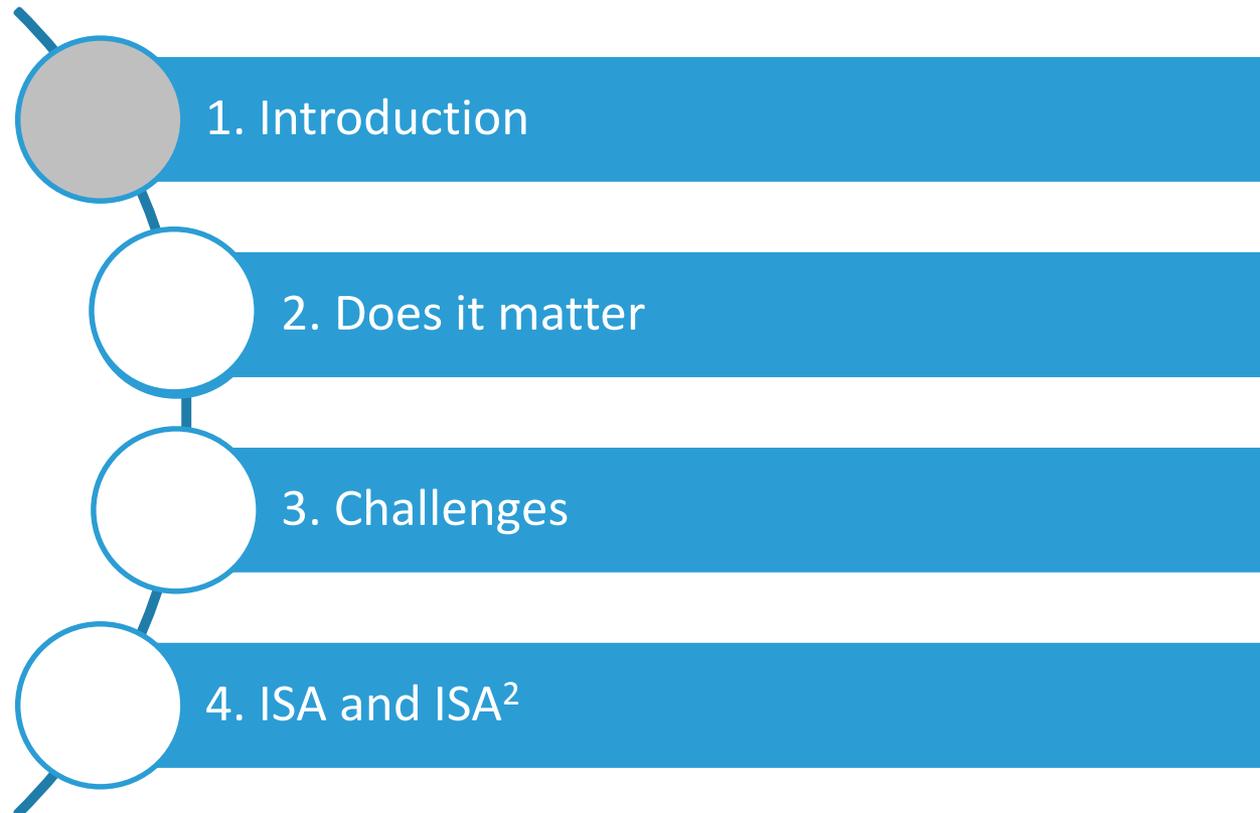




Promoting Interoperability in Europe:

The ISA programme and the upcoming ISA² programme

Dr. Vassilios Peristeras
European Commission, DG Informatics
vassilios.peristeras@ec.europa.eu



A photograph of a classical building with white columns and a pediment, set against a blue sky. The text "Public sector" is overlaid in a white, cursive font.

