EIRA local workshop – AgID (Italy)

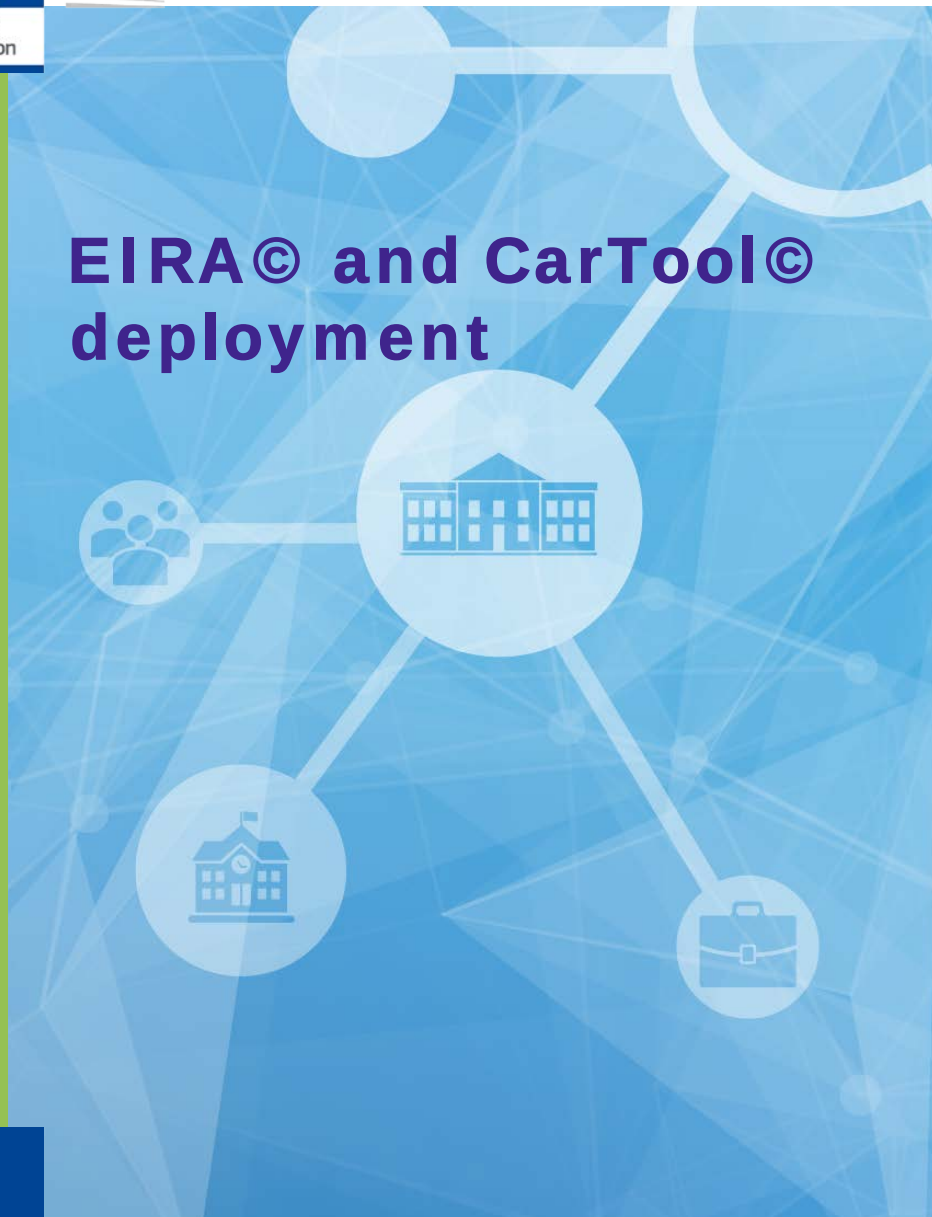
02nd April 2019

Dr. Raul M. Abril

EUROPEAN COMMISSION

Directorate-General for Informatics (DIGIT)

EIRA© and CarTool© deployment



ISA²

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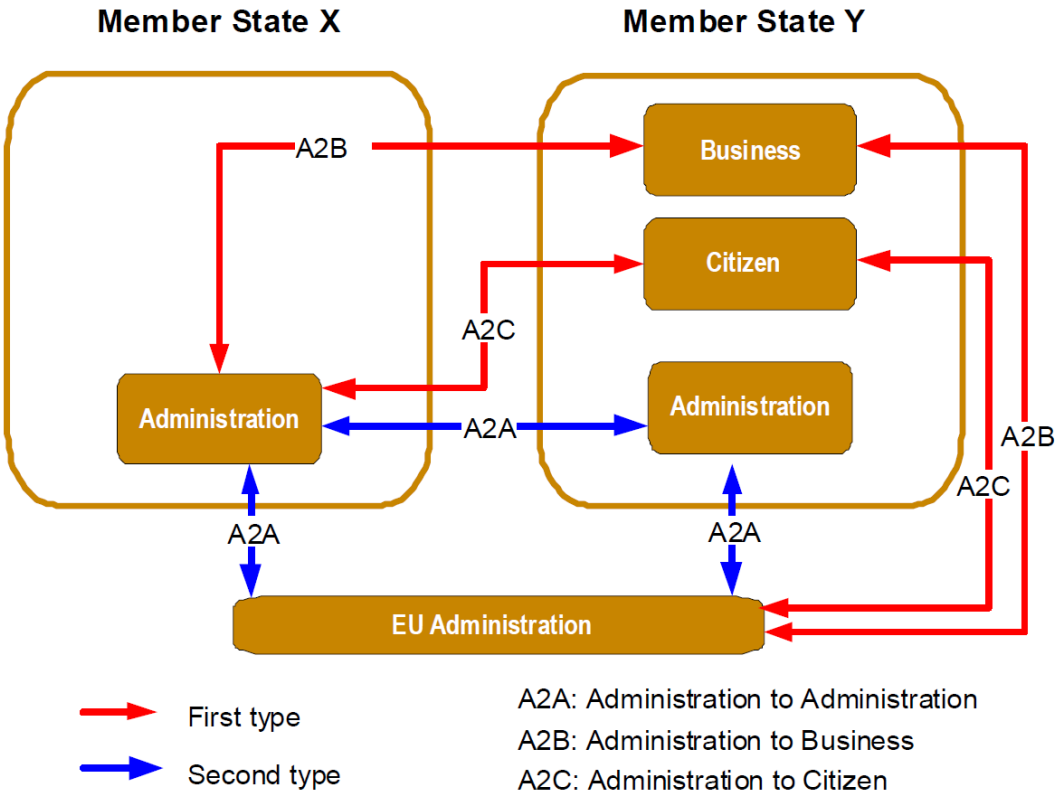
02nd April 10:00 – 10:30

