



Agenzia per l'Italia Digitale
Presidenza del Consiglio dei Ministri



Semantic Interoperability of Basic Data in the Italian Public Sector

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Agenzia per l'Italia Digitale (AgID)



- Created last year, AgID is a public body that merged three different existing public organizations (i.e., DigitPA, Agency for the Promotion of Technologies for Innovation, and Department of Innovation and Technology of the Presidency of Council of Ministers)
- It is under the direct control of the Presidency of the Council of Ministers
- It is mainly responsible for implementing the **Italian Digital Agenda** and has the mandate to perform a number of tasks within the Italian Government such as:
 - To contribute to the spread of the use of information and communication technologies (ICT)
 - To develop technical requirements and guidelines for promoting interoperability
 - To enable full cooperation between information systems of governmental bodies and between these systems and the European Union



Italian interoperability scenario

- In the Italian regulatory scenario interoperability plays a crucial role for both Public Administrations (PAs) and ICT market
 - It is a pillar concept of the legal interoperability framework named **Digital Administration Code (CAD)**
- The legal framework is enforced by the Italian ICT interoperability framework SPC - Sistema Pubblico di Connettività e Cooperazione
 - It consists of two principal building blocks: **the application services and the national interoperability infrastructures**
 - The national interoperability infrastructures include, for instance, **the catalogue of ontologies and metadata** and a number of **base registers** (e.g., Public Administration Registry, National Catalogue of Geographical Metadata)

SPCData project

- Open up national base registers
 - Compliant with W3C standards
- Leverage the SPC national interoperability infrastructures for the creation of **the Italian Linked Open Data cloud of Public Administration's data**
- Enable semantic interoperability
- Evaluation of Semantic Web technologies and their potentiality for enforcing semantic interoperability

SPCData project



- RDF data: **Public Administration Registry, SPC contracts, official classification of the territory** (in collaboration with the National Institute of Statistics - ISTAT)
- Interlinking with other RDF data: DBPedia, Florence Municipality, etc.
- Reuse of well-know ontologies/vocabularies (e.g., FOAF, CreativeCommons, GoodRelations)
- SPARQL endpoint to access data for human beings and machines



- Demo Applications
- Infographics



<http://spcdata.digitpa.gov.it>

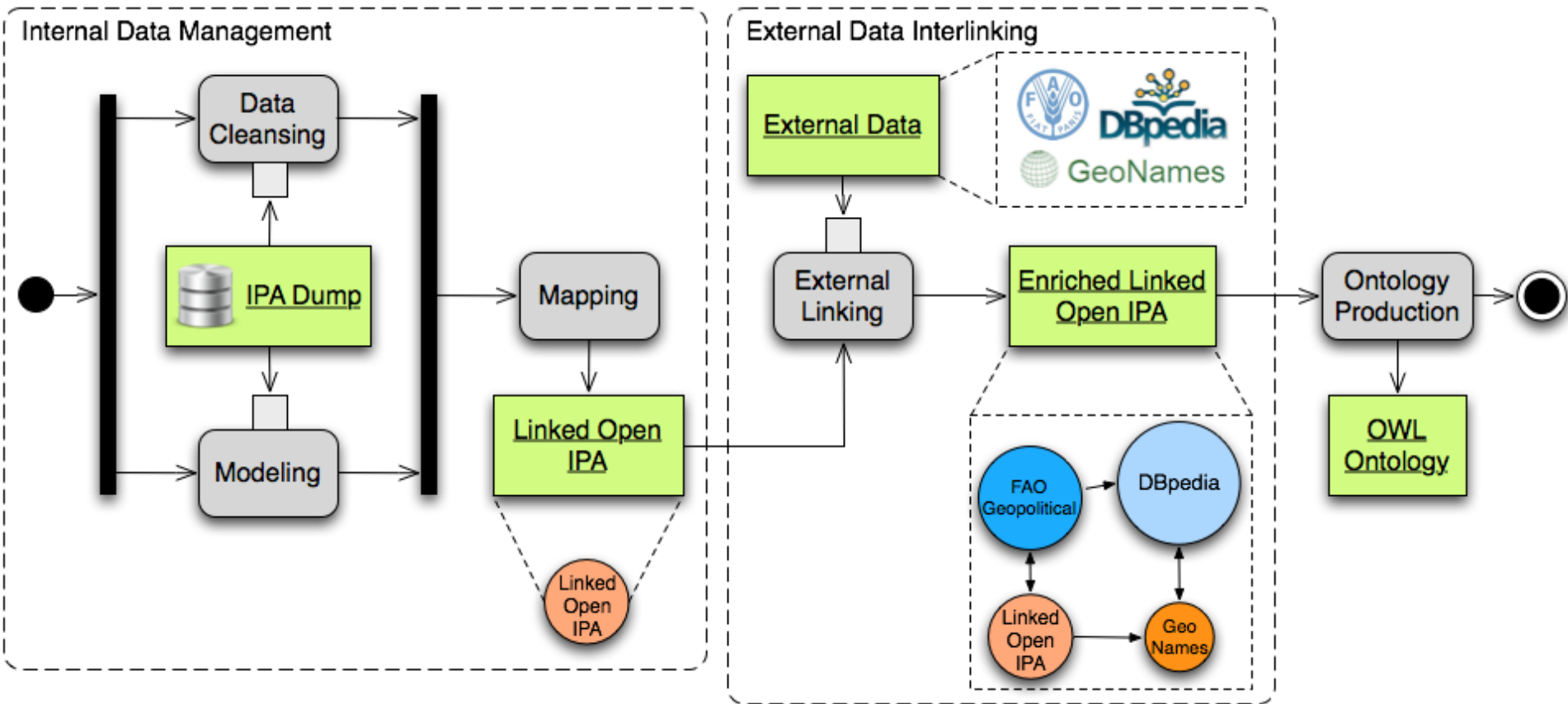
SPCData project: the case of Public Administration Registry - IPA



