



CAMSS

COMMON ASSESSMENT
METHOD FOR STANDARDS
AND SPECIFICATIONS

interoperable
europe

The Tallinn Declaration compels the Member States to take steps towards the interoperability by default



Interoperability by default

“We confirm our commitment to the vision laid out in the **EU eGovernment Action Plan 2016-2020** and in the **European Interoperability Framework** [...] to strive to be open, efficient and inclusive, providing borderless, **interoperable**, personalised, user-friendly, end-to-end **digital public services** to all citizens and businesses – at all levels of public administration.”
(p.3)

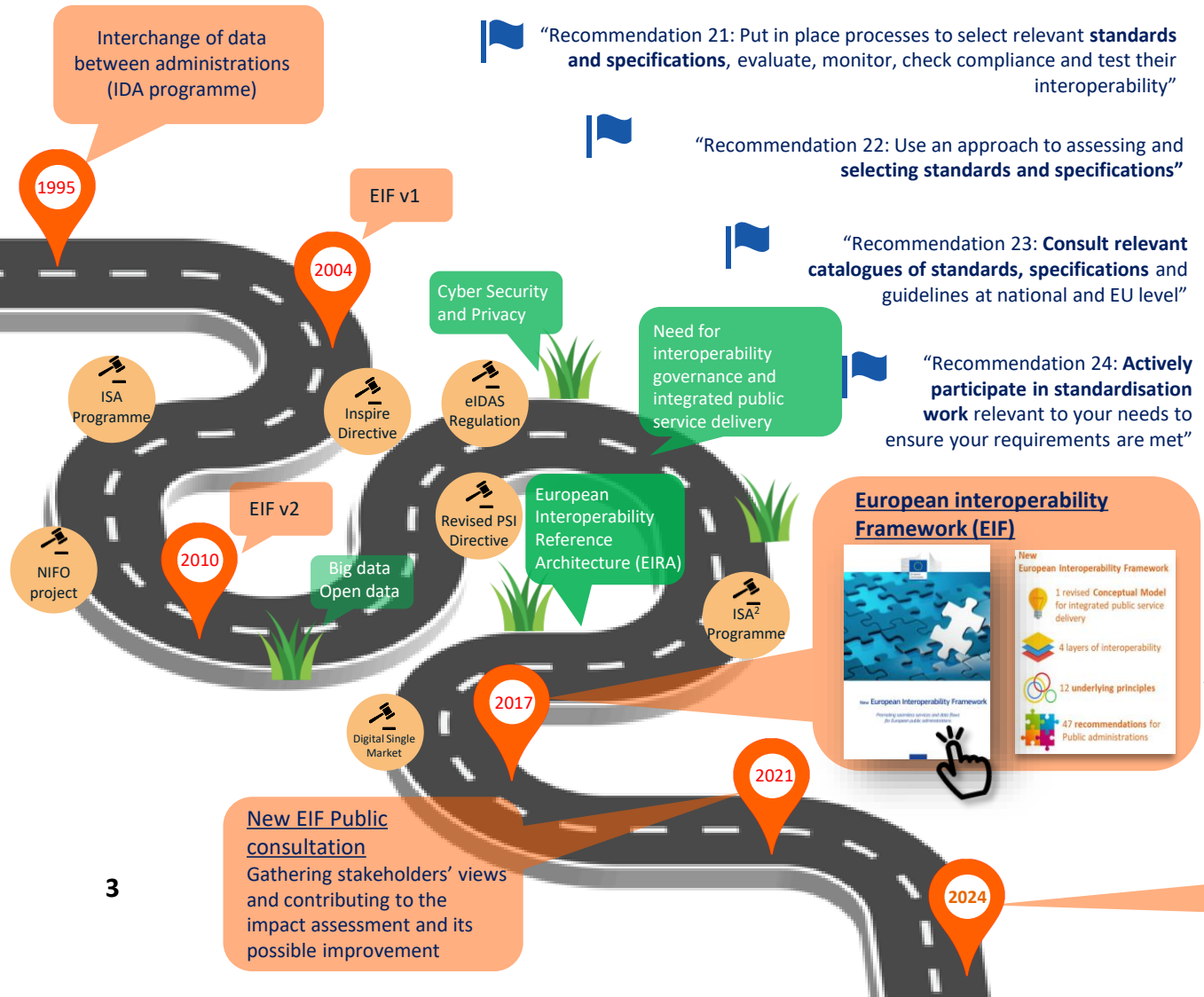
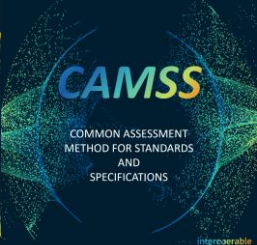
In this regard, MS will:

“**Make use** of open source solutions and/or **open standards** when (re)building ICT systems and solutions (among else, to **avoid lock-ins**), including those developed and/or promoted by EU programmes for **interoperability and standardisation**, such as **ISA²**.” (p.6)

“**Modernise** the design of public services, **procurement** and contracting arrangement to make them compatible with modern and agile ways of developing and deploying digital technology.”
(p.7)

“Increase the **digital leadership skills** among top civil and public servants and digital skills more widely within the public administration at all levels.” (p.7)

EIF Storyline Overview



- “Recommendation 21: Put in place processes to select relevant **standards and specifications**, evaluate, monitor, check compliance and test their interoperability”
- “Recommendation 22: Use an approach to assessing and selecting **standards and specifications**”
- “Recommendation 23: **Consult relevant catalogues of standards, specifications** and guidelines at national and EU level”
- “Recommendation 24: **Actively participate in standardisation work** relevant to your needs to ensure your requirements are met”

