ASSESSMENT SUMMARY v1.0.0

WAI-ARIA[1]

World Wide Web Consortium (W3C)[2]

---

[1] https://www.w3.org/TR/wai-aria/

[2] https://www.w3.org/

Change Control

Modification	Details
Version 1.0.0	
Initial version	

TABLE OF CONTENT

1. INTRODUCTION

The present document is a summary of the assessment of the **WAI-ARIA** carried out by CAMSS using the CAMSS Assessment EIF scenario[3]. The purpose of this scenario is assessing the compliance of a standard or specification with the European Interoperability Framework (EIF)[4].

2. ASSESSMENT SUMMARY

The **Accessible Rich Internet Applications (WAI-ARIA)** is a framework that defines a way to make Web content and Web applications more accessible to people with disabilities. The specification is not only focused on persons with special needs but also is being used as a solution for user-centric interfaces. An example of its usage is screen readers (that is, through synthesized speech) or refreshable Braille displays for people with visual impairments.

The specification provides an ontology of roles, states and properties that can be used to define the accessible elements of the user interface and to improve the accessibility and interoperability of web content and applications.

WAI-ARIA has been developed by World Wide Web Consortium (W3C), which is an international community concerned with evolving the World Wide Web by developing protocols and guidelines to ensure and enhance its growth. It is worth to note, that it has been developed in close collaboration with the ISA2 programme of the European Commission.

2.1. **EIF 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 does not support the principles setting context for EU actions on interoperability***:**

- **Subsidiarity and proportionality**
  According to the National Interoperability Framework Observatory (NIFO)[5] factsheets, WAI-ARIA is not included in any national catalogue of any Member State.

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

- **Openness**
  WAI-ARIA is a framework that complements mark-up languages such as HTML and allows to publish open and structured data. The development process has been developed by W3C[6] to

---

[3] https://ec.europa.eu/eusurvey/runner/EIFScenario_v500

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

[5] https://joinup.ec.europa.eu/collection/national-interoperability-framework-observatory-nifo/nifo-factsheets

[6] https://www.w3.org/2018/Process-20180201/#Policie

make it accessible to the different stakeholders and it also includes a public review. Moreover, there is the Accessible Rich Internet Applications Working Group (ARIA WG)[7], which is the developer community that maintains this specification among others.

Several implementers have assessed the usefulness or are exploring how the usage of this specification can enhance the accessibility to digital platforms. Some of them are React Aria[8] and Mozilla[9]. Notice that this does not extend to any European public service. In terms of availability, WAI-ARIA is publicly available for free at W3C's webpage[10]. It is licensed under the royalty-free basis for its implementation or study.

- **Transparency**

  WAI-ARIA promotes transparency and scopes visibility and comprehensibility of public services' interfaces. This is the role of assistive technologies, which convey suitable information to people with disabilities by introducing web widgets and structuring web content. For example, the French "General framework for improving accessibility" (RGAA)[11] includes the WAI-ARIA specification in their e-accessibility policies, as well as Spain for mobile user interfaces in all their public services[12].

- **Reusability**

  WAI-ARIA is publicly available for its use for free at W3C's website. Additionally, even though it was not developed under the scope of the eGovernment System Development, WAI-ARIA is meant to serve in the Internet of Things domain and is available for its use within any public administration service, for example in adaptative content for mobile devices.

- **Technological neutrality and data portability**

  WAI-ARIA can be used for large amounts of data without the risk of hampering the interoperability of systems. Regarding scalability, the specification might be limited by the mark-up language that coexists with; for example, the host language version (e.g., HTML4 versus HTML5) or even the platform where the mark-up language is deployed (e.g., computer versus mobile device) might require different configurations or parametrisation needs.

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

- **User-centricity**

---

[7] https://www.w3.org/WAI/ARIA/

[8] https://react-spectrum.adobe.com/react-aria/

[9] https://developer.mozilla.org/en-US/docs/Web/Accessibility

[10] https://www.w3.org/TR/vocab-adms/

[11] https://www.numerique.gouv.fr/publications/rgaa-accessibilite/methode-rgaa/criteres/

[12]

https://administracionelectronica.gob.es/pae_Home/en/pae_Estrategias/pae_Accesibilidad/pae_Observatorio_de_Accesibilidad.html?idioma=en

There is no reference to WAI-ARIA and a European use case explicitly stating that the specification allows relevant information and data to be reused. Moreover, it is not focused on the implementation of the OOP. However, since WAI-ARIA can extend a host language, a grid can reuse the elements and attributes of an HTML table element.

- **Inclusion and accessibility**

  The purpose of WAI-ARIA is increasing accessibility of web content and applications for a large range of users, either with special needs or without disabilities. Therefore, this specification addresses and enables e-accessibility.

- **Security and privacy**

  The purpose of WAI-ARIA is not related to the secure exchange nor processing of data.

- **Multilingualism**

  The purpose of WAI-ARIA is not related to the delivery of multilingual European Public Services. Therefore, this criterion is considered not applicable to this specification.

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

- **Administrative Simplification**

  WAI-ARIA helps the administration simplification by easing the digital transformation and the implementation of digital solutions. The specification enhances assistive technologies to interact with accessibility APIs and can restructure, simplify, stylise, or rescale content to help a different set of users by augmenting semantics in host languages such as HTML5 and SVG2.

- **Preservation of information**

  The specification's purpose is not directly the long-term preservation of electronic records.

- **Assessment of effectiveness and efficiency**

  There are no such assessments addressing the effectiveness of the specification. This might be due to the early-stage development of the specification. Besides, the ARIA initiative proposes tools and methods[13] to evaluate e-accessibility. In this sense, in the future there might exist such reports.

2.2. EIF 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'.

---

[13] https://www.w3.org/TR/wai-aria/

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

- **Interoperability governance**
  WAI-ARIA can be mapped with EIRA. Moreover, the specification is recommended by the French and Spanish Administrations, but not included in their catalogues. It is neither included in any catalogue at European Level. In terms of implementation conformity, the specification is complemented by a conformance testing platform[14] to allow testing of implementations.

- **Legal Interoperability**
  After checking the different standard catalogues at supra-national level, there is no evidence of WAI-ARIA as a European standard nor any relevant regulations at a European level focusing on this specification.

- **Organisational interoperability**
  The purpose of WAI-ARIA is not related to defining organisational interoperability aspects.

- **Semantic Interoperability**
  WAI-ARIA has the Web Accessibility Initiative - Communities of Practice (WAI-COOP) platform for sharing results and best practices. Therefore, the specification encourages the creation of open information about the specification and encourages relevant communities from the EU to share their results.

---

[14] https://www.w3.org/TR/wai-aria/

3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for **WAI-ARIA**. 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 is used to calculate the "Automated Score" per category and an "Overall Score".

Category	Automated Score	Assessment Strength	Compliance Level
EIF Principle setting the context for EU actions on interoperability	20/100	100%	Ad-hoc
Core interoperability principles	1880/2200	95%	Seamless
Principles related to generic user needs and expectations	460/500	40%	Seamless
Foundation principles for cooperation among public administrations	380/500	80%	Sustainable
Interoperability layers*	760/1100	91%	Sustainable
Overall Score	3500/4400	86%	

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

With an 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 79,55% (3500/4400) demonstrates that the specification supports the European Interoperability Framework in the domains where it applies.