Contribution ID: ccd09e61-fdf4-4fbf-9c9f-3ea42b3de99e

Date: 05/06/2025 13:28:19

CAMSS Assessment EIF Scenario v6.0.0

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CAMSS Assessment EIF Scenario v6.0.0

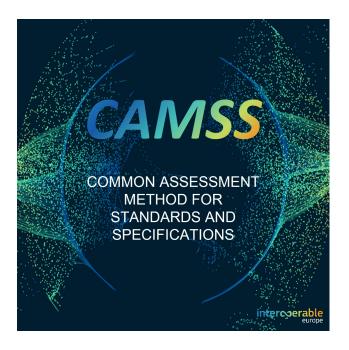


CAMSS

Release Date: 14/04/2023

Scenario Version: 6.0.0

INTRODUCTION



EIF Scenario

The European Interoperability Framework (EIF) provides guidance to public administrations on how to improve governance of their interoperability activities, establish cross-organisational relationships, streamline processes supporting end-to-end digital services, and ensure that existing and new legislation do not compromise interoperability efforts.

This CAMSS Scenario allows to assess the compliance of <u>interoperability specifications</u> 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.

Background

<u>CAMSS</u> is the European guide for assessing and selecting standards and specifications for an eGovernment project, a reference when building an architecture, and an enabler for justifying the choice of standards and specifications in terms of interoperability needs and requirements. It is fully aligned with the European Standardisation Regulation 1025/2012.

The main objective of CAMSS is achieving interoperability and avoiding vendor lock-in by establishing a neutral and unbiased method for the assessment of technical specifications and standards in the field of ICT. This method will be compliant with Regulation 1025/2012 on European Standardisation.

While ICT solutions have specific characteristics at the political, legal, and organisational levels; semantic and technical interoperability are based mostly on technical specifications or standards. Within the context of the elaboration of their National Interoperability Frameworks, Member States organise the assessment of technical specifications or standards, in order to establish their national recommendations. Deciding on the recommended technical specifications or standards often calls for a resource-intensive and time-consuming assessment. In order to tackle this, the Digital Europe Programme (DEP) defines an action focused on the development of a common assessment method for standards and specifications (CAMSS).

The purpose of CAMSS is:

- to ensure that assessments of technical ICT specifications or standards and interoperability profiles are performed according to high and consistent standards;
- to ensure that assessments will contribute significantly to the confidence in the interoperability of systems implementing these specifications and profiles;
- to enable the reuse, in whole or in part, of such assessments;
- to continuously improve the efficiency and effectiveness of the assessment process for ICT technical specifications, standards, and interoperability profiles.

The expected benefits of the CAMSS are:

- Ensuring greater transparency throughout the selection of standards in the context of ICT strategies, architectures, and interoperability frameworks. This will be achieved through the establishment of a commonly agreed assessment method, assessment process, and a list of assessment attributes.
- Reducing resource and time requirements and avoiding duplication of efforts. (Partial) sharing of finalised assessments of standards and specifications.
- Allowing easier and faster assessments, and reusing the ones already performed through the creation and maintenance of a library of standards.

Your compliance level of the specification assessed depends on the scores you achieved in each section of the survey. Please see below the survey score conversion table below for guidance.

			Compliance Level		
Section	Ad-hoc	Opportunistic	Essential	Sustainable	Seamless
Principles setting the context for EU Actions on Interoperability	20	40	60	80	100
EIF Core Interoperability Principles	0 to 340	341 to 680	681 to 1020	1021 to 1360	1361 to 1700
EIF Principles Related to generic user needs and expectations	0 to 240	241 to 480	481 to 720	721 to 960	961 to 1200

EIF Foundation principles for cooperation among public administrations	0 to 100 101 to 200 ic		201 to 300	301 to 400	401 to 500
EIF Interoperability Layers	0 to 200	201 to 400	401 to 600	601 to 800	801 to 1000

The following table shows the 'compliance levels' that a specification can reach depending on the assessment score.

Compliance Level	Description
Ad-hoc	Poor level of conformance with the EIF - The specification does not cover the requirements and recommendations set out by the EIF in this area.
Opportunistic	Fair level of conformance with the EIF - The specification barely covers the requirements and recommendations set out by the European Interoperability Framework in this area.
Essential	Essential level of conformance with the EIF - The specification covers the basic aspects set out in the requirements and recommendations from the European Interoperability Framework.
Sustainable	Good level of conformance with the EIF scenario - The specification covers all the requirements and recommendations set out by the European Interoperability Framework in this area.
Seamless	Leading practice of conformance level with the EIF - The specification fully covers the requirements and recommendations set out by the European Interoperability Framework in this area.

Contact: For any general or technical questions, please send an email to DIGIT-CAMSS@ec.europa.eu. Follow all activities related to the CAMSS on our CAMSS community page.

USER CONSENT

Disclaimer:

By no means will the Interoperability Specification assessment imply any endorsement of the EC to the assessed specification. Likewise, the use of CAMSS Assessment EIF Scenario implies that the user accepts that the EC is not liable on the assessment nor on any direct or indirect consequence/decision of such assessment.

The CAMSS Assessment EIF Scenario is based on EU Survey, by accepting the CAMSS Privacy Statement the user also accepts EU Survey <u>Privacy Statement</u> and the <u>Terms of use</u>.

* Please, fill in the mandatory* information to start the assessment

▼I have read and agreed to the following CAMSS Privacy Statement: here
I agree to be contacted for evaluation purposes, namely to share my feedback on specific DEP solutions and actions and on the DEP programme and the European Interoperability Framework in general.
This assessment is licensed under the European Union Public License (EUPL)
IDENTIFICATION
Information on the information provider
Your Last name
Your First Name
CAMSS Team
Your Position / Role
Todi i osition / Hole
* Your Organisation
European Commission
Vous Contact whose number
Your Contact phone number
* Would you like to be contacted for evaluation purposes in the context of your assessment? To see how
your data is handled, please check again the Privacy statement here
In case you would like to be contacted, please select "yes" and provide your email. Yes
No
* Where did you learn about CAMSS?
DEP Programme (DEP website, DEP social media)
O Joinup (e.g., CAMSS Collection, Joinup social media)
 European Commission Public Administrations at national, regional or local level
Standards Developing Organizations (SDOs)
Other

If you answered "Other" in the previous question, please specify how:

Information on the specification	
* Specification type	
Specification: Set of agreed, descriptive, and normative statements about how a specification should be designed.	ned
or made.	
Standard: Specification that is largely adopted and possibly endorsed. Application Profile: An application profile "quaterpiese and as more quieting enceifications naturally for a give	
Application Profile : An application profile "customises one or more existing specifications potentially for a give use case or a policy domain adding an end to end narrative describing and ensuring the interoperability of its	; i i
underlying specification(s)".	
Family : A family is a collection of interrelated and/or complementary specifications, standards, or application	
profiles and the explanation of how they are combined, used, or both.	
Specification	
Standard	
Application Profile	
Family of Specification	
* Title of the specification	
ebXML RegRep	
* Version of the specification	
4.0.0	
* Description of the specification	
ebXML RegRep can ease the provision of means for the identification, description and parametrisation (e.	a.
Metadata, semantics & ontologies, interoperability about access, authentication, authorisation, transport	,
security configuration, etc.) of services.	
* URL from where the specification is distributed	
https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html	
the second website of the standard developing (setting expension tips (CDO/CCO) of the seconification	
*Name and website of the standard developing/setting organisation (SDO/SSO) of the specification W3C (https://www.w3.org)	
OASIS (https://www.oasis-open.org/)IEEE (https://standards.ieee.org/)	
ETSI (https://www.etsi.org/)	
GS1 (https://www.eisi.org/)	
openEHR (https://www.openehr.org/)	
- oponiem (mtps://www.oponom.org/)	

IETF (https://www.ietf.org/)

Other (SDO/SSO)
Contact information/contact person of the SDO
a) for the organisation
b) for the specification submitted
Information on the assessment of the specification
Reason for the submission, the need and intended use for the specification.
If any other evaluation of this specification is known, e.g. by Member States or European Commission projects, provide a link to this evaluation.
Considerations
Is the functional area of application for the formal specification addressing interoperability and eGovernment? YES NO

Additional Information

ebXML enhances interoperability by providing a standardised framework for exchanging XML-based business messages. It enables seamless integration and communication between different systems and organisations. The specification supports the creation of Collaboration Protocol Agreements (CPA), facilitating consistent and reliable data exchange.

EIF PRINCIPLES SETTING THE CONTEXT FOR EU ACTIONS ON INTEROPERABILITY

This category is related to the first underlying principle (<u>UP</u>) of the EIF Subsidiarity and Proportionality (UP1). The basis of this principle is to ensure that the EU Actions are taken or stated to improve national actions or decisions. Specifically, it aims to know if National Interoperability Frameworks are aligned with the EIF.

Please note that some of the questions have a prefilled answer depending on the SDO. To ensure it, please see that these questions include a help message that remarks it.

Subsidiarity and Proportionality

* A1 - To what extent has the specification been included in a national catalogue from a Member State whose National Interoperability Framework has a high performance on interoperability according to National Interoperability Framework Observatory factsheets?

EIF 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.

This criterion assesses if the specifications have been included within the National Catalogues of Specifications of the Member States that are highly aligned with the higher level of performance in terms of interoperability.

