ISA: Interoperability Solutions for European public Administrations

Measuring the benefits of interoperability

"Government Information and Libraries: Production – Management – Access"

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"Interoperability, within the context of European public service delivery, is the ability of disparate and diverse organisations to interact towards mutually beneficial and agreed common goals, involving the sharing of information and knowledge between the organisations, through the business processes they support, by means of the exchange of data between their respective ICT systems."

(*) as defined in the European Interoperability Framework - EIF

European Commission

… towards an interconnected government model

- Develop synergies among institutions
- Unlock data across sectors
- Share services and solutions
- Optimize and simplify across ministerial boundaries

Enabler = Interoperability

- Extract from Council Conclusions, October 2013:

"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. "

Interoperability Solutions for Public Administrations (ISA)

Efficient	European public administrations	Flexible and interlinked
… and effective electronic cross-border and cross-sector interaction between European public administrations.	… share and re-use existing successful or new Interoperability solutions, common services and generic tools.	…IT systems allow smooth implementation of Community policies and activities.

The interoperability puzzle

European and national interoperability activities are aligned and complementary

Regularly map and update the current and future EU interoperability environment

Identify missing cross-sector services and solutions and promote their implementation

Reusable solutions are described and their conditions of use are fully established

Disseminate information about currently existing interoperability solutions

Public administrations develop services and solutions with interoperability in mind ('interoperability by design')

Assess and develop the means to facilitate the sharing of components of public services

IT services and solutions support new policies and are included in legislative proposals

Public Administrations have access to base registry data and a catalogue of services

Adopt a 'business case' approach to new PA services and including to cross-sector services

Public services building blocks and common infrastructure services are available

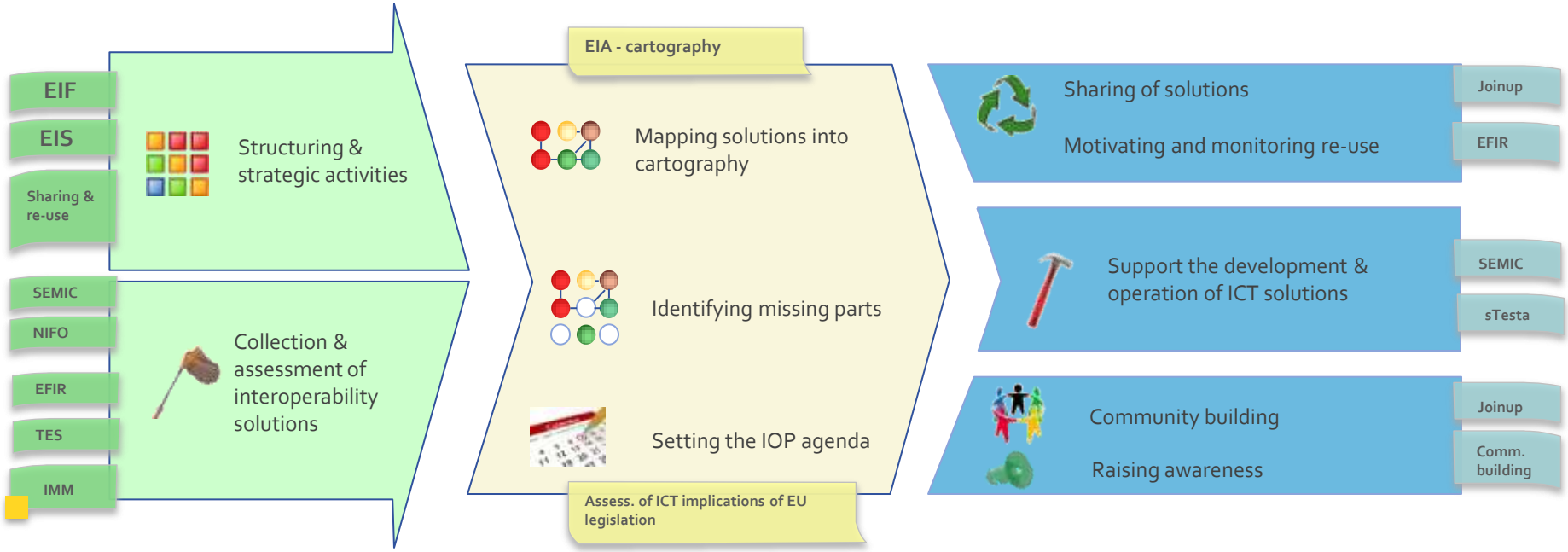
Domain-related specifications are identified and have a sector leader assigned to them

