



The European Interoperability Framework and its monitoring mechanism

An Introduction

03 March 2023

interoperable
europe

Agenda



I: Introduction



II: Brief presentation of the National Interoperability Framework Observatory (NIFO) & EIF Monitoring Mechanism



III: Live DEMO of the new **EIF Online Assistant tool**



IV: Conceptual model for ontology



V: Q&A and closing



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Objectives of the webinar

Discuss NIFO aspects and tools that support EIF evaluation, reporting, and implementation.

Show a common observatory model for comparing observatories and understanding their methodology, mandate, and data collection.

Seek input during the webinar for future serialization of the model.



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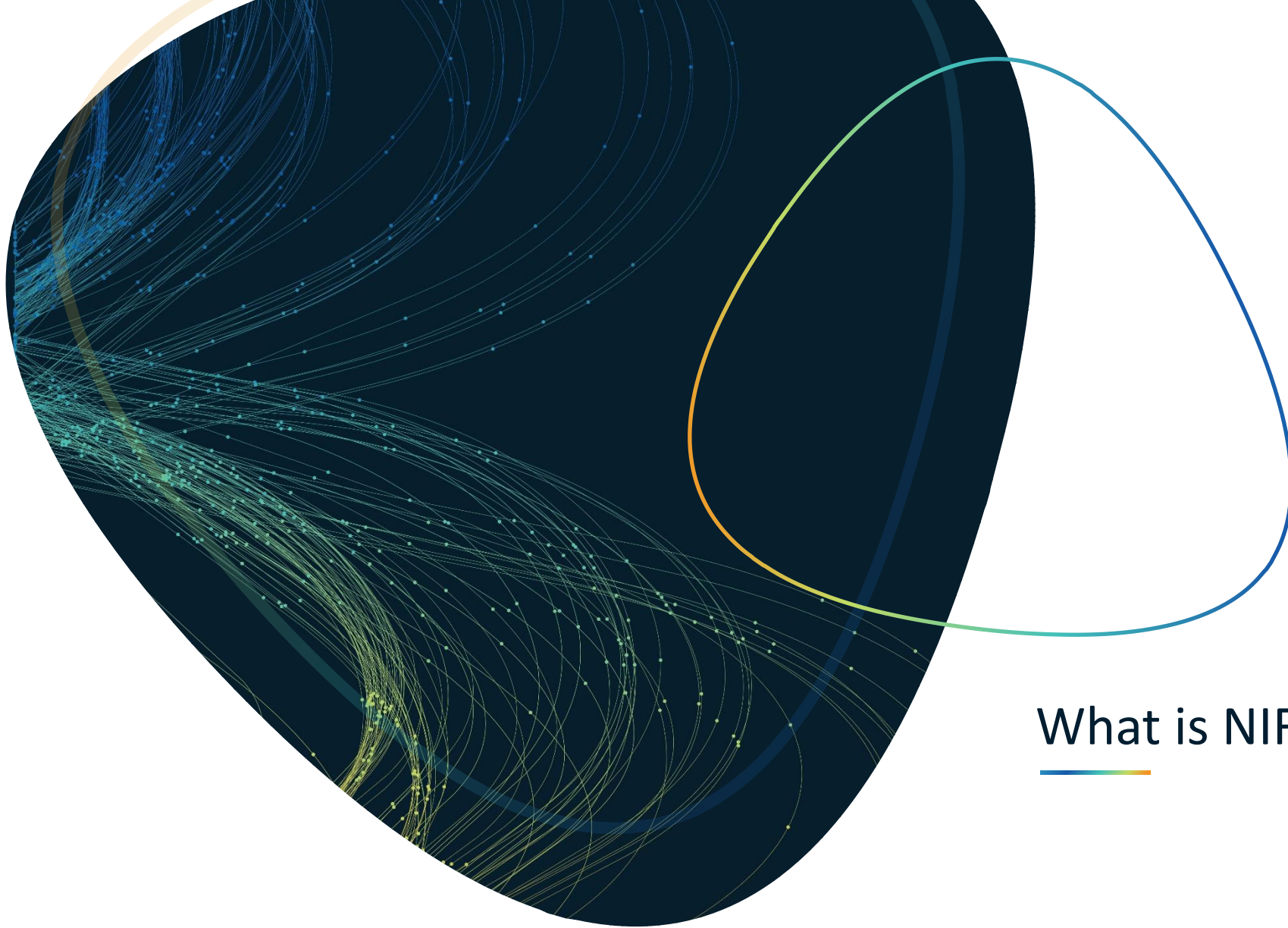


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What is NIFO?

The National Interoperability Framework Observatory (NIFO)



NIFO publishes the most up-to-date information on the state-of-play of digital public administration and interoperability.



NIFO provides support and guidance to European national administrations to facilitate the alignment of their National Interoperability Framework (NIF) with the European one (EIF).



NIFO fosters engagement activities with European public administrations such as workshops and webinars, so as to create a community of practice.

NIFO

NATIONAL
INTEROPERABILITY
FRAMEWORK
OBSERVATORY

*The main mission of NIFO is to monitor the implementation of the revised version of the **European Interoperability Framework (EIF)** and to help foster the capacity building policy and **modernisation of public administrations**. By doing so, it aims at becoming an online community of practice and the prime source of information regarding digital public administration and interoperability matters within Europe.*

