



JOINING UP GOVERNMENTS

EUROPEAN  
COMMISSION



# *Interoperability Solutions for European Public Administrations*

A Commission-driven EU programme (2010-2015)

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European Commission



- **Presentation of the ISA programme**
- Flash-back
- ISA defining and promoting interoperability specifications
  - The European Interoperability Strategy and the European Interoperability Framework
  - Semantic interoperability
  - Common assessment method for standards and specifications (CAMSS)
- ISA supporting interoperability solutions between European public administrations
- ISA supporting sharing and re-use of software solutions



## Efficient

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

## European public administrations

... share and re-use existing successful eGovernment solutions.

## Flexible and interlinked

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



# ISA: the objective

The efficient and effective electronic cross-border and cross-sector interaction between European public administrations

... enabling the delivery of electronic public services supporting the implementation of Community policies and activities

## How?

- Development of generic building blocs
- Development, operation and maintenance of common services and generic tools
- Share and re-use solutions

- Assessment of ICT implications of proposed or adopted Community legislation
- Raising awareness

## Actions in the ISA 2012 Workplan contribute directly to:

- The Digital Single Market (interoperability, eProcurement, eSignature, ...)
- eGovernment
- Various EU policies (eHealth, INSPIRE, CISE, ECI, ...)

The budget: €164,1 million (2010-2015)

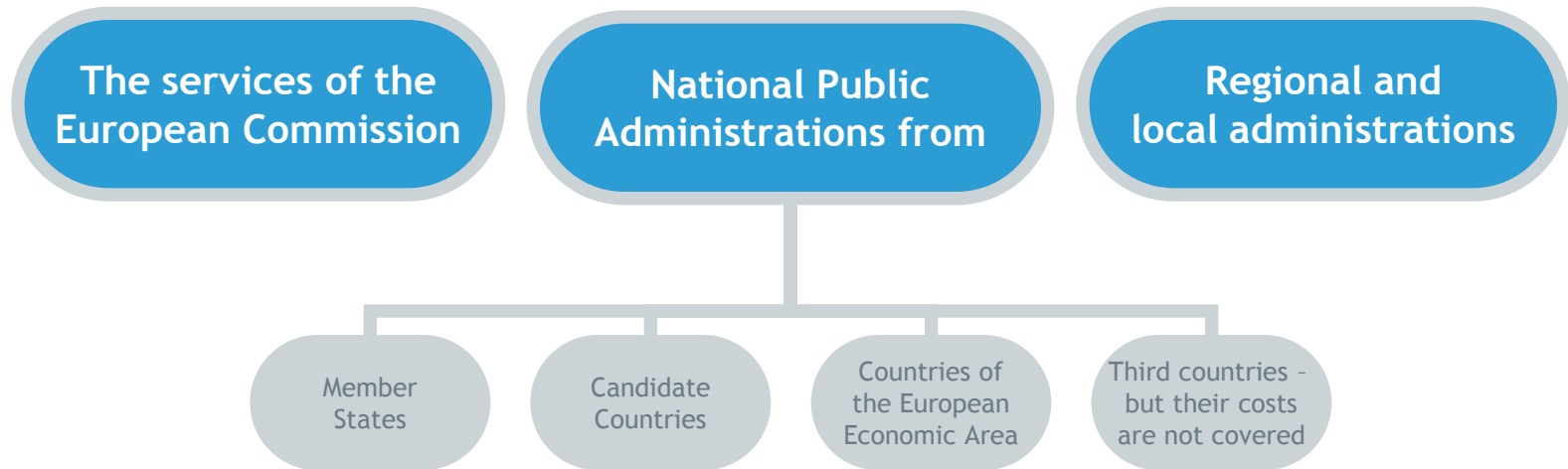
**Pooling of resources across  
the Member States through:**

coordination

exchange of  
experiences

good practices

## Directly



## Indirectly

European businesses and citizens - profiting from a more efficient delivery of public services.



# Management of the ISA work programme

- Through a **rolling work programme** revised annually, by the European Commission with the Member States.
- Assistance by a **management committee** - the ISA committee, representing the Member States.
- **Coordination group**, nominated by the ISA committee, to ensure continuity and consistency.
- **Expert groups** for guidance in specific work programme actions.



# The life cycle of ISA actions

Implementation by the Commission - in co-operation with the Member States.

Annual request to Member States and Commission services for proposals of actions.

