

# ASSESSMENT SUMMARY

**Universal Description Discovery & Integration (UDDI)**

Organization for the Advancement of Structured Information Standards (OASIS)

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## 1. INTRODUCTION

The present document is a summary of the assessment of UDDI 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>1</sup>.

## 2. ASSESSMENT SUMMARY

**Universal Description Discovery & Integration (UDDI)**<sup>2</sup> is a definition of a set of services supporting the description, publication, and discoverability of web services maintained by **OASIS**<sup>3</sup>. It defines an information model based on a common set of standards including HTTP, XML, and XML Schema among others providing an interoperable for foundational infrastructure for Web services-based software. It can be enabled publicly and only exposed internally.

### 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**

UDDI is included in 2 national catalogues of recommended specifications. They belong to the Netherlands and Spain. 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)<sup>4</sup> according to the National Interoperability Framework Observatory (NIFO)<sup>5</sup> factsheets.

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

- **Openness**

UDDI is an open specification that is publicly available for everyone to study or implementation. As the OASIS development process establishes, all the stakeholders are able to contribute to the specification development.

- **Transparency**

By listing and describing administrations' web services and improving the discoverability of them, UDDI fosters the visibility of public administration web services.

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<sup>1</sup> [https://ec.europa.eu/isa2/eif\\_en](https://ec.europa.eu/isa2/eif_en)

<sup>2</sup> <http://www.uddi.org/pubs/uddi-v3.0.1-20031014.htm>

<sup>3</sup> <https://www.oasis-open.org/>

<sup>4</sup> [https://ec.europa.eu/isa2/sites/isa/files/eif\\_brochure\\_final.pdf](https://ec.europa.eu/isa2/sites/isa/files/eif_brochure_final.pdf)

<sup>5</sup> <https://joinup.ec.europa.eu/collection/national-interoperability-framework-observatory-nifo/nifo-factsheets>

- **Reusability**

UDDI is a sector agnostic specification which has been made available for its use and implementation for free at OASIS's webpage.

- **Technological neutrality and data portability**

UDDI is built around well-known specifications and standards like XML, XML Schema or HTTP which do not hamper the interoperability of systems. Despite this, UDDI is involved in the implementation of SOAs solutions along with SOAP and WSDL, relying on them to perform properly providing the requested data.

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

- **User-centricity**

By allowing the publication and discovery of web services administrations and stakeholders can reuse software and integrate it when needed. UDDI implementation avoids the request for information in both parts easing to achieve the OOP. An example of its implementation is SELIS project<sup>6</sup>.

- **Inclusion and accessibility**

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

- **Security and privacy**

UDDI includes optional features regarding the security in terms of access to UDDI repositories or nodes, ensuring secure and trustworthy data exchange.

- **Multilingualism**

The purpose of UDDI is not related to the delivery of European multilingual services, therefore, the specification is not fostering the delivery of multilingual services.

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

- **Administrative Simplification**

UDDI allows to publish and discover web services and integrate them efficiently. This fact helps administration and stakeholders to meet each other creating effective services ecosystem avoiding extra steps. UDDI is an interoperability key enabler.

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<sup>6</sup> <https://joinup.ec.europa.eu/collection/eprocurement/document/secure-electronic-invoicing-service-selis>

- **Preservation of information**  
UDDI does not foster the long term preservation of electronic documents. The purpose of the specification is not related to eArchiving.
- **Assessment of effectiveness and efficiency**  
There are already existing studies assessing different UDDI features and performance<sup>7</sup>.

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

- **Interoperability governance**  
Several Member States are recommending UDDI in their ICT National Catalogues (e.g. the Dutch and Spanish). Additionally, the specification is already associated with the European Interoperability Reference Architecture (EIRA) ABBs in the European Library of Specifications (ELIS). More specifically, UDDI can define the interoperability aspects of the "Service Discovery Service", "Service Registration Service" and "Service Registry Component" ABBs of the EIRA Technical View.
- **Integrated public service governance & Legal interoperability**  
There is no evidence of any official agreement between administrations/organisations involved in the provision of European public services. Moreover, after having looked for assessments regarding compliance with the European Standardisation Regulation 1025/2012, there is no assessment regarding this topic.
- **Organisational interoperability**  
The purpose of UDDI is not related to organisational Interoperability aspects. Therefore, the specification is not defining any business process modelling nor other organisational interoperability aspects.
- **Semantic interoperability**

