European Interoperability Reference Architecture (EIRA) State of play

Making Standards Work® e-Government
The Open Group Conference
July 18th, 2017 Ottawa, Canada
Dr. Raul Abril, European Commission
DG DIGIT, ISA

Agenda

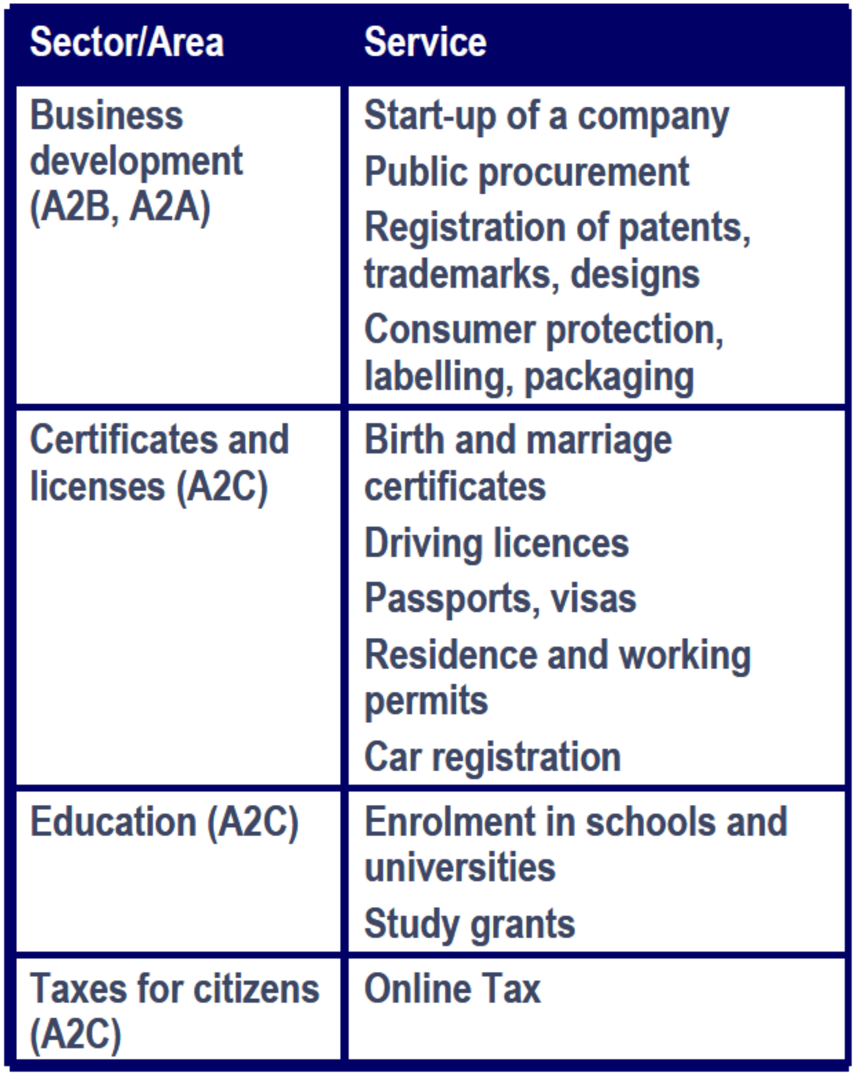
- Interoperability
- ISA^2 Programme – ISA unit
- EIRA

Interoperability (IOP)

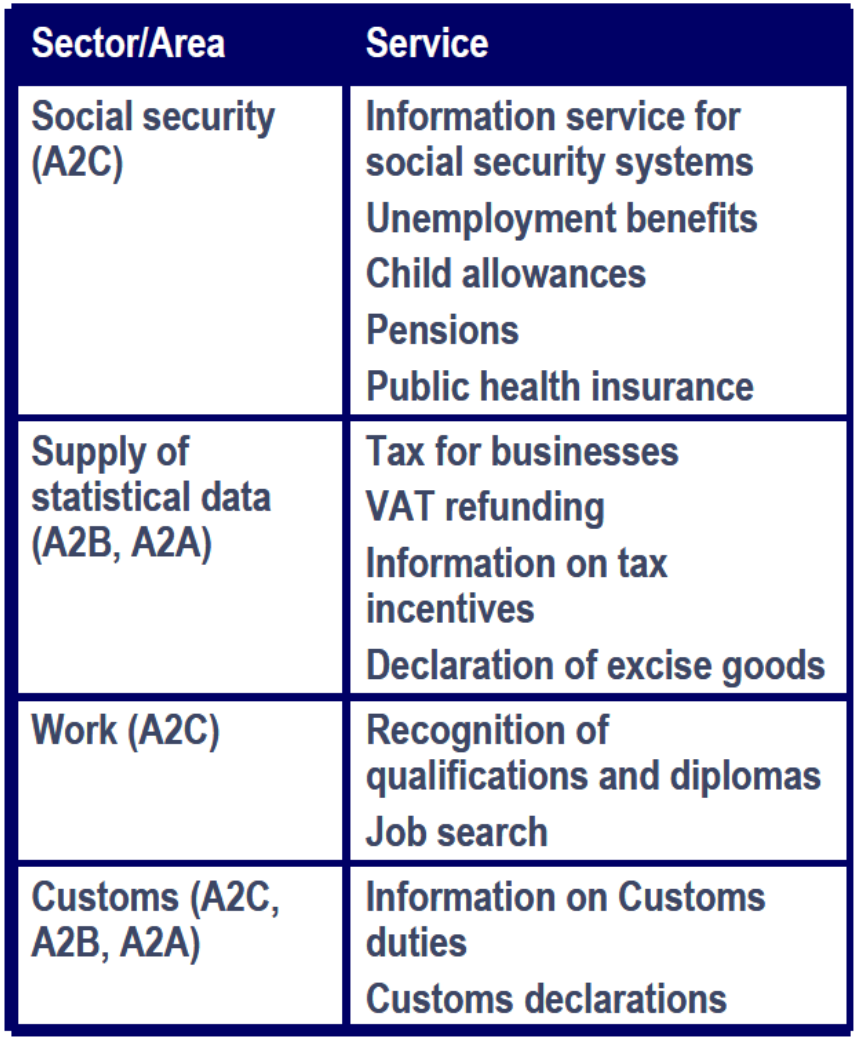
"ability of organisations to interact towards mutually beneficial goals, involving the sharing of information and knowledge between these organisations, through the business processes they support, by means of the exchange of data between their ICT systems" (*)

(*) COM(2017) 134 final, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of Regions. European Interoperability Framework – Implementation Strategy. Brussels, 23.03.2017.

Examples of European Public Services

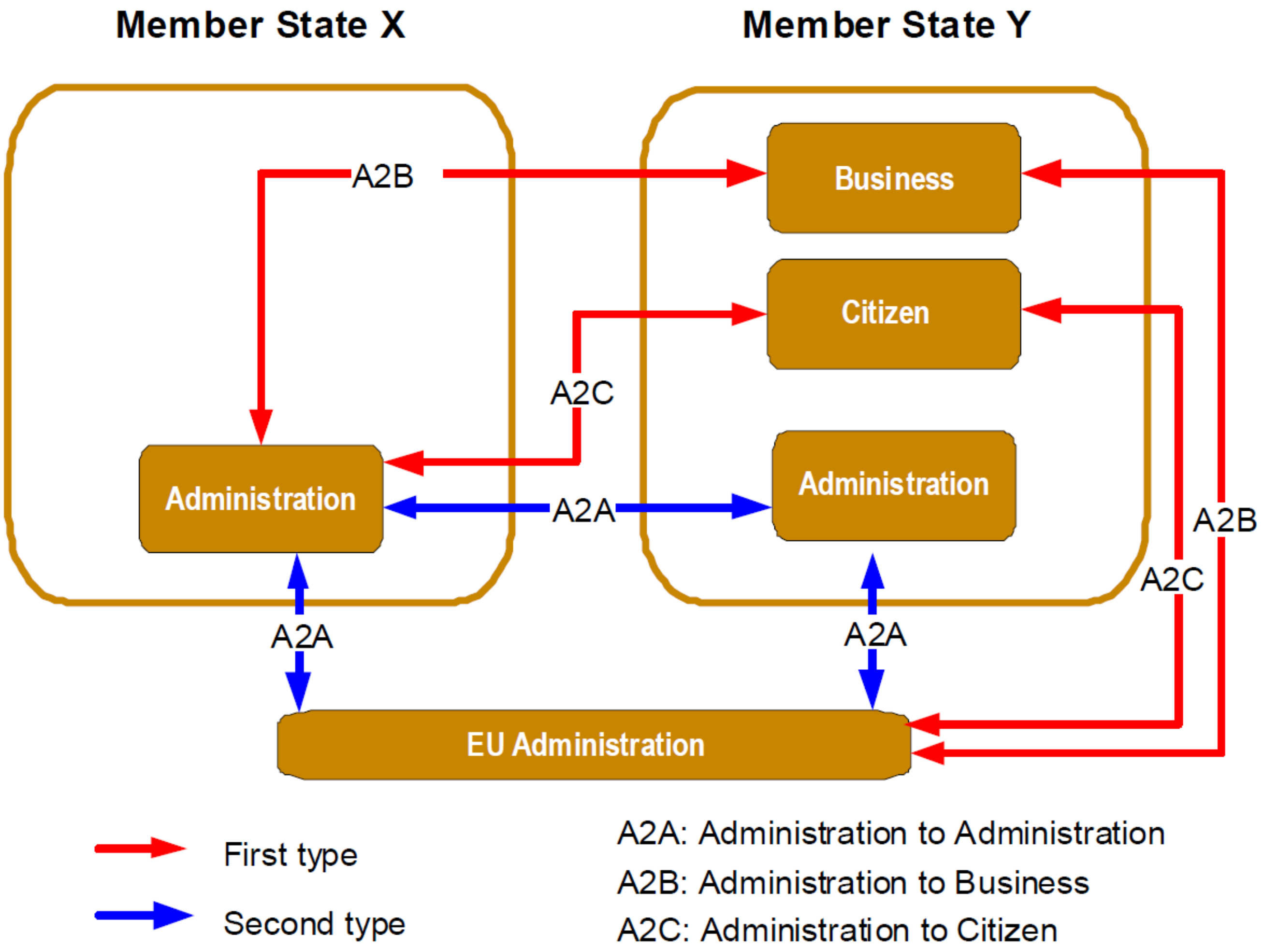


Sector/Area	Service
Business development (A2B, A2A)	Start-up of a company Public procurement Registration of patents, trademarks, designs Consumer protection, labelling, packaging
Certificates and licenses (A2C)	Birth and marriage certificates Driving licences Passports, visas Residence and working permits 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

Scenarios


Member State X
Member State Y
A2B
Business
Citizen
A2C
Administration
A2A
Administration
A2B
A2C
A2A
A2A
EU Administration
First type
Second type

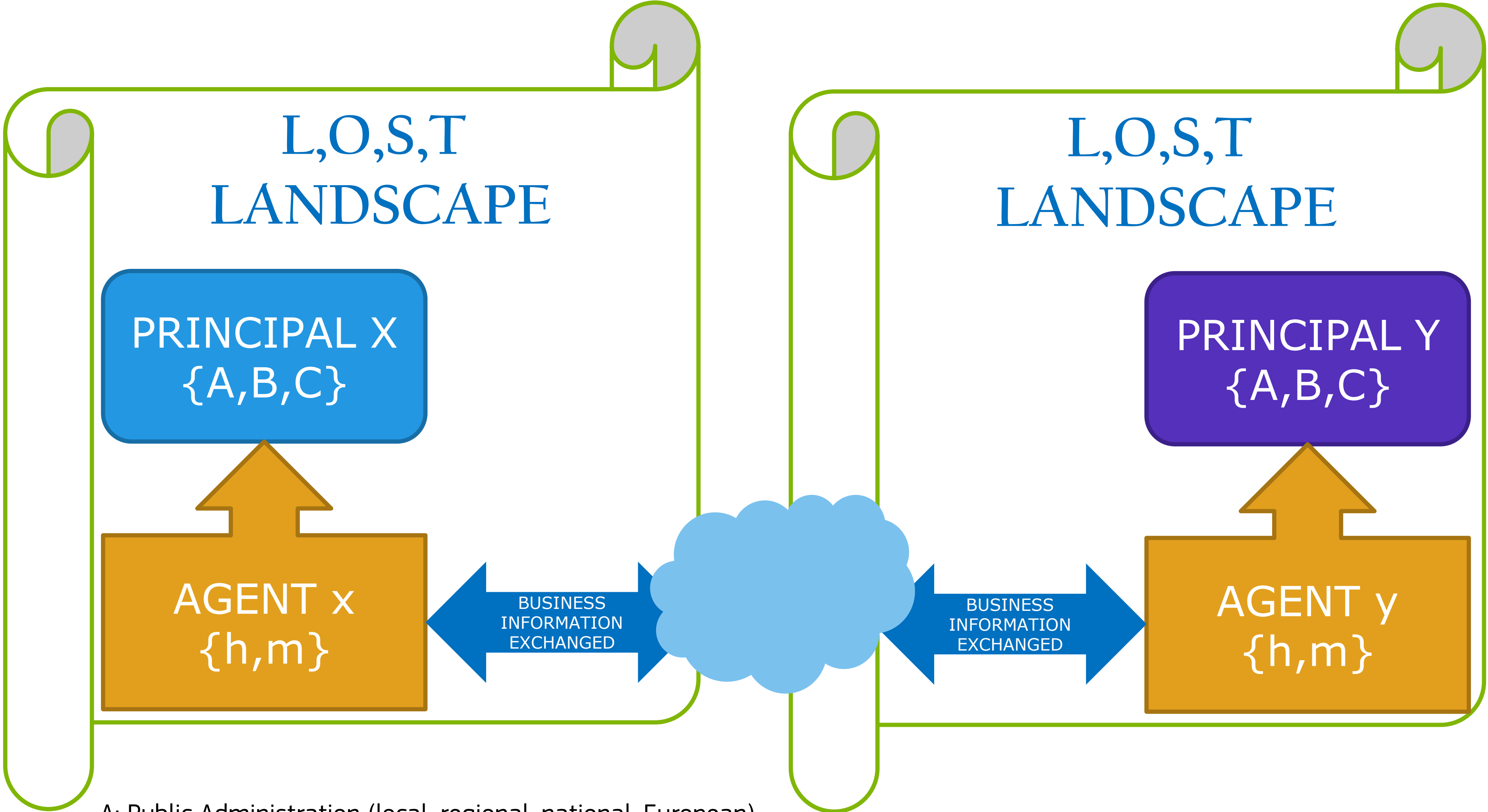
A2A: Administration to Administration

A2B: Administration to Business

A2C: Administration to Citizen

http://eur-lex.europa.eu/resource.html?uri=cellar:2c2f2554-0faf-11e7-8a35-01aa75ed71a1.0017.02/DOC_1&format=PDF
http://eur-lex.europa.eu/resource.html?uri=cellar:2c2f2554-0faf-11e7-8a35-01aa75ed71a1.0017.02/DOC_2&format=PDF
http://eur-lex.europa.eu/resource.html?uri=cellar:2c2f2554-0faf-11e7-8a35-01aa75ed71a1.0017.02/DOC_3&format=PDF

The IOP challenge: LOST landscapes of agents.



