H2020-SC6-GOVERNANCE-2018-2019-2020
DT-GOVERNANCE-05-2018-2019-2020

ACROSS
Towards user journeys
for the delivery of cross-border services
ensuring data sovereignty

D6.4: Toolbox for public administration managers, and policy makers -Initial

Project Reference No	959157 — ACROSS — H2020-SC6-GOVERNANCE-2018-2019-2020
Deliverable	D6.4: Toolbox for public administration managers, and policy makers - Initial
Work package	WP6: Use cases deployment, evaluation & impact assessment
Nature	Report
Dissemination Level	Public
Date	31/01/2023
Status	Final 1.0
Editor(s)	Nathan da Silva Carvalho (LC)
Contributor(s)	-
Reviewer(s)	Marina Klitsi (ATC), Enrique Areizaga (TEC), Max Kortlander (WAAG)
Document description	ACROSS will provide a self-standing toolbox containing a library of metrics mapped against evaluation criteria and evaluation questions, a set of data collection tools such as questionnaires and data collection templates, an overview of the main outcomes and lessons learned from ACROSS, including an action plan and recommendations for practitioners, policymakers, and public servant managers, guidelines on how to implement the ACROSS solution as well as for the operationalization of the evaluation and assessment, and will be available on the ACROSS platform for re-use and as an interactive version.

About

The project is co-funded by the European Commission's Horizon 2020 research and innovation framework programme. Spanning through three years, ACROSS consists of a consortium of 10 partners from 7 countries: Athens Technology Center (coordinator), Tecnalia, Dataport, Engineering, Fraunhofer, GRNET, TimeLex, The Lisbon Council, Waag and VARAM.

DISCLAIMER

Document Revision History

Version	Date	Modifications Introduced	
		Modification Reason	**Modified by**
V0.1	05/10/2023	ToC created	LC
V0.5	12/12/2023	First draft completed	LC
V1.0	15/01/2023	Draft revised and comments resolved	LC
V2.0	25/01/2023	Final draft made and small changes	LC
V3.0	27/01/2023	Internal Review	ATC, TEC, WAAG
V4.0	30/01/2023	Revised version based on reviewers comments	LC
V1.0	31/01/2023	Final version	LC

Executive Summary

This deliverable offers a set of principles and guidelines for public administrations in the provision of cross-border services in a practical way. The toolbox is a self-sufficient tool that assists public service managers and policymakers by providing recommendations and best practices based on the solutions developed in the project. This is an initial version of the toolbox, which means that metrics and data collection methods are added in the final version of the toolbox. As the ACROSS project is still ongoing, this version will be used to produce an initial prototype of the visual guideline form of the toolbox – which will need to be updated in the final version of this deliverable.

The toolbox includes the gap analysis made in the ACROSS project – and links with the solutions provided by the project, along with policy recommendations and lessons learnt. The final version of the toolbox will provide a variety of metrics that align with evaluation criteria and questions, in addition to data collection tools like questionnaires and templates. These variables will help policymakers evaluating and measuring the initial recommendations. The recommendations will centre on the utilisation of ACROSS services by public administration officials. The toolbox also features a summary of the main results and insights gained from the ACROSS project, including a plan of action and recommendations for practitioners, policymakers, and public service managers. On the ACROSS platform, the toolbox will be provided in a visual form, allowing for users to interact with it.

The toolbox is important because it addresses the gaps in cross-border services in the EU. The EU has a goal of providing seamless cross-border services for citizens and businesses, however, the reality is that there are still barriers that prevent citizens and businesses from accessing services across borders. This toolbox provides a practical approach for public administrations to deliver cross-border services and evaluate their effectiveness, helping to remove these barriers and making it easier for citizens and businesses to access services across borders.

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List of Terms and Abbreviations

Abbreviation	Definition
European Union EU	EU
Once Only Principle	OOP
General Data Protection Regulation	GDPR
Information Communications Technologies	ICT
European Cooperation in Science and Technology	COST
Single Digital Gateway	SDG
European Interoperability Framework	EIF

1   Introduction

Cross-border services in the EU are critical for ensuring that citizens and businesses can access the services they need, regardless of where they are located. However, there are still barriers that prevent citizens and businesses from accessing services across borders. These barriers can include differences in regulations, language barriers, and a lack of coordination between different national and regional public services. To address these gaps in cross-border services, it is necessary to provide public administrations with the necessary tools and resources to deliver seamless cross-border services. The toolbox developed by the ACROSS project aims to do just that. This toolbox offers principles, guidelines and a set of metrics, and data collection tools that will assist public service managers and policymakers in delivering cross-border services in a practical and user-centred way. In the following sections, we will present the toolbox and explain how it can be used to deliver seamless cross-border services, evaluate their effectiveness and how it can help to identify and remove barriers that prevent citizens from seamlessly moving across borders within the EU.

1.1   Purpose and Scope

The purpose of this toolbox is to provide public administration managers and policy makers with the necessary tools and resources to effectively implement digital public cross-border services within the EU. The toolbox aims to assist these stakeholders in understanding the complexities of cross-border digital public services and provide them with the knowledge and guidance needed to successfully implement these services.

The scope of the ACROSS toolbox (after its final version) includes the following key areas:

- An overview of the EU landscape and gaps for digital public cross-border services.
- Best practices, based on ACROSS use cases on the implementation of digital public cross-border services.
- A comprehensive guide on the technical and logistical requirements for implementing cross-border services.
- Templates and tools for developing and implementing digital public cross-border services, including service agreements, data protection agreements, and service level agreements.
- The toolbox is designed to be a comprehensive resource for public administration managers and policy makers, providing them with all the necessary information to understand and implement digital public cross-border services in the EU.
- An online version or visual guideline (handbook) where all the information is condensed in a visual way and has tools to help policymakers apply the knowledge from the toolbox.

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The ACROSS team will build a visual version that will be available on the ACROSS website. This presentation of the toolbox will allow policymakers and public sector managers to use the toolbox in an interactive way and evaluate if the implementation of cross-border services is following the correct guidelines of the user journey and life events applied in ACROSS. They will be able to follow the action plans provided by the team in a straightforward manner and make a self-evaluation of their cross-border services implementation.

