

ASSESSMENT SUMMARY

Data Catalogue Vocabulary Application Profile for data portals in Europe (DCAT-AP)

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1. INTRODUCTION

The assessment of **Data Catalog Vocabulary Application Profile for data portals in Europe (DCAT-AP)** has been 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 technical specification with the European Interoperability Framework (EIF)¹.

The present document is a summary of the assessment. Additionally, it includes the observations gathered throughout the assessment process and an interpretation of the results of the assessment

2. ASSESSMENT SUMMARY

The Data Catalogue Vocabulary Application Profile for data portals in Europe (DCAT-AP) is an RDF vocabulary that was designed to ease the interoperability between data catalogues published on the internet. The adoption of DCAT-AP allows European administrations to describe datasets included in data catalogues. In the same way that DCAT eases data aggregation and consumption of metadata by all the stakeholders involved, DCAT-AP acts.

DCAT-AP has been developed by SEMIC action of the ISA2 Programme (DG DIGIT), DG CONNECT and the Publications Office, all of them have implemented the vocabulary in European cross-border initiatives². DCAT-AP has been developed with DCAT (W3C) as a basis and it has been extended in order to meet European data portals needs.

Aligned with the aim and mission of ISA2 Programme³, DCAT-AP has the purpose of providing a data model to describe datasets included in public administrations' catalogues enhancing the interoperability between them and fostering the data reuse.

The Technical Specification is not compliant with the **principle setting the context for EU actions on interoperability**:

- **Subsidiarity and proportionality**

DCAT has not been included yet in any Member State's catalogue which is, according to the NIFO Factcheck, fully aligned with the EIF. However, it has been included within Belgium's catalogue, that its NIF is highly aligned with EIF according to NIFO Factcheck.

¹ https://ec.europa.eu/isa2/eif_en

² <https://www.europeandataportal.eu/en> ; <http://data.europa.eu/euodp/en/home> ; <http://data.jrc.ec.europa.eu/>

³ https://ec.europa.eu/isa2/isa2_en

The Technical Specification is partially compliant with the **core interoperability principles**:

- **Openness**

The adoption of DCAT-AP eases the publication of Open Data as the vocabulary is compliant with several of Tim Berners Lee's 5-star scheme for open data. DCAT-AP upgrades the discoverability of public administrations datasets and its reuse.

The development process has been designed by SEMIC action of ISA2 Programme ensuring the openness of the whole process. The different stakeholders are able to participate in the evolution of DCAT-AP. Through this process, the vocabulary is evolved and maintained⁴. Additionally, DCAT-AP is available for free at Joinup⁵.

- **Transparency**

DCAT-AP as a vocabulary to describe public administrations' datasets eases the visibility and availability of its data. Thus, this fact also helps to decision-processes. The increasing tendency of implementing DCAT-AP at supra-national and national levels could impact positively on achieving ISA2 mission.

- **Reusability**

The DCAT-AP is publically available for its use for free at Joinup and Github⁶. Moreover, aligned with its purpose of describing datasets included in data catalogues, DCAT-AP is able to be applied beyond the domain for which it was developed.

- **Technological neutrality and data portability**

DCAT-AP as an extension of DCAT is built around RDF and therefore has a dependence on it. However, is worth to note that RDF is a European standard and the common format for Semantic initiatives. As well, different national initiatives are raising demonstrating the capacity to be adapted and aligned with users' needs⁷.

The Technical Specification is partially compliant with the **principles related to generic user needs and expectations**:

⁴<https://joinup.ec.europa.eu/solution/dcat-application-profile-data-portals-europe/document/change-and-release-management-policy-dcat-ap>

⁵ <https://joinup.ec.europa.eu/solution/dcat-application-profile-data-portals-europe/about>

⁶ <https://joinup.ec.europa.eu/solution/dcat-application-profile-data-portals-europe/about>
<https://github.com/SEMICeu/DCAT-AP>

⁷ <https://www.govdata.de/> ; <http://data.gov.be/en> ; <https://opendata.swiss/en/>

- **User-centricity**

The adoption of DCAP-AP is helping to achieve the OOP⁸. The aim of the vocabulary is to describe datasets providing enhanced data discoverability and data searching among cross-border catalogues. An example of the capabilities to foster the OOP implementation is the Norway initiative for a common data catalogue based on DCAT-AP⁹.

