European Interoperability Framework (EIF) – Training Modules

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D06.03 Training material & Toolbox

ISA[2] Action 2016.21 - NIFO
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NIFO

NATIONAL
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EXAMPLE TRAINING DAY AGENDA

Time	Items
09:00 – 10:30	**Training Module 1 – General Introduction to the EIF**
10:30 – 12:30	**Training Module 2 – Detailed presentation of the EIF**
12:30 – 13:30	**Lunch**
13:30 – 15:00	**Training Module 3 – EIF Monitoring Mechanism**
15:00 – 16:30	**Training Module 4 – EIF Implementation**

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Module 1: General Introduction to the EIF

Module 1: General Introduction to the EIF - Outline

OVERALL TRAINING MODULE OBJECTIVE

The main objective of this module is to give participants a general understanding of the logic behind the EIF, its purpose and the structure of its Conceptual Model. By the end of this training, participants will also have a view of the policy context behind the EIF and be familiar with its main terms.

No	Module item	Addresses
1	**Explanation of training objectives (5 mins)**	What is the EIF & what does it do? Why are interoperable digital public services important in Europe?
2	**Purpose, structure and context of EIF (5 mins)**	Why does the EIF exist? Where did the EIF emanate from? How is the EIF structured?
3	**Introduction to main EIF concepts, terminology (10 mins)**	What are the main EIF concepts & terms I need to be familiar with?
4	**Presentation of the EIF's Conceptual Model (10 mins)**	How is the EIF conceived?
5	**EU Policies Promoting Interoperability (10 mins)**	What other EU policies promote interoperable digital public services?
6	**EIF Composition (levels, principles, recommendations) (20 mins)**	How does the EIF help my organisation contribute to improved digital public services?
7	**Q & A (30 mins)**	

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General Explanation of Training Objectives

Module Item I

General Explanation of Training Objectives

MODULE 1

Objective 1

Understand the **logic & purpose of the EIF** to support the design & delivery of interoperable public services.

Objective 2

Be aware of EIF's purpose & previous EU initiatives **supporting interoperable digital public services**.

Objective 3

Be familiar with the **main components and logic** of the EIF Conceptual Model.

Objective 4

Have a clear understanding, from the outset, of the **main interoperability concepts and EIF terminology**.

Objective 5

Understand how **each EIF component promotes interoperability**.

Purpose, Structure and Context of EIF

Module Item II

Purpose, Structure and Context of EIF

ENCOURAGE PUBLIC SECTOR

In their efforts to **design European public services** which are digital, cross-border and open-by-default.

CONTRIBUTE TO SINGLE DIGITAL GATEWAY

By **fostering cross-border and cross-sectoral interoperability** for of European public services.

## PROVIDE GUIDANCE

For the **update of National Interoperability Framework** (NIFs), or national strategies promoting interoperability.

Purpose, Structure and Context of EIF

- ✓ The **interoperability principles** are fundamental behavioural aspects to drive interoperability actions.
- ✓ They describe the context in which **European public services** are designed and implemented.
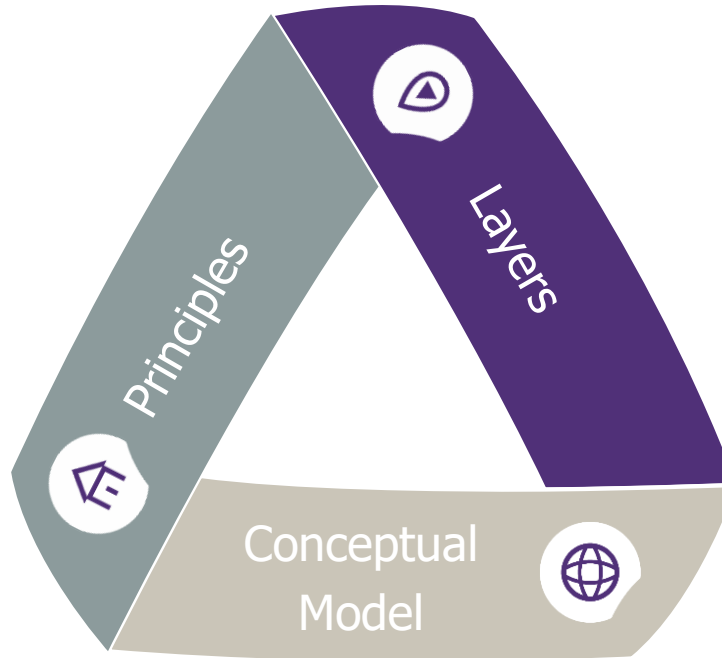
- ✓ There are **4 layers** of interoperability: legal, organisational, semantic and technical.
- ✓ A cross-cutting component of the four layers includes a **'integrated public service governance'**.

- ✓ The **conceptual model** is modular and comprises loosely coupled service **interconnected components**.
- ✓ Guides the planning, development, operation and maintenance of **public services** by Member States.

Purpose, Structure and Context of EIF

The new EIF

The **new EIF** is part of an **EC Communication (COM(2017)134)** adopted in March 2017. The framework gives guidance on the establishment of **interoperable digital public services**.

EU level

The **efforts to digitise the public sector** should be coordinated at EU and national levels **to avoid digital fragmentation** and help the development of the **Digital Single Market**.

Composition

The **EIF's 47 recommendations** provide guidance on how to **ensure interoperability** among digital public services, establish cross-organisational relationships, streamline processes and ensure that legislation does not affect interoperability.

Introduction to Main EIF Concepts, Terminology

Module Item III

Detailed Presentation of EIF Concepts and Terminology

As requested by EU Member States, to facilitate the implementation of the EIF and promote a common EU-wide understanding of the terms most frequently used in the EIF, a comprehensive EIF Glossary was conceived and made available through the Joinup collection, which is accessible here:

https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/glossary

Presentation of the EIF's Conceptual Model

Module Item IV

Conceptual Model of the EIF

Source: New European Interoperability Framework brochure, available at: https://ec.europa.eu/isa2/sites/isa/files/eif_brochure_final.pdf

Conceptual Model of the EIF

1 **Integrated Public Services:** To achieve public services integration at EU level, compatible models, standards and common infrastructure need to be agreed. To this end, the EIF Integrated Public Service Model in Annex 2 of the EIF should be applied to ensure the delivery of integrated public services.

2 **External Information sources and services:** Public administrations need to leverage services delivered outside of their organisations by third parties. They need also to be able to exploit external information sources, such as open data. Additional Data can be collected through the development of new technologies such as IoT. An example of an external source of information would be an Open Data Portal.

3 **Internal Information sources and services:** Information sources and services are sometimes available for use only inside the administrative system and not in the external environment. These information sources, such as base registries, are often unknown outside the boundaries of a particular administration. This can result in a duplication of effort and a under-exploitation of available resources and solutions. An example of internal source of information would be a base registry.

EU Policies Promoting Interoperability

Module Item V

EU Policies Promoting Interoperability

Other Policies, instruments or strategies

- ✓ Connecting Europe Facility
- ✓ Digital Agenda for Europe
- ✓ Europe 2020 Strategy
- ✓ Tallinn Declaration

Policies promoting the wider Digital Single Market

- ✓ GDPR (2016/679)
- ✓ Digital Single Market strategy
- ✓ Open Data communication (COM (2011) 882)

Policies promoting eGovernment

- ✓ EIDAS Regulation (EU) No 910/2014
- ✓ Public Sector Information (PSI) Directive (2013/37/EU)
- ✓ NIS Directive (2016/1148)
- ✓ SDG Regulation (EU) No 2018/1724

Policies promoting interoperability

- ✓ Decision (EU) 2015/2240 (ISA2)
- ✓ Decision (EU) 2009/922 (ISA)
- ✓ EIF Communication (COM(2017)134)

Level 4

Level 3

Level 2

Level 1

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EIF Composition (levels, principles, recommendations)

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Module Item VI

EIF Composition (levels, principles, recommendations)

Source: New European Interoperability Framework brochure, available at: https://ec.europa.eu/isa2/sites/isa/files/eif_brochure_final.pdf

EIF Composition (levels, principles, recommendations)

Legal Interoperability

Legal interoperability ensures that organisations operating under different legal frameworks are able to work together. This might require that legislation does not block the establishment of European public services within and between Member States and that there are clear agreements about how to deal with legal differences.

Organisation Interoperability

Organisational interoperability refers to the alignment of business processes, responsibilities and expectations to achieve agreed and mutually beneficial goals. It entails documenting, integrating business processes and relevant information exchanged. It also aims to make services available, easily identifiable, accessible and user-focused.

Semantic Interoperability

Semantic interoperability ensures that the precise format and meaning of exchanged data and information is preserved and understood throughout exchanges between parties. In the EIF, semantic interoperability covers both semantic and syntactic aspects of the data being exchanged.

Technical Interoperability

Technical interoperability covers the infrastructures linking systems and services. These include interface specifications, interconnection and data integration services, data exchange and communication protocols. Historically, applications and information systems were developed in a bottom-up fashion, resulting in fragmented ICT islands which are obsolete.

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EIF Composition (levels, principles, recommendations)

EIF Principles

I: Subsidiarity and Proportionality
1 recommendation

II: Openness
3 recommendations

III: Transparency
1 recommendation

IV: Reusability
2 recommendations

V: Technological neutrality and data portability
2 recommendations

VI: User-centricity
4 recommendations

VII: Inclusion and accessibility
1 recommendation

VIII: Security and privacy
1 recommendation

IX: Multilingualism
1 recommendation

X: Administrative simplification
1 recommendation

XI: Preservation of information
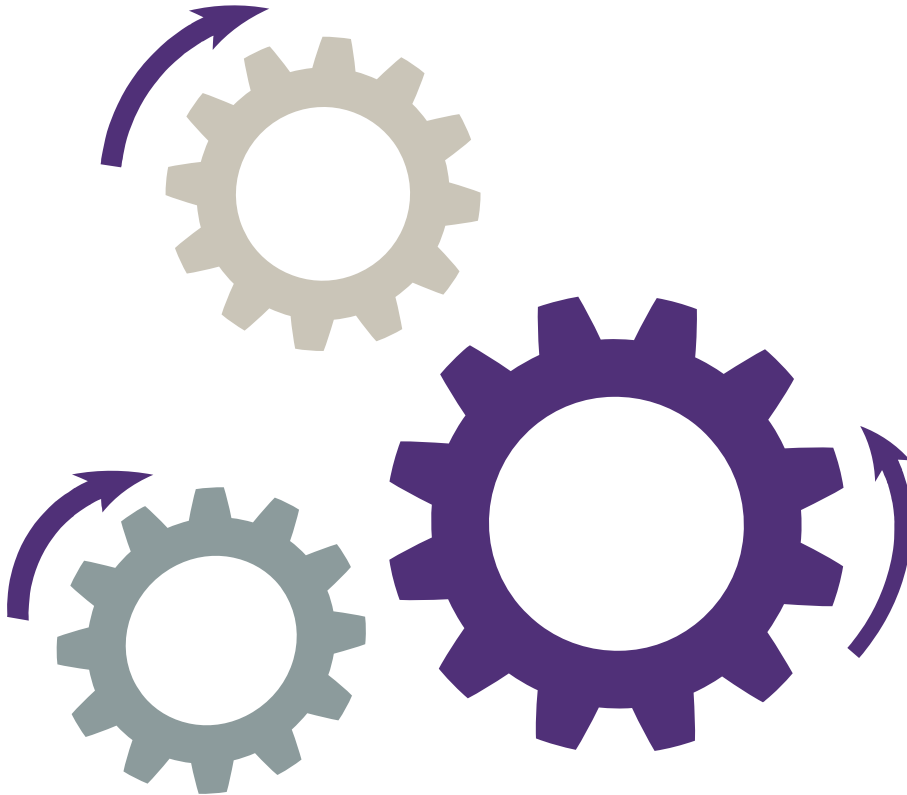*1 recommendation*

XII: Assessment of Effectiveness and Efficiency
1 recommendation

EIF Composition (levels, principles, recommendations)

Different sources of recommendations

Principles of European public services:

19 recommendations (# 1 to 19)
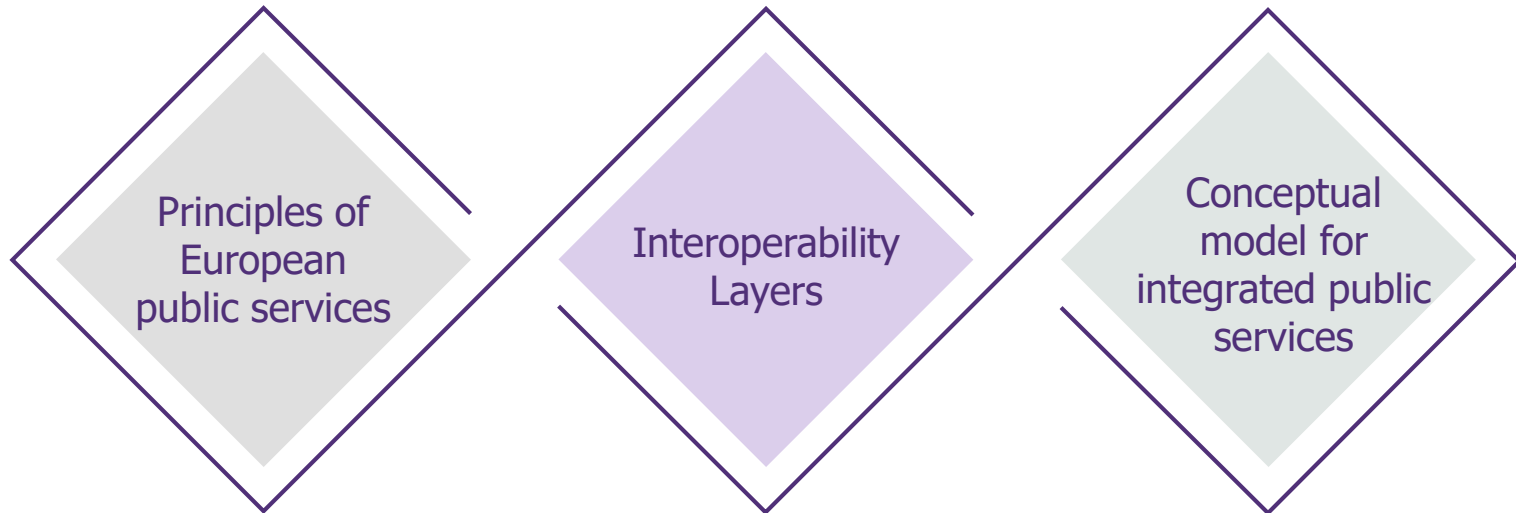
Interoperability Layers:

14 recommendations (# 20 to 33)

Conceptual model for integrated public services:

14 recommendations (# 34 to 47)

EIF Composition (levels, principles, recommendations)

Principles of European public services

Interoperability Layers

Conceptual model for integrated public services

Sample Recommendation:
'Simplify processes and use digital channels whenever appropriate for the delivery of European public services, to respond promptly and with high quality to users' requests and reduce the administrative burden on public administrations, businesses and citizens' -
Recommendation 17

Sample Recommendation:
'Use a structured, transparent, objective and common approach to assessing and selecting standards and specifications. Take into account relevant EU recommendations and seek to make the approach consistent across borders' -
Recommendation 22

Sample Recommendation:
'Develop interfaces with base registries and authoritative sources of information, publish the semantic and technical means and documentation needed for others to connect and reuse available Information' -
Recommendation 38

Q & A

Module 2: Detailed presentation of the EIF

Module 2: Detailed presentation of the EIF

OVERALL TRAINING MODULE OBJECTIVE

The main objective of this module is to provide participants with a detailed understanding of the benefits of the EIF and how it can support the delivery of interoperable digital public services. This will include an overview of the EIF & its history, a deep-dive into the main EIF components and future implementation steps. By the end of this training, participants will be able to assist in leading the implementation of the EIF at the national level.

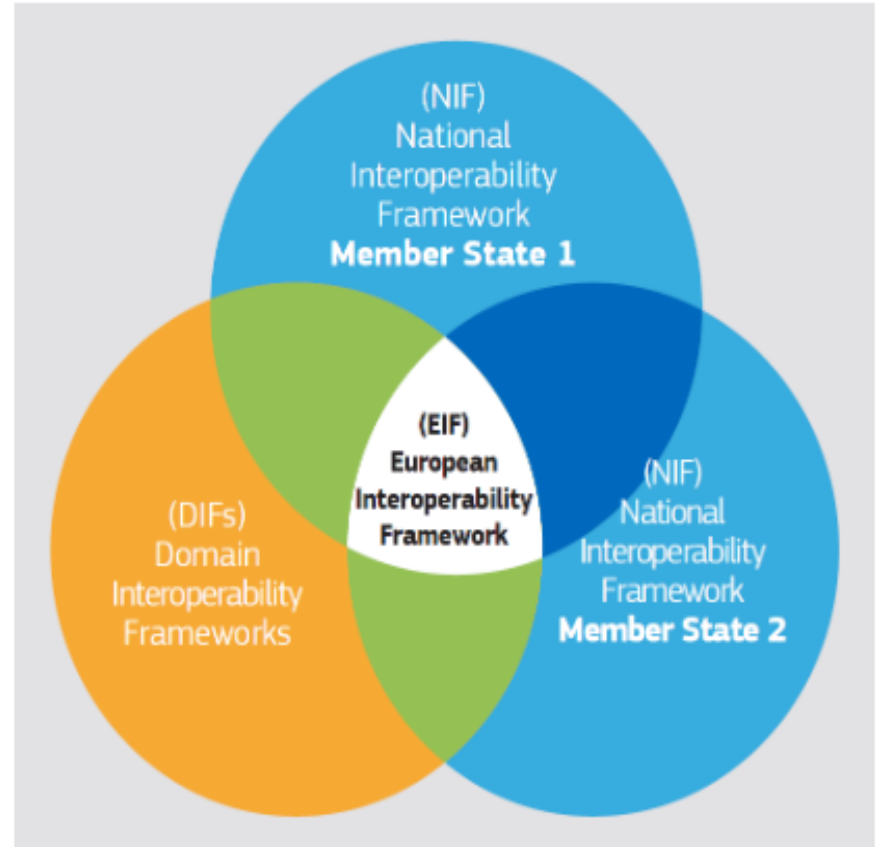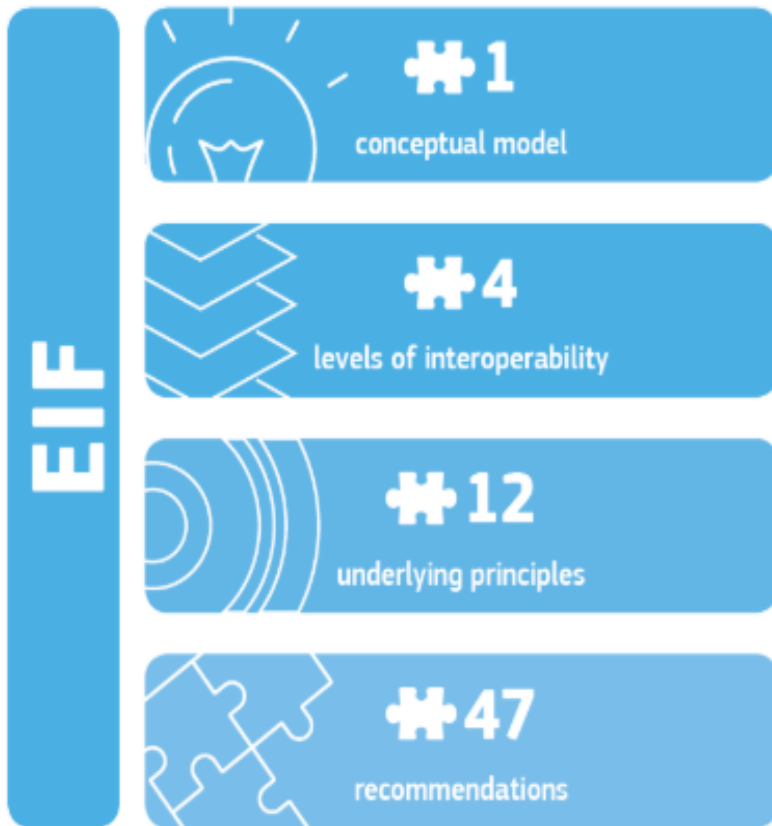| No	Module item	Addresses
1	Presentation of the EIF (5 mins)	How much does the EIF benefit the development of digital public services?
2	Detailed presentation of EIF concepts and terminology (10 mins)	What are the main EIF concepts & terms I need to be familiar with?
3	Overview of EIF development, structure and its main purpose (15 mins)	Why does the EIF exist? How is the EIF structured? How does the EIF contribute to the interoperability policy landscape in the EU?
4	Deep-dive into EIF recommendations (30 mins)	How do the different EIF Recommendations work together? How can I explain the EIF Recommendations to stakeholders responsible for implementing it?
5	Implementation of the EIF at the national level (15 mins)	With my knowledge of the EIF, how can I ensure its implementation through my Member State's NIF?
6	Next Steps in the implementation of the EIF (10 mins)	What comes next for the implementation of the EIF? Where can I get more information and support to drive its implementation?
7	Q & A (30 mins)	

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Presentation of the EIF

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Module Item I

Presentation of the EIF

MODULE 2

Objective 1

What is the EIF & how does it **benefit the development of digital public services**?

Objective 2

Be aware of EIF's purpose & previous EU initiatives **supporting interoperable digital public services**.

Objective 3

Be familiar with the **main terminology, components and logic of the EIF Conceptual Model** & deep-dive into the 47 EIF recommendations.

Objective 4

Understand how knowledge of the EIF **contributes to the alignment of the NIF** with the former and helps its implementation at the national level.

Objective 5

Be aware of the **next steps in EIF implementation**.

Presentation of the EIF

EIF

- **1** conceptual model
- **4** levels of interoperability
- **12** underlying principles
- **47** recommendations

(NIF) National Interoperability Framework **Member State 1**

(DIFs) Domain Interoperability Frameworks

(EIF) European Interoperability Framework

(NIF) National Interoperability Framework **Member State 2**

Detailed Presentation of EIF Concepts and Terminology

Module Item II

Detailed Presentation of EIF Concepts and Terminology

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Overview of EIF Development, Structure and its Main Purpose

Module Item III

Overview of EIF Development, Structure and its Main Purpose

ENCOURAGE PUBLIC SECTOR

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In their efforts to **design European public services** which are digital, cross-border and open-by-default.

CONTRIBUTE TO SINGLE DIGITAL GATEWAY

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By **fostering cross-border and cross-sectoral interoperability** for of European public services.

PROVIDE GUIDANCE

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For the **update of National Interoperability Framework** (NIFs), or national strategies promoting interoperability.

Overview of EIF Development, Structure and its Main Purpose

The new EIF

The **new EIF** is part of an **EC Communication (COM(2017)134)** adopted in March 2017. The framework gives guidance on the establishment of **interoperable digital public services**.

Digital Single Market Strategy

One of main the actions of the **Digital Single Market Strategy** is to revise and expand the EIF.

Role of ISA[2]

In accordance to the **ISA² legal decision**, the ISA² programme is in charge of **monitoring the implementation of the EIF** across the EU Member States

Overview of EIF Development, Structure and its Main Purpose

1 conceptual model

The EIF conceptual model for integrated public services sets out to promote "**interoperability-by-design**" as a standard approach for the design and operation of European public services. The model is modular and comprises service components interconnected through shared infrastructure.

4 levels of interoperability

The EIF identifies **four layers of interoperability challenges** (legal, organisational, semantic and technical) at the same time pointing out the essential role of **integrated governance** to ensure coordination of relevant activities across all levels and sectors of public administration.

12 underlying principles

A set of **12 interoperability principles** are instrumental to the process of establishing interoperable European public services, as they fundamental behavioural aspects to drive interoperability actions. The 12 principles are segmented according to 4 categories.

47 recommendations

A set of **47 recommendations** as actionable propositions to be implemented by public administrations. The 47 recommendations are divided between principles (19), interoperability layers (14), conceptual model (14).