Commission decision

Discussion of proposed actions by the ISA committee.

Favorable opinion of the ISA committee:  
Inclusion of the action within the work programme.





# Proposals can be funded, if...

- Support co-operation between European Public Administrations.
- based on a concrete business case
- linked to Commission policy priorities
- demonstrate interest and interoperability
  - Cross-border AND Multi-sector





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# ISA: flashback

- **1994:** A Council Resolution underlines the need for enhanced synergies between European and national information systems
- **1995:** The IDA Programme is established with a Community Decision, with a primary objective of setting up IT empowered networks for information exchanges in the different community policy areas.

The IDA Programme pioneered the use of IT in public administrations and facilitated the transition from paper-based to electronic exchanges across Europe.
- **1999:** Start of a second phase of the Programme (IDA II) until the end of 2004 with two interrelated Decisions :
  - The 'Projects of Common Interest' (PCIs) Decision continued to extend the implementation of networks in different Community policy areas
  - The 'Interoperability' or Horizontal Actions and Measures (HAMs) Decision focused on measures and services to be applied and used to ensure seamless interaction within and across networks at the trans-European level



- **January 2005:** New IDABC Decision moving the emphasis from 'networks' to 'services', i.e. putting the results of the pan-European administrative networks to the service of European citizens and businesses: “Interoperable Delivery of European eGovernment services to public Administrations, Business and Citizens”.  
Maintains the two IDA II mechanisms: Projects of Common Interest and Horizontal measures
- **January 2010:** ISA (« Interoperability Solutions for European public Administrations ») decision of the European Council and the Council enters into force.



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# Digital Agenda : Interoperability and Standards

*“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 (Interoperability Solutions for European Public Administrations)”*

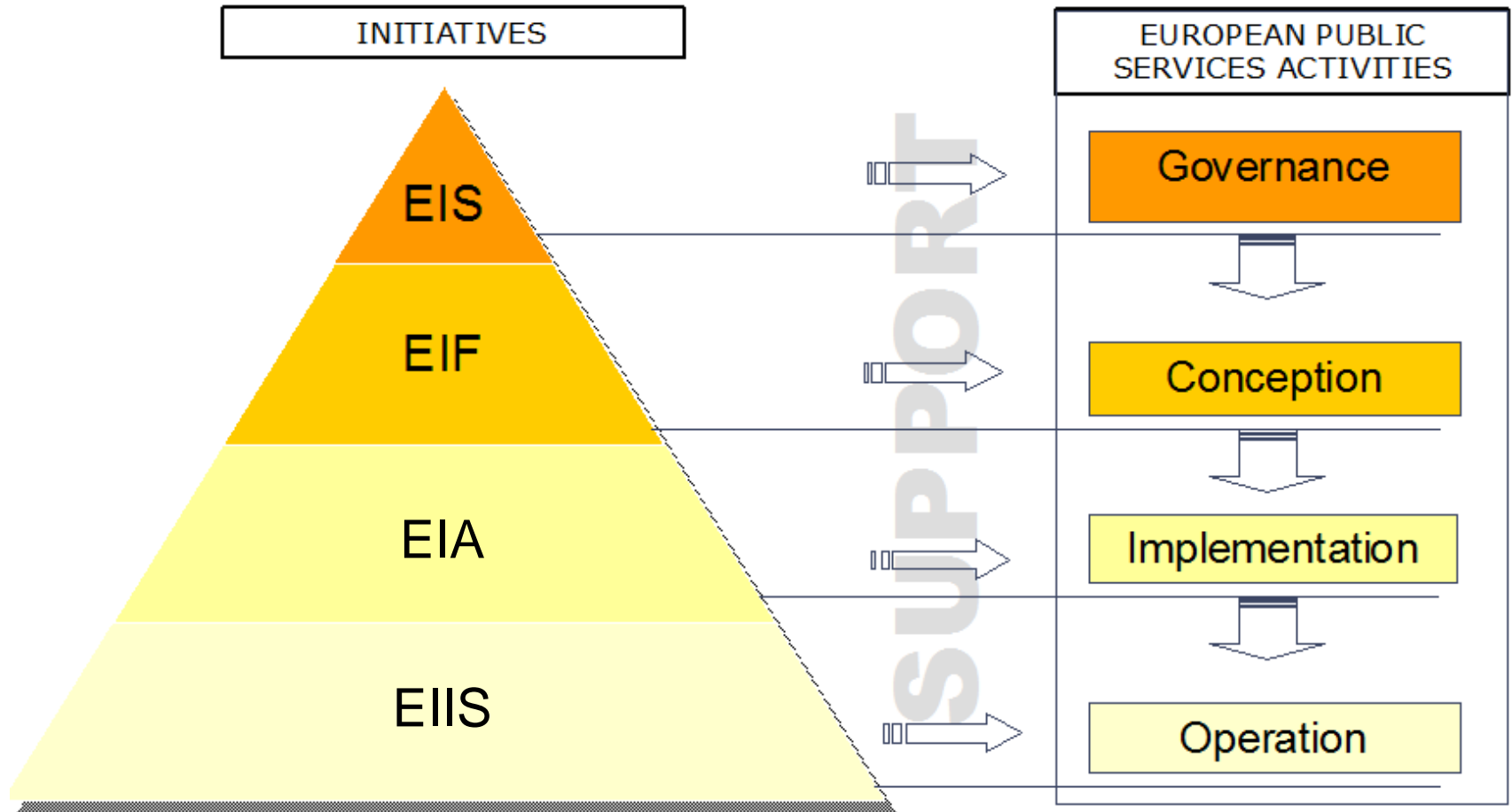
The Commission adopted the Communication “Towards interoperability for European public services”

