

# ASSESSMENT SUMMARY

## HTTP Over TLS (HTTPS)<sup>1</sup>

Internet Engineering Task Force (IETF)<sup>2</sup>

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<sup>1</sup> <https://tools.ietf.org/html/rfc2818>

<sup>2</sup> <https://www.ietf.org/>

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## 1. INTRODUCTION

The present document is a summary of the assessment of HTTPS 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)<sup>3</sup>.

## 2. ASSESSMENT SUMMARY

The **Hypertext Transfer Protocol Secure** developed by the **Engineering Task Force (IETF)**, is an extension of the Hypertext Transfer Protocol. It is used for secure communication over a computer network, and is widely used on the Internet. In HTTPS, the communication protocol is encrypted using Transport Layer Security, or, formerly, its predecessor, Secure Sockets Layer. which is an international community concerned with evolving the internet.

### 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**

HTTPS is included in 2 national catalogues of recommended specifications. They belong to Spain and Sweden. The National Interoperability Framework (NIF) of these Member States is fully aligned with at least 4 out of 5 sections of the European Interoperability Framework (EIF) according to the National Interoperability Framework Observatory (NIFO) factsheets<sup>4</sup>.

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

- **Openness**

HTTPS is an open specification available for everyone for study or use. In IETF, Stakeholders have the opportunity to contribute to the development of HTTPS and the decision making process includes a public review. Additionally, HTTPS has a significant market acceptance which demonstrates that it is mature enough for the development of products and services, including for the creation of innovative solutions.

- **Transparency**

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<sup>3</sup> [https://ec.europa.eu/isa2/eif\\_en](https://ec.europa.eu/isa2/eif_en)

<sup>4</sup> <https://joinup.ec.europa.eu/collection/national-interoperability-framework-observatory-nifo/nifo-factsheets>

By allowing the exchange of data over the internet, HTTPS fosters the visibility and comprehensibility of administrative rules, processes, services. In addition this specification ensures the availability of interfaces with internal information systems of a public administration.

- **Reusability**

HTTPS is an open specification that is available for free and published in collaborative platforms for the reuse of solutions (e.g. Joinup). Additionally, it is a sector agnostic specification.

- **Technological neutrality and data portability**

HTTPS is independent from any specific technology and/or platform and fosters data portability between systems and applications.

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

- **User-centricity**

HTTPS eases the implementation of the once-only principle by allowing the data to be exchanged and reused by public administrations across borders.

- **Inclusion and accessibility**

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

- **Security and privacy**

HTTPS does not secure the communication while exchanging data over a computer network. However, there is the extension HTTPS that uses other protocols to secure communications.

- **Multilingualism**

HTTPS does not foster the delivery of multilingual European public services. The purpose of the specification is not related multilingualism.

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

- **Administrative Simplification**

By allowing communications over the internet, HTTPS contributes to the exchange of information between public administrations therefore, it reduces administrative burden.

- **Preservation of information**

HTTPS does not foster the long-term preservation of electronic records and other kinds of information. The purpose of the specification is not related the preservation of information.

- **Assessment of effectiveness and efficiency**

No existing studies assessing HTTPS in terms of effectiveness and efficiency have been found.

## 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 Specification supports the implementation of digital public services complying with the EIF interoperability model:***

- **Interoperability governance**

7 Member States are recommending HTTPS in their ICT National Catalogues. Additionally, HTTPS is already associated to European Interoperability Reference Architecture (EIRA) ABBs in the European Library of Specifications (ELIS). More specifically, HTTPS can define the interoperability aspects of the "Network Service", "Network Component" "Private Network" and "Public Network" ABBs of the EIRA Technical View. However, no mechanism for assessing HTTPS conformance has been found.

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

After being evaluated compliant with the regulation on standardisation 1025/2012, HTTPS has been identified by Commission Implementing Decision as a specification that can be referenced in procurement. During the evaluation process, all the Member States are invited to share their doubts. Therefore the Commission Implementing Decision can be considered an interoperability agreement.

- **Organisational interoperability**

HTTPS is not a business process modelling standard or specification and does not define organisational interoperability aspects. The purpose of the specification is not related to organisational Interoperability.

