EUROPEAN
COMMISSION

Brussels, 15.12.2025
COM(2025) 860 final

REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL

First annual report on interoperability in the Union

{SWD(2025) 975 final}

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CONTEXT AND BACKGROUND

THE INTEROPERABLE EUROPE ACT LAYS THE FOUNDATIONS FOR A SEAMLESSLY CONNECTED DIGITAL EUROPE

As the EU advances its digital transformation, the Interoperable Europe Act[1], in force since 11 April 2024, provides an essential framework for boosting cross-border interoperability and innovation in the public sector. The Act is driving the Digital Decade[2] goal of 100% online key public services by 2030. It responds to the growing need for seamless cross-border services: with 150 million EU citizens living in border regions and 2 million commuting daily between Member States, interconnected public administrations are essential. Stronger digital administrations will not only deliver seamless services but will also save expected amounts of up to EUR 5 billion annually through greater efficiency[3].

This first Annual Report, submitted by the Commission to the European Parliament and Council under Article 20(4) of the Interoperable Europe Act, reviews the overall progress in implementing the Act and highlights achievements, challenges and future directions. It follows a structured approach, starting with the broader context of the Act before moving to a detailed look at its implementation and impact. While this report focuses on initial progress and the launch of new initiatives, future reports will benefit from the results of a fully-fledged monitoring mechanism that will benefit from a growing dataset to analyse trends, barriers and drivers. This will offer a comprehensive overview of the state of interoperability in the EU.

STRUCTURE

The provisions of the Interoperable Europe Act established a solid framework for public sector cooperation, ensuring that services can operate smoothly across territorial, sectoral and organisational boundaries. The main articles of the Act have been grouped into four main categories: governance, interoperability enablers, supporting measures for the implementation, and interoperability assessments. The final category includes digital-ready policymaking.

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[1] Regulation - EU - 2024/903 - EN - EUR-Lex.

[2] Europe's digital decade: 2030 targets | European Commission.

[3] EUR-Lex - 52022SC0721 - EN - EUR-Lex.

Figure 1 - Interoperable Europe Act - Subsections



This first report focuses on the implementation of the Act from its entry into force to July 2025 and incorporates some elements from the monitoring activities under Article 20. Due to the ongoing implementation of the Act, comprehensive data was not yet available to gain insights from the Interoperable Europe Monitoring Mechanism. Further information on this is detailed in the staff working document accompanying this report[4].

IMPLEMENTATION STATE-OF-PLAY

Governance

Legal basis

The governance framework set out by the Act has been fully established in the past year, as detailed below.

Implementation actions

Over the past year, substantial progress has been achieved in putting in place a strong governance structure.

- As mandated by Article 15, the **Interoperable Europe Board and its permanent working group** started formally operating in the fourth quarter of 2024 providing the institutional framework necessary to coordinate the implementation of the Act across the EU. In addition, the **work programme of the Board** was adopted by the Board in May 2025 and will be updated regularly to guide the drafting of future Board meeting agendas.
- As mandated by Article 16, the **Interoperable Europe Community** was officially launched via the Interoperable Europe Portal in May 2025. It provides a collaborative space for Member States, institutions and stakeholders to exchange experiences, share best practices and co-create solutions.
- As mandated by Article 17 and 18, 26 of the 27 Member States had appointed their **national competent authorities** by the legally binding deadline of 12 January 2025, as required by Article 17, and Union entities had appointed their **interoperability**

[4] SWD(2025)975.

coordinators under Article 18. This has enabled a coherent approach to implementation and coordination across the EU.

- To develop the **first Interoperable Europe Agenda** mandated by Article 19, a task force, including permanent working group members, was set up in the first quarter of 2025. A public consultation was prepared by the task force and launched on the Interoperable Europe Portal in June 2025, with the objective of ensuring that future priorities reflect the contributions and expectations of a broad range of stakeholders[5].