- European Interoperability Strategy (EIS)
- European Interoperability Framework (EIF)

➔ *In December 2010*



- In the context of European Public Service delivery
  - Interoperability means:
    - *"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"*
  - An interoperability framework is:
    - *"an agreed approach to interoperability for organisations that wish to work together towards the joint delivery of public services. Within its scope of applicability, it specifies a set of common elements such as vocabulary, concepts, principles, policies, guidelines, recommendations, standards, specifications and practices"*







# EIF: 4 Interoperability levels

Cooperating partners with compatible visions, aligned priorities, and focused objectives

**Political Context**

Aligned legislation so that exchanged data is accorded proper legal weight

**Legal Interoperability**

Legislative Alignment

Coordinated processes in which different organisations achieve a previously agreed and mutually beneficial goal

**Organisational Interoperability**

Organisation and Process Alignment

Precise meaning of exchanged information which is preserved and understood by all parties

**Semantic Interoperability**

Semantic Alignment

Planning of technical issues involved in linking computer systems and services

**Technical Interoperability**

Interaction & Transport



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# ISA defining and promoting semantic interoperability

- Increasing the awareness on the importance of semantic interoperability and appropriate metadata management policies
- Federation of National Semantic Assets Repositories: To tap on, promote, and reuse national efforts and results
- Asset Description Metadata Schema (ADMS)
- EGovernment Core Vocabularies: To start alignment on common core definitions at EU level



# ISA defining and promoting semantic interoperability

- National initiatives to create repositories/libraries/catalogues
- Standardization bodies and third party initiatives generate valuable and highly reusable specifications



How can we promote and support reuse of these semantic assets at an European level?



# ISA defining and promoting semantic interoperability

... by enabling a federation of semantic assets repositories

- Supporting cross-querying and discovery
- Respecting the autonomy of each repository

... by using common semantics to describe a “semantic asset”

We need a *common schema for assets description*



**Asset Description Metadata Schema (ADMS)**



# ISA defining and promoting semantic interoperability

- The Asset Description Metadata Schema is a specification to be used for describing semantic assets (e.g. metadata standards, taxonomies)
- The specification is being drafted by the ADMS Working Group (Feb. 2012)
- The WG kicked-off early November with 12 MSs participating
- Confirmed participation of W3C, OASIS, IEEE, CEN, UN/CEFACT, ETSI, Open Group and many other EC units
- ADMS will be used for the federation of semantic assets repositories. DE, DK, EE, FI have already repositories that could participate. Other countries are encouraged to set up similar infrastructures.
- March 2012: Workshop on sharing experiences on Metadata Management
- Currently the specification is available in UML, XML, RDF formats for public review at <https://joinup.ec.europa.eu/asset/adms/release/08>



# ISA defining and promoting semantic interoperability

- >> Via the federation, Joinup.eu will give access to a large number of reusable assets (June 2012) that may be useful to reuse.
- >> Joinup is the platform to use for promoting your own assets
- >> Do you have vocabularies, codelists, taxonomies, ontologies, RDFS, XML schemata, data models, or any other semantic interoperability asset you want to increase their visibility, share and reuse?
  - >> **Publish them in Joinup.eu**



