizen participation and administrative efficiency and accountability.

- Open Data as a crucial part of the Data Economy, as presented in the Digital Single Market Strategy.

- To further boost the development of information products and services based on the reuse and combination of high-value open public data across the EU, the Commission will make available 3,5 million euros for co-financing projects in the Member States, via a call for proposal which will remain open until 15 September 2016.

Information is a valuable source, it is a renewable energy that we have to make reusable for improving the economy.
Conference Highlights

Panel discussion: Creating a European Open Data Ecosystem: DCAT Application profile for data portals in Europe - implementation cases

Andrea Perego
Scientific Project Officer, European Commission’s Joint Research Centre

Andrea Perego co-chaired the groups who developed the Core Location Vocabulary and the geospatial extension of DCAT-AP (GeoDCAT-AP) in the framework of the EU ISA Programme.

- DCAT-AP is a way to ensure that metadata is and stays interoperable when shared across different catalogues.
- DCAT-AP can also be used for sending datasets across domains.
- To support cross domain search, GeoDCAT-AP has mapped the data themes of DCAT-AP and INSPIRE.

Bart Hanssens
Interoperability Expert, Fedict, Belgium

As the Technical Lead of the federal Open Data Taskforce and one of the DCAT-AP 1.1 reviewers, Bart Hanssens designed the tools that harvest metadata from various Belgian regional portals and keep data.gov.be up-to-date.

- DCAT-AP allows easily harvesting from different regional data portals.
- Many harvested portals use different formats and technologies. Therefore, tools, scripts and mappings were developed based on DCAT-AP to facilitate the harvesting.
Conference Highlights
Panel discussion: Creating a European Open Data Ecosystem: DCAT Application profile for data portals in Europe - implementation cases

Hans Overbeek
Senior advisor standardisation, Netherlands Publication Office

Hans Overbeek has worked on the Dutch Open Government Data Portal, data.overheid.nl, and the Dutch Application Profile for DCAT, which is used to exchange metadata about datasets between data catalogues in the Netherlands.

- DCAT-AP themes need to be looked at, as an ecosystem where different islands exist next to each other.
- Start by checking what standards are available to lift your project and win time.
- The benefits of DCAT-AP standards should be promoted so the uptake increases.

Marco Pellegrino
Statistical officer and project manager c/o http://ec.europa.eu/eurostat

Marco Pellegrino has been active in the creation and promotion of the Statistical Data and Metadata eXchange (SDMX) standard for data and metadata exchange (ISO IS 17369) and its infrastructure.

- The goal of Eurostat is to be a standardised framework for providing metadata in a discoverable way.
- If Eurostat provides the data directly, it would become the bridge between different standards.
- SDMX standardises the way data are organised and exchanged, and provides international guidelines on how to shape the data.
Conference Highlights
Panel discussion: Creating a European Open Data Ecosystem: DCAT Application profile for data portals in Europe - implementation cases

Simon Dutkowski is responsible for the technical aspects of Open Data projects and works for the European Data Portal which is based on the metadata specification DCAT-AP.

- DCAT-AP facilitates the automatic harvesting of data portals from national portals into the European Data Portal. However, when metadata is described in proprietary formats, a lot of effort is required to transform metadata into DCAT-AP.
- A lack of understanding about DCAT-AP sometimes leads to inaccurate or poor metadata descriptions.
- Moving the responsibility of the mapping of categorisations to the data provider could be an option to consider for improving the mappings.
SEMIC speakers and panellists’ organisations

St. James’s Hospital in Dublin (Ireland)
Agenzia per l’Italia Digitale - AgID
DG Informatics, European Commission
National Strategy Office of IT, Cabinet Secretariat, Government of Japan
IJIS Institute, USA
Ministry of State in Luxembourg
EU Publications Office
Spanish Ministry of Finance and Public Administration
IT-Standards Coordination Office (KoSIT), Germany
Information Promotion Agency (IPA), Japan
Global Legal Entity Identifier Foundation (GLEIF)
The Flemish Information Agency (AGIV), Belgium
National Centre for Scientific Research DEMOKRITOS, Greece
SWIFT
DG CNECT, European Commission
Fraunhofer FOKUS, Germany
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The annual SEMIC conference is organised by the European Commission’s ISA² programme. ISA² is a EUR 131 million programme supporting the modernisation of Public administrations in Europe through the development of solutions that enable Public administrations to smoothly interact with each other, businesses and citizens. ISA² also supports the development of solutions for the implementation of EU policies.

The ISA² programme supports a large range of activities for Semantic interoperability. Further information on these activities can be found here.
For more information, visit the ISA website
http://ec.europa.eu/isa/