National Interoperability Framework Observatory – First coffee talk

Creation of national catalogues of services and solutions to foster interoperability

25 November 2021
Introduction to NIFO and the European Interoperability Framework (EIF)

Presentation from our two guest speakers and dedicated Q&A sessions

Discussion around the topic of national catalogues with the audience

Closing remarks and collection of feedback
Today’s speakers

Frank Leyman
Head of International Relations at the Belgian Digital Transformation Office (BOSA)

Ana Rosa Guzmán Carbonell
Sub-directorate General of Planning and Governance for Digital Administration at the Spanish Ministry of Economic Affairs and Digital Transformation
Today’s attendees

• Guido Doucet, BOSA (Belgium)
• Jesus Camy Escobar, ELRA
• Suzanna Marazza, Università della Svizzera italiana
• Anabel Fraga, UC3M
• Xenophon Tsilimparis, National Infrastructures for Research and Technology (Greece)
• Edouard Dumonceau, Trasys International/NRB
• Charalampos Vassiliou, Hellenic Ministry of Digital Governance
• Stefan Dedovic, University of Tartu (Estonia)
• Kai Sattler, PublicPlan (Germany)
• Helle Astrid Stedøy, Norwegian Digitalisation Agency
• Sergio Muñoz
• Krystyna Michalik, Chancellery of the Prime Minister of Poland
• Salina Castle, Tallinn University of Technology (Estonia)
• Art Alishani, University of Tartu (Estonia)
• Vassilios Peristeras, European Council

• Olesia Danylenko, Eurasia Foundation
• Šimon Trusina, Ministry of the Interior (Czech Republic)
• Tomas Sedivec, Ministry of the Interior (Czech Republic)
• Alena Klimova, Ministry of the Interior (Czech Republic)
• Jorge Sousa, AMA (Portugal)
• Priit Kreitzberg, Ministry of Economic Affairs and Communications (Estonia)
• Mariusz Przybyszewski
• Paweł Masiarz
• Konstantina Kyriakopoulou, Trasys International/NRB
• Patrizia Ciurlia, Trasys International/NRB
• Danica Šaponja, e-Government Development at Ministry of Public Administration (Slovenia)
• Gunnar (Sweden)
• David K.
• Jonas

Thank you for your enthusiasm!
What is NIFO and what does it do?
The main mission of NIFO is to monitor the implementation of the revised version of the European Interoperability Framework (EIF) and to help foster the capacity building policy and modernisation of public administrations. By doing so, it aims at becoming an online community of practice and the prime source of information regarding digital public administration and interoperability matters within Europe.
What is done under NIFO?

Under NIFO’s Knowledge Centre, users can access to all the information and resources published by NIFO, providing also links to external resources, when needed.

To learn more about the recent developments in the field of digital public administration and interoperability across Europe, users can browse the information and resources published by NIFO thanks to two main thematic Hubs:

- **DIGITAL POLICY HUB**
- **INTEROPERABILITY HUB**
What is the European Interoperability Framework?
Published in 2017, the European interoperability framework is a commonly agreed approach to the delivery of European public services in an interoperable manner. It defines basic interoperability guidelines in the form of common principles, models and recommendations.

The EIF was created in the spirit of Articles 26, 170 and 171 of the Treaty on the Functioning of the European Union calling for the establishment of 
interoperable trans-European networks that will enable citizens to derive full benefit from a European internal market.

- Inspire European public administrations in their efforts to design and deliver seamless European public services;
- Provide guidance to public administrations on the design and update of national interoperability frameworks (NIFs), policies, strategies and guidelines.

The EIF is meant to be a generic framework applicable to all public administrations in the EU. It lays out the basic conditions for achieving interoperability, acting as the common denominator for relevant initiatives at all levels.
Introduction to the EIF Monitoring Mechanism

The EIF Monitoring Mechanism's (EIF MM) goal is to provide each Member State with its level of implementation of the EIF based on a recommendation-by-recommendation measurement as defined by the Article 1.2 of the ISA² Decision stating that "the Commission, through the ISA² programme, shall monitor the implementation of the EIF".

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<th>Input</th>
<th>Monitoring Mechanism</th>
<th>Benefits</th>
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<td><strong>Primary indicators</strong>&lt;br&gt;A survey of national contact points will be conducted to obtain responses needed to measure primary indicators.</td>
<td><strong>Member States gain intelligence</strong> on which operation areas they can improve in.</td>
<td><strong>Member States obtain granular information</strong> on their level of EIF implementation.</td>
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<td><strong>Secondary indicators</strong>&lt;br&gt;Secondary research will use existing data sources, such as the Open Data Portal, DESI, and eGovernment Benchmark Report, Eurostat, etc.</td>
<td>Simplified evaluation process through existing indicators.</td>
<td>Useful input for <strong>ISA² programme</strong> mid-term and final evaluations.</td>
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<td>Identification of <strong>synergies across EC</strong> facilitating interoperability.</td>
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Belgium’s way of creating national catalogues of services and solutions to foster interoperability
Mission of the Belgian Digital Transformation Office

- The Directorate-General Digital Transformation supports the Belgian federal government and its organizations with their digital journey.

