



**Innovative Public Services
for EU Citizens**

Innovative Public Services for EU Citizens

**Smarter eGovernment
for European Residents**



An initiative of the



This Policy Brief Compilation booklet has been produced with the support of Trust-IT Services, provider of the Horizon Results Booster, funded by the European Commission. The Policy Briefs have been written by projects and project groups that took part in the Horizon Results Booster.

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Executive Summary

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Table of Contents

Executive Summary	3
Smarter eGovernment for European Residents	4
Policy challenges in smoothing the Public Services usage in EU	6
User-centricity is not integrated enough in digital public services	6
Insufficient progress on interoperability	6
Lack of citizens' trust about data and online services	6
Lack of use of	7
Recommendations	7
1. Increase interoperability across countries	7
2. Creating a unified cross-border service platform	7
3. Deliver data protection and privacy to citizens	8
4. Improve mutual trust between member states	8
5. Consider mobile-first in digital policy	8
Project Group	9
Reference List	10

In pursuit of the EU Digital Decade ambition, Europe aims to offer all key public services online by 2030. This means the European Union has as a top priority to support the boost of governments digital transformation for the next years. This action became even more important after the COVID-19 pandemic, where it became clear the major role eGovernment plays in emergency situations.

Regardless of the EU ambition, the seamless access to public services has not been as smooth as desired. To deliver better eGovernment services, public administrations need to regroup resources together under common infrastructures at the European level that serve the needs of various actors and enable the participation of all relevant communities, namely Europeans that live across borders within Europe. European Policy Makers have been working on cross-border solutions, like the Single Digital Gateway Regulation (SDGR) and the Regulation on Electronic Identification and Trust Services (eIDAS), but it has not been enough. The existing barriers are not many but relevant enough to compromise a complete implementation of an eGovernment strategy across Europe. For instance, user-centricity is not integrated enough in digital public services, there is a lack of interoperability in technology, semantic and organisation aspects, along with a lack of trust from citizens regarding the security and privacy of their data hosted in these digital platforms.

In today's scenario, it is crucial that, firstly, EU citizens blind trust that their data in eGovernment platforms is protected and private. Additionally, Europe needs to increase interoperability levels across countries by defining standardised techniques and procedures, as well as creating a unified cross-border service platform that allows collaboration and coordination among governments. From a less technical point of view, all this will be possible only if there is a mutual trust between the government agencies from all member states in cooperating, to achieve the necessary interoperability and accessibility levels in digital public services.

A truly European eGovernment policy needs to be created together, not as individual nations. This requires high-level coordination between all different member states in defining the best solutions that serves everyone, both governments and citizens across Europe, to ensure a long-term union on digital governance.

Smarter eGovernment for European Residents



E-government (eGov) can thus be defined as the use of ICTs to more effectively and efficiently deliver government services to citizens and businesses. It is the application of ICT in government operations, achieving public ends by digital means¹. It improves the relationship between governments and their citizens. For citizens, eGov allows them a quick and convenient access to the government services they need to use, regardless of their locations, thanks to the help of digital technology. For governments, the transition of their services online allows higher levels of internal productivity and efficiency, reduced labor costs and better engagement with their communities.

Achieving the full potential of these technologies is a key challenge for governmental organisations. **The increment of digital technology usage in daily life by citizens consequently increases new demands and expectations on the public sector**, where their services need to have the same level of convenience and efficiency citizens have from non-government services. According to the “Digital Economy and Society Index 2022 Digital Public Services”, from all European Internet users, 65% used internet to interact with the public authorities.

The access to public services is even more important when we adopt a cross-border point of view. This scenario requires a coordinated approach to ensure proper user-centricity, interoperability and privacy embedded in eGovernment design and configuration. The European Commission is taking concrete actions to develop cross-border digital public services. The European “Digital Decade” programme aims to have all public services for both citizens and business fully online by 2030². The main goal is to ensure that when people move freely in the EU, they can easily deal with public services when outside their home country due to work, study, business, personal or other reasons. The need of accessing public services on online channels increased greatly during the COVID-19 pandemic, which disrupted many things which European citizens took for granted, including their freedom of movement throughout the EU. Almost one-third of the EU population live in border regions or travel to study or work in neighbouring countries³. The pandemic made national borders visible again, resulting in a strong economic impact due to long-lasting border controls. **The provision of high quality digital public services across borders is essential for the successful implementation of the European Digital Single Market.**

Policy makers have been working towards interoperable public services through regulations such as the Single Digital Gateway Regulation (SDGR)⁴ to grant online access to information, administrative procedures, and assistance services for residents and businesses in the EU, as well as on the Regulation on Electronic Identification and Trust Services (eIDAS) to provide a predictable regulatory environment to enable secure and seamless electronic interactions between businesses, citizens and public authorities.