- **Semantic interoperability**

By allowing the data exchange over computer networks, HTTPS supports the publication of the Linked Open Data. Additionally it can be found within the European collaborative platform Joinup.

- **Technical interoperability**

HTTPS is an open specification available for everyone for study or use.

### 3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments of HTTPS. The Assessment “Strength” indicator measures the reliability of the assessment by calculating the number of 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 categories.

Category	Automated Score	Assessment Strength	# Favourable	# Unfavourable	# Not Applicable
Principle setting the context for EU actions on interoperability	100%	100%	1	0	0
Core interoperability principles	100%	100%	16	0	0
Principles related to generic user needs and expectations	100%	50%	2	0	2
Foundation principles for cooperation among public administrations	50%	67%	1	1	1
Interoperability layers	95%	91%	19*	1	2
<b>Overall Score</b>	<b>94%</b>	<b>86%</b>	<b>30</b>	<b>2</b>	<b>5</b>

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

With a 86% of assessment strength, this assessment can be considered representative of the specification compliance with the EIF principles and recommendations.

The Overall Automated Score of 94% demonstrates that the specification highly supports the European Interoperability Framework in the domains where it applies.

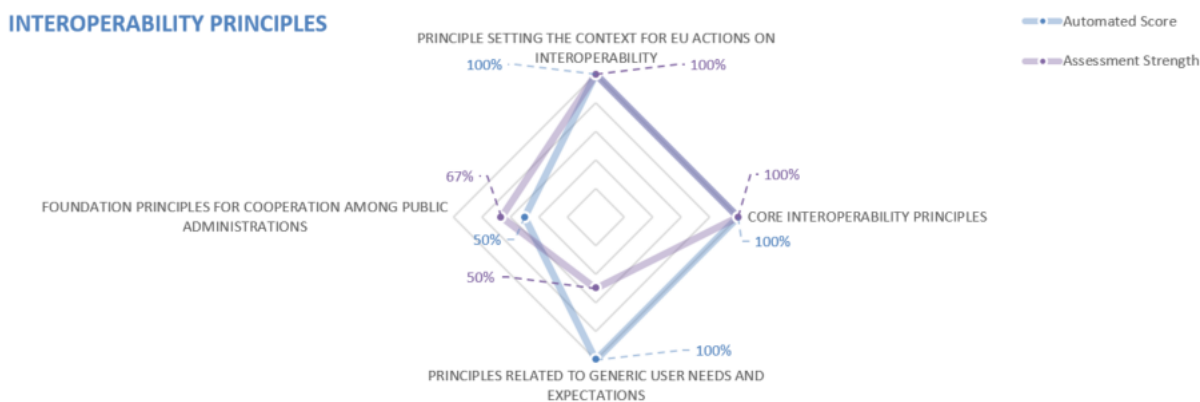


Figure 1 Assessment Results – Interoperability Principles

## INTEROPERABILITY LAYERS

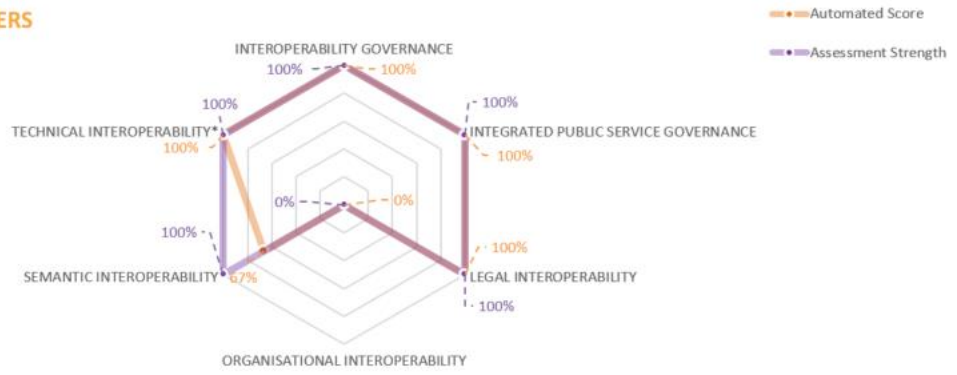


Figure 2 Assessment Results - Interoperability Layers