- The DG is the driving force behind the reshaping of the government’s digital landscape of public services.

- The DG consults and manages projects with special attention to the user experience of the citizens and commerces, with a focus on sustainable and scalable new technologies.
Values, strategic objectives & roles of the DG Digital Transformation

Values
- Customer-focused
- Collaboration
- Respect
- Responsibility

Roles
- Facilitator
- Service Owner
- Digital Transformer
- Innovator

Strategic Objectives
- Digital Strategy
- Digital Interactions
- Digital Policy
- Center of Excellence
- Relationships and Networks
- Social Support
- Collaboration Reuse
- Innovation
- Operational Excellence
Exchanges between and within networks of service integrators
PRIVACY = self-determination on how your data is used

Citizens & companies want interaction with the government (no wrong door principle)

Simple, proactive & intelligent services

Transparency & re-use of own data
The Federal Service Integrator in a nutshell

Authoritative Source
- reference database for a certain type of data (e.g., The National Register for personal data of Belgian Citizens)

Service Integrator
- offers uniform approach and smart services for a safe exchange of data, after control of permissions and legal basis, and with respect of privacy

Consumer organisation
- public sector service that, conform a legal basis and permission, collects data and puts it available for the end-user in own applications
Role of the Service Integrator

• Striving to **reduce the administrative burdens** that arise when providing services
  • Apply "only once“ principle.
• To **facilitate this exchange of data** by means of the federal service integrator and the accompanying services.
• The ICT platform **provides secure, uniform access to the data sources** in the form of web services.
• These are **standardised**, technical links between the data sources and the government organisations that use these data.
• The links are aimed at **machine-to-machine communication** and are based on the most common protocols (SOAP, REST, ftp).
• The federal service integrator equips all web services with the necessary components for **security and privacy** audit logging. If necessary, the federal service integrator applies transformations or orchestrations to some web services before offering them to users.
• You can consult the range of web services in the federal service integrator catalogue.
  • [Catalogue Service Integrator | DG DT (bosa.be)](https://example.com)
Families of web services already available

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Connecting as a service consumer

The services are available to all government services and institutions.

- Other organisations can also use the services of the FPS BOSA, insofar as these organisations fulfil a legal task of general interest, and exclusively in function of this legal task of general interest.

The **connection procedure** consists of:

- Endorsement of the FSB terms of use by signing the federal service integrator user agreement;
- Providing the legal basis for the use of the data
- Setting up the connection on a technical level:
  - Requesting and installing the necessary certificates or security tokens;
  - Providing the IP addresses to be whitelisted;
  - Implementing the web service in the user’s application
  - Testing the connection, security and audit logging
Challenges and opportunities

**DATA INCREASE**
- The never-before-seen data growth offers new opportunities for social and economic value creation

**NEW TECHNOLOGIES**
- New technologies are both driver of data explosion (IoT, 5G, social media) and solutions to deal with it (AI, quantum, edge computing)

**LEGAL FRAMEWORK**
- Legislation provides a framework for dealing in a responsible manner with big data and creates confidence in a correct use of it

**PUBLIC OPINION**
- Expecting simple and proactive public services
- Transparency on what data is used and why
Agile approach, automation of processes (test & deploy, scalability, onboarding, documentation, self-service).

Clear catalogs (DAIC), (Open) Data dives, public & private data (B2G), AS registry

Combining datasets into smart results (PDC), integration regional services, (BeSt), standardization, re-use

Maximizing scala of datasets and services to access them (PDC, API, WS, MFT, OpenData downloads)

PAL DB, EA, eBox, user-centricity, user journeys, alignment & understanding business cases

GDPR Registry, privacy & security by design, FISP, pentesting, PAL, PIA, guide for set-up AS, digital trust

Actions

Big Data

6 V’s

Volume

Value

Veracity

Variety

Velocity

Visualisation
Datasets (ongoing effort)

- Personal details
- Company details
- Central Criminal Records Register
- Cadastral particulars
- Driving licences & vehicles
- Country codes
  - Annual statements of accounts
  - Tax and social security debts
  - …
  - …
Federal Service Integration statistics 09/2021

Load: 81.4 Million requests (+23% compared to August)

Availability 24/7: 100%

Performance: Average < 1s

Highlights: PoliceServices +400%, MobilityServices +115%
Thank you

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**Q&A**

**Question:** How is the exchange of information organised between Belgian ministries?

**Answer:** Certain principles apply to such an exchange of information. First of all, each ministry manages its own data in a dedicated database. This data is unique, and a database cannot be copied. Therefore, the data is available between entities through the Federal Service Bus (FSB), which is managed by the FPS BOSA. To access the data, the civil servant who requests it has to provide the legal basis for accessing the data and also needs to respect privacy rules. If these criteria are met, BOSA will connect the civil servant with the appropriate database and to the requested data only. The access will be provided only to the requester, not the entire department at once.