Recommendations in short

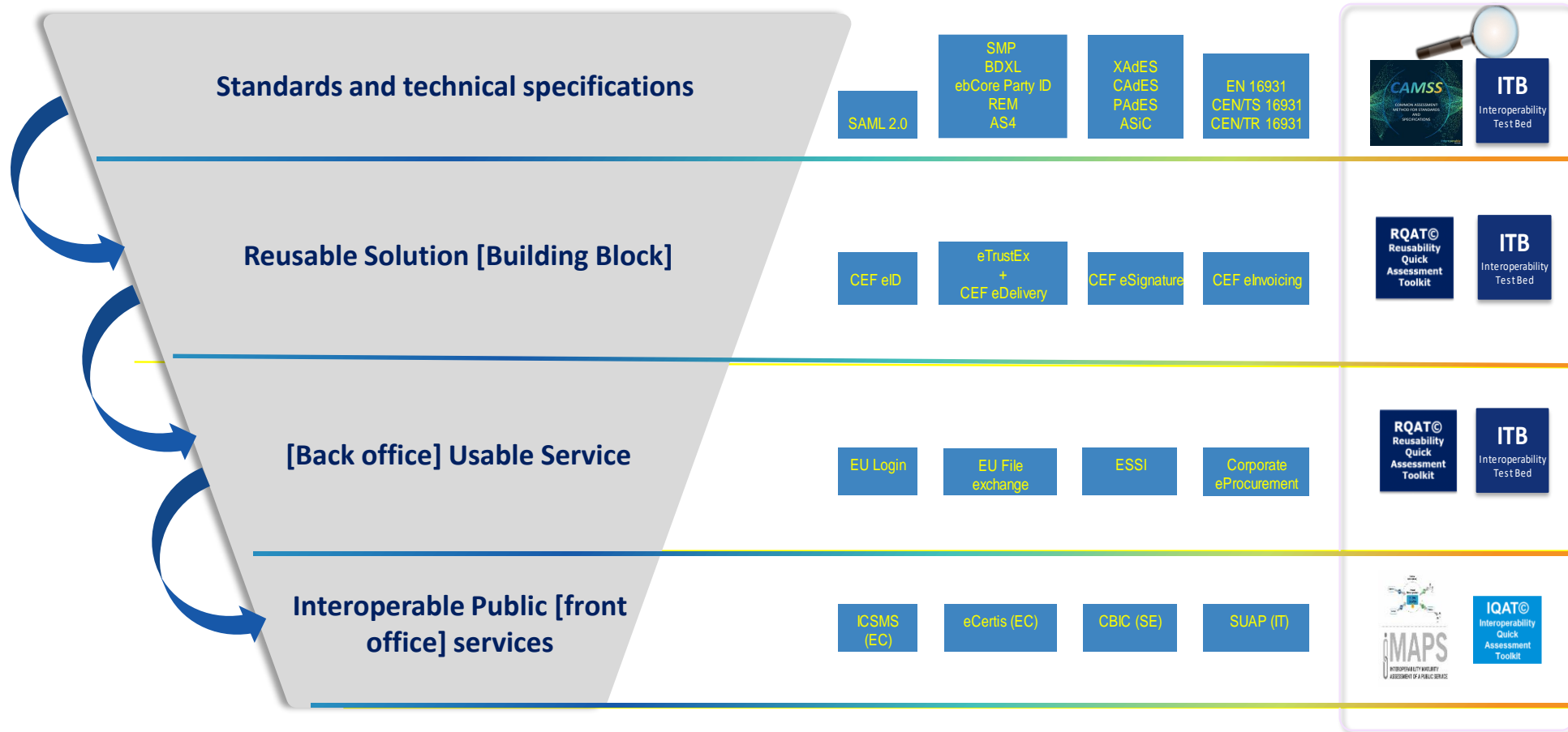
- “Promotes electronic communication among European public administrations by providing a set of common models, principles and recommendations.”
- “Reusability of IT solutions ([...] **standards**) [...] is an enabler of **interoperability** and improves quality because it **extends operational use, as well as saving money and time**. [...] one of the major contributor to the development of a digital single market in the EU.”
- “[...] **Standards and specifications** are needed to enable meaningful information exchange among European public organisations.”
- The European Interoperability Framework (EIF) provides the foundational guidelines for interoperability among EU public administrations, while the **Interoperable Europe Act** builds on these principles to **mandate and enhance digital collaboration and integration across Member States**.

European interoperability Framework (EIF)

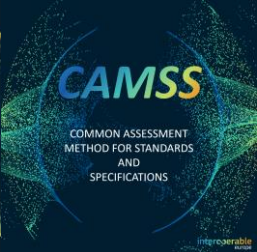
- 1 revised Conceptual Model for integrated public service delivery
- 4 layers of interoperability
- 12 underlying principles
- 47 recommendations for Public administrations

Entry into force of the **Interoperable Europe Act**

EIRA supports EIF Implementation



The Common Assessment Method for Standards and Specifications (CAMSS)



Do you struggle dealing with standards?



The context



ISA² Programme: From January 2016 to December 2020, this programme has put in place, supported and operated public services and common frameworks for its main beneficiaries, namely public administrations at EU, national, regional and local level, as well as citizens and businesses interacting with those administrations.



Digital Europe Programme: From Jan 2021 to December 2027, that aims at accelerating the recovery and driving the digital transformation of Europe.



EIF: The Commission adopted the European Interoperability Framework (EIF) on the 16th of December 2010. According to the EIF, "decisions on what formalised specifications and technologies to use to ensure interoperability for European public services should be based on transparency, fairness and non-discrimination. One way to do this is to agree on a common assessment methodology and selection process".



EIRA: The European Interoperability Reference Architecture (EIRA) is an architecture content metamodel defining the most salient architectural building blocks (ABBs) needed to build interoperable eGovernment systems. It is an action created and maintained in the context of the ISA² Programme.



Interoperable Europe Act: The regulation aims to set up a new cooperation framework for EU public administrations to ensure the seamless delivery of public services across borders, and to provide for support measures promoting innovation and knowledge exchange. It establishes an interoperability governance structure with a view to creating an ecosystem of shared interoperability solutions for the EU's public sector.

The need

- 1 The business need of cross-Administration and cross-border services require that services can interact with each other with ease and hence avoid creating new electronic barriers between administrations.
- 2 Need for public administrations to engage in public procurement of ICT solutions that require cross-administration or cross-border functionalities (plan interoperability architectures).
- 3 Need for formalised specifications in public procurement to avoid vendor lock-in situations.
- 4 Need for interoperability assessments and the share of interoperability solutions for the EU's public sector as laid out by the Interoperable Europe Act.

What's CAMSS?

CAMSS Overview



CAMSS is an established European guide for assessing and selecting standards and specifications for eGovernment projects. It can be used as a reference when building an ICT architecture and for justifying the selection of standards and specifications. For this purpose, CAMSS offers a set of solutions, assets and specifications.