EIRA Overview

Scenarios



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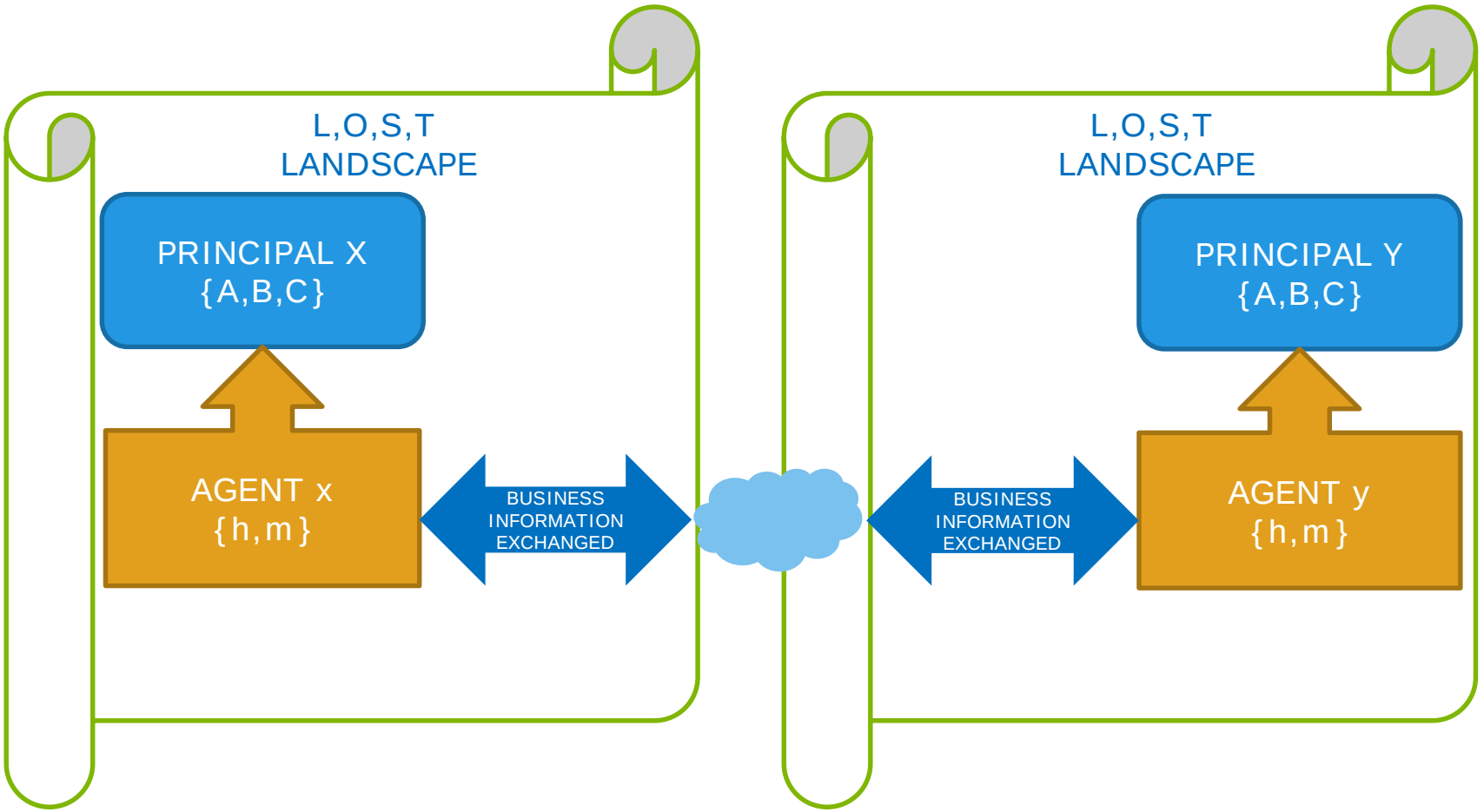
Example of European Public Service

Sector/Area	Service
Business development (A2B, A2A)	Start-up of a company Public procurement Registration of patents, trademarks, designs Consumer protection, labelling, packaging
Certificates and licenses (A2C)	Birth and marriage certificates Driving licences Passports, visas Residence and working permits Car registration
Education (A2C)	Enrolment in schools and universities Study grants
Taxes for citizens (A2C)	Online Tax

Sector/Area	Service
Social security (A2C)	Information service for social security systems Unemployment benefits Child allowances Pensions Public health insurance
Supply of statistical data (A2B, A2A)	Tax for businesses VAT refunding Information on tax incentives Declaration of excise goods
Work (A2C)	Recognition of qualifications and diplomas Job search
Customs (A2C, A2B, A2A)	Information on Customs duties Customs declarations

The Interoperability challenge: lost landscapes of agents

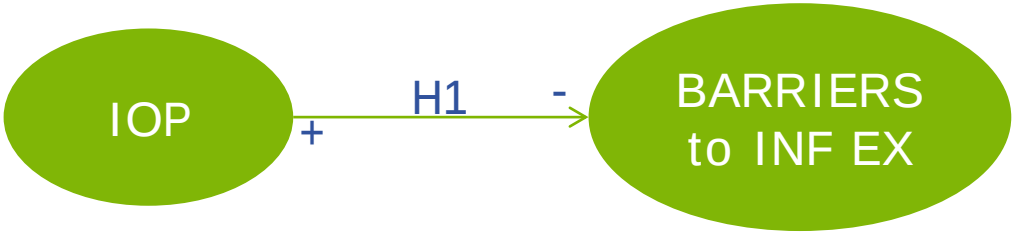


A: Public Administration (local, regional, national, European); B: Business; C: Citizen

