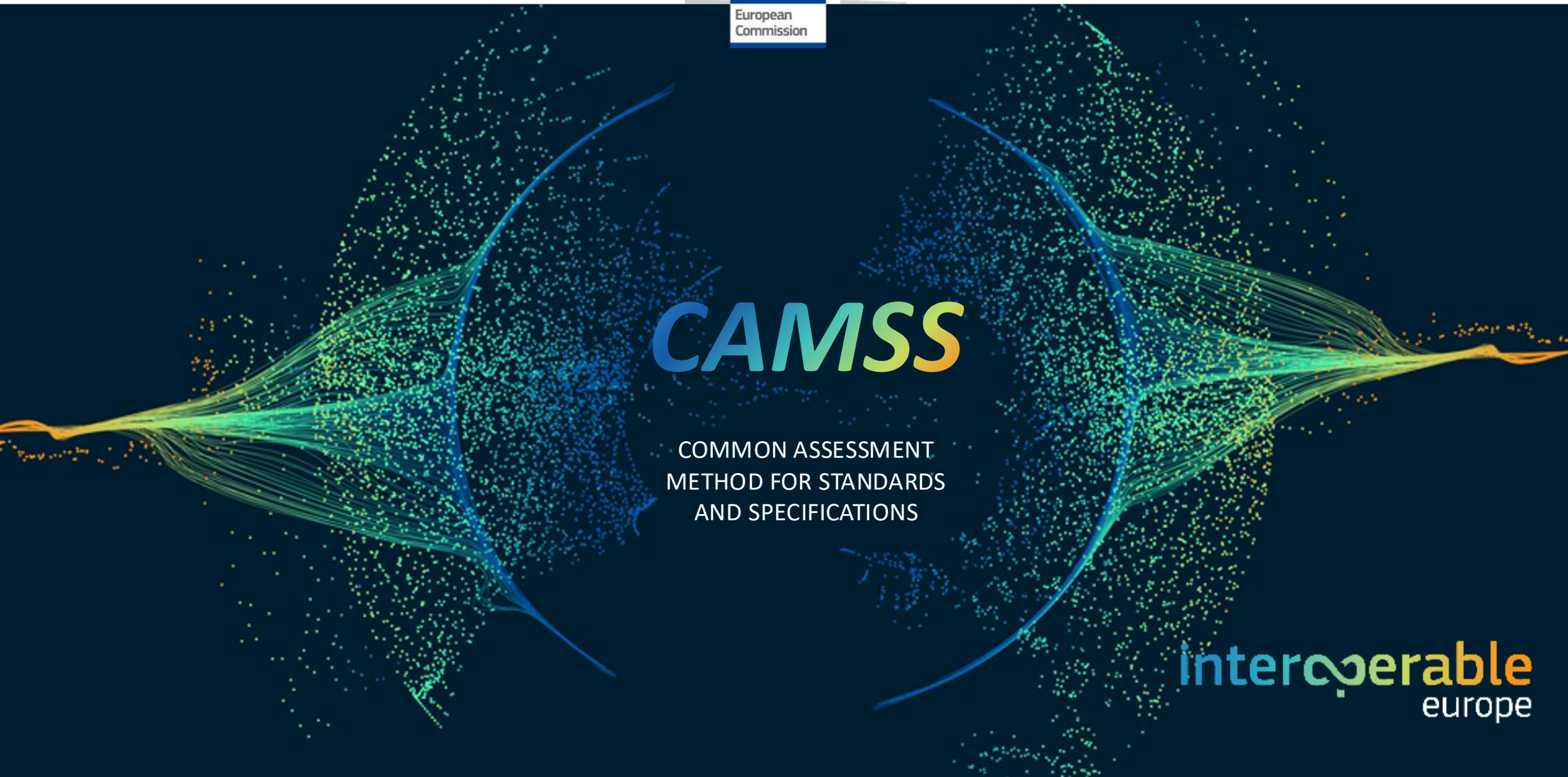

European Commission
CAMSS
COMMON ASSESSMENT METHOD FOR STANDARDS AND SPECIFICATIONS
interoperable europe

Tallinn Declaration
Overview

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

Interchange of data between administrations (IDA programme)

1995

ISA Programme

EIF v1

2004

Inspire Directive

Cyber Security and Privacy

eIDAS Regulation

Need for interoperability governance and integrated public service delivery

EIF v2

2010

NIFO project

Revised PSI Directive

European Interoperability Reference Architecture (EIRA)

