

Evolution of INSPIRE – interoperability solutions for e-government

INSPIRE Implementation State-of-Play 26/05/2015

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www.jrc.ec.europa.eu

*Serving society
Stimulating innovation
Supporting legislation*

Why?



Support technical evolution and use of INSPIRE data & services

Outline

1. ISA programme and actions

2. Geospatial interoperability solutions

a. Developing ideas

b. Putting them in practice

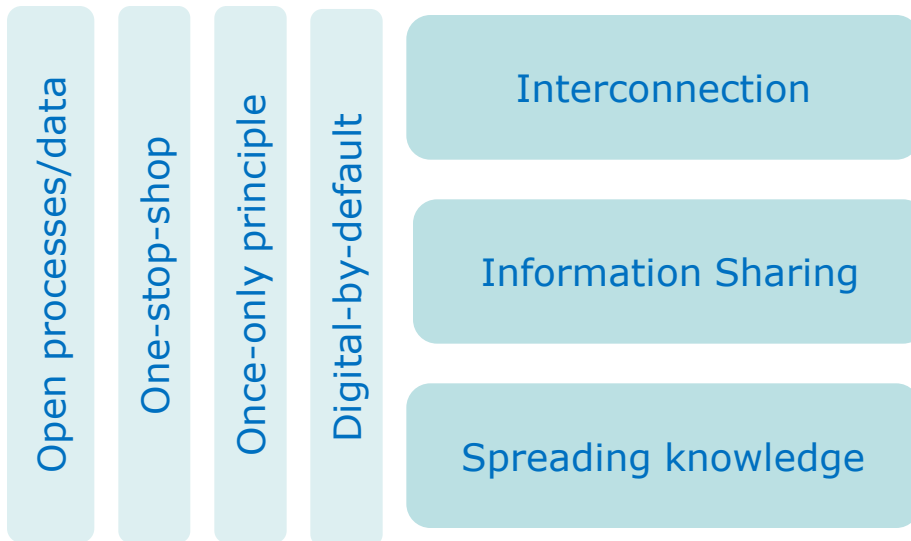
ISA Programme

EU **Interoperability Solutions for European Public Administrations** (ISA) Programme run by the EC for the EU Member States

- Facilitates efficient and effective cross-border electronic collaboration between European public administrations
- Contributes to the ***e-Government Action Plan 2011-2015*** and the ***Digital Agenda for Europe*** by supporting multi-sector interoperable cross-border e-services and resources to help share and reuse them