L,O,S,T
LANDSCAPE

PRINCIPAL X
{A,B,C}

AGENT x
{h,m}

BUSINESS
INFORMATION
EXCHANGED

BUSINESS
INFORMATION
EXCHANGED

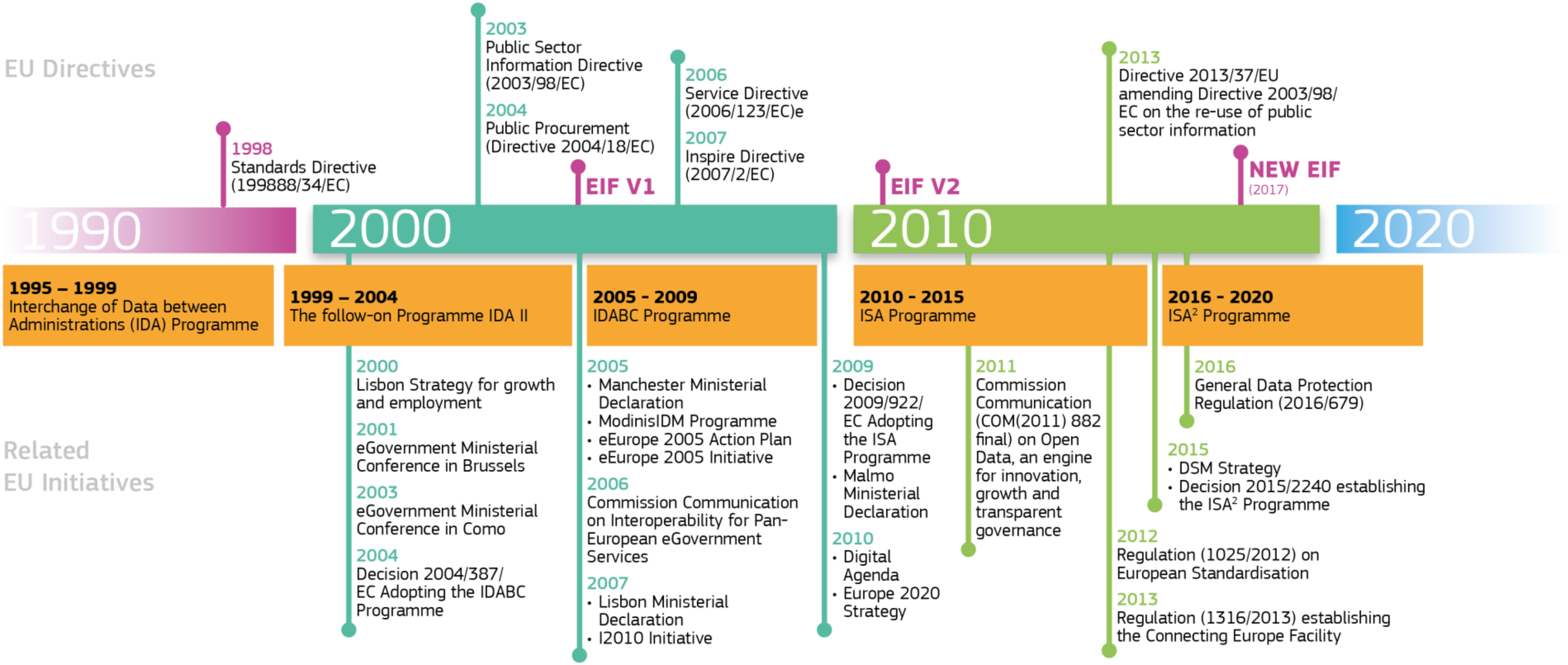
L,O,S,T
LANDSCAPE

PRINCIPAL Y
{A,B,C}

AGENT y
{h,m}

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

Related IOP EU initiatives timeline



EU Directives

1998
Standards Directive (199888/34/EC)

2003
Public Sector Information Directive (2003/98/EC)

2004
Public Procurement (Directive 2004/18/EC)

EIF V1

2006
Service Directive (2006/123/EC)e

2007
Inspire Directive (2007/2/EC)

EIF V2

2013
Directive 2013/37/EU amending Directive 2003/98/EC on the re-use of public sector information

NEW EIF
(2017)

1995 – 1999
Interchange of Data between Administrations (IDA) Programme

1999 – 2004
The follow-on Programme IDA II

2005 - 2009
IDABC Programme

2010 - 2015
ISA Programme

2016 - 2020
ISA² Programme

Related EU Initiatives

2000
Lisbon Strategy for growth and employment

2001
eGovernment Ministerial Conference in Brussels

2003
eGovernment Ministerial Conference in Como

2004
Decision 2004/387/EC Adopting the IDABC Programme

2005
- Manchester Ministerial Declaration
- ModinisIDM Programme
- eEurope 2005 Action Plan
- eEurope 2005 Initiative

2006
Commission Communication on Interoperability for Pan-European eGovernment Services

2007
- Lisbon Ministerial Declaration
- I2010 Initiative

2009
- Decision 2009/922/EC Adopting the ISA Programme
- Malmo Ministerial Declaration

2010
- Digital Agenda
- Europe 2020 Strategy

2011
Commission Communication (COM(2011) 882 final) on Open Data, an engine for innovation, growth and transparent governance

2012
Regulation (1025/2012) on European Standardisation

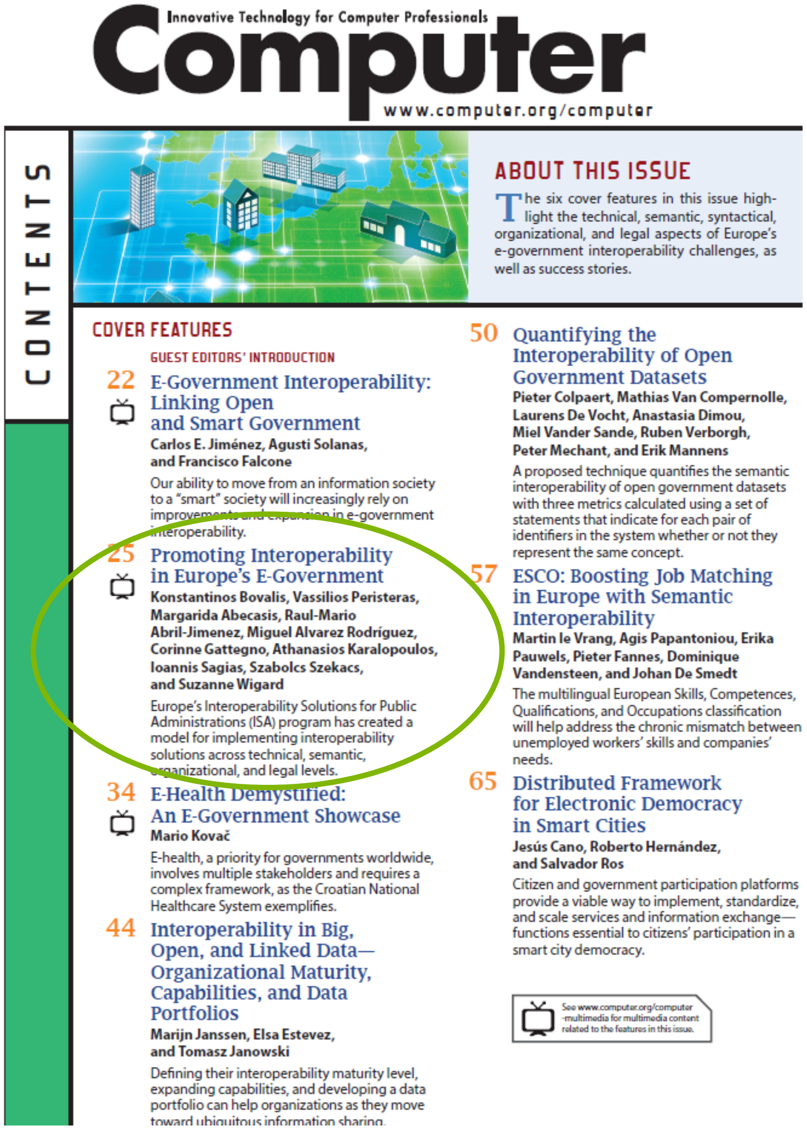
2013
Regulation (1316/2013) establishing the Connecting Europe Facility

2015
- DSM Strategy
- Decision 2015/2240 establishing the ISA² Programme

2016
General Data Protection Regulation (2016/679)

ISA² Programme – ISA unit

IEEE's COMPUTER vol 47 issue 10
"Promoting Interoperability in
Europe's e-Government"



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ABOUT THIS ISSUE

The six cover features in this issue highlight the technical, semantic, syntactical, organizational, and legal aspects of Europe's e-government interoperability challenges, as well as success stories.

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Citizen and government participation platforms provide a viable way to implement, standardize, and scale services and information exchange—functions essential to citizens' participation in a smart city democracy.

See www.computer.org/computer-multimedia for multimedia content related to the features in this issue.

What is EIRA?

European Commission

EIRA

EUROPEAN
INTEROPERABILITY
REFERENCE
ARCHITECTURE

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

Why EIRA?. ISA^2 legal bases (*)

(art 3) "…. The ISA^{2}programme 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

