



ASSESSMENT SUMMARY v1.0.0

**ISO 3166-1:2020 Codes for the representation of names of countries and their subdivisions --
Part 1: Country codes¹**

International Organization for Standardization (ISO)²

¹ The ISO 3166-1 specification homepage: <https://www.iso.org/obp/ui/#search>

² The development organisation homepage: <https://www.iso.org/standards.html>

Change Control

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1. INTRODUCTION

The present document is a summary of the assessment of the ISO 3166-1 carried out by CAMSS using the CAMSS Assessment EIF scenario³. 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 **ISO 3166-1:2020 Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes** is a collection of codes for the names of countries, dependent territories and special areas of geographical interest and serves as a guideline for its implementation and maintenance. At European level, the Publications Office (OP) of the European Union has added ISO 3166-1 to the Country⁵ code list (compiled in EU Vocabularies).

ISO 3166-1 addresses interoperability, as country codes are an asset that saves time and avoids errors; instead of using the name of a country (with the risk of misunderstandings when translating it from one language to another), these codes are understood worldwide.

The specification has been developed by the International Organization for Standardization (ISO), which develops and publishes international standards. It is worth to note that ISO is also the maintenance organisation of the ISO 3166-1 specification.

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

- **Subsidiarity and proportionality**

ISO 3166-1 is included in 2 national catalogues of recommended specifications. They belong to Malta and the Netherlands. The National Interoperability Framework (NIF) of these Member States varies when aligned with the European Interoperability Framework (EIF) according to the National Interoperability Framework Observatory (NIFO)⁶ factsheets. Whereas the Netherlands preforms higher, Malta has a middle-lower performance compared to the European average. Some of the Maltese weaknesses relate to the three EIF categories, the need to improve the EIF

³ EU Survey Scenario: https://ec.europa.eu/eusurvey/runner/EIFScenario_v500

⁴ The EIF homepage: https://ec.europa.eu/isa2/eif_en

⁵ Country code list: <https://op.europa.eu/en/web/eu-vocabularies/dataset/-/resource?uri=http://publications.europa.eu/resource/dataset/country>

⁶ National Interoperability Framework (NIF): <https://joinup.ec.europa.eu/collection/national-interoperability-framework-observatory-nifo/nifo-factsheets>

Principles and the Conceptual Model scoreboards. In addition, there is data missing on the Inclusion and Accessibility and Preservation of Information on the EIF Principles.

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

- **Openness**

ISO 3166-1 does not facilitate the publication of open data. The specification has a clear purpose which is to provide a collection of codes for the names of countries, dependent territories and special areas of geographical interest. Moreover, in 2013 the specification was integrated in an ISO "standard as a database" (Online Browsing Platform)⁷, easing its accessibility on the web. The development process has been developed by ISO⁸ to make it accessible to the different stakeholders.

ISO is the developer community that maintains this specification. Participation in ISO technical committee work is possible, depending on the membership category of the participant. Public reviews are not foreseen, provided that the Public Administration was a subscriber member. In terms of availability, ISO 3166-1 can be publicly accessed on the ISO official site⁹. It is licensed under the royalty-free basis for its implementation or study.

- **Transparency**

ISO 3166-1 can enable visibility and comprehensibility of administrations when combined with other specifications, notably Internet protocols (e.g. Domain Name System, DNS) or those specifications inherent to the interface of a given public service: for example, the specification prompts visibility (and interface exposure) of administrations in e-procurement¹⁰ (by allowing the display of data associated to the country or territory where a user is submitting an ESPD form¹¹), and also contributes to a better understanding of European spatial data (e.g., Core Person Vocabulary recommendation¹²).

- **Reusability**

⁷ Online Browsing Platform: <https://ttbs.isolutions.iso.org/obp/ui/#search>

⁸ ISO Standardization process: <https://www.iso.org/stages-and-resources-for-standards-development.html>

⁹ The ISO 3166-1 specification homepage: <https://www.iso.org/obp/ui/#search>

¹⁰ eProcurement: <https://ec.europa.eu/digital-building-blocks/wikis/display/CEFDIGITAL/eProcurement?msckid=1d426d24aa8311ec89f38d676363e47d>

¹¹ ESPD (European Single Procurement Document), Legal framework and context: https://docs.ted.europa.eu/ESPD-EDM/3.0.1/xml_business_handbook.html#_i_1_1_legal_framework_and_context

¹² Core Person Vocabulary (EU Semic Github): <https://semiceu.github.io/Core-Person-Vocabulary/releases/2.00/?msckid=7f4a3d0ca9ca11ec99845e3a63e37998#Location>

As a collection of codes, ISO 3166-1 could be used and implemented in any domain. In addition to e-Government, the specification is used in defining Internet protocols such as the Domain Name System (DNS).