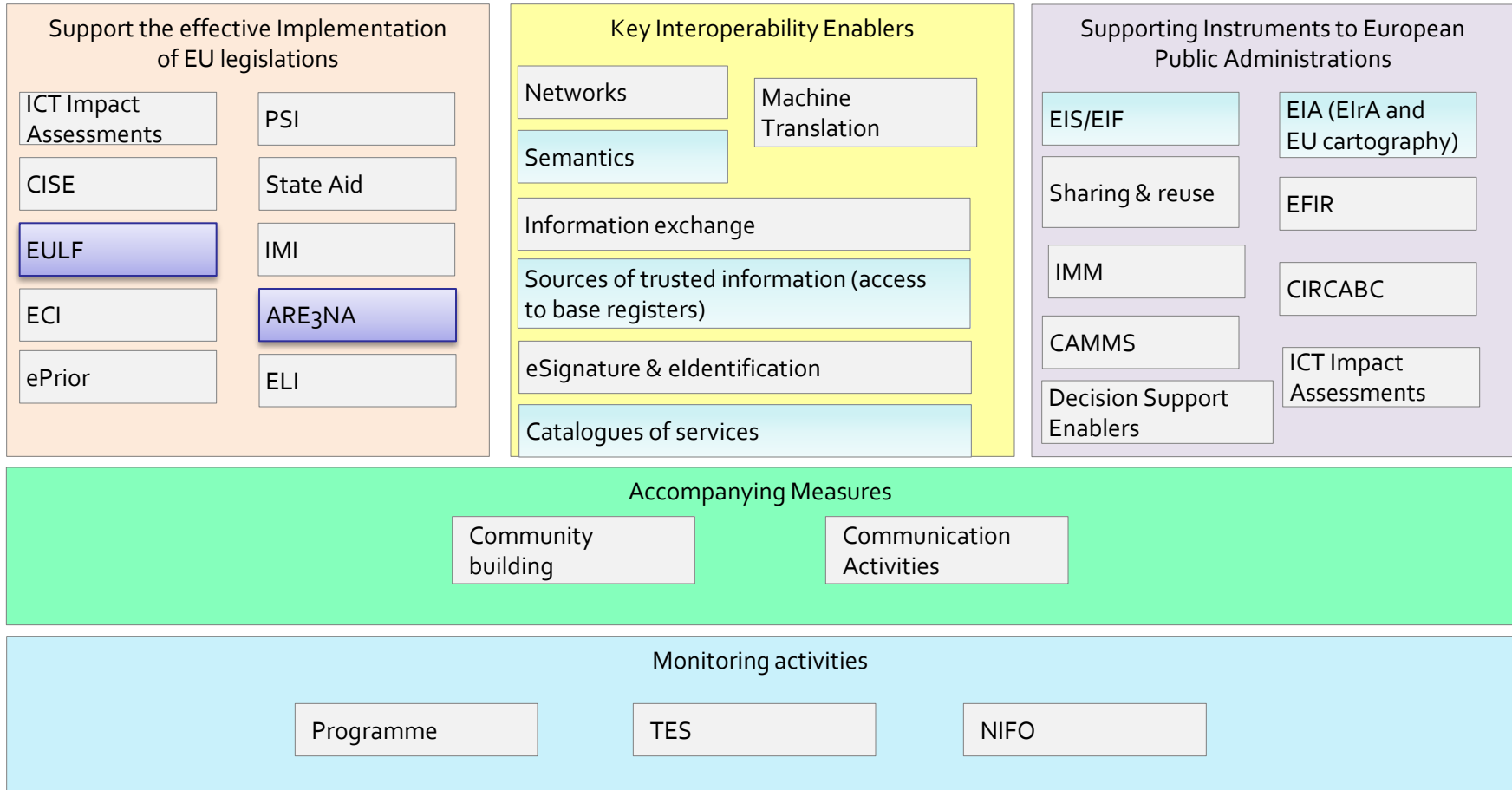
Interoperability - What is it about?