**Question:** Sweden is working on a secure digital integration of the communication between members of public administration (through encrypted email and certification). Is there something similar in Belgium?

**Answer:** In Belgium, everyone who is active on the FSB is identifiable, as they have to authenticate themselves with their ID. This makes it possible to trace what is done when using the FSB. To ensure secure communication between Belgium and Sweden, for example, eIDAS rules would apply.

**Complementary answer:** In the Czech Republic, they have a solution similar to the FSB. They are also working on a centralised solution to ensure interoperability with other EU administrations and public entities.
Spain’s way of creating national catalogues of services and solutions to foster interoperability
Spanish Catalogues for Organisational Interoperability

2021
The Spanish Context

Interoperability In Spain
Spanish Complexity

- **Multiple actors** and relationships
- **Multiple** independent **administrative levels**
  - university, local, provincial, regional, national, european
- Legal, organizational, semantic, technological **heterogeneity**
The 3 IOP Pillars in Spain

- **Legal Framework**
  - IOP embedded in Legal Framework
  - C&G bodies ensure IOP
  - Stakeholder Engagement
  - IOP Awareness
  - IOP Dissemination

- **Cooperation & Governance**
  - Common services enabling IOP at great scale
  - Building blocks
  - Reuse of IOP assets
Royal Decree 4/2010, January 8, which regulates the National Interoperability Scheme in the field of Electronic Administration.

Texts of a legal nature provided by Law 40/2015 (Laws 30/92 & 11/2007 revision)
Extended by Royal Decree 203/2021
Applicable to the entire Public Sector
Result of a collective effort: AGE, Aut.Regions, Local Entities, Justice, CRUE, ICT Sector
Aligned with the recommendations of the European Union (EIF) and the OECD
Staggered implementation

Details developed by Technical Standards, their Application Guides and Audit Manuals.
ENI Basic Principles

**Integral quality**
- From the conception of the systems and throughout their entire life cycle

**Legal**
- Legal framework that empowers cooperation and exchange

**Organizational**
- Collaboration between entities and interaction of services, procedures and processes.

**Semantic**
- Information automatically understandable and reusable by applications that did not intervene in its creation

**Technical**
- Interaction of technological systems, through specifications that respect technological neutrality

**Temporal**
- Guarantee access to information over time

**Multilateral solutions**
- For escalation, modular and multiplatform architectures, sharing, reusing and collaborations
1. The Sectorial Commission of e-Administration, dependent on the Sectorial Conference of Public Administration, is the **technical cooperation body** of the General State, the Autonomous Communities and Local Entities Administrations in matters of electronic administration.

2. The Sectorial Commission of the eAdministration will develop, at least, the following functions:
   - a) **Ensure the compatibility and interoperability** of systems and applications used by Public Administrations.
   - b) Promote the eAdministration development in Spain.
   - c) **Ensure cooperation** between Public Administrations to provide clear, up-to-date and unambiguous administrative information.

3. When because of the addressed matters are of interest, the organizations, corporations or social agents may be invited to participate in the deliberations of the Sectorial Commission as deemed appropriate in each case.

**LRJSP 9th Additional Provision**
Accession agreements

Adhesion of Autonomous Communities and Local Entities to General Administration’s platforms and registries.

• ..., Autonomous Communities and Local Entities may voluntarily join to the digital platforms and registries established by the General Administration. Their non-adherence must be justified in terms of efficiency.

• Whether an Autonomous Community or a Local Entity justifies ... and chooses to maintain its own registry or platform, the aforementioned Administrations must guarantee that it complies with the requirements of the National Interoperability Framework, the National Security Scheme, and its technical standards.
Directory of Public Entities

DIR3 - Organisational Interoperability

104,415 Public units
19,718 Public Offices
9,574 Users
1.b) Public administrations shall maintain an updated list of administrative bodies and citizen offices and their mutual relationships. Each inventory shall be linked to DIR3, which is managed by the central government and shall provide a univocal codification.