Benefits of CAMSS



Quality

Increasing transparency, efficiency and accountability in public administrations



Reusability

Reuse existing assessments or specifications already recommended by the EU Member State



Savings

Reduce administrative burden, speed up assessment processes

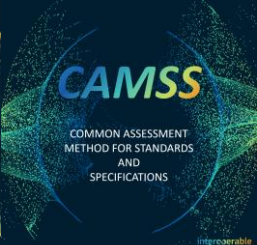


Compliance

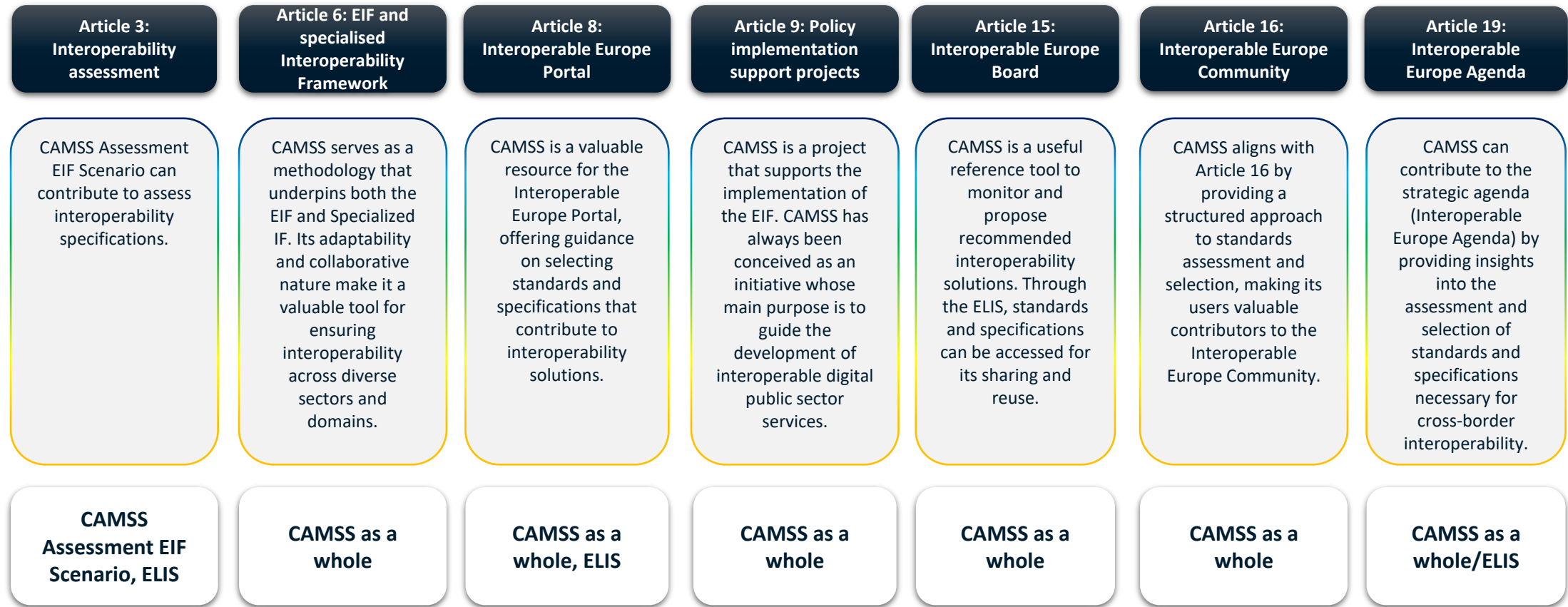
Assess the compliance of cutting-edge specifications with reference frameworks

What's CAMSS?

Support for the Interoperable Europe Act

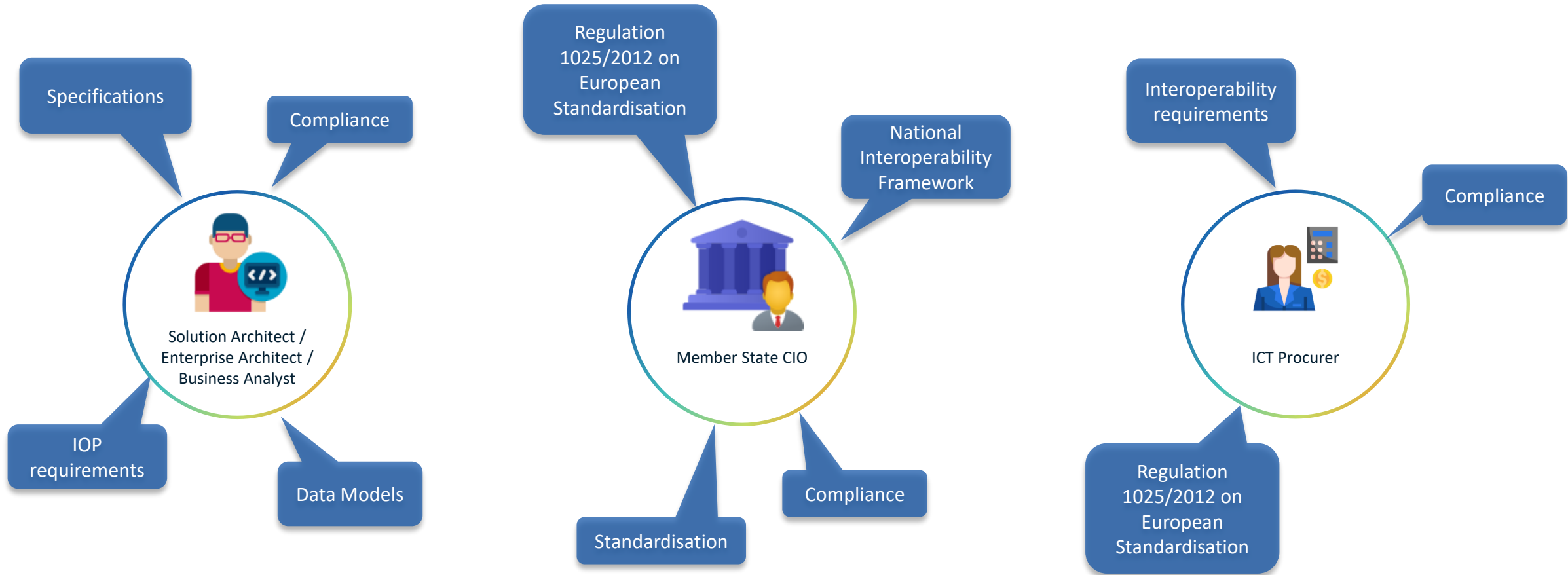
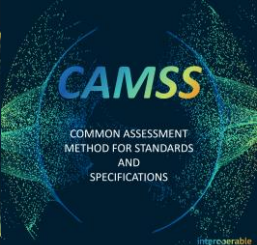


CAMSS contribution to the effective implementation of the Interoperable Europe Act



What's CAMSS?

