Framing Interoperability in Europe (EIF and ISA²)

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Directorate General for Informatics – Interoperability
European Commission
Back in 1995

Source: The Internet Society - Democracy and Network Interconnectivity
In 2015

Source: National Centre for Public Administration and Local Government (EKDDA)
Digital Public Services & Interoperability
Self Reinforcing

Alignment EU-National Interop.*

Digital Public Services Score**

Spain  | Portugal  | Malta  | Italy  | Ireland  | France  | Finland  | Estonia  | Denmak  | Croatia  | Belgium  | Austria

Source:
* National Interop. Framework Observatory - 2016
** Digital Economy and Society Index - 2016
Citizens & businesses on the move, Cross-border on the rise!

<table>
<thead>
<tr>
<th>EU CITIZENS in another Member State</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Workers</td>
<td>7.1 million (2013)</td>
</tr>
<tr>
<td>Residents</td>
<td>18.5 million (2014)</td>
</tr>
<tr>
<td>eConsumers</td>
<td>20% of online shoppers (2015)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SMEs active in another Member State</th>
<th></th>
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<tbody>
<tr>
<td>Exporters</td>
<td>5.5 million (2010)</td>
</tr>
<tr>
<td>Investors</td>
<td>0.5 million (2010)</td>
</tr>
</tbody>
</table>

Estimated demand for cross-border Online Services

> 2 million/p.a.
Full adoption of the principles of the EU eGovernment Action Plan including the interoperability by default;

National interoperability frameworks based on the European Interoperability Framework (EIF), and adhere to EIF for cross-border digital public services.
EU Institutions and Member States to implement

"European Interoperability Framework – Implementation Strategy"
Annex 1: Interoperability Action Plan (5 focus areas, 22 actions)
Annex 2: The European Interoperability Framework

(mainly) supported by ISA²
Alignment with policy development

- Digital Single Market (EIF revision in the Roadmap)
- Revised Directive on Public Sector Information
- eIDAS Regulation

Alignment with emerging trends

- Interoperability governance
- Integrated service delivery
- Data/Information management
- European Interoperability Reference Architecture
- Security & privacy

More focus on EIF implementation

- More concrete recommendations
- Point to specific solutions that can facilitate implementation
- Interoperability Action Plan
EIF 2017 – structure

1. Conceptual model
2. Levels of interoperability
3. Underlying principles
4. Recommendations
EIF Conceptual Model

Interoperability Governance

- Legal Interoperability
- Organisational Interoperability
- Semantic Interoperability
- Technical Interoperability

Integrated Public Service Governance

- Integrated Public Services
- Coordination for Integrated Service Delivery
- External Information Sources and Services

Internal Information Sources and Services
- Information Sources
  - Base Registries
  - Other Authentic Sources
  - Open Data
- Services
  - Shared Services
  - Basic Services

Catalogues
Underlying Principle 2: Openness

Recommendation 2:
Publish the data you own as open data unless certain restrictions apply.

Recommendation 4:
Give preference to open specifications, taking due account of the coverage of functional needs, maturity and market support and innovation.
 Recommendation 42:

Publish open data in machine-readable, non-proprietary formats. Ensure that open data is accompanied by high quality, machine-readable metadata in non-proprietary formats, including a description of their content, the way data is collected and its level of quality and the licence terms under which it is made available. The use of common vocabularies for expressing metadata is recommended.

 Recommendation 44:

Put in place catalogues of public services, public data, and interoperability solutions and use common models for describing them.

Use specs such as DCAT-AP (or extensions i.e. GeoDCAT-AP), Core Public Services Vocabulary, public services and interoperable solutions.
National Interoperability Framework Observatory - NIFO

Scope

• 28 EU Member States and EFTA countries for NIF
• eGovernment factsheets for 28 EU Member States, EFTA countries, Turkey, FYROM as well as for the EC

Analytical Capabilities

• Users can find best practices.
• View NIFO and eGovernment factsheets.
• Find and share their own news and events items.

End-users

• EU public administrations.
• National experts and policy officers.
• European Commission.
• ICT industry.

Data Sources

• NIFs are updated by the responsible national authorities.
• NIFO and eGovernment factsheets - data supplied by the national contact points.

Main Outputs

• Yearly updates to the Analytical Model;
• Annual report on the State of Play on Interoperability in Europe.
Interoperability and EIF (previous version)

Greece

NIF/EIFAlignment

Principles

Interoperability Governance

Interoperability Agreements

Interoperability Levels

Conceptual Model

EIF

Greece
There is an overall excellent NIF-EIF alignment across countries for 2016, with slight increase if compared with previous years.
### ISA² Programme