2) Each Public Administration shall regulate the creation and maintenance of this inventory according to the agreed conditions and IOP technical standards; Public Administrations will be able to use the national inventory to create and maintain their own inventories.

Usage

- eDocuments & eFiles
  - Issuing body
- Administrative Procedures
  - Competent body
- Virtual office web portal
  - Competent body
- Entries of virtual Registry office
  - Registry office
  - Processing body
- eInvoices
  - Processing body
  - Accounting office
  - Management body
Upload Services
- Single source
- Complementary sources

Download Services
- Full
- Incremental
- Filtered
- Changes
- Code Lists

Access Control
- Action
- User
- Source
- Predecessor

Quality Control
- Data quality rules
- Dictionary

Model
- Coordination, quality, historical record and Unique codification
Codification scheme

- E XXXX VV Central Government
- A CC XXXX Autonomous Regions
- L EE XXXX Municipalities
- U SS XXXX Universities
- J XXXX Justice Administration
- I XXXX Other institutions
- O XXXX Offices
- GE XXXX Econom-Budget Mngmt Units
- EC XXXX Collaborating Entities
- CC XXXX Chambers of Commerce
- GL XXXX Local action groups

Status

- V Active
- E Extinct
- T Transitory

Relationships

- R1 Hierarchy
- R2 Functional dependency
- R3 Competence transfer
  - Name change
  - Upper level change
  - Split
  - Merge
Administrative Procedure Information System

SIA - Organisational Interoperability

77,278 Procedures
- 6,499 national level
- 26,400 regional level
- 44,316 local level
1.a) Public administrations shall maintain an updated list of administrative procedures and provided services in a classified and structured way. Each inventory shall be linked to SIA, which is managed by the central government and shall provide a univocal codification.

2) Each Public Administration shall regulate the creation and maintenance of this inventory according to the agreed conditions and IOP technical standards; Public Administrations will be able to use the national inventory to create and maintain their own inventories.
Double goal

Information to Citizens

• Basic data
• Current regulation
• Procedure URL
• Documentation to present

SIA code for using common services

• Notification Platform
• Data Intermediation Platform
• Entry registries exchange
• eDocument exchange & eArchive
• Representation Registry
• Citizen folder
• ePortals
Content Typology

- **Procedure**
  - With claiming option (e.g. authorisation, aids, license)

- **Internal**
  - Aimed to public units or civil servants

- **Common**
  - Activity common to all or several public bodies

- **Service**
  - Without claiming option (e.g. fee payment, consultation, prior appointment)

- **External**
  - Citizen or business as initiator or addressee

- **Specific**
  - Activity specific of a particular sectoral domain
Metadata

1. Identity
   - Code, Typology
   - Name, title, description, Competent authority
   - Availability, fee

2. Classification
   - Matter, Sub-matter
   - Purpose

3. Access
   - Initiation requirements
   - Identification systems and requirements
   - Registries of representation
   - Level of digitalization, Links

4. Information
   - Initiation type, Silence effects, Timeline, Claims
   - Legislation
   - Notification types

5. Documentation (Evidence)
   - Required docs and compulsion
   - Specific shared docs
   - Common shared docs

6. Statistical data
   - Processing
   - Notifications

7. Archiving
   - Archival processing attributes
Thank You!
**Q&A**

**Question:** Rather than creating one catalogue per country, the principles of the eDelivery framework could be used to share data between countries, i.e. using the DNS of the country you want to exchange data with. Do you think such a solution could be implemented across the EU?

**Answer:** This could work, but in the end, we would need a more sophisticated solution. Depending on what you want to do, e.g. send notifications to citizens/businesses, each country has a specific platform. If you want to share data following the once-only principle, a platform is needed to integrate legal provisions to this effect. The problem is that it requires to have a legal basis for interoperability in place, and this is the biggest challenge.

**Complementary answer:** The eDelivery framework and encrypted emails could be used.
Discussion around the topic of national catalogues between the speakers and the audience
At EU27 level, the EIF monitoring mechanism for the Member States in 2020 showcased that the median value for **KPI 44**, corresponding to the use of ICT catalogues, was 3.
Closing remarks and feedback collection
The next NIFO coffee talks

Did you think this coffee talk was useful?

Do you have any recommendations for the next editions of the coffee talks?

What other topic do you wish to discuss during the next NIFO coffee talk?
The next NIFO coffee talks

As mentioned by one of the participants, a future coffee talk could be dedicated to central catalogues, like those presented by Ana Rosa today. Different countries could present, in about 5 minutes, similar initiatives within their organisation, the procedures in place, and the corresponding services offered.

Please do not hesitate to share your feedback and ideas for future NIFO coffee talks with us by reaching out to ps_research@wavestone.com