CAMSS Users



What's CAMSS?

CAMSS Solutions



CAMSS Assessment	The evidence supporting the compliance of a technical specification with a reference framework.
CAMSS Assessment EIF Scenario	This CAMSS Scenario allows to assess the compliance of interoperability specifications with the EIF .
CAMSS Assessment MSP Scenario	This CAMSS scenario is dedicated to the assessment of formal specifications in the context of public procurement .
CAMSSaaS (CAMSS as a Service)	A service through which users can request assessments free of charge .
ELIS (EIRA© Library of Interoperability Specifications)	A collection of specifications to define the interoperability requirements of a Solution categorised using the EIRA's Architecture Building Blocks.
CSSV (Core Standards and Specifications Vocabulary)	The core vocabulary used to describe specifications and standards .
CAV (Core Assessment Vocabulary)	The core vocabulary used to describe assessments .
ELAP (EIRA Library of architecture principles)	The EIRA library of architecture principles (ELAP) is intended to direct government organizations in initiating changes and implementing IT projects .
ELAP Validator	The ELAP Validator allows for the conformance testing of a designed solution against the principles and guidelines of ELAP .
10 CAMSS Incompatibility Scenario	The CAMSS Incompatibility Scenario aims to evaluate whether integrating a new specification or standard into an existing environment could potentially hinder its interoperability.

What's CAMSS?

CAMSS Assets



CAMSS Assessment Library

Catalogue of the assessments produced using CAMSS Tools. Each assessment constitutes a CAMSS Solution and is fully reusable.

CAMSS List of Standards

List with all the standards and technical specifications recommended by the Member States of the EU.

CAMSS Change Management Process

Process to formalise how requests for changes and the development of new releases of CAMSS are managed.

CAMSS RDF Converter

Transformation tool developed in Python for the transformation of the CAMSS Assessments (EIF, MSP) in Excel format to RDF formats.

CAMSS Specifications Graph

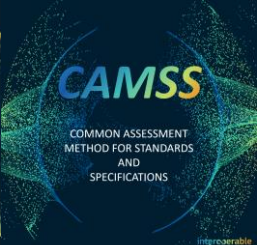
Data set of assertions on individuals belonging to the Core Standards and Specifications Vocabulary (CSSV). Simplifying, the description of standards and specifications using the CSSV.

CAMSS Assessment Graph

Data set containing the assertions of all assessments produced with the CAMSS method.

What's CAMSS?

CAMSS Assessments



1

USING IT

Do it yourself:

- You have access to **Assessment Resources: support to users, improved tools and training resources**

2

RE-USING IT

Reuse Assessments:

- A growing **Collection of Assessments** ready for reuse by the *Standardisation Community*
- *List to Member States Catalogues of standards*

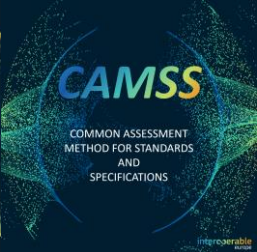
3

CONSUMING IT

Request the Service:

- **CAMSS as a Service: provision of assessments on demand**

CAMSS Assessments EIF Scenario

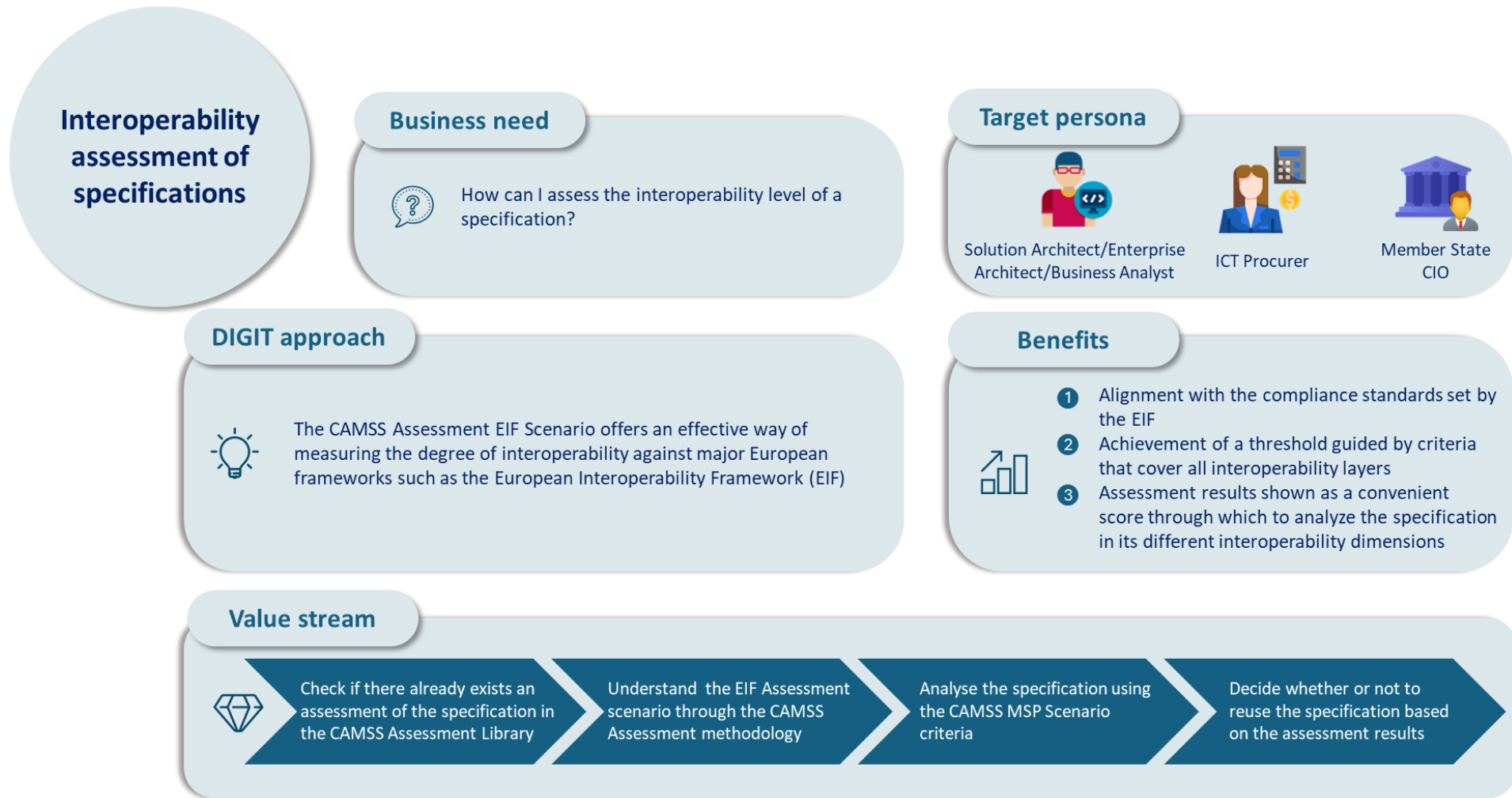


The CAMSS Assessment EIF Scenario contains different sections according to the insights and recommendations of the European Interoperability Framework (EIF). This CAMSS Scenario allows for the assessment of the compliance of interoperability specifications with the EIF. The objective of the obtained assessment is to determine the suitability of the assessed interoperability specification for the delivery of interoperable European public services.



CAMSS Assessments EIF Scenario

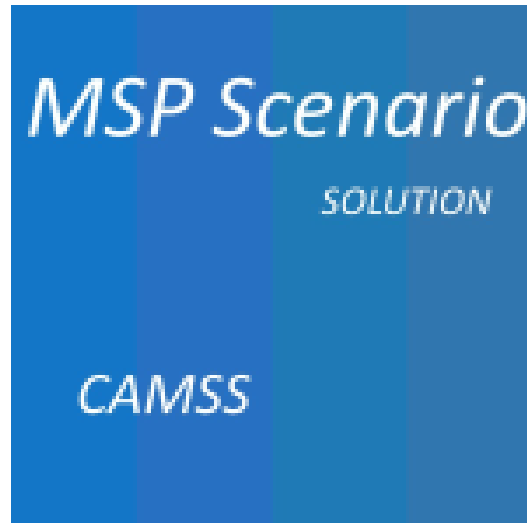
Value Proposition



CAMSS Assessments MSP Scenario

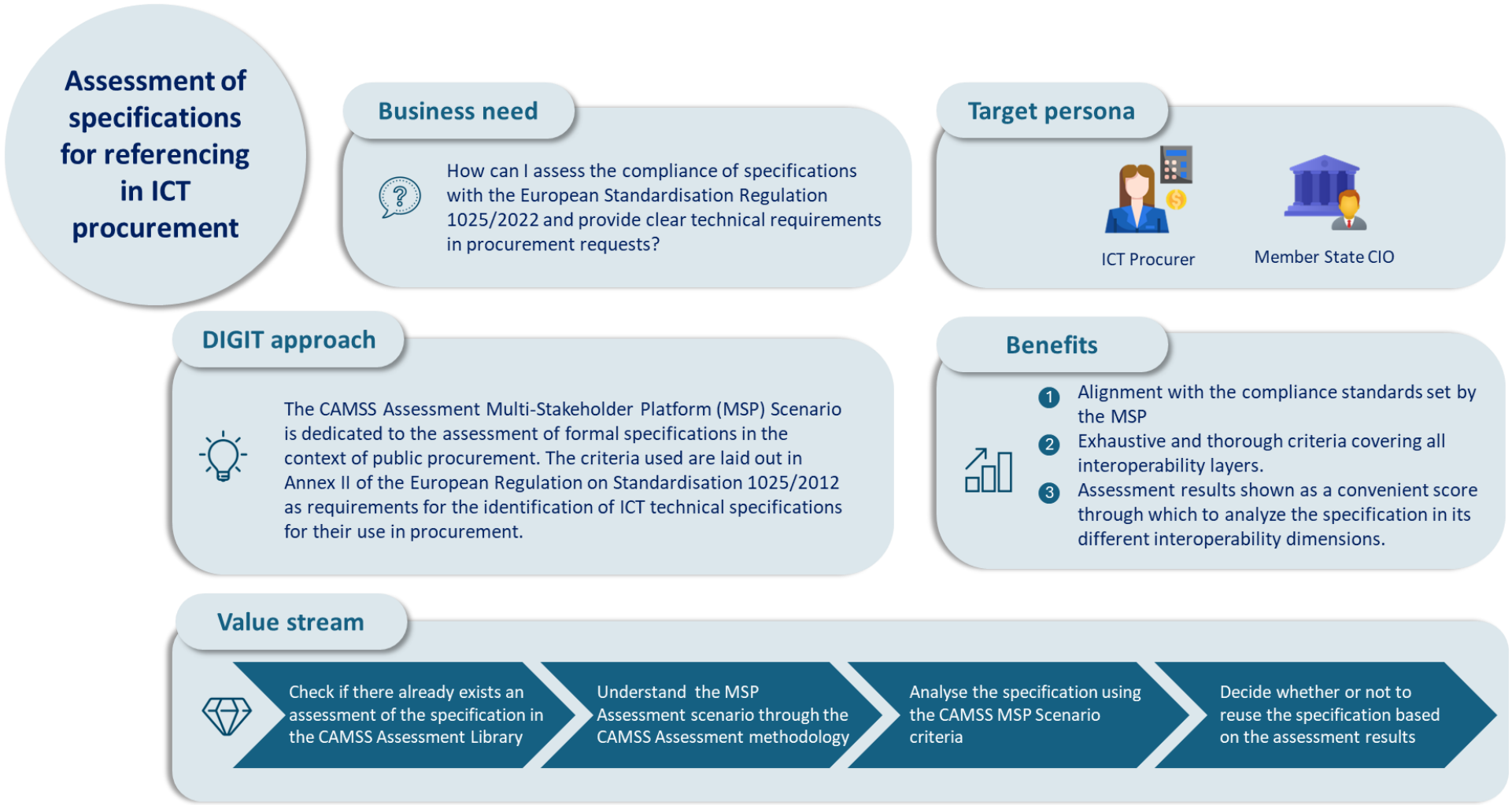


This CAMSS scenario is dedicated to the assessment of formal specifications in the context of public procurement. The criteria used are laid out in the Annex II of the regulation on standardisation 1025_2012 as requirements for the identification of ICT technical specifications for their use in procurement. This scenario is used to support the Multi-Stakeholder platform for European Standardisation on the identification of technical specifications.