**Semantic definitions should be  
commonly agreed  
on fundamental, highly reusable concepts**

**1**



**Is it possible for 27 MSs to agree on common semantics?**

**2**



**Is it possible to define an entity (concept) in a way that remains relevant in different contexts?**





# ISA defining and promoting semantic interoperability

- Definitions should first be agreed on fundamental concepts (Core), where diverged and/or conflicting views are less intense.
- A Core Concept/Vocabulary
  - Is highly reusable: the specification is simple and captures basic and generic characteristics of an information entity, regardless of the context this entity is used
  - Is extensible: domain specific specialisations can be drafted on top of the core representation.



# ISA defining and promoting semantic interoperability

## Current status:

- **Core Address TF:** chaired by JRC/H6 Spatial Data Infrastructures (INSPIRE Directive). The address specification is already an important element on the INSPIRE data models.
- **Core Business TF:** chaired by DG MARKET/F2, responsible for European Business Registry project.
- **Core Person TF:** chaired by Eurojust. Eurojust via the EPOC IV project promotes interoperability in the judicial domain amongst MSs.



# ISA defining and promoting semantic interoperability

## Next steps:

- Finalize the 3 Core Vocabularies specifications
- Endorsement of the 3 Core Vocabularies by the MSs
- Promote the Core Vocabularies in the MSs and particularly in their National Interoperability Frameworks
- Further liaison with standardization bodies and relevant initiatives (e.g. W3C, Standard Vocabularies for Government Linked Data)



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# CAMSS: Common assessment method for standards and specifications

- The purpose of CAMSS: to help European Public Administrations in the assessment of formal specifications in public procurement in the area of eGovernment services.
- CAMSS comprises:
  - 1) Process, 2) Criteria and 3) Assessment Library.
- The process describes how to complete an assessment from start to finish using CAMSS criteria.
- In the assessment process, the criteria are expressed as a series of qualitative questions for the evaluators to answer. The answers are then combined to create the full CAMSS assessment.
- Completed assessments are planned to be made available in an assessment library helping Member States to share and re-use assessments partially or in full depending on the business needs in question.



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# ISA supporting interoperability solutions between European public administrations

## Internal Market Information System

- Cooperation platform
- Helps competent authorities in Member States to overcome important practical barriers to communication by providing:
  - a search engine to **identify the right partner** in another MS
  - a complete **multilingual** system
  - a flexible workflow hiding the complexity of administrative structures in the other MS
- Covers 27 Member States and 3 EFTA countries
- Developed by the European Commission in partnership with the Member States, funded by IDABC, ISA and DG MARKT



# ISA supporting interoperability solutions between European public administrations

## Internal Market Information System

Multilingual web application for cross-border exchange of information between public authorities

- allows fast, structured, traceable exchange of information among competent authorities in different member states in the context of administrative cooperation
- supports all official EU languages
- Search for the right counter part in another Member State
- Secure bilateral exchange of information (one-to-one)
- Alerts about dangerous situations regarding service providers (one-to-many)
- Search for national registers





# ISA supporting interoperability solutions between European public administrations

## Internal Market Information System

- IMI is also a flexible tool which can be re-used for other Internal Market legislation and also legislation in other policy areas
  - the Commission develops one-single system
  - The MS uses only one system for administrative co-operation
- **Currently used in the context of:**
  - Professional Qualifications directive
  - Services directive
  - Posting of Workers directive
- **Future:**
  - Cross-border health care (DG SANCO)
  - Cash in Transit (DG ECFIN)
  - Professional Cards (DG MARKT)



# ISA supporting interoperability solutions between European public administrations

## Internal Market Information System

|                          | 2010 | 2011 | Increase |
|--------------------------|------|------|----------|
| Registered Authorities   | 5552 | 6536 | 17%      |
| Sent Requests            | 3148 | 5569 | 76%      |
| Answered/closed Requests | 2445 | 5302 | 116%     |



# ISA supporting interoperability solutions between European public administrations

## Common Information Sharing Environment for the surveillance of the EU maritime domain

- Interoperable and trusted cross-sector data exchange between public administrations within the EU maritime domain
- 7 policy areas:
  - Maritime safety and security
  - Maritime environment and pollution preparedness and response
  - Fisheries control
  - Border control
  - Law enforcement
  - Customs and defence
- Expected synergies with other solutions like the **INSPIRE reference platform**