Overview of EIF Development, Structure and its Main Purpose

Source: New European Interoperability Framework brochure, available at: https://ec.europa.eu/isa2/sites/isa/files/eif_brochure_final.pdf
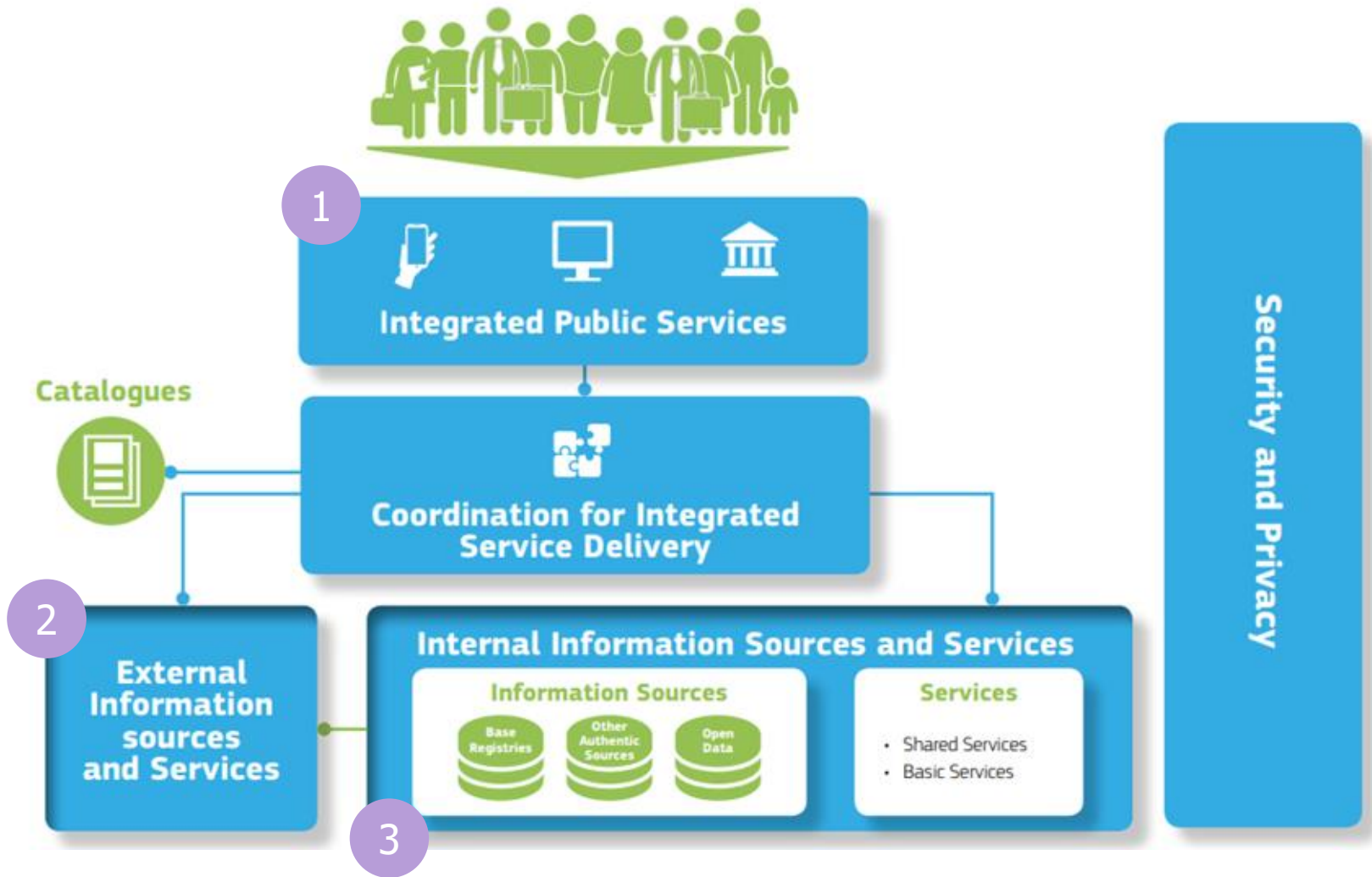
Overview of EIF Development, Structure and its Main Purpose

1 **Integrated Public Services:** To achieve public services integration at EU level, compatible models, standards and common infrastructure need to be agreed. To this end, the EIF Integrated Public Service Model in Annex 2 of the EIF should be applied to ensure the delivery of integrated public services.

2 **External Information sources and services:** Public administrations need to leverage services delivered outside of their organisations by third parties. They need also to be able to exploit external information sources, such as open data. Additional Data can be collected through the development of new technologies such as IoT. An example of an external source of information would be an Open Data Portal.

3 **Internal Information sources and services:** Information sources and services are sometimes available for use only inside the administrative system and not in the external environment. These information sources, such as base registries, are often unknown outside the boundaries of a particular administration. This can result in a duplication of effort and a under-exploitation of available resources and solutions. An example of internal source of information would be a base registry.

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Overview of EIF Development, Structure and its Main Purpose

Source: New European Interoperability Framework brochure, available at: https://ec.europa.eu/isa2/sites/isa/files/eif_brochure_final.pdf

Overview of EIF Development, Structure and its Main Purpose

Legal Interoperability

Definition

Legal interoperability ensures that organisations operating under different legal frameworks are able to work together. This might require that legislation does not block the establishment of European public services within and between Member States and that there are clear agreements about how to deal with legal differences.

Characteristics

1. Facilitates Interoperability between the public sector at lower levels (semantic & technical)

2. Facilitates the re-use of ICT solutions

3. Requires the formulation of legal agreements between Member States

Examples of use

1. Performing Interoperability checks, by screening existing legislation to identify interoperability barriers.

2. Performing a digital check on proposed legislation to ensure that it suits not only the physical but also the digital world.

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Overview of EIF Development, Structure and its Main Purpose

Organisation Interoperability

Definition

Organisational interoperability refers to the alignment of business processes, responsibilities and expectations to achieve agreed and mutually beneficial goals. It entails documenting, integrating business processes and relevant information exchanged. It also aims to make services available, easily identifiable, accessible and user-focused.

Characteristics

1. Ensuring business process alignment between different administrative entities

2. Defined relationships between service providers and service consumers

3. Sound coordination of various organisations; defining common SLAs for shared services

Examples of use

1. Signature of SLAs or MoUs to ensure interoperability.

2. Documenting business processes with accepted modelling techniques.

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Overview of EIF Development, Structure and its Main Purpose

Semantic Interoperability

Definition

Semantic interoperability ensures that the precise format and meaning of exchanged data and information is preserved and understood throughout exchanges between parties. In the EIF, semantic interoperability covers both semantic and syntactic aspects of the data being exchanged.

Characteristics

1. Ensures the semantic aspect, referring to the meaning of data elements and the relationship between them.

2. Protects the syntactic aspect by describing the exact format of the information exchanged in terms of grammar and format.

Examples of use

1. Using approaches like data-driven design, coupled with linked data technologies.

2. Designing information standards that facilitate a seamless communication of data.

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Overview of EIF Development, Structure and its Main Purpose

Technical Interoperability

Definition

Technical interoperability covers the infrastructures linking systems and services. These include interface specifications, interconnection and data integration services, data exchange and communication protocols. Historically, applications and information systems were developed in a bottom-up fashion, resulting in fragmented ICT islands which are obsolete.

Characteristics

1. Addresses the issues related to legacy systems

2. Aims to correct ICT governance fragmentation

3. Facilitates the development of formal technical specifications

Examples of use

1. Use of data presentation and exchange, and secure communication protocols.

2. Use of interconnection services, data integration services.

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Overview of EIF Development, Structure and its Main Purpose

Principles

Examples

I: Subsidiarity and proportionality
1 recommendation

1 Member States developing NIFs.

2 The provision of the EIF as a common denominator to which MS can align to.

II: Openness
3 recommendations

1 Use of open source software technologies and products.

2 Creation of an Open Data government portal.

III: Transparency
1 recommendation

1 Protecting personal data.

2 Ensuring visibility of interfaces used with internal information systems.

IV: Reusability
2 recommendations

1 Reusability of IT solutions (e.g. software components Application Programming Interfaces, standards).

2 Using ISA² sharing and reuse framework for IT solutions.

Overview of EIF Development, Structure and its Main Purpose

Principles

Examples

V: Technological neutrality and data portability
2 recommendations

1. providing for access and reuse of their public services and data irrespective of specific technologies or products.

2. ensuring data portability - the ability to move and reuse data easily among different applications and systems.

VI: User-centricity
4 recommendations

1. Using a multi-channel delivery approach, ensuring the availability of physical and digital channels to access a service.

2. Requesting service users' feedback.

VII: Inclusion and accessibility
1 recommendation

1. Allowing third persons to access services on behalf of an incapacitated individual.

2. Complying with existing e-accessibility specifications widely recognised at European or international level.

VIII: Security and privacy
1 recommendation

1. Upholding GDPR in public service delivery.

2. Applying the Regulation on electronic identification and trust services.

Overview of EIF Development, Structure and its Main Purpose

Principles   *Examples*

IX: Multilingualism
1 recommendation

1 Ensuring that services are delivered in the language of their expected users.

2 Taking into account of multilingualism at all levels of the design of public services.

X: Administrative simplification
1 recommendation

1 Ensuring digital-by-default services.

2 Applying the digital-first principle.

XI: Preservation of information
1 recommendation

1 Digitising archives in an electronic format.

2 Ensuring long-term accessibility to documents and information held.
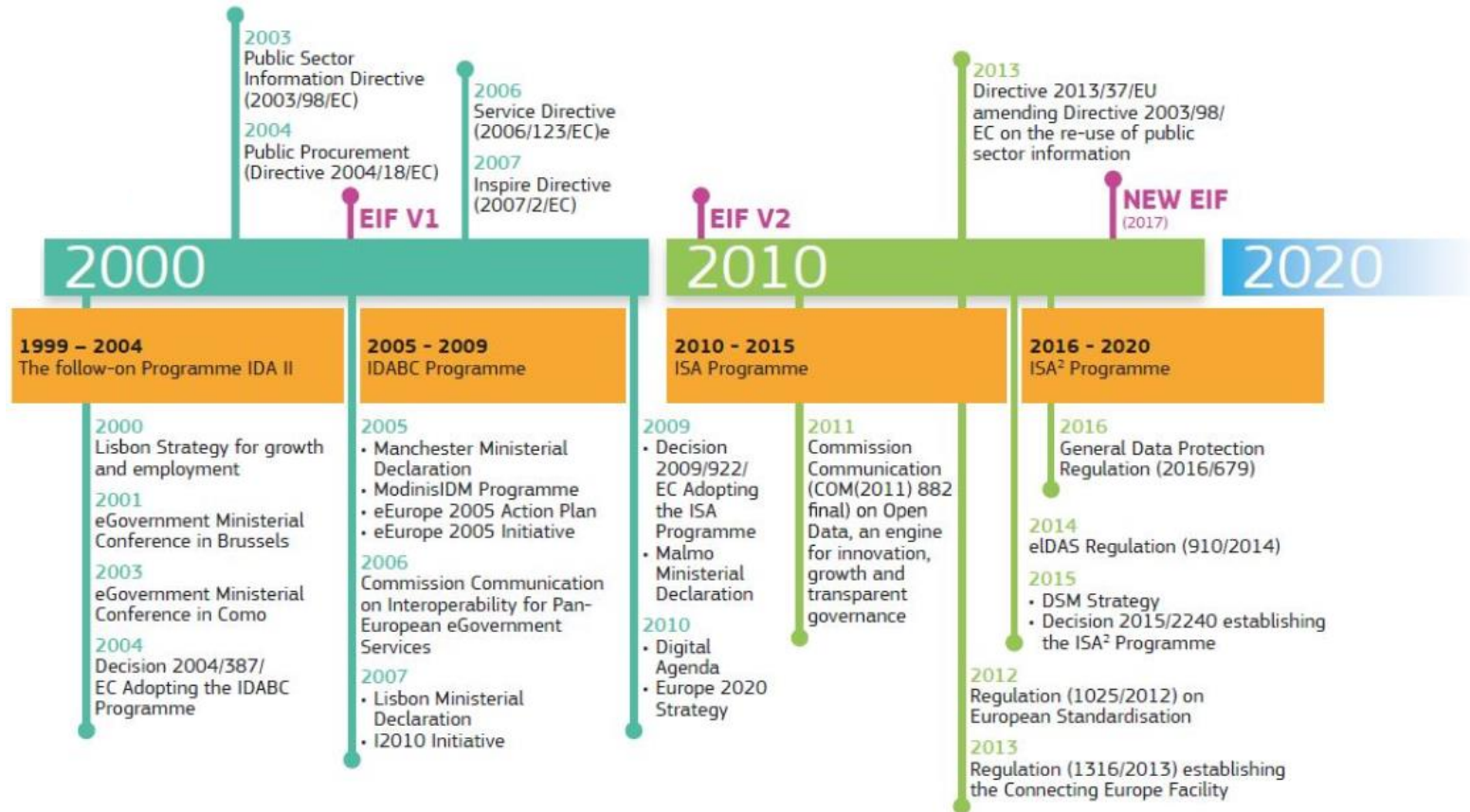
XII: Assessment of Effectiveness and Efficiency
1 recommendation