Why EIRA? Alignment

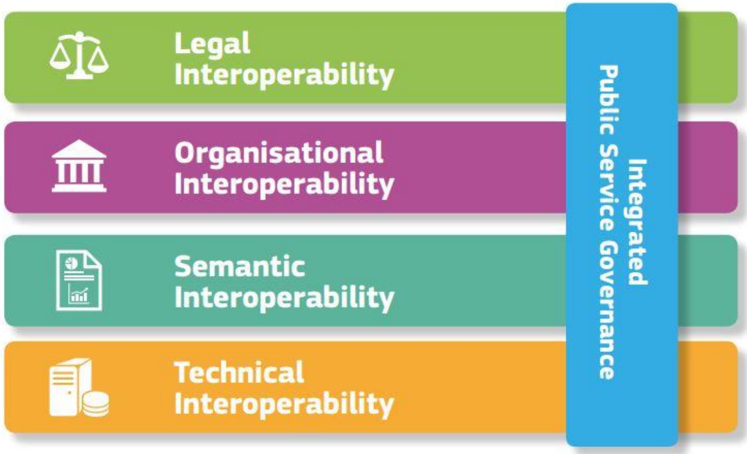
European Commission

EIF

Framework and principles

EIRA 2.0.0

Implementation guidelines and specifications



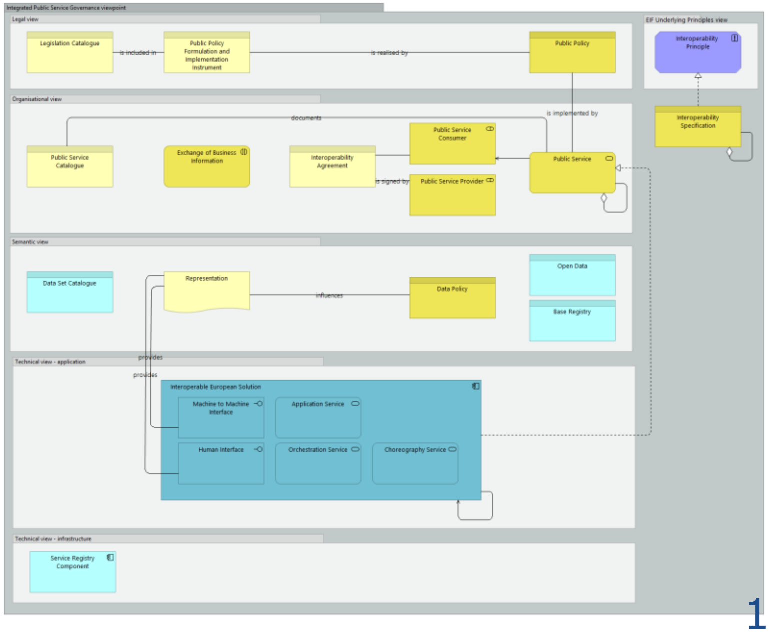
Legal Interoperability

Organisational Interoperability

Semantic Interoperability

Technical Interoperability

Integrated Public Service Governance

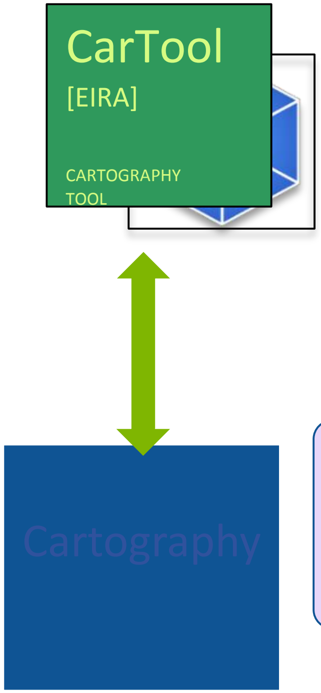

Integrated Public Service Governance viewpoint
Legal view
Legislation Catalogue
is included in
Public Policy Formulation and Implementation Instrument
is realised by
Public Policy
EIF Underlying Principles view
Interoperability Principle
Interoperability Specification
Organisational view
documents
is implemented by
Public Service Catalogue
Exchange of Business Information
Interoperability Agreement
Public Service Consumer
is signed by
Public Service Provider
Public Service
Semantic view
Data Set Catalogue
Representation
influences
Data Policy
Open Data
Base Registry
Technical view - application
provides
provides
Interoperable European Solution
Machine to Machine Interface
Application Service
Human Interface
Orchestration Service
Choreography Service
Technical view - infrastructure
Service Registry Component

What is the CarTool?

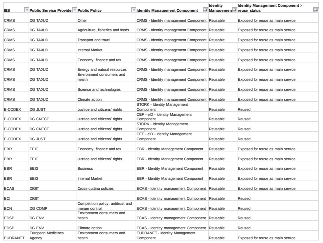
A solution owner or an service acting on his/her behalf uses the CarTool in any of the use cases. He/She might work on the basis on the documentation on an existing solution

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



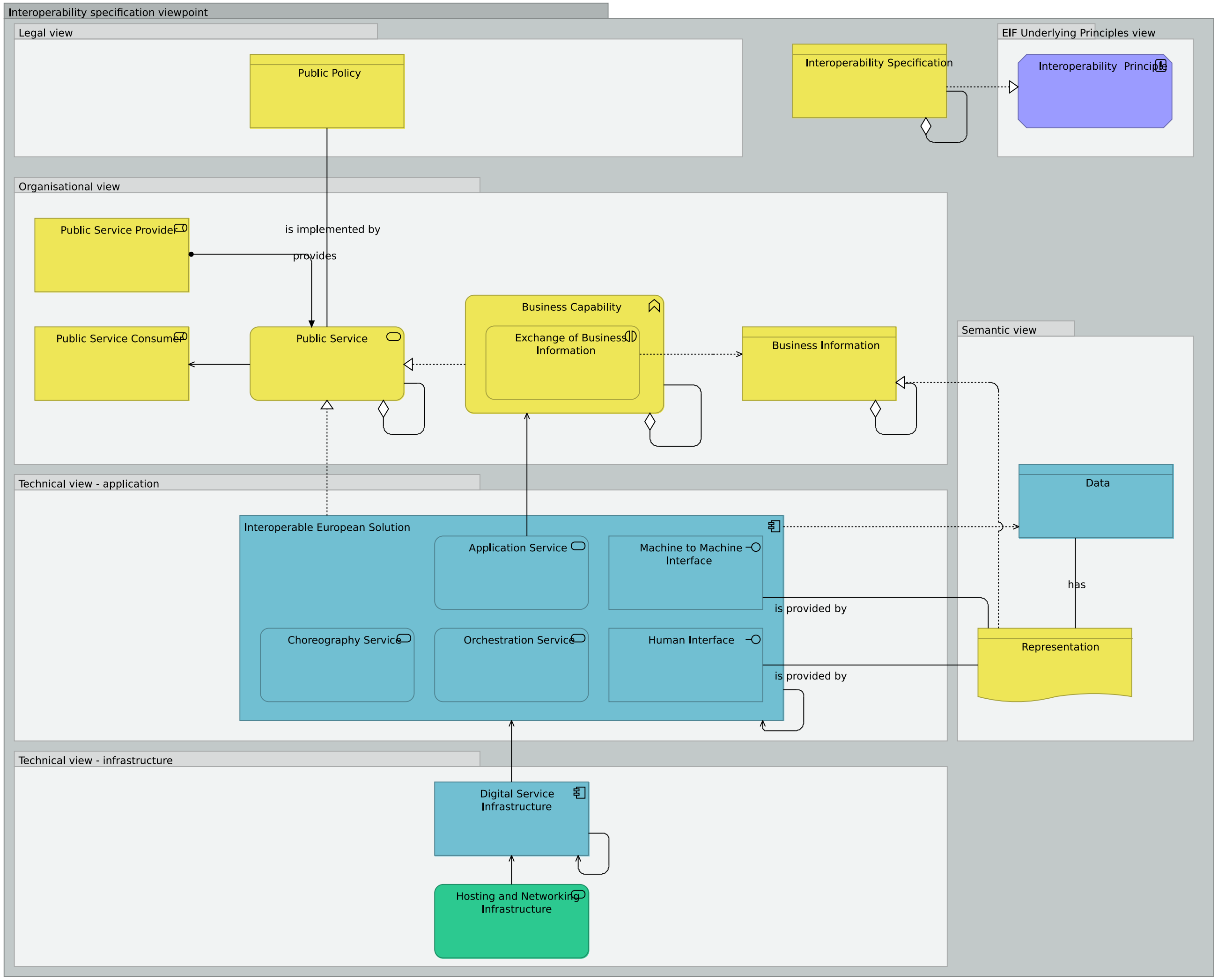
The CarTool supports 1) to design, document and search solutions according to EIRA and 2) to export descriptions of solutions in MEF standard format



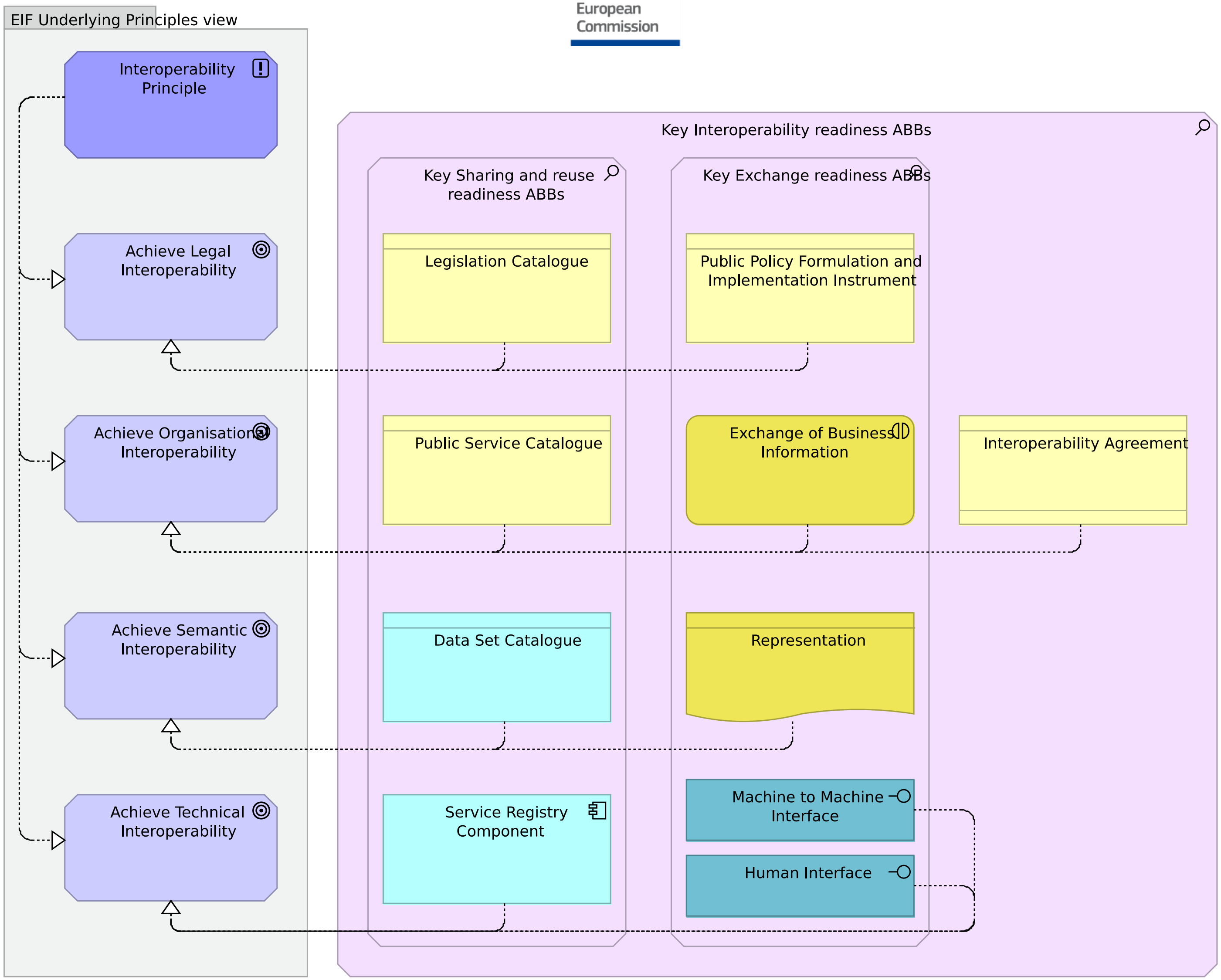
IES	Public Service Provide	Public Policy	Identity Management Component	Identity Managemen	Identity Management Component > reuse_status
CRMS	DG TAXUD	Other	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Agriculture, fisheries and foods	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Transport and travel	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Internal Market	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Economy, finance and tax	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Energy and natural resources	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Environment consumers and health	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Science and technologies	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
CRMS	DG TAXUD	Climate action	CRMS - Identity management Component	Reusable	Exposed for reuse as main service
E-CODEX	DG JUST	Justice and citizens' rights	STORK - Identity Management Component	Reusable	Reused
E-CODEX	DG CNECT	Justice and citizens' rights	CEF - eID - Identity Management Component	Reusable	Reused
E-CODEX	DG CNECT	Justice and citizens' rights	STORK - Identity Management Component	Reusable	Reused
E-CODEX	DG JUST	Justice and citizens' rights	CEF - eID - Identity Management Component	Reusable	Reused
EBR	EEIG	Economy, finance and tax	EBR - Identity Management Component	Reusable	Exposed for reuse as main service
EBR	EEIG	Justice and citizens' rights	EBR - Identity Management Component	Reusable	Exposed for reuse as main service
EBR	EEIG	Business	EBR - Identity Management Component	Reusable	Exposed for reuse as main service
EBR	EEIG	Internal Market	EBR - Identity Management Component	Reusable	Exposed for reuse as main service
ECAS	DIGIT	Cross-cutting policies	ECAS - Identity management Component	Reusable	Exposed for reuse as main service
ECI	DIGIT		ECAS - Identity management Component	Reusable	Reused
ECN	DG COMP	Competition policy, antitrust and merger control	ECAS - Identity management Component	Reusable	Reused
EDSP	DG ENV	Environment consumers and health	ECAS - Identity management Component	Reusable	Reused
EDSP	DG ENV	Climate action	ECAS - Identity management Component	Reusable	Reused
EUDRANET	European Medicines Agency	Environment consumers and health	EUDRANET - Identity Management Component	Reusable	Exposed for reuse as main service