1.2   Approach for Work Package and Relation to other Work Packages and Deliverables

This deliverable belongs to WP6 "Use cases deployment, evaluation and impact assessment." It builds upon the impact assessment of the project and D6.2 "Use Case Evaluation and Impact Assessment - Initial." The toolbox uses the knowledge created for the impact assessment of the project to create efficient guidelines for public sector managers and policymakers. Where the impact assessment measures all of the impacts planned by the ACROSS project, the toolbox is a solution that is more focused on the implementation of cross-border digital public services by the public sector side.

To build the toolbox, the ACROSS team used the information generated by D2.3 and D2.4 "Cross-border service gap analysis," the initial and final version, respectively. The identified gaps are important to be included in the toolbox as to give the correct context for policymakers and public managers when implementing the recommendations and guidelines proposed by the ACROSS team. This toolbox also uses D2.1 "User Journey Methodology definition – Initial" to give context to the user-centred methodology used in the ACROSS project. The user journey is an imperative methodology in ACROSS to implement cross-border services in the pilots of the project and make cross-border services aligned with the citizens' needs.

1.3   Methodology and Structure of the Deliverable

In chapter 1, an overview of the deliverable is given. Chapter 2 explains the state-of the art about cross-border services to give context to the EU's status on cross-border services and what are most prominent gaps and drivers. In chapter 3, a brief explanation about the gap-analysis conducted for ACROSS is presented, followed by chapter 4, which provides the user-journey methodology.

Chapter 5 explains the solutions developed in ACROSS, then finally, chapter 6 presents the recommendations of the toolbox and the policy road mapping. Chapter 7 gives the next steps to finalise the toolbox, and chapter 8 is the conclusion.

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2 State-of the art of digital public cross-border services in the EU

Cross-border digital public services enable citizens, businesses, and organisations in the EU to access public services provided by member states other than the one in which they reside. These services may include getting a passport, paying taxes, or receiving healthcare. The objective of cross-border digital public services is to make it simpler for people and businesses to access the services they need, regardless of their location within the EU. This access promotes mobility and cooperation across borders within the EU and allows people and businesses to take advantage of the opportunities provided by the Digital Single Market.

Digital public services, including those that are cross-border in nature, are an important aspect of the Digital Single Market Strategy of the EU[1]. The EU has made significant progress in recent years in developing and implementing digital public services that are easily accessible to citizens and businesses across the member states. One major initiative in this area is the EU's Digital Programme, which aims to promote the development and use of digital public services across the EU.[2] The plan has several key objectives, including making it easier for citizens and businesses to access public services online, and ensuring that digital public services are secure, reliable, and user-friendly.

The European Digital Strategy is a plan on how the EU will work to develop and promote the use of digital technology in the region over the next decade. The goal of the strategy is to create a digital single market in the EU, where digital goods and services can be easily accessed and used by people across the region. This includes initiatives to improve access to high-speed internet, promote the use of digital technologies in industry and business, and encourage the development of digital skills among citizens. The strategy also aims to ensure that all citizens have access to digital services that are secure, trustworthy, and respect their privacy. Naturally, it entails that the EU can also apply these key concepts when delivering cross-border services to European citizens. One of the key components of this strategy is a massive investment of 20% of the €724 billion recovery and resilience fund towards digital initiatives by European, national, and local governments. However, with such a large budget comes an immense responsibility to ensure that this investment results in tangible benefits for all European citizens.

One specific area where the EU has made significant progress is in the field of e-identification and authentication. This allows citizens and businesses to access public services across the EU using a single set of login credentials, making it much easier to access services in other member states. The EU has also developed and implemented several technical standards and guidelines to ensure that e-identification and authentication systems are secure and reliable. Another area

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[1] EU4Digital, "EU Digital Single Market",consulted on Jan. 30, 2023, https://eufordigital.eu/discover-eu/eu-digital-single-market/

[2] European Commission, "The Digital Europe Programme | Shaping Europe's Digital Future," accessed January 9, 2023, https://digital-strategy.ec.europa.eu/en/activities/digital-programme .

of focus for the EU is e-invoicing, which aims to simplify and digitise the process of invoicing for public procurement. The EU has developed a set of technical standards for e-invoicing and has been working to promote their adoption among member states. The EU has also been actively working to promote interoperability among e-invoicing systems across the member states, which would make it easier for businesses to invoice across borders. Other areas where EU has been working to promote digital public services include eProcurement, eHealth, and eJustice. In general, the EU has made significant progress in developing and implementing digital public services that are cross-border in nature, but many challenges remain to be solved.

For instance, low levels of trust in how personal data is handled by governments may also hinder the use of e-government services.[3] Adopting eIDAS solutions has proven to be a slow and difficult process, making it hard for EU citizens to access digital services across different member states.[4] The COVID-19 pandemic and Brexit have also made it harder for European residents to move freely within the EU. Studies have shown that the lack of cross-border service provision can have significant economic consequences and the contrary is also true, the good provision of cross-border services can promote job creation and economic growth in the EU.[5]

Other challenges include ensuring that digital public services are accessible to all citizens, regardless of their level of digital literacy, as well as ensuring that digital public services are secure and protect citizens' personal data. There are many barriers to creating seamless cross-border services in Europe, such as legal limitations, lack of political focus, challenges in protecting personal data privacy and lack of user-centred design in cross-border services.[6] Additionally, there is a growing tension between the need for increased data sharing to make cross-border services more efficient and the increasing concerns about the misuse of personal data. Some of the main challenges include:

- **Interoperability:** One of the main challenges to implementing cross-border digital public services is ensuring that different systems and services in different member states can work together seamlessly. This requires the development and adoption of common

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[3] Chrysoula Mitta, Charlotte van Ooijen, and David Osimo, "User-Centricity: What It Means, How It Works, Why It's Needed. How Relentless Focus on End-Users Raises Adoption and Delivers Better Services to Citizens," 2021, 13.

[4] 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.

[5] Manuel Fritsch and Roman Bertenrath, "Cross Border Services in the Internal Market: An Important Contribution to Economic and Social Cohesion." (Luxembourg: Publications Office, 2019), https://data.europa.eu/doi/10.2864/06095.