Considerations for the future

Looking ahead, the focus will shift to the Board's formal **adoption of the Interoperable Europe Agenda**. This Agenda will provide a comprehensive framework to guide interoperability efforts across the EU, aligning ongoing initiatives with long-term objectives and the evolving needs of Member States and EU institutions. The **monitoring framework** will be further improved. Finally, the **first annual assembly of the Community,** to be held in October 2025, will serve as a key occasion to further promote collaboration, exchange of best practices and stakeholder engagement.

Enablers

Legal basis

The Interoperable Europe Act establishes a comprehensive framework to address legal, organisational, semantic and technical requirements to ensure scalable and adaptable public sector solutions. To ensure effective **sharing and reuse** of solutions, Article 4 obliges EU institutions and public sector bodies to share interoperability solutions for trans-European digital services. The Board recommends **interoperability solutions** eligible for the 'Interoperable Europe solution' label. The Act reinforces the **European Interoperability Framework (EIF)** as a common reference point and introduces the **Interoperable Europe Portal** as a single-entry point for solutions, technical specifications and best practices.

Implementation actions

- The 2025 results of the Interoperable Europe Monitoring Mechanism demonstrated that **every Member State** has formally **adopted** the **current version of the European Interoperability Framework**[6]. To implement the provisions of Article 6 of the Act, an informal expert group on the **Next Generation European Interoperability Framework** was established in May 2025 to provide technical and strategic guidance for the revision of the framework.
- As mandated by Article 7, the **definition of the process and criteria for labelling Interoperable Europe solutions** was approved by the Board in May 2025. This will ensure that solutions meeting defined quality and interoperability standards can be recognised and promoted within the Portal and across the broader Community. A

[5] Agenda consultation on the Portal: Have your say | Interoperable Europe Portal.

[6] EUR-Lex - 52017DC0134 - EN - EUR-Lex.

dedicated task force composed of members from the permanent working group was established to select the first Interoperable Europe solutions. In addition, a **public consultation** was opened on the Portal from June to August 2025 to collect submissions of interoperability solutions to be considered for labelling.

- In alignment with Article 8, **the Interoperable Europe Portal** was launched in the fourth quarter of 2024. It serves as a central hub for information, resources and tools aimed at facilitating cross-border interoperability initiatives. Around 10 000 users are registered on the Portal and almost 100 000 pages are viewed every month. Among other features, the Portal hosts interoperability solutions and assessment reports, a space for the Board decisions and documents; provides a collaboration space for the regulatory sandboxes; and it publishes new digital funding opportunities every month. As of July 2025, **670** active solutions have been recorded on the Portal[7]. The majority of these (58.5%) originated at EU level. Ownership is primarily with EU entities (57.7%), followed by public sector bodies (34.5%). The European Commission – in particular DG DIGIT – is the main institutional owner.

Good practices

ESTONIA'S IMPLEMENTATION OF THE EUROPEAN INTEROPERABILITY FRAMEWORK

In 2023 Estonia launched a new national interoperability framework[8] to replace its decade-old predecessor. Although not mandatory, it offers practical guidance on interoperability principles for the entire public administration. These principles ensure seamless communication and data-sharing between ICT systems. The framework is aligned with the European Interoperability Framework and is a 'living framework', regularly updated to remain adaptable and user-friendly, with revisions at least every two years.

Complementing this, Estonia has advanced several initiatives on interoperability and digital resilience, in particular the world's first 'data embassy' in Luxembourg[9]. This secure backup for government data ensures continuity of operations and exemplifies best practice in cross-border data management and interoperability. This initiative is part of Estonia's broader strategy to boost its digital resilience and maintain uninterrupted government operations based on strong interoperability supporting the secure and seamless exchange of data between systems. By storing critical government data in a secure location outside Estonia, the data embassy represents best-in-class practice for business continuity and disaster-recovery management. These are essential for systems to be interoperable.

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[7] Data from the 2025 Interoperable Europe Monitoring Mechanism results. More information is available in SWD(2025)975.