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<sup>7</sup>[https://www.researchgate.net/publication/303921682\\_INDEXING\\_TRADITIONAL\\_UDDI\\_FOR\\_EFFICIENT\\_DISCOVERY\\_OF\\_WEB\\_SERVICES](https://www.researchgate.net/publication/303921682_INDEXING_TRADITIONAL_UDDI_FOR_EFFICIENT_DISCOVERY_OF_WEB_SERVICES)

[https://www.academia.edu/14435163/Binding\\_now\\_or\\_binding\\_later\\_The\\_performance\\_of\\_UDDI\\_registries](https://www.academia.edu/14435163/Binding_now_or_binding_later_The_performance_of_UDDI_registries)

As abovementioned, UDDI can be found for free at OASIS's webpage. Even UDDI is not defining a data model per se but defines an Information model that allows interested parties to map relevant features and constraints and build their own data model.

- **Technical interoperability**

The specifications is an open and widely used mean to implement SOAs fostering the interoperability of systems.

### 3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for UDDI. 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	86%	88%	12	2	2
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	78%	82%	14*	4	4
<b>Overall Score</b>	<b>79%</b>	<b>78%</b>	<b>23</b>	<b>6</b>	<b>8</b>

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

The Overall Automated Score of 79% demonstrates that UDDI highly supports the European Interoperability Framework in the domains where it applies.

## INTEROPERABILITY PRINCIPLES

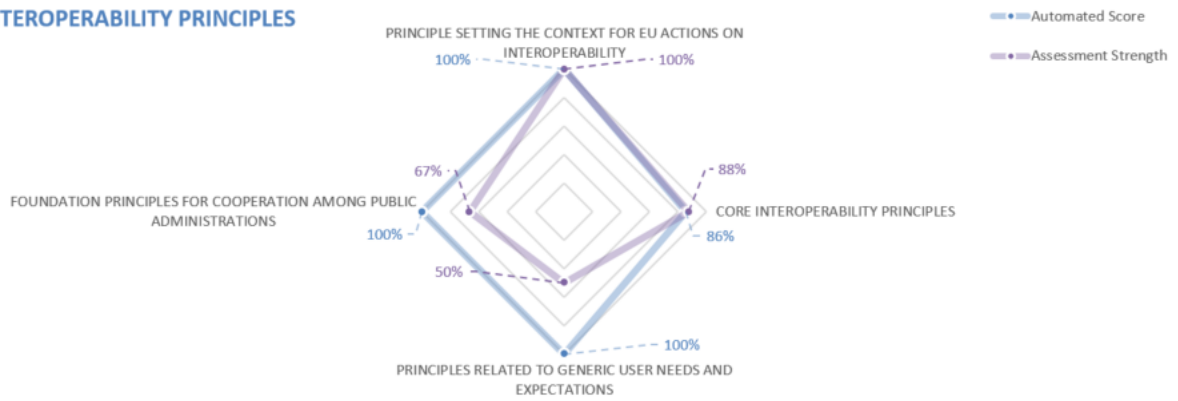


Figure 1 Assessment Results - Interoperability Principles

## INTEROPERABILITY LAYERS

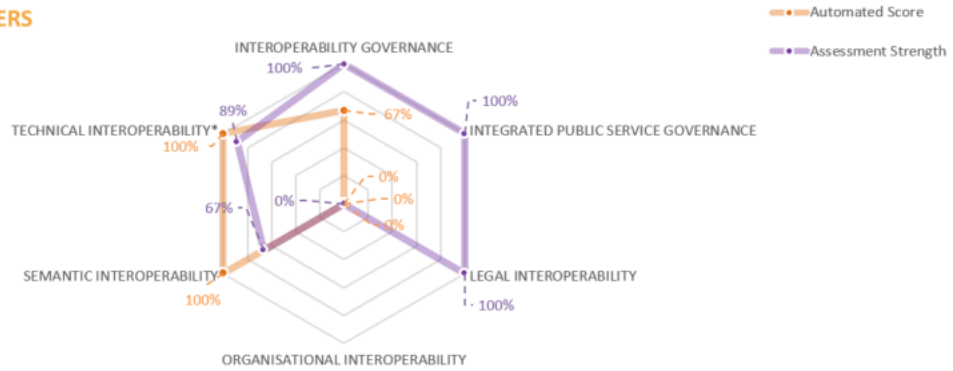


Figure 2 Assessment Results - Interoperability Layers