Public sector

... part of a solution to the economic crisis

Growth and Jobs

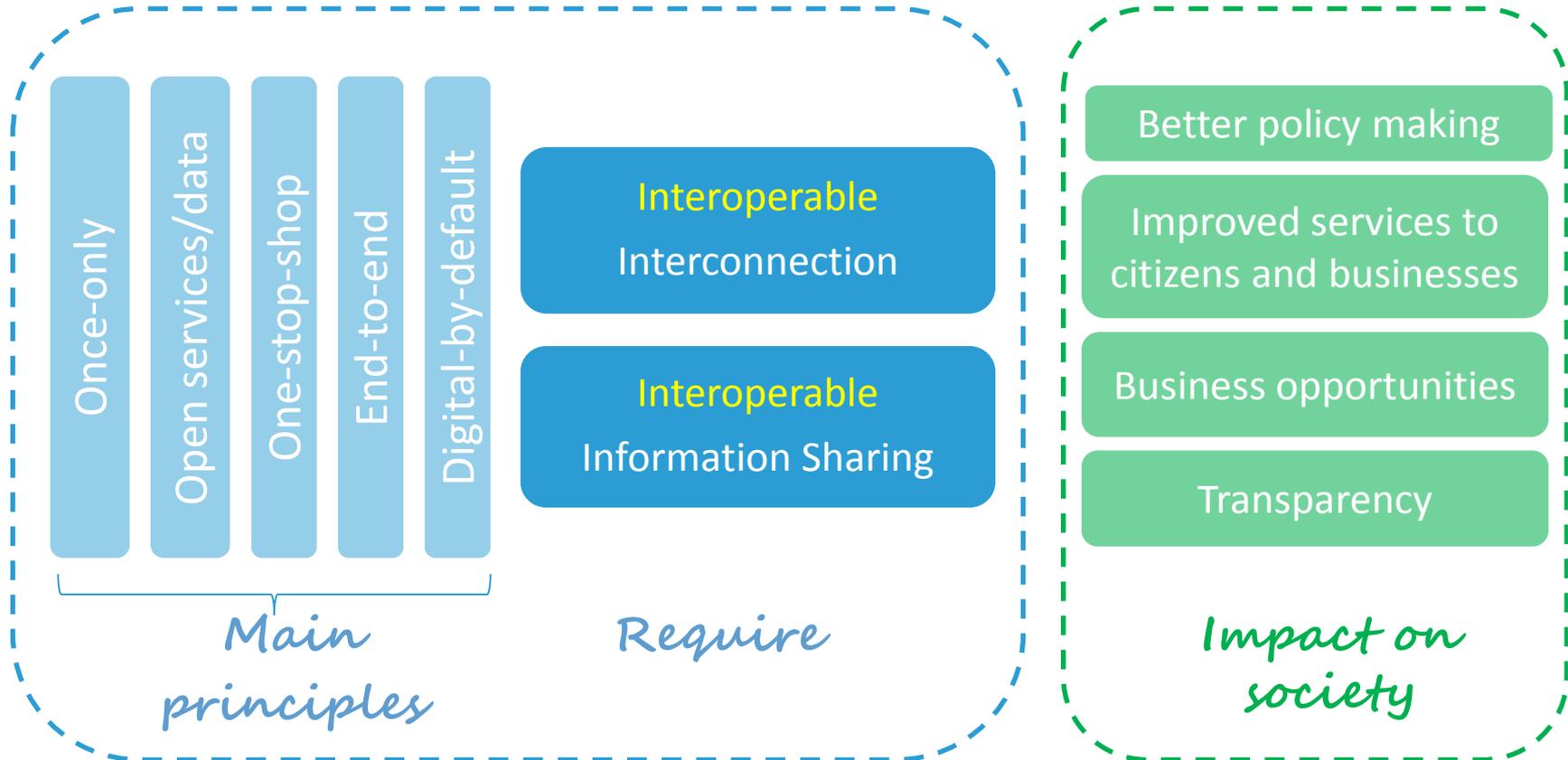
- EU 2020 Strategy
- Annual growth surveys 2011, 2012, 2013, 2014
- European Semester
- Digital Single Market strategy

50% EU GDP

25% of total
employment in
EU

Public
procurement
19% of EU GDP

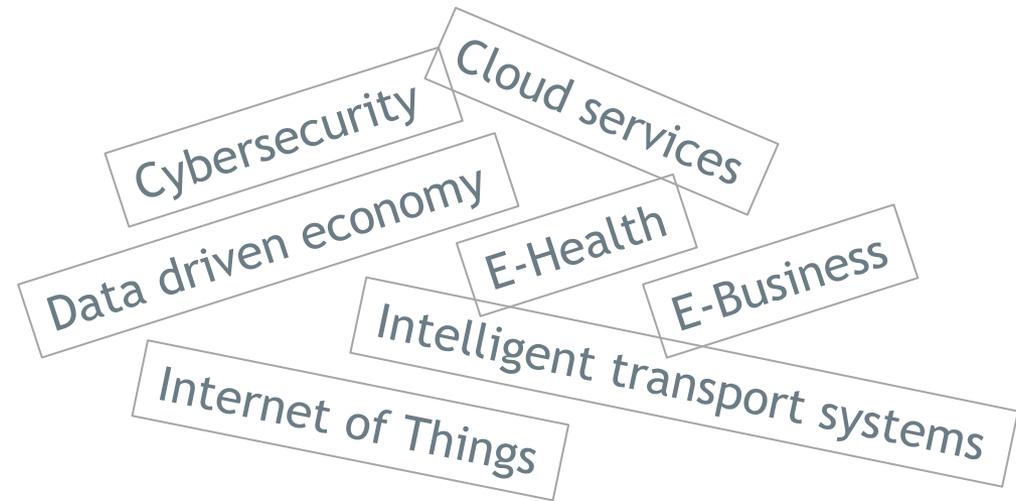
e-procurement:
5%-20% of
procurement
expenditure
(€100 - €400 bn
annually)



1. Introduction to interoperability
2. Does it matter
3. Challenges
4. ISA and ISA²

Creating an European Digital Economy and society with growth potential

Interoperability is strategic for



Global challenges require multidisciplinary approaches



Does Interoperability matter?

74% of the EU countries consider interoperability as a high priority in their political agenda

Extract from the European Interoperability Strategy (EIS) implementation review, October 2012

"The modernisation of public administrations should continue ... Open data is an untapped resource with a huge potential ... **Interoperability** and the **re-use of public sector information** shall be promoted actively. "

Extract from Council Conclusions, October 2013

IOP part of the political priorities set by the Juncker Commission



During our mandate, I would like you to focus on the following, in your role as Vice-President:

*"...Supporting ways to make public administration more open and effective by championing the digital and eGovernment approaches across all Member States and within the Commission, in cooperation with the Vice-President for Budget and Human Resources. You should also look at how to **improve the interaction with Member States' administrations**, for example on reporting and exchanging information on systems needed to **make the EU function, and facilitating cross-border interoperability between them...**"*



Mission Statement letter to VP A. Ansip from Jean-Claude Juncker,
President-elect of the European Commission



- Cost savings for users
- Increased revenue for owners
- Reduced operational costs for owners
- Vendor lock-in avoidance for owners
- Facilitate reuse, sharing and adoption of future solutions



- Owner time savings
- User time savings



- Higher services satisfaction for users
- Improved compliance for owners
- Better data quality for owners
- Better data availability for users
- Improved security for owners



- Foster innovation
- Increase transparency
- Impact on growth and competitiveness
- Protection of fundamental rights for users and society
- Reduced CO₂ emissions
- Better decision making
- Furthering public and private policy goals

Is it worth it?