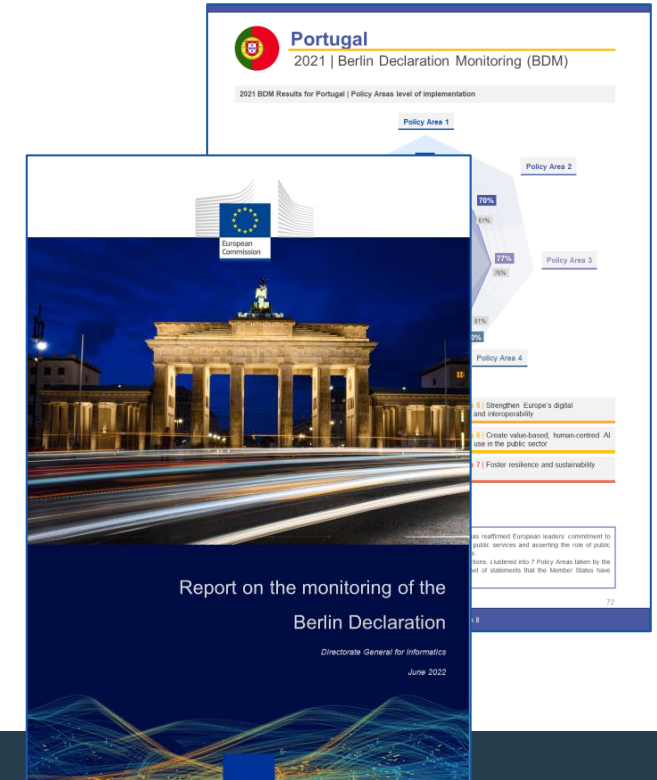
Some examples from NIFO's Digital Policy and Monitoring Hubs



Digital Public Administration factsheets



Digital Policy reports



Berlin Declaration monitoring report



How can EU countries assess their
public services?



The European Interoperability Framework (EIF) monitoring mechanism



What is Interoperability?



Interoperability is a key factor in making a digital transformation possible. It allows administrative entities to electronically exchange meaningful information in ways that are understood by all parties. It addresses all layers that impact the delivery of digital public services in the EU, including legal, organisational, semantic and technical aspects.



European Interoperability Framework – Implementation Strategy

Introduction to the European Interoperability Framework (EIF)



Published in 2017, the European interoperability framework is a commonly agreed approach to the delivery of European public services in an interoperable manner. It defines basic interoperability guidelines in the form of common principles, models and recommendations.



The EIF is promoted and maintained by the **Interoperable Europe programme** in close cooperation between the Member States and the Commission in the spirit of Articles 26, 170 and 171 of the Treaty on the Functioning of the European Union calling for the establishment of interoperable trans-European networks that will enable citizens to derive full benefit from a European internal market.



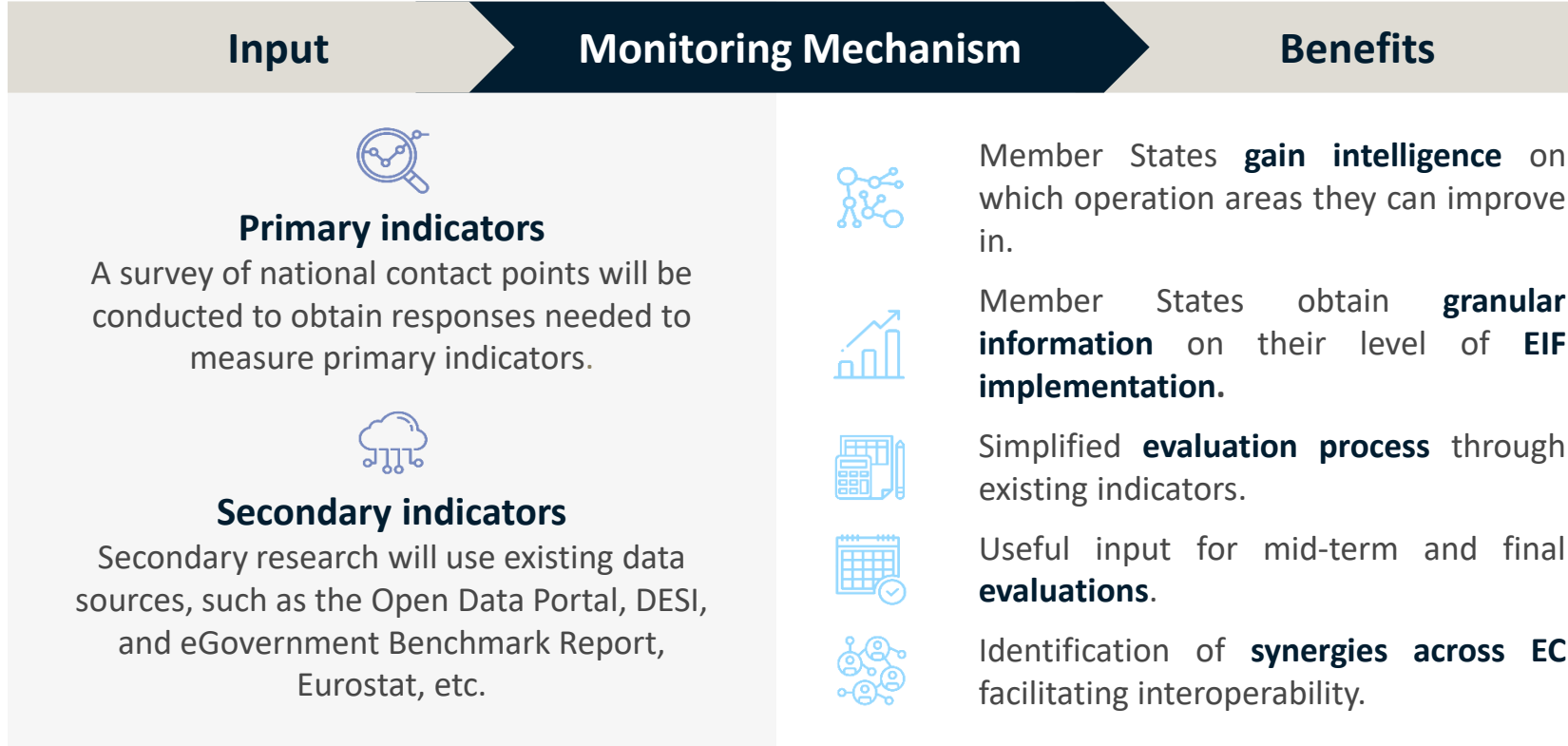
- Inspire European public administrations in their efforts to design and deliver **seamless European public services** which are to the degree possible, digital-by-default, cross-border by-default and open-by-default;
- Provide **guidance** to public administrations on the design and update of **national interoperability frameworks** (NIFs), policies, strategies and guidelines;
- Contribute to the establishment of the digital single market by fostering **cross-border and cross-sectoral interoperability**.



