Update and Validation of EIRA

European Interoperability Architecture (EIA) action of ISA

EIA-D02.01.01-v3.01_Update and Validation of EIRA

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<th>Document Title</th>
<th>EIA-D02.01 Update and Validation of EIRA</th>
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<td>Project Title</td>
<td>European Interoperability Architecture</td>
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<tr>
<td>Document Author</td>
<td>Deloitte Consulting CVBA</td>
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### Document Control Information

<table>
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<th>Document Approver(s) and Reviewer(s)</th>
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<tbody>
<tr>
<td><strong>Name</strong></td>
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<td>Raul-Mario Abril-Jimenez</td>
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### Document History

<table>
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<th>Revision</th>
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<td>V0.01</td>
<td>04/04/2014</td>
<td>Deloitte Consulting CVBA</td>
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<td>v1.02</td>
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<td>Revised version sent for review, including comments of Project Officer</td>
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<td>v2.00</td>
<td>19/05/2014</td>
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<td>Beta version of the EIRA, including the feedback received from the ISA WG meeting</td>
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<td>Key take-away messages of the EIRA</td>
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Key take-away messages of the EIRA
Key take-away messages of the EIRA

• The European Interoperability Reference Architecture (EIRA) is an application of Enterprise Architecture with a focus on **interoperability in the public sector**.

• The European Interoperability Reference Architecture is based on the **Service Oriented Architecture** style and uses the **Archimate** modelling notation.

• EIRA implements the **European Interoperability Framework** (EIF). There is a full alignment between the EIRA and the EIF.

• Each view of the European Interoperability Reference Architecture is defined in terms of the **interoperability aspects** that are supported.

• Views of the European Interoperability Reference Architecture are linked through designated **entry and exit building blocks** following a layered approach.

• The ambition of the EIRA is to provide **real value to the European public administration**, both at the Member States level as to the European Institutions level. The EIRA is developed in collaboration with the Member States.
European Interoperability Reference Architecture
An active structure element is defined as an entity that is capable of performing behaviour.

A behaviour element is defined as a unit of activity performed by one or more active structure elements.

A passive structure element is defined as an object on which behaviour is performed.

Relationships between building blocks:

- Composed of
- Aggregated of
- Used by
- Used by
- Realises
- Assigns
- Access
- Specialisation
- Associated with
- Triggers
European Interoperability Reference Architecture

Legal view

Organisational view

Semantic view

Technical view
Application and Infrastructure
The Legal view models the most salient public policy development enablers and implementation instruments that shall be considered in order to support legal interoperability in the public policy cycle.

**Entry points**
- ‘policy cycle’ from political context

**Exit points**
**Legal View**

**Public Policy Development Enablers**
- Approach
- Mandate

**Public Policy Implementation Instruments**
- Legal Requirements
  - Binding Instrument
  - Non-binding Instrument
- Legal Constraints
  - Binding Instrument
  - Non-binding Instrument
- Operational Enablers
  - Financial Resource
  - Implementing Guideline

**Public Policy Cycle**
- Definition of Public Policy Objectives
- Formulation of Public Policy Scenarios
- Impact Assessment
- Public Policy Implementation
- Public Policy Evaluation

**Public Policy**
- EU level
- National level
- Sub-National level
A [public policy], at [EU level, National level or Sub-national level], is the outcome of a specific public policy cycle, that aims at addressing the needs of a / a group of stakeholders. The public policy cycle consists of the following subsequent steps: [Definition of Public Policy Objectives], [Formulation of Public Policy Scenarios], [Impact Assessment], [Public Policy Implementation], [Public Policy Evaluation].

The public policy is developed taking into account public policy development enablers, which include a specific [Approach] (centralised/decentralised) and a [Mandate]. The policy is implemented through policy instruments, which can be [binding / non-binding] [legal requirements or constraints], or operational enablers, in the form of [financial resources] and [implementing guidelines].
The Organisational view models the most salient building blocks that shall be considered in order to support organisational interoperability among providers and users of a public service.

**Entry points**
- ‘public policy’ from ‘legal view’

**Exit points**
- ‘business information entity’ to ‘semantic view’
- ‘business rule’ to ‘semantic view’
- ‘service catalogue’ to ‘semantic view’
- ‘business process model’ to ‘semantic view’
- ‘public service’ to ‘technical view – application’
Narrative of the Organisational view

[Organisations] on [EU / national / sub-national level] in the role of Service Providers supply [Public Services] of the [Service Catalogue] to [Public Administrations] and/or [Businesses] and/or [Citizens] in the role of Users according to a [Service Delivery Model]. Organisations which are collaborating on interoperability projects or assignments, can sign an [Interoperability Collaboration Agreement]. With the aim of delivering the public service, the service provider proposes and the user accepts an [interoperability service agreement]. [Service providers] can sign an [Interoperability supplier agreement] to agree on how to deliver a service to their users.