[6] Tarmo Kalvet et al., "Cross-Border e-Government Services in Europe: Expected Benefits, Barriers and Drivers of the Once-Only Principle," in *Proceedings of the 11th International Conference on Theory and Practice of Electronic Governance*, ICEGOV '18 (New York, NY, USA: Association for Computing Machinery, 2018), 69–72, https://doi.org/10.1145/3209415.3209458.

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technical standards and guidelines, as well as the alignment of legal and regulatory frameworks across the member states.

- **Legal and regulatory fragmentation:** The EU is composed of 27 different member states, each with its own legal and regulatory frameworks. This can make it difficult to implement cross-border digital public services, as different laws and regulations can create barriers to the free flow of information and data across borders. Researchers state that resolving legal obstacles and establishing a sound legal basis for the once-only principle (OOP) is a crucial strategic matter. Existing national legal frameworks need to not only allow data sharing within countries but also enable data sharing and reuse across borders. The EU has adopted some directives and regulations to support interoperability, but a common legal basis at the EU level is still needed to support cross-border OOP.[7]
- **Cybersecurity:** Ensuring the security of digital public services is a major challenge, particularly when it comes to cross-border services. This requires the implementation of robust cybersecurity measures, including the use of encryption and secure authentication systems, as well as regular monitoring and testing to detect and respond to cyber threats.
- **Digital literacy and inclusion:** Not all citizens in the EU have the same level of digital literacy, which can make it difficult for some people to access and use digital public services. This is an important challenge that needs to be addressed to ensure that all citizens can fully benefit from digital public services.
- **Data protection and privacy:** Ensuring the protection of citizens' personal data is a critical challenge when it comes to cross-border digital public services. Solving this challenge requires the implementation of robust data protection and privacy regulations and ensuring that all member states comply with them.
- **Funding:** The development and implementation of digital cross-border public services can be expensive, and the funding issue can be a major hurdle in their deployment. Also, the maintenance, updates and upscaling may need financial resources.
- **Human and organisational challenges:** Even with all the technical and legal challenges, the implementation of cross-border digital public services also needs a proper organizational and human aspect. This includes making sure the public administration staff is properly trained to work with the new digital services and change management techniques are well applied.

Overall, implementing effective digital public cross-border services in the EU is a complex and challenging task, requiring coordination and cooperation among different stakeholders at the national, regional, and EU levels. Innovative solutions that combine user experience, interoperability, and data sovereignty are needed to ensure successful cross-border services. Thus, the ACROSS project conducted a gap analysis to identify all the gaps that appear when citizens try to study or work in another member state (as-is situation). Along with it, the team also defined user journeys for these processes based on input from different stakeholders, to

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[7] Kalvet et al.

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outline how these processes should look like (to-be situation). Understanding both scenarios is crucial for the toolbox. Knowing the current situation of cross-border services and citizens' desires can help during policy implementation. The results of these methods are explained in the next chapters.

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3   Digital public cross-border services gap analysis: as-is situation

To have an overview of the most current gaps of cross-border in the EU, the ACROSS team conducted a gap analysis (as presented in the D2.4: Report for cross-border service gap analysis) in the three countries (Germany, Latvia, and Greece). The results of the analysis allowed the team to evaluate the current scenario of such services provided in each country. The gap analysis was conducted together with the user journey methodology, allowing a holistic view of what are the gaps in the currently provided services and how citizens would like these services to be provided.

First, utilising a gap analysis was vital in assessing the current state of cross-border digital public services, identifying areas where services are lacking, and where there are disparities in service delivery across different countries within the EU. This information can be used to prioritise areas for improvement and allocate resources more effectively. Benchmarking the performance of cross-border digital public services against established standards or best practices can provide a clear understanding of where the services stand in terms of quality and user-friendliness and help identify areas that need to be improved to reach desired levels of performance. It can also reveal trends and patterns in cross-border digital public services and inform policy and decision-making related to cross-border services to improve the overall performance and user experience.

Furthermore, it can be used to measure the effectiveness of interventions or solutions implemented to address service delivery gaps or improve performance. Finally, it can help ensure that the service is compliant with regulations such as the General Data Protection Regulation (GDPR) regarding data protection and privacy, which are important when it comes to cross-border services. Overall, conducting the gap analysis provided a comprehensive understanding of the current state of cross-border digital public services in the EU, allowing government agencies to make data-driven decisions and improve the overall performance and user experience of these services.

In ACROSS, the gap analysis methodology was translated into the following steps:
- First, the pilot partners each researched cross-border services offered in their respective countries. The research process began with finding and cataloguing the available cross-border services in each country. Partners then evaluated these existing services in terms of their readiness and ability to be integrated into the ACROSS user journey. Overall, the research found that fragmentation, lack of technical readiness, and lack of interoperability maturity are major issues in national cross-border services. Some services exist and may be integrated, while others are not ready or incompatible with other services. Additionally, necessary services for a complete user journey may not exist at all. More information is available in D2.3 "Cross-border Service Gap Analysis – Initial."
- To further validate these findings, a co-creation workshop was organized on June 30, 2022, with the help of external researchers and professionals who work with European migration and cross-border services. More detailed information can be seen in the D2.4 "Cross-border Service Gap Analysis – Final." The goal of the workshop was to understand

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where other initiatives identify gaps in cross-border services and explorer further points of improvement for the identified gaps. All the relevant gaps can be read in the following table:

Table 1 – List of identified cross-border service gaps

Identified cross-border service gaps
1. Countries are unable to identify a solid basis of trust and mutual recognition.
2. There is a low level of information sharing between EU member states.
3. Lack of interoperability of ICT solutions amongst different countries.
4. No temporary ID for non-EU residents, newcomers or refugees to access digital wallets.
5. Function creep is a serious issue facing cross-border services, because the types of credentials that are developed and used in a cross-border context are often highly personal or sensitive.
6. Certain services that have been digitised in one EU country may not yet have been digitised in another.
7. There is a lack of trust towards and between institutions in the public and private sector.
8. People do not have control over who has access to their personal data and there is a lack of transparency about their data processing.
9. There is uncertainty over how to accommodate non-EU systems (for credentials, identity management, data sharing, etc.) within a European data infrastructure.
10. There is limited use of the eIDAS infrastructure, and no mature digital identity wallet in the market today.
11. Cross-border services are not perceived as safe (like other digital public services). The implementation of robust cybersecurity measures, including the use of encryption and secure authentication systems, is necessary to increase service uptake.
12. Undetermined impact of disruptive technologies for cross-border digital public services.
13. Lack of attention to every-day commuters who face issues by working and living in neighbouring countries.
14. Low digital skills which make it difficult for many people to access cross-border services.
15. People do not know what their workflow is to move abroad (which steps they have to take, and in which order).
16. Many services are not available in languages other than the local language.
17. Lack of impact assessment of cross-border services.