If ... then



Results in



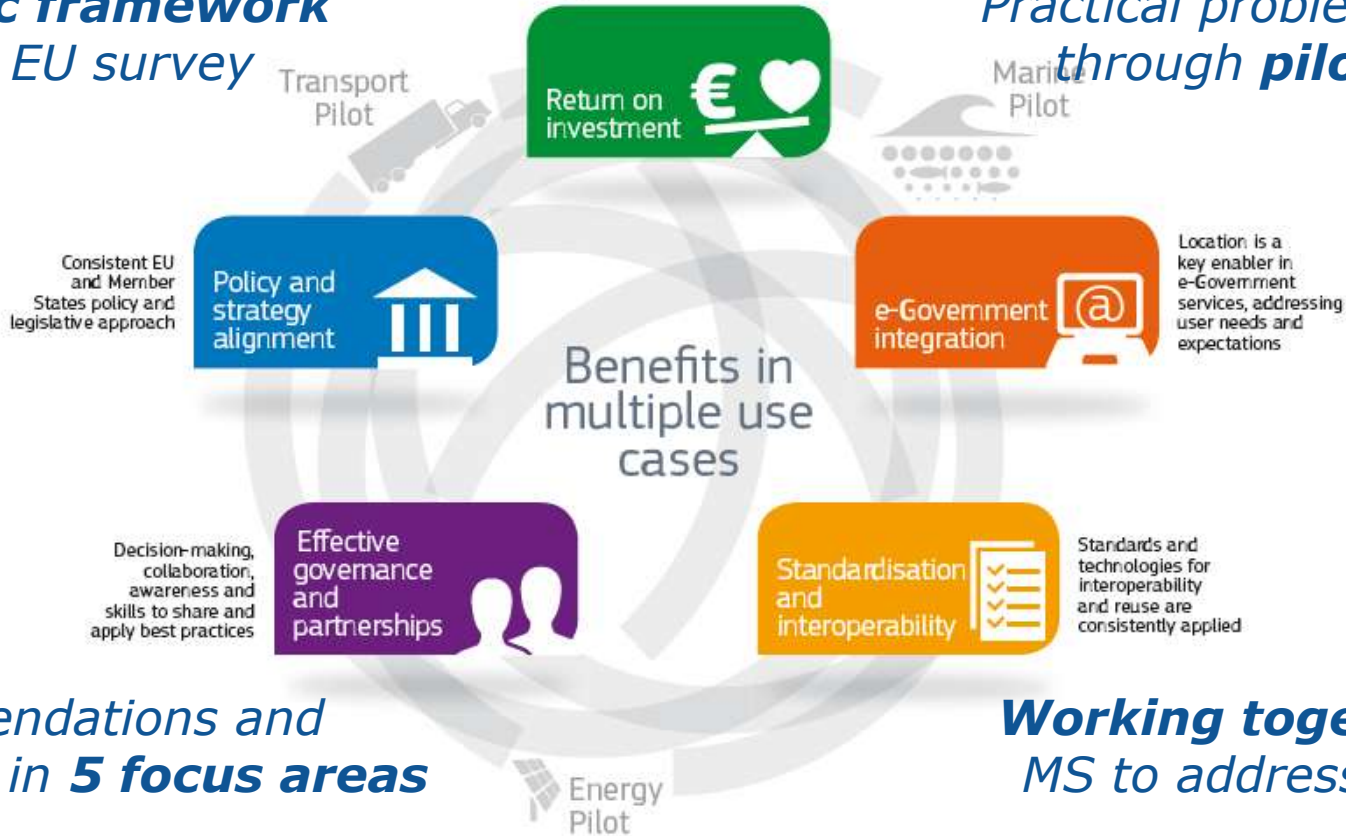


European Union Location Framework

*Strategic framework
based on EU survey*

Strategic funding and procurement,
sound business cases and
good evidence of benefits

*Practical problems solved
through **pilot studies***



*Recommendations and
guidance in **5 focus areas***

***Working together** with
MS to address priorities*

Delivering savings, growth and better services
through “location-enabled government”

EULF Workshop



- **Friday 1330-1500**
- ***Have your say & 'Bring and Buy' Ideas Exchange***
 - Delivering e-government across sectors and borders
 - EULF guidelines in Interoperability Frameworks
 - Toolkit for location-enabled policies and services