The EIF is meant to be a generic framework **applicable to all public administrations in the EU**. It lays out the basic conditions for achieving interoperability, acting as the common denominator for relevant initiatives at all levels including European, national, regional and local, embracing public administrations, citizens and businesses.

Following a public consultation from February to April 2021, a revised version of the EIF will be published to reinforce EU governments' interoperability strategy.

Introduction to the EIF Monitoring Mechanism



THE EIF MONITORING MECHANISM (EIF MM)

Has for goal to provide each Member State with its level of implementation of the EIF based on a recommendation-by-recommendation measurement as defined by the Article 1.2 of the ISA² Decision stating that "the Commission, through the ISA² programme, shall monitor the implementation of the EIF".

Introduction to the EIF Scoreboards (1/2)



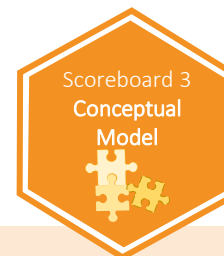
The **interoperability principles** are fundamental behavioural aspects to drive interoperability actions. They describe the context in which European public services are designed and implemented.

	Recommendation(s) n°
Principle 1 - Subsidiarity and Proportionality	1
Principle 2 - Openness	2-4
Principle 3 - Transparency	5
Principle 4 - Reusability	6-7
Principle 5 - Technological neutrality and data portability	8-9
Principle 6 - User-centricity	10-13
Principle 7 - Inclusion and accessibility	14
Principle 8 - Security and privacy	15
Principle 9 - Multilingualism	16
Principle 10 - Administrative simplification	17
Principle 11 - Preservation of information	18
Principle 12 - Assessment of Effectiveness and Efficiency	19



The **4 layers of interoperability**: legal, organisational, semantic and technical are complemented by cross-cutting governance components.

	Recommendation(s) n°
Interoperability Governance	20-24
Integrated Public Service Governance	25-26
Legal Interoperability	27
Organisational Interoperability	28-29
Semantic Interoperability	30-32
Technical Interoperability	33



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.

	Recommendation(s) n°
Conceptual Model	34-35
Internal information sources and services	36
Basic Registries	37-40
Open Data	41-43
Catalogues	44
External information sources and services	45
Security and Privacy	46-47



Introduction to the EIF Scoreboards (2/2)

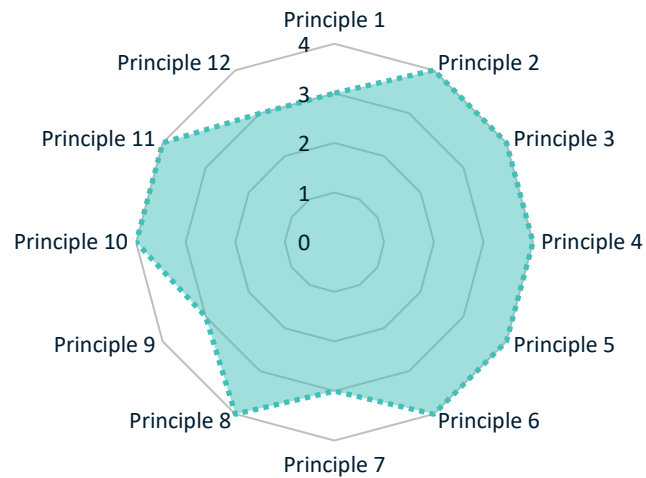
A cross-border scoreboard was added as an **additional transversal scoreboard** in the 2022 edition of the EIF monitoring mechanism. In particular, it was added as an “add-on” to the current framework to ensure the possibility to compare results with previous editions in order to reflect the thematic areas and recommendations outlined by the EIF Framework. Finally, the aim was to reuse the current survey questions and secondary data sources as much as possible and add new questions only if strictly necessary.



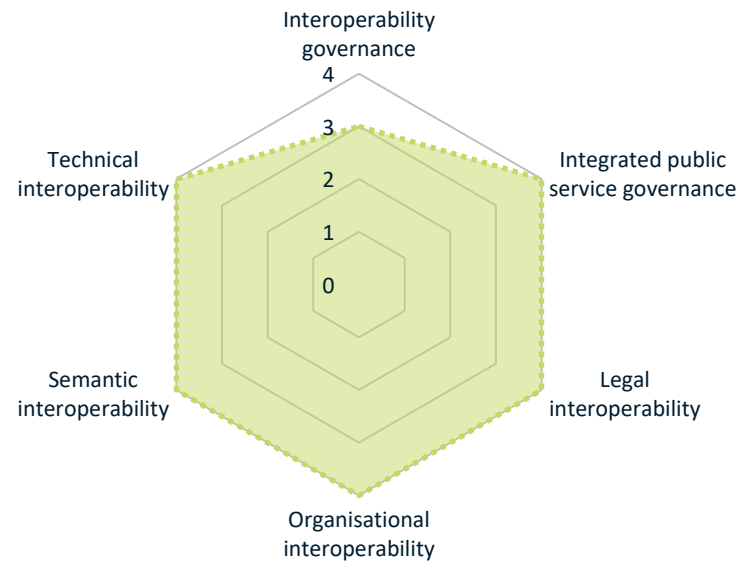
European results of the 2021 EIF Monitoring Mechanism