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4   User journey for digital public cross-border services: to-be situation

4.1   User journey definition in ACROSS

The second method used by the ACROSS team was the user journeys. Defining and utilising a user journey methodology for cross-border digital public services in the EU is a decisive step in ensuring that services are tailored to meet the needs and goals of the users. It provides a framework for designing and delivering services with a user-centred approach, which helps to ensure that services are effective and efficient. By mapping the user journey and identifying any issues or challenges that citizens face when accessing the service, it allows government agencies to identify areas where improvements can be made to enhance the user's experience.

Regularly monitoring and evaluating the user journey can guarantee that it continues to meet the needs of citizens and that the solutions developed to address pain points are still effective. This method can improve the reliability and efficiency of the service and reduce user frustration. The insights and data gathered through the user journey mapping process can be used to inform policy and decision-making related to cross-border services, helping to ensure that services continue to meet the needs of users, and that improvements are made in a data-driven, evidence-based way. By providing seamless and efficient service to users, it can enhance their experience and satisfaction, and will foster trust in the government and its ability to provide efficient services. All these variables are taken into consideration when creating the ACROSS toolbox.

To establish the direction of the ACROSS project, the consortium needed to understand the current experiences and services utilized by EU citizens who move abroad for work or study. To do this, the team started with a co-creative process in WP2, understanding the journey of citizens moving across Europe for work or study. These journeys –referred to as "user scenarios" – represented the experiences of the project's end-users. The co-creative process included several steps: inventorying existing services, reflecting on personal experiences of moving across borders, conducting two online co-creation workshops with ACROSS partners, and conducting interviews with people in Greece, Latvia, and Germany who have crossed borders for work or study in the past.

The first co-creation workshop involved partners sharing participatory methods, establishing a co-creative culture, and preparing for interviews with individuals who have moved across borders. Based on this workshop, a "starter pack" was created to assist partners in the interview and survey process. Pilot partners then conducted interviews over the summer of 2021 with individuals who have moved across European borders for work or study. These interviews were the primary input for the user scenarios. In the second co-creation workshop, WP2 and WP6 partners came together to collect and compile the content from the interviews. The outcome of this process was the development of two shared user scenarios that apply to the three pilot countries: one for working abroad and one for studying abroad.

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In ACROSS the user journey methodology was translated into the following steps:

1. Building a catalogue of currently available cross-border services.
2. Creating a preparation guide to introduce participatory methodologies from the ACROSS project.
3. Holding a workshop on June 1st to share valuable information and collaborative techniques.
4. Creating an Interview Starter Pack to help pilot partners engage citizens in a participatory process.
5. Providing support to pilot partners for conducting interviews and surveys.
6. Creating shared user journey scenarios based on the results from all pilot areas.

The results of such scenarios can be seen in D6.2 "Use case evaluation and Impact Assessment." One example of a user journey can be seen below. In this example, it is possible to see the user journey process flow for a citizen who moving from Greece to Germany to study.
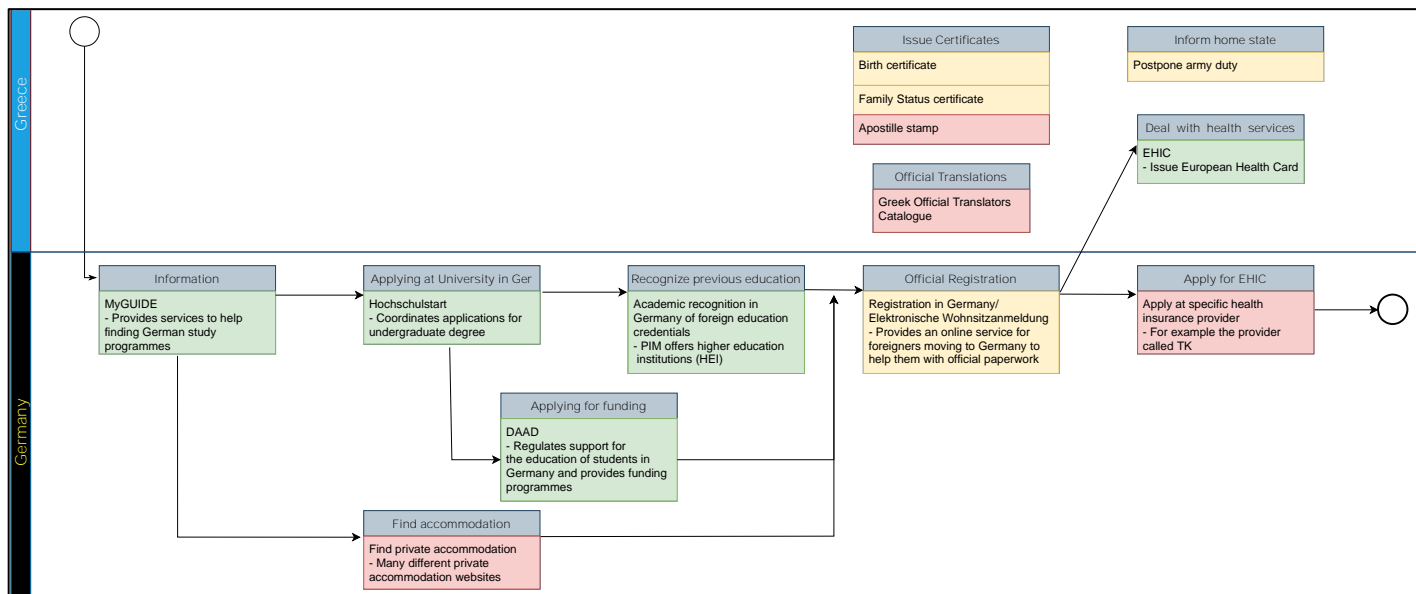
Figure 1 – ACROSS user journey example

4.2   Defining user requirements for a cross-border platform

The ACROSS platform is still in its prototyping phase – and as such, the toolbox and its recommendations are developed alongside it. In any case, during the examination of use case scenarios and interviews conducted by the pilot partners, several key user requirements emerged that were not previously addressed in technical discussions. These requirements are important information for policymakers and public sector managers to consider on a technical level when implementing digital-cross border services. These are genuine requests from citizens and are necessities that they would like to see when using platforms to complete cross-border

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services. The ACROSS team is working to implement these requirements (whether directly/indirectly or fully/partially) in the ACROSS platform. These requirements can be seen as "wishes" from citizens when implementing cross-border services and should be considered if public managers want to make these services more user-centred.