- **Inclusion and accessibility**

The purpose of DCAT-AP is not related in any way to fostering e-accessibility

- **Security and privacy**

Even the main DCAT-AP's purpose is not fostering the trustworthy of data exchange, is a tool that allows the data exchange. By means of the different properties related to datasets, DCAT-AP provides information related to latest modifications, the responsible and other elements that help the trustworthy data exchange.

- **Multilingualism**

DCAT-AP does not have the aim of easing or fostering the delivery of multilingual European Public Services.

The Technical Specification is compliant with the **foundation principles for cooperation among public administrations**:

- **Administrative Simplification**

DCAT-AP was developed to ease the reuse of resources among administrations, enhance the interoperability between them and beat the cross-border limitations. Furthermore, free availability to implement and use reduce the administrative burden.

- **Preservation of information**

DCAT-AP's purpose is not related directly to the long-term preservation of information. Even though, it could be an element to enhance the data reuse within and among administrations.

- **Assessment of effectiveness and efficiency**

⁸ https://ec.europa.eu/isa2/dcat-ap-key-european-data-publishers-reach-data-consumers-and-create-european-open-data-ecosystem_en

⁹ <https://www.difi.no/>

There is existing documentation¹⁰ provided by SEMIC action and ISA2 Programme assessing and advising the benefits of implementing DCAT-AP. These documents are used as promoting elements by the community developing DCAT-AP and as well to foster the ISA2 Program mission.

The Technical Specification is partially compliant with **interoperability layers**:

- **Interoperability governance**

DCAT-AP can be mapped with the EIRA's Data Catalogue ABBs included on EIRAS's Semantic View. Moreover, the specification is recommended and included in Belgium's Catalogue¹¹. At supra-national level, ISA2 and its action SEMIC are including DCAT-AP within their solutions catalogue.

As DCAT-AP has been developed at European level, it has been implemented in three cross-border initiatives as is the Open Data Portal, the European Data Portal, and JRC Data Catalogue. Furthermore, there are implementations in some Member States, which indicates the creation of a cross-border interoperability ecosystem.

In terms of implementation conformity, SEMIC action provides a validation tool in order to ensure the quality metadata taking into account DCAT-AP requirements.

- **Integrated public service governance**

There is no explicit and stated agreement between the different organisations involved in the European Public services provision.

- **Legal interoperability**

DCAT-AP has not been assessed to verify its compliance with the Annex 2 of European Standardisation regulation 1025/2012.

- **Organisational interoperability**

The DCAT-AP is not defining organisational interoperability aspects, furthermore, it is not related to its purpose.

¹⁰ <https://joinup.ec.europa.eu/collection/semantic-interoperability-community-semic/dcat-ap> ;
https://joinup.ec.europa.eu/sites/default/files/document/2019-01/ISA2%20Study_Use%20cases%20and%20benefits%20of%20ISA2%20specifications_January%202019.pdf

¹¹ <https://www.forumstandaardisatie.nl/open-standaarden/lijt>
https://administracionelectronica.gob.es/pae_Home/dam/jcr:9e2c2877-5103-4934-8440-c60ba2e10c48/Catalogue_of_Standards_NIF_Spain.pdf

- **Semantic interoperability**

The adoption of DCAT-AP allows the publications of Linked Open Data as it is highly aligned with Tim Berners Lee's 5 Stars scheme for Open Data. It is reflected in the consequences of adopting DCAT-AP, better discoverability and enhanced search across catalogues for data reuse. Moreover, DCAT-AP is defining a cross-sector data model since is providing the guidelines to embed metadata to datasets included within catalogue.