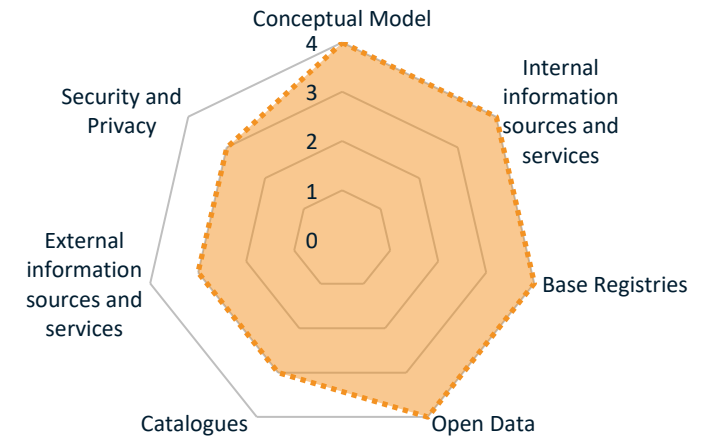
SCOREBOARD 1 INTEROPERABILITY PRINCIPLES



SCOREBOARD 2 INTEROPERABILITY LAYERS



SCOREBOARD 3 CONCEPTUAL MODEL



Visualisation Dashboard

An interactive visualisation dashboard is [available online](#) on Joinup to visualise the results of the EIF MM over time for all in-scope countries



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EIF Online Assistant

Underlying principles	Interoperability layer	Conceptual model	Solution category
Subsidiarity and proportionality	Interoperability governance	Model	Assessment tools
Openness	Integrated public service governance	Coordination function	Common frameworks
Transparency	Legal interoperability	Internal information sources and services	Common services
Reusability	Organisational interoperability	Base registries	Generic tools
Technological neutrality and data portability	Semantic interoperability	Open data	Legal interoperability tools
User centricity	Technical interoperability	Catalogues	Semantic assets
Inclusion and accessibility		External information sources and services	Catalogue of open standards and specifications
Security and privacy		Security and privacy	
Multilingualism			
Administrative simplification			
Preservation of information			
Assessment of effectiveness and efficiency			



The **EIF Online Assistant** helps users to **find operational solutions** that cover the alignment and implementation of the European Interoperability Framework (EIF) and **filter them by attributes**.

Attributes matching the EIF

Underlying principle	Reusability, Technological neutrality and data portability, User centricity, Administrative simplification
Interoperability layer	Interoperability governance, Semantic interoperability
Conceptual model	Base registries, Open data
Solution category	Common frameworks

ABR - BRegDCAT-AP



The Registry of Registers is a solution dedicated to an application profile of DCAT-AP for base registries, namely, BRegDCAT-AP, aiming to provide a standard data model / specification for base registries access and interconnection.

Solution's owner: European Commission / DG Informatics (DIGIT) - Interoperability solutions for public administrations, businesses and citizens (ISA²)

[View EIF Perspective](#)

[Go to Solution](#)

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Context

The EU has put on the table significant resources to support the digital transformation, accelerate digitalisation, increase the Union's resilience and reduce external dependencies with both reforms and investments.

digital transformation

eGovernment

public sector

public services

The 2017 **Tallinn Declaration** on eGovernment marked a milestone for a service-oriented, reliable and innovative eGovernment in Europe.

interoperability

The **Berlin Declaration** recognises the public sector as an essential element for the European Single Market and a driver for new and innovative technological solutions for public services and societal challenges .

digital public administration

EU Landscape

Different observatories and monitoring mechanisms exist at European level, aiming to:



Monitor the digital performance and **track the progress** of EU countries



Assess the EU **digital governments' strategies**



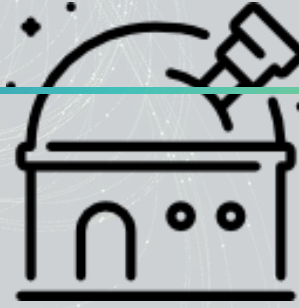
Compare how governments across Europe deliver digital public services



Monitor, evaluate and report on the implementation of the European Interoperability Framework within the EU Countries

Research Questions





1. Process

- **Study** different observatories and monitoring mechanisms in the EC;
- **Analyse** the available methodologies, practices, techniques and indexes that exist to track the progress for digital transformation of government and interoperability.