Citizens showed interest in utilising a platform like the one developed in ACROSS if it offered a comprehensive location for both digital services and migration information. They highlighted that a platform that only offers digital services would be insufficient without also offering guidance on recommended procedures and steps to make the migration process easier. To improve the technical performance of digital services and overall process management, citizens would benefit from interactive data management tools such as checklists and cockpits. Incorporating examples, tutorials, information, and external connections would make the platform more attractive and enhance the user experience. Without these features, ACROSS would be comparable to the current "Your Europe" platform.[8]

More information about the requirements made by the citizens can be found in D6.1 "Use case scenarios and roadmap" and "D6.2: Use case evaluation and impact assessment – Initial".

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[8] "Questions on Your Rights in the EU? Or Your Obligations?," Your Europe, accessed January 27, 2023, https://europa.eu/youreurope///index_en.htm .

5   ACROSS Solutions

As seen in the previous chapters, cross-border services within the EU have become increasingly important as the EU continues to expand and integrate its markets. These services, which include everything from e-commerce and digital services to transportation and logistics, have the potential to drive economic growth and improve the lives of citizens across the EU. However, the complexity of regulations and administrative procedures can make it difficult for governments to provide cross-border services. To facilitate cross-border trade and promote the growth of these services, the ACROSS project is developing severalsolutions to help simplify and streamline the process. These solutions incorporate the results from the user journeys and try to focus on user needs whenever possible.

During the development of these solutions, the ACROSS consortium has also learned what can work better for national governments when implementing cross-border services. These learned lessons are incorporated into the toolbox of the project. Therefore, it is necessary to have an overview of the solutions that the project is currently developing to then acknowledge the lessons learned and policy recommendations. The following table depicts these solutions.

Table 2 - ACROSS solutions

Solution	Description
User journey	Demonstrate to the public servants that the use of the 'User Journey' approach for the definition of (digital) public services improves the usability and understandability of the different steps that a citizen or other relevant stakeholders must execute, in this case, in the life event 'moving'.
Connectors	Demonstrate that due to the data harmonization tools that allows to 'translate' the digital public services in the legacy format to the format recommended by the EIF[9], the interoperability at cross-border in the different dimensions (technical, semantic) is achieved, so these can be used both by the public servants, businesses and the citizens.
Virtual Assistant	Show the added value of using a Virtual Assistant when making a transaction in the digital public service that guides a citizen in the different steps that can solve potential problems or questions that the citizen may face. The support for speech communication and multiple languages will enhance the interaction of the citizen with the public service by improving accessibility and lowering potential language barriers the citizen may encounter.

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[9] European Commission, "The New European Interoperability Framework," Text, ISA[2] - European Commission, October 1, 2023, http://webserver:8080/isa2/eif_en.

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Solution	Description
ACROSS platform	Demonstrate the potentiality of an integrated ICT platform that is prepared to interoperate with the SDG implementation[10], as well as compliant with the EIF vocabularies. Also, show that ACROSS is modular enough to be able to integrate external services coming from the private sector.
Mobile and web app	Show the advantages of using a one-stop-shop application, web or mobile, that allows the users to carry out multiple transactions in several countries, without having to enter the multiple websites of the public services institutions relevant to said service.
ACROSS ecosystem	Demonstrate the potential of the ACROSS ecosystem and the resulting web and mobile applications for the implementation of an interoperable, user-centric cross-border digital public service, compliant with European regulations and recommendations, following a user journey approach.
Data Governance framework	The data governance framework built in the project gives control back to the citizens on how their personal data is used, by whom and for what purpose. Using easy-to-understand metrics and visualizations, citizens can easily adapt each data type (e.g., documents, forms, and so on) to their specific privacy preferences, while better understanding the value of their data and the privacy/utility trade-off they are entering.
Co-sessions	Show the relevant stakeholders that participating in co-creation, co-design, and co-delivery sessions have an impact on the definition of the user journey and the implementation of a digital public service, in this case, in the life event 'moving'.
Impact analysis	Present the relevant stakeholders with the lessons learned, benefits, risks and potential of the use of transformative approaches and solutions for the delivery of the cross-border mobility service. Show the impact that data governance has on the delivery of cross-border services.

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[10] "Single Digital Gateway," accessed January 30, 2023, https://single-market-economy.ec.europa.eu/single-market/single-digital-gateway_en.

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6 Toolbox to evaluate digital public cross-border services

To achieve the citizens needs and the high-level digital policies proposed by the EU, the ACROSS project prepares a toolbox to share the knowledge created by the project and mitigate some of the challenges that policymakers might encounter when implementing cross-border services. The toolbox for cross-border digital public services is intended to assist public administration managers and policymakers in delivering seamless services. It follows a user-centred approach, to aid in the process. The toolbox is built on real research, easy to understand and its final version will count with an interactive form. This initial version counts with the identified gaps and lessons learnt from the solutions provided in ACROSS. Furthermore, an initial roadmap is proposed that emphasises local initiatives and vision while also utilizing the support of the European context to promote user-centricity, interoperability, and data sovereignty in cross-border services.

