

ASSESSMENT SUMMARY v1.0.0

Hypertext Markup Language 4.01 (HTML)¹

World Wide Web Consortium (W3C)²

¹ <https://www.w3.org/TR/html401/>

² <https://www.w3.org/>

Change Control

Modification		Details
Version 1.0.0		
Initial version		

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1. INTRODUCTION

The present document is a summary of the assessment of HTML carried out by CAMSS 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)³.

2. ASSESSMENT SUMMARY

Hypertext Markup Language 4.01 (HTML) is a markup languages to develop web documents and make them online to share and publish information. It was the first markup language specifically designed by this purpose.

HTML 4 comes from the evolution of different versions of HTML that they were already recommendations in W3C. HTML 4 became a W3C recommendation on December 1997.

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**

HTML is included in 4 national catalogues of recommended specifications. They belong to Estonia, the Netherlands, 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)⁴ factsheets.

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

- **Openness**

HTML is an open specification publicly available for study or use. The specification supports the first level of maturity of Tim Berners-Lee's 5-star which corresponds to make data available on the Internet. In W3C, all the stakeholders have the opportunity for the development and approval process of the specification as a recommended standard. The specification is licensed on an (F)RAND and royalty-free basis. Moreover, it is fully supported by one developer community, W3C which is an international community developing open standards.

Although HTML is mature enough for the development of products and services, it does not have sufficient market acceptance because there is a better specification in the field that applies HTML which is HTML5. So, it is not considered a specification for the creation of innovative solutions.

³ https://ec.europa.eu/isa2/eif_en

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

- **Transparency**

The purpose of HTML is to publish data on the web. By allowing the publication of administrative data on the web with various formats, HTML foster the visibility and comprehensibility of administration data, and services.

However, the purpose of HTML is not related to the availability of interfaces with internal information systems.

- **Reusability**

HTML is a business domain agnostic specification that can be reused in a cross-domain way. The specification is publicly available for implementation and use for free on W3C's webpage. Moreover, HTML can be found for free along within the European Collaborative Platform, Joinup.

- **Technological neutrality and data portability**

Although HTML can be used independently of other technical specifications, it can be enhanced along with other specifications like CSS. HTML was the first standard markup languages to develop web resources. HTML files are used to exchange information through the web. So, it is proportionate to the needs of its users, and it fosters data portability between systems and applications.

The specification does not support the principles related to generic user needs and expectations:

- **User-centricity**

By helping administrations to access and reuse information across borders, the implementation of HTML4 and other standards from HTML family can help to foster and ease the Once-Only Principle.

- **Inclusion and accessibility**

HTML fosters e-accessibility through helping people with disabilities with digital signs, e-books and other HTML components that make browsing through an HTML web easier.

- **Security and privacy**

HTML markup languages to develop web resources to share content. By allowing to exchange data via online websites, HTML fosters the secure and trustworthy data exchange between administrations and stakeholders.

- **Multilingualism**

HTML has various components that help to publish online data in different languages. In fact, HTML allows to have the same website online in different languages.

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

- **Administrative Simplification**
HTML reduces the administrative burden by allowing public administration to publish online data that can be administrative documents, videos etc.
- **Preservation of information**
The purpose of HTML is not related to long term preservation of electronic records. Therefore, this criterion is considered not applicable to this specification.
- **Assessment of effectiveness and efficiency**
After carrying out information retrieval, no document or study has been found assessing directly the HTML in terms of efficiency or effectiveness. However, there is information that compares different versions of HTML (HTML4 and HTML5), and the main differences between them. From there, can be inferred the effectivity and effectiveness of the usage of HTML4⁵.

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**
12 Member States are recommending HTML in their ICT National Catalogues. The specification is included within catalogues of standards at the national level but not at the EU level. Moreover, W3C provides a Markup Validation Service for free to validate Web documents including HTML implementations.

At the time of elaborating this assessment, this specification is not included in any EIRA ABB in the current European Library Of Specifications (ELIS). Moreover, there is not a cross-border project that use HTML.

- **Integrated public service governance & Legal Interoperability**
After checking the assessments performed by CAMSS and the list of specifications identified by the MSP Multi-stakeholder-platform, no assessment verifying the compliance of the specification with the European standardisation regulation has been found. Moreover, no evidence has been

⁵ <https://www.educba.com/html5-vs-html4/>

found of the specification being included in a formal interoperability agreement between organisations involved in the European public services provision.

- **Organisational interoperability**

The purpose of HTML is not related to the modelling of business processes nor related to organisational interoperability. Therefore, these criteria are not applicable to the specification.

