ASSESSMENT SUMMARY

Comma-Separated Values (CSV)

Internet Engineering Task Force (IETF)

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1. INTRODUCTION

The present document is a summary of the assessment of CSV 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

Comma separated values (CSV)[2] can be considered a facilitator of public data as open data. The specification has been developed by the **Internet Engineering Task Force (IETF)[3]** and it makes sure content is available on the web, structures data and makes it usable in a non-proprietary open format. Every field is separated by commas, which are able to store numbers and text.

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**
  CSV is included in 3 national catalogues of recommended specifications. They belong to the Netherlands, Estonia, 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. Moreover, CVS is free and open technical specification, built on IETF standards and licenses from the Open Web Foundation, therefore licensed on a royalty-free basis.

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

- **Openness**
  CSV can be considered a facilitator of public data as open data. In W3C, all the stakeholders have the opportunity to contribute to the development of CSV and the decision making process includes W3C members review. It has a significant market acceptance that demonstrates that it is mature enough to innovate as CSV Dialect to simplify the format to be able to describe various CSV dialects. Finally, the specification has the support from 2 international standardisation organisations like IETF and W3C.

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[1] https://ec.europa.eu/isa2/eif_en

[2] https://tools.ietf.org/html/rfc4180

[3] https://www.ietf.org/

- **Transparency**

   As a common data exchange format, CSV fosters the visibility of administration's data. However, the specification is not related to Interfaces availability assurance.

- **Reusability**

   CVS fosters reusability by enabling you to reuse the same schema when publishing multiple CSV files, even if those files are created by different organisations. Moreover, CSV has been made available for its implementation and reuse for free at IETF's webpage.

- **Technological neutrality and data portability**

   CSV is independent from any specific technology and/or platform and is designed to foster data portability between systems and applications. Moreover, is proportionate to the user's needs as it is one of the most used formats.

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

- **User-centricity**

   CSV does not foster the once-only principal. The purpose of the specification is not related to user-centricity.

- **Inclusion and accessibility**

   CSV does not foster inclusion and accessibility. The purpose of the specification is not related e-accessibility.

- **Security and privacy**

   CSV does not foster security and privacy. The purpose of the specification is not related to trustworthy data exchange between actors.

- **Multilingualism**

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

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

- **Administrative Simplification**

   CSV makes sure content is available on the web, structures data and makes it usable in a non-proprietary open format. So it can be said that CSV facilitates the reduction of administrative burdens when making it usable and open.

- **Preservation of information**
  CSV 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**
  CSV has documentation[4] regarding Use Cases and Requirements which analyses its efficiency.

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**
  CSV provides a conformance validation for its readability. It is included in several national catalogues with a total of 8 countries and related to EIRA. Specifically, CSV is describing the "Representation" ABB from the EIRA Semantic View.

- **Integrated public service governance & Legal interoperability**
  After being evaluated compliant with the regulation on standardisation 1025/2012, CSV has been identified by Commission Implementing Decision. The positive evaluation of CSV and its identification is considered an interoperability agreement. Moreover, after being evaluated compliant with the regulation on standardisation 1025/2012, CSV has been identified by Commission Implementing Decision.

- **Organisational interoperability**
  The purpose of CSV is not related to the modelling of business processes and definitions of organisational interoperability. Therefore, this criterion is not applicable to the specification.

- **Semantic interoperability**
  CSV makes sure content is available on the web, structures data and makes it usable in a non-proprietary open format. This fact fosters the publications of the European Administrations as Linked Open Data. Furthermore, CSV is an IETF free specification, which means that is publically available for its reuse. However, it cannot be directly downloaded from any European Platform.

- **Technical interoperability**
  CVS is an open specification that is widely used for the exchange of data.

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[4] https://www.w3.org/TR/csvw-ucr/

3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for Comma-Separated Values (CSV). 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	CAMSS Strength	Favourable	Unfavourable	Not Applicable
Principle setting the context for EU actions on interoperability	100%	100%	1	0	0
Core Interoperability principles	100%	94%	15	0	1
Principles related to generic user needs and expectations	0%	0%	0	0	4
Foundation principles for cooperation among public administrations	100%	67%	2	0	1
Interoperability layers	95%	91%	19*	1	2
Overall Score	**97%**	**78%**	**28**	**1**	**8**

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

With a 78% of assessment strength, this assessment can be considered representative of the specification compliance with the EIF principles and recommendations.

The Overall Automated Score of 97% demonstrates that CSV highly supports the European Interoperability Framework in the domains where it applies.
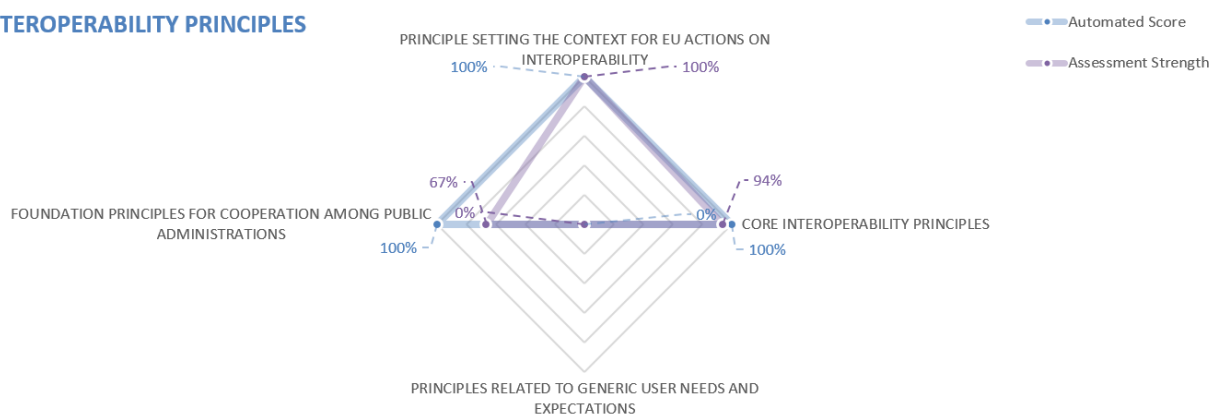

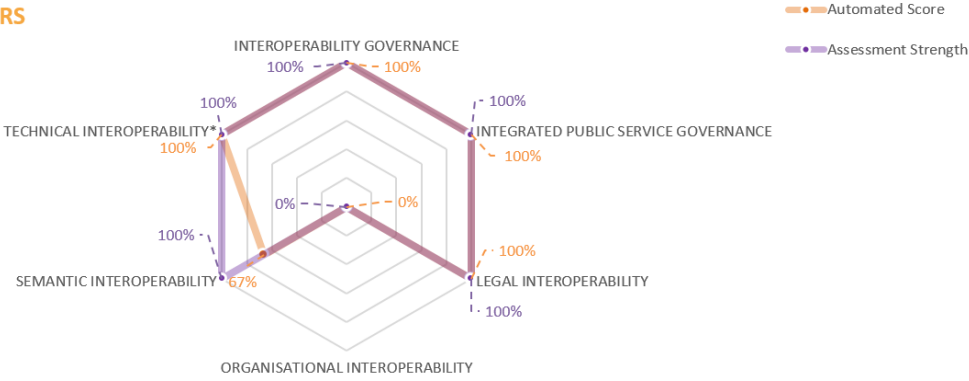**Figure 1 Assessment Results - Interoperability Principles**

INTEROPERABILITY LAYERS

Figure 2 Assessment Results - Interoperability Layers