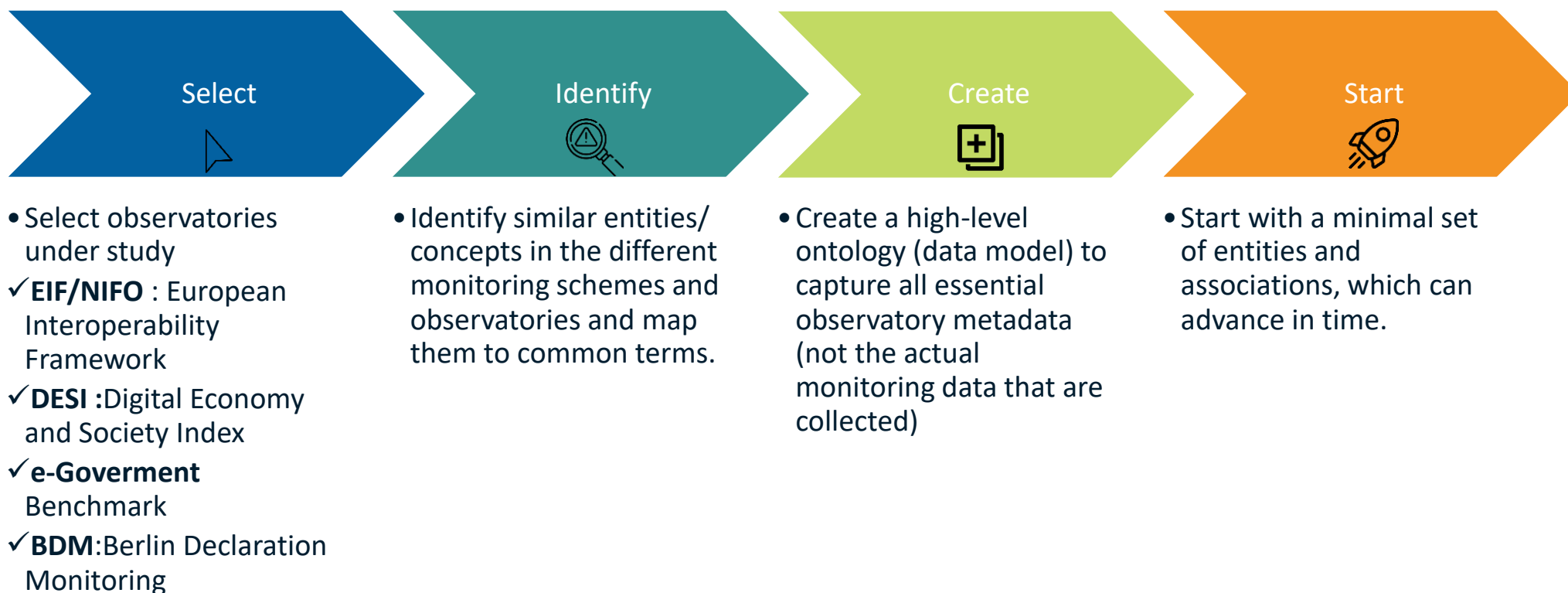
3. Benefits

- Harmonisation
- Interoperability
- Information exchange
- Extensibility

2. Objective

- **Identify** similar concepts and terms shared between these observatories
- **Define** a common semantic model for different monitoring schemes, and approaches (data/metadata about observatories, not KPI monitoring data).

Approach methodology





Observatories & Monitoring Mechanisms under study

NIFO publishes the most up-to-date information on the state-of-play of digital public administration and interoperability.

It monitors the **implementation of the revised EIF recommendations** across Europe and get relevant **data and KPIs** on the countries' implementation.

★ 3 EIF Pillars

- Underlying principles (12 thematic areas)
- Interoperability Layers (6 thematic areas)
- Conceptual Model (7 thematic areas)

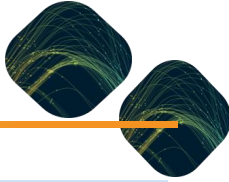
★ 47 Recommendations

★ 71 KPIs

The **EIF** provides 47 recommendations, organised in three pillars:

- **1st pillar: 12 principles**, guiding policy makers in the pursuit of 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, and Assessment of effectiveness and efficiency.
- **2nd pillar: interoperability layers**, presenting different aspects of interoperability that should be addressed in the design of European public services: Legal, Organisational, Semantic and Technical. These four layers share a cross-cutting component regarding the integrated public service governance, and a background layer on interoperability governance.
- **3rd pillar: conceptual model**, for designing and delivering integrated public services. It fosters the idea of 'interoperability by design' as a standard approach driven by reusability. In this regard, European public services should reuse both internal and external information sources.

DESI - Digital Economy and Society Index

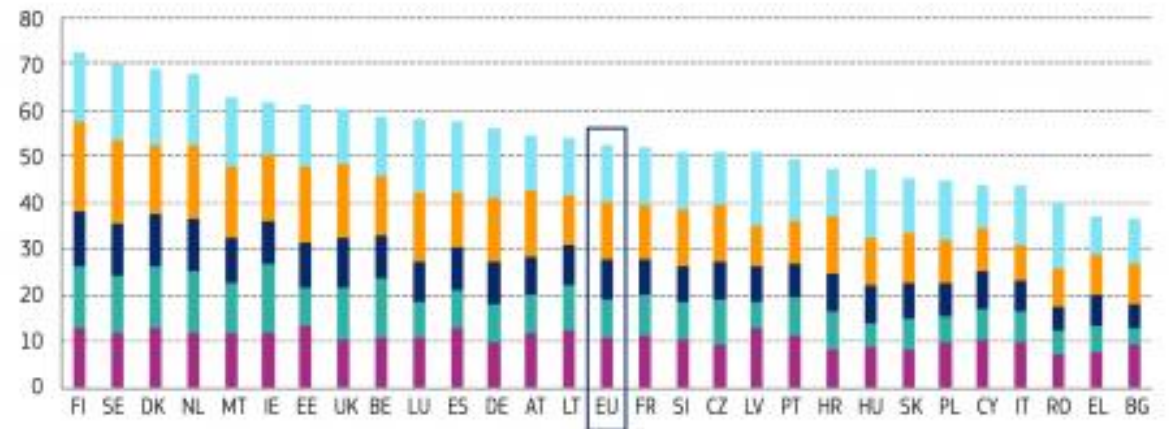


The **Digital Economy and Society Index (DESI)** is a composite index that summarises relevant indicators on **Europe's digital performance** and tracks the evolution of EU member states across five main dimensions: Connectivity, Human Capital, Use of Internet, Integration of Digital Technology, Digital Public Services.