ARe³NA

A Reusable INSPIRE Reference Platform



Interoperability



Openness



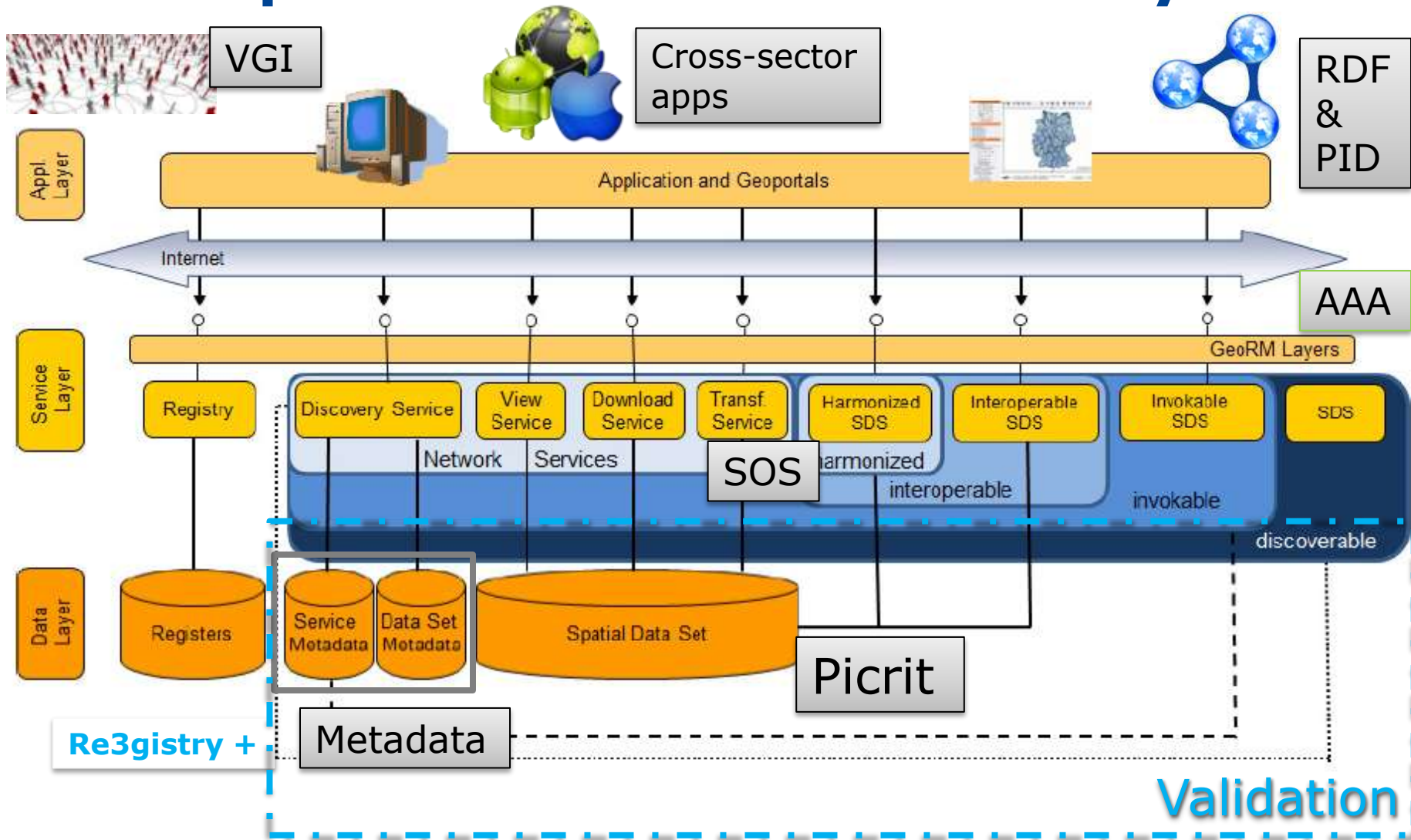
Reuse



Collaboration

... sharing reusable components for INSPIRE implementation and interoperability in cross-border/cross-sector contexts.

Developments for INSPIRE and beyond



Evolution of the access control testbed AAA study and software on JoinUp

- How best to **manage access** geospatial data and services?
- Common data usage/restriction **terminology**
- We want solutions to fit **with e-government** at the European level



The screenshot shows the JoinUp website interface. At the top, there is a search bar and navigation links for 'Login or Sign up'. The main header features the JoinUp logo and the tagline 'Share and reuse interoperability solutions for public administrations'. Below this, there are navigation tabs for 'My Page', 'Communities', 'Interoperability solutions', 'News', 'Events', 'e-Library', and 'People'. The main content area displays the 'ARE3NA study on Authentication, Authorization and (...)' project. It includes a star rating, social media icons, and a navigation menu with tabs for 'Overview', 'Description', 'Members list', 'Issues', 'Interoperability Solutions', 'Highlights', and 'Communications'. The 'Overview' tab is active, showing a description of the study's scope and a 'Learn more' link. Below the description, there are sections for 'Themes' and 'Keywords'. A 'Documentation' section provides a URL to the project's documentation. At the bottom, there are sections for 'Related activity', 'Related projects', and 'Recent issues'.