Business case for Interoperability (IOP) in e-Government

IOP is a mean to eliminate barriers in business information exchange (it is not the goal)

H1: ”There is a negative correlation between IOP and barriers to business information exchange”

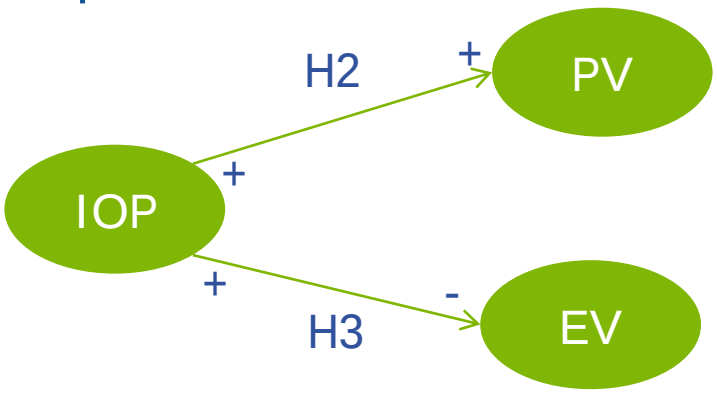


Business case for IOP in e-Government

IOP is the independent variable [of performance/economic cost variables]

H2: “There is a positive correlation between IOP and [**performance variable**] (i.e. # requests/hr) of public service delivery to public administrations citizens and businesses”

H3:”There is a negative correlation between IOP and [**economic cost variable**] (i.e. # rejection cost) of public service delivery for public administrations, businesses and citizens”

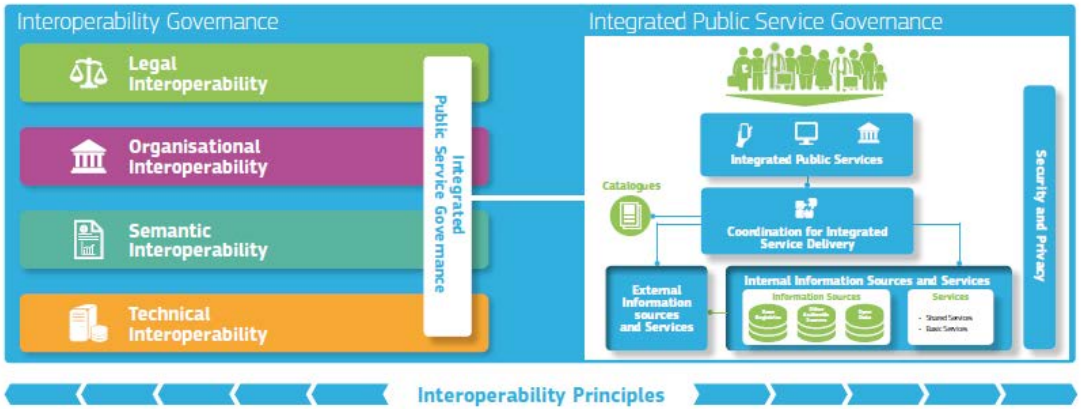


EIRA Value proposition

European Commission

EIRA
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE

The revised EIF Conceptual Model



iMAPS
INTEROPERABILITY MATURITY ASSESSMENT OF A PUBLIC SERVICE

ASSESSING "EIF CONFORMANCE" IN PUBLIC SERVICE

EIRA
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE

CarTool
[EIRA]
CARTOGRAPHY TOOL

IQAT©
Interoperability Quick Assessment Toolkit

ASSESSING "EIF CONFORMANCE" IN SOFTWARE COMPONENT

CAMSS

ASSESSING STANDARDS

ISA²

EIRA supports EIF implementation (*)

European Commission

EIRA
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE

Standards & technical specifications

- *Profile standards and technical specifications for use in the EU*
- *Create sample software*
- *Create testing services*
- *Create promotion services*

Building Blocks

- *Provide Hosting (infrastructure)*
- *Set SLAs*
- *Provide dedicated Ops teams*

Common Services

SAML 2.0 | SMP BDXL ebCore Party ID REM AS4 | XAdES CAdES PAdES ASiC | EN 16931 CEN/TS 16931 CEN/TR 16931

CEF eID | eTrustEx + CEF eDelivery | CEF eSignature | CEF eInvoicing

EU Login | EU File exchange | ESSI | Corporate eProcurement

Available at:
https://www.youtube.com/watch?v=RWhoy3ilYEA
https://joinup.ec.europa.eu/collection/european-interoperability-reference-architecture-eira/about
(*) DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

ISA²

Why EIRA? ISA2 legal bases (*)

"…. The ISA²programme shall support and promote:

f) the mapping and analysis of the overall interoperability landscape in the Union ***through the establishment, maintenance and improvement of the EIRA and the EIC as instruments to facilitate the re-use of existing interoperability solutions and to identify the areas where such solutions are still lacking****;*

(g) ***the maintenance, updating, promotion and monitoring of the implementation of the EIS, the EIF and the EIRA***"