- **Technological neutrality and data portability**

ISO 3166-1 relates to metadata, and can be used in any system that ingests metadata. The specification may pose a problem for scalability since country codes can be represented as a two-letter code (alpha-2), a three-letter code (alpha-3), or a three-digit numeric code (numeric-3), which is useful if you need to dispense with the use of the Latin alphabet but may hamper interoperability in some cases. Also, it is worth to note that the specification does not allow customisation, extension nor partial implementation as it was designed for a unique purpose. In terms of data portability, ISO 3166-1 does not address nor prevents it.

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

- **User-centricity**

ISO 3166-1 could be beneficial for the application of the once-only principle, as this specification may allow the reuse of relevant information regarding administrative units and the geometry of the maritime area at European level as it is currently the case with the European Administrative Units¹³.

- **Inclusion and accessibility**

The purpose of ISO 3166-1 is not related to e-accessibility. Therefore, this criterion is considered not applicable to this specification.

- **Security and privacy**

The purpose of ISO 3166-1 is not related to the secure nor trustworthy exchange and processing of data. Therefore, this criterion does not apply to this specification.

- **Multilingualism**

ISO 3166-1 could be used in a multilingual context when determining the linguistic and dialectical areas when establishing a specific European public service.

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

- **Administrative Simplification**

ISO 3166-1 may contribute to simplify the delivery of European public services. The INSPIRE (Infrastructure for Spatial Information in the European Community)¹⁴ project partly relies on the

¹³ INSPIRE Data Specification on Administrative Units: <https://inspire.ec.europa.eu/id/document/tg/au>

¹⁴ Directive 2007/2/EC document, INSPIRE Article 1: <https://inspire.ec.europa.eu/inspire-legislation/26>

ISO 3166-1 specification, fostering the exchange, sharing, access and use of interoperable spatial data and spatial data services at different levels of public authority and in different sectors.

- **Preservation of information**

ISO 3166-1 is intended to serve as a code list for the names of countries, dependent territories and special areas of geographical interest. Therefore, it is not designed to address nor prevent data long-term preservation.

- **Assessment of effectiveness and efficiency**

Despite being involved in several projects, ISO 3166-1 has no evaluations that assess it and no evidence of any technological solutions that indirectly assess the specification has been found. Therefore, there is no assessment of the specification's effectiveness and efficiency.

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'.

The Specification does not support the implementation of digital public services complying with the EIF interoperability model:

- **Interoperability governance**

ISO 3166-1 can be mapped with the EIRA's ABB "Data Set" from the Semantic View. Moreover, the specification is recommended and included in two ICT National Catalogues: Malta¹⁵ and the Netherlands¹⁶. Despite having been included in MS's catalogues, it is not included in any catalogue at European Level; however, it is worth to note that the Publications Office (OP) of the European Union has integrated the specification in some Authority tables, such as the Country code list¹⁷. In terms of implementation conformity, there is no available validation tool provided by the ISO.

- **Legal Interoperability**

After checking the different standard catalogues at supra-national level, there is no mention of ISO 3166-1 in any official document stating its conformance in regard to Regulation 1025/2012.

- **Organisational interoperability**

¹⁵ National catalogue Malta: <https://mccaa.org.mt/Section/Content?contentId=1243>

¹⁶ National catalogue The Netherlands: <https://www.forumstandaardisatie.nl/open-standaarden/liijst>

¹⁷ Authority tables, Country code list: <https://op.europa.eu/en/web/eu-vocabularies/authority-tables?msckid=72f85375b00d11ec9c13d3f9f6befab0>

The purpose of ISO 3166-1 is not related to defining organisational interoperability aspects, but may help easing the creation and formalisation of Interoperability agreements; for example, the Reference And Management Of Nomenclatures (RAMON)¹⁸ is a self-declared organisational interoperability agreement which integrates ISO 3166-1 along with other international specifications.

- **Semantic Interoperability**

ISO 3166-1 is a key component in the development of some national and cross-border projects and initiatives. However, ISO 3166-1 does not encourage the creation of communities nor promotes the sharing of data and results in any national nor European platform.

¹⁸ RAMON data server:

https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_CLS_DLD&StrNom=CL_GEO&StrLanguageCode=EN&msclkid=5b294654b00e11ecb0cfbc45e6ce9d20

3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for **ISO 3166-1**. 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	Compliance Level
Principle setting the context for EU actions on interoperability	100/100	100%	Seamless
Core interoperability principles	1560/2100	90%	Sustainable
Principles related to generic user needs and expectations	420/500	40%	Seamless
Foundation principles for cooperation among public administrations	280/500	100%	Essential
Interoperability layers*	700/1100	91%	Sustainable
Overall Score	3060/4300	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 71,16% (3060/4300) demonstrates that the specification does not support the European Interoperability Framework in the domains where it applies.