Big data Open data

ISA² Programme

2017

Digital Single Market

2021

2024

"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"

European interoperability Framework (EIF)

New EIF Public consultation
Gathering stakeholders' views and contributing to the impact assessment and its possible improvement

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

Recommendations in short

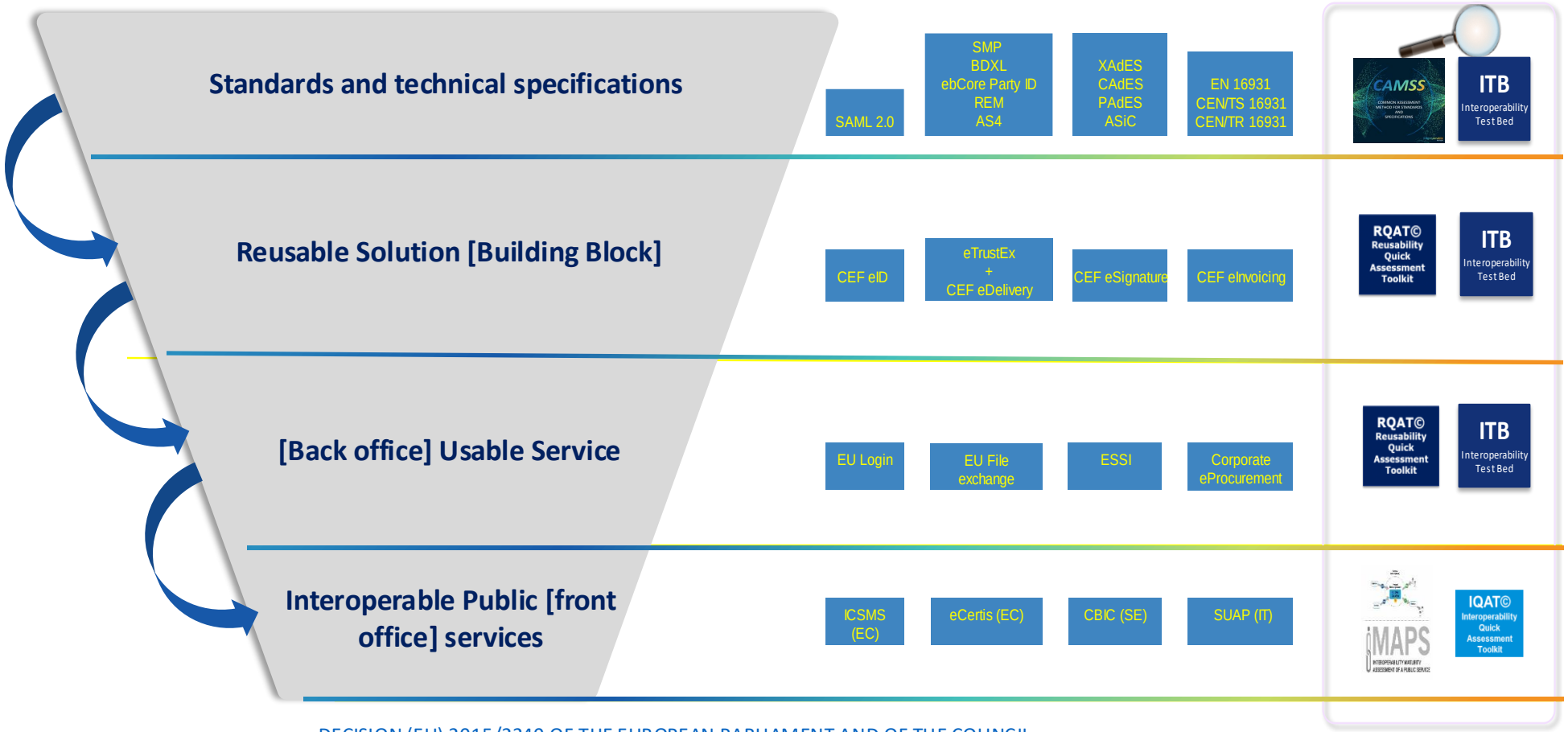
"Promotes electronic communication among European public administrations by providing a set of common models, principles and recommendations."

"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.**

EIRA supports EIF Implementation



DECISION (EU) 2015/2240 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

The Common Assessment Method for Standards and Specifications (CAMSS)

Do you struggle dealing with standards?