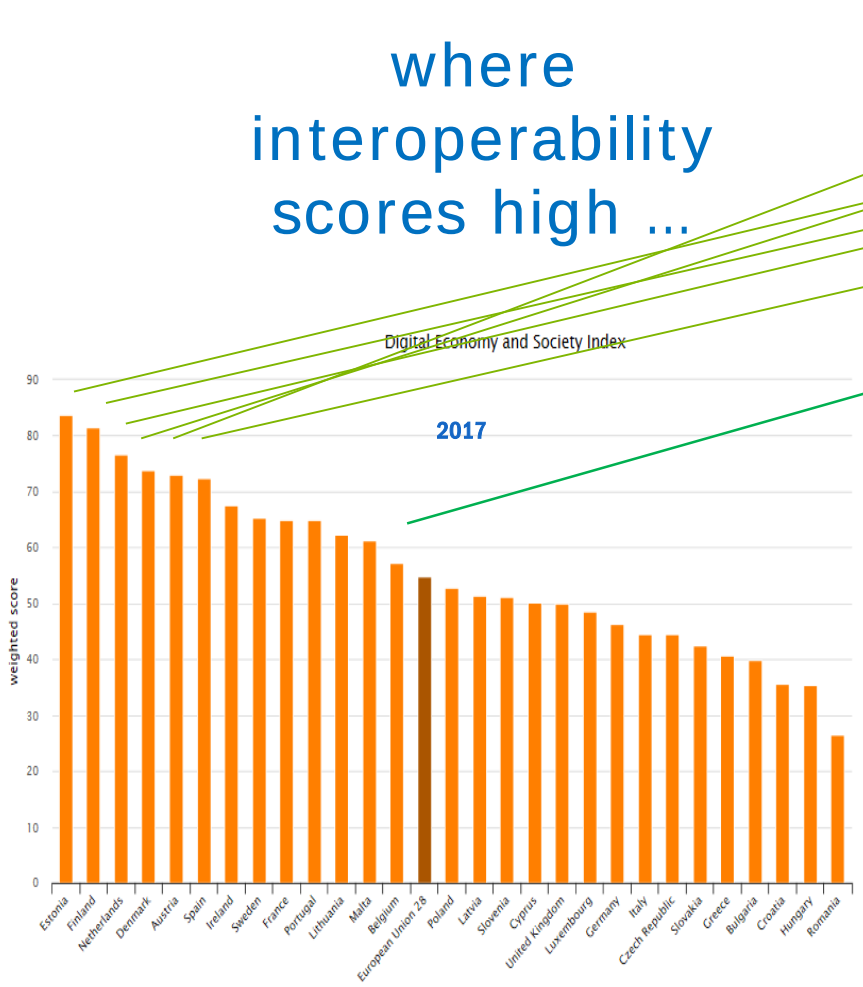
(*) DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 25 November 2015

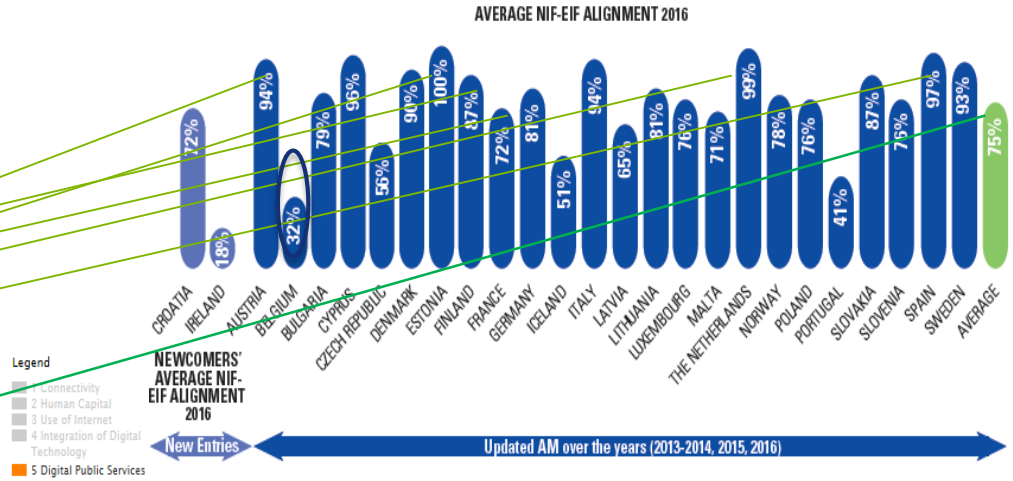
What is EIRA©?

- ✓ **Architecture content metamodel**
- ✓ Defining the most salient **architectural building blocks (ABBs)** needed **to build interoperable solutions** supporting public services
- ✓ Each **ABB models** a decoupled functionality
- ✓ Result of a **collaborative effort of MS**
- ✓ As any RA
  - Has a focus: **Interoperability**
  - Has an Reference Model/Ontology: **ArchiMate ©**
  - Has an Architecture Style: **SOA**

Digital public services - Current landscape

where interoperability scores high ...





...digital public services score high

NORA
Nederlandse Overheid
Referentie Architectuur

DIGITALISERINGSSTYRELSEN

RIIGI INFOSÜSTEEMI AMET

BOSA
DG Digitale Transformatie
FOD Beleid en Ondersteuning
DG Transformation digitale
SPF Stratégie et Appui

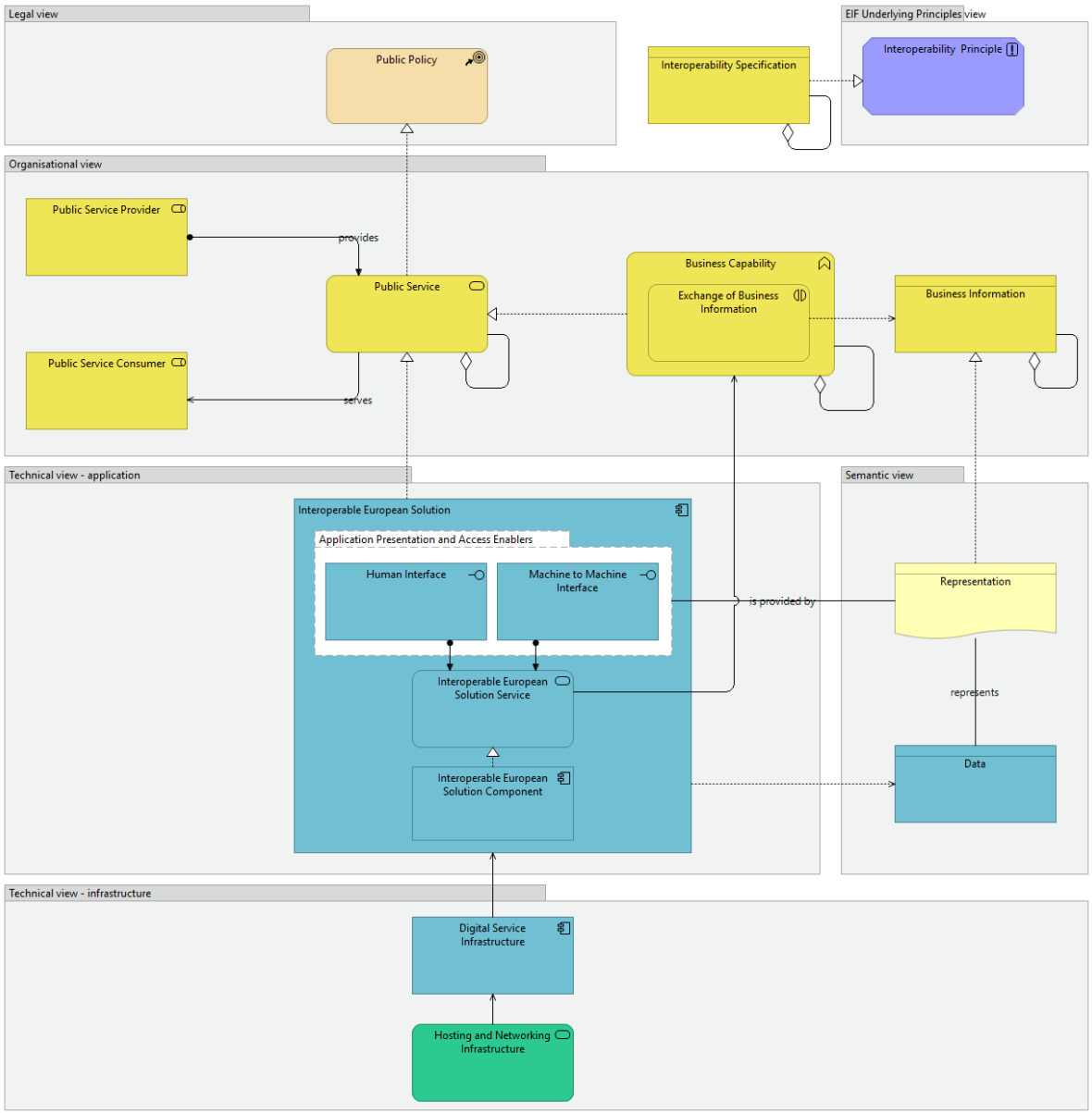
difi
Direktoratet for
forvaltning og IKT