The delivery of these services is realised through [Business Processes] following a [Business Process Model]. Business processes contain [Business Information exchange], which enclose [Business Transactions] of defined [Business Information Entities].

The Semantic view models the most salient building blocks that shall be considered in order to support semantic interoperability of business information entities processed by an IES.

**Entry points**
- 'public policy' from 'legal view'
- 'business information entity' from 'organisational view'
- 'business rule' from 'organisational view'
- 'service catalogue' from 'organisational view'
- 'business process model' from 'organisational view'

**Exit points**
- 'data' to 'technical view – application'
[Data], which is grouped in [data sets] and documented in the [data set catalogue], is represented using a specific [representation] format. [Business rule], [service catalogue] and [business process model] are also subject to a representation.

[Metadata], composed of [Data models] and [Reference data], provide the structure for a [representation]. The reference data include [Identifier Schemas], [Controlled Vocabularies], and/or [Code lists].

Data is classified according to a [Security & Privacy Policy]. A [Licensing & Charging Policy] can be [applied / not applied], which can depend on the specific representation of data. [Metadata] are managed through a specific [metadata management policy].
The Technical view - Application models the most salient policy-specific application building blocks that need to be considered in order to support technical interoperability when building an Interoperable European System (IES). An IES can support one or several policies.

**Entry points**
- ‘public policy’ from ‘legal view’
- ‘public service’ from ‘organisational view’
- ‘data’ from ‘semantic view’

**Exit points**
- ‘Interoperable European System’ to ‘technical view – infrastructure’
Interoperable European Systems (IESs) implement Public Services and are supporting one or multiple Public Policies. They can be accessed by Users, which can be humans or systems, through Presentation and Access enablers. The IES is documented through documentation enablers and is tested through the use of test enablers.

An IES provides access to data through data source enablers. Information can be exchanged, cross-border and cross-sector, with the support of mediation enablers, or can be processed to make informed decisions with the help of decision support enablers.

IESs can execute complex business processes through workflow enablers and can support interaction among humans through collaboration enablers. The information related to the services provided by an IES can be discovered by users or systems through the discovery enablers.

Access control and data security are managed through the services offered by application security enablers, involving access management components and audit and logging components.

The administration and operational management of an IES system is performed through administration enablers.
The Technical view - Infrastructure models the most salient infrastructure services that shall be considered in order to support technical interoperability when building an IES.

Infrastructure building blocks are any type of building blocks providing cross-policy services or functionalities.

**Entry points**
- ‘Interoperable European System’ from ‘technical view – application’

**Exit points**
/
Technical View - Infrastructure

- Interoperable European System
- Public Policy
- e-Signing Service
- e-Signature Validation Service
- Identity Management Service
- Trust Management Service
- e-Payment Service
- Machine Translation service

- Machine Translation Component

- Networking Service
- Hosting Service
- Hosting Facility
  - Secure Access
  - Storage
  - Processing
- Network
  - Public Network
  - Private Network
- Private Hosting Facility
  - Public Hosting Facility

- Infrastructure Security Enablers
- Digital Services Infrastructure
- Hosting and Networking Services Infrastructure
The [Interoperable European Systems] and its application components make use of cross-sectorial [digital services infrastructures], such as [infrastructure security enablers], [e-payment services], and [machine translation services]. The Interoperable European Systems and the digital services infrastructures are deployed and operated through [hosting and networking services infrastructures], provided by a [public / private hosting facility], and make use of a [public / private network] to exchange data.
Summary of the entry/exit points between the views

- The number indicated in the cells of the table represents the number of entry building block(s), belonging to the “origin” view, that are included in the “destination” view;
- The sum of the numbers in a row indicates the number of exit building blocks in the corresponding “origin” view.

<table>
<thead>
<tr>
<th>ORIGIN</th>
<th>Legal view</th>
<th>Organisational view</th>
<th>Semantic view</th>
<th>Technical view - application</th>
<th>Technical view - infrastructure</th>
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For more information

EIA project collaborative space  https://webgate.ec.europa.eu/CITnet/confluence/display/EIA/EIA+Home

ISA website  http://ec.europa.eu/isa/index_en.htm

ISA FAQ  http://ec.europa.eu/isa/faq/faq_en.htm