[8] Interoperability of the State Information System 2011 | Ministry of Economic Affairs and Communications.

[9] Data embassy in Luxembourg.

THE EU OPEN SOURCE SOLUTIONS CATALOGUE

The EU Open Source Solutions Catalogue[10] demonstrates how shared digital assets can drive efficiency, cross-border cooperation and Europe's digital sovereignty. Public administrations are increasingly adopting open source, and Article 4 of the Act encourages the sharing of interoperability solutions – including code, documentation and references to open standards – to support trans-European digital public services.

The Catalogue, developed under the Free and Open Source Software Solutions for European Public Services (FOSSEPS) pilot projects by the European Commission, compiles solutions from multiple Member States, enabling reuse, collaboration and better interoperability. It serves as a marketplace for open source solutions, empowering collaboration, creativity and efficiency while strengthening interoperability. Initially launched as a minimum viable product in 2024 with contributions from Italy, Germany and the Commission's code.europa.eu[11], it now includes Finland, France, the Netherlands and Sweden. Initiatives like the EU Open Source Solutions Catalogue and publiccode.yml are helping build a more innovative, interoperable and efficient EU digital public sector.

Considerations for the future

In the coming period, the operational focus will be on the **first batch of Interoperable Europe solutions** to be submitted for the Board's approval. The solutions that receive the Board's endorsement will be awarded the Interoperable Europe solution label and made available on the Interoperable Europe Portal. Furthermore, building on the work of the European Interoperability Framework Informal Expert Group, the **blueprint for the Next Generation European Interoperability Framework** will be presented to the Board in December 2025 to kick-start the formal revision of the framework. In addition, a new task force, to include members of the permanent working group, will be established to draft the **Guidelines for the Sharing and Reuse** of interoperability solutions. The Interoperable Europe Portal will be translated into all EU official languages via machine translation to ensure broad accessibility.

Supporting measures

Legal basis

The Interoperable Europe Act sets out measures to strengthen interoperability across Member States and entities through tailored support, innovation, skills and collaboration. Article 10 introduces **innovation measures** to develop new or improved interoperability solutions, often in collaboration with GovTech actors such as SMEs, research institutions and start-ups. Articles 11 and 12 **establish interoperability regulatory sandboxes** for testing and validating solutions in a controlled environment. Additional support includes further training material on the European Interoperability Framework and Interoperable

[10] EU Open Source Solutions Catalogue | Interoperable Europe Portal.

[11] code.europa.eu | GitLab.

Europe solutions, including open source, and a voluntary **peer review** mechanism to improve cooperation among public sector bodies.

Implementation actions

Multiple support measures have been put in place to support innovation in interoperability.

- In relation to Articles 11 and 12, the **Committee on Interoperability Regulatory Sandboxes** oversees the functioning of sandboxes, facilitates the exchange of experiences and provides guidance on best practices. The **implementing act for the interoperability regulatory sandboxes**[12] was adopted in July 2025, providing a structured legal basis for testing and experimenting with innovative digital solutions in a controlled environment. This framework enables Member States and stakeholders to pilot new approaches while ensuring compliance with the principles and objectives of the Act.
- Through the Digital Europe Programme and in line with Article 10, the Commission funds **key initiatives** to boost cross-border digital cooperation, innovation measures and GovTech (e.g. the **GovTech Incubator** and a **Coordination and Support Action on Innovative and connected public administrations)**. The latter is paving the way for a future multi-country project to co-invest in developing AI and key interoperability solutions for public services.
- Public sector interoperability skills have been strengthened through the **development of the Interoperable Europe Academy**, as mandated by Article 13. The Commission has promoted the development of a certification programme on interoperability matters. Between September 2024 and June 2025, 9 new courses were published, there were 12 426 enrolments and **2 716 certificates** were delivered. The rate of delivered certificates is **34%**[13]. A virtual event, the Seasonal School, organised from 13 to 15 May, attracted more than 500 participants, aiming to promote European interoperability and further reinforce knowledge sharing in the field. The event is to become an annual one.