DIGG
MYNDIGHETEN FÖR
DIGITAL FÖRVALTNING
Agency for Digital Government

AgID Agenzia per
l'Italia Digitale

ISA²

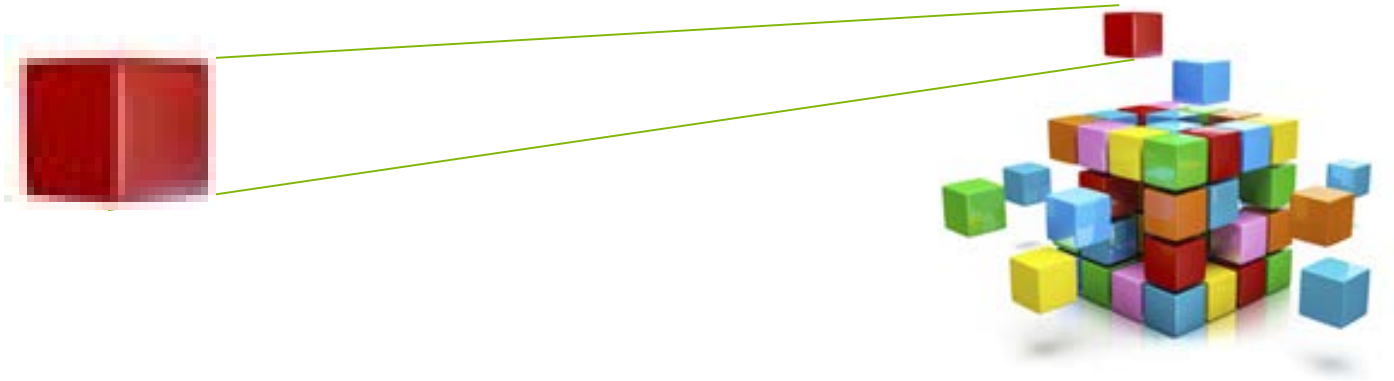
EIRA v3.0.0 High-Level viewpoint



Interoperability saliency in ABB

ABB salient for the interoperability

Public service interoperable



Interoperability saliency in an ABB means

- ✓ The ABB is a [key] interoperability enabler because [...]

and/or

- ✓ The ABB is salient for [legal | org | semantic | tech] interoperability because [...]

EIRA© EIF Alignment

European Commission

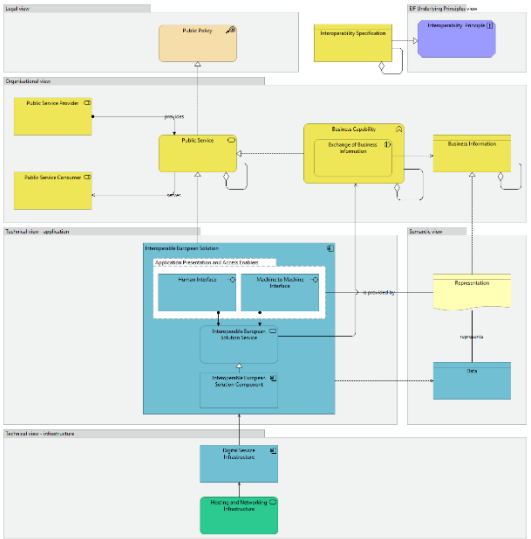
EIRA
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE

EIF

Framework and principles

EIRA© v3.0.0

Implementation guidelines and specifications



EIRA value proposition

The European Interoperability Reference Architecture (EIRA) is an architecture content metamodel defining the most salient architectural building blocks (ABBs) needed to build interoperable eGovernment systems. The EIRA provides a common terminology that can be used by people working for public administrations in various architecture and system development tasks.