<https://joinup.ec.europa.eu/asset/are3na-aaa/home>

Registry tools

V1.0 on JoinUp

- **Reuse** of Re3gistry tool in Slovakia
- Interested in promoting its reuse in **other sectors** and links to **similar tools**
- Recent study on registry interoperability will lead to more work on a **registry federation**



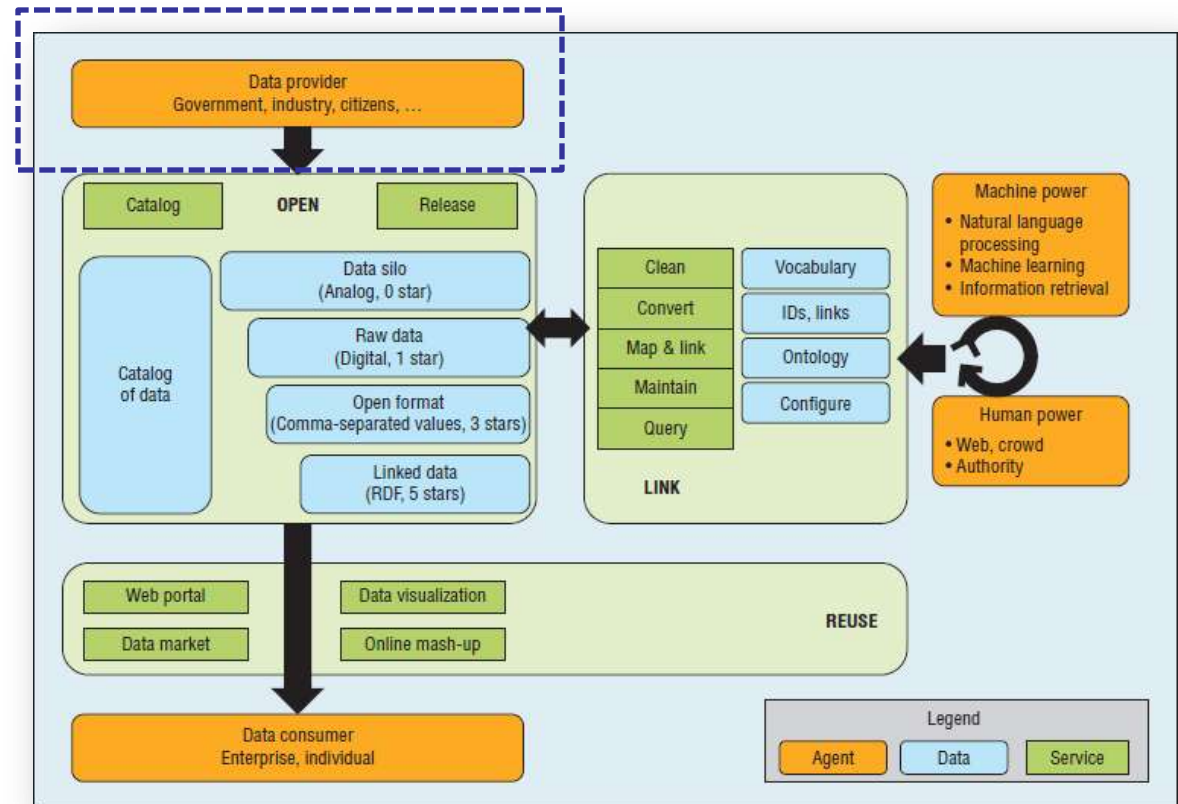
<https://joinup.ec.europa.eu/software/re3gistry/home>

