



ASSESSMENT SUMMARY v1.0.0

XBRL Global Ledger (XBRL-GL)¹

XBRL International²

¹ The XBRL-GL specification homepage: <https://specifications.xbrl.org/work-product-index-xbrl-gl-xbrl-gl-2017.html>

² The development organisation homepage: <https://www.xbrl.org/>

Change Control

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1. INTRODUCTION

The present document is a summary of the assessment of the XBRL-GL 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 **XBRL Global Ledger (XBRL-GL)** is a taxonomy based on XML⁵ and XBRL⁶, which has a modular design and provides a standardized format for representing the data in the fields of accounting and operation systems. The specification encourages the reuse of data by providing financial reporting capabilities to tax administration and contributes to the business system interoperability development. Up to date, XBRL-GL is implemented in the Estonian Tax and Customs Board's Aruandlus 3.0 (Reporting 3.0)⁷ project.

The XBRL-GL modules consist of the following modules: COR (Core), BUS (advanced business concepts), MUC (concepts that represent multicurrency information), USK (concepts specific to the US, UK, and other Saxonian jurisdictions), TAF (concepts related to the tax audit file), SRCD (concepts that represent explicit mappings to XBRL taxonomies for financial reporting) and EHM (concepts related to inventory and fixed assets). Therefore, its use may extend business interoperability and business and financial reporting to multiple authorities, notably among public administrations.

The specification has been developed by the XBRL International⁸, which is an international community committed to improving reporting in any domain by developing protocols and guidelines to ensure and enhance reporting capabilities. It is worth to note that the specification relies on the sounder standard in this community which is the Extensible Business Reporting Language (XBRL)⁹ standard.

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**

³ EUSurvey EIF Scenario: https://ec.europa.eu/eusurvey/runner/EIFScenario_v500

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

⁵ XML standard: <https://www.w3.org/standards/xml/?msclid=e4637e6fae8711ec8e6c36c104a02c85>

⁶ XBRL standard: <https://specifications.xbrl.org/?msclid=0cd6c219ae8811ec84f5bb427e3c64db>

⁷ Reporting 3.0 project: <https://www.stat.ee/index.php/en/reporting-30?msclid=922dbe54ae8a11ec86c9e933fbde2567>

⁸ XBRL International: <https://www.xbrl.org/>

⁹ Extensible Business Reporting Language (XBRL): <https://www.xbrl.org/the-standard/?msclid=17776b89b01c11ec9ca54acc14d947f1>

There is no Member State that includes XBRL-GL in their National Interoperability Framework (NIF)¹⁰ in alignment with the three categories of the European Interoperability Framework (EIF).

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

- Openness

XBRL-GL is a common data interface that facilitates the publication of open data in different formats. A primary goal of the specification is that data becomes open and reusable, therefore reliable. As a data interface, XBRL-GL can represent any type of data from original electronic sources and styles (containing events, activities, or documents) to a common data structure document. The specification can represent data (both quantitative and qualitative data) at any level of detail and standardise data to be open. Moreover, XBRL worked closely with the W3C¹¹ in evaluating the XBRL syntax and W3C specifications¹², noting that “[f]acts, concepts and links in XBRL documents can be readily mapped into the Semantic Web”. The development process has been developed by XBRL International, is accessible to different stakeholders and is open not only to direct members of XBRL International but also to its national jurisdictions¹³. Moreover, XBRL International is the developer community that maintains this specification and has a public review period for all of its specifications.

It is interesting to remark that XBRL-GL has support from interest groups that are involved in the development of this specification. XBRL-GL modules are designed to internally harmonized data with other open specifications as part of other interoperability efforts as ISO (for example, XBRL-GL can be mapped to SAF-T (Standard Audit File for Taxation) which integrates some of the ISO standards¹⁴).

Also, XBRL-GL was developed by an international consortium with a major focus on financial regulators and administrators; the specifications are freely licensed and royalty free, with the only exception of some restrictions imposed by XBRL’s intellectual property policies and trademark rules. In terms of availability, XBRL-GL is publicly available for free¹⁵.

- Transparency

As a taxonomic source, XBRL-GL promotes the reusability of data and enhances interoperability among solutions/assets, increasing the discoverability and searchability of them. XBRL-GL is designed to provide an unambiguous linkage from original data sources to reporting information formats, and can therefore be used to increase visibility and provide greater comfort in the

¹⁰ National Interoperability Framework (NIF): <https://joinup.ec.europa.eu/collection/national-interoperability-framework-observatory-nifo/nifo-factsheets>

¹¹ W3C: <https://www.w3.org/>

¹² XBRL and the Semantic Web Interest Group (XBRL IG): <https://www.w3.org/2009/02/xbrl-ig/charter.html>

¹³ The development organisation homepage: <https://www.xbrl.org/the-consortium/join/>

¹⁴ SAF-T and XBRL-GL integrability: <https://docs.google.com/spreadsheets/d/1a1HJJfwsLUbLvzQ9hQ-ZGtiz2peyGt/edit#gid=973977421>

¹⁵ XBRL-GL 2017 release: <https://specifications.xbrl.org/work-product-index-xbrl-gl-xbrl-gl-2017.html>

trustworthiness of underlying content. As an example, initiatives implementing XBRL-GL is TALTIO in Finland¹⁶. In terms of protecting personal data, personally identifiable information is segregated and standardized to simplify encryption and other protection efforts.