EIRA use cases

Design	Assess	Communicate & Share	Discover & Reuse
Accelerate the design of systems that support the delivery of interoperable digital public services (across borders and sectors)	Provide a reference model for comparing existing architectures in different policy domains and thematic areas, to identify focal points for convergence and reuse	Help documenting the most salient interoperability elements of complex systems and facilitate the sharing of reusable solutions	Ease the discovery and reuse of interoperability solutions through the TES Cartography using the **CarTool**

Available at: https://joinup.ec.europa.eu/collection/european-interoperability-reference-architecture-eira/about

Potential use cases

EIRA

Cart

Designing

- Design solution architectures
- Create portfolio

Assessing

- Compare solution architectures
- Rationalise portfolio
- Manage portfolio

Communicating and Sharing

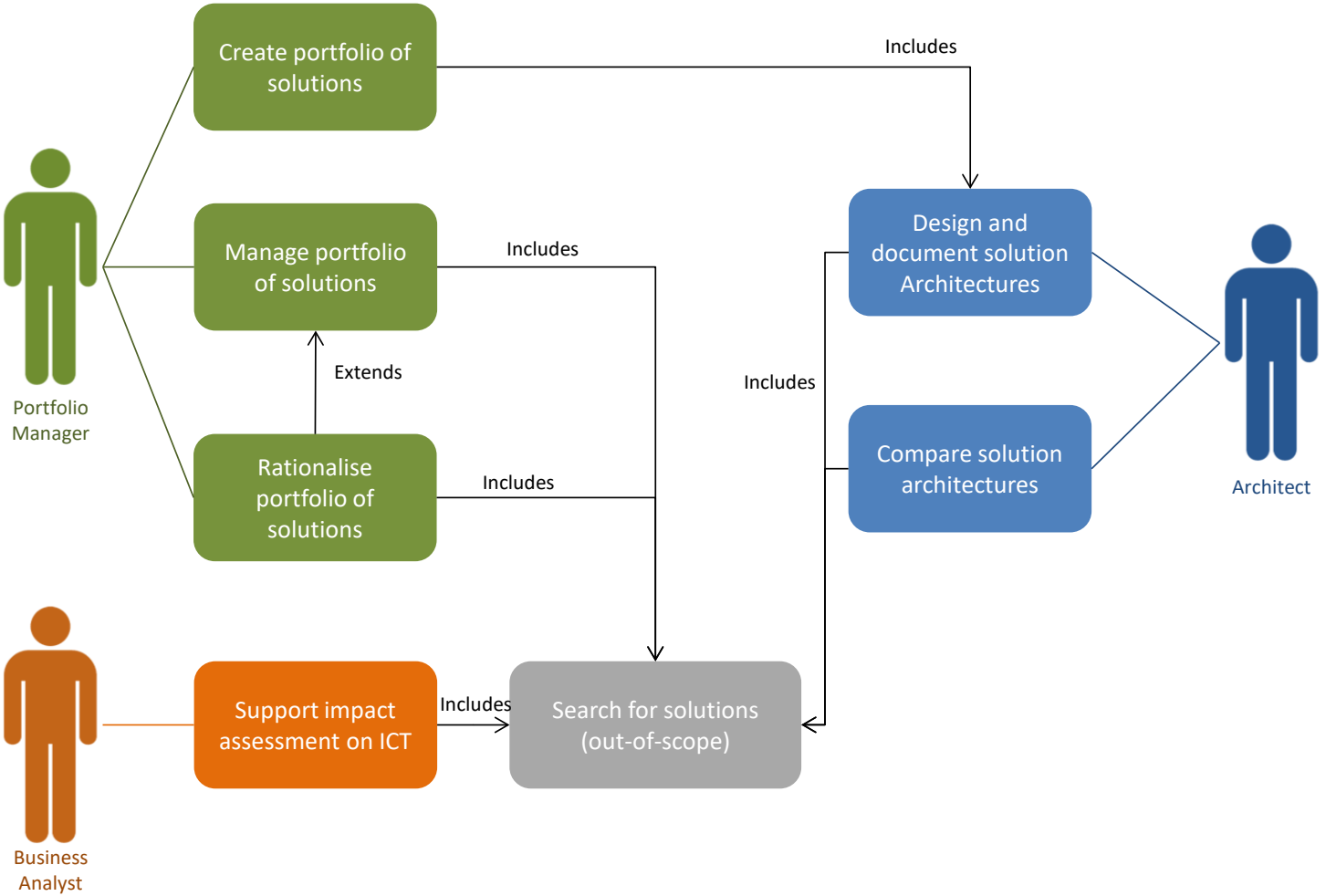
- Support Impact Assessment on ICT
- Document interoperability solutions

Discovering and Reusing

- Search for interoperability solutions

Value of EIRA from different viewpoints

Target users and their use cases within the EIRA©



What is the CarTool

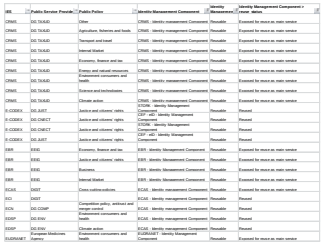
A solution owner or an service acting on his/her behalf uses the CarTool in any of the use cases. He/She might work on the basis on the documentation on an existing solution

The CarTool is the response of the EC to a request of the MS
In order to allow them to document solutions in compliance to EIRA
Iis an open SW pluggin developed for the ARCHI SW