However, the slow and challenging uptake of eIDAS solutions has shown that it remains cumbersome to access digital services from different countries throughout the EU. According to a recent evaluation study of the eIDAS Regulation⁵, only 14 member states have notified an electronic Identification (eID) to the European Commission or ensured that their eIDAS nodes are up and running. Even though cross-border interoperability is ensured to some extent, interoperability is still a challenge, particularly regarding organisational interoperability.

To ensure effective cross-border services in Europe, it is necessary to develop a new approach that aligns user experience, interoperability, and data sovereignty as co-existing objectives rather than mutually exclusive concepts. It is crucial to investigate a new way to deliver cross border public services, with citizens’ data sovereignty at its core, focusing on the central principle is that citizens should control their data and monitor how it is accessed and used.

1. Source: <https://publicadministration.un.org/egovkb/en-us/Overview>.

2. Source: European Commission, Digital Economy and Society Index (DESI) 2022 Digital public services, Page 3.

3. European Commission, “EU Cross-Border Cooperation Survey (2020),” accessed February 25, 2023, https://ec.europa.eu/regional_policy/en/policy/cooperation/european-territorial/survey-2020.

4. European Commission, “Single Digital Gateway,” accessed February 25, 2024, https://ec.europa.eu/growth/single-market/single-digital-gateway_en.

5. Davide Ceccanti et al., “Evaluation Study of the Regulation No.910/2014 (eIDAS Regulation): Final Report” (Luxembourg: Publications Office, 2021), <https://data.europa.eu/doi/10.2759/850876>.

Policy challenges in smoothing the Public Services usage in EU

When delivering cross-border public services, there are three main components to focus on, which are described below. It is crucial to analyse properly the challenges that compromise the advancement of eGov services and what is needed to be done to overcome them.

These barriers are well-known, such as legal constraints between member states, a lack of interoperability, absence of political priority and technical and legal difficulties in ensuring data privacy for all citizens. Furthermore, the tension between striving for greater data sharing that enables the Only Once Principle (OOP) to become a reality across borders and the growing concerns over personal data use and misuse has become ever more critical.

To ensure effective cross-border services in Europe, it is necessary to develop a new approach that aligns user experience, interoperability, and data sovereignty as co-existing objectives rather than mutually exclusive concepts. The challenges in providing seamless cross-border services can be summarised as follows:

User-centricity is not integrated enough in digital public services

The current scenario paints a vicious cycle for digital public services: a) there is a limited supply of cross-border digital public services in the EU; b) there is relatively low citizen demand for and acceptance of these services and c) the reason for this low demand is that public services are insufficiently focused on the user. Furthermore, the interoperability, extensibility and re-use of these services and their long-term sustainability must be ensured.

Insufficient progress on interoperability

Mostly due to technological, organisational and semantic nature reasons. **Technological factors** are related with interoperability between member states and delivering data sovereignty for citizens⁶ (e.g database conflicts that occur when distinct member states adopt different units of measure for the same type of data or use incompatible systems⁷). Absence of **organisational rules** are related to standard forms, processes and contact information, that increase the administrative costs of cross-border exchanges and the mental effort of understanding procedures for public servants, businesses and affected citizens alike⁸. **Semantic interoperability** is hampered by a lack of agreed-upon data models and reference data (e.g. code lists, identifiers and taxonomies). There are no widely accepted data models or reference data that member states can use to interconnect their services, as well as a lack of standards (e.g distinct public sector organisations using vocabularies to indicate different styles of commercial activity⁹).

Lack of citizens' trust about data and online services

Only if citizens can 'trust' that their data is secure will they continue to share it with corporations and governments, shop online and adopt innovative services¹⁰. Most Europeans do not trust governments to keep their data secure, and for half of them, this is a reason not to use eGovernment services¹¹. Citizens' trust in the way their data is used is poor and economic progress is affected by this lack of confidence.