Good practices

STUDENT DATA EXCHANGE

EMREX[14] is a cross-border infrastructure enabling secure electronic exchange of student data, such as transcripts and diplomas, among students, higher education institutions and authorised third parties. It supports the recognition of academic achievements in machine-readable and PDF formats, promoting interoperability and reusability in line with the Act and the European Interoperability Framework[15], thereby facilitating student mobility.

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[12] Implementing regulation - EU - 2025/1420 - EN - EUR-Lex.

[13] Data from 2025 Interoperable Europe Monitoring Mechanism results. More information is available in SWD(2025)975.

[14] EMREX | Supporting Student Mobility.

[15] Emrex, an open source solution supporting student mobility | Interoperable Europe Portal.

Originally funded through Erasmus+ (2015-2017), EMREX is now a self-sustaining, open source initiative governed by the EMREX user group (EUG), an independent, international, multi-stakeholder network involving government bodies, academia and GovTech actors. The initiative is now active in several countries, including Finland, the Netherlands, Norway, Sweden and Chile, with increasing adoption in Germany.

Its technical architecture features open source components available on GitHub under an EUPL-1.2 open source licence[16]. Like the Student Mobility Plugin, which facilitates the transfer of educational records, for example, between a university and an application portal, the EMREX Data Access Point provides reliable, standardised access to student data. Data is exchanged using the EMREX learning model object, a common format that ensures academic records are structured in an interoperable and machine-readable way. Gateway with DC4EU[17] is a once-only technical link that integrates EMREX with the Digital Credentials for EU (DC4EU) project, thus reinforcing its role in the broader European digital education ecosystem. It supports trusted and secure data exchange aligned with EU principles such as eIDAS and the once-only principle. EMREX continues to expand, with potential alignment with the EU Digital Identity Framework and the Single Digital Gateway on the horizon. This will position it as a key enabler of trusted, user-centred data exchange in higher education and beyond.

INTEROPERABILITY EDUCATION IN POLAND'S PUBLIC ADMINISTRATION

Poland has advanced digital public administration and interoperability through two key initiatives: it reused the Interoperable Europe Academy's 'Interoperability: An Introductory Course' and launched the Government Enterprise Architecture (GEA) Study. The 'Interoperability: An Introductory Course'[18], integrated into Poland's national eLearning platform[19] under EUPL licence[20] and translated in collaboration with the European Commission, builds public sector capacity on EU-aligned interoperability principles. The training material has been widely praised for its clarity and ease of use, prompting Poland to proactively engage with the European Commission to localise additional courses, such as those on interoperability assessments and eGovERA©[21].

The Government Enterprise Architecture Study[22], launched in late 2023, combines introductory webinars, on-site workshops and advanced maturity support to boost the capacity of public sector organisations in interoperability and enterprise architecture. It builds on a Government Enterprise Architecture Repository to boost practical application. Engaging over 400 civil servants across 26 organisations, these initiatives demonstrate

[16] EMREX | GitHub.

[17] Digital Credentials for Europe | DC4EU.

[18] Interoperability: An introductory course | EU Academy.

[19] Kurs wprowadzający do interoperacyjności | Portal Interoperacyjności i Architektury.

[20] Introduction to the EUPL licence | Interoperable Europe Portal.

[21] Introduction to eGovERA© | EU Academy.

[22] Studium AIP | Portal Interoperacyjności i Architektury.

how strategic training and capacity-building strengthen governance, drive digital transformation and deliver tangible benefits for administrations, businesses and citizens alike.