The Digital Public Administration Factsheets use three categories to evaluate the level of National Interoperability frameworks in accordance with the EIF. The three categories are 1. CONCEPTUAL MODEL FOR INTEGRATED PUBLIC SERVICES PROVISION; 2 INTEROPERABILITY LAYERS, and 3. INTEROPERABILITY PRINCIPLES. National Interoperability Frameworks reports can be found here: https://joinup.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/digital-public-administration-factsheets-2021

- Not Answered
- Not Applicable
- The specification has not been included within the catalogue of any Member State.
- The specification has been included within the catalogue of a Member State with a lower performance than stated in the Digital Public Administration Factsheets from the NIFO.
- The specification has been included within the catalogue of a Member State with a middle-lower performance than stated in the Digital Public Administration Factsheets from the NIFO.
- The specification has been included within the catalogue of a Member State with a middle-upper performance than stated in the Digital Public Administration Factsheets from the NIFO.
- The specification has been included within the catalogue of a Member State with a higher performance than stated in the Digital Public Administration Factsheets from the NIFO.

* Justification

exbXML is included in 1 national catalogues of recommended specifications. It belongs to Norway. The National Interoperability Framework (NIF) of Norway is aligned with at least 3 out of 4 scoreboards of the EIF Monitoring according to the National Interoperability Framework Observatory (NIFO) factsheets.

CAMSS list of standards:

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

NIFO Factsheets:

https://interoperable-europe.ec.europa.eu/collection/nifo-national-interoperability-framework-observatory/digital-public-administration-factsheets-2024

National Catalogue of Norway:

https://www.difi.no/fagomrader-og-tjenester/digitalisering-og-samordning/standarder

ebXBL RegRep reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

EIF CORE INTEROPERABILITY PRINCIPLES

In this category, elements related to the core interoperability principles (UP) are encompassed, which are: openness (UP 2), transparency (UP3), reusability (UP4), technological neutrality and data portability (UP5).

Openness

* A2 - Does the specification facilitate the publication of data on the web?

EIF Recommendation 2: Publish the data you own as open data unless certain restrictions apply.

Relates to the ability of the specification to publish data as open data or not.

- Not Answered
- Not Applicable
- The specification does not support the publication of data on the web.
- The specification supports the publication of data on the web but under a non-open license.
- The specification supports the publication of data on the web with an open license, but in an unstructured format.
- The specification supports publication of data on the web with an open license and in a structured, machinereadable format.
- In addition to the previous question, the specification does not require proprietary software for the processing of its related data.
- In addition to the previous question, the specification is or incorporates open standards (e.g. W3C).

* Justification

According to the 5 star Open Data model suggested by Tim Berners-Lee about how to publish linked data, the second star corresponds to the availability of data as structured data. ebXML is a standard that proposes an XML-based infrastructure enabling the user to store data in a structured manner. In addition, this specification has been established as an open standard.

Tim Berners-Lee 5-star schema for Open Data:

https://5stardata.info/en/

ebXML open standard:

https://www.oasis-open.org/2023/02/23/oasis-ebxml-repreg-v4-0-approved-as-international-standard/

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A3 - To what extent do stakeholders have the opportunity to contribute to the development of the specification?

EIF 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.

Relates to in which measure the different stakeholders that a specification can benefit have the opportunity to participate in the working groups focused on the development of certain specifications.

- Not Answered
- Not Applicable
- There is no information on the working group of the specification.
- The working group is open to participation by any stakeholder but requires registration, fees, and membership approval.
- The working group is open to participation by any stakeholder but requires fees and membership approval.
- The working group is open to participation following a registration process.
- The working group is open to all without specific fees, registration, or other conditions.

* Justification

This is an ISO International Standards. In this context, standards are developed by groups of experts called technical committees. These experts are put forward by ISO's national members. If a user interested in getting involved, they ought to contact their national standards body. Companies and individuals are not eligible to join ISO as members

OASIS ebXML Registry Technical Committee reference:

https://www.oasis-open.org/committees/comments/index.php?wg abbrev=regrep

Mail Lists and Comments reference:

https://www.oasis-open.org/committees/tc_home.php?wg_abbrev=regrep#feedback

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

ebXML RegRep ISO reference:

https://www.iso.org/standard/83479.html

* A4 - To what extent is a public review part of the release lifecycle?

EIF 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.

A public review consists of the public availability of the specification's draft for stakeholders to provide inputs for the improvement and fix of possible bugs.

- Not Answered
- Not Applicable
- Specification releases do not foresee public reviews.
- Public review is applied to certain releases depending on the involved changes.
- All major releases foresee a public review.
- All major and minor releases foresee a public review but, during which, collected feedback is not publicly visible.
- All major and minor releases foresee a public review during which collected feedback is publicly visible.

* Justification

Every International Standard published by ISO alone, or jointly with the IEC, is subject to a systematic review in order to determine whether it should be confirmed, revised/amended, converted to another form of deliverable, or withdrawn. Moreover, the specification has not been reviwed yet, and it is not a Publicly Available Standard (PAS).

ISO public review guide:

https://www.iso.org/files/live/sites/isoorg/files/store/en/PUB100413.pdf

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

ebXML RegRep ISO reference:

https://www.iso.org/standard/83479.html

* A5 - To what extent do restrictions and royalties apply to the specification's use?

EIF 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.

Additionally to the EIF's recommendation that refers to open-source software it applies to a specification in itself at any interoperability level (legal, organisational, semantic, or technical)

- Not Answered
- Not Applicable
- The specification has no public definition of its Intellectual Property Right (IPR) policy or licence.
- Use of the specification is restricted and requires the payment of royalty fees.
- Use of the specification is royalty-free but imposes an Intellectual Property Right (IPR) policy or licence that goes against Fair, Reasonable and Non-Discriminatory (F/RAND) principles.
- Use of the specification is royalty-free and its Intellectual Property Right (IPR) policy or licence is aligned with Fair, Reasonable and Non-Discriminatory (F/RAND) principles.

* Justification

The ISO 15000-3:2023 standard is protected by copyright, and its official version must be purchased from ISO or authorised bodies. While it can be implemented in systems, use of any embedded patents may require licensing under FRAND terms. Reproduction and distribution of the standard's content is restricted without permission. Thus, its application involves both access limitation and potential royalty considerations.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

ebXML RegRep ISO reference:

https://www.iso.org/standard/83479.html

* A6 - To what extent is the specification sufficiently mature for its use in the development of digital solutions/services?

EIF Recommendation 4: Give preference to open specifications, taking due account of the coverage of functional needs, maturity and market support, and innovation.

Maturity related to the stability of the specification, meaning that it has been evolved enough and mechanisms for its development have been put in place (Change Management processes, monitoring, etc.)

- Not Answered
- Not Applicable
- The specification has no published releases and no publicly accessible information on its development state.
- The specification is under development without published releases.
- The specification is under development with published preview releases.
- The specification has published major releases but without public documentation on its supporting processes (e.g. change management and release management).
- The specification, in addition to having major releases available, has published documentation on its supporting processes (e.g. change management and release management).

* Justification

The ebXML specification was started in 1999 as a joint initiative between the United Nations Centre for Trade facilitation and Electronic Business (UN/CEFACT) and Organization for the Advancement of Structured Information Standards (OASIS). A joint coordinating committee composed of representatives from each of the two organisations led the effort. In this context, four different versions have been launched since 1999, and each release can be found in the OASIS web. The current and latest version (4.0) was launched in 2012.

However, the specification has joined ISO recently, and in future releases it is possible that release management will not be available publicly.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

ebXML RegRep ISO reference:

https://www.iso.org/standard/83479.html

* A7 - To what extent has the specification sufficient market acceptance for its use in the development of digital solutions/services?

EIF Recommendation 4: Give preference to open specifications, taking due account of the coverage of functional needs, maturity and market support, and innovation.

Relates to how the specification is supported by the market, taking as a reference whether or not the specifications are widely used or implemented. There is an exception, and it is when the specification is used to implement innovative solutions, then, the specification should not be considered as failing to meet the requirements of the criterion.

-			
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60	IMOI	Answ	/erea

- Not Applicable
- There is no information about the specification's market uptake.
- The specification has known implementations but not enough to indicate market acceptance.
- The specification has widespread use indicating market acceptance.
- The specification has widespread use and relevant independent reports proving its market acceptance.
- The specification does not have market acceptance because it is directly used to create innovative solutions.

* Justification

The ebXML specification is an independent technology that takes a top-down approach to providing business process standardisation. In this context, the specification requirements also address interoperability, ubiquity, extensibility, security, transactions, and so on. Moreover, several initiatives in Europe have adopted the Universal Business Language (UBL), which is designed to be agnostic with respect to any EDI infrastructure and mapped to the ebXML core components.

Interoperable Europe Portal OASIS UBL reference:

https://interoperable-europe.ec.europa.eu/collection/eprocurement/solution/oasis-universal-business-language-ubl

"ebXML and Web services" study:

https://ieeexplore.ieee.org/abstract/document/1200304

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A8 - To what extent has the specification support from at least one community?

EIF 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.

Related to whether or not communities exist around the specification at any level legal, organisational, semantic, or technical contributions to its enhancement and development.

Not	Answered
INOL	Alloweled

Not Applicable

- There is no community linked to the specification.
- Specification support is available but as part of a closed community requiring registration and possibly fees.
- There is no specific community to support the specification but there are public channels for the exchange of help and knowledge among its users.
- There is a community providing public support linked to the specification but in a best-effort manner.
- There is a community tasked to provide public support linked to the specification and manage its maintenance.

* Justification

The ebXML specification has been published and is maintained by the Organization for the Advancement of Structured Information Standards (OASIS). In addition, the specification has joined now ISO organisation and it is now respnsible of the specification.