6.1 Toolbox recommendations per pilot country

The eGovernment Benchmark 2022 shows that online services for foreign users are improving, but progress is still slow. The cross-border online service availability indicator is at 46%, while the online service availability indicator for national users is at 81%. For all cross-border services where authentication is required, it is only possible to log in with an eID from another country for one in four (25%) of the services. It seems that cross-border eID is not yet the norm in Europe. Additionally, only 48% of procedures allow foreigners to upload/download official documentation online. Language is also a barrier, as 38% of procedures on service websites are only in the country's original language.[11]

The gap between the frontrunners and laggards in providing online public services is decreasing but remains persistent in cross-border mobility. The COVID-19 crisis has highlighted the importance of eGovernment and accelerated the digitalisation of services. Citizens' expectations for digital services have risen because of the pandemic and governments are focusing on developing digital strategies to meet these expectations. In the upcoming years, the EU can expect to see more government digital transformation, as the eGovernment Action Plan aims to speed up the digital transformation of eGovernment and allow people across the EU to fully benefit from digital public services.[12] This plan places a strong emphasis on cross-border availability of services and the once-only principle. The eGovernment Benchmark 2022 provides an overview of the progress in the digital provision of public services in 36 European countries, with a focus on the cross-border availability of services in three pilot countries.
The ACROSS has then recognised policy recommendations based on the context of each piloted country.

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[11] European Commission. Directorate General for Communications Networks, Content and Technology. et al., *EGovernment Benchmark 2022: Synchronising Digital Governments : Background Report.* (Luxembourg: Publications Office, 2022), https://data.europa.eu/doi/10.2759/204448.

[12] "EGovernment Action Plan | Shaping Europe's Digital Future," accessed January 25, 2023, https://digital-strategy.ec.europa.eu/en/policies/egovernment-action-plan.

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6.1.1   Cross-border services in Latvia

Among ACROSS pilots the one that scores better also with reference to the EU27+ average. Latvia offers 67% of the online services also to cross-border users. Latvia also scores quite well (81%), on the online availability of cross-border services metric which shows that services are not fully online but something more than just information is available. Furthermore, 40% of services accept a foreign eID to login and 55% of cross-border services accept eDocuments.
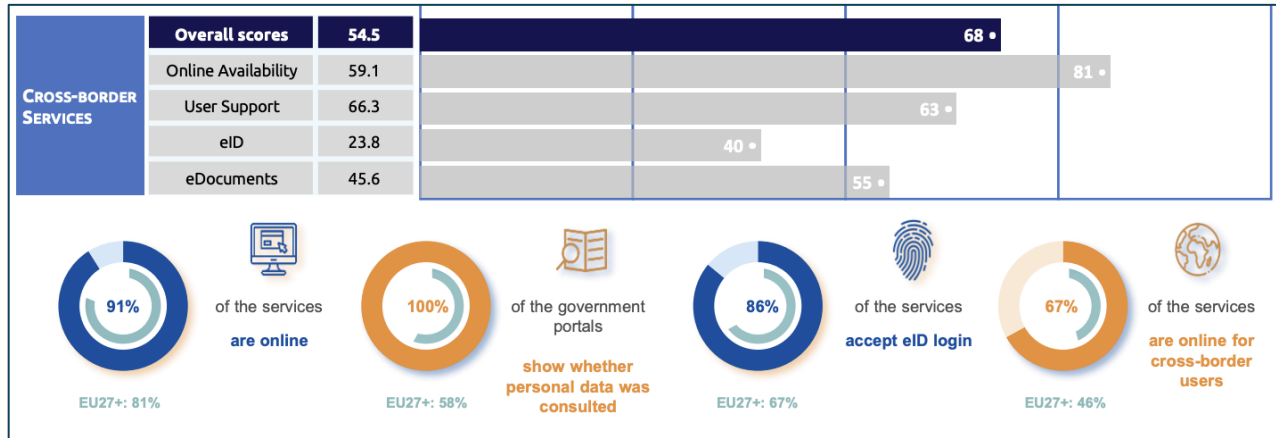

Figure 2 - Cross-Border services state of play 2022 – Latvia

6.1.2   Policy recommendations for Latvia

Besides the national services platform latvija.lv, several important state institutions have developed or will develop their services single sign-on portals. Currently, they are not available for cross-border authentication, and strategies for further services placements are different. Some institutions will develop single sign-on portals adjusted for cross-border authentication to gather currently scattered services while others will update and release single cross-border enabled services. However, technical development is still in the process, and it is projected that cross-border services relevant to ACROSS project will not be available until at least 2024. For now, there is no vision that such services could be gathered in one place which is one of the benefits identified by end-users in ACROSS project.

Another shortcoming is the lack of user research. ACROSS consortium executed several iterations of user research. Comparing findings to the current digital services solutions in Latvia, they do not live up to the needs of cross-border users. As they usually must navigate unknown institutional environments, they must put extra effort into information sourcing. Current and envisioned solutions for cross-border services in Latvia do not offer enough guidance apart from typical service descriptions. Institutions are continuing their switch to unified government website standard which entails posting information also in English. However, it is still up to the user to source this information and interpret it in the right way as it is not always written in an easy language. Based on these issues, the initial recommendations for Latvia are:

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- **Develop a centralised platform for cross-border services** (such as the one prototyped in ACROSS): Policymakers should aim to gather all relevant cross-border services in one place for easy access by users. This platform will improve the user experience and make it easier for cross-border users to find the information and services they need.
- **Prioritise user research:** Policymakers should prioritise user research to understand the needs and challenges faced by cross-border users. This will help to ensure that services are designed and implemented in a way that meets the needs of these users.
- **Improve guidance and information provision:** Policymakers should ensure that cross-border services provide clear and comprehensive guidance to users, including information written in easy-to-understand language. This will help to reduce the extra effort required by cross-border users to find and understand the information they need.
- **Ensure cross-border authentication:** Policymakers should ensure that cross-border authentication is available for all relevant state institutions' single sign-on portals so that users can access services easily across borders.
- **Improve language support:** Policymakers should continue the switch to a unified government website standard, which includes posting information in English and other languages, this will help cross-border users to easily understand and navigate the information and services.
- **Accelerate technical development:** Policymakers should accelerate technical development to make cross-border services relevant for projects such as the ACROSS project available as soon as possible, to reduce the waiting time for citizens.