Lack of use of synergies¹²

The once-only principle that has been introduced through the Single Digital Gateway Regulation (SDGR) shall facilitate the provision of evidences that competent authorities already have. To securely access such services availability of electronic identity (eID) and electronic signatures to conclude transactions are key. Both are provided through the eIDAS Regulation and its ongoing revision, respectively. The initiatives are interwoven, as access to a SDGR service also needs secure authentication. The synergies are, however, not reaped fully when considering that we nowadays increasingly use mobile devices as the tool of choice to access the Internet. Both the SDGR once-only technical system (OOTS) and eID are still tailored to conventional desktop and browser situations, even if the European Digital Identity Framework has a clear mobile focus. The policy gap also to be filled is to provide seamless integration of the once-only principle, eID and eSignatures in mobile environments.

6. Adrian Mocan et al., "Solving Semantic Interoperability Conflicts in Cross-Border E-Government Services," International Journal on Semantic Web and Information Systems 5, no. 1 (January 2009): 1-47, <https://doi.org/10.4018/jswis.2009010101>.
7. Carmen-Elena Cîrnu and Carmen-Ionela Rotună, "Cross-Border EServices for Public Administration Driven by Once-Only Principle," Revista Română de Informatică Și Automatică 30, no. 4 (December 18, 2020): 99-110, <https://doi.org/10.33436/v30i4y202008>.
8. Nikolaos Loutas et al., "Building Cross-Border Public Services in Europe Through Sharing and Reuse of Interoperability Solutions," Proceedings of the 14th European Conference on eGovernment (ECEG 2014), 2014, 170-79, <https://www.proquest.com/openview/6964291f2da5da625059b06e1ca75da6/1?pq-origsite=gscholar&cbl=1796415>.
9. Loutas et al.
10. Viviane Reding, "Digital Sovereignty: Europe at a Crossroads," 2016, <https://institute.eib.org/wp-content/uploads/2016/01/Digital-Sovereignty-Europe-at-a-Crossroads.pdf>.
11. European Commission, "Europeans' Attitudes towards Cyber Security" (Luxembourg: Publications Office, 2017), <https://data.europa.eu/doi/10.2837/82418>.
12. European Parliament, <https://www.europarl.europa.eu/news/en/press-room/20230315IPR77508/parliament-ready-to-negotiate-with-council-for-an-eu-wide-digital-wallet>.

Recommendations

1. Increase interoperability across countries

Digital public services are still in their infancy although tremendous work has been invested. Only a few EU Member States can offer a wide array of services to their citizens. The situation is even harder when trying to achieve interoperability between systems regarding cross-border services. In order for digitally based government programs to succeed, political power must be used to establish and enforce standards and rules for cross-border services across countries, ensuring that all government agencies follow the same rules and procedures across all departments and institutional levels is the most challenging component of implementation. To tackle this challenge, **policymakers should encompass standardised techniques and procedures including interfaces, data governance, interoperability, and open standards for technology in addition to the technical standards** established by bodies like the International Organisation for Standardization (ISO). This value can be accomplished by establishing required procedures and compliance monitoring, as well as by tying public financing to the achievement of standards like the European Interoperability Framework (EIF).

2. Creating a unified cross-border service platform

A unified platform is necessary to improve the cross-border scenario in each country, for several reasons. To **build such a platform, collaboration and coordination among government agencies and EU member states are essential**. This can be reached by: a) harmonising regulations and standards across the EU so that the platform is compatible and accessible to all member states; b) adopting common technical solutions and infrastructure to help reduce costs and increase interoperability, also encouraging private sector participation and partnerships to bring in expertise and resources; c) ensuring data protection and privacy compliance with EU regulations such as GDPR; d) providing training and support to users and government officials to ensure the platform is being used effectively and building a central governance structure to oversee the platform's development, operation and maintenance, also establishing clear and transparent communication and feedback mechanisms and continuous monitoring.

3. Deliver data protection and privacy to citizens

In order to satisfy the users' needs in utilising digital public services, it is **necessary to ensure that data protection and privacy are built into the design from the start, to protect citizens' personal data and build trust in the services and businesses**. To to this end, regular audits, training and awareness-raising activities need to be performed, as well as the creation of dedicated data protection and privacy units within member state governments. Policymakers should also establish clear and transparent procedures for data processing and ensure that these procedures are in line with EU data protection regulations. Moreover, they should also establish mechanisms for monitoring and enforcing compliance with EU data protection regulations, such as regular audits of data controllers, as well as sanctions for non-compliance.