1 Evaluate different technological solutions according to many metrics such as user satisfaction and cost.
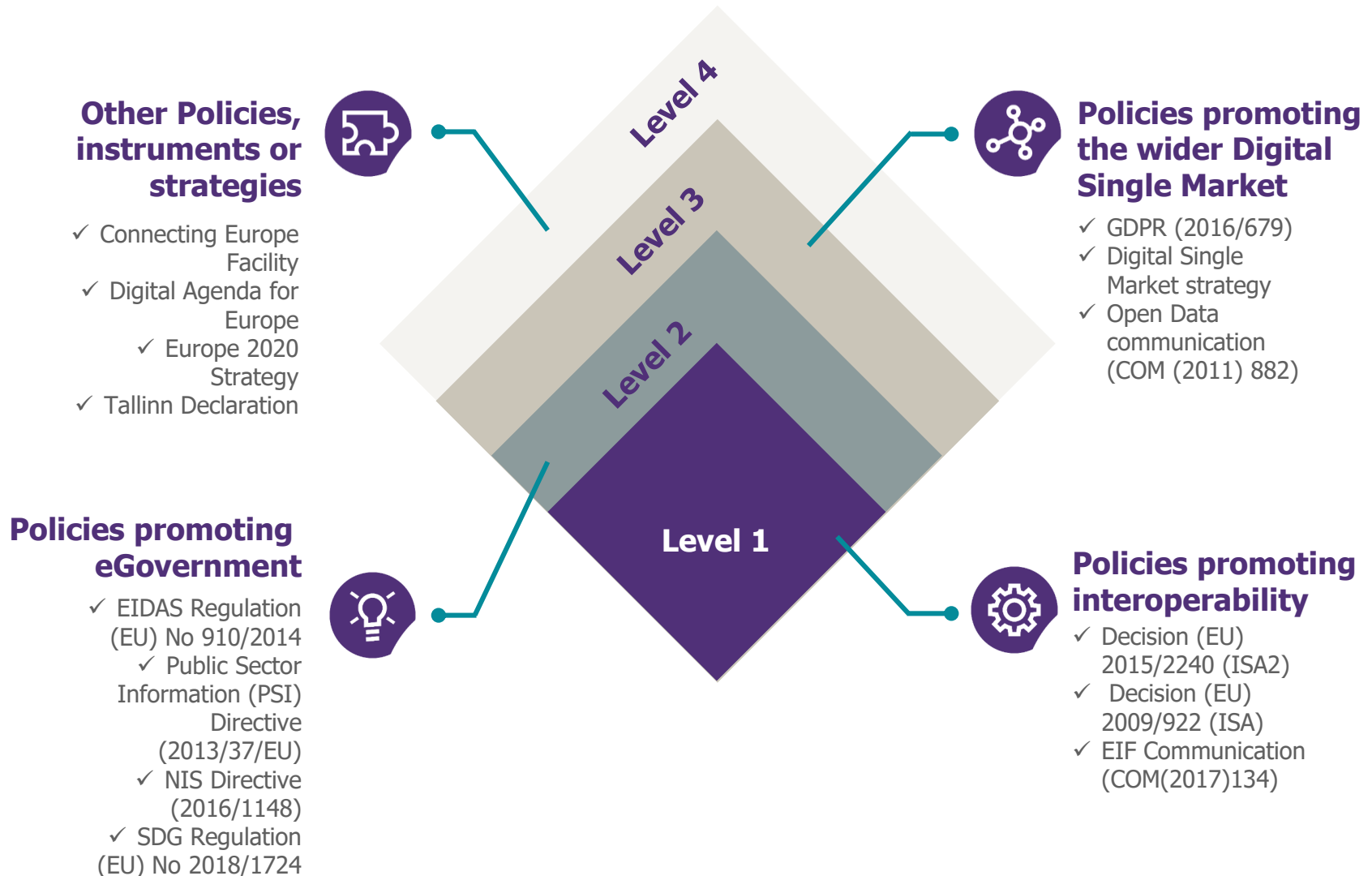
2 Conduct impact assessments.

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Overview of EIF Development, Structure and its Main Purpose

Overview of EIF Development, Structure and its Main Purpose

Other Policies, instruments or strategies

✓ Connecting Europe Facility
✓ Digital Agenda for Europe
✓ Europe 2020 Strategy
✓ Tallinn Declaration

Policies promoting the wider Digital Single Market

✓ GDPR (2016/679)
✓ Digital Single Market strategy
✓ Open Data communication (COM (2011) 882)

Level 4
Level 3
Level 2
Level 1

Policies promoting eGovernment

✓ EIDAS Regulation (EU) No 910/2014
✓ Public Sector Information (PSI) Directive (2013/37/EU)
✓ NIS Directive (2016/1148)
✓ SDG Regulation (EU) No 2018/1724

Policies promoting interoperability

✓ Decision (EU) 2015/2240 (ISA2)
✓ Decision (EU) 2009/922 (ISA)
✓ EIF Communication (COM(2017)134)

Overview of EIF Development, Structure and its Main Purpose

1

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Provision of more **detailed EIF recommendations**. The updated interoperability recommendations have been made more specific to facilitate their implementation.

2

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Stronger focus on openness and information management, governance and **integrated service delivery**.

3

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Take into account **emerging technological trends**, such as open data and cloud computing.
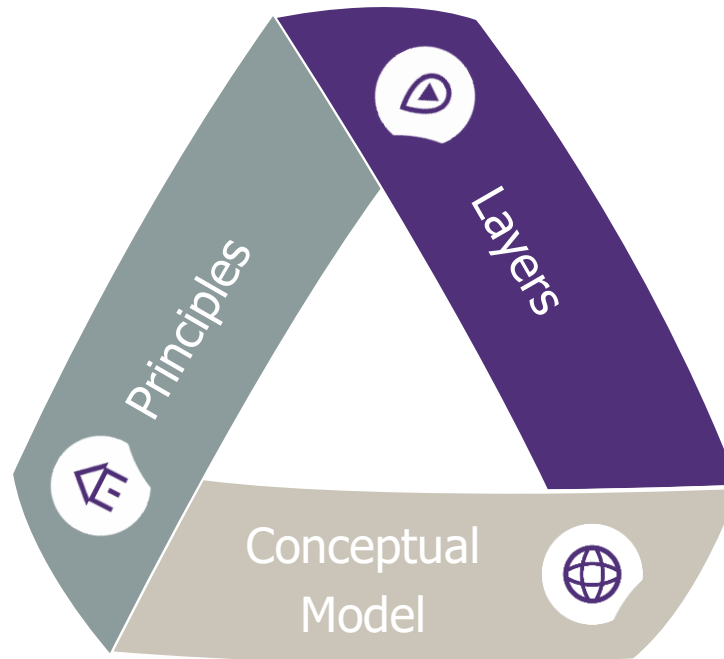
4

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Focuses on facilitating the full alignment with most recent EU policy developments.

5

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More emphasis on how interoperability principles and models should **apply in practice**.

Overview of EIF Development, Structure and its Main Purpose

✓ The **interoperability principles** are fundamental behavioural aspects to drive interoperability actions.

✓ They describe the context in which **European public services** are designed and implemented.

Principles of European public services:

19 recommendations

✓ There are **4 layers** of interoperability: legal, organisational, semantic and technical.

✓ A cross-cutting component of the four layers includes a **'integrated public service governance'**.

Interoperability Layers:

14 recommendations

✓ The **conceptual model** is modular and comprises loosely coupled service **interconnected components**.

✓ Guides the planning, development, operation and maintenance of **public services** by Member States.

Conceptual model for integrated public services:

14 recommendations

Deep-Dive into EIF Recommendations

Module Item IV

Deep-Dive into EIF Recommendations

The **EIF provides guidance**, through a set of **recommendations**, to public administrations on how to improve the governance of their interoperability activities.

The EIF, through its principle and layer or Conceptual model-led **recommendations**, aims to establish cross-organisational relationships and streamline processes supporting **end-to-end digital services**.

Moreover, the **EIF** seeks to ensure that existing and **new legislation** do not compromise ongoing or future interoperability efforts.

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Deep-Dive into EIF Recommendations

Principle 1 - Subsidiarity and Proportionality

Recommendation 1

Ensure that national interoperability frameworks and interoperability strategies are aligned with the EIF and, if needed, tailor and extend them to address the national context and needs.

Deep-Dive into EIF Recommendations

Principle 2 - Openness

Recommendation 2

Publish the data you own as open data unless certain restrictions apply.

Recommendation 3

Ensure a level playing field for open source software and demonstrate active and fair consideration of using open source software, taking into account the total cost of ownership of the solution.

Recommendation 4

Give preference to open specifications, taking due account of the coverage of functional needs, maturity and market support and innovation.

Deep-Dive into EIF Recommendations

Principle 3 - Transparency

Recommendation 5

Ensure internal visibility and provide external interfaces for European public services.

Deep-Dive into EIF Recommendations

Principle 4 - Reusability

Recommendation 6

Reuse and share solutions, and cooperate in the development of joint solutions when implementing European public services.

Recommendation 7

Reuse and share information and data when implementing European public services, unless certain privacy or confidentiality restrictions apply.

Deep-Dive into EIF Recommendations

Principle 5 – Technological Neutrality & Data Portability

Recommendation 8

Do not impose any technological solutions on citizens, businesses and other administrations that are technology-specific or disproportionate to their real needs.

Recommendation 9

Ensure data portability, namely that data is easily transferable between systems and applications supporting the implementation and evolution of European public services without unjustified restrictions, if legally possible.

Deep-Dive into EIF Recommendations

Principle 6 – User-Centricity

Recommendation 10

Use multiple channels to provide the European public service, to ensure that users can select the channel that best suits their needs.

Recommendation 11

Provide a single point of contact in order to hide internal administrative complexity and facilitate users' access to European public services.

Deep-Dive into EIF Recommendations

Principle 6 – User-Centricity

Recommendation 12

Put in place mechanisms to involve users in analysis, design, assessment and further development of European public services.

Recommendation 13

As far as possible under the legislation in force, ask users of European public services once-only and relevant-only information.

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Deep-Dive into EIF Recommendations

Principle 7 – Inclusion and Accessibility

Recommendation 14

Ensure that all European public services are accessible to all citizens, including persons with disabilities, the elderly and other disadvantaged groups. For digital public services, public administrations should comply with e-accessibility specifications that are widely recognised at European or international level.

Deep-Dive into EIF Recommendations

Principle 8 – Security and Privacy

Recommendation 15

Define a common security and privacy framework and establish processes for public services to ensure secure and trustworthy data exchange between public administrations and in interactions with citizens and businesses.

Deep-Dive into EIF Recommendations

Principle 9 - Multilingualism

Recommendation 16

Use information systems and technical architectures that cater for multilingualism when establishing a European public service. Decide on the level of multilingualism support based on the needs of the expected users

Deep-Dive into EIF Recommendations

Principle 10 – Administrative Simplification

Recommendation 17

Simplify processes and use digital channels whenever appropriate for the delivery of European public services, to respond promptly and with high quality to users' requests and reduce the administrative burden on public administrations, businesses and citizens.

Deep-Dive into EIF Recommendations

Principle 11 – Preservation of Information

Recommendation 18

Formulate a long-term preservation policy for information related to European public services and especially for information that is exchanged across borders.

Deep-Dive into EIF Recommendations

Principle 12 – Assessment of effectiveness and efficiency

Recommendation 19

Evaluate the effectiveness and efficiency of different interoperability solutions and technological options considering user needs, proportionality and balance between costs and benefits.

Deep-Dive into EIF Recommendations

Interoperability Governance

Recommendation 20

Ensure holistic governance of interoperability activities across administrative levels and sectors.

Recommendation 21

Put in place processes to select relevant standards and specifications, evaluate them, monitor their implementation, check compliance and test their interoperability.

Deep-Dive into EIF Recommendations

Interoperability Governance

Recommendation 22

Use a structured, transparent, objective and common approach to assessing and selecting standards and specifications. Take into account relevant EU recommendations and seek to make the approach consistent across borders.

Recommendation 23

Consult relevant catalogues of standards, specifications and guidelines at national and EU level, in accordance with your NIF and relevant DIFs, when procuring and developing ICT solutions.

Recommendation 24

Actively participate in standardisation work relevant to your needs to ensure your requirements are met.

Deep-Dive into EIF Recommendations

Integrated Public Service Governance

Recommendation 25

Ensure interoperability and coordination over time when operating and delivering integrated public services by putting in place the necessary governance structure.

Recommendation 26

Establish interoperability agreements in all layers, complemented by operational agreements and change management procedures.

Deep-Dive into EIF Recommendations

Legal Interoperability

Recommendation 27

Ensure that legislation is screened by means of 'interoperability checks', to identify any barriers to interoperability. When drafting legislation to establish a European public service, seek to make it consistent with relevant legislation, perform a 'digital check' and consider data protection requirements.

Deep-Dive into EIF Recommendations

Organisational Interoperability

Recommendation 28

Document your business processes using commonly accepted modelling techniques and agree on how these processes should be aligned to deliver a European public service.

Recommendation 29

Clarify and formalise your organisational relationships for establishing and operating European public services.

Deep-Dive into EIF Recommendations

Semantic Interoperability

Recommendation 30

Perceive data and information as a public asset that should be appropriately generated, collected, managed, shared, protected and preserved.