6.1.3   Cross-border services in Greece

Greece has an average score of 29% when it comes to cross-border service provision. The country offers only 8% of its services to cross-border users. Of these services, only 21% of them are available online. Moreover, only 30% of these services have support for the eID and 20% for eDocuments. Overall, Greece has still many advancements to make when it comes to cross-border services.
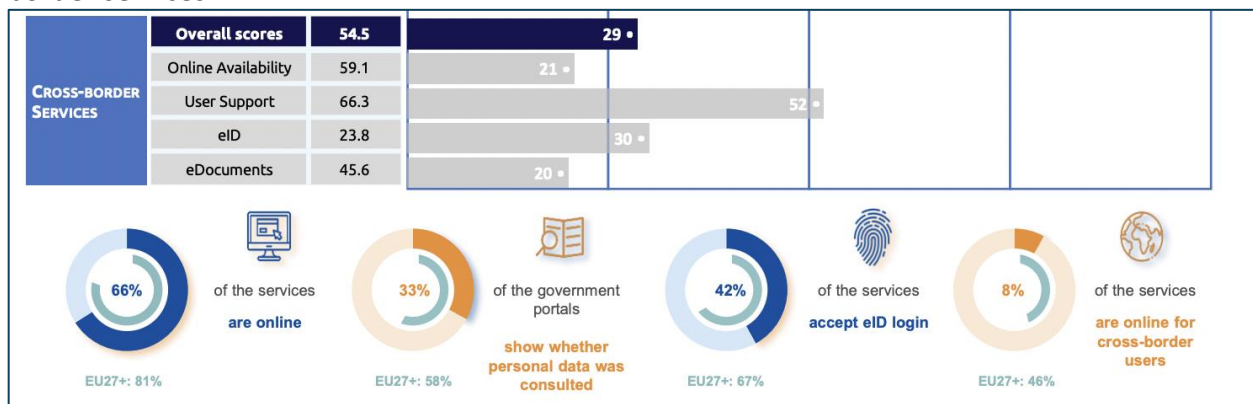

Figure 3 - Cross-Border services state of play 2022 – Greece

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6.1.4   Policy recommendations for Greece

In Greece, many government services can be accessed online or via video call through a central portal (gov.gr). To use these services, citizens typically need to provide verification through credentials issued by tax authorities or their health insurance numbers. Another initiative, the National Registry of Administrative Public Services (MITOS), is gradually providing information about all state procedures, including process steps and supporting documents. The registry stores this information in a service catalogue, which is used by the EU-GO portal, the Greek Point of Single Contact for European citizens and businesses wanting to provide services in Greece.

Despite progress in digitalising services, Greece still has many challenges for EU citizens looking to study or work there. These include a lack of a central point of contact for all necessary services, a language barrier as most services and documents are only in Greek, and low interconnection capabilities among services developed by different authorities. Additionally, there is limited use of the eIDAS infrastructure and no mature digital identity wallet.

- **Develop a central point of contact for all necessary services:** A one-stop-shop portal should be created where EU citizens and businesses can easily access all the necessary information and services related to cross-border provision. Without it, people wishing to work or study in Greece will still go through many challenges when doing so.
- **Address the language barrier:** Services and documents should be made available in multiple languages, including English, to make it easier for non-Greek speakers to access and use them.
- **Improve interconnection capabilities among services:** Services should be developed and provided in a more interconnected manner, with clear and consistent process steps and supporting documents, to make it easier for EU citizens and businesses to navigate and use them.
- **Increase use of the eIDAS infrastructure:** Greek authorities should take steps to increase the use of the eIDAS infrastructure for digital identity verification and eDocument exchange.
- **Follow the user journey approach to delivering services to citizens** as this will guide them according to their specific status without expecting them to know what they are looking for.
- **Support outgoing and incoming citizens** to Greece by collaborating with other public authorities, providing channels of communication to the citizens and gathering information about their needs and the difficulties they faced.
- **Develop a digital identity wallet:** A digital identity wallet should be developed to allow EU citizens and businesses to securely store and manage their digital identity information and eDocuments, making it easier to access and use cross-border services.

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6.1.5 Cross-border services in Germany

In Germany, only 39% of the public services are online for cross-border users. This is below the EU27+ average of 46%. When it comes to using a European eID to authenticate for the use of a German public online service the score for Germany in the eGovernment Benchmark is 10 out of 100 (EU27+ average is 23.8). For Germany, as the largest economy in the European Union (EU) with a gross domestic product (GDP) of around 3.57 trillion euros[13], this eGovernment Benchmark score way below average is a clear signal that there is a need for optimisation, when it comes to public cross-border services in Germany.
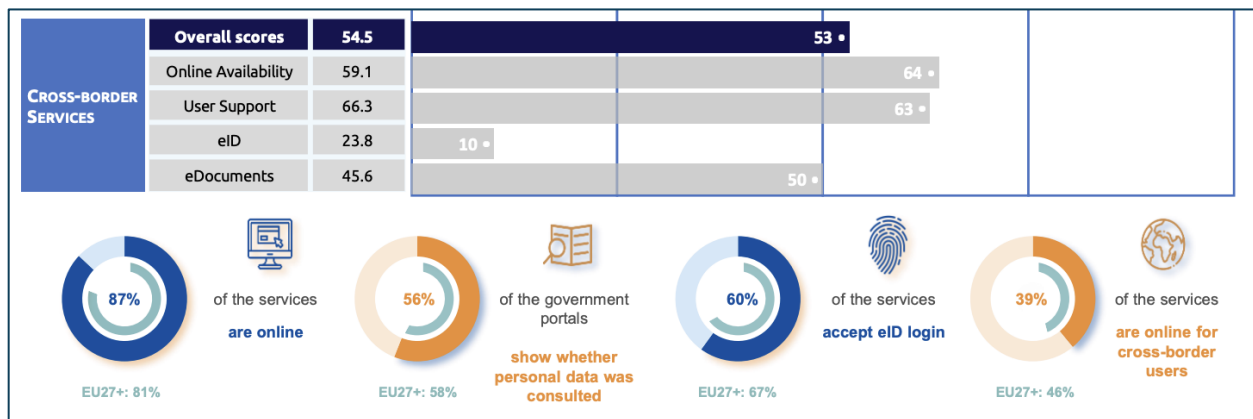

Figure 4 - Cross-Border services state of play 2022 – Germany

6.1.6 Policy recommendations for Germany

From the perspective of the ACROSS project results the following recommendations can be made for the German Government:

- If possible, **use centralised solutions instead of fragmented services** and service accounts from 16 German federal states. Making a national public online service cross-border usable includes several steps – e.g., a valid translation in English and eID implementation. To do this for each state is an immense effort. The more federal states and municipalities offer the same cross-border service, the fewer will have to make this effort and the faster Germany will have more cross-border services.