CAMSS Storyline

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 metametamodel 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

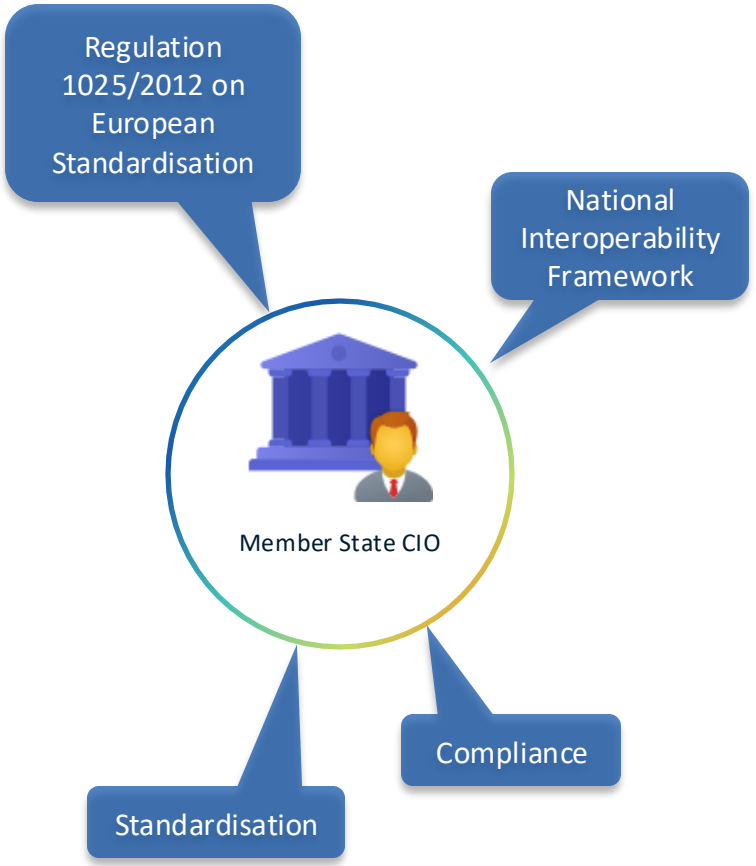
https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss

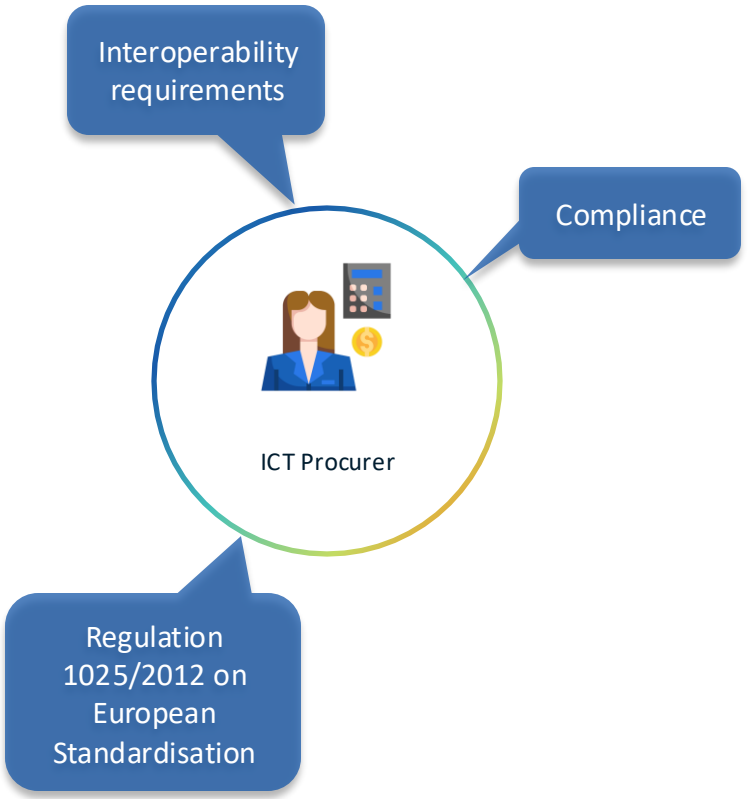
What's CAMSS?
Support for the Interoperable Europe Act

CAMSS contribution to the effective implementation of the Interoperable Europe Act