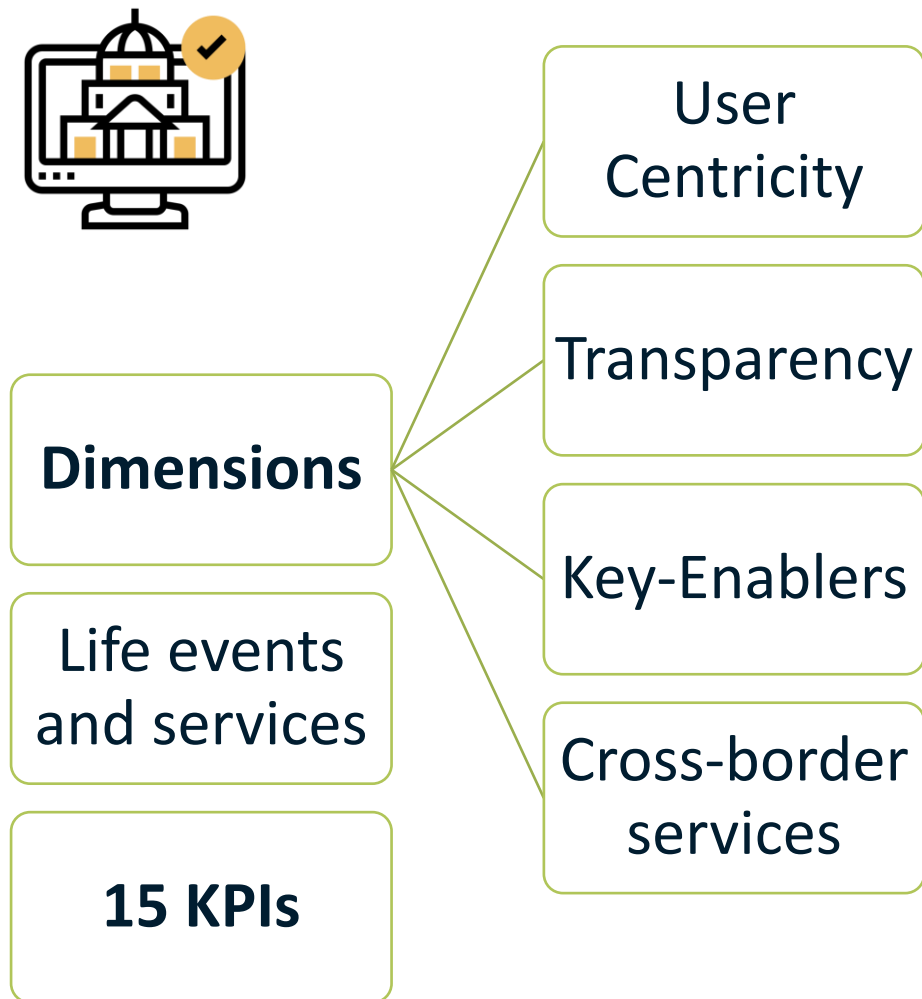
★ Dimensions - Key Areas

- Human Capital (2 sub-dimensions)
- Connectivity (2 sub-dimensions)
- Use of Internet (3 sub-dimensions)
- Integration of Digital Technology
- Digital Public Services (1 sub-dimension)

★ 27 KPIs



eGovernment Benchmark



The **e-Government Benchmark** framework corresponds with the key policy priorities in the e-government Action Plan, the Tallinn and Berlin Declarations. The e-Government Benchmark framework reflects on the Digital Decade and it brings insights on the **state-of play of e-government in Europe**. The measurement evaluates the **maturity of online public services** in terms of **User centricity, Transparency, and use of Key enablers**. It also brings the dimension of **Cross-border service delivery**, which is a truly European metric. The new method presents various changes e.g. simplified **life events** by measuring less services for national users, substantially increasing the amount of **services that are measured cross-border**, including the Career and the Family life events, and addition of Health life events for odd years together with relabeling of some indicators. Various indicators allow the comparison over the time and across countries. The list of countries currently includes the European Union Member States, Iceland, Norway, Montenegro, Republic of Serbia, Switzerland, Turkey as well as Albania and North Macedonia

Berlin Declaration Monitoring

The Berlin Declaration on Digital Society and Value-based Digital Government has reaffirmed European leaders' commitment to fundamental rights and European values, as already stipulated in the 2017 Tallinn Declaration on eGovernment.

The Declaration relies on 7 key principles which emphasise the importance of digital public services in our everyday lives. It is aimed at taking the user-centricity principles already formulated in the Tallinn Declaration a step further, by asserting the role of public administrations in driving a value-based digital transformation of European societies.

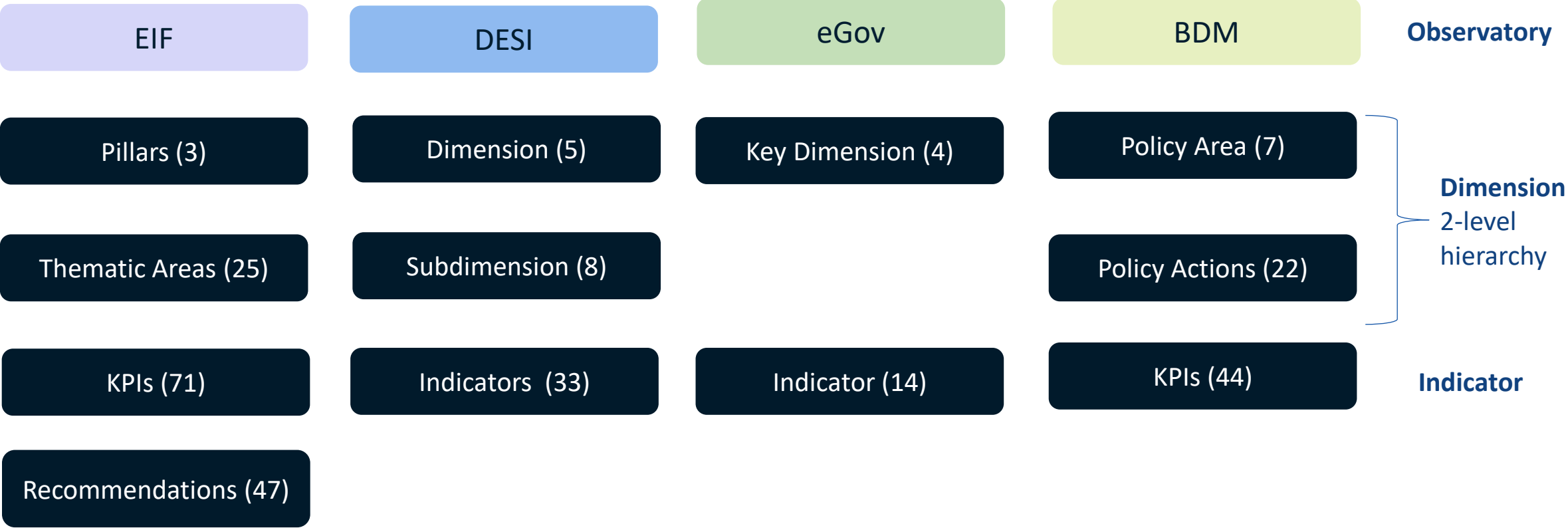
7 Policy Areas (Principles) - Level 1

- Fundamental rights and democratic values
- Social participation and digital inclusion
- Empowerment and digital literacy,
- Trust and security in digital government interactions
- Digital sovereignty and interoperability
- Human-centred systems and innovative technologies in the public sector
- A resilient and sustainable digital society