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

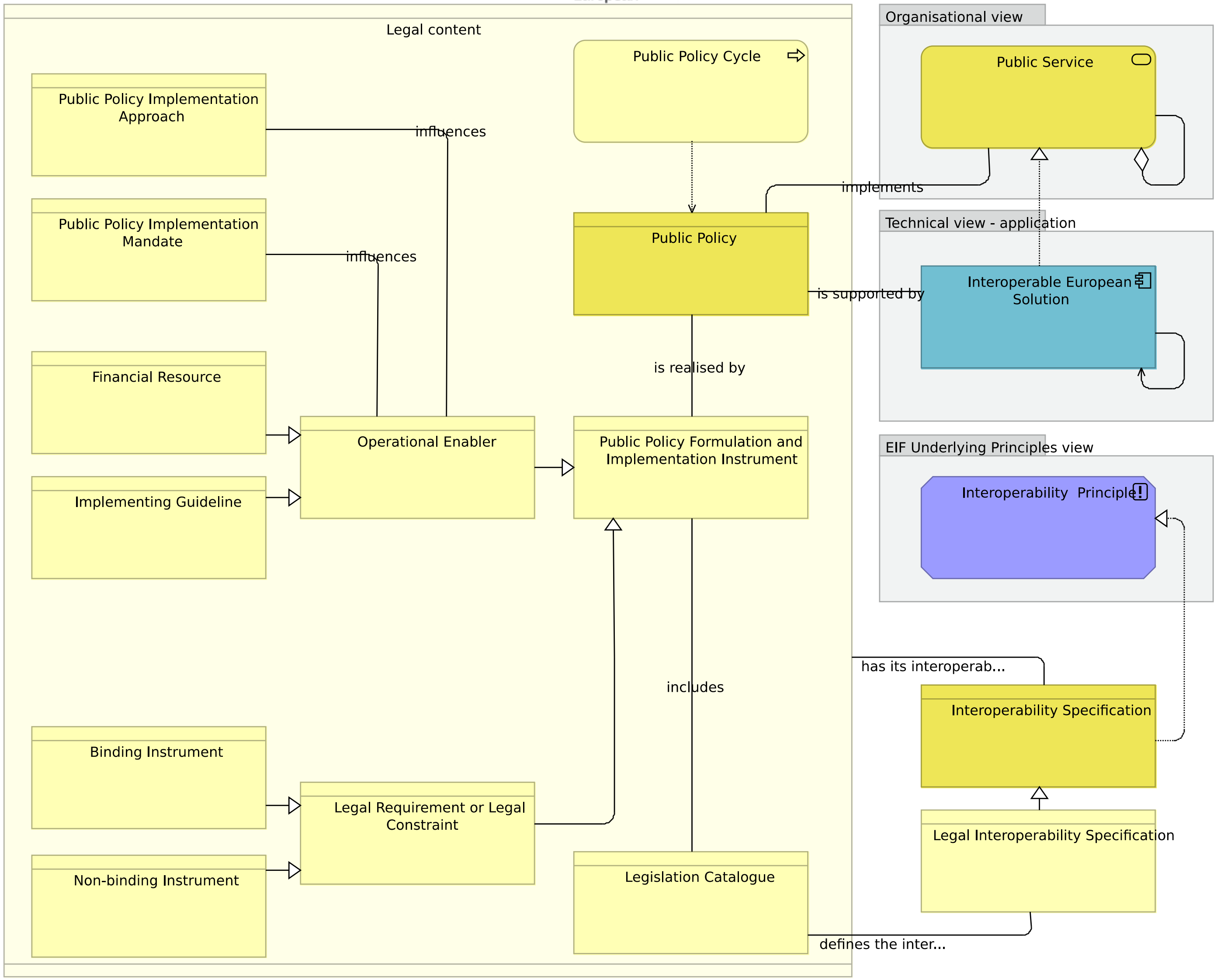
EIRA High-Level viewpoint


Interoperability specification viewpoint
Legal view
Public Policy
Interoperability Specification
EIF Underlying Principles view
Interoperability Principle
Organisational view
Public Service Provider
is implemented by
provides
Public Service Consumer
Public Service
Business Capability
Exchange of Business Information
Business Information
Semantic view
Data
has
Representation
Technical view - application
Interoperable European Solution
Application Service
Machine to Machine Interface
is provided by
Choreography Service
Orchestration Service
Human Interface
is provided by
Technical view - infrastructure
Digital Service Infrastructure
Hosting and Networking Infrastructure

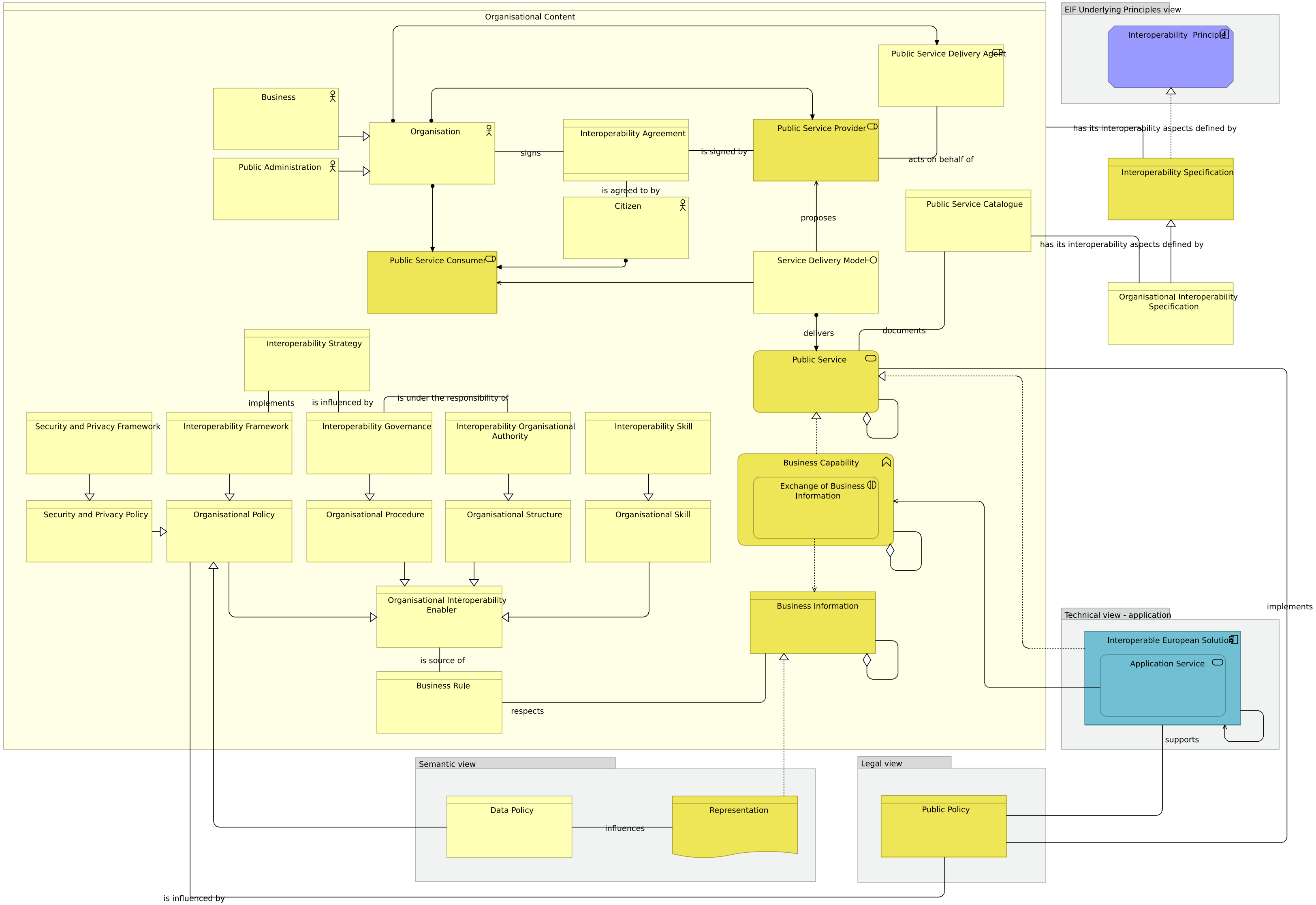
EIRA Integrated Public Service Governance viewpoint


EIF Underlying Principles view
Interoperability Principle
Achieve Legal Interoperability
Achieve Organisational Interoperability
Achieve Semantic Interoperability
Achieve Technical Interoperability
Key Interoperability readiness ABBs
Key Sharing and reuse readiness ABBs
Key Exchange readiness ABBs
Legislation Catalogue
Public Policy Formulation and Implementation Instrument
Public Service Catalogue
Exchange of Business Information
Interoperability Agreement
Data Set Catalogue
Representation
Service Registry Component
Machine to Machine Interface
Human Interface

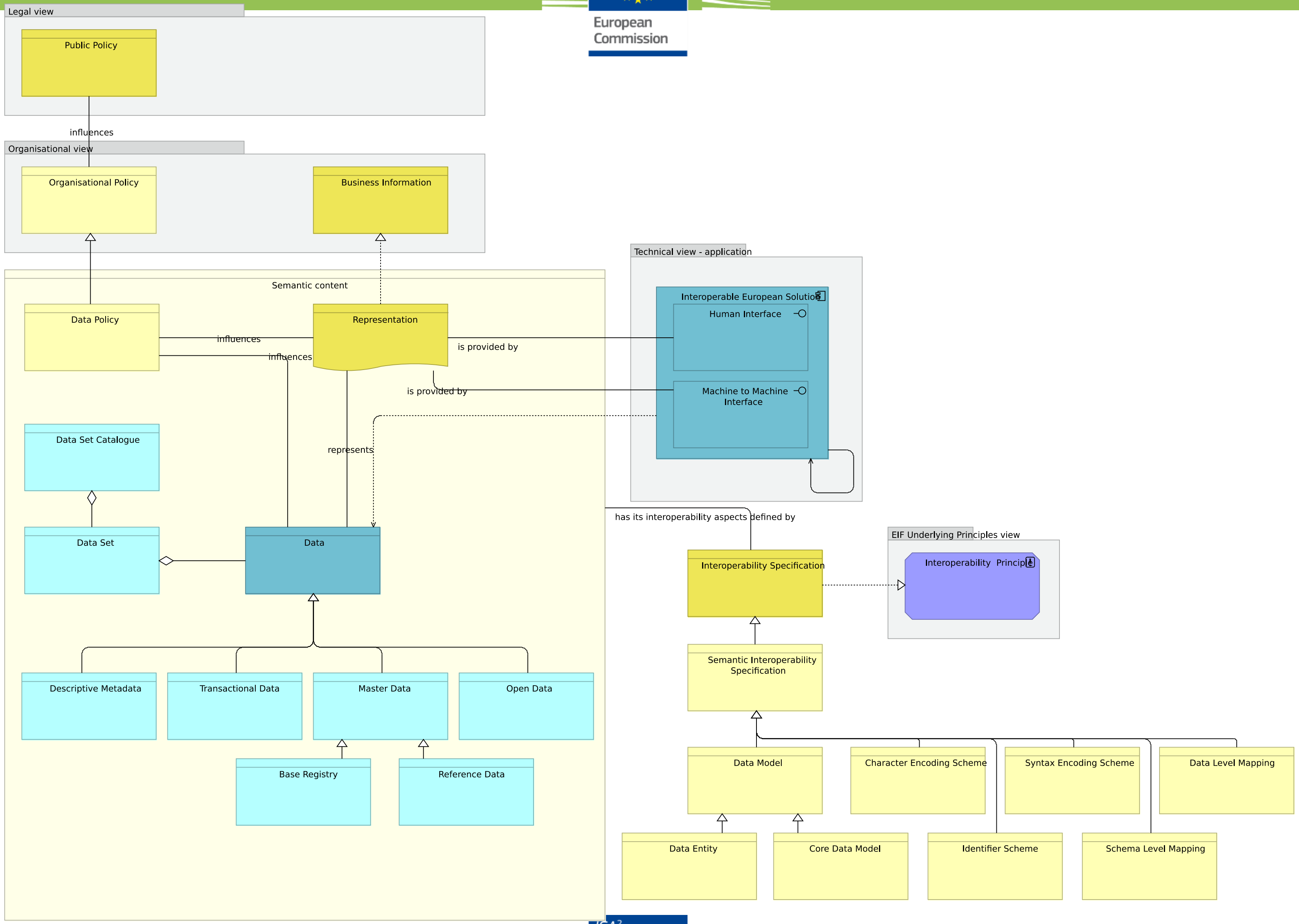
EIRA Legal view


Legal content
Public Policy Implementation Approach
influences
Public Policy Cycle
Public Policy Implementation Mandate
influences
Public Policy
Financial Resource
Operational Enabler
Implementing Guideline
is realised by
Public Policy Formulation and Implementation Instrument
includes
Binding Instrument
Legal Requirement or Legal Constraint
Non-binding Instrument
Legislation Catalogue
Organisational view
Public Service
implements
Technical view - application
Interoperable European Solution
is supported by
EIF Underlying Principles view
Interoperability Principle
has its interoperab...
Interoperability Specification
Legal Interoperability Specification
defines the inter...