Appropriate governance models are in place covering the life span of the PA services and interoperability solutions

Support development and implementation of cross-sector solutions

Public Sector Information is available in common formats

Achieving Interoperability requires an holistic approach be it at EU, national or local level



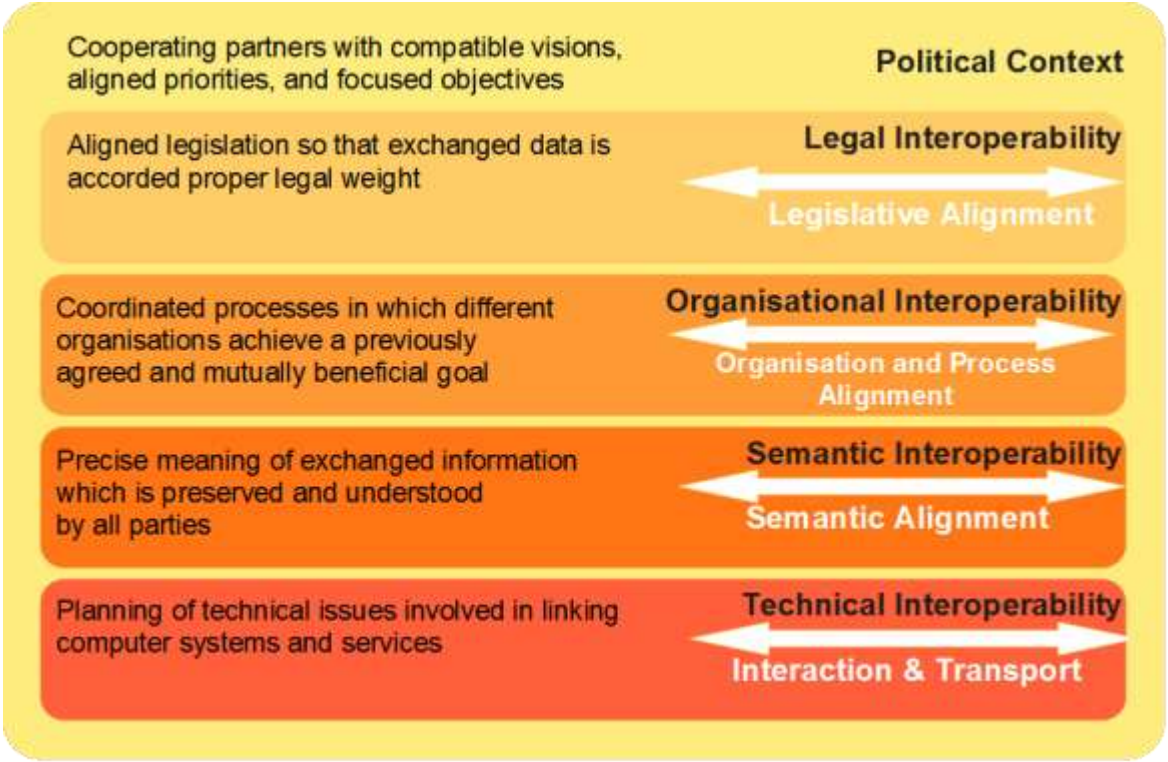
The European Interoperability Strategy and The European Interoperability Framework

- **Digital Agenda:**

  "A key action to promote interoperability between public administrations will be the Commission's adoption of an ambitious ***European Interoperability Strategy*** and the ***European Interoperability Framework*** to be drawn up under the ISA programme"

- Adopted by the Commission in December 2010 in the Communication "Towards interoperability for European public services"

The European Interoperability Framework identifies different layers of interoperability:



EIF provides specific recommendations for every layer

An overview of ISA outputs

Support the effective Implementation of EU legislations (L)

- ICT Impact Assessments
- PSI
- CISE
- State Aid
- EULF
- IMI
- ECI
- INSPIRE
- ePrior
- ELI

Key Interoperability Enablers (I)

- Networks
- Machine Translation
- Semantics
- Information exchange
- Sources of trusted information (access to base registers)
- eSignature & eIdentification
- Catalogues of services

Supporting Instruments to European Public Administrations (PA)

- EIS/EIF
- EIA (EIrA and EU cartography)
- Sharing & reuse
- EFIR
- IMM
- CIRCABC
- CAMMS
- ICT Impact Assessments
- Decision Support Enablers

Accompanying Measures (A)

- Community building
- Communication Activities
- Measuring the benefits of IoP (planned)

Monitoring activities (M)