Article 3: Interoperability assessment	Article 6: EIF and specialised Interoperability Framework	Article 8: Interoperable Europe Portal	Article 9: Policy implementation support projects	Article 15: Interoperable Europe Board	Article 16: Interoperable Europe Community	Article 19: Interoperable Europe Agenda
CAMSS Assessment EIF Scenario can contribute to assess interoperability specifications.	CAMSS serves as a methodology that underpins both the EIF and Specialized IF. Its adaptability and collaborative nature make it a valuable tool for ensuring interoperability across diverse sectors and domains.	CAMSS is a valuable resource for the Interoperable Europe Portal, offering guidance on selecting standards and specifications that contribute to interoperability solutions.	CAMSS is a project that supports the implementation of the EIF. CAMSS has always been conceived as an initiative whose main purpose is to guide the development of interoperable digital public sector services.	CAMSS is a useful reference tool to monitor and propose recommended interoperability solutions. Through the ELIS, standards and specifications can be accessed for its sharing and reuse.	CAMSS aligns with Article 16 by providing a structured approach to standards assessment and selection, making its users valuable contributors to the Interoperable Europe Community.	CAMSS can contribute to the strategic agenda (Interoperable Europe Agenda) by providing insights into the assessment and selection of standards and specifications necessary for cross-border interoperability.
CAMSS Assessment EIF Scenario, ELIS	**CAMSS as a whole**	**CAMSS as a whole, ELIS**	**CAMSS as a whole**	**CAMSS as a whole**	**CAMSS as a whole**	**CAMSS as a whole/ELIS**

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.**
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.

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

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 Conversor	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***

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/camss-assessments-library

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.

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-assessment-eif-scenario

CAMSS Assessments EIF Scenario
Value Proposition

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

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-assessment-eif-scenario

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.

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-assessment-msp-scenario

CAMSS Assessments MSP Scenario
Value Proposition

Assessment of specifications for referencing in ICT procurement

Business need

How can I assess the compliance of specifications with the European Standardisation Regulation 1025/2022 and provide clear technical requirements in procurement requests?

Target persona

ICT Procurer

Member State CIO

DIGIT approach

The CAMSS Assessment Multi-Stakeholder Platform (MSP) Scenario is dedicated to the assessment of formal specifications in the context of public procurement. The criteria used are laid out in Annex II of the European Regulation on Standardisation 1025/2012 as requirements for the identification of ICT technical specifications for their use in procurement.

Benefits

1. Alignment with the compliance standards set by the MSP
2. Exhaustive and thorough criteria covering all interoperability layers.
3. Assessment results shown as a convenient score through which to analyze the specification in its different interoperability dimensions.

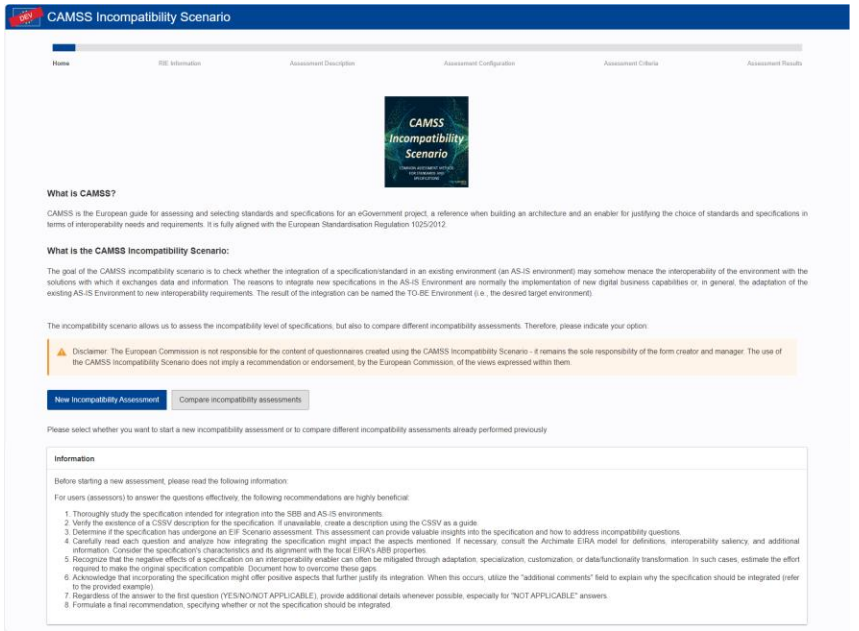
Value stream

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

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-assessment-msp-scenario

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

CAMSS as s Service
CAMSSaaS

"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.

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-service-camssaas

CAMSS as s Service
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https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-service-camssaas

CAMSSaaS
Value Proposition

On-demand assessments of specifications

Business need

Which tools can help me assess a specification against EIF requirements or an ICT procurement framework?