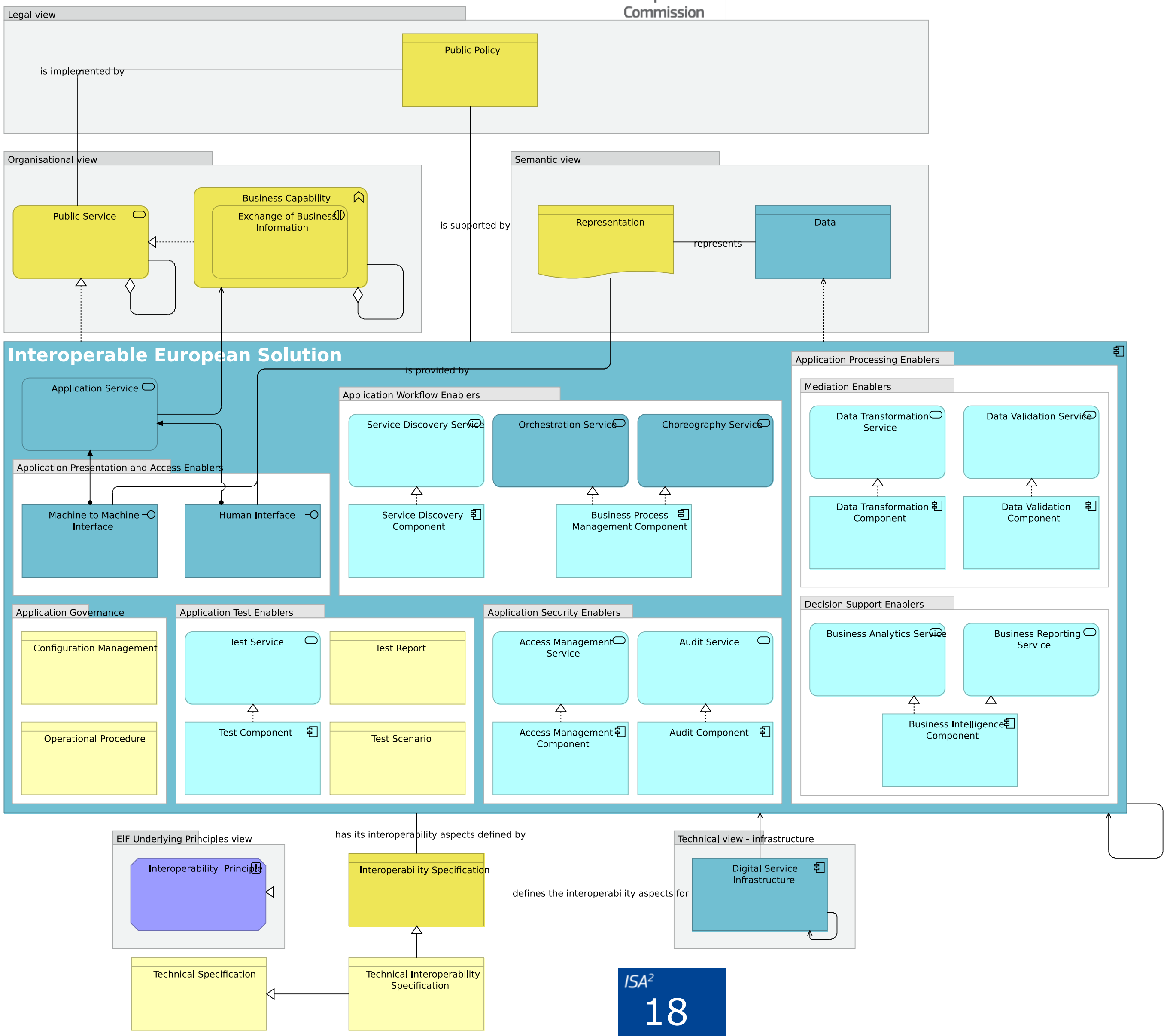
EIRA Organizational view


Organisational Content
Public Service Delivery Agent
Business
Organisation
signs
Interoperability Agreement
is signed by
Public Service Provider
acts on behalf of
Public Administration
is agreed to by
Citizen
Public Service Catalogue
proposes
Public Service Consumer
Service Delivery Model
delivers
documents
Interoperability Strategy
Public Service
implements
is influenced by
is under the responsibility of
Security and Privacy Framework
Interoperability Framework
Interoperability Governance
Interoperability Organisational Authority
Interoperability Skill
Business Capability
Exchange of Business Information
Security and Privacy Policy
Organisational Policy
Organisational Procedure
Organisational Structure
Organisational Skill
Organisational Interoperability Enabler
Business Information
is source of
Business Rule
respects
EIF Underlying Principles view
Interoperability Principle
has its interoperability aspects defined by
Interoperability Specification
has its interoperability aspects defined by
Organisational Interoperability Specification
Technical view - application
implements
Interoperable European Solution
Application Service
supports
Semantic view
Data Policy
influences
Representation
Legal view
Public Policy
is influenced by

EIRA Semantic view


Legal view
Public Policy
influences
Organisational view
Organisational Policy
Business Information
Technical view - application
Semantic content
Interoperable European Solution
Human Interface
Machine to Machine Interface
Data Policy
influences
influences
Representation
is provided by
is provided by
represents
Data Set Catalogue
Data Set
Data
has its interoperability aspects defined by
EIF Underlying Principles view
Interoperability Specification
Interoperability Principle
Semantic Interoperability Specification
Descriptive Metadata
Transactional Data
Master Data
Open Data
Base Registry
Reference Data
Data Model
Character Encoding Scheme
Syntax Encoding Scheme
Data Level Mapping
Data Entity
Core Data Model
Identifier Scheme
Schema Level Mapping

EIRA Technological – Application part view



Legal view

Public Policy

is implemented by

is supported by

Organisational view

Public Service

Business Capability

Exchange of Business Information

Semantic view

Representation

represents

Data

Interoperable European Solution

is provided by

Application Service

Application Presentation and Access Enablers

Machine to Machine Interface

Human Interface

Application Workflow Enablers

Service Discovery Service

Orchestration Service

Choreography Service

Service Discovery Component

Business Process Management Component

Application Processing Enablers

Mediation Enablers

Data Transformation Service

Data Validation Service

Data Transformation Component

Data Validation Component

Decision Support Enablers

Business Analytics Service

Business Reporting Service

Business Intelligence Component

Application Governance

Configuration Management

Operational Procedure

Application Test Enablers

Test Service

Test Report

Test Component

Test Scenario

Application Security Enablers

Access Management Service

Audit Service

Access Management Component

Audit Component

EIF Underlying Principles view

Interoperability Principle

has its interoperability aspects defined by

Interoperability Specification

defines the interoperability aspects for

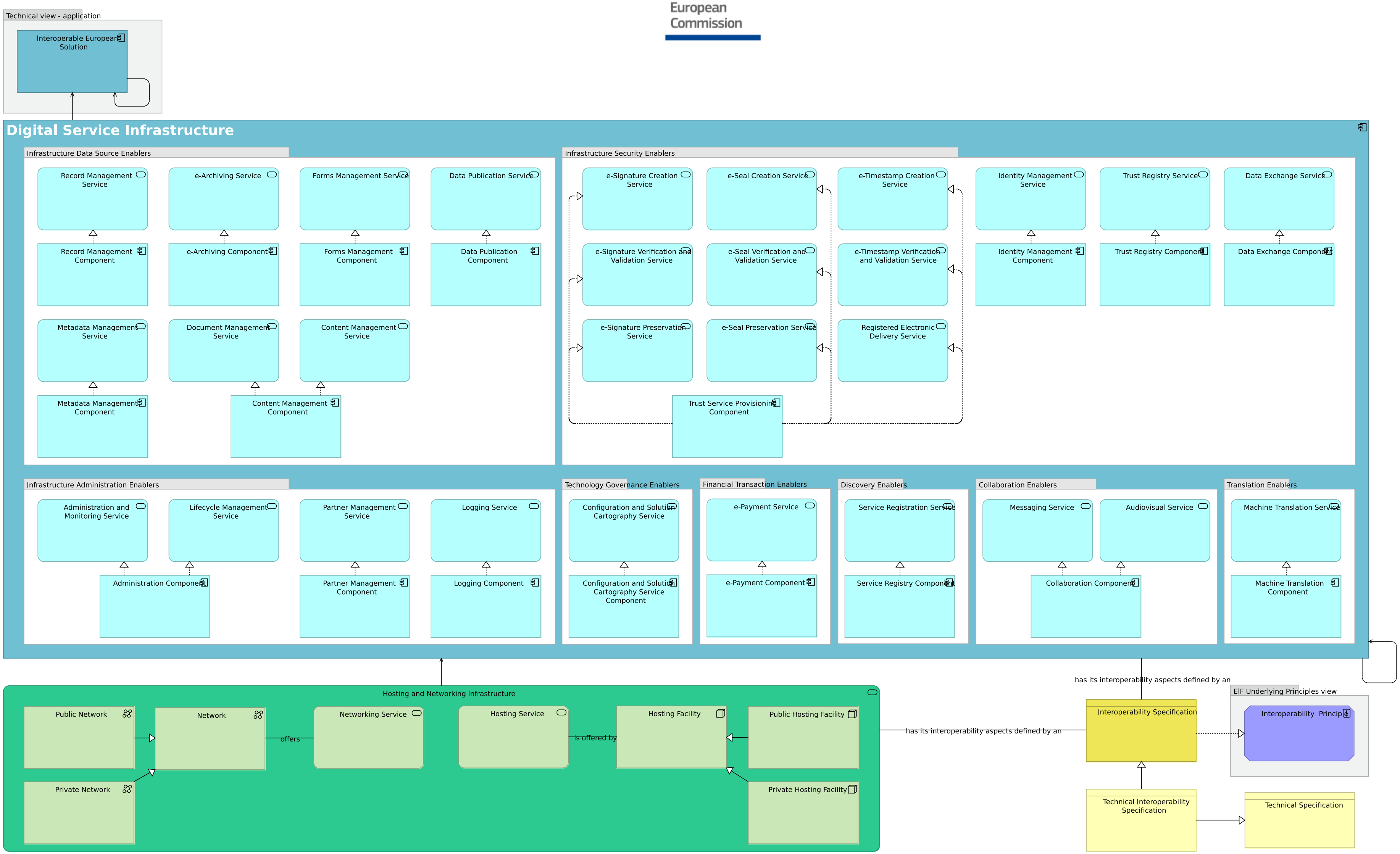
Technical view - infrastructure

Digital Service Infrastructure

Technical Specification

Technical Interoperability Specification

EIRA Technological – Infrastructure part view



Technical view - application

Interoperable European Solution

Digital Service Infrastructure

Infrastructure Data Source Enablers

- Record Management Service
- Record Management Component
- e-Archiving Service
- e-Archiving Component
- Forms Management Service
- Forms Management Component
- Data Publication Service
- Data Publication Component
- Metadata Management Service
- Metadata Management Component
- Document Management Service
- Content Management Service
- Content Management Component

Infrastructure Security Enablers

- e-Signature Creation Service
- e-Seal Creation Service
- e-Timestamp Creation Service
- Identity Management Service
- Trust Registry Service
- Data Exchange Service
- e-Signature Verification and Validation Service
- e-Seal Verification and Validation Service
- e-Timestamp Verification and Validation Service
- Identity Management Component
- Trust Registry Component
- Data Exchange Component
- e-Signature Preservation Service
- e-Seal Preservation Service
- Registered Electronic Delivery Service
- Trust Service Provisioning Component

Infrastructure Administration Enablers

- Administration and Monitoring Service
- Lifecycle Management Service
- Partner Management Service
- Logging Service
- Administration Component
- Partner Management Component
- Logging Component

Technology Governance Enablers

- Configuration and Solution Cartography Service
- Configuration and Solution Cartography Service Component

Financial Transaction Enablers

- e-Payment Service
- e-Payment Component

Discovery Enablers

- Service Registration Service
- Service Registry Component

Collaboration Enablers

- Messaging Service
- Audiovisual Service
- Collaboration Component

Translation Enablers

- Machine Translation Service
- Machine Translation Component

Hosting and Networking Infrastructure

- Public Network
- Network
- Private Network
- offers
- Networking Service
- Hosting Service
- is offered by
- Hosting Facility
- Public Hosting Facility
- Private Hosting Facility

has its interoperability aspects defined by an

has its interoperability aspects defined by an

Interoperability Specification

EIF Underlying Principles view

Interoperability Principle

Technical Interoperability Specification

Technical Specification

Benefits of the EIRA & CarTool

European
Commission

Designing	Accelerate the design of systems that support the delivery of interoperable digital public services (across borders and sectors).
Assessing	Provide a reference model for comparing existing architectures in different policy domains and thematic areas, to identify focal points for convergence and reuse.
Communicating and Sharing	Help documenting the most salient interoperability elements of complex systems and facilitate the sharing of reusable solutions.
Discovering and Reusing	Ease the discovery and reuse of interoperability solutions through the TES Cartography using the CarTool.

EIRA & CarTool Use Cases

European Commission

EIRA
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE 🔵

CarTool
[EIRA]
CARTOGRAPHY TOOL 🟢

Designing

- 🔵 🟢 Design solution architectures
- ○ 🟢 Create Cartography

Assessing

- 🔵 🟢 Assessing solution architectures
- ○ 🟢 Portfolio mgmt decision support
- ○ 🟢 Support Impact Assessment on ICT

Communicating and Sharing

- 🔵 🟢 Document interoperability solutions

Discovering and Reusing

- 🔵 🟢 Search for interoperability solutions

How EIRA & CarTool support IOP in e-Government?