22 Policy Actions - Level 2

44 KPIs - Level 3

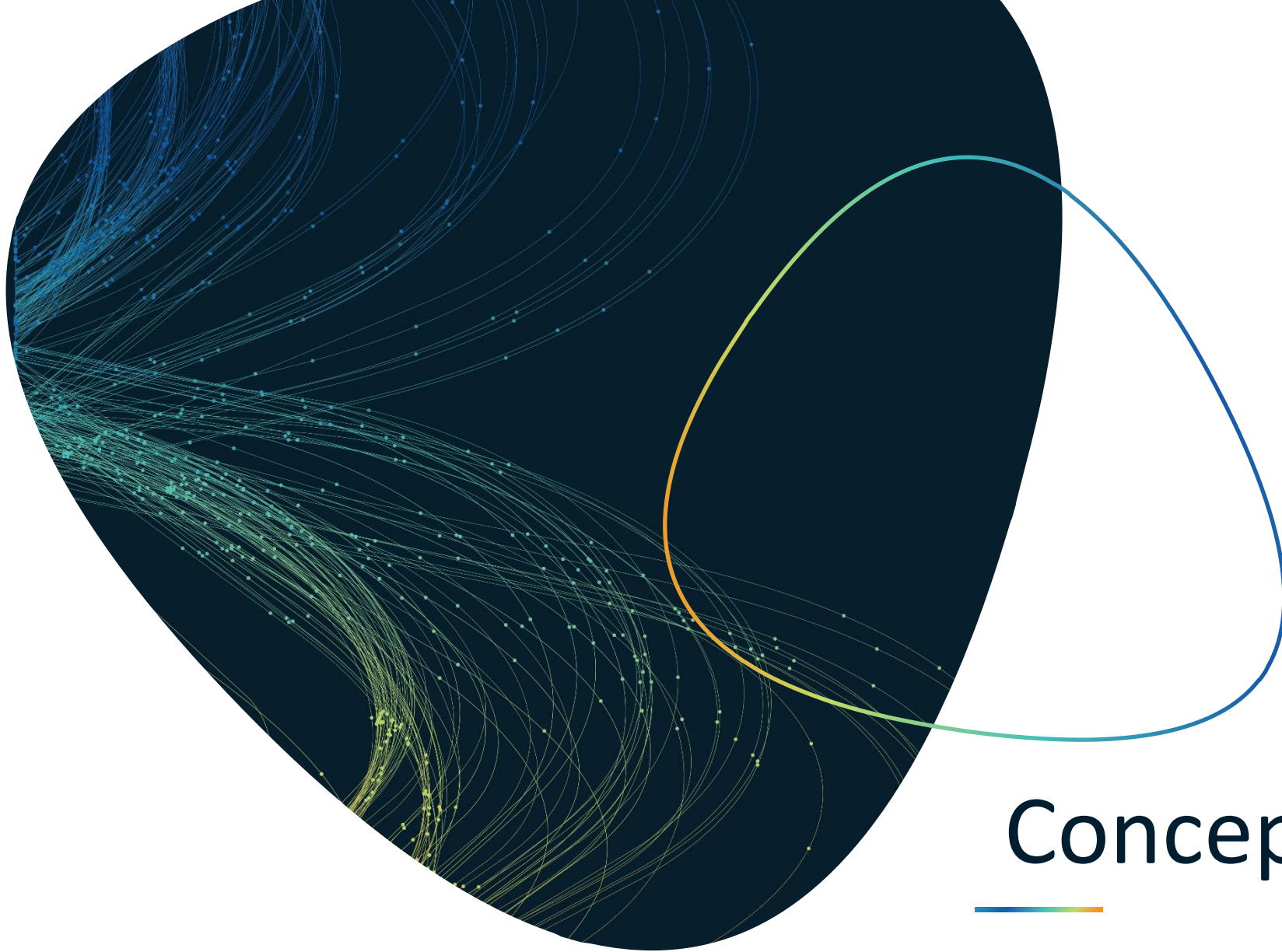
Findings



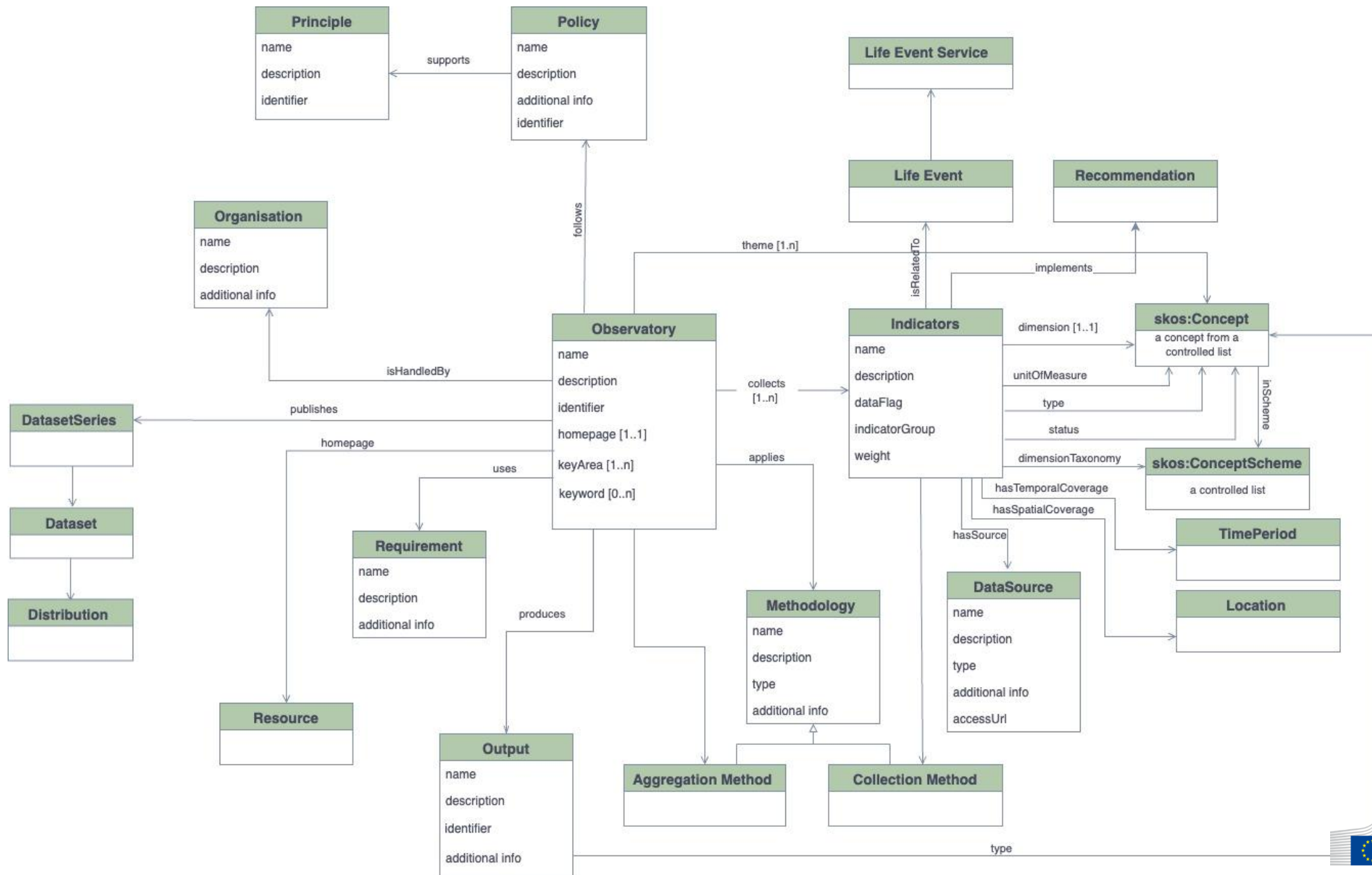
Common Concepts shared between Observatories



- **Dimensions - Level1** (Dimensions [eGovernment benchmark] - Dimensions (Key Areas) [DESI] - Pillars [EIF] - Policy Areas [Berlin Declaration])
- **Dimensions – Level 2** (Sub-dimensions [DESI] - Thematic areas [EIF] - Policy Action[Berlin Declaration])
- **Indicators (KPIs)**
 - Unit of measures
 - Normalisation method
- **Data Sources** [Primary / Secondary]