Country	2010 GDP (USD Millions)
World	60,449,499

Impact
0.50%

Australia	368,736
-----------	---------

\$2.347 billion

Belgium	469,374
---------	---------

Brazil	2,087,890
--------	-----------

Canada	1,577,040
--------	-----------

China	5,926,612
-------	-----------

\$12.8 billion

France	2,560,002
--------	-----------

\$16.4 billion

Germany	3,280,530
---------	-----------

India	1,727,111
-------	-----------

\$10.26 billion

Italy	2,051,412
-------	-----------

Japan	5,458,837
-------	-----------

Mexico (*)	1,034,804
------------	-----------

\$3.9 billion

Netherlands	779,356
-------------	---------

Russia	1,479,819
--------	-----------

Minutes to execute	Number of activities per year per citizen				
	10	15	20	25	30
5	0.04%	0.06%	0.08%	0.10%	0.13%
10	0.08%	0.13%	0.17%	0.21%	0.25%
15	0.13%	0.19%	0.25%	0.31%	0.38%
20	0.17%	0.25%	0.33%	0.42%	0.50%
25	0.21%	0.31%	0.42%	0.52%	0.63%
30	0.25%	0.38%	0.50%	0.63%	0.75%
35	0.29%	0.44%	0.58%	0.73%	0.88%
40	0.33%	0.50%	0.67%	0.83%	1.00%
45	0.38%	0.56%	0.75%	0.94%	1.13%
50	0.42%	0.63%	0.83%	1.04%	1.25%
55	0.46%	0.69%	0.92%	1.15%	1.38%
60	0.50%	0.75%	1.00%	1.25%	1.50%

Wasted time
due to "waiting in the line" or
delay produced
due to "lack of interoperability"
when citizens/businesses are served
by a public administration
results to **impact** on the GDP

(*) The Economic Impact of Interoperability, Microsoft research study



Savings....

- *Spain:*
3 out of 4 administrative procedures are now started on-line leading to estimated savings of 2.75 billion€
- *Netherlands:*
Modernisation of base registers system results in annual 170M€ burden reduction
- *Denmark:*
On-line interaction with public services is 30 times less expensive than face to face

1. Introduction to interoperability
2. Does it matter
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If the benefits are clear why are we not yet there?

Digital
services





- **Legal and political**
 - Enforcement
- **Organisational**
 - Country size
 - Institutional complexity
 - Lack of interaction
 - Resources (time, financial, skills ...)
- **Technical:**
 - Legacy technology
 - Replacing older systems



... and more

- Lack of visibility of existing available solutions including standards and specifications
- Language
- Lack of information and documentation
- Lack of trust
- Lack of technical and semantic IOP



- *Fragmented landscape*
- *Activities uncoordinated*
- *Different domains with different legal basis, specific mandates, roadmaps and governance bodies reporting to different political levels*

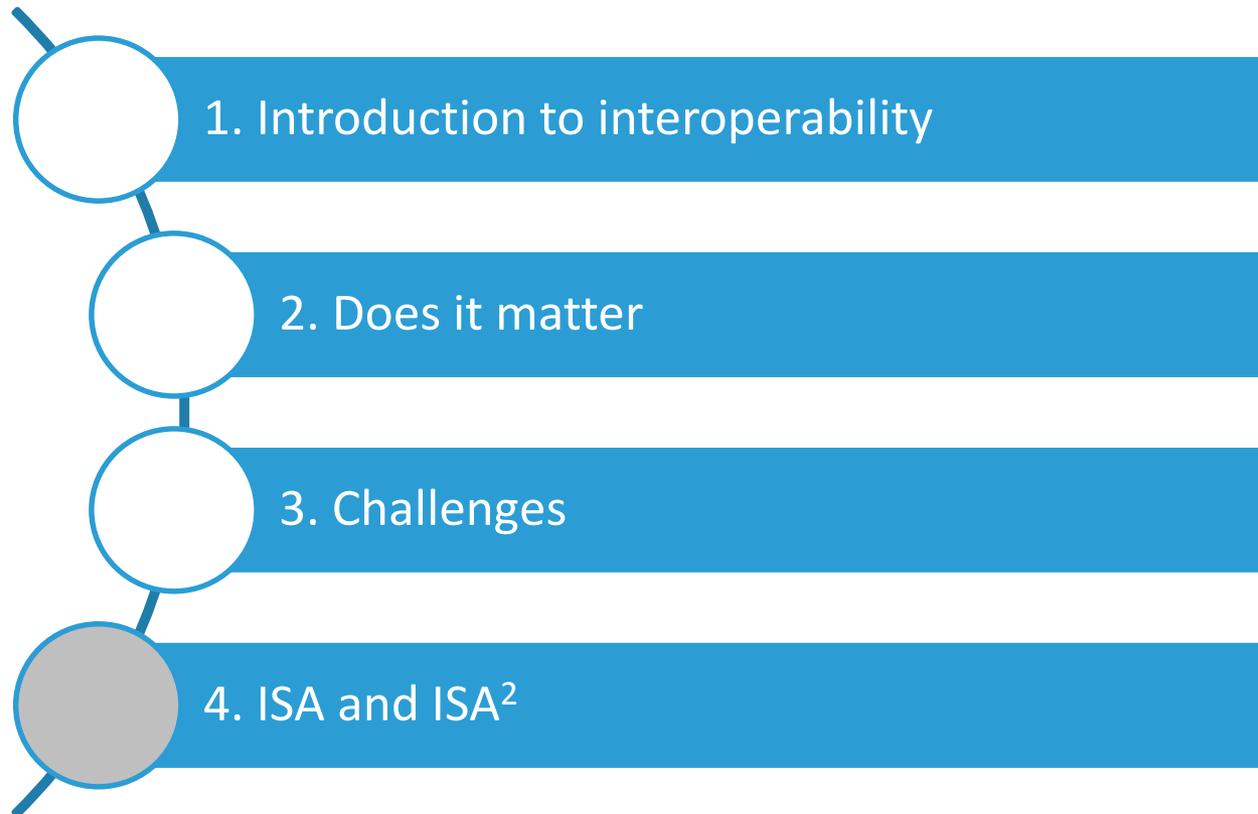
Modernisation of public administrations will not flow automatically from digital transformation without:

- **stronger collaboration among public bodies and jurisdictions;**
- **coordinated service delivery and service transparency across multiple channels and organisational boundaries**
- **new government models and modes of service**

Conclusions of the task-force on "Public Sector Modernisation", Austria, Denmark, France, Germany, Italy, Latvia, Norway, The Netherlands, chaired by the European Commission (Robert Madelin and Stephen Quest)



European
Commission



Interoperability Solutions for Public Administrations Objectives

Efficient

... and effective electronic **cross-border** and **cross-sector** interaction between European public administrations.

European public
administrations

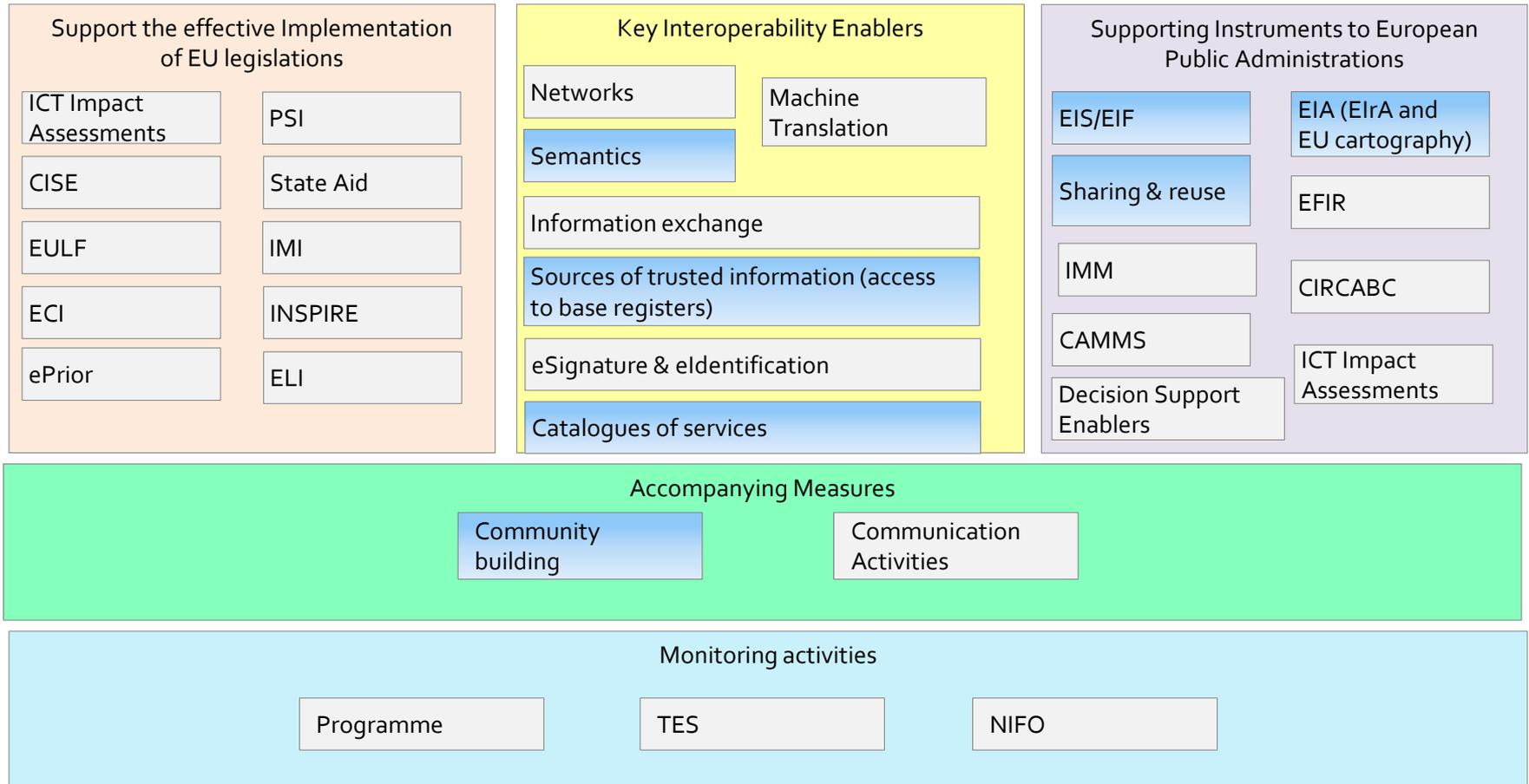
... share and re-use **existing** successful or **new** Interoperability **solutions**, **common services** and **generic tools**.