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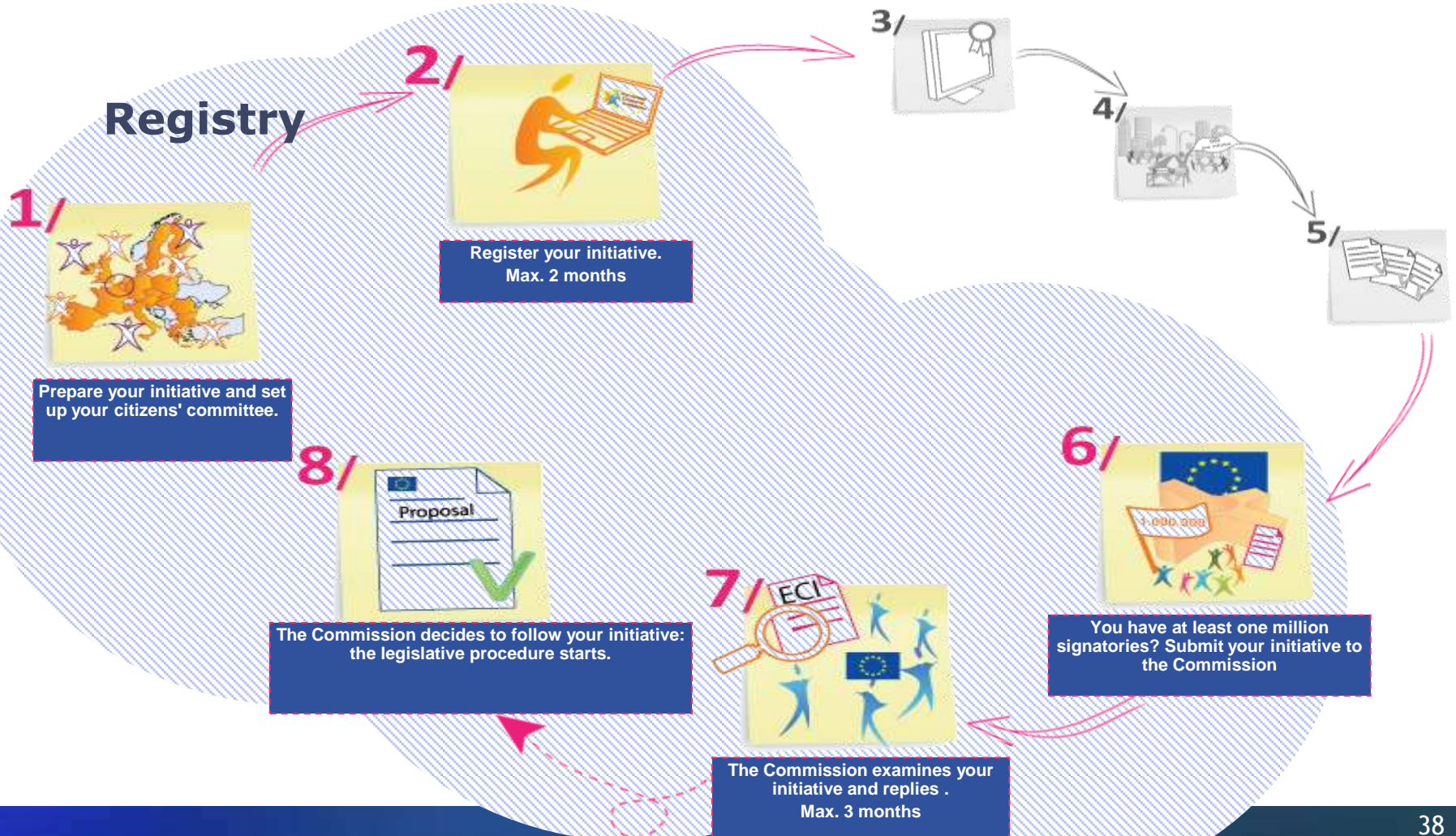


