

ASSESSMENT SUMMARY

XAdES (XML Advanced Electronic Signatures)

European Telecommunications Standards Institute (ETSI)

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1. INTRODUCTION

The present document is a summary of the assessment of XML Advanced Electronic Signatures, hereby XAdES carried out by the CAMSS Team using the CAMSS EIF assessment scenario. The purpose of this scenario is assessing the compliance of a standard or specification with the European Interoperability Framework (EIF)¹.

2. ASSESSMENT SUMMARY

XML Advanced Electronic Signatures, hereby **XAdES**, is an XML extension making the specification suitable for electronic signatures. XAdES is compliant with the European eIDAS regulation, which is the regulation for electronic identification and trust services for electronic transactions in the internal market. It is binding for all EU member states since 2014 having the same legal value of a written signature.

2.1. Interoperability principles

Interoperability principles are fundamental behavioural aspects that drive interoperability actions. They are relevant to the process of establishing interoperable European public services. They describe the context in which European public services are designed and implemented.

The specification fully supports the principles setting context for EU actions on interoperability:

- **Subsidiarity and proportionality**

XAdES is included in 7 national catalogues. They belong to Member States which comply with at least 4 out of 5 sections of the EIF according to the NIFO factsheets.

The specification fully supports the principles setting context for EU actions on interoperability:

- **Openness**

XAdES stakeholders have the opportunity to contribute to the development of the specification, is available for everyone to study and it is licensed through (F)RAND basis. Moreover, the specification is a royalty-free basis and has a high market acceptance as it is used throughout all the EU. Finally, it has a strong support for development through ETSI, one of the European Agencies for Standardisation.

- **Transparency**

XAdES fosters the visibility and comprehensibility of administrative rules, processes, data, services and decision-making of a public administration through the facilitation of the electronic signature.

¹ https://ec.europa.eu/isa2/eif_en

- **Reusability**

XAdES Baseline Profile has been made available for its reuse by ETSI and is a sector agnostic specification. Moreover, it is complying with the eIDAS European Directives.

- **Technological neutrality and data portability**

XAdES Baseline Profile is built over XML which is an open standard that made it independent from any technology. In addition, the specification is proportionate to the users needs as it has to be used throughout all the European Union.

The Technical Specification partially supports the principles related to generic user needs and expectations:

- **User-centricity**

XAdES fosters and eases the implementation of Once-Only Principle by allowing the eSignature. Moreover, it allows reducing the number of interactions between administrations and stakeholders by means of using electronic signature.

- **Inclusion and accessibility**

XAdES does not foster e-accessibility. The purpose of the specification is not related to e-accessibility.

- **Security and privacy**

XAdES is part of the electronic signature stack of specifications, this group of specifications are aimed to ensure the availability and validation of signed data, fostering secure and trustworthy data exchange.

- **Multilingualism**

The purpose of the specification is not related to multilingualism. Therefore, XAdES Baseline Profiles does not foster the delivery of multilingual European Public Services.

The Technical Specification partially supports the foundation principles for cooperation among public administrations:

- **Administrative Simplification**

XAdES implementation of eSignatures reduces the administrative burdens of the administration.

- **Preservation of information**

The purpose of XAdES is not related to the long-term preservation of electronic records and other kinds of information.

- **Assessment of effectiveness and efficiency**

There are document of the European Commission assessing the suitability of XAdES specification.

2.2. Interoperability layers

The interoperability model which is applicable to all digital public services includes:

- Four layers of interoperability: legal, organisational, semantic and technical;
- A cross-cutting component of the four layers, 'integrated public service governance';
- A background layer, 'interoperability governance'.

The Technical Specification supports the implementation of digital public services complying with the EIF interoperability model:

- **Interoperability governance**

The purpose of the specification is not related to the definition of organizational interoperability aspects. Moreover, the specification has assessed conformity of the implementations of the standard or specification according to the European Commission Mandate 460. Finally, it is widely accepted by the EU Member States in the national and supranational level, including cross-border projects.

- **Integrated public service governance & Legal interoperability**

XAdES promotes the intergration of public services, the European Commission has stated an Implementing decision (2015/1506) where urged the Member States and other Public services providers to recognise CAdES, PAdES, XAdES, and ASiC as formats for electronic signatures purposes. Moreover, the specification is compliant with a European standardisation regulation.

- **Organisational interoperability**

The purpose of XAdES is not related to the modelling of business processes or the organizational interoperability aspects.

- **Semantic interoperability**

XAdES is available for free in the ETSI collection at the European Platform Joinup. However, it does not provide a cross sector reusable data model per se and the purpose of the specification is not related to linked opened data.