Flexible and
interlinked

...IT systems allow smooth implementation of **Community policies** and activities.



ISA outcomes



ISA Programme

Examples of interoperability solutions



European Interoperability Framework (EIF)

ΕΙΣΩΓΕΜΟΛΚ (ΕΙΕ)
 ΙΥΓΕΙΟΒΕΙΡΠΙΙΥΓ
 ΡΗΙΟΒΕΣΥ

EIRA

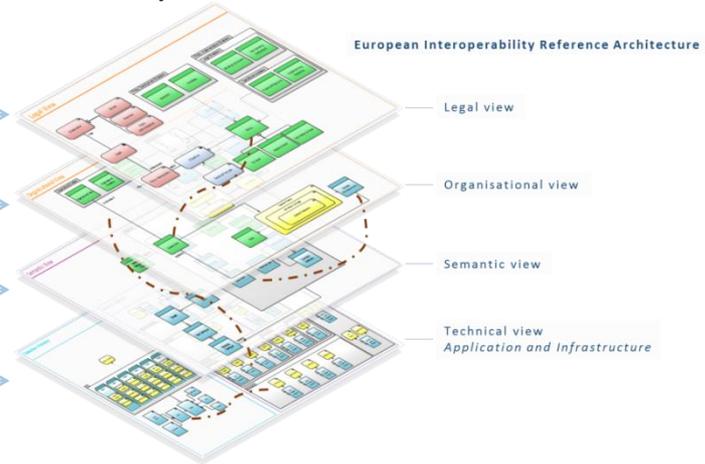
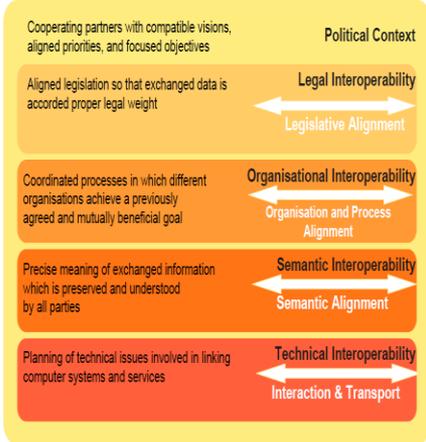
European Interoperability Reference Architecture

A reference architecture for delivering digital public services (across borders and sectors).

EICart

European Interoperability Cartography

A mapping of IOP solutions to the Building Blocks of the EIRA.



Team	Workflow Enablers	Data Exchange Enablers				Security Service				
System	Chronography Service	Orchestration Service	Data Transformation Service	Data Transformation Service	Data Translation Service	Data Validation Service	e-Signature Service	Identity Management Service	Access Management Service	Audit Service
e-FROR	No	No	Yes	e-FROR provides data transformation (language/IDP transformations)	No	e-FROR provides data validation services (XSD validation, Schema.com validation)	No	No	No	Capability of e-FROR
GENES IS	No	No	e-TrustEE e-Delivery	No	Multi-lingual Building Block manages translation of multilingual applications	No	No	ECAS	No	No
e-TrustEE	No	No	Yes	e-TrustEE provides data transformation (language/IDP transformations)	No	e-TrustEE provides data validation services (XSD validation, Schema.com validation)	No	No	No	Capability of e-TrustEE
POSTA	No	No	Yes, digital network infrastructure	No	No	No	No	No	No	No
CONTR	No	No	Yes, electronic exchange of structured and unstructured data (XML)	No	No	No	Yes, authenticate users	Yes, authorize access	No	No



European
Commission

EICart

European Interoperability Cartography



Member
States

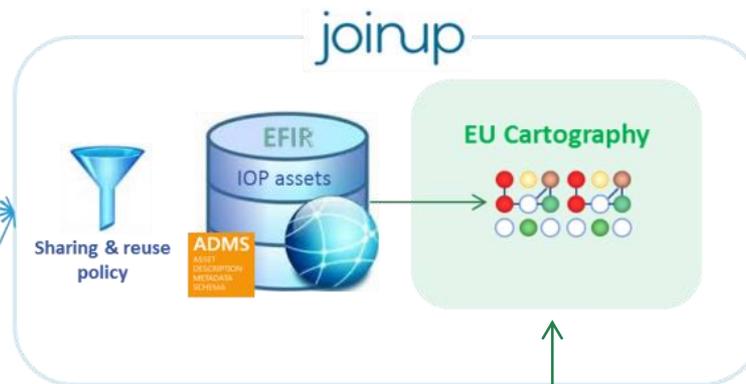
National
Interoperability
Frameworks
Observatory (NIFO)