OASIS Commitee reference:

https://groups.oasis-open.org/communities/tc-community-home2?CommunityKey=eb27e05e-9bf5-4821-b1ed-018dc7d3f258

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

ebXML RegRep ISO reference:

https://www.iso.org/standard/83479.html

Transparency

* A9 - To what extent does the specification enable the visibility of administrative procedures, rules data, and services?

EIF Recommendation 5: Ensure internal visibility and provide external interfaces for European public services.

- Not Answered
- Not Applicable
- The specification hinders visibility.
- The specification neither promotes nor hinders visibility.
- The specification can contribute and promote the visibility of administrations, but it is not its main purpose.
- The specification can enable the visibility of administrations if combined with other specifications.
- The specification actively promotes and supports visibility.

* Justification

ebXML provides a set of components enabling users to store and work with any type of electronic content, fostering the visibility of administrations. As well as providing an electronic data interchange model (the ebRIM and the ebRS core components), the specification contributes and promotes to some degree to the visibility of public services' implementations.

ebRIM component reference:

http://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-rim-v4.0-os.html

ebRS component reference:

http://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-rs-v4.0-os.html

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A10 - To what extent does the specification scope comprehensibly administrative procedures, rules data, and services?

Not Answered
Not Applicable
The specification hinders comprehensibility.
The specification neither promotes nor hinders comprehensibility.
The specification can contribute and promote the comprehensibility of administrations, but it is not its main
purpose.
The specification can scope the comprehensibility of administrations if combined with other specifications.
The specification actively promotes and supports comprehensibility.

EIF Recommendation 5: Ensure internal visibility and provide external interfaces for European public services.

* Justification

The ebXML specification includes detailed guidelines for business process modeling, which helps in defining and automating administrative procedures. Additionally, the registry and repository components manage metadata about services, facilitating efficient discovery and access. Finally, the messaging services ensure reliable and secure delivery of business information, which is crucial for handling administrative data.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A11 - To what extent does the specification enable the exposure of interfaces to access the public administration's services?

EIF Recommendation 5: Ensure internal visibility and provide external interfaces for European public services.

Relates to ensuring availability of interfaces with internal information systems. As the EIF defines: *Public administrations operate a large number of what are often heterogeneous and disparate information systems in support of their internal processes. Interoperability depends on ensuring the availability of interfaces to these systems and the data they handle. In turn, interoperability facilitates the reuse of systems and data and enables these to be integrated into larger systems.*

	Not Applicable
	The specification prevents the exposure of such interfaces.
	The specification neither promotes nor hinders the exposure of such interfaces.
\odot	The specification can contribute to the exposure of interfaces, but it is not its main purpose.
	The specification can enable the exposure of interfaces if combined with other specifications.

The specification enables exposure of such interfaces.

* Justification

Not Answered

The ebXML specification greatly enhances the exposure of interfaces for accessing public administration services. It provides a standardised framework for electronic business information exchange, ensuring interoperability between systems. The messaging services enable reliable and secure delivery of electronic business messages. The registry and repository components help in discovering and accessing services efficiently.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Reusability

* A12 - To what extent is the specification usable beyond the business-specific domain, allowing its usage across business domains?

EIF Recommendation 6: Reuse and share solutions, and cooperate in the development of joint solutions when implementing European public services.

Relates to the use of the specification beyond a specific business domain. E.g. a specification developed under the eHealth domain that can be used in other domains or not.

- Not Answered
- Not Applicable
- The specification is tied to a specific domain and is restricted from being implemented or used in other domains.
- The specification is associated with a specific domain but its implementation and/or use in other domains is difficult
- The specification is associated with a specific domain but could be partially implemented and/or used in other domains.
- The specification is associated with a specific domain but could be implemented and/or used 'as-is' to other domains.
- The specification is domain-agnostic, designed to be implemented and/or used in any domain.

* Justification

The ebXML specification was originally designed to be associated with business processes. In this sense, the ebXML working groups included a section dedicated to "business processes." Additionally, the "XML and Global Business Exchanges - an invitation" document states that the specification aims to be a global initiative to develop an open technical framework, enabling XML to be utilised in a consistent and uniform manner for the exchange of all electronic business data. However, it does not state that the specification cannot be used in other domains. Therefore, although it is designed to be implemented in a business context, it can be considered domain-agnostic.

ebXML business domain:

https://xml.coverpages.org/ebXML.html

"XML and Global Business Exchanges - an invitation" document:

https://xml.coverpages.org/ebXMLInvit.pdf

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Technological Neutrality and Data Portability

* A13 - Is the specification technology agnostic?

EIF Recommendation 8: Do not impose any technological solutions on citizens, businesses, and other administrations that are technology-specific or disproportionate to their real needs.

Technology-neutrality relates to not being dependent on any other ("sister") specifications, and platform-neutrality, not being dependent on any specific environment, web platform, operating system.	
Not Answered Not Answered	
Not Applicable No. No.	
NO NEC	
O YES	
Justification	_
The ebXML specification extends XML standard. In this context, XML is technology agnostic, therefore ebXML can also be considered as a technology agnostic specification.	
ebXML RegRep OASIS reference:	
https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html	
A14 - Is the specification platform agnostic? <u>EIF Recommendation 8:</u> Do not impose any technological solutions on citizens, businesses, and other administrations that are technology-specific or disproportionate to their real needs.	
Technology-neutrality relates to not being dependent on any other ("sister") specifications, and platform-neutrality, not being dependent on any specific environment, web platform, operating system. Not Answered Not Applicable NO YES	
Justification	
The ebXML specification extends XML standard. In this context, XML is platform agnostic, therefore ebXML can also be considered as a platform agnostic specification. ebXML RegRep OASIS reference: https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html	
A15 - To what extent does the specification allow for partial implementations? EIF Recommendation 8: Do not impose any technological solutions on citizens, businesses, and other administrations that are technology-specific or disproportionate to their real needs.	
Partial implementations refer to the application of specifications, not in their whole, but part of the requirements or features defined in the documentation.	
It can also be understood as the implementation of different profiles, which is also related to a certain set of requirements depending on the context of implementation. Not Answered	
 Not Applicable The specification is only meant to be used as a whole. The specification could be partially implemented but does not make specific provisions towards this 	

The specification could be partially implemented but includes only guidelines towards this rather than sets of requirements.

- The specification explicitly foresees sets of requirements that can be implemented incrementally.
- The specification explicitly foresees sets of requirements that can be implemented incrementally or separately.

* Justification

As can be seen on the Oracle documentation about ebXML MCD implementation, the specification can implement additional functionalities such as Message Control Documents (MCD), which serve as an interface between a back-end system and WebLogic Integration Business Connect for processing business messages. In this context, this implementation is optional and can be carried out incrementally to achieve new functions.

ebXML MCD implementation:

https://docs.oracle.com/cd/E13215 01/wlibc/docs81/admin/xml protocols.html#1032357

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A16 - Does the specification allow customisation?

EIF Recommendation 8: Do not impose any technological solutions on citizens, businesses, and other administrations that are technology-specific or disproportionate to their real needs.

A clear example of customizations is Core Vocabularies, which define a set of general requirements that could fit in any context and allow for the customization to fit specific business requirements in the implementation.

- Not Answered
- Not Applicable
- NO
- YES

* Justification

As can be seen on the Oracle documentation about ebXML MCD implementation, the ebXML specification can work with some components that can be customised. For example, Message Control Documents (MCD), which serve as an interface between a back-end system and WebLogic Integration - Business Connect for processing business messages. In this sense, when using MCD, some elements are optional to implement. However, the core elements of the specification cannot be customised.

ebXML MCD implementation:

https://docs.oracle.com/cd/E13215 01/wlibc/docs81/admin/xml protocols.html#1032357

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A17 - Does the specification allow extension?

EIF Recommendation 8: Do not impose any technological solutions on citizens, businesses, and other administrations that are technology-specific or disproportionate to their real needs.

A clear example of extension is Core Vocabularies, which are a set of general requirements fitting in different
contexts that can complement each other in a sort of extensibility practice to fit specific business requirements in
any implementation.

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Not Applicable

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YES

* Justification

ebXML allows extensibility or the addition of plugins in the specification's ebRIM and ebRS components. Although such extensibility is limited to some of the ebRIM and ebRS features, ebXML RegRep 4.0 - Part 1 and Part 2 specify how extensibility may be achieved, that is, either by extending ebRIM or modifying the ebRS service interface. It is the case of the ebXML RegRep SWG specification, which is an Open Geospatial Consortium's authoring of the ebXML specification and which deals with the use of geo-data in a variety of contexts.

ebXML RegRep Part 1, Extending ebRIM section:

http://docs.oasis-open.org/regrep/regrep-core/v4.0/csprd01/regrep-core-rim-v4.0-csprd01.

html#__RefHeading__39225_1821683062

ebXML RegRep Part 2, Cataloguer Plugin section:

http://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-rs-v4.0-os.

html# RefHeading 32575 422331532

ebXML RegRep SWG reference:

https://www.ogc.org/projects/groups/ebxmlregrepswg

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A18 - To what extent does the specification enable data portability between systems/applications supporting the implementation or evolution of European public services?

<u>EIF Recommendation 9:</u> 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.

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- Not Applicable
- The specification prevents or does not support data portability.
- The specification neither addresses data portability nor prevents it.
- The specification addresses data portability but without specific provisions to enable it.
- The specification introduces certain aspects that can contribute to enabling data portability.
- The specification explicitly addresses and enables data portability.