- **Technical interoperability**

XAdES is an open specification developed by ETSI and is broadly adopted in the context of the European Internal Market for signed data interchange.

3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for XAdES. The CAMSS “Strength” indicator measures the reliability of the assessment by calculating the number of answered (applicable) criteria. On the other hand, the number of favourable answers and the number of unfavourable ones are used to calculate the “Automated Score” per category and an “Overall Score”.

**The technical interoperability layer is covered by the criteria corresponding to the core interoperability principle "Openness".*

Category	Automated Score	CAMSS Strength	Favourable	Unfavourable	Not Applicable
Principle setting the context for EU actions on interoperability	100%	100%	1	0	0
Core Interoperability principles	92%	81%	12	1	3
Principles related to generic user needs and expectations	100%	50%	2	0	2
Foundation principles for cooperation among public administrations	100%	67%	2	0	1
Interoperability layers	89%	82%	9*	2	4
Overall Score	93%	76%	26	2	9

With a 76% of assessment strength, this assessment can be considered fairly representative of the specification compliance with the EIF principles and recommendations.

The Overall Automated Score of 93% demonstrates that XAdES highly supports the European Interoperability Framework in the domains where it applies.

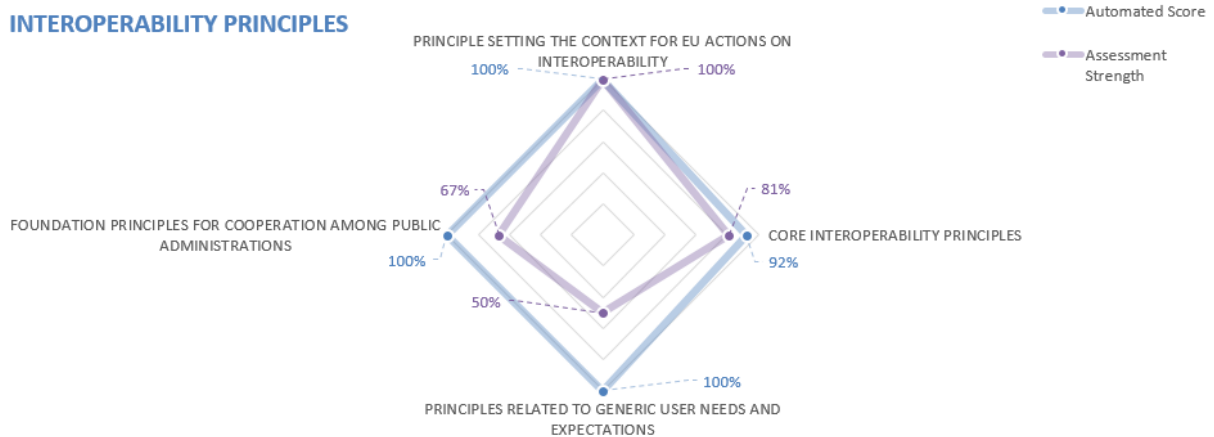


Figure 1 Assessment Results - Interoperability Principles

INTEROPERABILITY LAYERS

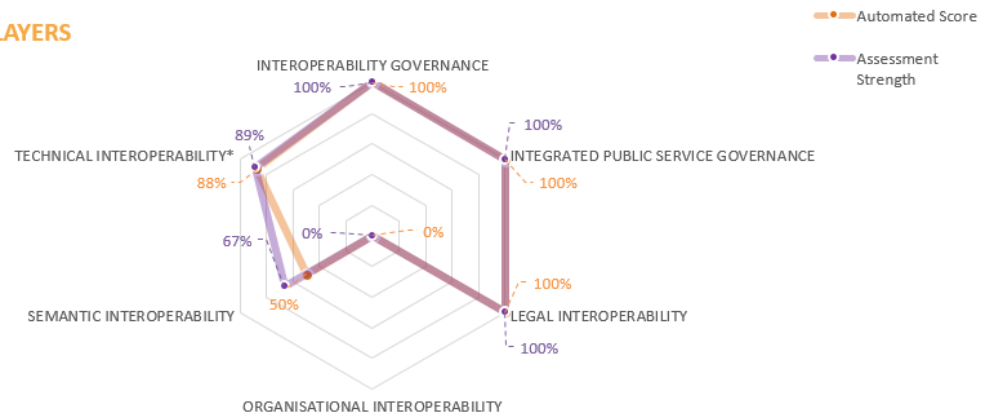


Figure 2 Assessment Results - Interoperability Layers