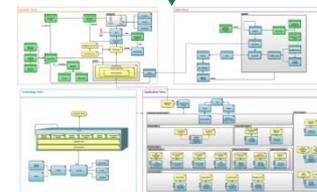
Standardisation
bodies



Industry



Alignment
with the EIRA
Reference
Architecture



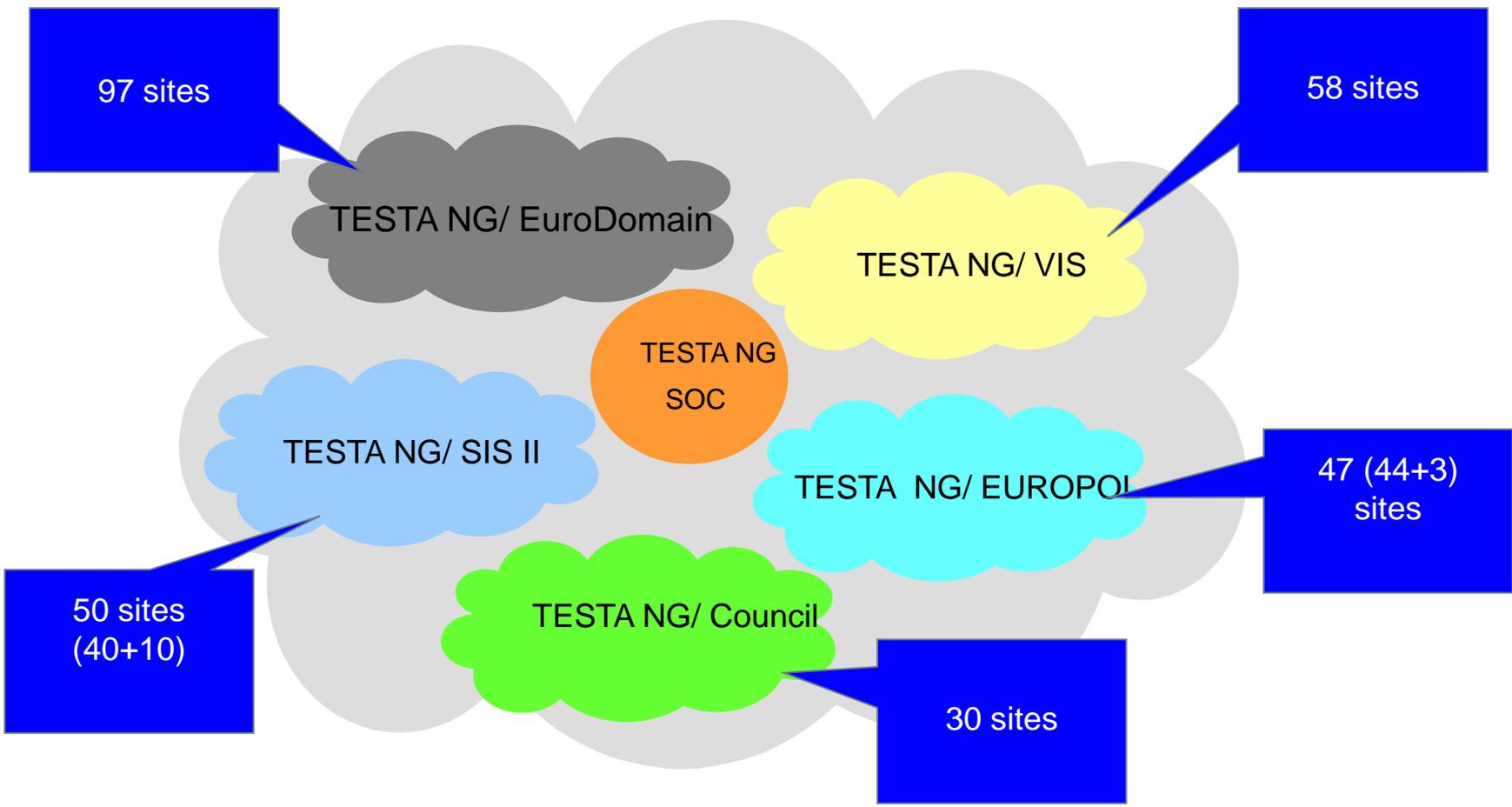
EIRA

European Interoperability Reference Architecture

(make the link ...)



- What exists?
- What is still missing?