* Justification

An ebXML RegRep stores any type of electronic content, such as text documents, images, sound or video, and provides a set of protocols enabling data transfer among systems. For example, ebMS (part of the broader ebXML framework) contributes by providing the header structure necessary for message exchange

over AS4.

OOTS AS4 reference:

https://code.europa.eu/oots/tdd/tdd_chapters/-/tree/86290aa801fb9a8e56486fc49019addcc1321a95/OOTS-EDM/xml/Request-Response%20Samples

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

EIF PRINCIPLES RELATED TO GENERIC USER NEEDS AND EXPECTATIONS

This category includes all underlying principles from the EIF which are related to user needs. Principles included here are user-centricity (UP6), inclusion and accessibility (UP7), security and privacy (UP8), and multilingualism (UP9).

User-Centricity

* A19 - To what extent does the specification allow relevant information to be reused when needed?

<u>EIF Recommendation 13:</u> As far as possible under the legislation in force, ask users of European public services once-only and relevant-only information.

The Once-Only Principle is related to making the operations or transactions between administrations and stakeholders more efficient. It implies avoiding the provision of certain data or information twice or more when this information is already available for public administrations.

First European Data Space, Once Only Technical System (OOTS):

https://ec.europa.eu/digital-building-blocks/wikis/display/DIGITAL/Once+Only+Technical+System

Additional and relevant information can be found here: https://ec.europa.eu/cefdigital/wiki/display/CEFDIGITAL
/Once+Only+Principle

- Not Answered
- Not Applicable
- Information needs to be provided whenever this is needed.
- There is limited reuse of provided information.
- Provided information is reused, but this is not consistently done.
- Provided information is reused, but not in all scenarios.
- Information is provided once-only and reused as needed.

* Justification

The ebXML specification can help with the reuse of information by defining different mechanisms. In this sense, the specification provides a way to register business process sequences with related message exchanges. Additionally, in the context of OOTS (Once-Only Technical System) the ebXML specification provides the standardised structure necessary for relevant information to be identifiable, efficiently transported, and usable by receiving systems.

ebXML information reuse OOTS:

https://code.europa.eu/oots/tdd/tdd_chapters/-/tree/86290aa801fb9a8e56486fc49019addcc1321a95/OOTS-EDM/xml/Request-Response%20Samples

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Inclusion and Accessibility

* A20 - To what extent does the specification enable the e-accessibility?

EIF 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 the European or international level.

Examples of specifications addressing e-accessibility are, for instance, WAI-ARIA (https://www.w3.org/WAI /standards-guidelines/aria/) included within Web Content Accessibility Guidelines (WCAG) Overview (https://www.w3.org/WAI /standards-guidelines/wcag/).

- Not Answered
- Not Applicable
- The specification prevents or does not support e-accessibility.
- The specification neither addresses e-accessibility nor prevents it.
- The specification can contribute and promote e-accessibility, but it is not its main purpose.
- The specification can enable e-accessibility if combined with other specifications.
- The specification explicitly addresses and enables e-accessibility.

* Justification

The purpose of ebXML is not related to e-accessibility. Therefore this criterion is considered not applicable to the specification.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Privacy

* A21 - To what extent does the specification ensure the protection of personal data managed by Public Administrations?

<u>EIF Recommendation 15:</u> Define 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.

Relates to the actions that Public Administrations establish concerning sensitive information for the proper delivery of public services. The different actions imply the reception, classification, and exchange of such information.

Securing the right to the protection of personal data, by respecting the applicable legal framework for the large volumes of personal data of citizens, held and managed by Public administrations.

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Not Applicable

The specification hinders the protection of personal data.

The specification does not address the protection of personal data but neither prevents it.

The specification includes certain data protection considerations but without being exhaustive.

The specification explicitly addresses data protection but without referring to relevant regulations.

The specification explicitly addresses data protection and its alignment to relevant regulations.

* Justification

The ebXML specification can ensure the protection of personal data by establishing mechanisms such as encryption, using XML Encryption. As described in the Oracle document about security features, by using these mechanisms, public administrations can share information among themselves, ensuring that the information cannot be changed and is secured against possible attacks.

ebXML security:

https://www.oracle.com/technical-resources/articles/enterprise-architecture/ebxml-security1.html

XML Encryption:

https://www.w3.org/Encryption/2001/

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A22 - Does the specification provide means for restriction of access to information/data?

EIF Recommendation 15: Define 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.

The principle of confidentiality defines that only the sender and the intended recipient(s) must be able to create the content of a message. Confidentiality have compromised if an unauthorized person is able to create a message.

N	ot Answere	d
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Not Applicable

The specification prevents or does not support the implementation of confidentiality mechanisms/features.

The specification neither addresses confidentiality nor prevents it.

The specification addresses confidentiality but without specific provisions to enable it.

The specification introduces certain aspects that can contribute to enabling confidentiality.

The specification explicitly addresses and enables the implementation of features to guarantee confidentiality.

* Justification

The ebXML specification can prevent unauthorised data access by establishing authorisation and authentication mechanisms. As described in the Oracle document about security features, using these settings, organisations can ensure that data cannot be accessed by non-verified users, making it trustworthy and confidential.

ebXML security:

https://www.oracle.com/technical-resources/articles/enterprise-architecture/ebxml-security1.html

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A23 - Is the specification included in any initiative at European or National level covering privacy aspects?

EIF Recommendation 15: Define 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.

Securing the right to the protection of personal data, by respecting the applicable legal framework for the large volumes of personal data of citizens, held and managed by Public administrations.

Relates to the actions that Public Administrations establish concerning sensitive information for the proper delivery of public services. The different actions imply the reception, classification, and exchange of such information.

For example, the ETSI (Electronic Signatures and Infrastructures) family of specifications are part of the trust establishment of the eDelivery solution, ensuring that its implementation is salient to guarantee security and privacy.

- Not Answered
- Not Applicable
- Yes, but at national or regional level.
- Yes, at European level.

* Justification

The ebXML specification can be found in the e-CODEX system. In this system, the gateway is responsible for the basic exchange of communications. In this context, the ebXML and ebMS 3.0 specifications allow for the structuring of message headers, securing message exchange, and enabling global communication.

Eur-lex ebXML reference:

https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=CELEX%3A32022D2519&qid=1743495780482

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Security

Data processing and exchange

* A24 - To what extent does the specification enable the secure exchange of data?

<u>EIF Recommendation 15:</u> Define 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.

This relates to the actions that Public Administrations establish concerning sensitive information for the proper delivery of public services. The different actions imply the reception, classification, and exchange of such information.

- Not Answered
- Not Applicable
- The specification prevents or does not support the secure and trustworthy exchange of data.
- The specification introduces certain aspects that can contribute to enabling the secure exchange of data.
- The specification addresses data security and trustworthy data exchange but does not foresee specific provisions to enable them.
- The specification addresses data security and trustworthy data exchange but specific provisions to enable them are limited.
- The specification explicitly addresses and enables the secure and trustworthy exchange of data.

* Justification

The majority of real-world ebXML messages have unique XML-based, message-level security requirements, including digital signatures, non-repudiation, data privacy, and content-borne threat protection. As described in the Oracle document about security features, these message-level mechanisms provide protection over and above transient application layer security such as SSL/TLS. Therefore, the specification can help to ensure a secure exchange of data between users.

ebXML security:

https://www.oracle.com/technical-resources/articles/enterprise-architecture/ebxml-security1.html

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A25 - To what extent does the specification enable the secure processing of data?

<u>EIF Recommendation 15:</u> Define 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.

Relates to the actions that Public Administrations establish concerning sensitive information for the proper delivery of public services. The different actions imply the reception, classification, and exchange of such information.

- Not Answered
- Not Applicable
- The specification prevents or does not support the secure and trustworthy processing of data.
- The specification introduces certain aspects that can contribute to enabling the secure processing of data.
- The specification addresses data security and trustworthy data processing but does not foresee specific provisions to enable them.
- The specification addresses data security and trustworthy data processing but specific provisions to enable them are limited.
- The specification explicitly addresses and enables the secure and trustworthy processing of data.

* Justification

The message-level security standards employed by ebXML rely on XML Security operations such as XML Signature and XML Encryption. As described in the Oracle document about security features, the XML Encryption mechanism allows for the encryption of digital content, making data more secure and trustworthy.

ebXML security:

https://www.oracle.com/technical-resources/articles/enterprise-architecture/ebxml-security1.html

XML Encryption:

https://www.w3.org/Encryption/2001/

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Data authenticity

* A26 - To what extent the specification guarantees the authenticity and authentication of the roles agents involved in the data transactions?

EIF Recommendation 15: Define 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.

Authentication defines that users are who they request to be. Availability defines that resources are available by authorized parties; "denial of service" attacks, which are the subject matter of national news, are attacks against availability. The concerns of information security professionals are access control and Nonrepudiation.

Authorization defines the power that it can have over distinguishing authorized users from unauthorized users, and levels of access in-between. Authenticity defines the constant checks that it can have to run on the system to make sure sensitive places are protected and working perfectly."

- Not Answered
- Not Applicable
- The specification prevents or does not support the implementation of authentication features.
- The specification neither addresses authenticity nor prevents it.
- The specification addresses the implementation of authenticity features but without specific provisions to enable it.
- The specification introduces certain aspects that can contribute to enabling authenticity features.
- The specification explicitly addresses and enables the implementation of authenticity features.