Considerations for the future

The **processes and conditions to put in place policy support implementation projects**, as introduced by Article 9, will be drawn up and submitted to the permanent working group in 2026. This may result in the **creation of the first interoperability sandbox**, which would mark a significant step towards fostering innovation in the public sector. It would also support the controlled testing of cross-border solutions. The sandboxes will enable Member States and stakeholders to experiment with novel digital approaches while ensuring compliance with the principles of the Interoperable Europe Agenda. Over time, the lessons learned from sandbox operations will also help to refine interoperability policies and develop new solutions. The Academy will publish 12 **new training courses** before the end of 2025 and three of these will be available in all 24 official EU languages. Finally, the methodology for the voluntary **peer review** mechanism will be submitted to the Board for approval. Once validated, the supporting features will be developed on the Portal and promoted through the Interoperable Europe Community.

Interoperability assessments

Legal basis

The Act mandates **interoperability assessments** for EU entities and public sector bodies to ensure that cross-border interoperability issues of trans-European digital public services are considered before implementation (Article 3). The assessments are designed to evaluate the impact of binding requirements on digital public services, to identify stakeholders and to ascertain the applicability and value contribution of existing interoperability solutions before making decisions on new or substantially modified binding requirements. To facilitate the process, the European Commission provides technical tools, including an online tool for completing assessment reports and publishing them on the Portal. For Member States these instruments make it easier to identify digital dimensions of proposals early on and to involve the right experts and stakeholders from the start. They also enable them to assess whether changes or compromises during interinstitutional negotiations have significant digital implications. In addition, they provide a structured channel for feedback and exchange, which strengthens the Commission's capacity to anticipate implementation challenges and refine its policymaking practices.

Implementation actions

- For Member States, the adoption of **interoperability assessment guidelines**[23] helps to ensure a structured and consistent approach to evaluating interoperability across various domains. These guidelines provide a clear framework to assess the effects of binding requirements on cross-border interoperability, on the stakeholders and on the

[23] Assessment Guidelines | Interoperable Europe Portal.

supporting Interoperable Europe solutions. In the second quarter of 2025 the guidelines were translated into all EU languages and supported the two interoperability assessment reports submitted by Member States (Cyprus and Germany) since the entry into force of the mandatory interoperability assessments on 12 January 2025.

- At the Commission, Article 3 of the Interoperable Europe Act has been implemented through the **digital-ready policymaking (DRPM) framework**[24], which entered into force in January 2025. Using this structured approach, the Commission has already completed **32 interoperability assessments**[25] with efficiency and a clear focus on quality[26]. The approach is built around three core elements.
  - The **Digital Check** is carried out during the policy planning phase and consists of four short questions that help policy teams determine whether an initiative has digital implications.
  - The **digital-ready policymaking guidance** supports the systematic integration of digital considerations throughout the policymaking process.
  - The **Legislative Financial and Digital Statement (LFDS)** or, where appropriate, the **Digital Statement (DS).** Both statements serve as the Commission's interoperability assessment when required. The Legislative Financial and Digital Statement adds a dedicated digital chapter to the former Legislative Financial Statement. The Digital Statement is a simplified version for implementing and delegated acts.

Good practices

INTEROPERABILITY ASSESSMENTS VIA THE DIGITAL-READY POLICYMAKING FRAMEWORK

The assessment highlighted EU-level systems like eIDAS[27] for electronic identification and the EU Cybersecurity Framework[28] as key enablers of secure, interoperable service delivery, with no remaining cross-border barriers identified.

Using the Digital-Ready Policymaking Framework, the Commission has completed 32 interoperability assessments on policy proposals in 2025, with examples like the BridgeforEU[29] and Digital Waste Shipment[30] regulations available on the Interoperable Europe Portal.

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[24] Digital-ready policymaking | Interoperable Europe Portal.

[25] Assessment report's repository | Interoperable Europe Portal.

[26] Data coming from the 2025 Interoperable Europe Monitoring Mechanism results. More information is available in SWD(2025)975.

[27] Electronic Identification, Authentication and Trust Services – learn more at eIDAS Regulation | European Commission.

[28] EU Cybersecurity Framework.