Documentation on a Solution in production

CarTool
[EIRA]
CARTOGRAPHY TOOL

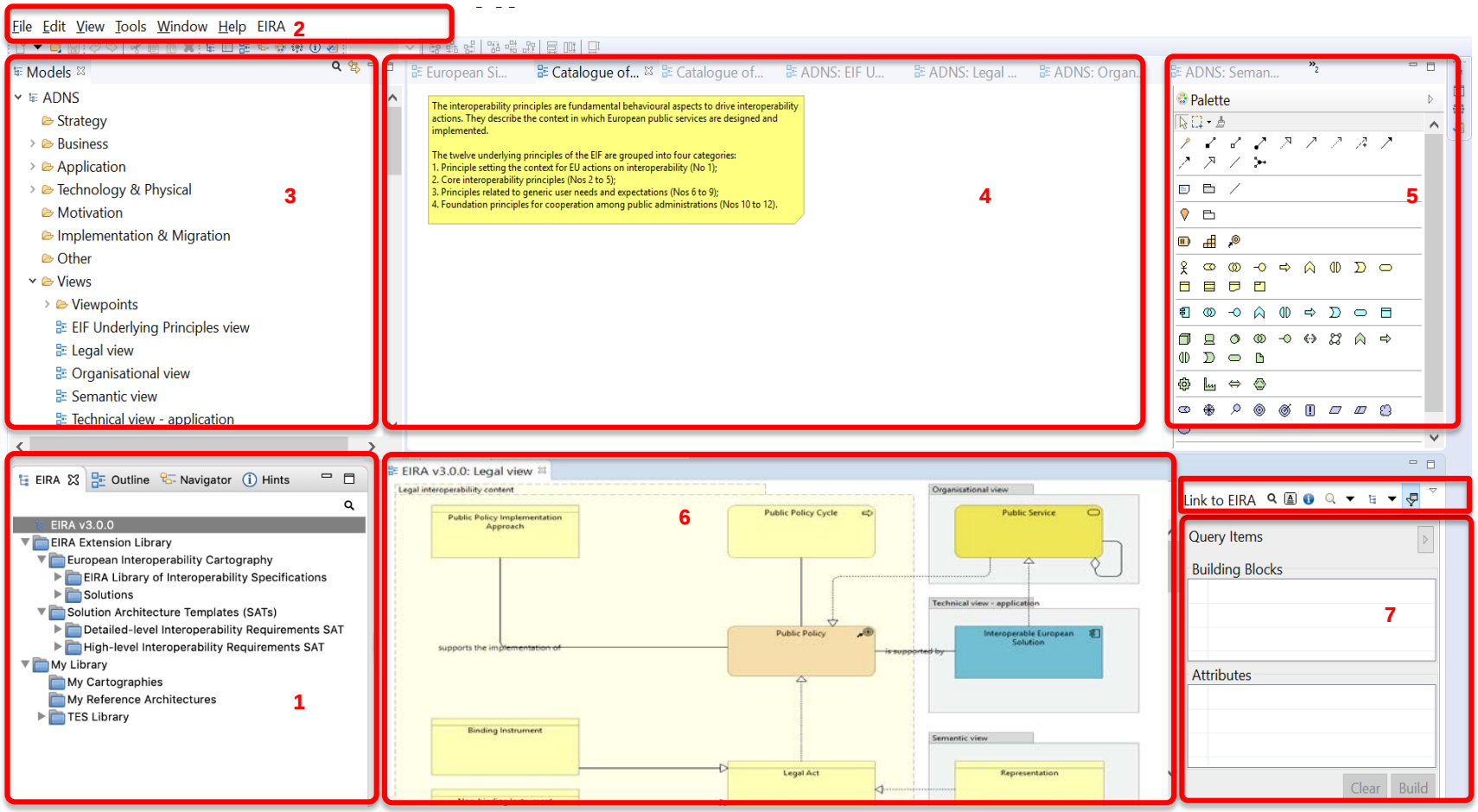
The CarTool supports 1) to design, document and search solutions according to EIRA and 2) to export descriptions of solutions in MEF standard format



Cartography

A cartography is the outcome of mapping/decomposing existing solutions or documenting new ones against a taxonomy (EIRA in our case)

CarTool Overview



CarTool Value proposition

The **Cartography Tool (CarTool)** brings together high level support for the EIRA **as a plug-in** for the popular **ArchiMate modelling tool Archi®.** It includes both editing features, to model solutions using the EIRA, and querying features to query an **EIRA-based Cartography of solutions**.

CarTool use cases

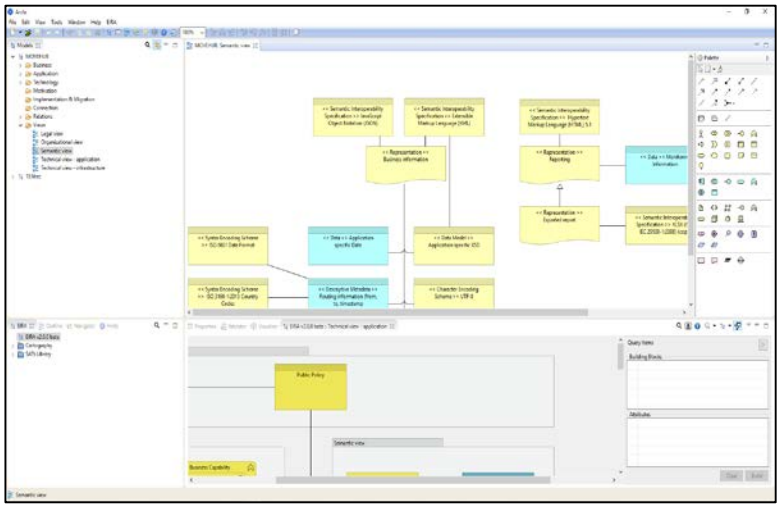
Search

- Query Cartographies, such as the EIC and the TESCart for used solutions
- Consult a list of proposed IoP Specifications

Model

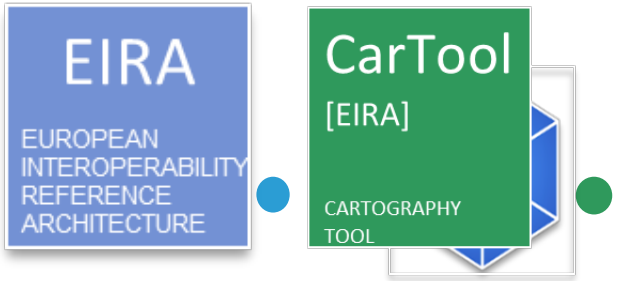
- Model new solutions based on either the EIRA, SATs or existing TES
- Model SATs based on the EIRA