- **National registry fed by Public Administrations (PAs)** every six months (article 57-bis of Digital Administration Code – CAD)
- **It includes data necessary to establish a, possibly electronic, communication with legal value** either among PAs or between PAs and citizens/enterprises
- In particular, it includes tax codes, e-mail and certified e-mail addresses, postal addresses, official web site URLs, people in charge and organizational structures (e.g., offices and departments) of about 21.000 Italian PAs (central and local)



Linked Open IPA



Giorgia Lodi, Antonio Maccioni, Francesco Tortorelli, "Linked Open Data in The Italian e-Government Interoperability Framework", in *Proceeding of METTEG 2012*, May 2012

Guidelines for Semantic Interoperability through Linked Open Data



- On March 2012, the SPC governance body created a working group on semantic interoperability
 - In November 2012, the *Guidelines for Semantic Interoperability through Linked Open Data* were published
 - A summary in English of the guidelines is also available
- **Objectives**
 - Augment the awareness of PAs on how to produce and publish **interoperable open data**
 - Outline a **methodology for open data under the form of Linked Open Data**
 - Use of ontologies to describe data
 - Provide an insight of **legal aspects and business models** enabled by Open Data
 - Identify the role of SPC and national shared infrastructures. **SPCData can become the Italian linked open data hub**



International collaborations

- In SPCData, we used **Core Vocabularies** developed in the context of ISA programme
 - In the Public Administration Registry - IPA
 - **Org** to describe the structure of Public Administrations
 - **Core Location** to describe physical addresses of Public Administrations
 - **Core Public Service Vocabulary** to describe services provided by Public Administrations
 - In the official classification of the territory, use of **Asset Description Metadata Schema (ADMS) + SKOS**
 - In SPC contracts we are currently evaluating how to use **RegOrg**
- Working Group for the definition of the Core Public Service Vocabulary
- Piloting activity on the use of Org for **interlinking Italian Public Administration Registry with Linked Data of MAREG in Greece**
- Thematic Network on standards for open data