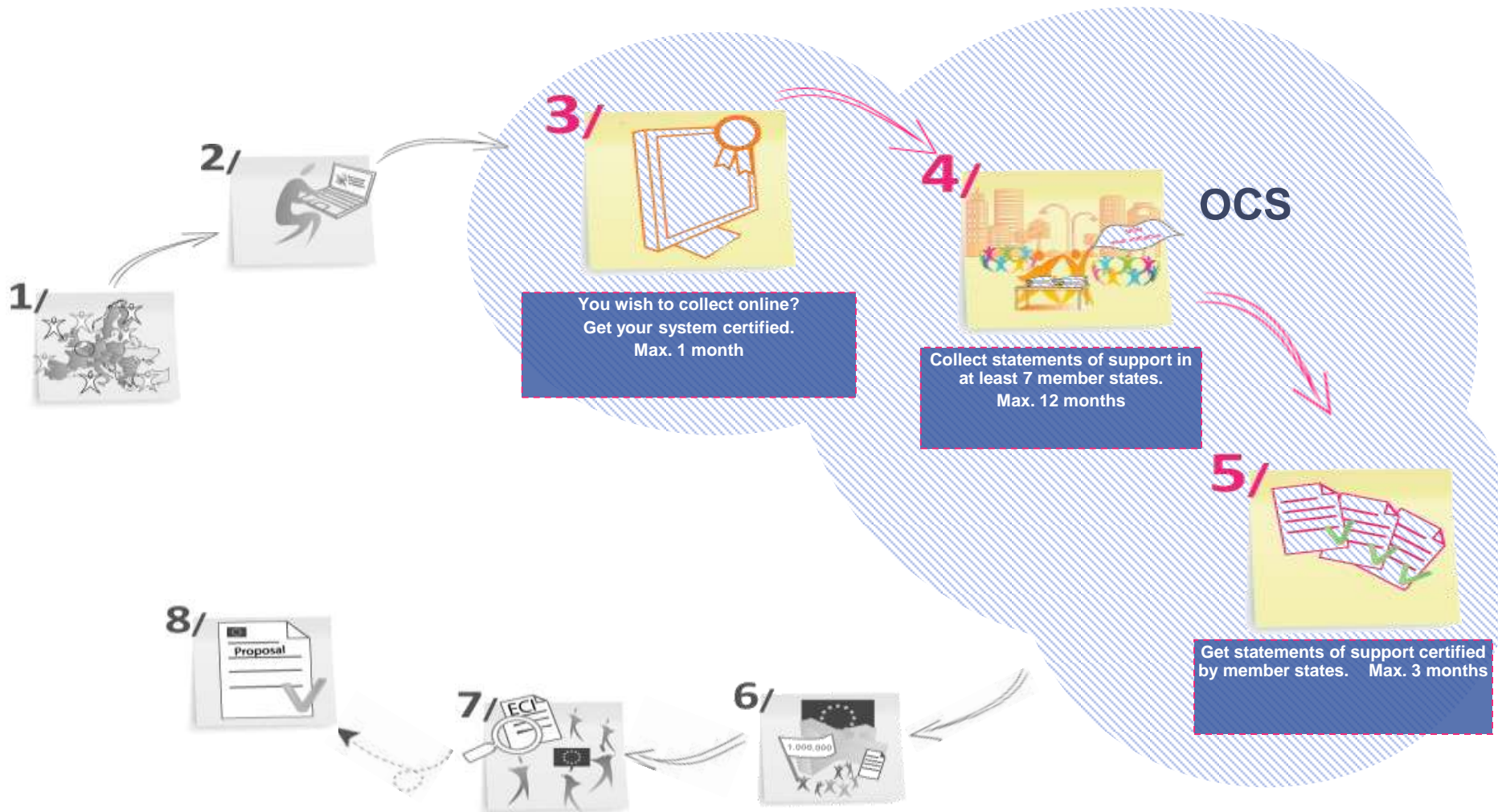
## European Citizens Initiative: **On-line collection of statements**

- Helps organisers build their online collection systems (free, downloadable open source software)
- Provides a user-friendly tool for citizens to sign-up online and for organisers to manage their online collection
- Available in all 23 official languages
- Complies with the relevant security requirements of the regulation
- Facilitates certification by the Member States
- Facilitates the export of data to the Member States
- Facilitates the verification by Member States authorities