* Justification

The ebXML specification uses message-level security mechanisms to enhance data security. As described in the Oracle document about security features, these mechanisms provide sender authentication for long-running transactions. Thus, by authenticating the data sender, it helps to identify whether a user is verified or not.

ebXML security:

https://www.oracle.com/technical-resources/articles/enterprise-architecture/ebxml-security1.html

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Data integrity

* A27 - To what extent information is protected against unauthorised changes?

EIF Recommendation 15: Define 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.

Integrity defines that information is protected against unauthorized changes that are not perceptible to authorized users; some incidents of hacking compromise the integrity of databases and multiple resources.

- Not Answered
- Not Applicable
- The specification prevents or does not support the implementation of data integrity mechanisms /features.
- The specification neither addresses data integrity nor prevents it.
- The specification addresses data integrity but without specific provisions to enable it.
- The specification introduces certain aspects that can contribute to enabling data integrity.
- The specification explicitly addresses and enables the implementation of features to guarantee data integrity.

* Justification

The ebXML specification can help guarantee data integrity by providing mechanisms such as digital signatures. In this context, XML digital signatures are used in ebXML to ensure data integrity on messages, existing authentication and authorisation schemes, as well as non-repudiation between entities. As described in the "Secure ebXML Business Transaction Models Applying Web Service Security Standards" article, SAML is recommended to provide identification, authentication, and authorisation, and is often used with XACML to allow or deny access to an XML resource.

Secure ebXML Business Transaction Models Applying Web Service Security Standards: http://article.nadiapub.com/IJSIA/vol6 no2/46.pdf

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Data accuracy

* A28 - To what extent does the specification ensure and enable data processing accuracy?

EIF Recommendation 15: Define 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.

The accuracy and completeness of information systems and the data supported within the systems should be an administration concern. The information which has been inappropriately changed or destroyed (by external or employees) can impact the organization. Each organization should make controls to provide that data entered into and saved in its automated files and databases are complete and accurate and provide the accuracy of disseminated data.

- Not Answered
- Not Applicable
- The specification prevents or does not support the implementation of data accuracy mechanisms/features.
- The specification neither addresses data accuracy nor prevents it.
- The specification addresses data accuracy but without specific provisions to enable it.
- The specification introduces certain aspects that can contribute to enabling data accuracy.

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The specification explicitly addresses and enables the implementation of features to guarantee data accuracy.

* Justification

As described on the Oracle documentation about security features, the ebXML specification includes mechanisms that help guarantee data accuracy, such as data encryption and user authentication. By authenticating users, it helps ensure that data comes from a reliable and trustworthy source. Additionally, other mechanisms, such as encryption, can help ensure that data has not been altered by an unauthorised user since it was sent.

ebXML security:

https://www.oracle.com/technical-resources/articles/enterprise-architecture/ebxml-security1.html

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Access Control

* A29 - To what extent does the specification provide an access control mechanism?

EIF Recommendation 15: Define 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.

The principle of access control decides who must be able to access what. For example, it must be able to define that user A can view the data in a database, but cannot refresh them. User A can be allowed to create updates as well. An access-control mechanism can be installed to provide this. Access control is associated with two areas including role management and rule management. Role management applies on the user side, whereas rule management targets the resources side.

- Not Answered
- Not Applicable
- The specification does not provide access control mechanisms.
- The specification neither addresses nor prevents access control mechanisms.
- The specification addresses access control mechanisms but without specific provisions to enable them.
- The specification introduces certain aspects that can contribute to enabling access control mechanisms.
- The specification explicitly foresees a set of requirements for the enabling of access control mechanisms.

* Justification

As described on the Oracle documentation about security settings, the ebXML specification provides authentication and authorisation mechanisms, helping to prevent unauthorised users from making changes to original data or accessing restricted information.

ebXML security:

https://www.oracle.com/technical-resources/articles/enterprise-architecture/ebxml-security1.html

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Multilingualism

* A30 - To what extent could the specification be used in a multilingual context?

<u>EIF Recommendation 16:</u> Use information systems and technical architectures that cater to multilingualism when establishing a European public service. Decide on the level of multilingualism support based on the needs of the expected users.

- Not Answered
- Not Applicable
- The specification cannot be used in a multilingual context.
- The specification could be used in a multilingual context but has no specific provisions to facilitate this.
- The specification foresees limited support for multilingualism.
- The specification foresees support for multilingualism but this is not complete.
- The specification is designed to fully support multilingualism.

* Justification

The purpose of ebXML is not related to the delivery of multilingual services. Therefore this criterion is not applicable to this specification.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

EIF FOUNDATION PRINCIPLES FOR COOPERATION AMONG PUBLIC ADMINISTRATIONS

This category includes the criteria aiming to evaluate principles related to collaboration amongst public organisations, business, and citizens. This is related to the underlying principles of administrative simplification (UP10), preservation of information (UP11), and assessment of effectiveness and efficiency (UP12).

Administrative Simplification

* A31 - Does the specification simplify the delivery of European public services?

EIF 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.

A positive answer would cover every specification easing digitalisation and administratice simplification by for example helping an Identification service access a Digital Portfolo with citizens information.

- Not Answered
- Not Applicable
- ON O
- YES

* Justification

The ebXML specification offers a standardised format for exchanging messages between users. In this context, the ebXML specification also facilitates business collaborations through the exchange of XML documents in a standardised format.

ebXML interoperability:

https://www.tutorialspoint.com/ebxml_quick_guide.htm

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A32 - Does the specification enable digital service delivery channels?

EIF 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.

A positive answer would cover that a specification eases or provides better means of delivering public services as a good asset for digitalisation and administrative simplification. For instance, a specification directly related to API performance easing and improving the delivery of a Digital Public Service through an API.

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Not	App	licable

- ON O
- YES

* Justification

The ebXML specification plays a crucial role in enabling digital services delivery channels by providing a standardised framework for exchanging XML-based business messages. This framework ensures secure and reliable communication between different systems, facilitating seamless integration and interoperability.

ebXML techtarget:

https://www.techtarget.com/searchcio/definition/ebXML

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Preservation of Information

* A33 - To what extent does the specification enable the long-term preservation of data/information /knowledge (electronic records included)?

EIF Recommendation 18: Formulate a long-term preservation policy for information related to European public services and especially for information that is exchanged across borders.

Relates to the capacity of the specification to contribute to the long-term preservation of information.

- Not Answered
- Not Applicable

- The specification prevents or does not support long-term preservation.
- The specification neither addresses the long-term preservation nor prevents it.
- The specification addresses the long-term preservation of electronic resources (information, data, etc) in a limited manner.
- The specification addresses long-term preservation of electronic resources (information, data, etc), but not in a complete manner.
- The specification explicitly addresses and enables long-term preservation.

* Justification

The ebXML specification allows for the registration of information, making it accessible to other organisations or users. Additionally, the specification supports the use of the Collaboration Protocol Profile (CPP), which provides information that can also be stored and accessed by other users.

ebXML information reuse:

https://www.tutorialspoint.com/ebxml/ebxml quick guide.htm

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Assessment of Effectiveness and Efficiency

* A34 - To what extent are there assessments of the specification's effectiveness?

<u>EIF Recommendation 19:</u> Evaluate the effectiveness and efficiency of different interoperability solutions and technological options considering user needs, proportionality, and balance between costs and benefits.

Related to the degree to which the specification is effective while using it. There are indirect methods to determine that the specification is effective, for instance when a solution that has an effective performance and uses the specification to deliver the expected service.

Effectiveness: the extent to which the specifications reach the expected action according to its purpose.

- Not Answered
- Not Applicable
- There are no such assessments.
- There are such assessments that indirectly address the specification.
- There are such assessments evaluating digital solutions' effectiveness that involve the specification.
- There are such assessments addressing the specification and its effectiveness together with other specifications.
- There are such assessments directly addressing the specification.

* Justification

The effectiveness of the ebXML specification has been assed by the Institute of Electrical and Electronics Engineers, dedicated to standardisation and development in technical areas. In the "ebXML: status, research issues, and obstacles" study, it is seen that the status of ebXML is adressed, and open research issues to be solved in order to meet some of the obstacles on the way to a commercial application of ebXML are identified.

"ebXML: status, research issues, and obstacles" study: https://ieeexplore.ieee.org/abstract/document/995093

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A35 - To what extent are there assessments of the specification's efficiency?

EIF Recommendation 19: Evaluate the effectiveness and efficiency of different interoperability solutions and technological options considering user needs, proportionality, and balance between costs and benefits.

Related to the good use of time and resources not wasted unnecessarily by a specification being used. There are indirect methods to determine that the specification is efficient, for instance, a solution delivering a service with an efficient performance that uses the specification.

Efficiency: times and means needed to achieve the results using the specification.

- Not Answered
- Not Applicable
- There are no such assessments.
- There are such assessments that indirectly address the specification.
- There are assessments evaluating digital solutions' efficiency that involve the specification.
- There are such assessments addressing the specification and its efficiency together with other specifications.
- There are such assessments directly addressing the specification.

* Justification

The efficiency of the ebXML specification has been assed by the Institute of Electrical and Electronics Engineers, dedicated to standardisation and development in technical areas. In the "ebXML and Web services" study, it is seen an overview of the ebXML and the Web services architecture (WSA) specifications. In this sense, it is also offered a comparision between both specifications.

"ebXML and Web services" study:

https://ieeexplore.ieee.org/abstract/document/1200304

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

EIF INTEROPERABILITY LAYERS

This category is aligned with the related interoperability models described in the EIF and apply to all the public services. It includes six layers: interoperability governance, integrated public service governance, legal interoperability, organisational interoperability, semantic interoperability, and technical interoperability covered by criteria A2 to A10 under the Openness category.