- **Semantic Interoperability**

HTML does not define a cross-sector reusable data model, but defines a markup language to develop web documents. Moreover, it does not support the different principles of Linked Open Data.

- **Technical interoperability**

HTML is the first markup languages that was designed to develop web resources.

3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for **Hypertext Markup Language 4.01 (HTML)**. 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”.

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	89%	95%	16	2	1
Principles related to generic user needs and expectations	100%	75%	3	0	1
Foundation principles for cooperation among public administrations	50%	67%	2	0	1
Interoperability layers*	55%	91%	11	9	2
Overall Score	74%	90%	26	9	4

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

With an 90% of assessment strength, this assessment can be considered representative of the specification in compliance with the EIF principles and recommendations.

The Overall Automated Score of 74% demonstrates that the specification highly supports the European Interoperability Framework in the domains where it applies.

INTEROPERABILITY PRINCIPLES

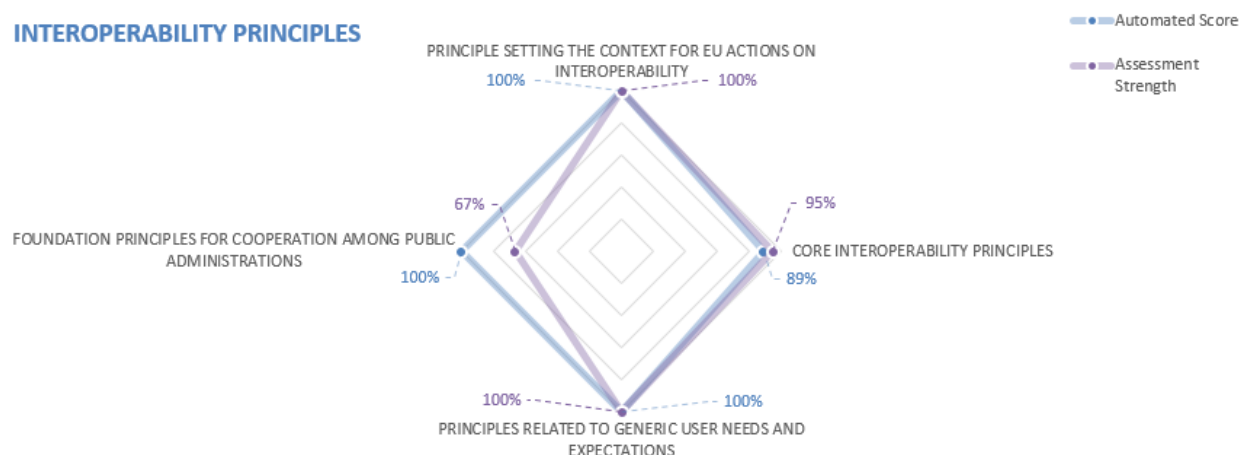


Figure 1. Interoperability principles Results

INTEROPERABILITY LAYERS

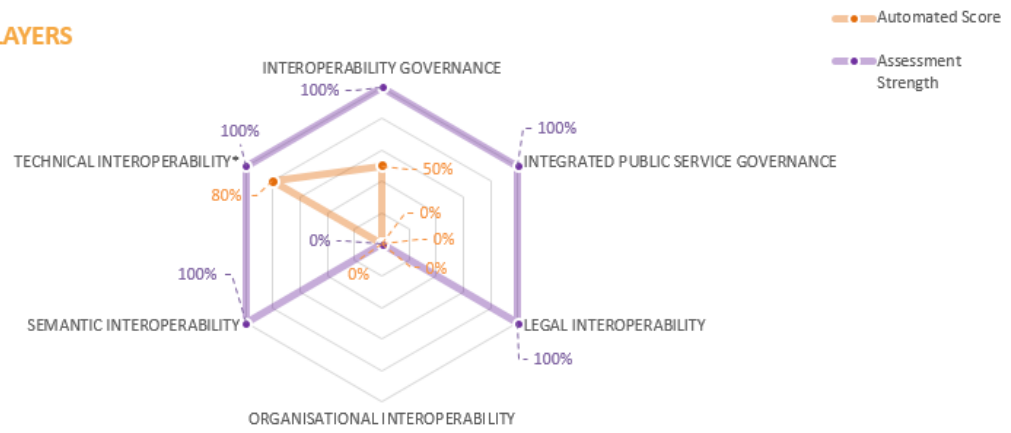


Figure 2. Interoperability layers Results