



ASSESSMENT SUMMARY v1.0.0

Domibus¹

European Commission²

¹Domibus: <https://ec.europa.eu/digital-building-blocks/wikis/display/DIGITAL/Domibus>

² European Commission website: <https://ec.europa.eu/digital-building-blocks/wikis/display/DIGITAL/Digital+Homepage>

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1. INTRODUCTION

The present document is a summary of the assessment of **Domibus** carried out by CAMSS using the CAMSS Assessment EIF scenario³. The purpose of this scenario is to assess the compliance of a standard or specification with the European Interoperability Framework (EIF)⁴.

2. ASSESSMENT SUMMARY

Domibus is an open-source, extensible, and scalable eDelivery Access Point (AP) software. It enables secure and reliable data exchange between various parties within a network.

Domibus plays an important role for public services interoperability because it enables standardized, secure, and efficient communication and data exchange between different public service entities. It ensures compliance, fosters collaboration, streamlines processes, and enhances the delivery of public services. Its open-source nature, focus on standards, and community involvement make it an essential tool for enhancing communication and collaboration among public administrations and institutions.

Domibus is an open-source project that was developed by the European Commission's Directorate-General for Informatics (DIGIT). It was created to address the need for secure and interoperable electronic message exchange within the European Union's (EU) public sector.

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**
Domibus has not been found included in the National Catalogue of recommended specifications⁵ of any Member State.

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

- **Openness**

³ CAMSS Assessment EIF Scenario 6.0.0: <https://ec.europa.eu/eusurvey/runner/CAMSSAssessmentEIFScenario6>

⁴ ISA² programme: https://ec.europa.eu/isa2/eif_en

⁵ CAMSS List of standards: <https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/camss-list-standards>

Comentado [MB1]: Can we do a reference for this technology in footnotes? Please, also add what eDelivery Access Point is about within this paragraph

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Domibus serves a distinct purpose unrelated to web data publication, thus rendering this criterion irrelevant. Those interested in contributing to Domibus development can do so via the eDelivery Governance space⁶, hosted by the eDelivery Operational Management Board (OMB), a platform for operational matters led by the European Commission with input from Member States, private sector, user organizations, and standardization bodies. Improvements can also be proposed through the Domibus Bitbucket⁷ and Github⁸ repositories, with developer feedback accessible upon registration on the eDelivery user community.

Domibus operates as open-source software, free from (F)RAND principles and governed by the European Union Public License⁹. Its distribution website hosts comprehensive documentation, including supporting processes, change and release management details, and tracks major and minor specification changes on the "roadmap and previous releases" section¹⁰.

Notably, Domibus is extensively utilized in numerous large-scale public services delivery projects involving substantial message exchange, exemplified by initiatives like MAPA¹¹ and e-CODEX¹², which enable cross-border justice access across Europe. Backed by an active community¹³, Domibus thrives as an open-source solution providing secure electronic message exchange and interoperability through collaborative efforts of users, developers, and contributors.

- Transparency

Domibus functions as an eDelivery Access Point (AP) solution, prioritizing secure message exchange, particularly in eGovernment and cross-border contexts. While its core is message exchange, it indirectly supports visibility of administrative processes and data by offering a standardized communication platform. This promotes data and service comprehensibility through standard messaging and metadata inclusion, enhancing context. Domibus ensures secure message and document exchange, catering to government agencies, organizations, and partners, aligning with standards like AS4 profile of ebMS¹⁴.

⁶ eDelivery Governance Space: <https://ec.europa.eu/digital-building-blocks/wikis/display/EDELGOV/eDelivery+Governance>

⁷ Domibus Bitbucket: <https://ec.europa.eu/digital-building-blocks/code/projects/EDELIVERY/repos/domibus/browse?at=9d8ec59cdf>

⁸ Domibus Github: <https://github.com/cefedelivery/domibus>

⁹ EUPL: <https://eupl.eu/>

¹⁰ Domibus releases: <https://ec.europa.eu/digital-building-blocks/wikis/display/DIGITAL/Domibus+releases>

¹¹ Domibus implementation in MAPA project: <https://mapa-project.eu/2022/01/F>

¹² DomibusConnector Suite for e-CODEX: <https://www.e-codex.eu/node/47>

¹³ eDelivery Developers community: <https://ec.europa.eu/digital-building-blocks/wikis/display/DIGITAL/eDelivery+Developers+Community+management>

¹⁴ AS4 Profile of ebMS 3.0: <http://docs.oasis-open.org/ebxml-msg/ebms/v3.0/profiles/AS4-profile/v1.0/AS4-profile-v1.0.html>

- **Reusability**

Domibus, is generally domain-agnostic in the sense that it can be used in various industries and sectors for facilitating communication between different entities. It provides a framework for exchanging electronic messages and documents while ensuring security, reliability, and adherence to standards like the AS4 (Applicability Statement 4) profile of the ebMS (ebXML Messaging Service) standard.

- **Technological neutrality and data portability**

Domibus, an open-source messaging platform prioritizing secure and standardized message exchange, is designed to be technology-agnostic, capable of integration with diverse underlying technologies and systems. While it's not tied to specific platforms or operating systems, its deployment could entail infrastructure-related considerations.

Domibus offers modularity, accommodating partial implementations by allowing selective deployment of components or features to align with organizational needs. Customization options empower developers to tailor Domibus, incorporating UI changes, backend integrations, and security configurations to suit existing setups. The platform's extension is facilitated via its plugin mechanism, enabling the addition of custom features, integrations, and enhancements for specific requirements and expanded functionality.