- Programme
- TES
- NIFO

Measuring the benefits of interoperability

benefits and savings

For the Public Administrations

- Improvement of efficiency in service delivery and access
- Interconnected data and coordinated services which result in further efficiency gains
- Single points of data entry, improvement of workflows
- Sharing and reuse of solutions
- Use of standards as way to reduce costs
- Avoid vendor lock-in, increase flexibility
- Development and maintenance

For the policy makers

- Data collection and parsing techniques to support decision making
- Avoid the cost of failure
- Reduce, and if possible eliminate, the cost of insufficient IoP
- Transparency, accountability thus better governance

In general Interoperability in the Public Administration is:

- a condition for establishing Points of Single Contact
- service delivery "end to end" and
- Support to the "once only" rule

Interoperability is a key requirement for achieving the modernisation of Public Administrations in Europe

- Public procurement accounts for approximately 19% of EU's GDP (source EC, Reducing administrative burdens)
- By using e-procurement the contracting authorities in Europe report savings between 5% to 20% of their procurement expenditure (each 5% would save €100 billion annually) (source EC, Reducing administrative burdens)

- Belgium has announced the intention to use e-prior and the estimated potential benefits can reach €9,5million annually. 7,5 million € for the administration and 2 million € for the suppliers (source FEDICT)
- UK G-Cloud expects cost reduction in the area of shared procurement and procurement of shared services at the level of £6 million annually (source HM Government)
- Portugal adapted e-procurement in hospitals' contracts and achieved 18% price reductions. The switch-over to e-procurement in Portugal have generated savings of about €650 million in the first year (2011) (source EC, A strategy for e-Procurement)

- The social and private costs of payments in the EU is equal to 1,2% of GDP or €156 billion a year.(source Europe's digital challenge, contribution to EUCO of 24-25 October 2013)
- The adoption of e-invoicing in public procurement across EU could generate savings of up to €2,3 billion per year.(source EC)
- Switching from paper to fully automated invoicing can cut costs from 30 – 50 euro to 1 euro per invoice (i.e. France: online tax declaration 0,5 euro, face to face 20 euro, COCCOPS Study 2012)

- Denmark: the mandatory e-invoicing reduced related administrative costs by 80% or €120 – 150 million per year since 2005. (source www.nemhandel.dk)
- Latvia: the new e-paying office achieved a reduction of time needed for payment of taxes of companies by 9% in 2012. (source www.kase.gov.lv)

- France: eBourgogne platform delivers shared eGov services in collaboration with local administrations. The estimated RoI of the platform is close to €13 million for the French state and €20 million for the local administrations with savings from pooling resources and equipment reaching more than €40 million. (source www.e-bourgogne.fr)
- Italy: ePrescription platform for electronic medical prescriptions saves €2,5 billion per year (source EC, Member States Competitiveness report 2013)
- Ireland: e-Enabled child benefit services reduced significantly the number of certificates issued (80.000 certificates less) and the time to give the allowances to the beneficiaries. Also it reduces the amount of birth certificates needed for issuing a passport (source http://www.welfare.ie)
- Estonia: through interconnection of base registries and easy access the time to register a company takes less than 3h (source, The Path for Growth EC Conference, 29/10/2013)

A Microsoft Research study

Why achieving interoperability in the public sector has an important positive impact on GDP?

- We can define the value of an interoperable system as a function of the number of connected transactions.
- The more connections there are the higher the value with a factorial progression is.

$$Value = \sum_{i=1}^{m} \lambda^{i} \left(t! \frac{1}{(t-n)!\, n!} \right)$$

Where:
t is the total number of transactions to interoperate
m is the number of sub-systems
n is the number of transactions that need to be combined to complete a process
λ is the correlation factor

The economic impact of interoperability one model

A Microsoft Research study

As we increase the number of connected services in the PA we have a significant increase in the value and the efficiency of the administration thus reducing the wasted hours of the citizens and businesses

We can measure the burden on GDP when a citizen needs to wait in line for a government service. We can consider this waiting time as wasted time.

We vary the number of activities a citizen has to carry out annually (paying taxes, filling out forms, obtaining permits, and others) due to laws or government requirements, as well as the number of minutes needed to fully execute each of the required activities.