**Check out our more than 20 interoperable and open source solutions to cut red tape.**

**More to come!**

<table>
<thead>
<tr>
<th>Key and generic interoperability enablers</th>
<th>Semantic interoperability</th>
<th>Decision making and legislation</th>
<th>EU policies-Supporting instruments</th>
<th>e-Procurement/e-Invoicing</th>
<th>Geospatial solutions</th>
<th>Supporting instruments for public administrations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secure document exchange platform</td>
<td>ArchiMate diagrams visualising e-Document lifecycle</td>
<td>Tool facilitating the editing of legislative texts</td>
<td>To gather statements of support online</td>
<td>OCS for ECIs</td>
<td>Communication and Information Resource Centre for Administrations, Businesses and Citizens</td>
<td>National Interoperability Framework Observatory</td>
</tr>
<tr>
<td>Data model for describing public services and the associated life and business events</td>
<td>Data communication network service</td>
<td>e-Procurement system for Public Administrations</td>
<td>Tool facilitating participation in public procurement across the EU</td>
<td>ESPD</td>
<td>EU Interoperability Reference Architecture and EU Interoperability Cartography</td>
<td>Open Project Management Methodology</td>
</tr>
<tr>
<td>CPSV-AP</td>
<td>TESTA</td>
<td>Open ePrior</td>
<td></td>
<td>Re3gistry</td>
<td>EIRA &amp; EICart</td>
<td>PM²</td>
</tr>
<tr>
<td>Metadata standard</td>
<td>To share your own semantic assets</td>
<td>Tool for mapping certificates necessary in public procurement</td>
<td>Tool to manage and share reference codes</td>
<td>-Cert</td>
<td>EUSurvey</td>
<td>EUPL</td>
</tr>
<tr>
<td>DCAT-AP</td>
<td>Core Vocabularies</td>
<td>e-Certis</td>
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<tr>
<td>Government metadata management</td>
<td>Multilingual platform for collaborative thesaurus management</td>
<td>Common assessment method for standards and specifications</td>
<td>Platform for sharing and reuse of IT solutions for public administrations</td>
<td>Joinup</td>
<td>Interoperability Maturity Model</td>
<td>Interoperability and conformance testing platform</td>
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<tr>
<td>ADMS</td>
<td>VocBench3</td>
<td>CAMSS</td>
<td>IMM</td>
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Online Self-assessment – Measure Interoperability Maturity of their Digital Public Services (based on EIF 2017)

Already used for 17 Trans European Systems e.g. (ePRIOR, Support for pre and post award phase of Public Procurement; IMI, International Market Information system; ECRIS, European Criminal Records Information System...)

### Interoperability Maturity Model (IMM)

<table>
<thead>
<tr>
<th>Maturity level</th>
<th>Maturity stage</th>
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<tbody>
<tr>
<td>1</td>
<td>Ad Hoc</td>
</tr>
<tr>
<td>2</td>
<td>Opportunistic</td>
</tr>
<tr>
<td>3</td>
<td>Essential</td>
</tr>
<tr>
<td>4</td>
<td>Sustainable</td>
</tr>
<tr>
<td>5</td>
<td>Seamless</td>
</tr>
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</table>
ONLINE COLLECTION SOFTWARE FOR EUROPEAN CITIZENS INITIATIVES

When is this solution for you?

You are the organiser of a European Citizens’ Initiative (ECI) and wish to gather statements of support online.

Key facts and figures

Four of the initiatives have collected more than 1 million signatures:

Stop vivisection (1,173,130 signatures)
One of us (1,721,626 signatures)
Water and sanitation are human rights! Water is a public right and not a commodity! (1,659,543 signatures)
Ban glyphosate and protect people and the environment from toxic pesticides (1,070,865 signatures)
"OCS allows CTIE to foster certify ECI online collection systems and to validate more efficiently the signatures of citizens supporting an ECI, saving us time and efforts"
EU Survey

A tool for creating, managing and analysing online surveys and public consultations

When is this solution for you?
You would like to create and conduct multilingual online surveys or consultations with easy analysis of results.

Key facts and figures:
In 2016, more than 5,400 surveys were created with the tool, resulting in more than 1.7 million contributions.

EUSurvey is available in 23 EU languages.
"In DG EAC we manage Erasmus+, programme that has been changing lives and opening minds for 30 years. Since 2014, Erasmus+ uses EUSurvey tool to collect feedback from participants - over 1 million to date! With EUSurvey Erasmus+ participants who study, train, teach or volunteer have the unique opportunity to give opinion on their experience and provide suggestions on how it can be further improved - all that in their own language. Data collected through the EUSurvey are used by the beneficiaries of the programme such as Higher Education Institutions, schools, NGOs not only to monitor the impact of the programme but also to improve the quality of the programme. National Agencies and the European Commission also use this feedback to closely monitor the performance of the programme and the satisfaction of its users - more than 95% participants are satisfied with the programme and over 96% improved their language skills. Thanks to EUSurvey, we can further shape and develop the Erasmus+ programme to meet changing needs."

Barbara NOLAN
Head of unit of EAC.B.4 – Erasmus+ Coordination
European Commission
Take Aways

• The EIF can give guidance to design your public digital services

• ISA² tools can help adhere to the EIF and can provide concrete solutions – Share & Reuse

• EC continues supporting & monitoring the EIF (New monitoring mechanism is being built);

• Ongoing reflection around 'digital public administrations' support into the post 2020 MFF
More about the EIF: [https://ec.europa.eu/isa2/eif](https://ec.europa.eu/isa2/eif)