[29] Assessment report for BridgeforEU | Interoperable Europe Portal.

[30] Assessment report for Digital Waste Shipment Regulation | Interoperable Europe Portal.

CROSS-BORDER DIGITAL PUBLIC SERVICES: DECLARATION ON SWEDISH-FINNISH COOPERATION

The Declaration on Swedish-Finnish Cooperation[31], signed on 16 September 2024, is a key milestone in cross-border digital collaboration. It focuses on interoperable digital public services, including population data exchange and harmonised business regulations, to improve access, efficiency and reliability for citizens and businesses across borders.

Interoperability underpins the declaration, enabling seamless services, stronger cybersecurity and better coordination, while fostering economic integration and innovation. The initiative demonstrates that shared goals, joint investment and harmonised standards are essential for successful cross-border digital cooperation, offering a best-practice model with trans-European relevance for other EU Member States.

Considerations for the future

Interoperability assessments have proven valuable in embedding cross-border interoperability into new legislation and digital public services from the outset. Continued effectiveness will rely on streamlining processes and guidance, integrating emerging priorities like AI, data governance and cybersecurity, and ensuring consistent application across Member States and EU institutions.

At Commission level, internal guidance is forthcoming on interoperability assessments for procurement. An AI-based tool, AI4DRPM, is being explored to partially automate Digital Statements and Legislative Financial and Digital Statements, reducing workload while preserving their role in assessing digital implications. These measures aim to make interoperability assessments a cornerstone of better regulation and policy implementation.

COOPERATION BETWEEN THE COMMISSION AND OTHER STAKEHOLDERS

Over the past year, the Commission has strengthened stakeholder cooperation to advance the Interoperable Europe Act. Member States participate via the Interoperable Europe Board and its subgroups, shaping priorities and the agenda, while interoperability coordinators, experts and communities of practice ensure practical experience informs policies and tools. Collaboration extends to candidate countries, international partners and standardisation bodies, reflecting the interconnected nature of digital public services. Collaboration under the Interoperable Europe Act and its Board offers a valuable opportunity for accession countries to align early with EU digital-governance standards — thereby accelerating gradual integration in the EU Digital Single Market. Partnerships with industry, academia, civil society and international organisations have promoted open source solutions, GovTech markets and

[31] Declaration on Swedish-Finnish Cooperation.

regulatory sandboxes, helping align efforts, avoid duplication and create cross-border and cross-sector synergies.

CONCLUSION AND A LOOK INTO THE FUTURE

This first year of implementation of the Interoperable Europe Act has laid the groundwork for a stronger, more cohesive digital public sector across the EU. These achievements show that interoperability is no longer a purely technical issue but a strategic enabler of Europe's digital sovereignty and competitiveness. Milestones such as putting in place the governance structures, launching interoperability assessments and adopting criteria for labelled solutions have demonstrated the EU's capacity to act collectively. In the coming year we can expect:

- the adoption of the first Interoperable Europe Agenda by the Board, setting out the priorities for 2026 and beyond;
- the first batch of Interoperable Europe solutions approved by the Board and the guidelines for the reuse and sharing of solutions;
- further support measures for Member States and EU entities, including training courses, regulatory sandboxes, support projects and peer review mechanisms;
- additional updated guidance and tools for interoperability assessments to foster simplification.

The next steps will require political commitment and investment: scaling up the uptake of labelled solutions, embedding interoperability in major EU policy initiatives such as the Data Act[32], Single Digital Gateway Regulation[33] and the AI Act[34], and reinforcing Europe's global leadership by aligning with international standards. The Commission, together with Member States and partners, will continue to drive forward this agenda, ensuring that interoperability becomes a cornerstone of a more digital, inclusive and resilient European Union.

[32] Regulation - EU - 2023/2854 - EN - EUR-Lex.

[33] Regulation - 2018/1724 - EN - EUR-Lex.

[34] Regulation - EU - 2024/1689 - EN - EUR-Lex.