4. Improve mutual trust between member states

Policymakers can take several actions to achieve a high level of mutual trust between different member states in order to address interoperability and accessibility to digital public services. One of the key actions is to **foster mutual understanding and cooperation between different EU member states and government agencies**, for example through regular meetings and consultations between representatives of different member states, as well as through the creation of working groups and task forces. Encouraging private sector participation and partnerships can bring expertise and resources for the development and implementation of services, and public-private partnerships can help ensure that services meet the needs of users. Another important action is to harmonise regulations and standards across the EU, and encourage the use of open standards and open data can help increase interoperability and guarantee easier access to digital public and cross-border services.

5. Consider mobile-first in digital policy

Accessing digital services is increasingly done through mobile devices. We buy cinema tickets, book flights, order pizza or make dates with peers using our smartphones or tablets, which are highly personal devices which use sensors or personalised data to support us. Such an always-online attitude requires paradigm shifts in how services are designed. Public services need to follow the citizens' expectations in modern service design. To support this, a policy to enable the Digital Single Market shall consider this increasingly mobile environment where personal devices are both a communication device as well as an information security tool.



Project Group



across-h2020.eu



ingov-project.eu



[INTERLINK-project.](https://interlink-project.eu)



www.mgov4.eu

The projects that contributed to this document are indicated below. These projects have received funding from the European Union's Horizon 2020 (H2020) Research and Innovation programme under Grant Agreements: ACROSS **959157**; inGOV **962563**; INTERLINK **959201**; mGov4EU **959072**;

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Reference List

- Adrian Mocan et al., "Solving Semantic Interoperability Conflicts in Cross-Border E-Government Services," International Journal on Semantic Web and Information Systems 5, no. 1 (January 2009): 1–47, <https://doi.org/10.4018/jswis.2009010101>
- Carmen-Elena Cîrnu and Carmen-Ionela Rotună, "Cross-Border EServices for Public Administration Driven by Once-Only Principle," Revista Română de Informatică Și Automatică 30, no. 4 (December 18, 2020): 99–110, <https://doi.org/10.33436/v30i4y202008>
- Davide Ceccanti et al., "Evaluation Study of the Regulation No.910/2014 (EIDAS Regulation): Final Report" (Luxembourg: Publications Office, 2021), <https://data.europa.eu/doi/10.2759/850876>
- European Commission, Digital Economy and Society Index (DESI) 2022 Digital public services, Page 3
- European Commission, "EU Cross-Border Cooperation Survey (2020)," accessed February 25, 2023, https://ec.europa.eu/regional_policy/en/policy/cooperation/european-territorial/survey-2020/.
- European Commission, "Europeans' Attitudes towards Cyber Security" (Luxembourg: Publications Office, 2017), <https://data.europa.eu/doi/10.2837/82418>
- European Commission, "Single Digital Gateway," accessed February 25, 2024, https://ec.europa.eu/growth/single-market/single-digital-gateway_en
- Nikolaos Loutas et al., "Building Cross-Border Public Services in Europe Through Sharing and Reuse of Interoperability Solutions," Proceedings of the 14th European Conference on EGovernment (ECEG 2014), 2014, 170–79, <https://www.proquest.com/openview/6964291f2da5da625059b06e1ca75da6/1?pq-origsite=gscholar&cbl=1796415>.
- United Nations, <https://publicadministration.un.org/egovkb/en-us/Overview>
- User-centricity, interoperability and citizens' data sovereignty: the foundations of cross-border digital public services https://across-h2020.eu/sites/d8across/files/ACROSS%201st%20Policy%20Brief_0.pdf
- Viviane Reding, "Digital Sovereignty: Europe at a Crossroads," 2016
- <https://institute.eib.org/wp-content/uploads/2016/01/Digital-Sovereignty-Europe-at-a-Crossroads.pdf>





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The **HRB - Horizon Results Booster** is an initiative funded by the European Commission, Directorate General for Research and Innovation, Unit J5, Common Service for Horizon 2020 Information and Data.