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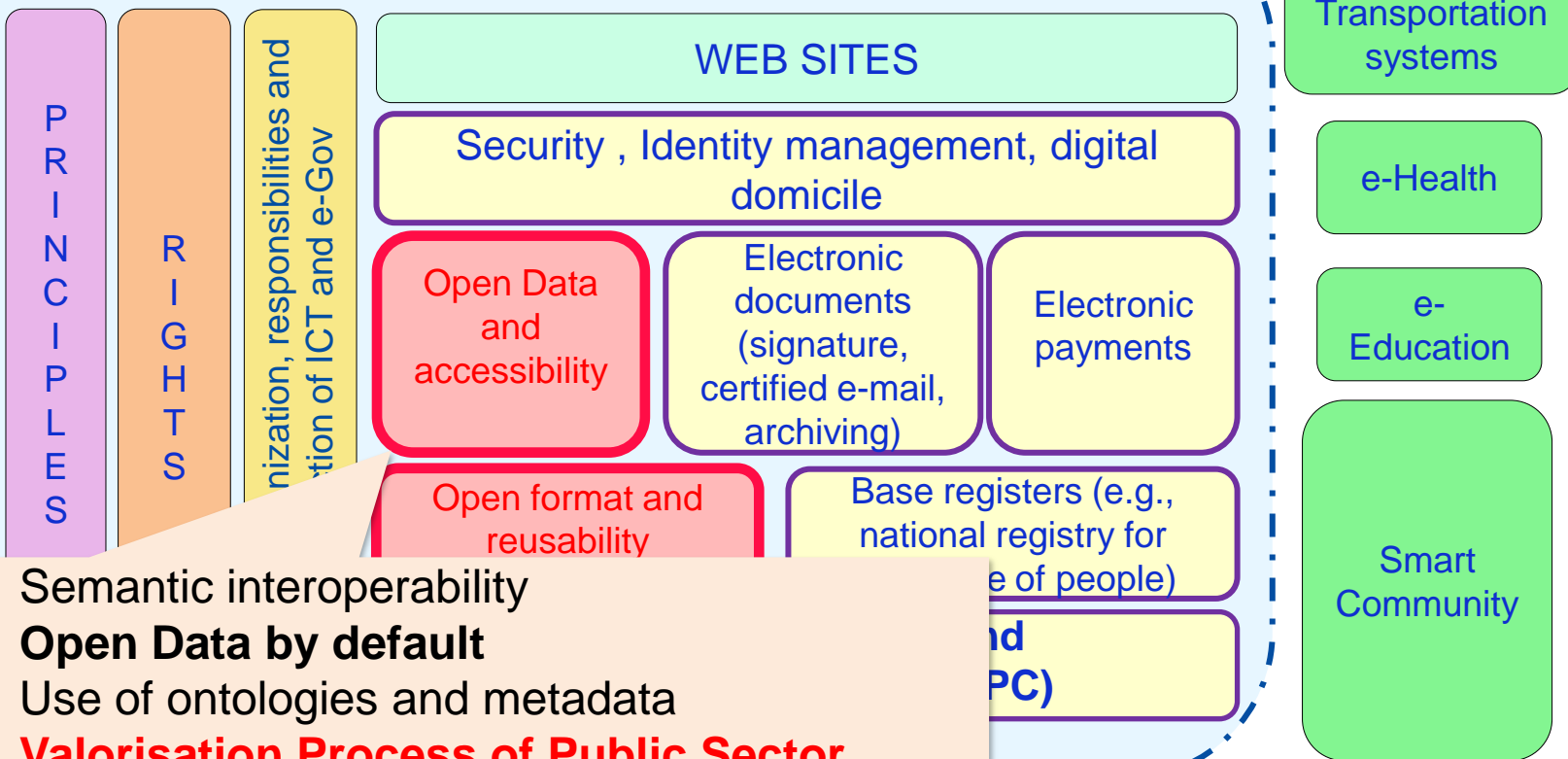
What's currently going on?