Additionally, adhering to AS4 profile of ebMS standard, Domibus ensures standardized message structures, enhancing data portability across systems by facilitating accurate interpretation and processing.

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

- **User-centricity**

Domibus enables the reuse of relevant information through features like message templates, standardized formats, metadata, integration with backend systems, customization, and real-time communication within its messaging scope.

- **Inclusion and accessibility**

While Domibus may not be the central solution for e-accessibility, it plays a role within the broader context of ensuring that digital services and systems are inclusive and usable for all individuals, including those with disabilities.

- **Privacy**

Domibus prioritizes personal data protection in electronic message exchange, adhering to the AS4 profile of the ebMS standard for enhanced security and privacy. Access control mechanisms within Domibus enable restricted information access, managing user roles and permissions. Domibus has been integral to the Multilingual Anonymisation for Public Administrations (MAPA)

project, central to the development of NLP tools and an anonymization toolkit for medical and legal text, further showcasing its role in data protection.

- **Security**

Domibus plays a pivotal role in secure data exchange through mechanisms like encryption, digital signatures, transport security, access control, authentication, authorization, message validation, and audit trails. This ensures data confidentiality, integrity, and controlled access during electronic message exchange. Its support for digital signatures verifies data authenticity and integrity, with adherence to the AS4 standard guaranteeing digitally signed messages, thereby confirming legitimacy and preventing tampering. While Domibus prioritizes secure transmission, its focus doesn't inherently extend to secure data processing. Additionally, adhering to AS4 ensures Domibus' access control mechanisms, enabling administrators to manage user roles and permissions, enhancing control over access and actions within the messaging platform.

- **Multilingualism**

Domibus supports the capability to configure and display user interfaces, messages, and notifications in different languages, thus, making it possible to use in a multilingual context.

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

- **Administrative Simplification**

Domibus simplifies public service delivery through standardized secure message exchange, streamlining communication and data sharing. Integrated into the digital service ecosystem, it enhances messaging and data exchange, supporting seamless communication between backend systems and facilitating vital components of digital service delivery.

- **Preservation of information**

The purpose of Domibus is not related to the long-term preservation of information. Therefore, this criterion is not applicable to the specification.

- **Assessment of effectiveness and efficiency**

There has not been found any assessment addressing the effectiveness or efficiency of Domibus implementations.

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

- **Interoperability governance**
Domibus is associated with EIRA¹⁵ ABBs in the EIRA Library of Specifications (ELIS)¹⁶. More specifically, it covers the "Enterprise Service Bus" ABB from the ELIS Technical Interoperability view. Moreover, Domibus is a component of CEF eDelivery, offering conformance testing services¹⁷ for relevant specifications. While not explicitly recommended by any European Member State, it's recognized in European eGovernment and secure data exchange contexts. Employed in the e-CODEX project, it supports cross-border e-Justice services. Domibus prioritizes secure electronic message exchange, adhering to AS4 profile of the ebMS standard. While not listed in national catalogues, it's accessible on platforms like Joinup and the European Commission's Digital Europe website, providing comprehensive implementation documentation.
- **Legal Interoperability**
Domibus is not a European standard in the sense of being an official standardization document or specification issued by a recognized European standardization organization. However, it is treated as such given that it is an important component from the eDelivery building block¹⁸, as well regarded as an eIDAS regulation¹⁹ enabler.
- **Organisational interoperability**
Domibus can perform data transformation as part of the message exchange process. It can help ensure that data exchanged between systems aligns with the requirements of the business processes involved. Domibus can somehow contribute to facilitating organisational interoperability agreements given that it provides a common and standardised tool for the communication and data exchange between different entities.
- **Semantic Interoperability**
Implementations and some news regarding Domibus can be found in the Joinup platform²⁰, a European repository for IT solutions.

¹⁵ EIRA: <https://joinup.ec.europa.eu/collection/european-interoperability-reference-architecture-eira/solution/eira/release/600>

¹⁶ ELIS: <https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/elis/elis-dashboard>

¹⁷ CEF eDelivery conformance testing services: <https://ec.europa.eu/digital-buildingblocks/wikis/display/DIGITAL/eDelivery+Conformance+testing>

¹⁸ Digital Europe eDelivery: <https://ec.europa.eu/digital-building-blocks/wikis/display/DIGITAL/eDelivery>

¹⁹ eidas regulation: <https://digital-strategy.ec.europa.eu/en/policies/eidas-regulation>

²⁰ Domibus in Joinup: https://joinup.ec.europa.eu/search?keys=domibus&sort_by=relevance&f%5B%5D=

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3. ASSESSMENT RESULTS

This section presents an overview of the results of the CAMSS assessments for ~~PROV family of documents~~Domibus. 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
Principle setting the context for EU actions on interoperability	20/100 (20%)	100%	Ad-hoc
Core interoperability principles	1600/1700 (94%)	88%	Seamless
Principles related to generic user needs and expectations	1100/1200 (92%)	92%	Seamless
Foundation principles for cooperation among public administrations	340/500 (68%)	80%	Sustainable
Interoperability layers*	800/1000 (80%)	100%	Seamless
Overall Score	3860/4500 (86%) ²¹	91%	

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

With an 91% of assessment strength, this assessment can be considered representative of the specification compliance with the EIF principles and recommendations.

The Overall Automated Score of 86% (3860/4500) demonstrates that the specification supports the European Interoperability Framework in the domains where it applies.

²¹ See the “results interpretation” section of the CAMSS Assessment EIF Scenario Quick User Guide:

<https://joinup.ec.europa.eu/collection/common-assessment-method-standards-and-specifications-camss/solution/camss-assessment-eif-scenario/results-visualisation-and-interpretation>