



European
Commission

Semantic Interoperability Conference 2016

Data standards
for interconnected
Public Administrations

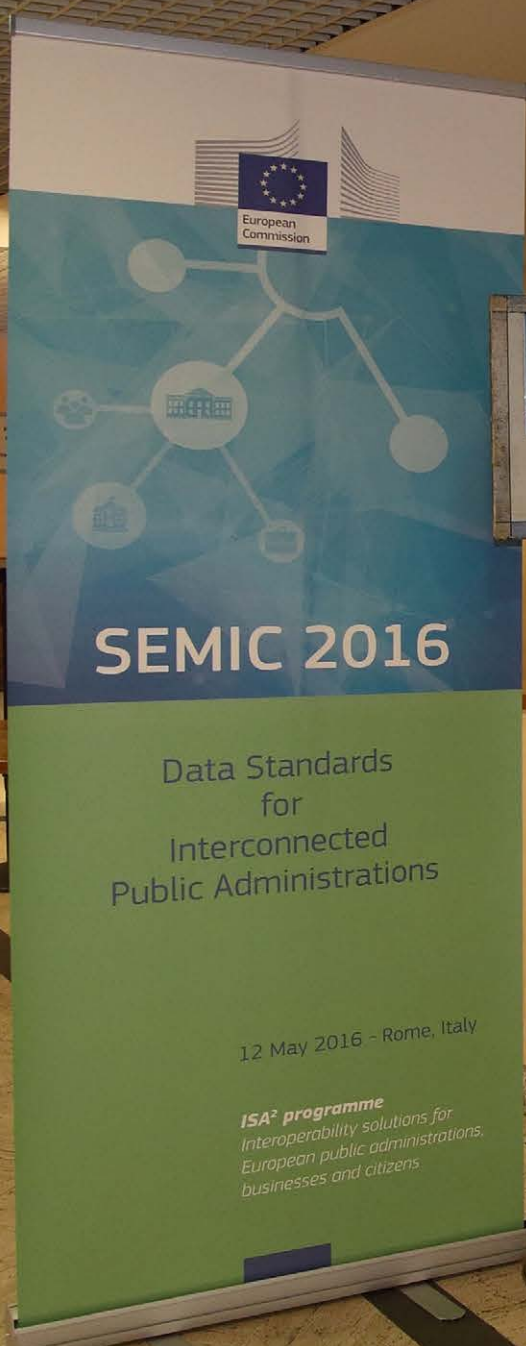
Highlights Report

12 May 2016
Rome, Italy





European
Commission



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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.

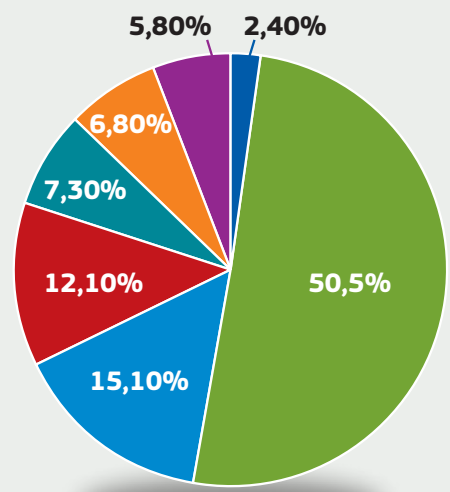
The biggest challenge is to raise awareness around which standards exist and how to connect them.



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SEMIC 2016 Conference Figures