Country	2010 GDP (USD)	Population	GDP / Capita	GDP / Working Hour
World	60,449,498,549,137	6,817,263,829	8,867	4.434
Argentina	368,736,062,144	40,412,376	9,124	4.562
Belgium	469,374,172,185	10,879,159	43,144	21.572
Brazil	2,087,889,553,822	194,946,470	10,710	5.355
Canada	1,577,040,082,218	34,108,752	46,236	23.118
China	5,926,612,009,750	1,338,299,512	4,428	2.214
France	2,560,002,000,000	64,876,618	39,460	19.730
Germany	3,280,529,801,325	81,702,329	40,152	20.076
India	1,727,111,096,363	1,170,938,000	1,475	0.737
Italy	2,051,412,153,370	60,483,521	33,917	16.958
Japan	5,458,836,663,871	127,450,459	42,831	21.416
Mexico	1,034,804,491,265	113,423,047	9,123	4.562
Netherlands	779,356,291,391	16,612,213	46,915	23.457
Russia	1,479,819,314,058	141,750,000	10,440	5.220
South Korea	1,014,483,158,314	48,875,000	20,757	10.378
Spain	1,407,405,298,013	46,081,574	30,542	15.271
Sweden	458,973,278,964	9,379,116	48,936	24.468
Switzerland	527,919,933,356	7,825,243	67,46	33.732
Turkey	734,364,471,760	72,752,325	10,094	5.047
United Kingdom	2,248,831,038,714	62,218,761	36,144	18.072
United States	14,586,736,313,339	309,050,816	47,199	23.599

SOURCES:
GDP:
HTTP://DATA.WORLDBANK.ORG/INDICATOR/NY.GDP.MKTP.CD/COUNTRIESORDER=WBAPI_DATA_VALUE_2010%20WBAPI_DATA_VALUE%20WBAPI_DATA_VALUE-LAST&SORT=DESC&DISPLAY=DEFAULT

POPULATION:
HTTP://DATA.WORLDBANK.ORG/INDICATOR/SP.POP.TOTL

ASSUMPTION:
2000 WORKING HOURS/YEAR

The economic impact of interoperability
one model (from a citizen's perspective)

According to this model, for citizens that have to execute 10 transactions with the state when each transaction lasts 30 minutes each, the impact in the GDP is approximately:

- in Belgium: **€1,1 billion a year**,
- in Germany: **€7,9 billion a year**,
- in Italy: **€4,9 billion a year**, etc.

And in Greece **€1,74 Billion a year** (calculation with 2013 GDP)

These figures can vary with the number of transactions and the time spend on them.

From a Microsoft Research study

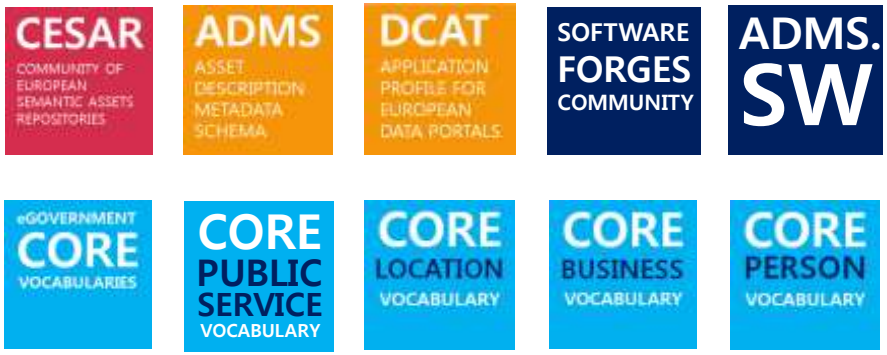
- Collecting figures on interoperability benefits throughout EU Member States

- We launch a study for identifying potential cost-benefit or business models for interoperability and to define metrics for consistent measurement

- We would like the Member States to share their experiences, and provide their input on this issue

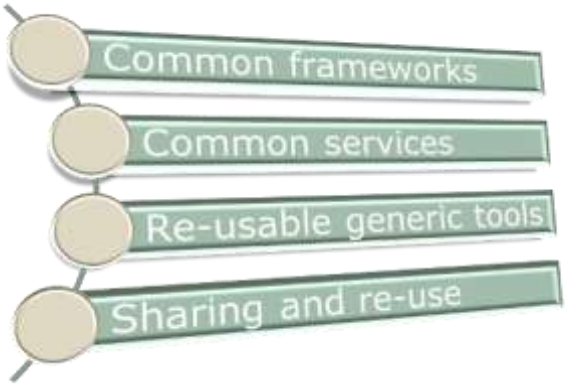
Join ISA initiatives at:
http://ec.europa.eu/isa/index_en.htm
and @ http://joinup.ec.europa.eu

Get involved



Q&A

***I**nteroperability*
***S**olutions for*
European public
***A**dministrations*



ISA a key enabler for Public Administrations to join forces, bring down e-barriers and overcome financial constraints