Target persona

Solution Architect / Enterprise Architect

ICT Procurer

Member State CIO

DIGIT approach

CAMSS as a Service (CAMSSaaS) offers on-demand service where there is a need to verify the conformity of a given specification using one of the CAMSS Assessment Scenarios and choosing between 3 different service modalities (CAMSSaaS Assessment, CAMSSaaS Content review, and CAMSSaaS compliance review)

Benefits

1. Easy procedure with fast outcome results and zero costs
2. 3 types of assessment modalities depending on the user's specific needs and requirements
3. Continuous support and availability of the team throughout the process

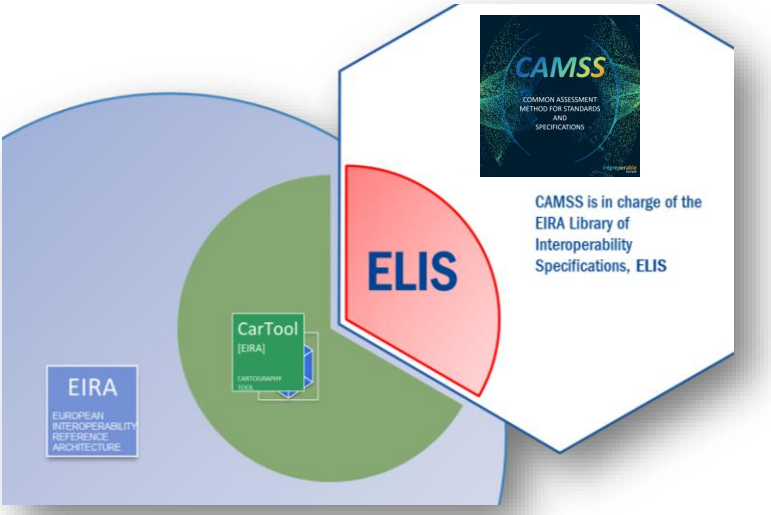
Value stream

- Choose one of the CAMSSaaS modalities that best fits my needs
- Review the proposed specification's conformance to standardization regulation and CAMSS criteria
- Review the result's interpretation in the shape of an Assessment Summary
- User feedback on the Assessment Summary outcome, and final satisfaction survey

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:

Link to metrics

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

ELIS
Value Proposition

Selection of best-in-class specifications for ICT solutions

Business need

How can I know which technical specification fits best for the design and development of a solution?

Target persona

Solution Architect / Enterprise Architect

ICT Procurer

DIGIT approach

The EIRA Library of Interoperability Specifications (ELIS) serves as a catalogue that extensively documents specifications and associates them to each of the EIRA Architecture Building Blocks (ABBs). In addition, all CAMSS Assessments with a higher score than 75% are included

Benefits

1. Inclusion of all specifications assessed with the CAMSS method
2. Documentation of specifications and guidance through ABBs easing the decision-making process of choosing the best fit-for-purpose specification
3. Yearly-update to guarantee the validity and accuracy of the information

Value stream

- Align solution's needs with the EIRA guidelines to Identify the ABBs that need to be fulfilled
- Find in the ELIS the specifications that best fit your requirements and its association with the EIRA ABBs
- Look for assessed specifications covering the needed ABBs to ensure seamless interoperability
- Retrieve all the documents in the CELLAR repository for more in-depth information retrieval

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).

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/core-standards-and-specifications-vocabulary-cssv

CSSV
Value Proposition

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

CAV
Core Assessment Vocabulary

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.

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/core-assessment-vocabulary-cav

CAV
Value Proposition

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.

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

ELAP Validator

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

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/elap-validator

ELAP and ELAP Validator
Value Proposition

Modelling of detailed-level architectures for solutions

Business need

How can I model a high-level architecture for a national ICT solution?

Target persona

Solution Architect / Enterprise Architect

Business Analyst

DIGIT approach

The European Library of Architecture Principles (ELAP) serves as a reference framework architecture when building national ICT solutions, while the ELAP Validator checks the compliance of high-level architecture principles against the principles defined in ELAP.

Benefits

1. Improvement of the development of more Interoperable eGovernment solutions
2. Validation of your model using a TestBed-based validator
3. Integration with ELIS and CarTool©, meaning easy modelling of specifications and standards as architectural principles are followed

Value stream

- Need for an interoperable ICT national solution
- Model the solution high-level architecture using the ELAP CarTool plugin in ArchiMate
- Realize the principles needed to be fulfilled and covered
- Validate solutions alignment with ELAP using the ELAP Validator

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