European
Commission

EIRA
EUROPEAN
INTEROPERABILITY
REFERENCE
ARCHITECTURE 🔵

CarTool
[EIRA]
CARTOGRAPHY
TOOL 🟢

	Designing	Assessing	Communicating and Sharing	Discovering and Reusing
Providing a controlled vocabulary	🔵 🟢	🔵 🟢	🔵 🟢	🔵 🟢
Decoupling functionalities in Architectural Building Blocks	🔵 🟢	🔵 🟢	🔵 🟢	🔵 🟢
Facilitating the identification of IOP specifications	🔵 🟢	🔵 🟢	🔵 🟢	🔵 🟢
Holistique L,O,S,T IOP guidance	🔵 🟢	🔵 🟢	🔵 🟢	🔵 🟢
Accelerating development cycle	🔵 🟢	○ ○	○ ○	🔵 🟢
Enabling cartographies	○ 🟢	○ 🟢	○ 🟢	○ 🟢
Promoting discovery/reusability	🔵 🟢	🔵 🟢	🔵 🟢	🔵 🟢
Supporting Portfolio Mgmt Decision Making	○ 🟢	○ 🟢	○ 🟢	○ 🟢
Supporting Public Policy formulation	○ 🟢	○ 🟢	○ 🟢	○ 🟢

How EIRA supports IOP in e-Government?. Impact on ICT

EUROPEAN
COMMISSION

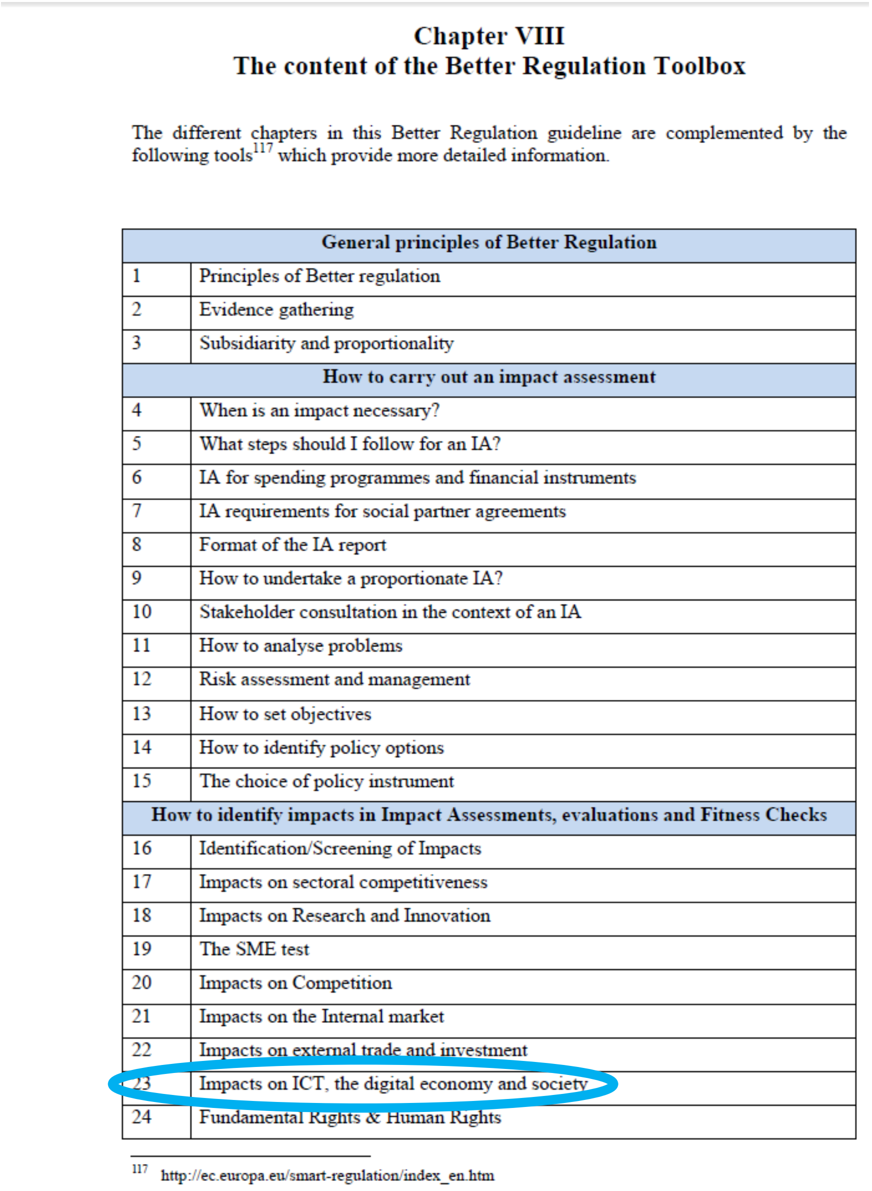
Strasbourg, 19.5.2015
SWD(2015) 111 final

COMMISSION STAFF WORKING DOCUMENT

Better Regulation Guidelines

{COM(2015) 215 final}
{SWD(2015) 110 final}

EN EN



Chapter VIII
The content of the Better Regulation Toolbox

The different chapters in this Better Regulation guideline are complemented by the following tools[117] which provide more detailed information.

	General principles of Better Regulation
1	Principles of Better regulation
2	Evidence gathering
3	Subsidiarity and proportionality
	How to carry out an impact assessment
4	When is an impact necessary?
5	What steps should I follow for an IA?
6	IA for spending programmes and financial instruments
7	IA requirements for social partner agreements
8	Format of the IA report
9	How to undertake a proportionate IA?
10	Stakeholder consultation in the context of an IA
11	How to analyse problems
12	Risk assessment and management
13	How to set objectives
14	How to identify policy options
15	The choice of policy instrument
	How to identify impacts in Impact Assessments, evaluations and Fitness Checks
16	Identification/Screening of Impacts
17	Impacts on sectoral competitiveness
18	Impacts on Research and Innovation
19	The SME test
20	Impacts on Competition
21	Impacts on the Internal market
22	Impacts on external trade and investment
23	Impacts on ICT, the digital economy and society
24	Fundamental Rights & Human Rights

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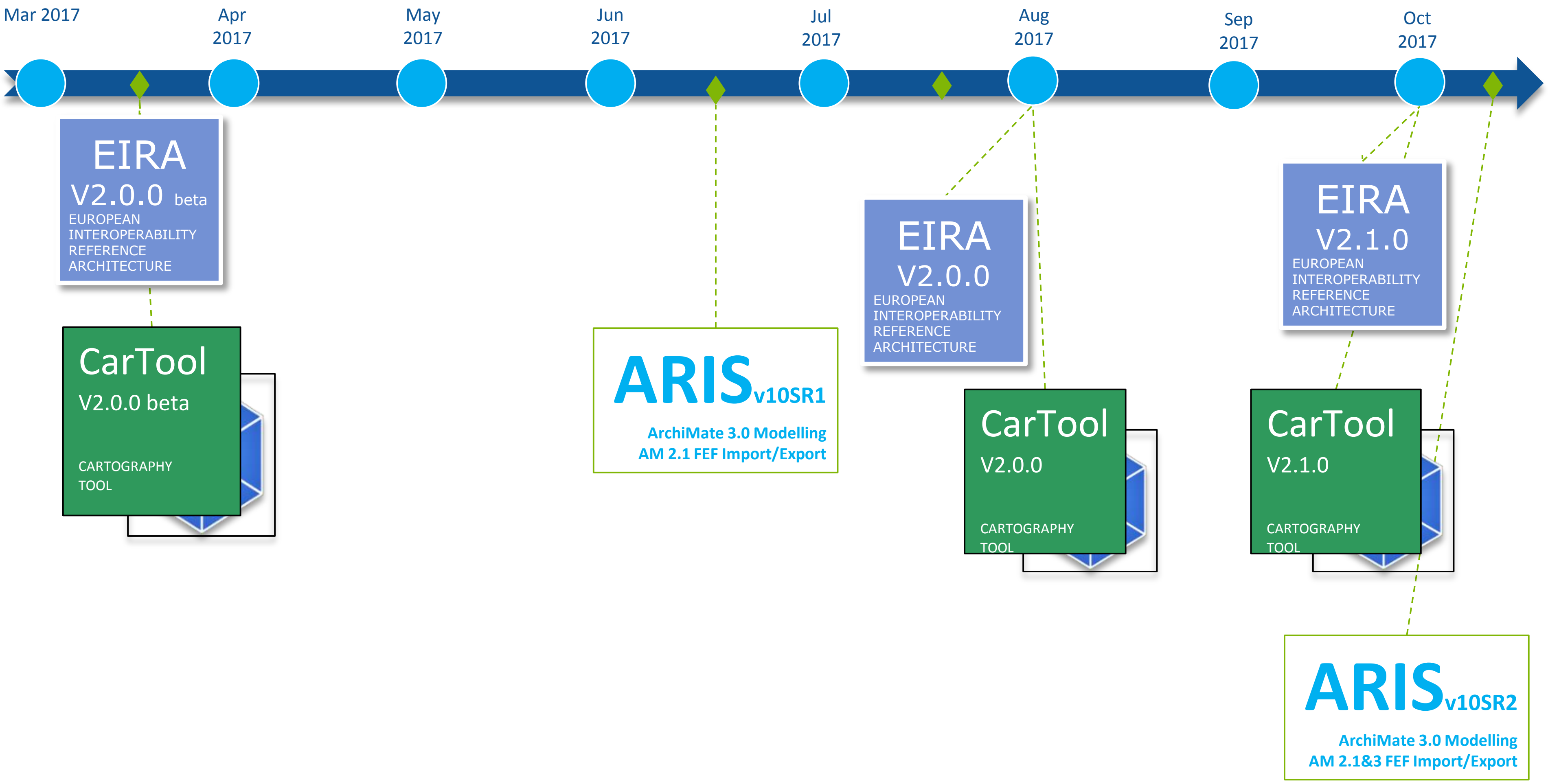
[117] http://ec.europa.eu/smart-regulation/index_en.htm

How EIRA supports IOP in e-Government?. Impact on ICT

https://www.youtube.com/watch?v=RWhoy3ilYEA

Roadmap key milestones



Mar 2017

Apr 2017

May 2017

Jun 2017

Jul 2017

Aug 2017

Sep 2017

Oct 2017

EIRA
V2.0.0 beta
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE

CarTool
V2.0.0 beta
CARTOGRAPHY TOOL

ARIS v10SR1
ArchiMate 3.0 Modelling
AM 2.1 FEF Import/Export

EIRA
V2.0.0
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE

CarTool
V2.0.0
CARTOGRAPHY TOOL

EIRA
V2.1.0
EUROPEAN INTEROPERABILITY REFERENCE ARCHITECTURE

CarTool
V2.1.0
CARTOGRAPHY TOOL

ARIS v10SR2
ArchiMate 3.0 Modelling
AM 2.1&3 FEF Import/Export

Questions?

ISA² programme

You click, we link.

Stay in touch

ec.europa.eu/isa2

@EU_isa2 **isa@ec.europa.eu**

Run by the ISA Unit at DIGIT (European Commission) with 131€M budget, the ISA² programme provides public administrations, businesses and citizens with specifications and standards, software and services to reduce administrative burdens.

EIRA

EUROPEAN
INTEROPERABILITY
REFERENCE
ARCHITECTURE

CarTool
[EIRA]

CARTOGRAPHY
TOOL

Contact us

Project Officer

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For more information

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

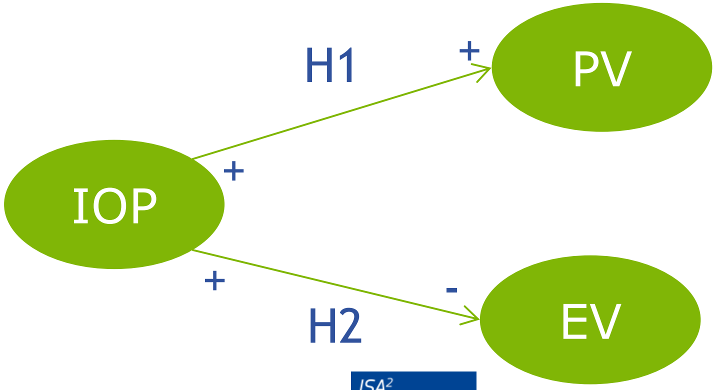
EIA Joinup community	https://joinup.ec.europa.eu/asset/eia/description
ISA website	http://ec.europa.eu/isa/index_en.htm
ISA FAQ	http://ec.europa.eu/isa/faq/faq_en.htm

Business case for IOP in e-Government

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

H1: “There is a positive correlation between IOP and [performance variable] (i.e. # requests/hr) of ***public service delivery*** to public administrations citizens and businesses”

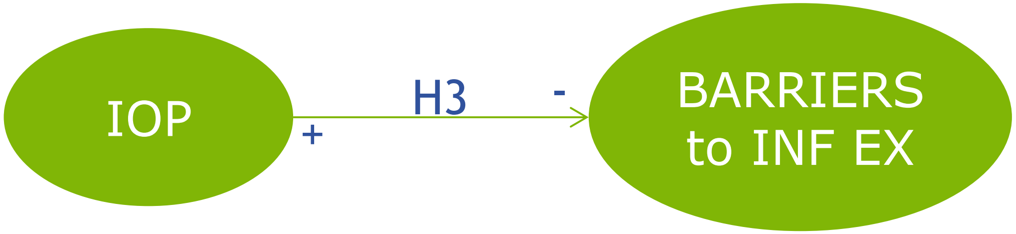
H2:”There is a negative correlation between IOP and [economic cost variable] (i.e. # rejection cost) of ***public service delivery*** for public administrations, businesses and citizens”