Recommendation 31

Put in place an information management strategy at the highest possible level to avoid fragmentation and duplication. Management of metadata, master data and reference data should be prioritised.

Recommendation 32

Support the establishment of sector-specific and cross-sectoral communities that aim to create open information specifications and encourage relevant communities to share their results on national and European platforms.

Deep-Dive into EIF Recommendations

Technical Interoperability

Recommendation 33

Use open specifications, where available, to ensure technical interoperability when establishing European public services.

Deep-Dive into EIF Recommendations

Conceptual Model - Introduction

Recommendation 34

Use the conceptual model for European public services to design new services or reengineer existing ones and reuse, whenever possible, existing service and data components.

Recommendation 35

Decide on a common scheme for interconnecting loosely coupled service components and put in place and maintain the necessary infrastructure for establishing and maintaining European public services.

Deep-Dive into EIF Recommendations

Internal Information Sources and Services

Recommendation 36

Develop a shared infrastructure of reusable services and information sources that can be used by all public administrations.

Deep-Dive into EIF Recommendations

Base registries

Recommendation 37

Make authoritative sources of information available to others while implementing access and control mechanisms to ensure security and privacy in accordance with the relevant legislation.

Recommendation 38

Develop interfaces with base registries and authoritative sources of information, publish the semantic and technical means and documentation needed for others to connect and reuse available information.

Deep-Dive into EIF Recommendations

Base registries

Recommendation 39

Match each base registry with appropriate metadata including the description of its content, service assurance and responsibilities, the type of master data it keeps, conditions of access and the relevant licences, terminology, a glossary, and information about any master data it uses from other base registries.

Recommendation 40

Create and follow data quality assurance plans for base registries and related master data.

Deep-Dive into EIF Recommendations

Open Data

Recommendation 41

Establish procedures and processes to integrate the opening of data in your common business processes, working routines, and in the development of new information systems.

Recommendation 42

Publish open data in machine-readable, non-proprietary formats. Ensure that open data is accompanied by high quality, machine-readable metadata in non-proprietary formats, including a description of their content, the way data is collected and its level of quality and the licence terms under which it is made available. The use of common vocabularies for expressing metadata is recommended.

Recommendation 43

Communicate clearly the right to access and reuse open data. The legal regimes for facilitating access and reuse, such as licences, should be standardised as much as possible.

Deep-Dive into EIF Recommendations

Catalogues

Recommendation 44

Put in place catalogues of public services, public data, and interoperability solutions and use common models for describing them.

Deep-Dive into EIF Recommendations

External Information Sources & Services

Recommendation 45

Where useful and feasible to do so, use external information sources and services while developing European public services.

Deep-Dive into EIF Recommendations

Security & Privacy

Recommendation 46

Consider the specific security and privacy requirements and identify measures for the provision of each public service according to risk management plans..

Recommendation 47

Use trust services according to the Regulation on eID and Trust Services as mechanisms that ensure secure and protected data exchange in public services.
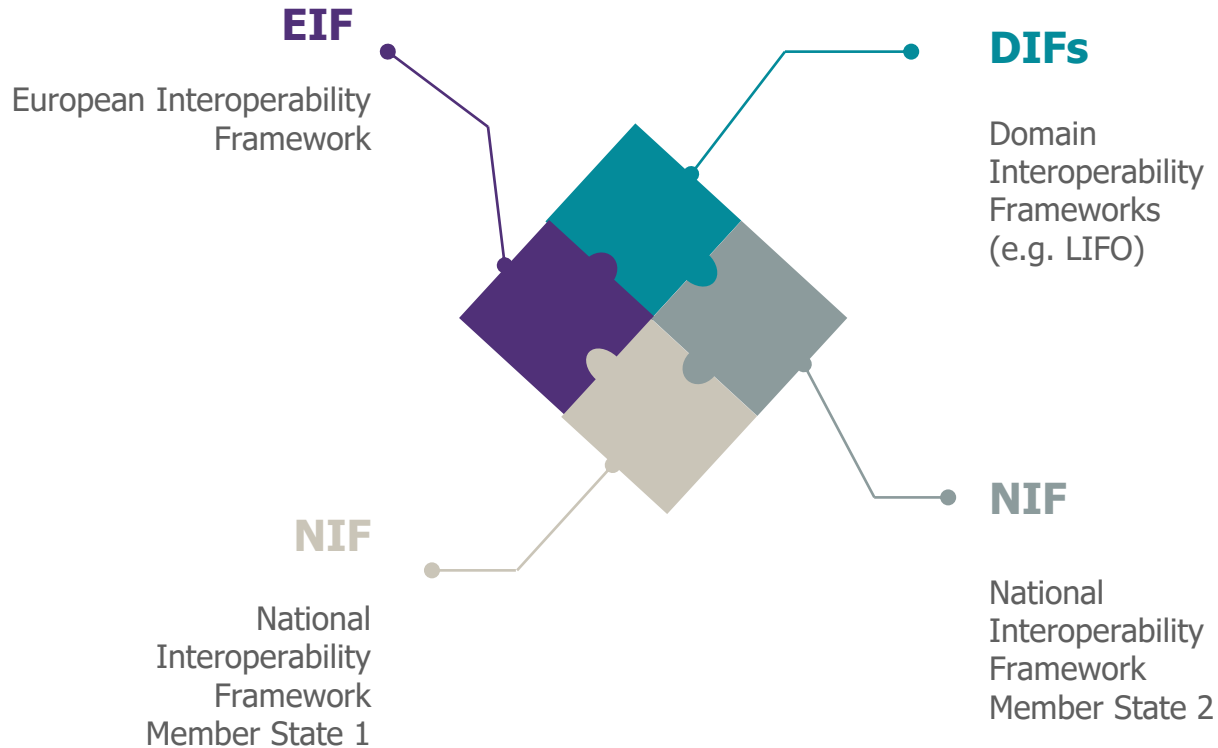
Implementation of the EIF at the national level

_____

Module Item V

Implementation of the EIF at the national level

EIF

European Interoperability
Framework

DIFs

Domain
Interoperability
Frameworks
(e.g. LIFO)

NIF

National
Interoperability
Framework
Member State 1

NIF

National
Interoperability
Framework
Member State 2

The EIF provides **a common core of interoperability elements to European NIFs and DIFs.** Compliance with the EIF allows NIFs and DIFs to be developed in a coordinated and aligned way while **providing the necessary flexibility to address specific requirements coming from national or domain-specific requirements.**

European Commission

Implementation of the EIF at the national level

Content
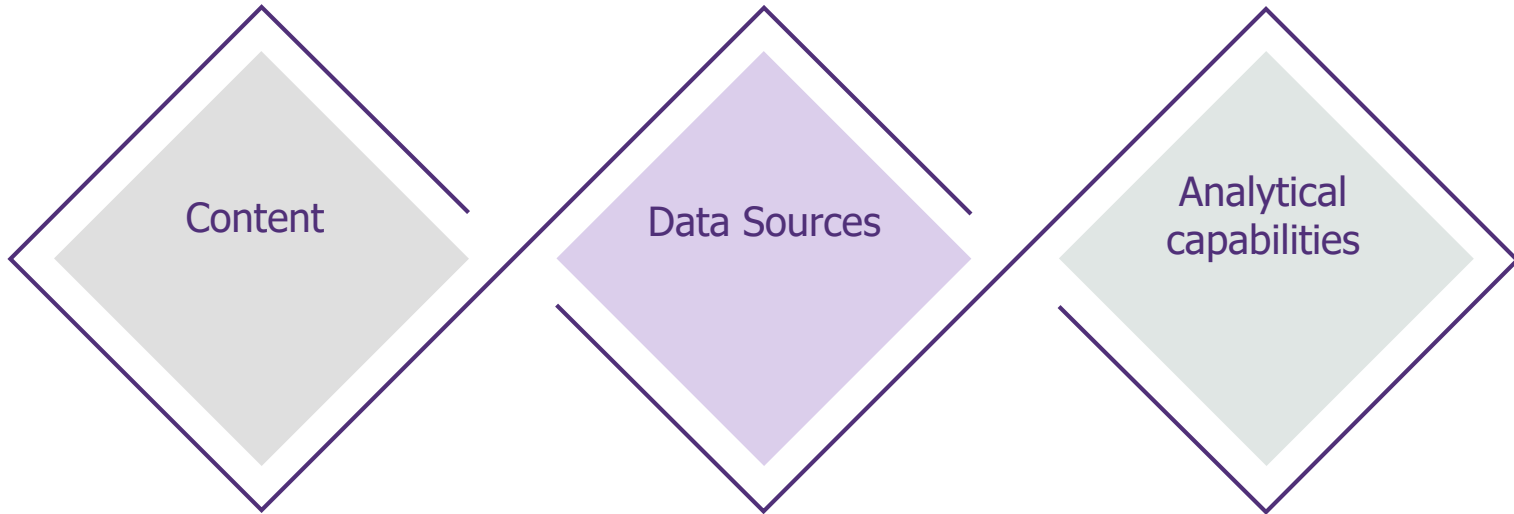
- eGovernment Factsheets and Infografics;
- NIFO Factsheets;
- European Semester Study.

Data Sources

- Data supplied by the national contact points (NCPs);
- Other secondary data sources made available through the monitoring of the EIF.

Analytical capabilities

- View and identify best practices;
- eGovernment infographics;
- Interoperability & eGovernment case studies.

European Commission

Implementation of the EIF at the national level

STRATEGIC VIEW (ISA² Decision and EIF Implementation Strategy)

Mission

Article 1.2 of the ISA² Decision states *"the Commission, through the ISA² programme, shall monitor the implementation of the EIF".*

Goal

Provide each Member State with its **level of implementation** of the EIF based on a recommendation by recommendation measurement (COM(2017) 134 final).

Approach

Using a series of **KPIs** to measure primary and secondary indicators for all 47 EIF recommendations, the Monitoring Mechanism will determine the **level of EIF implementation** for each country as part of an annual data collection exercise.

Implementation of the EIF at the national level (example)

EIF Implementation in Spain

Spain has a very good alignment score that is supported by the new commitment of the Spanish Public sector to publish updated information describing all their administrative procedures.

In 2016, Spain stood out in terms of not only NIF Implementation (100%), but also in terms of NIF alignment with the EIF (97%) and monitoring 88%.

The Ministry of Finance and Public Function has developed an application for mobile devices eAdmon "@dministración, all services in your hand" which offers a user-friendly interface for online services.

Spain's new Digital Transformation Plan for the General Administration and Public Agencies (2016–2020) also mandates the updating of the catalogue of administrative procedures.

Q & A

Module 3: Presentation of the new EIF Monitoring Mechanism (Measuring progress towards a more connected Europe)

Module 3: General Introduction to the EIF - Outline

OVERALL TRAINING MODULE OBJECTIVE

The main objective of this module is to give participants a general understanding of the logic behind the EIF, its purpose and the structure of its Conceptual Model. By the end of this training, participants will also have a view of the policy context behind the EIF and be familiar with its main terms.

| No	Module item	Addresses
1	**Objective and scope (10 mins)**	What is the new EIF Monitoring mechanism? What is the political context? Why a Monitoring Mechanism of the EIF?
2	**Introduction: Overview of the EIF Monitoring Mechanism and Glossary (10 mins)**	What are the key elements and components of the new EIF Monitoring Mechanism?
3	**Deep dive (30 mins)**	What are the key feature of the monitoring mechanism? What are the inputs and benefits of monitoring mechanism?
4	**Governance (5 mins)**	What is the governance process? What are the role of key players in the EIF implementation process?
5	**Next steps in the implementation of the EIF (5 mins)**	What's next in terms of EIF implementation?
6	**Q & A (30 mins)**	

Objective and scope

Module Item I

Context

POLITICAL CONTEXT: THE TALLINN DECLARATION

The Tallinn Declaration recognised that the digital transformation of public administration can be greatly facilitated by interoperability (IoP)

IoP PRINCIPLES:

1. Digital-by-default
2. Once-only
3. Trustworthiness and Security
4. Openness and transparency
5. Interoperability by default
6. Horizontal enabling policy steps
7. Cross-border by default

Source: Tallinn Declaration on eGovernment
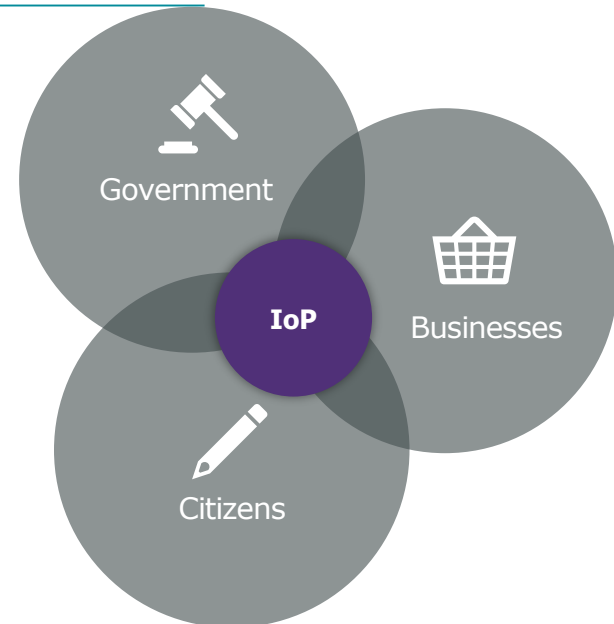
General Introduction to the EIF - Outline

STRATEGIC VIEW (ISA² Decision and EIF Implementation Strategy)

Mission

Article 1.2 of the ISA² Decision states *"the Commission, through the ISA² programme, shall monitor the implementation of the EIF".*

Goal

Provide each Member State with its **level of implementation** of the EIF based on a recommendation by recommendation measurement (COM(2017) 134 final).