Interoperability Governance

* A36 - Is the (or could it be) specification mapped to the European Interoperability Architecture (EIRA)?

<u>EIF Recommendation 20:</u> Ensure holistic governance of interoperability activities across administrative levels and sectors.

The EIRA defines the required capabilities for promoting interoperability as a set of Architecture Building Blocks (ABBs). The association of specification to these ABBs means the capacity to enable Legal, Organisational, Semantic, or Technical aspects needed for the development of interoperable public services. This association can be taken from ELIS the EIRA Library of Interoperability Specifications (ELIS) but also can be established ad-hoc.

- Not Answered
- Not Applicable
- ON O
- YES

* Justification

ebXML is already associated to EIRA ABBs in the EIRA Library of Interoperability Specifications (ELIS). More specifically, ebXML can define the interoperability aspects of the "Registration" ABB of the EIRA Technical View.

EIRA Library of Interoperability Specifications (ELIS):

https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/elis/release/v610

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A37 - To what extent can the conformance of the specification's implementations be assessed?

EIF Recommendation 21: Put in place processes to select relevant standards and specifications, evaluate them, monitor their implementation, check compliance and test their interoperability.

Relates to the implementation of the specification being conformant with the requirements established in the text of the specification. There are different methods to ensure the conformance of an implementation: check manually if the implementation meets the requirements in the specification text (if any), use additional methods or resources provided to this purpose or use specific tools provided by the SDO developing the specification.

- Not Answered
- Not Applicable
- The specification does not include a definition of conformance.
- The specification defines conformance but not as a set of measurable requirements.
- The specification defines conformance as requirements that can be measured manually.
- The specification defines conformance as requirements with resources to enable automated measurement.
- The specification is complemented by a conformance testing platform to allow testing of implementations.

* Justification

Although there is no platform to test ebXML specification implementations, some papers addressing the testing can be found. The "Conformance Testing and Certification Framework" document offers a guide on how to test ebXML.

8 - Is the specification recommended by a European Member State?
ebXML RegRep OASIS reference: https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html
"Conformance Testing and Certification Framework" document: https://www.nist.gov/system/files/documents/itl/ssd/is/ebxml-test-framework.pdf

* A3

EIF Recommendation 23: Consult relevant catalogues of standards, specifications, and guidelines at the national and EU level, in accordance with your NIF and relevant DIFs, when procuring and developing ICT solutions.

Recommended specifications are these specifications that the Member States provide as examples for the implementation of certain digital public services or for being used when procuring these digital public services or solutions.

Not Answered
Not Applicable
NO

* Justification

YES

1 Member State is recommending ebXML in its ICT National Catalogue. It Member State is Norway.

CAMSS List of Standards:

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

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A39 - Is the specification selected for its use in a European Cross-border project/initiative?

EIF 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.

The European Commission set up a process for the identification and assessment of specifications for its use in the development of IT solutions and also when procuring them. Find here the commission implementing decisions that include th /eu

t	t include the specifications identified by the European Commission: https://ec.europa.eu/growth/single-marke
/(ropean-standards/ict-standardisation/ict-technical-specifications_en
_	
P	ditionally, there could be other situations where a specification can be selected for European projects or
iı	atives out of the scope of the above-mentioned context. These specifications can be considered positively in
t	assessment.
	Not Answered
	Not Applicable
	○ NO
	9 YES
* Jւ	tification

The ebXML specification can be found in the UBL 2.1, which is a library of standard electronic business
documents in XML (Extensible Markup Language) format that is free from copyright. UBL 2.1 operates within
a standardised commercial framework, such as ISO 15000 (ebXML), providing a complete and standardised
infrastructure.

ebXML UBL 2.1 eur-lex:

https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=CELEX%3A32014D0771&qid=1743495780482

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A40 - Is the specification included in an open repository/catalogue of standards at national level?

<u>EIF Recommendation 23:</u> Consult relevant catalogues of standards, specifications, and guidelines at the national and EU level, in accordance with your NIF and relevant DIFs, when procuring and developing ICT solutions.

<u>EIF Recommendation 6:</u> Reuse and share solutions, and cooperate in the development of joint solutions when implementing European public services.

- Not Answered
- Not Applicable
- ON O
- YES

* Justification

The ebXML specification is included in 1 Member State catalogue of recommended specifications. It Member State is Norway.

CAMSS List of Standards:

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

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A41 - Is the specification included in an open repository/catalogue of standards at European level?

<u>EIF Recommendation 23:</u> Consult relevant catalogues of standards, specifications, and guidelines at the national and EU level, in accordance with your NIF and relevant DIFs, when procuring and developing ICT solutions.

EIF Recommendation 6: Reuse and share solutions, and cooperate in the development of joint solutions when implementing European public services.

- Not Answered
- Not Applicable
- ON O
- YES

* Justification

Although the specification cannot be found in any repository of standards at the European level, ebXML is mentioned in the "Commission Implementing Decision (EU) 2022/2519 of 20 December 2022 on the

technical specifications and standards for the e-CODEX system, including for security and methods for integrity and authenticity verification" as a specification to improve the security and privacy of data.

"Commission implementing decision (EU) 2022/2519 of 20 December 2022 on the technical specifications and standards for the e-CODEX system, including for security and methods for integrity and authenticity verification" document:

https://eur-lex.europa.eu/legal-content/ES/TXT/?uri=CELEX%3A32014D0771&qid=1743495780482

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Legal Interoperability

* A42 - Is the specification a European Standard?

EIF 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.

European Standards are those standards developed by certain organisations dedicated to this purpose. CEN, CENELEC, and ETSI are the principal organisations and all of them are developing their standards under the basis of meeting the requirements established within the European Standardisation Regulation. CEN-CENELEC homepage: https://www.cencenelec.eu/

- Not Answered
- Not Applicable
- ON
- YES

* Justification

The ebXML specification is developed by a non-European organisation. Therefore, the specification cannot be considered a European standard.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Organisational Interoperability

* A43 - Does the specification facilitate the modelling of business processes?

EIF 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.

- Not Answered
- Not Applicable
- ON O
- YES

* Justification

ebXML provides a set of components enabling users to store and work with any type of electronic content. The specification's ebRIM and ebRS components provides an ebXML infrastructure model, as well as a service interface contributing to this end. Therefore, ebXML facilitates the modelling of business processes.

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

* A44 - To what extent does the specification facilitate organisational interoperability agreements?

EIF Recommendation 29: Clarify and formalise your organisational relationships for establishing and operating European public services.

Relates to specifications' capacities to help and ease the creation and formalisation of Interoperability agreements. E.g. Memorandums of Understanding (MoUs), Services Level Agreements (SLAs).

- Not Answered
- Not Applicable
- The specification's definition hinders the drafting of such agreements.
- The specification makes no provisions that would facilitate the drafting of such agreements.
- The specification defines certain elements to facilitate such agreements.
- The specification defines most elements to facilitate such agreements.
- The specification explicitly identifies all elements to be used in drafting such agreements.

* Justification

ebXML facilitates organisational interoperability agreements, as one of the specification's objectives is to boost interoperability within organisations. In this sense, it is noteworthy that it allows for the creation of a standardised framework to share XML documents. Moreover, it also enables the creation of a Collaboration Protocol Agreement (CPA).

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Semantic Interoperability

* A45 - Does the specification encourage the creation of communities along with the sharing of their data and results in national and/or European platforms?

EIF 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.

Relates to specifications that are narrowly related to the data/information being exchanged, its format, and structure. It would allow a common method/mechanism to improve its reuse and exchange removing possible limitations. An example of it could be RDF, which is used to describe information and its metadata using specific syntax and serialisation.

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Not Applicable

- Yes, but at national or regional level.
- Yes, at European platforms.

* Justification

The ebXML specification is assessed and discussed in various forums and across the Internet. For example, the ebXML Forum News discusses the specification. Additionally, there are many papers that explore ebXML and its implementation, such as the "EbXML simplified: a guide to the new standard for global ecommerce" document.

ebXML Forum News:

https://ebxmlforum.blogspot.com/

"EbXML simplified: a guide to the new standard for global e-commerce" document:

https://books.google.es/books?

hl=es&lr=&id=y5mwRBUXgAAC&oi=fnd&pg=PR3&dq=ebxml+&ots=yYosABWG9D&sig=wjypDYsboxfGo7abUyoaQFyIBSg&redir esc=y#v=onepage&q=ebxml&f=false

ebXML RegRep OASIS reference:

https://docs.oasis-open.org/regrep/regrep-core/v4.0/os/regrep-core-overview-v4.0-os.html

Useful links

CAMSS Joinup Page (https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss)

CAMSS Library of Assessments (https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/camss-assessments-library)

<u>CAMSS Assessment EIF Scenario - User Guide (https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-assessment-eif-scenario/camss-assessment-eif-scenario-quick-user-guide)</u>

Contact

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CAMSS Assessment EIF Scenario v6.0.0 - Results

CAMSS Assessment Result

Thank you for your contribution.

The score of the specification related to the scenario under which it is being evaluated depends on the scores achieved in each section of the survey. Please see the example below for guidance.

The following table shows the 'compliance levels' that a specification can reach depending on the assessment score.