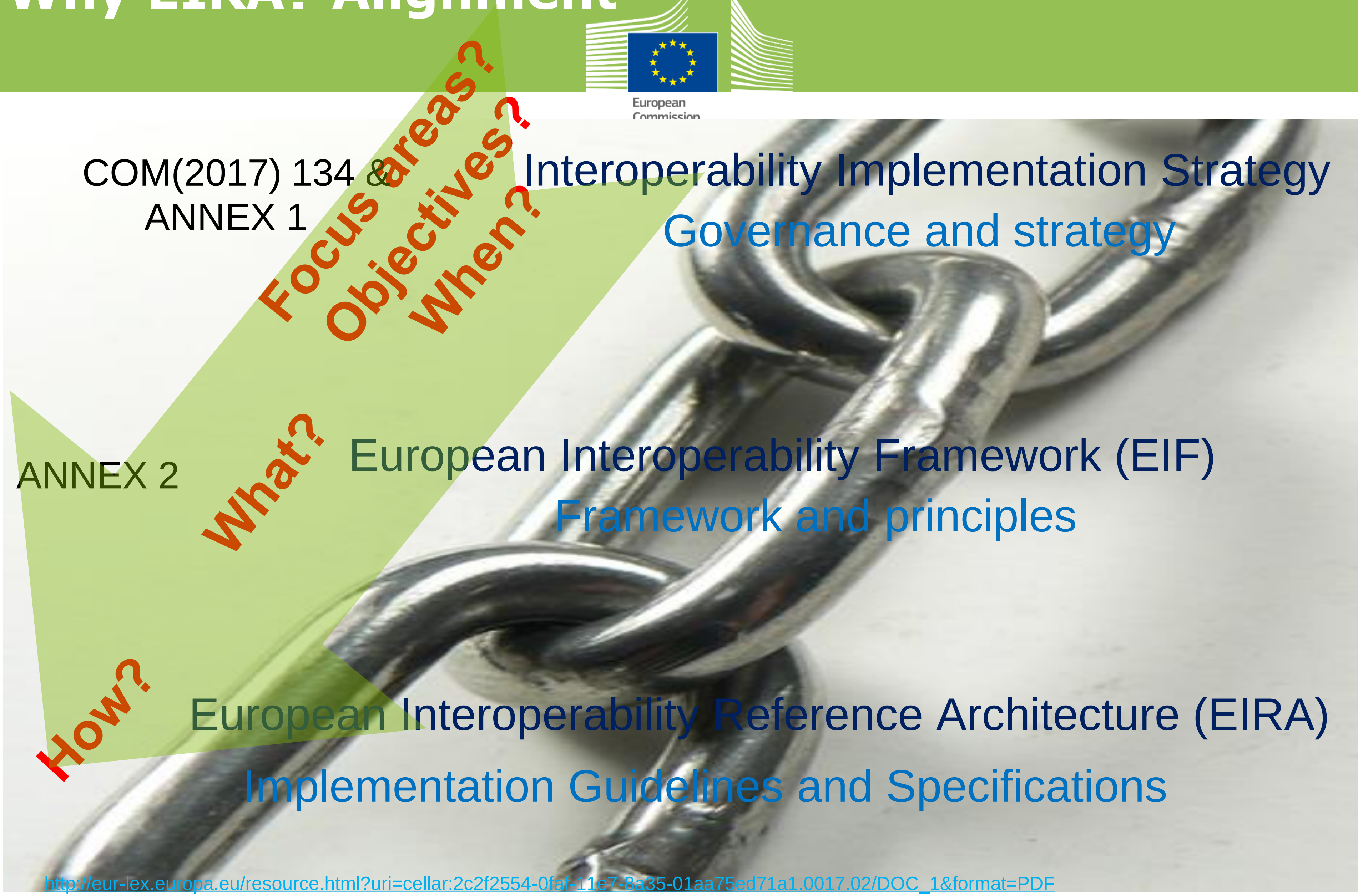
Business case for IOP in e-Government

IOP is a means to eliminating barriers in business information exchange (it is not the goal)

H3: ”There is a negative correlation between IOP and barriers to business information exchange”



Why EIRA? Alignment



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ANNEX 1

Focus areas?
Objectives?
When?

Interoperability Implementation Strategy

Governance and strategy

ANNEX 2

What?

European Interoperability Framework (EIF)

Framework and principles

How?

European Interoperability Reference Architecture (EIRA)

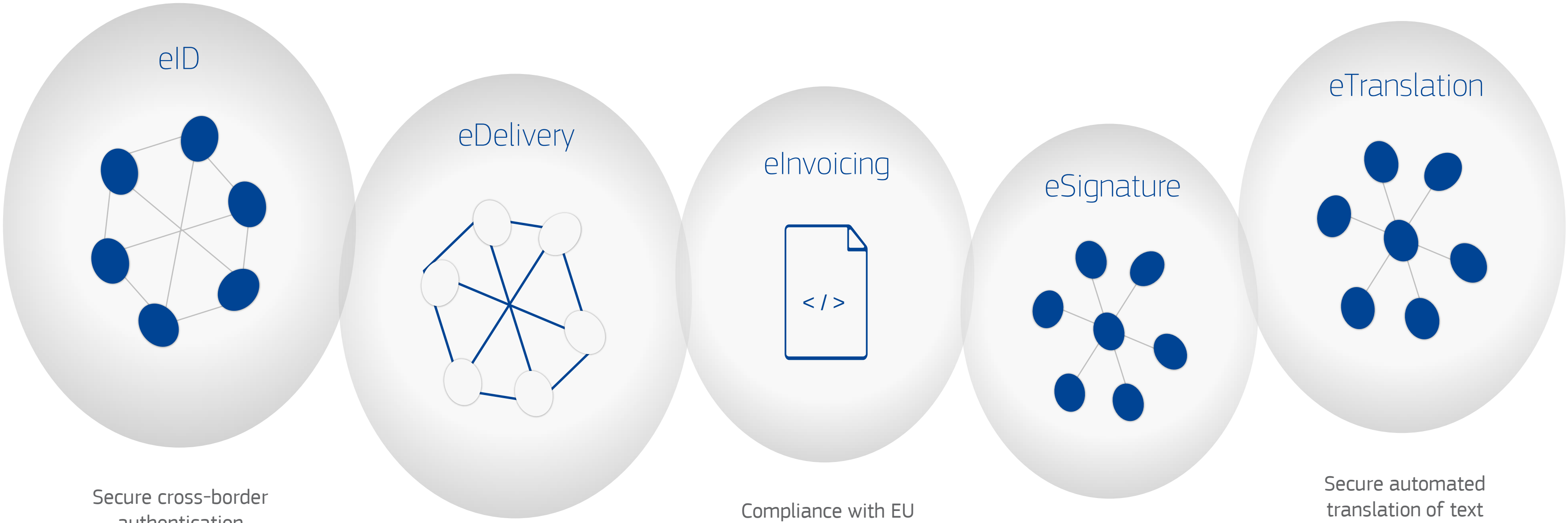
Implementation Guidelines and Specifications

http://eur-lex.europa.eu/resource.html?uri=cellar:2c2f2554-0faf-11e7-8a35-01aa75ed71a1.0017.02/DOC_1&format=PDF
http://eur-lex.europa.eu/resource.html?uri=cellar:2c2f2554-0faf-11e7-8a35-01aa75ed71a1.0017.02/DOC_2&format=PDF
http://eur-lex.europa.eu/resource.html?uri=cellar:2c2f2554-0faf-11e7-8a35-01aa75ed71a1.0017.02/DOC_3&format=PDF

Connected Europe Facility. Grants

Building block Digital Service Infrastructures provide basic functionality and are reusable by sector-specific DSIs

Examples are:



eID

Secure cross-border authentication

eDelivery

Secure message exchange of documents and data

eInvoicing

Compliance with EU eInvoicing standards

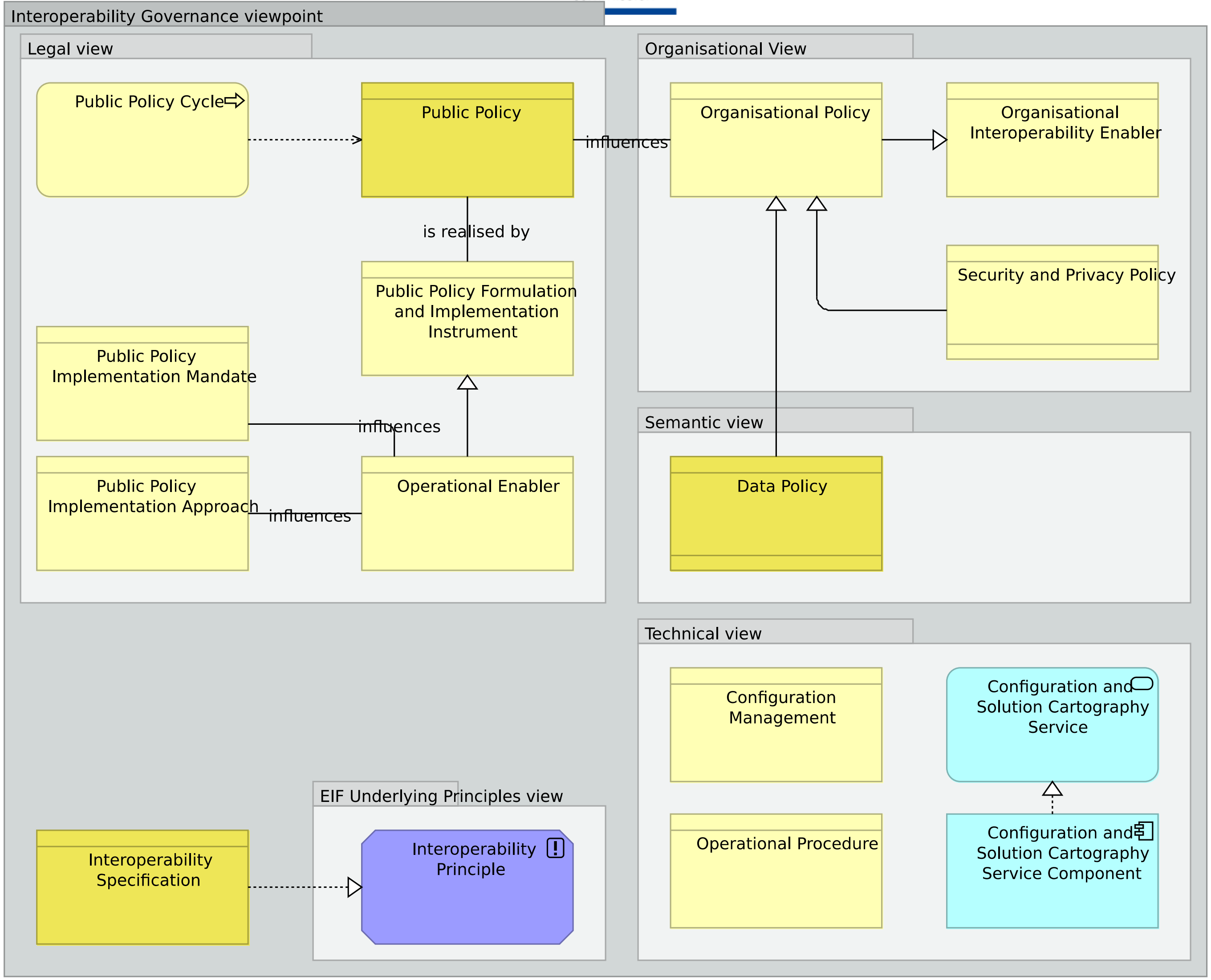
eSignature

Create and validate electronically signed documents

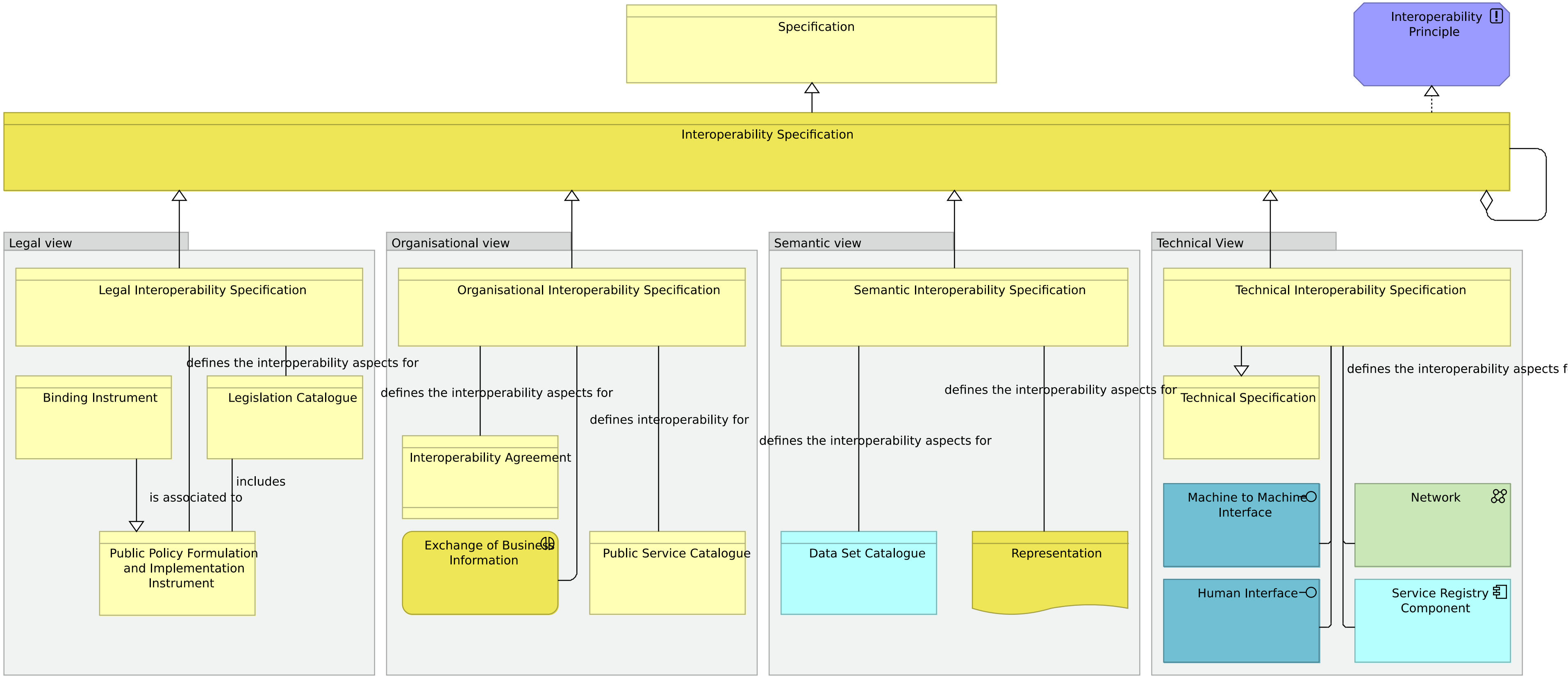
eTranslation

Secure automated translation of text

EIRA IOP Governance viewpoint


Interoperability Governance viewpoint
Legal view
Public Policy Cycle
Public Policy
is realised by
Public Policy Formulation and Implementation Instrument
Public Policy Implementation Mandate
influences
Public Policy Implementation Approach
influences
Operational Enabler
influences
Organisational View
Organisational Policy
Organisational Interoperability Enabler
Security and Privacy Policy
Semantic view
Data Policy
Technical view
Configuration Management
Configuration and Solution Cartography Service
Operational Procedure
Configuration and Solution Cartography Service Component
EIF Underlying Principles view
Interoperability Specification
Interoperability Principle