Approach

Using a series of **KPIs** to measure primary and secondary indicators for all 47 EIF recommendations, the Monitoring Mechanism will determine the **level of EIF implementation** for each country as part of an annual data collection exercise.

Introduction: Overview of the EIF Monitoring Mechanism and Glossary

Module Item II

Monitoring mechanism: Inputs & Benefits

Input	Monitoring Mechanism	Benefits

Primary indicators

A survey of national contact points will be conducted to obtain responses needed to measure primary indicators.

Secondary indicators

Secondary research will use existing data sources, such as the eGovernment benchmark, DESI, Open Data Portal and eGovernment Benchmark Report).

Member States **gain intelligence** on which operation areas they can improve in.

Member States obtain **granular information** on their level of **EIF implementation.**

Simplified **evaluation process** through existing indicators.

Useful input for **ISA² programme** mid-term & final evaluations.

Identification of **synergies across EC** facilitating interoperability.

European Commission

Monitoring mechanism: Key features of the monitoring mechanism

Ensuring annual updates

Combining primary and secondary data

Leveraging existing indicators and data sources

Almost all the indicators are measured on an annual basis to provide up-to-date data.

45 indicators coming from existing secondary data sources, while 39 are coming from the survey addressed to the NIFO contact points.

CEF - Digital monitoring dashboard; DESI Indicators; EU eGovernment Benchmark Report; European Open Data portal; Eurostat; Single Digital Gateway; Trusted List Browser.

Deep dive
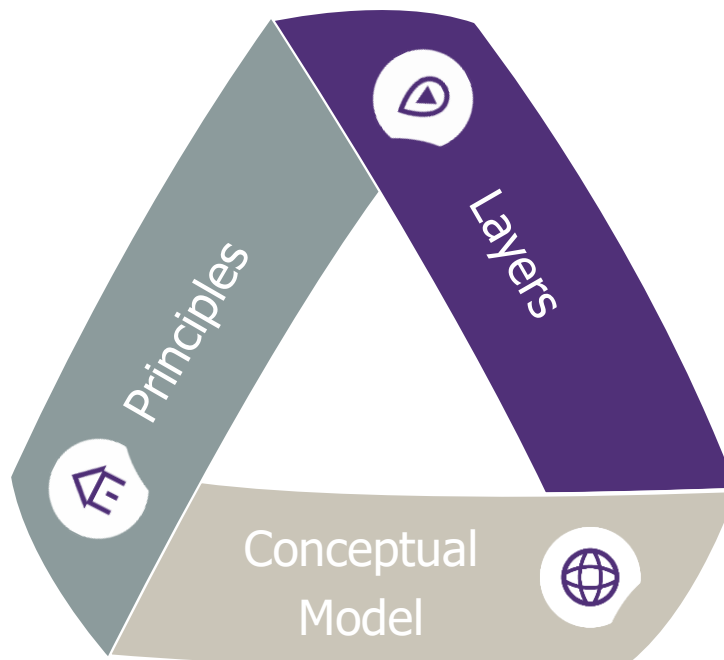
Module Item III

Deep dive: slide on context needed

84 KPIs

39

45

Primary data

Data collected by the

survey questionnaire

Secondary data

➤ European Open Data portal

➤ Joinup - European collaborative platform and catalogue (2016.20)

➤ Eurostat - Table E-government activities of individuals via websites

➤ DESI Indicators

➤ EU eGovernment Benchmark Report 2018

➤ Access to base registers (2016.28)

➤ CEF - Digital monitoring dashboard

➤ Trusted List Browser

Minimisation of burden on Member States, by relying as much
as possible on secondary data

Deep dive: Monitoring Mechanism's structure

- ✓ The **interoperability principles** are fundamental behavioural aspects to drive interoperability actions.
- ✓ They describe the context in which **European public services** are designed and implemented.

Principles of European public services:

19 recommendations

- ✓ There are **4 layers** of interoperability: legal, organisational, semantic and technical.
- ✓ A cross-cutting component of the four layers includes a **'integrated public service governance'**.

Interoperability Layers:

14 recommendations

- ✓ The **conceptual model** is modular and comprises loosely coupled service **interconnected components**.
- ✓ Guides the planning, development, operation and maintenance of **public services** by Member States.

Conceptual model for integrated public services:

14 recommendations

European Commission

Deep dive: Monitoring Mechanism's structure

⌂ Principles

1

Subsidiarity and proportionality

Questions number:1-2-3

Example Indicator:
Extent to which strategies or frameworks take the EIF into account

2

Openness

Questions number:4-5-6-7 + Secondary data

Example Indicator:
Promotion of the use of open specification to public administrations

3

Transparency

Question number 8

Example Indicator:
Extent to which a Member State is meeting the requirements set by the Single Digital Gateway Regulation on the online availability and accessibility of the administrative procedures

4

Reusability

Questions number:9-10-11 + Secondary data

Example Indicator:
Existence of an Open Data portal (extent to which data can easily be found at one central place for reuse purposes)

5

Technological neutrality and data portability

Questions number:12-13-14

Example Indicator:
Extent to which data is easily transferable between systems and applications

6

User-centricity

Questions number:15-16 + Secondary data

Example Indicator:
Existence of a single points of contacts in the areas of information relevant for citizens and businesses

European Commission

Deep dive: Monitoring Mechanism's structure

Principles

7

Inclusion and accessibility

Question number 17

Example Indicator:
Compliance with e-accessibility specification issued by the Web Accessibility Initiative (WAI)

8

Security and privacy

Questions number:18-19

Example Indicator:
Level of security and privacy defined for public authorities

9

Multilingualism

Questions number:20-21 + Secondary data

Example Indicator:
Uptake of eTranslation building block in different Member States

10

Administrative simplification

Secondary data

Example Indicator:
Online Availability versus other User Centricity indicators

11

Preservation of information

Question number 22
Example Indicator:
Existence of long-term preservation policy for information owned and management by public administrations

12

Assessment of effectiveness and efficiency

Question number 23
Example Indicator:
Extent to which public administrations evaluate the efficiency and effectiveness of interoperability solutions

European Commission

Deep dive: Monitoring Mechanism's structure

Interoperability layers

1 Interoperability governance

Questions number:24-25-26-27-28-29-30

Example Indicator:
Extent to which administrations are using ICT standards and specifications

2 Integrated public service governance

Questions number:31-32-33

Example Indicator:
Extent to which a governance structure for the provision of public services is implemented

3 Legal interoperability

Question number 34

Example Indicator:
Extent to which ICT is taken into account when preparing new legislation

4 Organisational interoperability

Questions number:35-36

Example Indicator:
Existence of modelling techniques to document business processes to deliver public services

5 Semantic interoperability

Questions number:37-38-39-40-41-42 + Secondary data

Example Indicator:
Existence of metadata, master data and reference data management policies

6 Technical interoperability

Questions number:6-7

Example Indicator:
Promotion of the use of open specifications to public administrations

European Commission

Deep dive: Monitoring Mechanism's structure
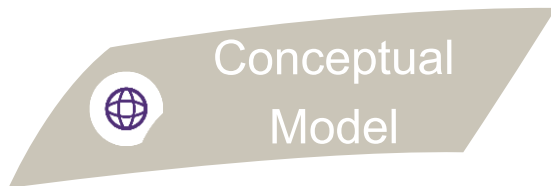
Conceptual Model

General introduction
Questions number:43-44-45

1 Internal information sources and services
Question number 46

Example Indicator:
Extent to which public administrations take into account the conceptual model proposed by the EIF

2 Base registries
Questions number:38-47-48 + Secondary data

Example Indicator:
Extent to which public administrations make authoritative sources of information available to others public administrations

3 Open data
Question number 49 + Secondary data

Example Indicator:
Existence of national guidelines on the publication of Public Sector Information

4 Catalogues
Questions number:26-27

Example Indicator:
Extent to which public administrations are managing ICT standards and specifications to ensure interoperability

5 External information sources and services
Question number 50

Example Indicator:
Extent to which public administrations are using external information sources and services while developing public services

6 Security and Privacy
Question number 51 + Secondary data

Example Indicator:
Application of privacy and security principles

Measure of IAP implementation through matching of EIF with IAP

Objectives	IAP Actions	Linked ISA² Action	EIF Recommendations
Focus area 1: Ensure governance, coordination and sharing of interoperability initiatives			
To govern and coordinate interoperability initiatives at EU and national levels.	1. Identify and liaise with other relevant policies and their governance structures at EU and national levels (including the sectoral committees).	2016.33 Supporting instruments for public administrations - EIF implementation and governance models (ex-EIS governance)	**Recommendation 20:** Ensure holistic governance of interoperability activities across administrative levels and sectors. **Recommendation 25:** Ensure interoperability and coordination over time when operating and delivering integrated public services by putting in place the necessary governance structure. **Recommendation 29:** Clarify and formalise your organisational relationships for establishing and operating European public services.
	2. Identify and describe governance structures and good practices for interoperability coordination.	2016.33 Supporting instruments for public administrations - EIF implementation and governance models (ex-EIS governance)	**Recommendation 20:** Ensure holistic governance of interoperability activities across administrative levels and sectors. **Recommendation 25:** Ensure interoperability and coordination over time when operating and delivering integrated public services by putting in place the necessary governance structure. **Recommendation 29:** Clarify and formalise your organisational relationships for establishing and operating European public services.
	3. Ensure that interoperability is taken into account when legislative instruments are drafted, and relevant references are included as appropriate.	2016.23 Decision making and legislation – supporting instruments - legal interoperability (ex- ICT implications of EU legislation)	**Recommendation 27:** Ensure that legislation is screened by means of 'interoperability checks', to identify any barriers to interoperability. When drafting legislation to establish a European public service, seek to make it consistent with relevant legislation, perform a 'digital check' and consider data protection requirements.
To ensure the execution and monitoring of EIF implementation.	4. Expand and maintain the NIF Observatory to monitor implementation of the EIF and compliance of national interoperability strategies/frameworks with the EIF. Also, monitor and assess interoperability action plan's implementation.	2016.21 Supporting instruments for Public Administrations - National Interoperability Framework Observatory	**Recommendation 1:** Ensure compliance of National Interoperability Frameworks and interoperability strategies with the EIF and, if needed, tailor and extend them to address the national context and needs.

Deep dive: Database overview

ID	EIF Recomme ndation	Indicator (SC60)	Type of data	Unit of Measu-rement	Unit of Measurement - Description	Reference to NIFO Survey Item - Text (optional field)	Reference to NIFO Survey Item (optional field)	"Reference to NIFO Survey Items providing additional information(optional field)"
1	Recommend ation 1	Extent to which strategies or frameworks take the EIF into account	Primary	1-5 Likert scale	-1 means strongly disagree;-5 means strongly agree.	Please state your level of agreement with the following statement: In my country, the current strategies or frameworks in place, or those in the process of being published, take the 47 EIF recommendations and its 12 principles into account. ( ) Strongly disagree ( ) Disagree ( ) Neither agree nor disagree ( ) Agree ( ) Strongly agree ( ) Don't know	1) Q2 2) Q3	1) Which strategies or frameworks currently in place in your country, or those that are in the process of being published, take the 47 EIF recommendations and its 12 principles into account? [open question] 2) Please explain why the 47 EIF recommendations or its 12 principles are not taken into account by your national strategies or frameworks. [open question]

Deep dive: Overview of data gathering process for primary indicators (survey)

51 questions to gather data for **39 primary indicators**.

Free text box for each question to leave feedback and comments.

Each question has been tested with users in pilots for 'face validity' purposes to ensure **clarity**.

Direct references to the EIF to better **understand the context** of each question.

Deep dive: Overview of data gathering process for primary indicators (survey)

Some questions require general information about national best practices rather than detailed answers to ease the burden on survey respondents. This will provide an indication of the general levels of implementation of certain EIF recommendations in the country.