The business need for Linked Data

...the LOGD ecosystem defined in the "Linked Open Government Data" study

The key stakeholders:

- Data providers
- Data consumers
- Data brokers
- Regulatory entities



Persistent URI Best Practices

10 Rules for Persistent URIs



Follow the pattern

e.g. `http://[domain]/[type]/[concept]/[reference]`

Re-use existing identifiers

e.g. `http://education.data.gov.uk/id/school/123456`

Link multiple representations

e.g. `http://data.example.org/doc/foo/bar.html`

e.g. `http://data.example.org/doc/foo/bar.rdf`

Implement 303 redirects for real-world objects

e.g. `http://www.example.com/id/alice_brown`

Use a dedicated service

i.e. independent of the data originator

10 rules for persistent URIs



Avoid stating ownership

e.g. `http://education.data.gov.uk/ministryXeducation/id/school/123456`

Avoid version numbers

e.g. `http://education.data.gov.uk/doc/school/X/123456`

Avoid using auto-increment

e.g. `http://education.data.gov.uk/id/school1/123456`

e.g. `http://education.data.gov.uk/id/school1/123457`

Avoid query strings

e.g. `http://education.data.gov.uk/doc/school?id=X3456`

Avoid file extensions

`http://education.data.gov.uk/doc/schools/123456.X`

Source:

<https://joinup.ec.europa.eu/community/semic/document/10-rules-persistent-uris>



DCAT-AP, Location RDF and PIDs in practice

Reuse of INSPIRE with linked/open data

Put draft guidelines into practice for

- Data (RDF)
- Governance around Persistent Identifiers
- **What are the e-government use cases and common areas of interest?**



Governance		Operations		
PIDs Policy What are we looking for? What are we not looking for?	PIDs Organisational structure What are the roles and responsibilities of the organisations involved?	Registration What are the requirements for the registration process?	Validation What are the requirements for the validation process?	Archivation What are the requirements for the archivation process?
Business Case What are the business cases for this project?	Case Model What are the business cases for this project?	PIDs Naming and Design rules What are the requirements for the naming and design rules?		Service Model What are the requirements for the service model?
Financing		Architecture		

GeoDCAT-AP

- Geospatial extension to DCAT application profile for data portals in Europe
 - *a metadata profile as an interchange format between EU Member States data portals*
- Developed through ISA
- Intended to provide a DCAT-AP compliant representation for the set of metadata elements included in
 - INSPIRE metadata
 - The core profile of ISO 19115



INSPIRE & GeoDCAT-AP: Why?

- **Agree upon a common RDF representation**
- an **alternative representation** of INSPIRE metadata
- Without a harmonised INSPIRE-to-RDF mapping, **metadata interoperability** is lost