EIF Scenario Compliance Level Conversion Table

		Compliance Level			
Section	Ad-hoc	Opportunistic	Essential	Sustainable	Seamless
Principles setting the context for EU Actions on Interoperability	20	40	50	80	90
EIF Core Interoperability Principles	0 to 340	341 to 681	681 to 1020	1021 to 1360	1361 to 1700
EIF Principles Related to generic user needs and expectations	0 to 240	241 to 480	481 to 720	721 to 960	961 to 1200

EIF Foundation principles for cooperation among public administrations	0 to 100	101 to 200	201 to 300	301 to 400	401 to 500
EIF Interoperability Layers	0 to 200	201 to 400	401 to 600	601 to 800	801 to 1000

The table below expresses the range of the score per section. When used in combination with the table above, the total score can be interpreted. See the example below for guidance.

Section Compliance Conversion Table

Compliance Level		Description		
	Ad-hoc	Poor level of conformance with the EIF - The specification does not cover the requirements and recommendations set out by the EIF in this area.		
	Opportunistic	Fair level of conformance with the EIF - The specification barely covers the requirements and recommendations set out by the European Interoperability Framework in this area.		
	Essential	Essential level of conformance with the EIF - The specification covers the basic aspects set out in the requirement and recommendations from the European Interoperability Framework.		
	Sustainable	Good level of conformance with the EIF scenario - The specification covers all the requirements and recommendations set out by the European Interoperability Framework in this area.		
	Seamless	Leading practice of conformance level with the EIF - The specification fully covers the requirements and recommendations set out by the European Interoperability Framework in this area.		

Example – How to find the final Compliance Level

Using the score reached after the initial assessment, the interpretation can be made as follows.

- 1. In the summary table, observe the score for each section, e.g. EIF Core Interoperability Principles has 1800 points.
- 2. In the middle table the Section Compliance Conversion Table see that this number correlates to a column. In our example, the 1800 points of Core Interoperability Principles fall in the EIF Core Interoperability Principles row, and '1441 to 1800' point range, placing it in the column 'Compliance **Seamless**'.

3. Next, in the top table – the EIF Scenario Compliance Level Conversion Table – we see Compliance Level " **Seamless**", and from its description that the specification for the EIF Core Interoperability Principles 'fully covers the requirements and recommendations set out by the European Interoperability Framework in this area.'.

For additional calculation of the assessment strength, please follow the instruction provided in the User Guide, found here.

Summary:



Section	Score for this Section	
EIF PRINCIPLES SETTING THE CONTEXT FOR EU ACTIONS ON INTEROPERABILITY	100 /100	
EIF CORE INTEROPERABILITY PRINCIPLES	1320 /1700	
EIF PRINCIPLES RELATED TO GENERIC USER NEEDS AND EXPECTATIONS	1180 /1200	
EIF FOUNDATION PRINCIPLES FOR COOPERATION AMONG PUBLIC ADMINISTRATIONS	480 /500	
EIF INTEROPERABILITY LAYERS	900 /1000	

Scores by Question:

EIF PRINCIPLES SETTING THE CONTEXT FOR EU ACTIONS ON INTEROPERABILITY

Score for this Section: 100/100

A1 - To what extent has the specification been included in a national catalogue from a Member State whose National Interoperability Framework has a high performance on interoperability according to National Interoperability Framework Observatory factsheets?

Your answer

✓ The specification has been included within the catalogue of a Member State with a higher performance than stated in the Digital Public Administration Factsheets from the NIFO.

100 out of 100 points

EIF CORE INTEROPERABILITY PRINCIPLES

Score for this Section: 1320/1700

A2 - Does the specification facilitate the publication of data on the web?

Your answer

✓ In addition to the previous question, the specification is or incorporates open standards (e.g. W3C).

100 out of 100 points

A3 - To what extent do stakeholders have the opportunity to contribute to the development of the specification?

Your answer

✓ The working group is open to participation by any stakeholder but requires fees and membership approval. 60 out of 100 points

A4 - To what extent is a public review part of the release lifecycle?

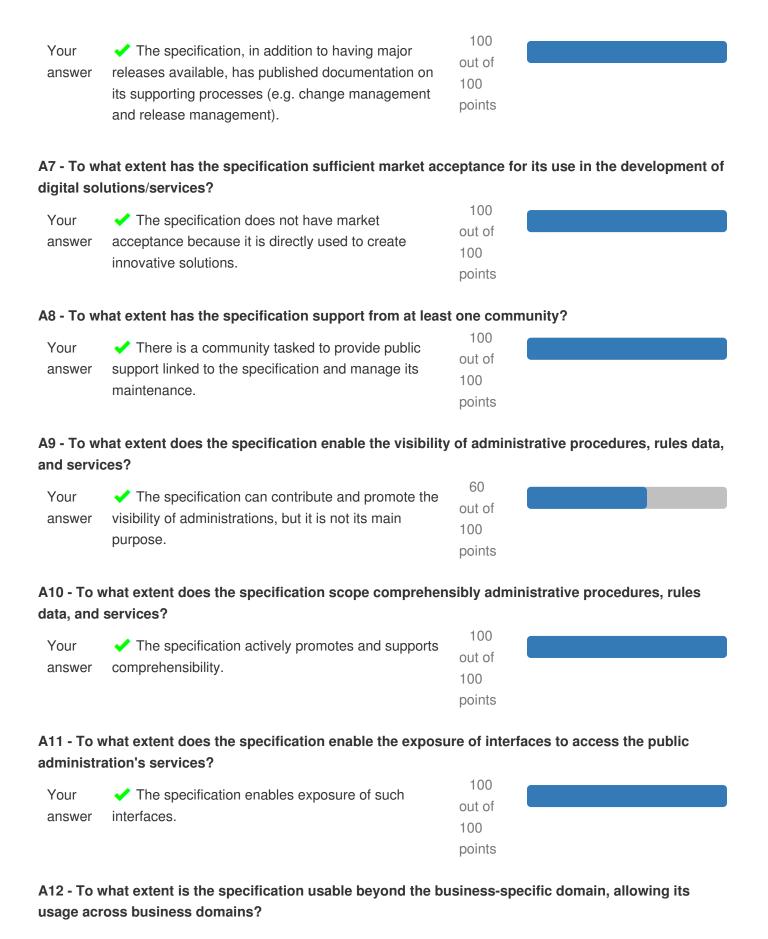
Your answer ✓ Public review is applied to certain releases depending on the involved changes. 40 out of 100 points

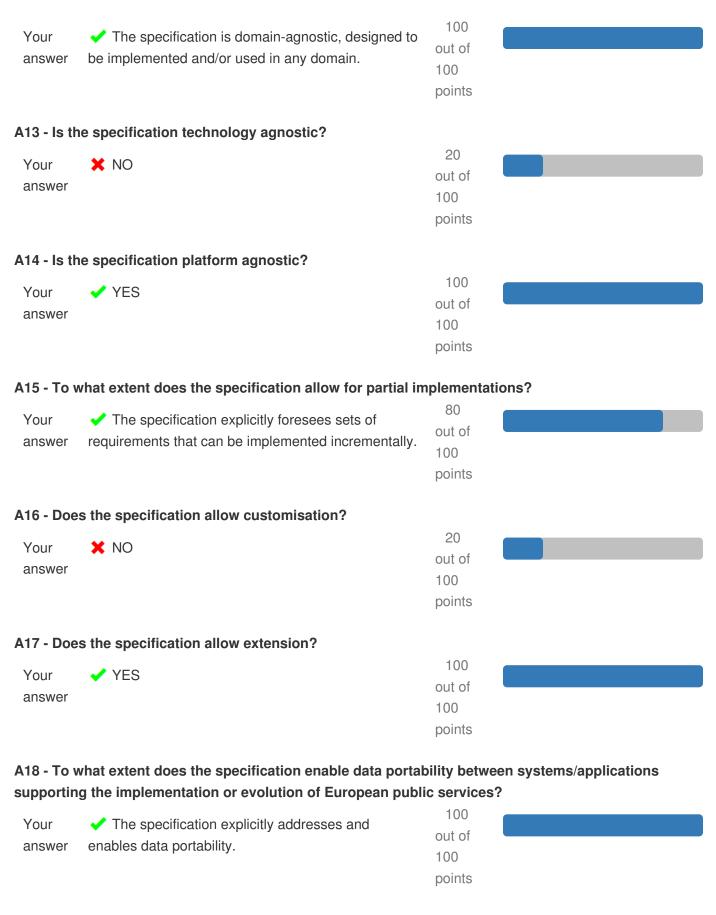
A5 - To what extent do restrictions and royalties apply to the specification's use?