Questions related to the **21 proposed procedures across the 7 life** that will be defined in Regulation (EU) 2018/1724, the regulation establishing the **Single Digital Gateway**[1] (questions number 8-15-20-44)

Questions related to **policies at national level** (questions number 22-38)

Questions related to **procedures and processes at national level** (questions number 25-28-35-49)

Questions related to **shared infrastructure at national level** (questions number 46)

[1]The SDG regulation was adopted on 2 October 2018. It aims to grant EU citizens & businesses with online access to the information, administrative procedures and assistance services needed to operate in other EU countries. The regulation stems from the current political will in the EU to digitise public services, making them interoperable and open across EU borders. The gateway will facilitate the cross-border completion of 21 common administrative procedures (e.g. registering a company) online.

Composite indicator

All indicators are compiled into a single index, on the basis of an underlying model.

The **underlying model** of the composite indicator will be created in the first half of 2019.

Following the creation of the composite indicator, the **survey questionnaire** will be **slightly modified**.

Governance

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Module Item IV

Governance: Presentation of the main milestones of the EIF implementation process

January 2019	February 2019	March 2019	April 2019	May 2019	June 2019	July 2019	August 2019	September 2019	October 2019	November 2019	December 2019

Baseline survey questionnaire

Creation of the composite indicator

Data analysis and results of baseline

EIF measurement

Data analysis

Results publication

European Commission   Member States

European Commission

Next steps in the implementation of the EIF

Module Item V

Next steps in the implementation of the EIF

Through the ISA² programme, the European Commission will manage the implementation of a monitoring framework.

EU countries are expected to complement the EU's actions identified in the Interoperability Action Plan, with national actions to ensure coherence.

The European Commission will evaluate the implementation of the new EIF by the end of 2019.

Q & A

Module 4: EIF Implementation

Module 4: EIF Implementation

OVERALL TRAINING MODULE OBJECTIVE

The main objective of this module is to give participants a general understanding of the main tools that can help Public Administrations implement the EIF and align their National Interoperability Frameworks to the EIF. Moreover it presents attendants with a view of the state of the EIF's implementation in their countries.

No	Module item	Addresses
1	**Overview of EIF Implementation Tools (10 mins)**	What tools are useful to implement the EIF?
2	**Solutions to get to know the EIF (20 mins)**	Which solutions inform National Public Administrations about the contents and requirements of the EIF?
3	**Solutions to implement the EIF (20 mins)**	Which solutions help Public Administrations implement the EIF?
4	**Examples of EIF recommendations presented in the Toolbox (10 mins)**	How does the EIF Implementation Toolbox help Public Administrations implement the EIF's recommendations?
5	**Implementation of the EIF at the National Level (5 mins)**	How has your country implemented the EIF?
6	**Interactive Q & A on national implementation (30 mins)**	

European Commission

Overview of EIF Implementation Tools

Module Item I

EIF Implementation Tools
Solutions to get to know the EIF and its Monitoring

EIF Brochure

Providing detailed description
of the main EIF components
(EIF principles, layers)

Legal Documents

Relevant decisions and
communications
concerning the EIF

EIF Glossary

Detailed definitions of
key EIF terms and
concepts
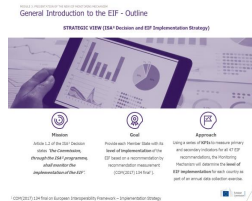
New EIF Monitoring

The new monitoring
mechanism as an
implementation tool

EIF Guidelines

Simplified user-guide for
understanding the EIF
and its components.

EIF Implementation Tools
Solutions to implement the EIF

Joinup

Collective platform enabling access to tools implementing interoperability

NIFO

Online community facilitating the sharing of interoperability and eGovernment best practices

EIF Training Modules

Interactive training modules on the EIF for Public Administrations
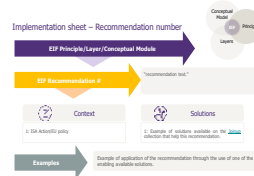
EIF Toolbox

Toolbox highlighting all the implementation needs of the EIF's 47 recommendations

NIFs & DIFs

The importance of NIFs and DIFs in implementing the EIF

Solutions to get to know the EIF

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Module Item II

Solutions to get to know the EIF
Legal Documents

In order to help promote interoperability in public administration it is important that implementing actors be familiar with the policy context underpinning the EIF.

A first level of policy context giving a comprehensive oversight of the EIF's strategies and objectives is given by the following documents;

Decision (EU) 2015/2240 (ISA2), EIF Communication (COM(2017)134).

Beyond the directly impacting legal documents, implementing actors ought to have a clear understanding of the wider EU digital strategies, and how interoperability and the EIF in particular fit into them.

Other Policies, instruments or strategies
- ✓ Connecting Europe Facility
- ✓ Digital Agenda for Europe
- ✓ Europe 2020 Strategy
- ✓ Tallinn Declaration

Policies promoting the wider Digital Single Market
- ✓ GDPR (2016/679)
- ✓ Digital Single Market strategy
- ✓ Open Data communication (COM (2011) 882)

Policies promoting eGovernment
- ✓ EIDAS Regulation (EU) No 910/2014
- ✓ Public Sector Information (PSI) Directive (2013/37/EU)
- ✓ NIS Directive (2016/1148)
- ✓ SDG Regulation (EU) No 2018/1724

Policies promoting interoperability
- ✓ Decision (EU) 2015/2240 (ISA2)
- ✓ Decision (EU) 2009/922 (ISA)
- ✓ EIF Communication (COM(2017)134)

Level 4
Level 3
Level 2
Level 1

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Solutions to get to know the EIF
EIF Glossary

Interoperability at the European level requires a common understanding among public administrations in order to pursue a joint-endeavour establishing European Public Services.

To this end, and following feedback from interoperability experts from EU Member States in a workshop on the 28 September of 2018. A common glossary was designed to provide a common understanding of EIF terms.

These definitions have been reviewed and approved at the European Level and it has been concluded that the definitions are correct and conform to other EU related tools, such as EIRA.

Solutions to get to know the EIF
EIF Brochure

One of the best guides for implementing the EIF remains the New EIF's brochure, which constitutes a comprehensive introduction to the goals and structure of the EIF.

Through the brochure, users are able to build a strategic understanding of the conceptual model underpinning the EIF, along with its key principles and layers.

The brochure also provides a comprehensive introduction to the EIF's 47 recommendations.

New **European Interoperability Framework**

Promoting seamless services and data flows for European public administrations

CONTENTS

European Commission

Solutions to get to know the EIF
New EIF Monitoring Mechanism

Monitoring the IEF's implementation is also a key ingredient to the implementation of the EIF more widely as it gives Member States an overview of their current positioning and where they can improve.

To this end Member States are invited to make the greatest use of the developing New EIF Monitoring mechanism that is being developed.

Through the use of secondary and primary indicators, the mechanism will provide new data on an annual basis that will enable to steer Member States on where they can improve their EIF's implementation.

Solutions to get to know the EIF
EIF Guidelines - Goals

The **EIF Guidelines** have been primarily designed to provide a quick guide of the EIF to various potential users, to demystify its contents and the various instruments it presents to promote **interoperability**.

The user guide aims to be an easy to-use yet comprehensive tool, that can accompany a reading of the **EIF Annex II**, by providing a condensed understanding of its main contents.
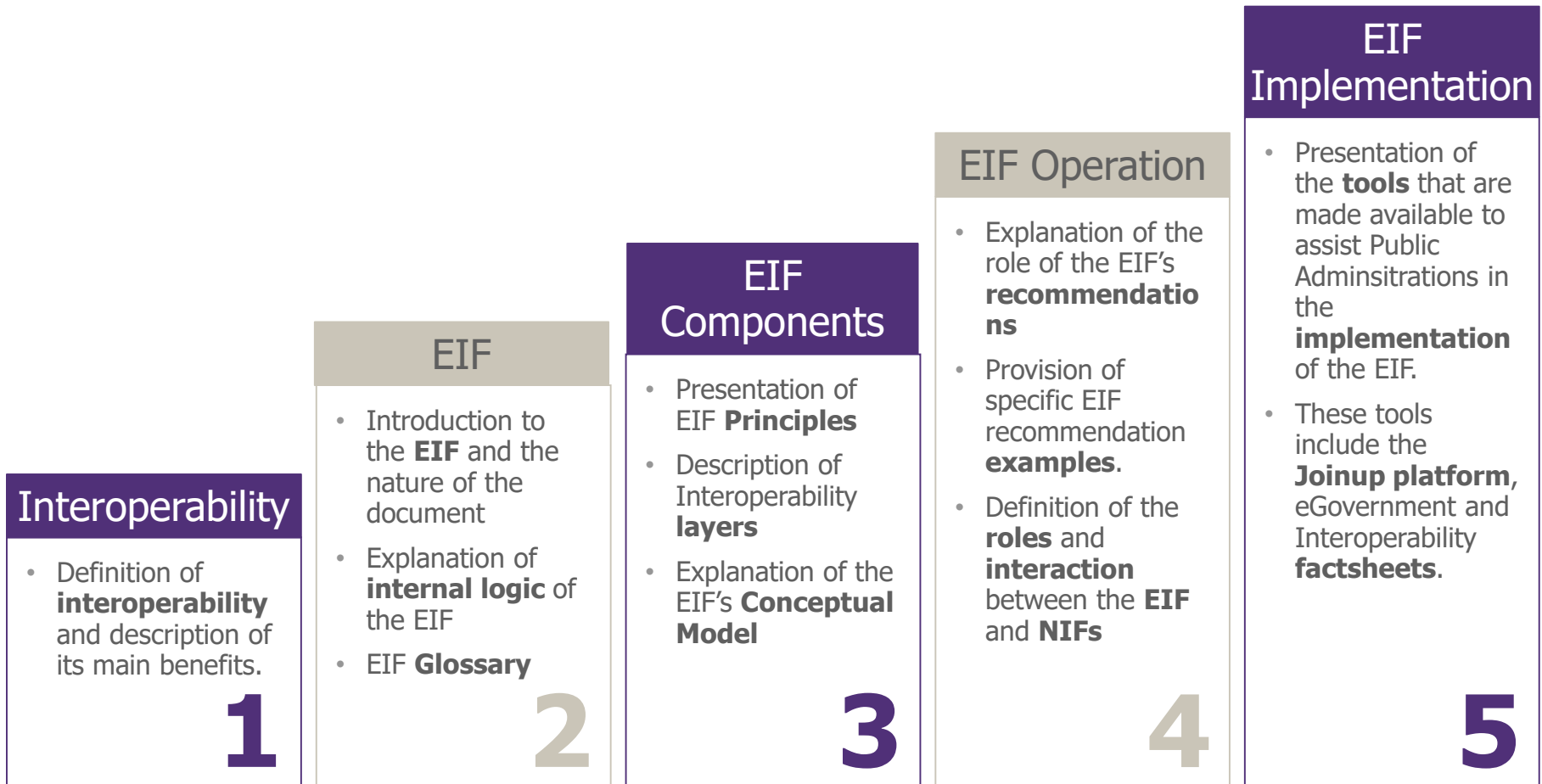
The EIF guidelines are specifically tailored for implementers, providing a rapid description of the main benefits of Interoperability and the EIF, in addition to providing a **quick access** to the tools needed to implement the EIF.

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Solutions to get to know the EIF
EIF Guidelines - Structure

Interoperability

- Definition of **interoperability** and description of its main benefits.

1

EIF

- Introduction to the **EIF** and the nature of the document
- Explanation of **internal logic** of the EIF
- EIF **Glossary**

2

EIF Components

- Presentation of EIF **Principles**
- Description of Interoperability **layers**
- Explanation of the EIF's **Conceptual Model**

3

EIF Operation

- Explanation of the role of the EIF's **recommendations**
- Provision of specific EIF recommendation **examples**.
- Definition of the **roles** and **interaction** between the **EIF** and **NIFs**

4

EIF Implementation

- Presentation of the **tools** that are made available to assist Public Adminsitrations in the **implementation** of the EIF.
- These tools include the **Joinup platform**, eGovernment and Interoperability **factsheets**.

5

European Commission

Solutions to implement the EIF

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Module Item III

Solutions to implement the EIF
Joinup

Joinup is a collaborative platform created by the European Commission in the context of the Interoperability solutions for public administrations, businesses and citizens (ISA^2) Programme.

It offers several services that aim to help e-Government professionals share their experience with each other.

National public administrations can search, discover and access the solutions and standards needed to implement the EIF, through the various Joinup collections.

Solutions to implement the EIF
NIFO

The National Interoperability Framework Observatory (or NIFO) monitors the latest eGovernment initiatives implemented across Europe and allows Member States to find Interoperability best practices.