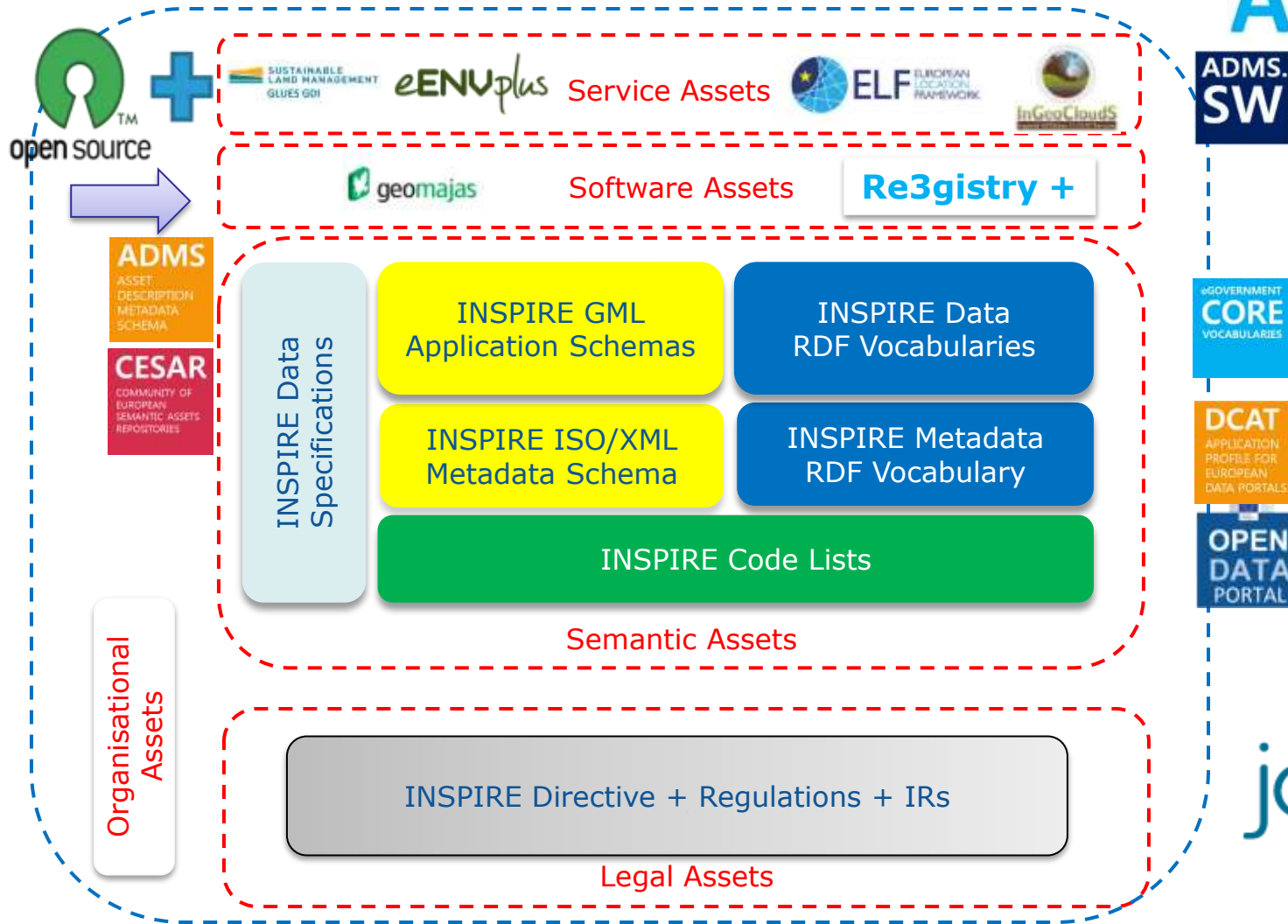
- **Facilitate cross-sector sharing of INSPIRE metadata**
- INSPIRE metadata harvested and published in **cross-domain data portals** at different levels
- Development of a **pan-EU Open Data Portal**- single access point for the cross-border datasets discovery from EU data portals
- **DCAT-AP** should be its metadata schema

GeoDCAT-AP: Current status

- First draft to be released in **early June** for public review (1month)
- Final draft published in **July**
- All the **documentation** on GeoDCAT-AP is available on Joinup:
 - <https://joinup.ec.europa.eu/node/139283/>
- An **XSLT** implementing the GeoDCAT-AP specification is publicly available:
 - <http://europa.eu/!VN33fk>
- You are welcome to send **comments and feedback** to the GeoDCAT-AP WG mailing list:
 - dcat_application_profile-geo@joinup.ec.europa.eu

INSPIRE Asset Constellation & Reuse

ARe³NA



Our guide to exploiting the INSPIRE infrastructure in 6 points:

4) INSPIRE components as a LEGO set



ARE3NA Re3ference Platform



Support for outreach/promotion

Re³ference
Platform

live³tutorial

Initial design, workflows and
guidance for tools

de³mo

Help
imple
bene
to ex

Projects,
examples
and good
practices

organisation
of
ing items &
opments'