# European Citizens Initiative: On-line Collection of Statements









## Get informed

- News
- Events
- Cases
- Guidelines

The screenshot shows the Joinup platform interface. At the top, there is a navigation bar with the European Commission logo and the text 'Joinup'. Below this, there is a search bar and a navigation menu with options like 'HOME', 'COMMUNITIES', 'SEMANTIC ASSETS', 'SOFTWARE', 'NEWS', 'EVENTS', 'E-LIBRARY', and 'PEOPLE'. The main content area is titled 'Open-Source Software' and includes a sub-header 'Find, reuse and develop Open-Source Software for public administrations.' Below this, there is a section for 'Guidelines on Open-Source Software (OSS)' which lists three guidelines: 'Guideline for Public Administrations on Procurement and Open Source Software (updated June 2010)', 'Guidelines for Public Administrations on Partnering with Free Software Developers (2005)', and 'Partnering with Public Administrations: A short guide for OSS developers (2005)'. To the right of the guidelines, there are several buttons for user actions: 'Propose your Software', 'Ask a legal question', 'Propose your...', and 'Share this on...'. Below these buttons, there is a section for 'Federated Forges' which lists various software repositories and their project counts: OSOR (200 projects), Forja de la junta de Andalucía (234 projects), LaFarga.cat (184 projects), ASC (19 projects), and Admisource (0 projects).

Interoperability Strategies to achieve wide availability of eGovernment services in the Member States for all EU citizens and enterprises.





# Joinup platform

## Repository to share and re-use

- Asset repository
- OSS repository
- Project federation - ongoing
- Asset federation - to come

A screenshot of the Joinup Semantic Assets web application. The page header includes the European Commission logo and the text 'Joinup'. Below the header is a navigation menu with buttons for 'HOME', 'COMMUNITIES', 'SEMANTIC ASSETS', 'SOFTWARE', 'NEWS', 'EVENTS', 'E-LIBRARY', and 'PEOPLE'. The main content area is titled 'Semantic Assets' and contains a search bar, a 'Find an Asset' section with a search button, and a list of 'Latest Assets'. The list includes two items: 'MoReq2' and 'XML structures for personal data'. On the right side, there are buttons for 'Propose your Asset', 'Propose your...', 'Subscribe to RSS', and 'Share this on...'. Below these buttons is a 'Recently Registered' section listing several projects with their registration dates.



## Platform for collaboration

- Communities
  - wiki, mailing lists, issue manager, forum, blogs, news version control (svn), updates.
- Virtual forges
  - From jan 2012
- People

A screenshot of the Joinup platform's 'People' section. The page header includes the European Commission logo and the 'Joinup' logo. Below the header, there are navigation tabs for 'HOME', 'COMMUNITIES', 'SEMANTIC ASSETS', 'SOFTWARE', 'NEWS', 'EVENTS', 'E-LIBRARY', and 'PEOPLE'. The main content area is titled 'People' and 'Latest Registered People'. It features a search bar, a 'Sort' dropdown menu set to 'Name', and an 'Apply' button. Below the search bar, there is a list of members with their names, member since dates, organizations, locations, and keywords. The members listed are Michaela Elisa JACKSON, Theo JACOBS, and Veit JAHNS. On the right side, there are buttons for 'Invite People' and 'Propose your...', and a 'Most Active' section listing users like JoinUp ADMINISTRATOR, Jens-Erik THYHOLDT, Frans FOKKENROOD, Jörg HOLETSCHEK, and Robert H.P. ENGELS.



# Need more information?

ISA-website: <http://ec.europa.eu/isa>

**European Commission**  
**Directorate-General for Informatics**  
**European eGovernment Services**  
**B-1049 Brussels - Belgium**  
[isa@ec.europa.eu](mailto:isa@ec.europa.eu)

Thank you!



# Semantic interoperability: References

- ISA Programme, Action on semantic interoperability: [http://ec.europa.eu/isa/actions/01-trusted-information-exchange/1-1action\\_en.htm](http://ec.europa.eu/isa/actions/01-trusted-information-exchange/1-1action_en.htm)
- Joinup platform: <https://joinup.ec.europa.eu/>
- Core Vocabularies: <https://joinup.ec.europa.eu/elibrary/document/egovernment-core-vocabularies>
- Federation of semantic assets repositories: <https://joinup.ec.europa.eu/elibrary/document/federation-semantic-assets-repositories>
- ADMS Brochure: <https://joinup.ec.europa.eu/elibrary/document/adms-brochure>
- Open Government Metadata: <https://joinup.ec.europa.eu/elibrary/document/towards-open-government-metadata>
- ADMS version for public review: <https://joinup.ec.europa.eu/asset/adms/topic/public-comments-adms-specification-v08>