CarTool view



Available at: https://joinup.ec.europa.eu/solution/cartography-tool/about

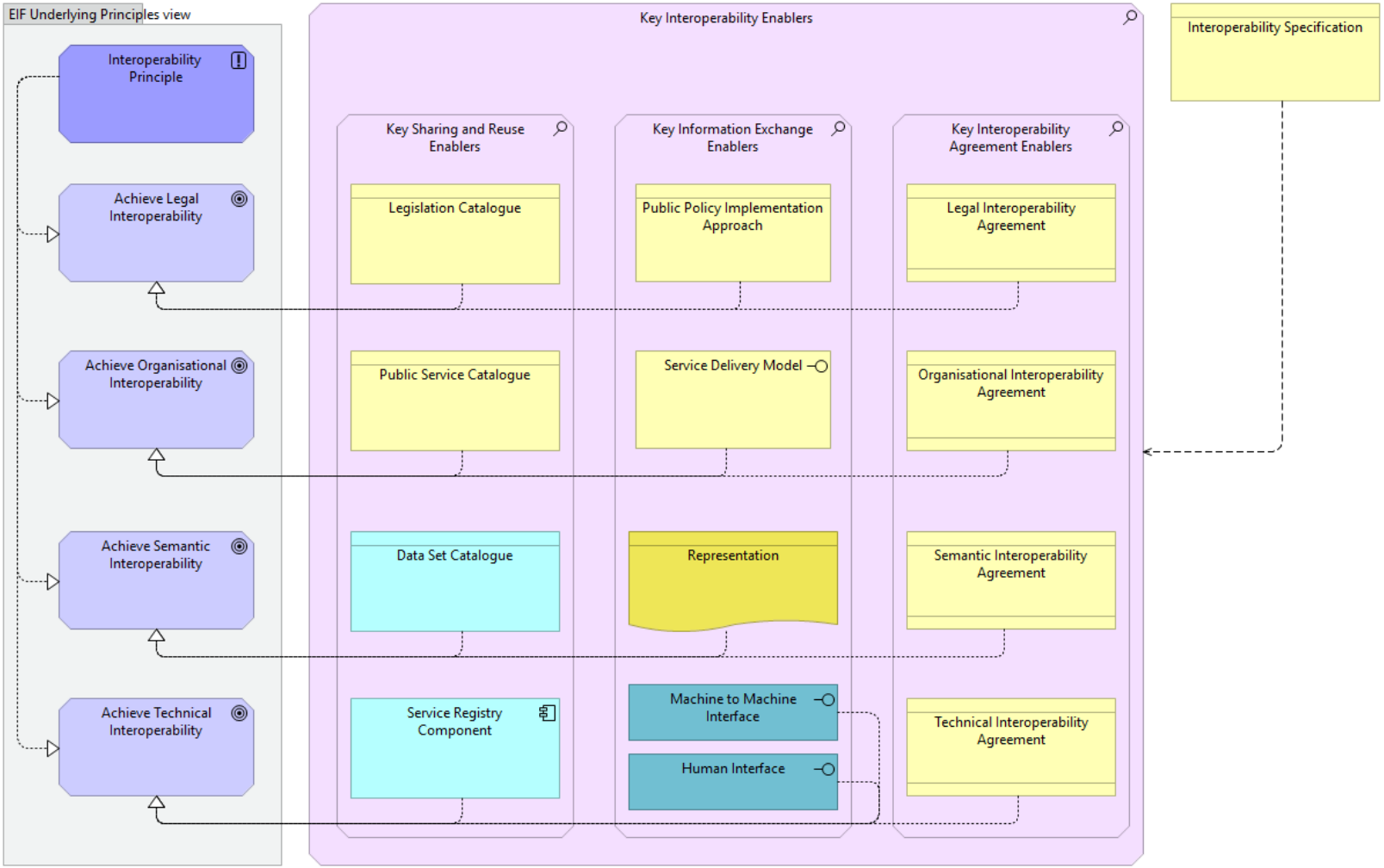
EIRA & CarTool key areas of support



	Design	Assess	Communicate & Share	Discover & Reuse
Providing a controlled vocabulary	● ●	● ●	● ●	● ●
Decoupling functionalities in Architectural Building Blocks	● ●	● ●	● ●	● ●
Facilitating the identification of IOP specifications	● ●	● ●	● ●	● ●
Providing the key Interoperability enablers ABBs	● ●	● ●	● ●	● ●
Accelerating development cycle	● ●	○ ○	○ ○	● ●
Enabling cartographies	○ ●	○ ●	○ ●	○ ●
Promoting discovery/reusability	● ●	● ●	● ●	● ●
Supporting Portfolio Mgmt Decision Making	○ ●	○ ●	○ ●	○ ●
Supporting Public Policy formulation	○ ●	○ ●	○ ●	○ ●

How the EIRA© & CarTool© support IoP in e-Government?

Key Interoperability enablers ABBs

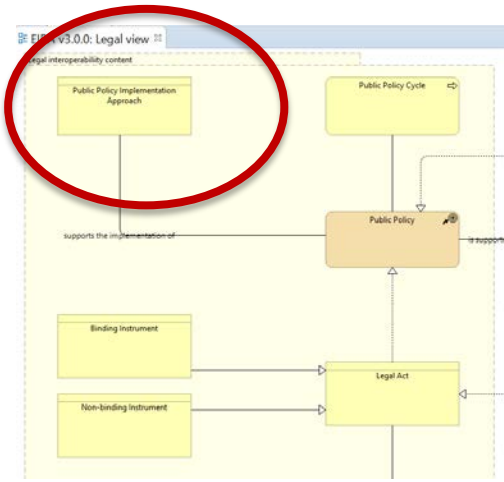


How EIRA supports IOP in e-Government? LOST IOP support

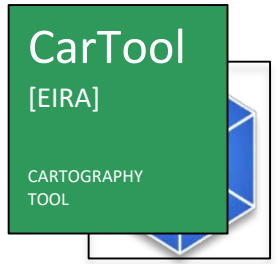
"Public Policy Implementation Approach ABB is influenced by the regulatory state and the delegation of powers"

Example: Focus on the public policy implementation approach of a national PA including references to TOGAF v 9.1

PUB POLICY IMPL REGULATORY STATE	TOP/CENTRALISED PUBLIC POLICY IMPL	DOWN/DELEGATED DELEGATION OF POWERS
STRONGLY/ LOW LEVEL REGULATED	**THE CONTROLLED SCENARIO** FOCUS ON SEMANTIC INTEROPERABILITY (i.e. data architecture, base registries)	**THE NORMATIVE SCENARIO** FOCUS ON TECHNOLOGY INTEROPERABILITY (i.e. interoperability specifications)
SOFTLY/HIGHL LEVEL REGULATED	**THE FEDERATED SCENARIO** FOCUS ON ORGANIZATIONAL INTEROPERABILITY (i.e. interoperability governance)	**THE SUBSIDIARITY SCENARIO** FOCUS ON LEGAL INTEROPERABILITY (i.e. interoperability frameworks, interoperability reference architecture)



Questions?



Contact us

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For more information

A Reference Architecture for Interoperability in the European Union: A Conversation with Raul Abril

EIRA community on Joinup.eu	https://joinup.ec.europa.eu/solution/eira/about
ISA website	https://ec.europa.eu/isa2/home_en