Define implementation
vocabularies

a,b,c

Interactive
guidance and
workflows for
implementation
and reuse



Showcase apps and
applications using INSPIRE



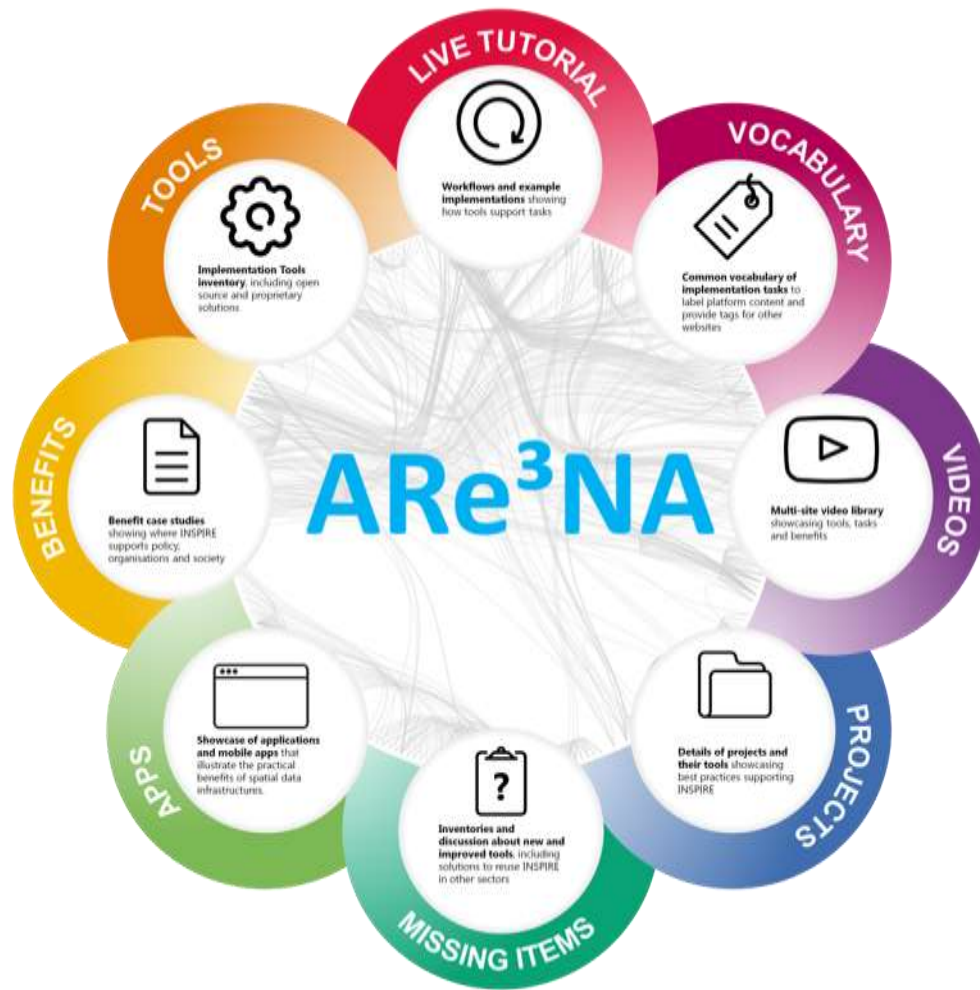
Help solution providers
write case studies



detailed workflows
for JRC platform
developments

Joint
Research
Centre

Reporting on implementation experience for further developments





**Tomorrow 14-15h:
INSPIRE Lunchtime Talk**

Obrigado

For more information

EULF http://ec.europa.eu/isa/actions/02-interoperability-architecture/2-13action_en.htm

ARE3NA http://ec.europa.eu/isa/actions/01-trusted-information-exchange/1-17action_en.htm

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