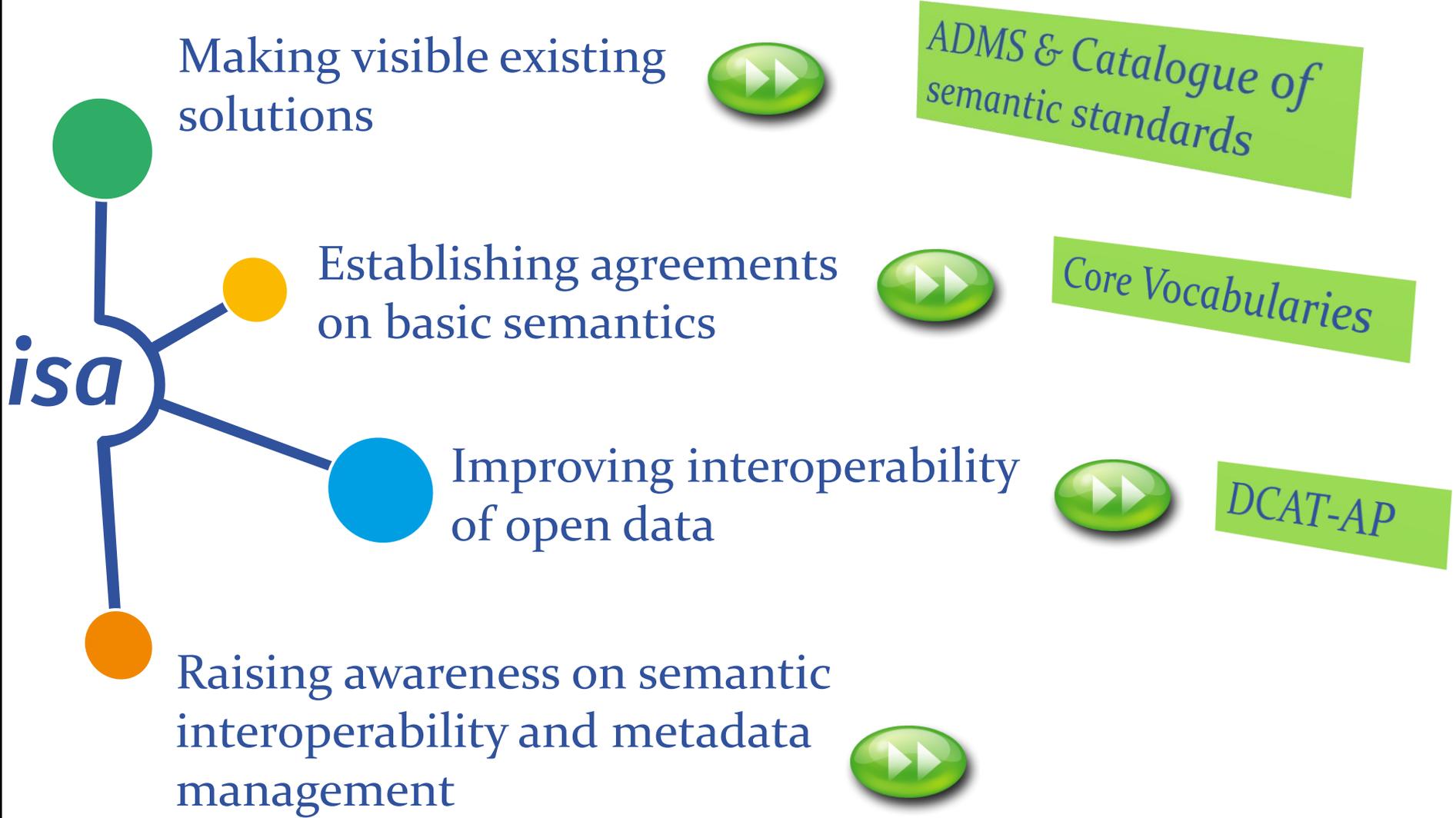


IMI

- The Internal Market Information System (IMI) is a Trans-European System which supports Administrative Cooperation between Member States.
- IMI provides a secure online accessible application which supports the communication of national, regional and local administrations with their equivalent instances in other countries.