EIRA IOP specification underpinning viewpoint



Specification

Interoperability Principle

Interoperability Specification

Legal view

Legal Interoperability Specification

defines the interoperability aspects for

Binding Instrument

Legislation Catalogue

includes

is associated to

Public Policy Formulation and Implementation Instrument

Organisational view

Organisational Interoperability Specification

defines the interoperability aspects for

defines interoperability for

Interoperability Agreement

Exchange of Business Information

Public Service Catalogue

Semantic view

Semantic Interoperability Specification

defines the interoperability aspects for

defines the interoperability aspects for

Data Set Catalogue

Representation

Technical View

Technical Interoperability Specification

defines the interoperability aspects f

Technical Specification

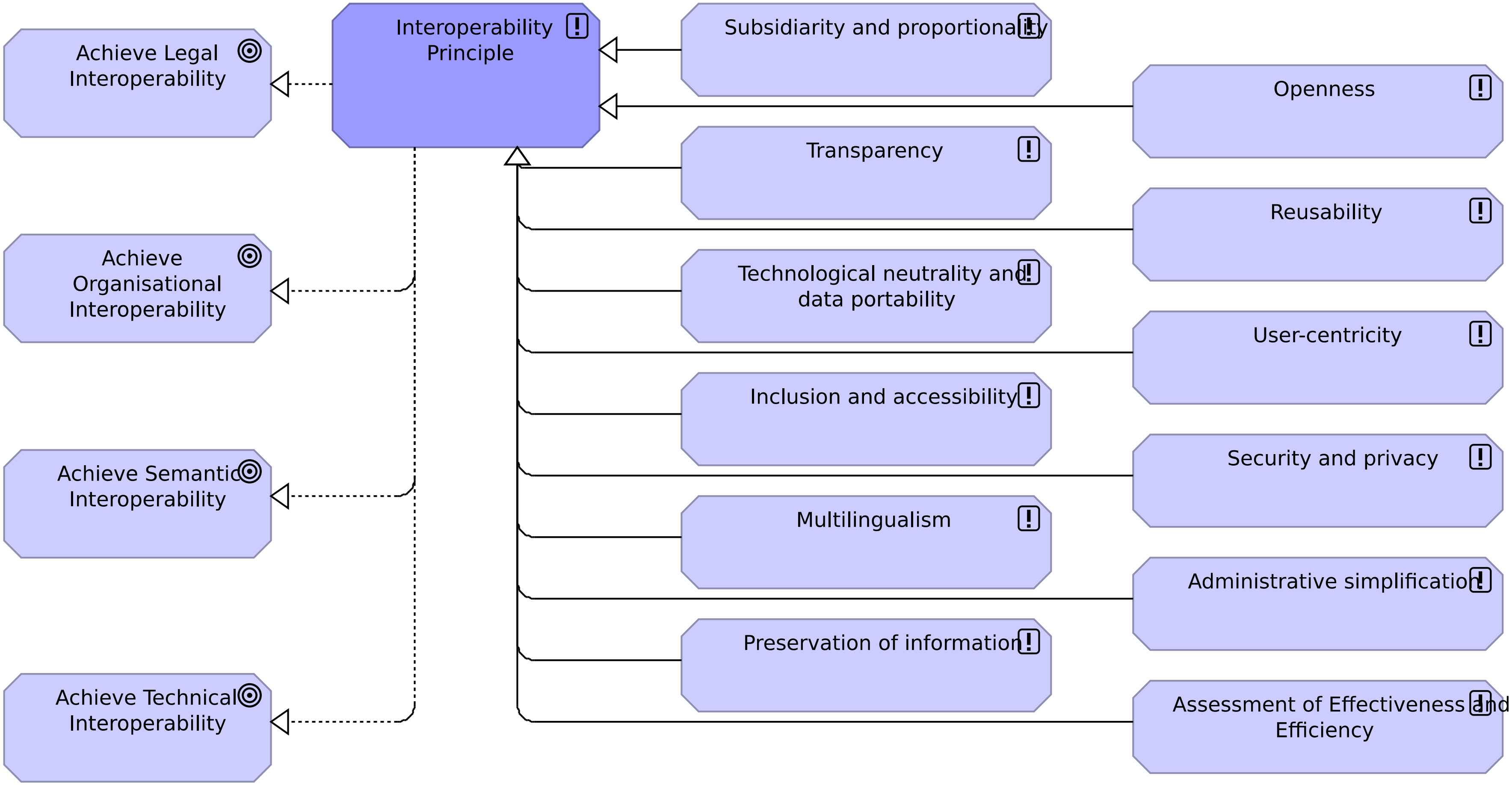
Machine to Machine Interface

Network

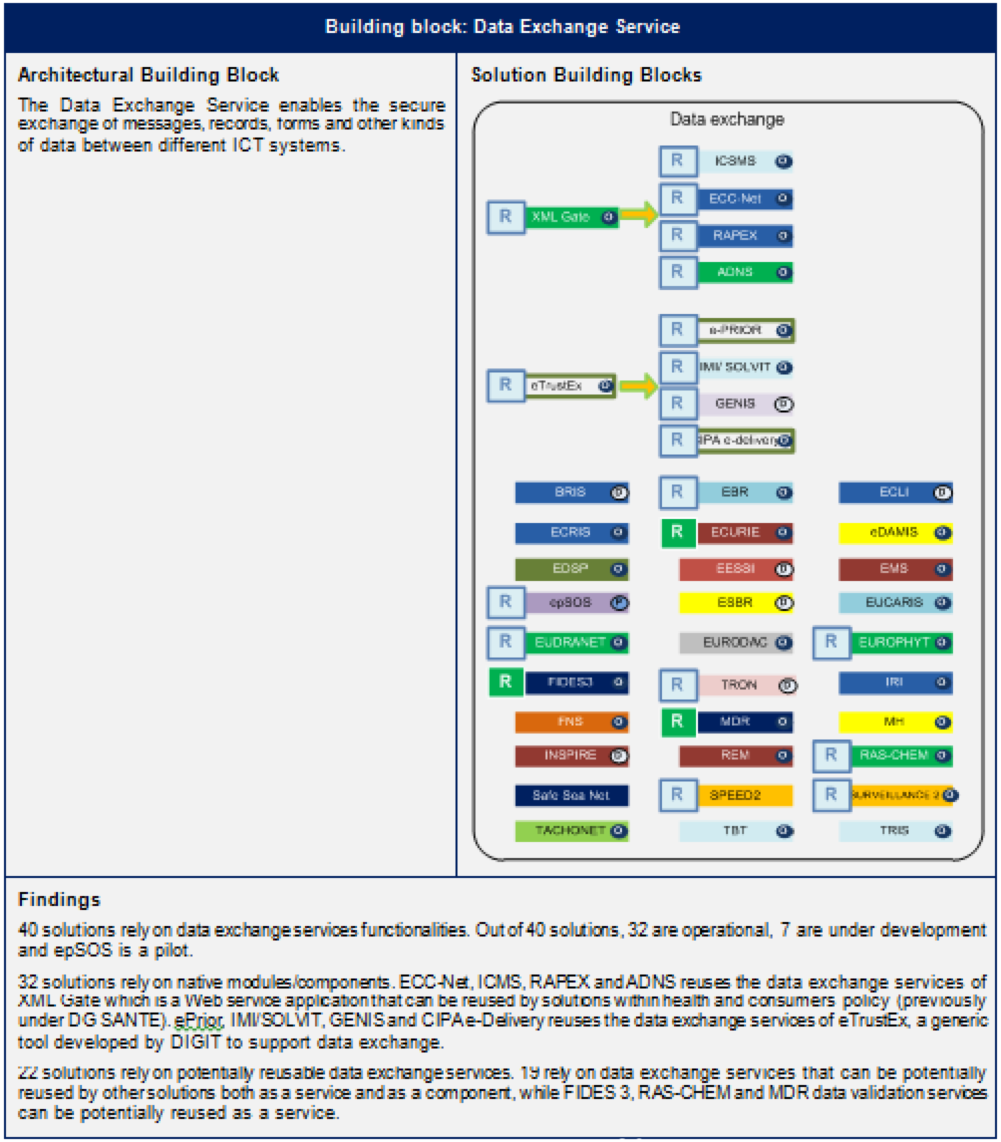
Human Interface

Service Registry Component

EIRA EIF IOP Principles


Interoperability Principle
Achieve Legal Interoperability
Achieve Organisational Interoperability
Achieve Semantic Interoperability
Achieve Technical Interoperability
Subsidiarity and proportionality
Openness
Transparency
Reusability
Technological neutrality and data portability
User-centricity
Inclusion and accessibility
Security and privacy
Multilingualism
Administrative simplification
Preservation of information
Assessment of Effectiveness and Efficiency

How EIRA supports IOP in e-Government?. Reusability analyses



Building block: Data Exchange Service

Architectural Building Block

The Data Exchange Service enables the secure exchange of messages, records, forms and other kinds of data between different ICT systems.

Solution Building Blocks

Data exchange
R XML Gate
R ICSMS
R ECC-Net
R RAPEX
R ADNS
R eTrustEx
R e-PRIOR
R IMI/ SOLVIT
R GENIS
R IPA e-delivery
BRIS
R EBR
ECLI
ECRIS
R ECURIE
eDAMIS
EDSP
EESSI
EMS
R epSOS
ESBR
EUCARIS
R EUDRANET
EURODAC
R EUROPHYT
R FIDES3
R TRON
IRI
FNS
R MDR
MH
INSPIRE
REM
R RAS-CHEM
Safe Sea Net
R SPEED2
R URVEILLANCE 2
TACHONET
TBT
TRIS

Findings

40 solutions rely on data exchange services functionalities. Out of 40 solutions, 32 are operational, 7 are under development and epSOS is a pilot.

32 solutions rely on native modules/components. ECC-Net, ICMS, RAPEX and ADNS reuses the data exchange services of XML Gate which is a Web service application that can be reused by solutions within health and consumers policy (previously under DG SANTE). ePrior, IMI/SOLVIT, GENIS and CIPA e-Delivery reuses the data exchange services of eTrustEx, a generic tool developed by DIGIT to support data exchange.

22 solutions rely on potentially reusable data exchange services. 19 rely on data exchange services that can be potentially reused by other solutions both as a service and as a component, while FIDES 3, RAS-CHEM and MDR data validation services can be potentially reused as a service.

How EIRA supports IOP in e-Government?. Portfolio mgmt support

Rapid Alert and Notification

- ADNS
- CECIS
- CRMS
- DUES
- ECURIE
- EMS
- EUROPHYT
- EWRS
- RAPEX
- RAS-CHEM
- Safe Sea Net
- TBT
- TRIS

Cross-border access to authentic data sources

- AFIS
- BRIS
- CISE
- CPCS
- EBR
- ECLI
- e-Justice Portal
- ELRA
- ERRU
- EUCARIS
- EULIS
- EURODAC
- REGPROF
- SIS II
- EUROSUR
- FIDES3
- ICSMS
- Inspire
- IRI
- RESPER
- SIGL2
- TACHONET
- VIES
- VIS
- TRON

Basic Digital Services

- CIPA e-delivery
- DSS/TSL-Manager
- ECAS
- EESSI
- e-Prior
- e-SENS e-ID (STORK)
- ESSI
- eTrustEx
- MT@EC
- SPEED2
- XMLGate

Handling statistical information

- AMECO
- DW
- eDAMIS
- EDSP
- ESBR
- ESDEN
- FDMS+
- ICT
- MDR
- MH
- SERV
- SIMSTAT

Request for Information and Assistance

- ECC-Net
- E-CODEX
- ECRIS
- epSOS
- eQuestionnaire
- EUDRANET
- IMI/SOLVIT

Reporting to the Commission

- FNS
- GENIS
- MARS
- REM
- SARI
- SURVEILLANCE 2

Information Based Collaboration

- ECN
- EURES
- SINAPSE

Networking Services

- CCN2
- Géant
- sTESTA