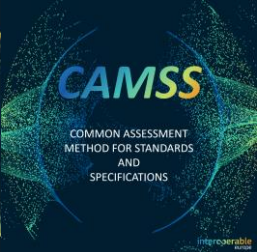


CAMSS Assessments MSP Scenario

Value Proposition



CAMSS Assessment Incompatibility Scenario



The CAMSS Incompatibility Scenario aims to evaluate whether integrating a new specification or standard into an existing environment could potentially hinder its interoperability. This scenario helps determine the impact of introducing new digital business capabilities or adapting to new interoperability requirements by examining how the new specification might affect the current system's ability to exchange data and information effectively.



CAMSS Assessment Incompatibility Scenario

Value Proposition



Ensuring seamless integration and interoperability of specifications

Business need



How can I assess if a new specification will disrupt current interoperability in an existing solution?

Target persona



Solutions architect / Enterprise Architect



Member State CIO

DIGIT approach



The CAMSS Incompatibility Scenario helps determine the impact of introducing new digital business capabilities or adapting to new interoperability requirements. To this end, it examines how the new specification might affect the current system's ability to exchange data and information effectively

Benefits



- 1 Identify and mitigate potential interoperability issues before implementation and ensure seamless integration of new specifications
- 2 Maintain system interoperability and avoid disruptions
- 3 Provide a structured assessment methodology for evaluating compatibility

Value stream



Define AS-IS environment and specification to ensure a clear understanding of the current interoperability landscape

Evaluate the new specification against the AS-IS environment to identify potential interoperability issues

Assess the new specification's impact to understand the extent of changes needed and possible disruptions

Make informed decisions and plan for integration, ensuring smooth implementation and system interoperability



“CAMSSaaS is the service provided by CAMSS for the execution and review of assessments on demand”

Request the service at:
DIGIT-CAMSS@ec.europa.eu

There are 3 modalities of service:

1

CAMSS Assessment

In this modality the user requests the CAMSS Team to perform the assessment of a technical specification.

2

CAMSSaaS Content Review

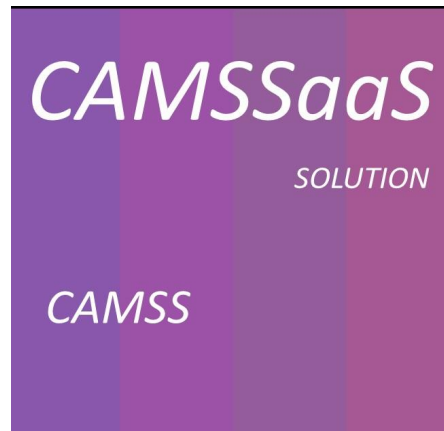
In this modality the user requests the CAMSS Team to review an already performed assessment. The CAMSS Team will perform an in-depth review of the information, improving the answers of the user when need and challenging them in order to strengthen the quality of the assessment as much as possible.

3

CAMSSaaS Compliance Review

In this modality the user requests the CAMSS Team to review an already performed assessment. The CAMSS Team will perform a review of the assessment in order to determine if it has been properly filled, not challenging the actual content of it.

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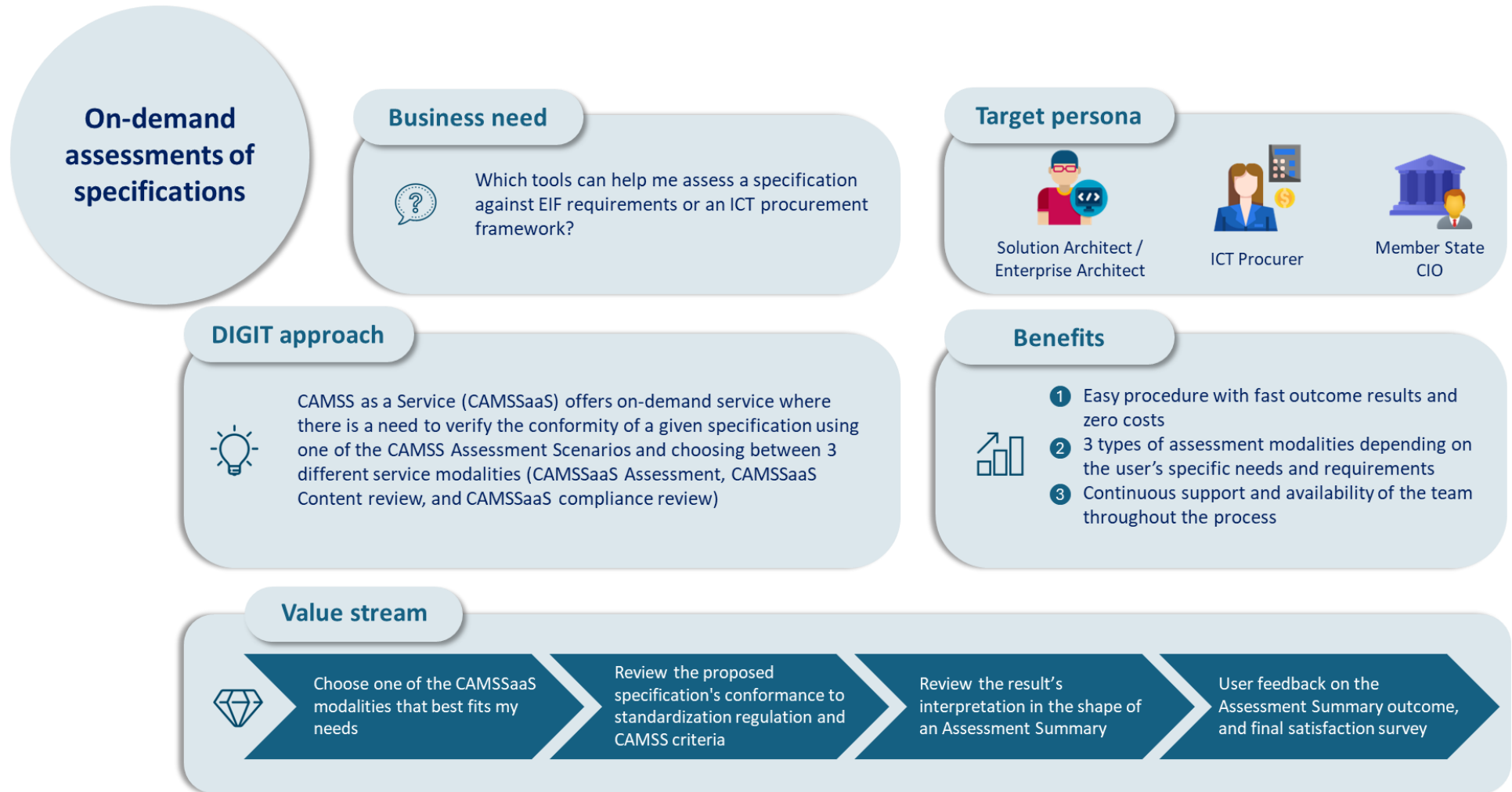
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ELIS