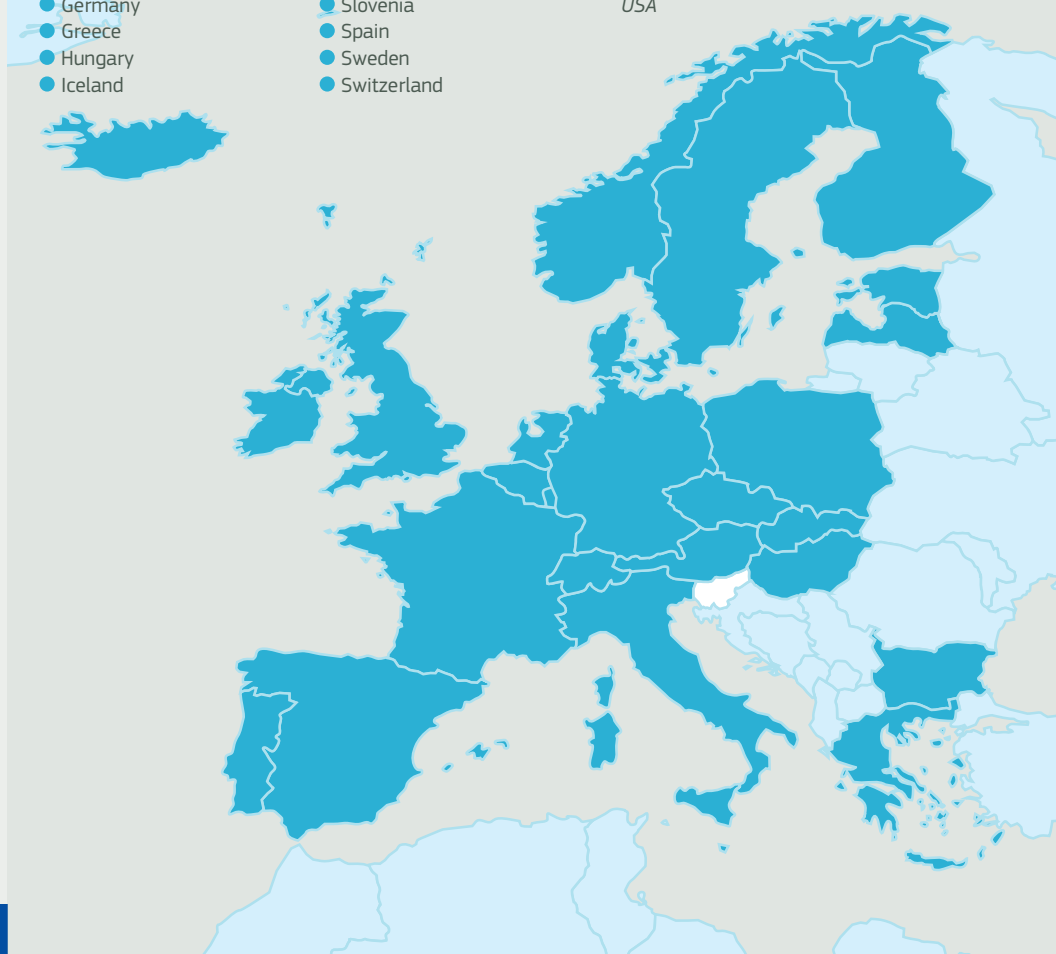
206 participants from 32 countries



- Public administration
- Academia
- Private sector
- Non-profit organisation
- European Institution
- Standardisation body
- Other

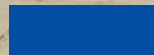
- Austria
- Ireland
- The Netherlands
- Belgium
- Italy
- United Kingdom
- Bulgaria
- Latvia
- Luxembourg
- Cyprus
- Malta
- Czech Rep.
- Norway
- Poland
- Denmark
- Portugal
- Slovakia
- Estonia
- Slovenia
- France
- Spain
- Germany
- Sweden
- Greece
- Switzerland
- Hungary
- Iceland

+ Japan
Russia
Uruguay
USA





Conference Highlights



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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

*Standards are
useless unless
implemented.*



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 [GSI](#) 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.



It is very important to share the information, but also to protect it.



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 “**I**nformation 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.





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.



We need communication hubs, to clearly show the potential of the standards to the stakeholders.



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.

*The success
of a standard
can be measured
by 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.



The lack of data interoperability is a real obstacle for a modernised public administration.



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

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



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.



Conference Highlights

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



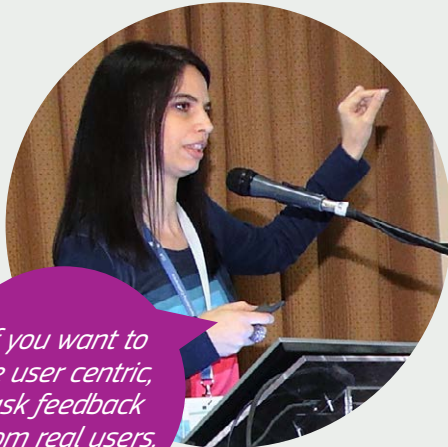
Miguel Álvarez Rodriguez

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.



If you want to be user centric, ask feedback from real users.

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



*Open public finance
is key for achieving
public transparency
and or gaining
citizens' trust.*

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.



Conference Highlights

Use of International Standards in the Financial Industry



Paul Janssens

Programme Director, SWIFT, Belgium

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.

We use standards every day without noticing it.





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

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



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.



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](http://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.

Applying the standard from the beginning of the project saves a lot of time.



The purpose of SDMX is to improve the discoverability of metadata.



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

Senior System Architect, Fraunhofer FOKUS, Germany



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
Eurostat
Joint Research Centre
Netherlands Publication Office
Fedict, Belgium



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Stay connected



Project Officers

Vassilios.Peristeras@ec.europa.eu

Athanasios.Karalopoulos@ec.europa.eu

The Semantic Interoperability Community (SEMIC)

<https://joinup.ec.europa.eu/community/semic>

Visit our initiatives

ADMS ASSET DESCRIPTION METADATA SCHEMA		
DCAT-AP FOR DATA PORTALS IN EUROPE	GeoDCAT-AP FOR GEOSPATIAL DATASETS	StatDCAT-AP FOR STATISTICAL DATASETS
CORE PERSON VOCABULARY	CORE PUBLIC SERVICE VOCABULARY	CORE LOCATION VOCABULARY
CORE BUSINESS VOCABULARY	CORE PUBLIC ORGANISATION VOCABULARY	CORE CRITERION & EVIDENCE VOCABULARY

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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](#).



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*Interoperability solutions for
European public administrations,
businesses and citizens*

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