http://ec.europa.eu/internal_market/imi-net/_images/video/all_about_imi_en.mp4



Interoperability Maturity Model



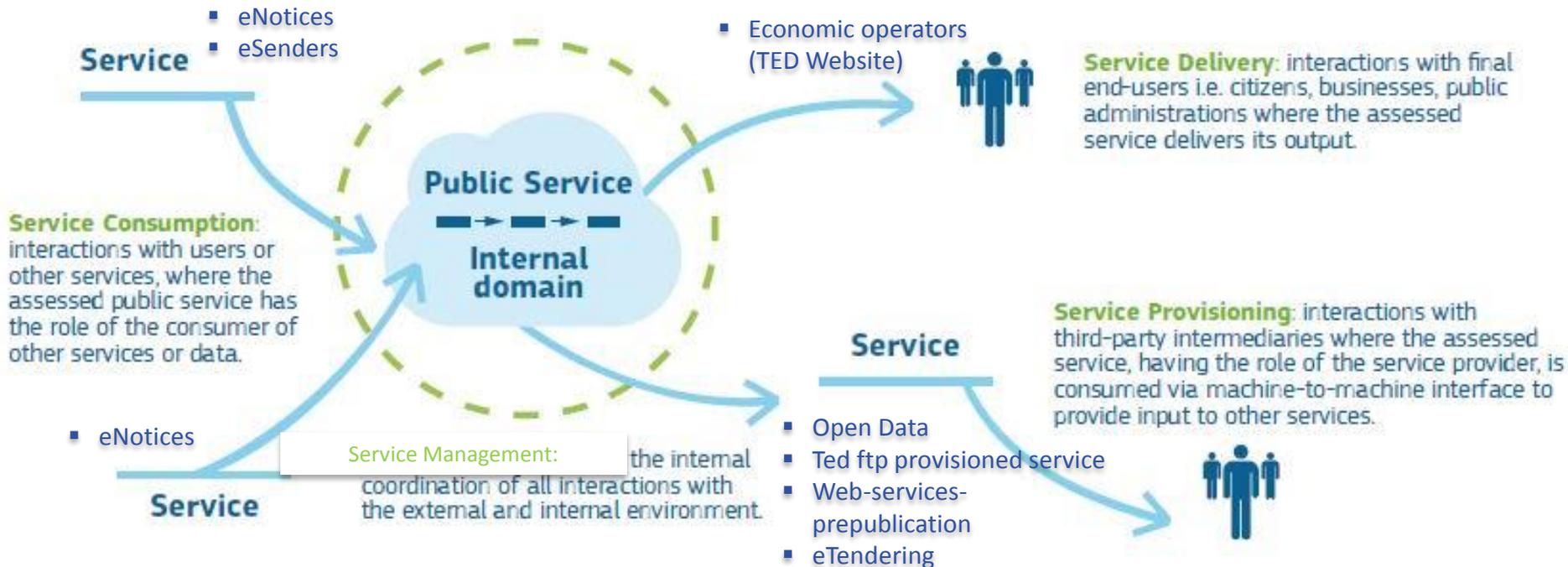
Service Delivery

Service Consumption

Service Provisioning

Service Management

Interoperability is measured in four areas



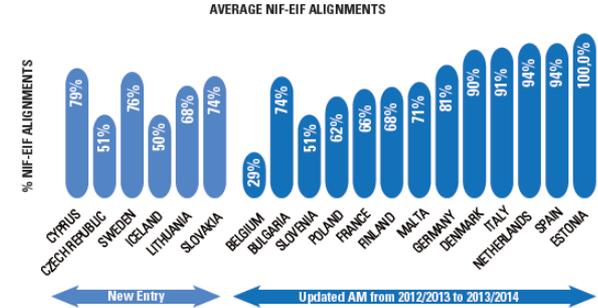
Maturity level	Maturity stage	Interpretation
1	Ad Hoc	Poor interoperability — almost no interoperability in place
2	Opportunistic	Fair interoperability — some elements of interoperability best practices appear
3	Essential	Essential interoperability — the essential best practices for interoperability appear
4	Sustainable	Good interoperability — major, relevant IOP best practices are implemented
5	Seamless	Interoperability leading practice — the service is a leading example

← Desired level



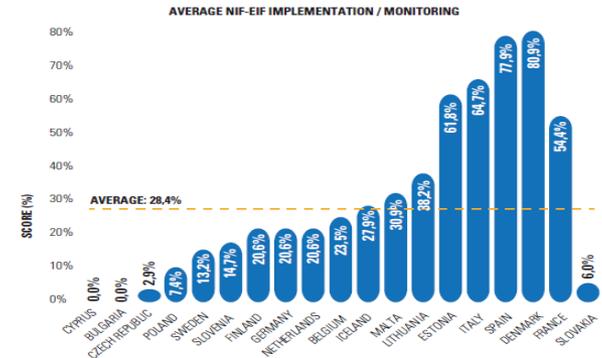
European Interoperability Framework

Well accepted as a framework by the MS



There is an overall very good NIF-EIF alignment across countries for 2014

Still some way to go to have it implemented



The overall average of NIF Implementation and Monitoring for 2014 is significantly minor than the overall average of NIF-EIF Alignment (72%)



Guidance

Support

Best practices

Avoiding the creation of new electronic barriers or silos when modernising public administrations in Europe



Facilitating the interconnection of public services for citizens and businesses at national and EU level



Improving quality of public services and transparency



Coherence of open data from various sectors and countries



Developed by the ISA/ISA² programmes...

ISA Programme

Examples of interoperability solutions:

- Catalogue of Services
- Access to Base Registries
- Joinup

ISA²

Interoperability

Solutions for European Public

Administrations, Businesses and Citizens



Objective

Shall facilitate efficient & effective electronic cross-border or cross-sector interaction between European public administrations & between them, citizens & businesses.



~131M Euros, 2016-2020



Leverage interoperability



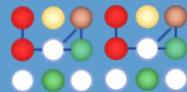
ESIF
European Semester
H2020
... others

Define Interoperability Strategies, Frameworks and Guidelines

Assess ICT impact of EU legislation

Identify
Collect
Assess

Map in a
Cartography



Develop

Deploy
Operate



Contact | Search | Glossary | Help | Analytics Disclaimer | English (en)

European Commission

joinup

Share and reuse interoperability solutions for public administrations

European Commission > ISA > Joinup > Projects > Eia > Description

My Page | Communities | **Interoperability solutions** | News | Events | e-Library | People

Catalogue | Federated repositories | **Projects**

EIA European Interoperability Architecture (EIA) (5/5 | 3 votes)

Download

Overview | **Description** | Members list | Issues | Interoperability Solutions | Highlights | Forums | Communications

Submitted by [Eia Team](#) on August 06, 2014

Description

With the growing amount of information exchanges between public services (across borders and sectors), the need for interoperability in Europe is higher than ever. The ISA Action 2.1 (EIA) introduces a reference architecture to guide public administrations in their work to provide interoperable European public services to businesses and citizens.

[Propose your...](#) [Actions](#)

Related Content

06 May 2014 | Europe
PUBLIC ENTITIES REDUCING LOCK-IN: THE WAY FORWARD.

11 April 2014
DIGIT - Common Information Sharing Environment - CISE Incubator

An interoperable Europe. Interested?

Join ISA initiatives at: http://ec.europa.eu/isa/index_en.htm
and @ <http://joinup.ec.europa.eu>



<http://goo.gl/eK1EY>



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<http://joinup.ec.europa.eu>