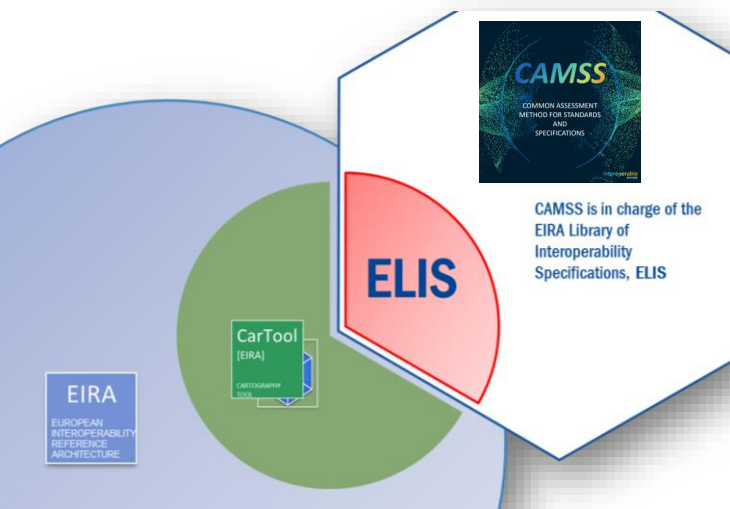
EIRA Library of Interoperability Specifications



The EIRA Library of Interoperability Specifications (ELIS) contains and extensively documents the specifications describing the interoperability requirements of the different EIRA v5.0.0 architecture building blocks. As an element of the EIRA, the ELIS constitutes a tool for supporting architects on the process of modelling EIRA-based solutions.

“The ELIS is a modelling tool-agnostic but not architecture-agnostic library of interoperability specification”

The ELIS is implemented by CarTool, and its metrics can be consulted over time in the following link:



<https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/elis>

Interoperability assessment of specifications

Business need



How can I assess the interoperability level of a specification?

Target persona



Solution Architect/Enterprise Architect/Business Analyst



ICT Procurer



Member State CIO

DIGIT approach



The CAMSS Assessment EIF Scenario offers an effective way of measuring the degree of interoperability against major European frameworks such as the European Interoperability Framework (EIF)

Benefits



- 1 Alignment with the compliance standards set by the EIF
- 2 Achievement of a threshold guided by criteria that cover all interoperability layers
- 3 Assessment results shown as a convenient score through which to analyze the specification in its different interoperability dimensions

Value stream



Check if there already exists an assessment of the specification in the CAMSS Assessment Library

Understand the EIF Assessment scenario through the CAMSS Assessment methodology

Analyse the specification using the CAMSS MSP Scenario criteria

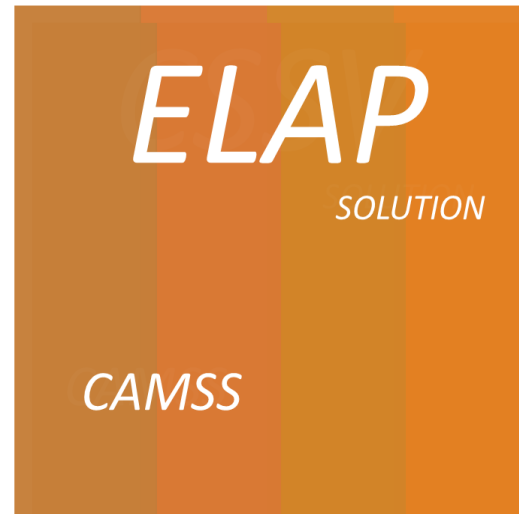
Decide whether or not to reuse the specification based on the assessment results

CSSV

Core Standards and Specifications Vocabulary



The CSSV is the vocabulary used for the information exchange related to standards and specifications amongst software solutions, and also for the description of themselves like EIRA, CPSV, IMAPS, amongst other specifications. The CSSV is the key element for the development of the EIRA Library of Interoperability Specifications (ELIS).



Vocabulary for standards and specifications description

Business need



Which vocabulary can I use to describe and exchange information about standards and specifications?

Target persona



Solutions architect /
Enterprise Architect



Member State CIO

DIGIT approach



The Core Standards and Specifications Vocabulary (CSSV) is the vocabulary used for the information exchange related to standards and specifications amongst software solutions, and it is the key element for the development of the new release of the EIRA Library of Interoperability Specifications (ELIS)

Benefits



- 1 Enhancement of the understanding and communication across different stakeholders, including policymakers, IT developers, and end-users, making it easier to share and compare information across borders
- 2 Reusable asset to describe any kind of standard or specification.

Value stream



Map vocabularies to your ICT national catalogue

Reuse and consider assessments for the inclusion or exclusion of specifications in your catalogue

Publish your National ICT Catalogue data in CELLAR for retrieval and discovery

Compare and find recommended specifications from other MS

The Core Assessment Vocabulary represents and defines what an “Assessment” of “assets” is and how to perform the assessment based on “Criteria”. It is a domain-agnostic vocabulary, meaning that it can be used to assess any type of assets.



Vocabulary for the description of assessments

Business need



How can I, develop assessment tools that meet CAMSS requirements to support cross-border and cross-domain data exchange?

Target persona



Solutions architect /
Enterprise Architect



Member State CIO

DIGIT approach



The Core Assessment Vocabulary (CAV) defines rules and constraints to represent, express and define what an "Assessment" of "Assets" is, and how to perform assessments based on "Criteria" regardless of the domain of the assets to be evaluated.