- **Reusability**

XBRL-GL is publicly available for its use for free at the XBRL International website. Additionally, the specification captures a broad set of business transaction related data, e.g., accounting and taxation related details, parties involved, products or services traded. Therefore, XBRL-GL is fully designed to holistically represent any area of business reporting in any level of detail from source events and business documents to more aggregated and summarized information, using a single, holistic, generic and global specification.

- **Technological neutrality and data portability**

XBRL-GL can be used for large amounts of data without the risk of hampering the interoperability of systems nor the scalability, as the specification is based on XBRL/XML. Also, it is worth to note that the specification takes no stance on what technologies or platform it's being used. Moreover, the specification provides clear guidelines for customisation and extending the XBRL-GL taxonomy. Even though users should not find any restrictive requirement when setting an environment with XBRL-GL, during their implementation processes it is highly recommended to publish sets of requirements per implementation to keep track of this. In terms of data portability, the specification explicitly addresses and enables it.

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

- **User-centricity**

XBRL-GL supports and makes possible reporting for diverse needs from the different data sources and therefore can prevent citizens or businesses from providing information multiple times. Although there is no evidence of current studies evaluating how the specification reuses data in public administrations, XBRL-GL offers an interesting asset in the application of OOP.

- **Inclusion and accessibility**

XBRL-GL is more towards semantic interoperability and does not address User Experience and data representation layers; however, some of the specification's modules may contribute to some extent to the promotion of e-accessibility.

- **Security and privacy**

XBRL-GL only addresses semantic aspects, thus data security and data privacy issues should be addressed by other means. However, the specification does not prevent the use of any security means and any issue or shortcomings related to authorization and authentication processes have

¹⁶ TALTIO initiative:

https://unece.org/fileadmin/DAM/cefact/cf_forums/2019_Geneva/Conf_AccountAudit/PPT_1_2_XBRL_Koske_ntalo.pdf

been scoped in conjunction with other W3C's security specifications development, allowing for some kind of alignment.

- **Multilingualism**

The underlying XBRL specification was designed to permit not only the capture and expression of business reporting facts in all the languages supported by ISO 639¹⁷, but also the internal capture and expression of regulation and guidance related to the reporting content. Besides, the specification has support already for eight languages and the process for adding new ones is also defined.

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

- **Administrative Simplification**

XBRL-GL adds value to data-driven services and increases interoperability by providing open data and reporting formats.

- **Preservation of information**

The long-term preservation of data needs to be addressed by other specifications. The use of XBRL-GL in Turkey, for example, leverages digital signatures and certificates so long-term data does not need to be maintained centrally; in this sense, authentication of data maintained at the enterprise is accomplished through the certificates that prove the integrity of information provided later.

- **Assessment of effectiveness and efficiency**

After researching whether studies or documentation assessing the efficiency and effectiveness exist, there are only pilot assessments that indirectly address the specification.

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

- **Interoperability governance**

¹⁷ ISO 639 language codes: <https://www.iso.org/iso-639-language-codes.html?msclid=2eae30ccb01611ecbdd8110006fff30a>

XBRL-GL can be mapped with the EIRA's "Data Transformation Component" and "Data Transformation Service" ABBs of the Technical View, and the EIRA's ABB "Representation" of the Semantic View. Moreover, the specification is recommended and included in the Estonian Tax and Customs Board catalogue¹⁸. In terms of implementation conformity, the specification has a validation schema to test conformance and an automated implementation rule checker.

- **Legal Interoperability**

After checking assessments carried out in order to verify XBRL-GL's compliance with European Standardisation regulation 1025/2012, no assessments have been found verifying XBRL-GL compliance. However, the Extensible Business Reporting Language (XBRL)¹⁹ underlying specification is identified as a key asset in public procurement according to the Decision (EU) 2016/12020.

- **Organisational interoperability**

The specification supports the exchange of data and business processes between partners. The specification is easy to implement in standard business processes. In addition, organisations wishing to share their data can communicate and agree on the scope, quantity, and restrictions of the data to be exchanged.

- **Semantic Interoperability**

XBRL international encourages and supports the creation of communities to share their data and results on national and international platforms and communities to further develop and support the implementation of the specification. It is the case of the XBRL Finland²¹ and XBRL Europe²².

¹⁸ Estonian Tax and Customs Board catalogue: <https://www.emta.ee/en/business-client/e-services-training-courses/how-use-e-services/x-tee-services#xbml-gl>

¹⁹ Extensible Business Reporting Language (XBRL): <https://www.xbrl.org/the-standard/?msclid=17776b89b01c11ec9ca54acc14d947f1>

²⁰ Commission Implementing Decision (EU) 2016/120: https://eur-lex.europa.eu/legal-content/EN/TXT/?toc=OJ%3AL%3A2016%3A023%3ATOC&uri=uriserv%3AOJ.L_.2016.023.01.0077.01.ENG

²¹ XBRL Finland: <https://fi.xbrl.org/>

²² XBRL Europe: <https://www.xbrl.org/tag/xbrl-europe/>

3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for **XBRL-GL**. 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	20/100	100%	Ad-hoc
Core interoperability principles	2020/2200	91%	Seamless
Principles related to generic user needs and expectations	460/500	100%	Seamless
Foundation principles for cooperation among public administrations	320/500	100%	Sustainable
Interoperability layers*	1060/1100	100%	Seamless
Overall Score	3880/4400	95%	

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

With a 95% of assessment strength, this assessment can be considered representative of the specification compliance with the EIF principles and recommendations.

The Overall Automated Score of 88,18% (3880/4400) demonstrates that the specification supports the European Interoperability Framework in the domains where it applies.