- **Data Flags**
- **Data Collection Process/Methodology**
- **Data Aggregations /Methodology**
- **Policies, principles, recommendations**
- **Outcomes**



Conceptual model



Questions

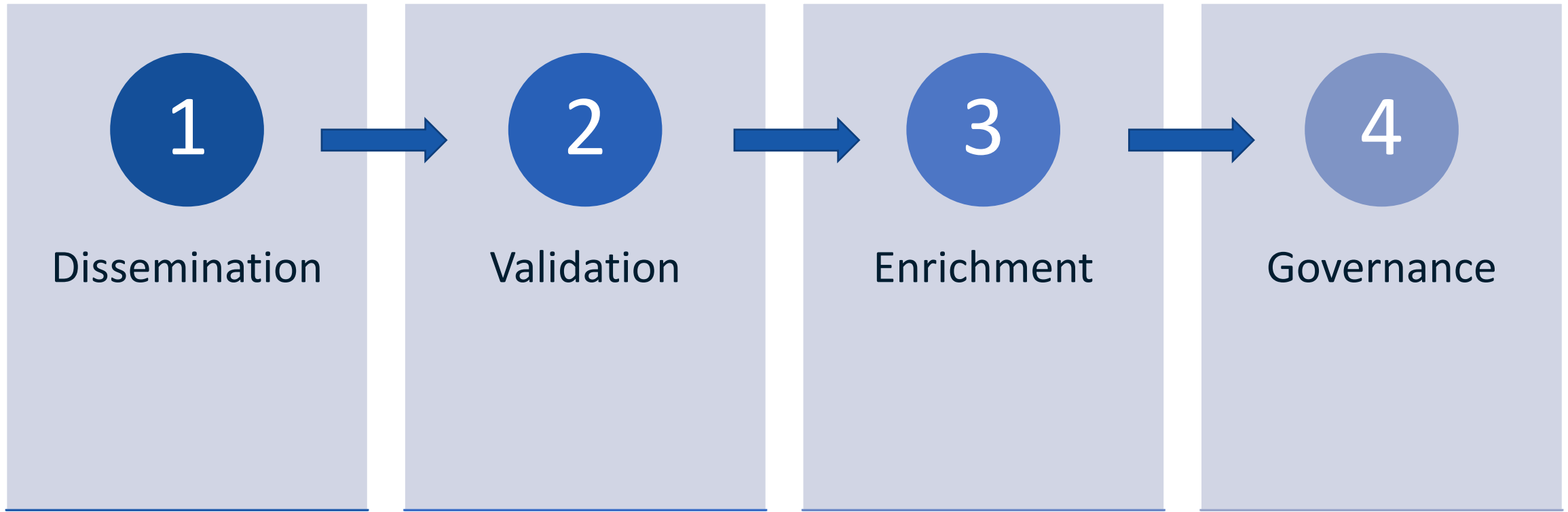


Are you aware of any similar models?

Have you made similar effort for
harmonisation?

Do you find this useful?
How would you use it for
your work?

Next Steps



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nifo-monitoring@wavestone.com



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Thank you