The NIFO collections also include studies on the state of eGovernment in Europe, such as the Digital Government factsheets, EU Semester study series and comprehensive Interoperability Case Studies.

NIFO is also a living community, where its members can interact and share knowledge, as well as contacting their country's NIF and eGovernment representatives.

Solutions to implement the EIF
EIF Training Modules

In order to equip Public administrations with the knowledge needed to implement the EIF and embed them into their wider NIF, the EIF trainings are also available.

The present module in addition to module 1, 2 & 3 are also available for Member States to consume and distribute among their public administrations.

These modules can also be delivered through specialist training sessions to be organised in Member States or delivered through specific webinars.

European Interoperability Framework (EIF) – Training Modules

Specific contract n° 64 under Framework Contract n° DI/07626–ABCIV:
D06.03 Training material & Toolbox

ISA[2] Action 2016.16 - NIFO
Project officer: Miguel ALVAREZ RODRIGUEZ

Brussels
Friday 30 November 2018

Time	Items
09:00 – 10:30	Training Module 1 – General Introduction to the EIF
10:30 – 12:30	Training Module 2 – Detailed presentation of the EIF
12:30 – 13:30	Lunch
13:30 – 15:00	Training Module 3 – EIF Monitoring Mechanism
15:00 – 16:30	Training Module 4 – EIF Implementation

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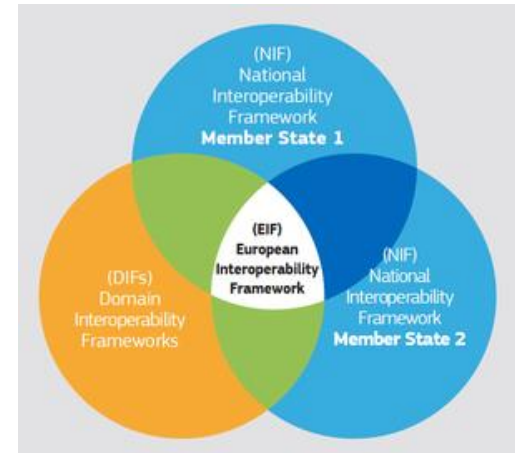
Solutions to implement the EIF
NIFs & DIFs

In respect of the principles of Subsidiarity and Proportionality, the success of the EIF can be achieved when Member State's National Interoperability Frameworks (NIFs) also reflect its principles.

To this end, Member States should push toward establishing NIFs promoting interoperability, and where possible, aligning it with the priorities of the EIF.

The development of a European public services ecosystem will also facilitate the establishment of Domain Interoperability Frameworks (DIFs) that are aligned to both the EIF and the country's NIF.

Solutions to implement the EIF
EIF Implementation Toolbox

An EIF Implementation Toolbox has been developed to provide guidance to national public administrations and equip them with the tools needed to promote interoperability.

The proposed EIF Implementation Toolbox has been conceived based on the OECD's Digital Government Toolkit, which provides public administrations with practical tools linked to the digital government principles it promotes.

The proposed EIF toolbox provides key elements for each recommendation: name of EIF Interoperability Layer/Principle/Conceptual Model component; Recommendation text; list of policies supporting the implementation of the recommendation and use cases.
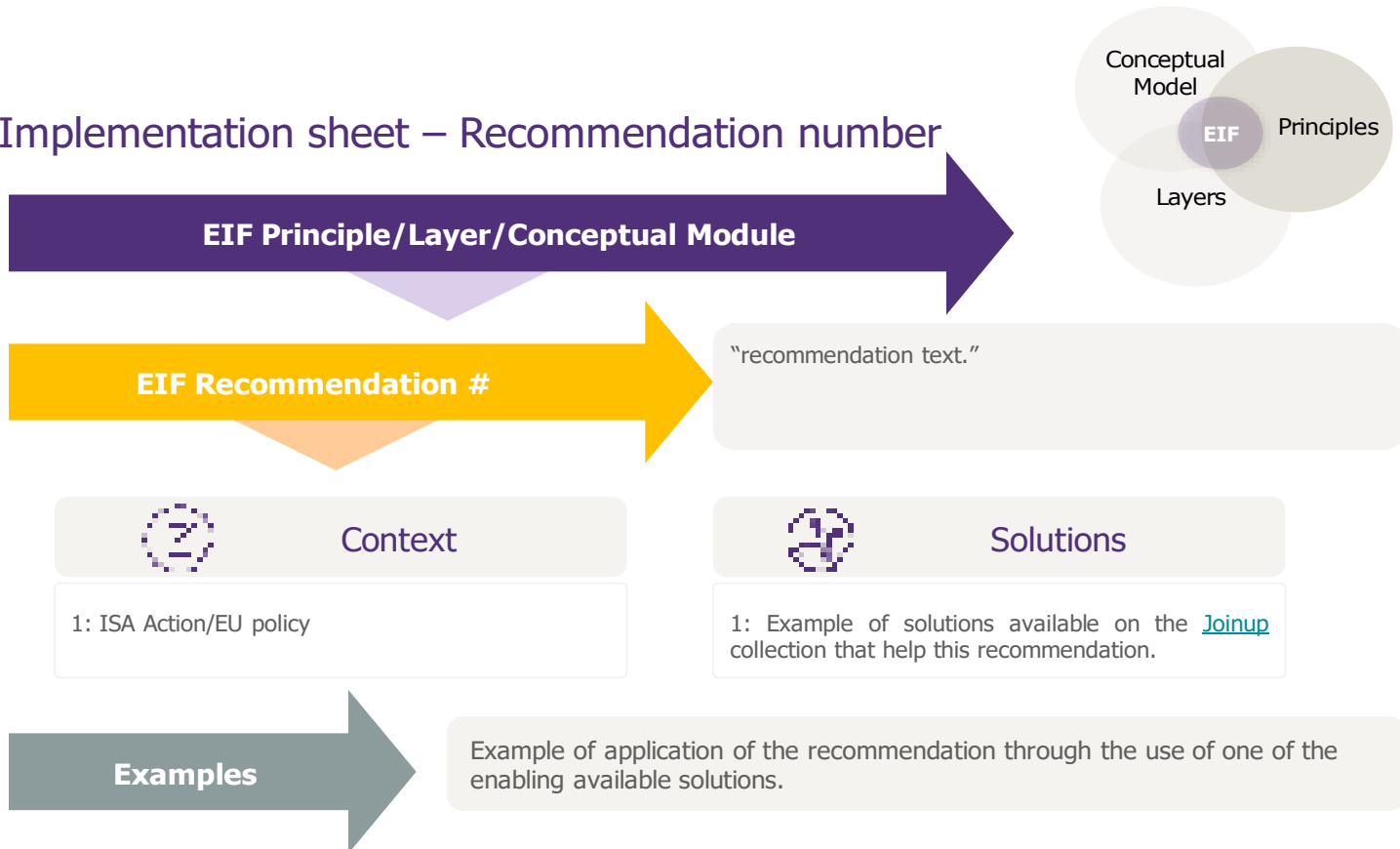
Solutions to implement the EIF
EIF Implementation Toolbox

Inspired by the OECD digital toolkit's comprehensiveness and ease to use, the EIF implementation toolbox present a series of fields that will help public administrations understand the EIF's recommendations, how they were developed, but also point them to the solutions they need to use to implement them.

Implementation sheet – Recommendation number

EIF Principle/Layer/Conceptual Module

Conceptual Model

EIF

Principles

Layers

EIF Recommendation #

"recommendation text."

Context

1: ISA Action/EU policy

Solutions

1: Example of solutions available on the Joinup collection that help this recommendation.

Examples

Example of application of the recommendation through the use of one of the enabling available solutions.

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Examples of EIF recommendations presented in the Toolbox

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Module Item IV

Implementation sheet – Recommendation 6

Conceptual Model

EIF

Principles

Layers
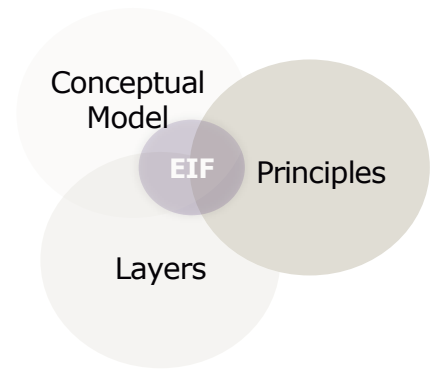
EIF Principle 4: Reusability

EIF Recommendation #6

"Reuse and share solutions, and cooperate in the development of joint solutions when implementing European public services."

Context

1: **Sharing and Re-use** (2016.31)

2: **Revised EIF**

3: **ISA² decision**

4: **Public Sector Information Directive**
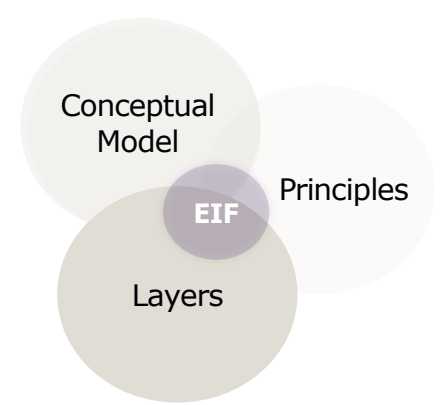
Solutions

1: **CPSV-AP**, Core Public Service Vocabulary Application Profile

2: **ADMS**, Asset Description Metadata Schema

3: **RQAT**, Reusability Quick Assessment Toolkit

4: **DCAT-AP**, Application profile for data portals in Europe

Examples

Joinup offers several services that aim to help e-Government professionals share their experience with each other. These solutions are accessible for reuse on the Joinup https://joinup.ec.europa.eu/.

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Implementation sheet – Recommendation 22

Conceptual Model

Principles

EIF

Layers

Interoperability governance

EIF Recommendation #22

"Use a structured, transparent, objective and common approach to assessing and selecting standards and specifications. Take into account relevant EU recommendations and seek to make the approach consistent across borders."

Context

1: **CAMSS** - Common assessment method for standards and specifications (2016.27)
2: **ISA² Decision (EU) 2015/2240 -** setting up ISA² programme
3: **Regulation (EU) No 1025/2012 —** on European standardisation

Solutions

1: **CAMSSTools**, criteria for different assessment scenarios.
2: **CAMSS Wiki**, roles and responsibilities & the CAMSS process in detail.
3: **CAMSS Library**, list of assessed standards that can be reused.
4: **EU Catalogue** of ICT Standards
5: **ELIS**, Library of Interoperability Specifications

Examples

Denmark's Health Data Authority , makes use of the different CAMSSTools.

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Implementation sheet – Recommendation 31

Conceptual Model

EIF

Principles

Layers
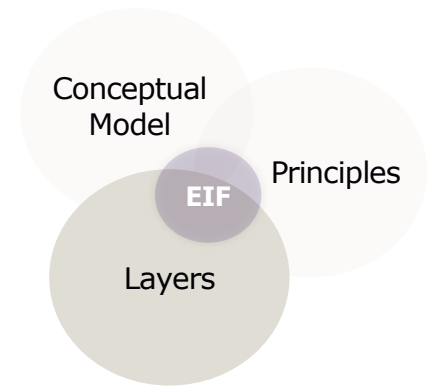
Semantic interoperability

EIF Recommendation #31

"Put in place an information management strategy at the highest possible level to avoid fragmentation and duplication. Management of metadata, master data and reference data should be prioritised."

Context

1: **CAMSS** - Common assessment method for standards and specifications (2016.27)

2: **ISA² Decision (EU) 2015/2240 -** setting up ISA² programme

3: **Regulation (EU) No 1025/2012 —** on European standardisation

Solutions

1: **CPSV-AP**, Core Public Service Vocabulary Application Profile

2: **ADMS**, Asset Description Metadata Schema

3: **Core Vocabularies**, simplified, reusable and extensible data models

4: **DCAT-AP**, Application profile for data portals in Europe

Examples

Example of countries that have adopted the CAMSS standards and specifications include Denmark, Netherlands and the United Kingdom.

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National Overview of EIF implementation

Module Item V

Implementation of the EIF at the national level (example)

EIF Implementation in Spain

Spain has a very good alignment score that is supported by the new commitment of the Spanish Public sector to publish updated information describing all their administrative procedures.

In 2016, Spain stood out in terms of not only NIF Implementation (100%), but also in terms of NIF alignment with the EIF (97%) and monitoring 88%.

The Ministry of Finance and Public Function has developed an application for mobile devices eAdmon "@dministración, all services in your hand" which offers a user-friendly interface for online services.

Spain's new Digital Transformation Plan for the General Administration and Public Agencies (2016–2020) also mandates the updating of the catalogue of administrative procedures.

Interactive Q & A on national implementation