Benefits



- 1 Ensure that all parties have common understanding of assessment criteria.
- 2 Reusable asset to describe any kind of assessment and the evidences needed to support it.
- 3 Allows for an easier comparison of different standards and specifications.

Value stream



Development of an assessment tool based on the CAV rules and constraints

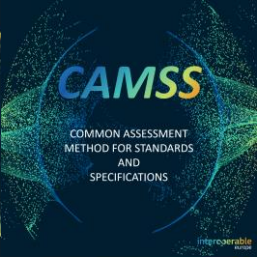
Integration of CAV into existing assessment tools and processes to provide a uniform language for assessments.

Production and publication of the assessments in linked data platforms.

Compare and find assessments from other MS implementing the CAV.

ELAP

European Library of Architecture Principles

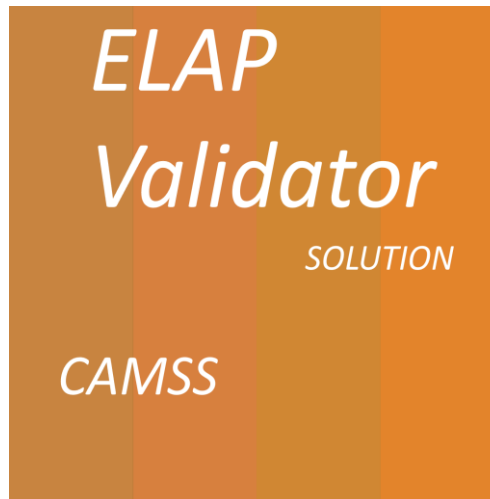


The ELAP is a library intended to direct government organizations in initiating changes and implementing IT projects. The principles are described in relation to relevant policy frameworks, established standards, building blocks and examples that are already available, so that they are as recognisable as possible in practice.

This library is implemented in the CarTool in the same way the EIRA Library of Interoperability Specifications (ELIS) is. In addition, ELAP will be also accessible through the CAMSS collection in Joinup.

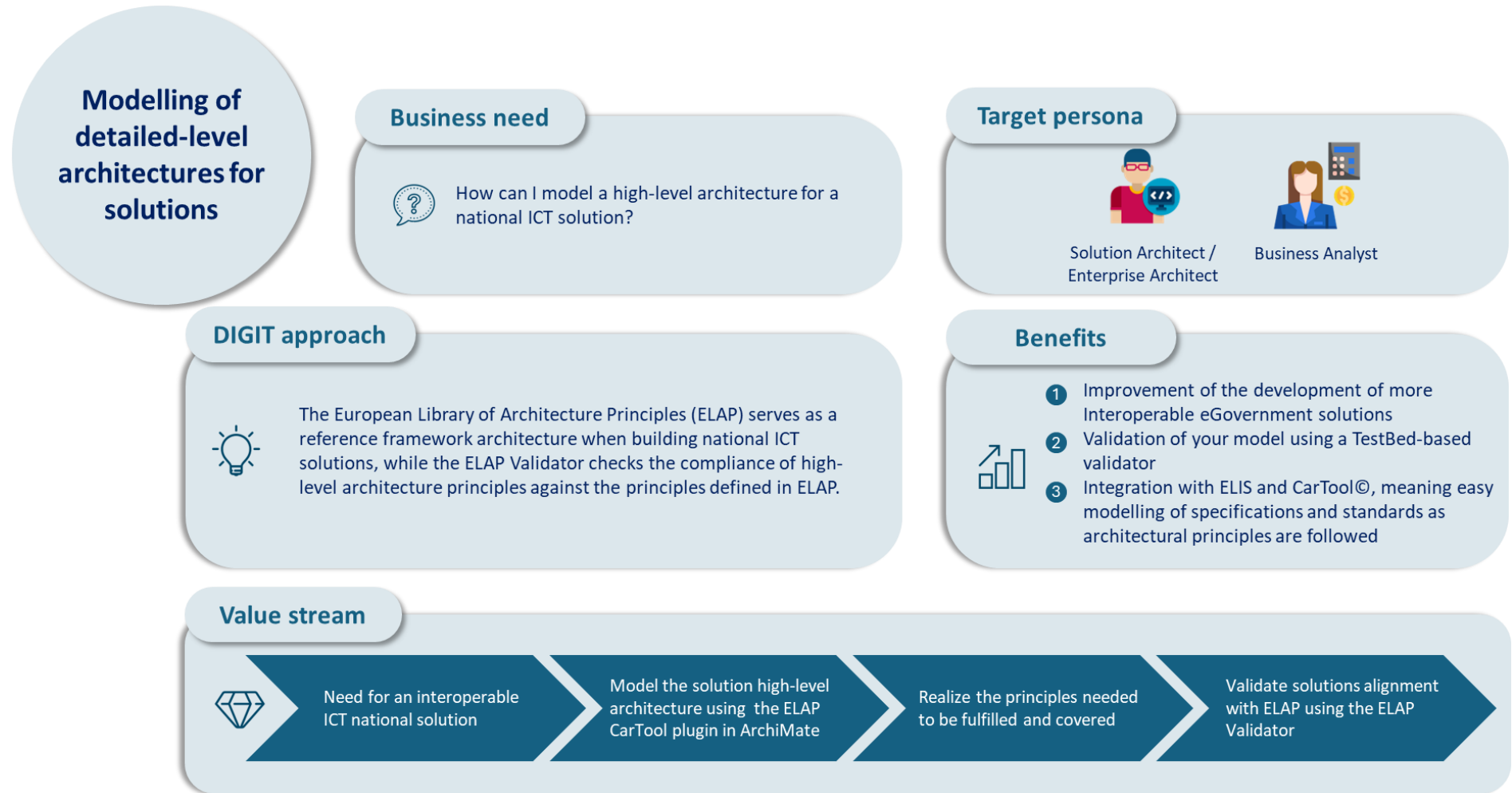
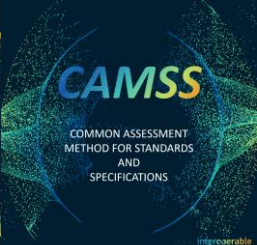


The **ELAP Validator** is a comprehensive tool developed to **address a variety of needs in the design and implementation of interoperability solutions** within public institutions in Europe. The ELAP Validator allows for the conformance testing of a designed solution against the principles and guidelines of ELAP



ELAP and ELAP Validator

Value Proposition



interoperable europe

innovation ∞ govtech ∞ community

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