Your answer

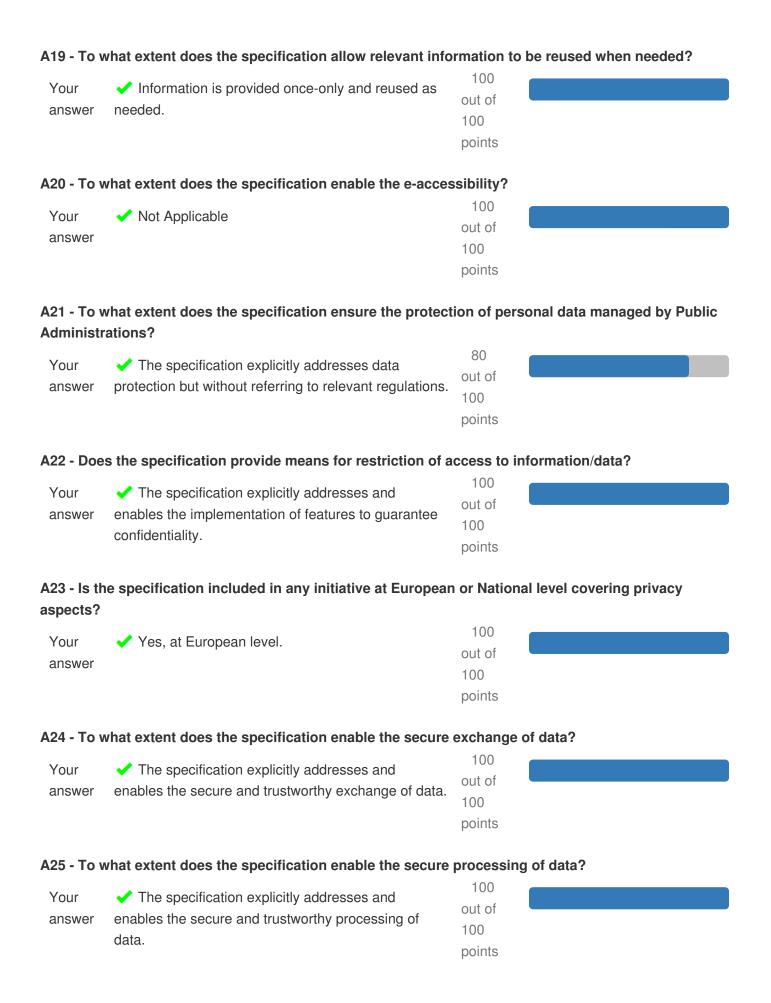
✓ Use of the specification is restricted and requires the payment of royalty fees. 40 out of 100 points

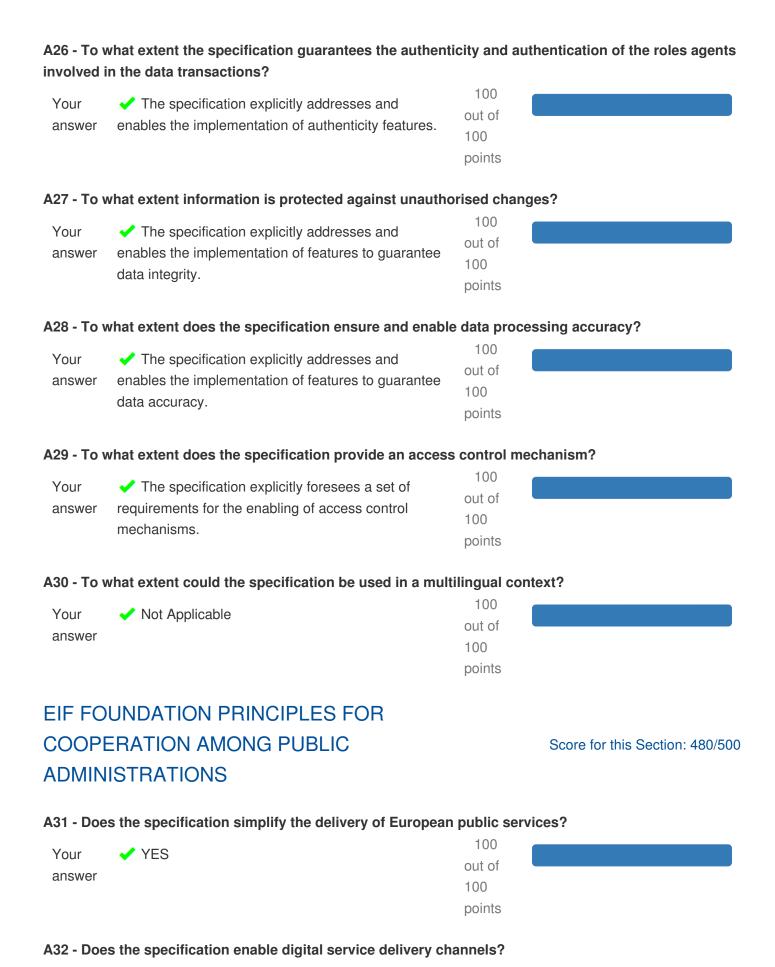
A6 - To what extent is the specification sufficiently mature for its use in the development of digital solutions/services?

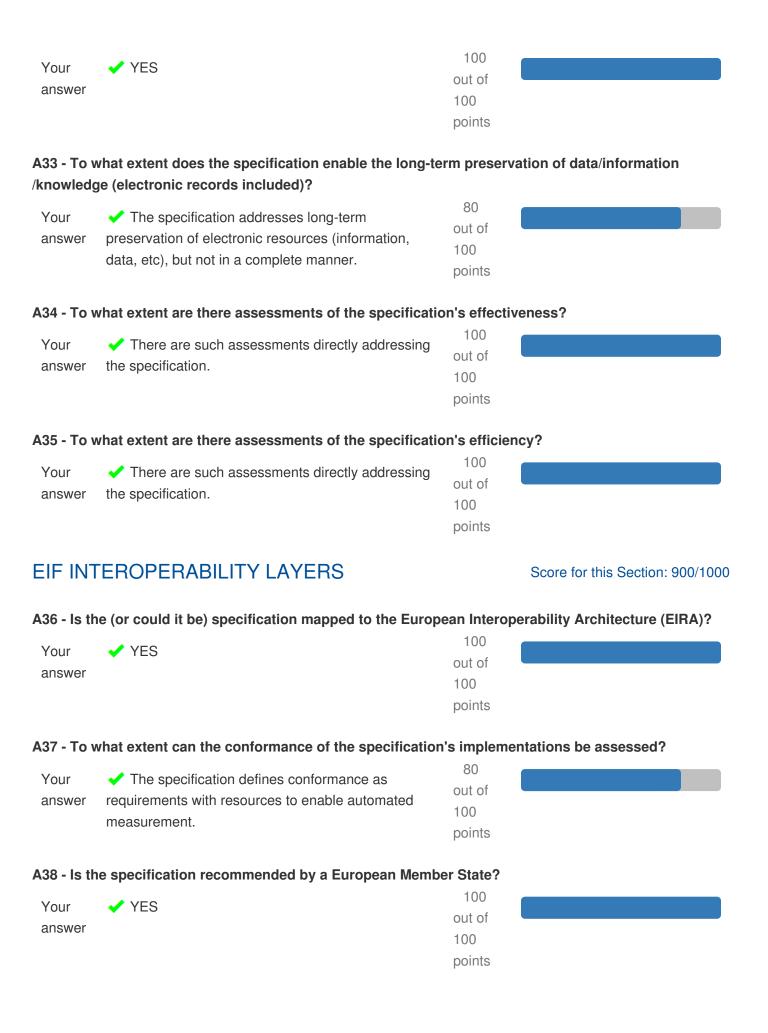


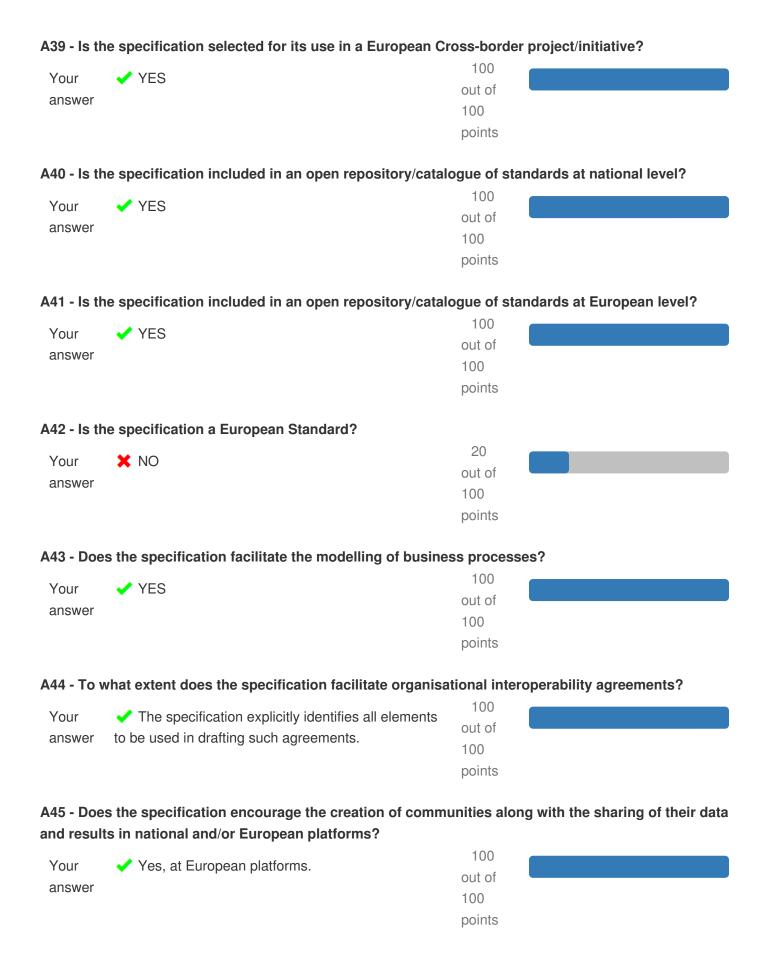


Score for this Section: 1180/1200









Contact <u>DIGIT-CAMSS@ec.europa.eu</u>

CAMSS Joinup Page

Useful links CAMSS Library of Assessments

CAMSS Assessment EIF Scenario - User Guide

Contribution ID ccd09e61-fdf4-4fbf-9c9f-3ea42b3de99e

Completed at 05/06/2025 13:28:19

Completion time -