Regarding availability, DCAT-AP can be found at Jopinup as a SEMIC action solution and included within the Working Group's Github. It is available for everyone to study and implementation for free.

- **Technical interoperability**

This technical interoperability layer is covered by the core interoperability principle "Openness".

3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments of DCAT-AP. 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	0%	100%	0	1	0
Core interoperability principles	93%	94%	14	1	1
Principles related to generic user needs and expectations	67%	75%	2	1	1
Foundation principles for cooperation among public administrations	100%	67%	2	0	1
Interoperability layers	90%	91%	18	2	2
Overall Score	84%	86%	27	5	5

The results of the CAMSS assessment, with an 86% Assessment Strength, can be considered as representative of the specification attributes. The Overall Automated Score is 84%; DCAT-AP is partially compliant with the core interoperability principles, the principles related to generic user needs and expectations, the foundation principles for cooperation among public administrations and the interoperability layers. However, it is not compliant with the principle setting the context for EU action on interoperability.

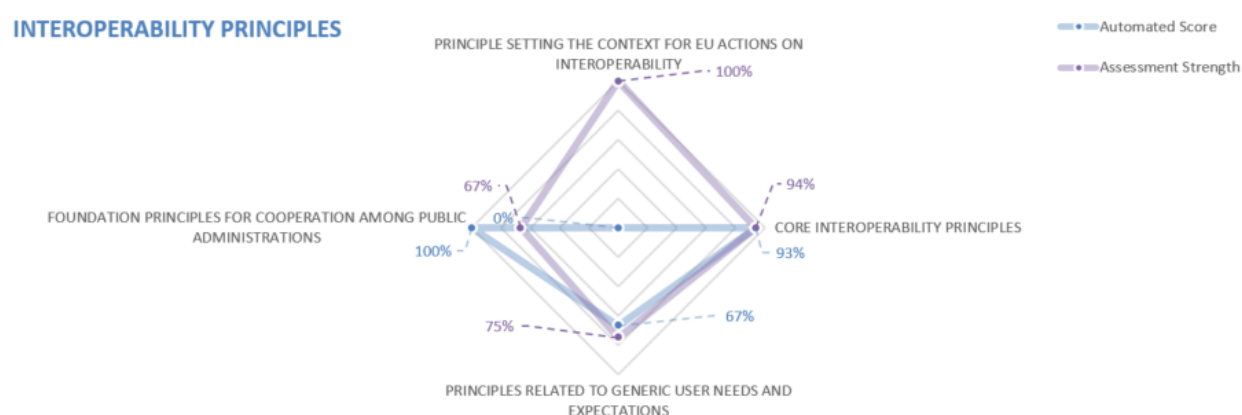


Figure 1 Assessment Results – Interoperability Principles

INTEROPERABILITY LAYERS

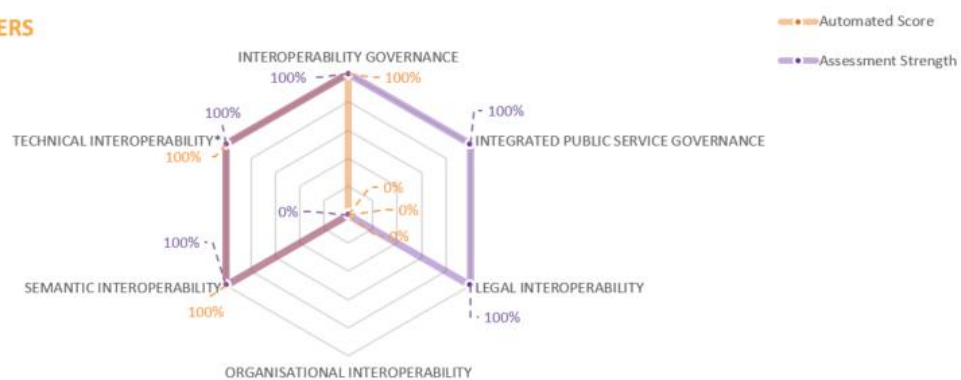


Figure 2 Assessment Results - Interoperability Layers