Italian Digital Agenda

Born in December 2012, it reinforces the interoperability principle

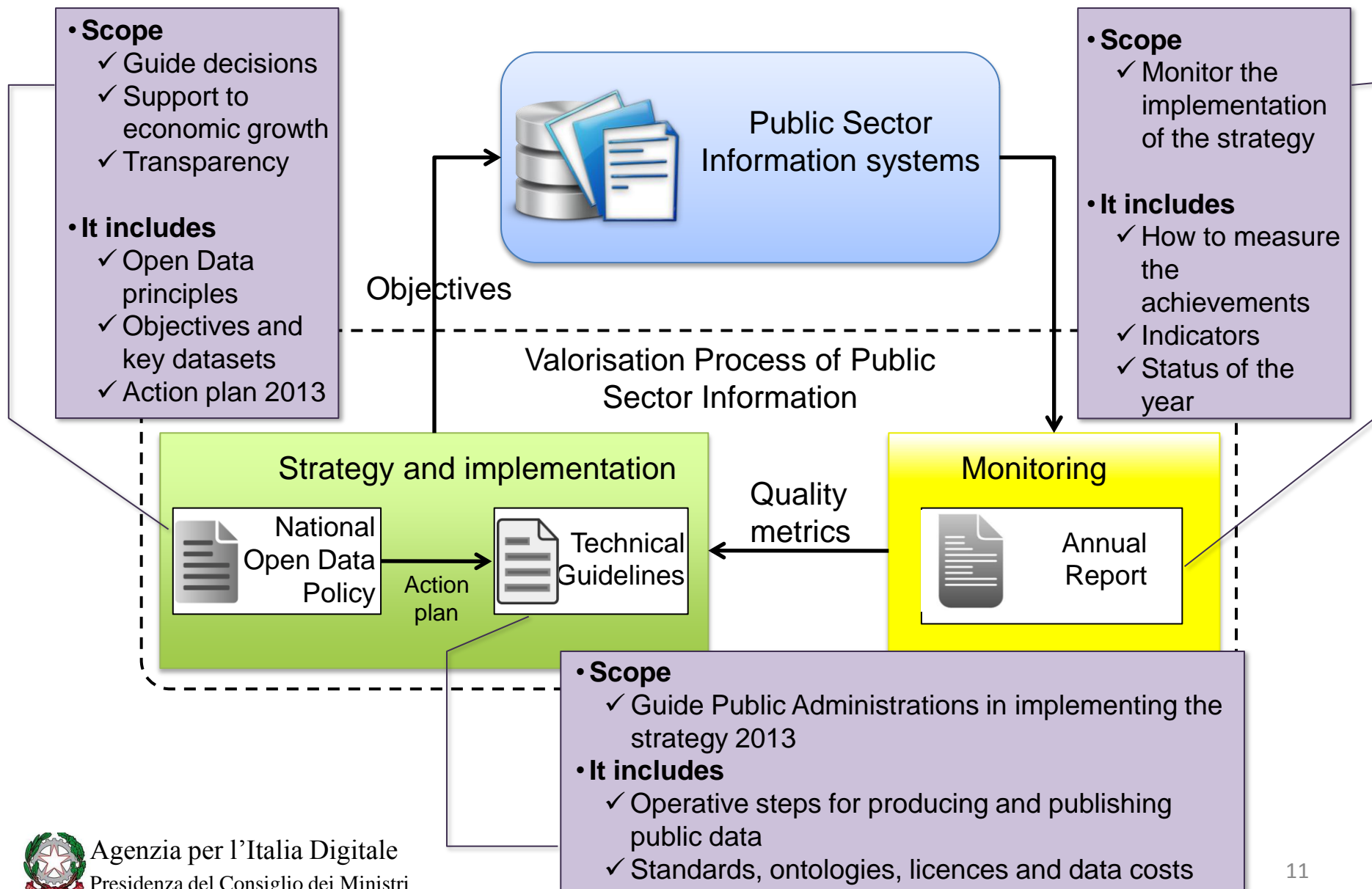
Italian Digital Agenda (Law Decree n.179/2012)

Digital Administration Code - CAD



- Semantic interoperability
- **Open Data by default**
- Use of ontologies and metadata
- **Valorisation Process of Public Sector Information**

National strategy for the valorisation of the Public Sector Information



Concluding Remarks

- More than 6000 open datasets are available; however, we still need to guide Public Administrations in meeting crucial principles
 - **Maximum reuse**, with the identification of licenses to be associated with the data that allow the use even outside the national borders
 - Use of **metadata and ontologies** to describe the data
 - Data **Accessibility**
 - **Completeness**
 - **Authenticity**
 - **Timeliness**
 - **Disaggregation**
- Linked Open Data (LOD) starts emerging, especially for geodata
 - **Public Administrations, do not be scared by LOD! 😊**
 - **LOD can be an opportunity to be exploited for semantic interoperability**

Future Works

- Start the entire Valorisation Process of Public Sector Information
 - The national **Open Data Policy for 2013 has been already submitted** to the President of Council of Ministers for the approval
 - The **technical guidelines could be released on July 2013**
 - We will start **collaborations with Public Administrations** in order to support them in opening up in LOD strategic data (**even through the use of SPC national shared infrastructures**)
- Leverage our experience in semantics for **the e-SENS project** (www.esens.eu),
 - “semantics and processes” is one of the pillars of the future European interoperability architecture for cross-border public services





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Thank you for the attention!