- **Use a user-centred approach and offer user journeys.** The results of the ACROSS user research shows, that using German public services is often not intuitive and unclear. In addition, it is a challenge (for Germans but especially for non-residents) to know which services are needed for a particular life event and when. Cross-Border-Services (as well at national public services) should be also provided in user journeys so that users know exactly what steps and services they need to take for a life event like moving to a German city or applying for a job.

- **Increase the availability of online public services for cross-border users:** German authorities should take steps to increase the percentage of public services that are

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[13] EU – BIP in Europa 2021 | Statista

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available online for cross-border users, at least to reach the goal of the EU27+ average of 46%.

- **Improve the use of European eID for authentication:** German authorities should take steps to increase the use of the European eID for authentication when using public online services. This could include implementing technical solutions to make it easier for users to authenticate with a European eID and providing training for public servants on how to use the European eID.

- **Increase awareness of cross-border services:** German authorities should increase awareness of cross-border services among citizens, businesses, and public servants. This awareness could include creating a central point of contact for cross-border services, providing training for public servants on how to assist cross-border users and providing information on cross-border services on the German government's website.

- **Improve Interoperability of e-Government services:** German authorities should take measures to improve the interoperability of e-Government services, to make it easier for citizens to access and use cross-border services. This improvement could include implementing common technical standards, improving data sharing among government agencies and allowing for cross-border e-identity verification.

- **Increase cooperation with other EU member states:** German authorities should increase cooperation with other EU member states to improve cross-border service provision, this could include participating in EU-wide initiatives and sharing best practices with other member states.

6.2   Toolbox recommendations per gap and lessons learned per solution developed

The toolbox provides recommendations for using a gap-analysis in cross-border services in the EU. The toolbox includes the solutions created by ACROSS to address identified gaps and complements them with lessons learned from implementing each solution. As stated, the gap analysis is important to help identify areas where current services are not meeting the needs of EU citizens and businesses, and the solutions and lessons learned can assist in developing more effective and efficient cross-border services in the EU. These are initial knowledge sharing created by the ACROSS partners, directed to policymakers with the perspective of the project solutions.

Table 3 – Toolbox recommendations per gap and lessons learned per solution developed

Cross-border services gaps	ACROSS solution	Initial lessons learned
Countries are unable to identify a solid basis of trust and mutual recognition.	ACROSS ecosystem	ACROSS creates an ecosystem of stakeholders which can help countries that are unable to identify a solid basis of trust and mutual recognition in several ways. First, by creating the ACROSS platform, it enables collaboration and information-sharing. The project can foster a sense of trust and cooperation among the stakeholders,

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Cross-border services gaps	ACROSS solution	Initial lessons learned
		including government agencies. This cooperation can help to build mutual understanding and acceptance of each other's needs, concerns, and perspectives. Additionally, by identifying and addressing specific challenges and barriers to cross-border services, the project can help to establish a more solid basis of trust and mutual recognition between countries. Furthermore, an ecosystem can provide a framework for countries to work together on common issues and to learn from each other's experiences. By providing an opportunity for stakeholders to engage in dialogue and to exchange best practices, the project can help to build greater mutual understanding and cooperation between countries. Moreover, by creating a platform for stakeholders to share information and collaborate on solutions, the project can support the development of more effective and efficient cross-border services, which in turn, can help to build trust and mutual recognition between countries.
There is a low-level of information sharing between EU member states	ACROSS platform	Governments should design and implement strategies to reach out to different stakeholders, combining them in a matrix of complementary and sometimes competing services and forcing them to work out open standards that allow them to work together.
Lack of interoperability of ICT solutions amongst different countries.	ACROSS platform	Public administrations are working on interoperability at the national level to interact with all local administrations, there is work in progress however, a lot of effort should be given to extending the level of interoperability at the European level. Governments must address interoperability issues, which can be divided into three primary levels: technical, organisational, and semantic. Technological factors are a prominent barrier to achieving interoperability between member states and delivering data sovereignty for citizens.

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Cross-border services gaps	ACROSS solution	Initial lessons learned
		Aside from technical differences, member states also vary greatly concerning administrative procedures and organisational culture. The absence of organisational rules such as standard forms, processes and contact information increases the administrative costs of cross-border exchanges and the mental effort of understanding procedures for public servants, businesses and affected citizens alike.
No temporary ID for non-EU residents, newcomers or refugees to access digital wallets.	ACROSS platform	Unfortunately, access to any public administration service requires strong authentication using the ID as the base. Without an ID, ACROSS will provide access only to a very limited set of services. However, there are alternatives that allow online registration by video calls, if the public administration accepts to be registered, so will do ACROSS.
Function creep is a serious issue facing cross-border services, because the types of credentials that are developed and used in a cross-border context are often highly personal or sensitive.	ACROSS platform	Through the Personal Data Framework provided by ACROSS the user can decide which personal data or credentials are shared as well as tracking if they have been used by the service provider in the way it was meant to. Across supports user control of their data, also towards public authorities. User data should not be shared with public authorities without the explicit request of the user, and users should always be able to review the information before it is shared with public authorities. This should help to prevent or at least diminish Function creep.
Certain services that have been digitised in one EU country may not yet have been digitised in another.	Service Catalogue and Adapters	Recent discussions[14] have pointed out the need of semantic interoperability to assure the provisioning of seamless digital public services. This aspect also is in line with the coming Data Act and the proposal of the Interoperable Europe Act. The European Commission ISA2 programme worked on reducing barriers that currently hinder the adoption of an EU-wide solution for the cross-border transfer of representation information, highlighting the lack of a common semantic framework.

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[14] "SEMIC 2022," accessed January 27, 2023, https://semic2022.eu/.

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Cross-border services gaps	ACROSS solution	Initial lessons learned
		The adoption of solutions such as the Service Catalogue and Adapters can address the need by providing services and tools to manage a wide spectrum of aspects of service description, by adopting semantic formalization and standard vocabularies.
There is a lack of trust towards and between institutions in the public and private sector.	Data Governance framework	Current deployments by administrations are working on the OOP that will be launched during 2023 with the purpose to enhance the trust among public institutions.
People do not have control over who has access to their personal data and there is a lack of transparency about their data processing.	Data Governance framework	It is imperative to provide a governance framework for personal data (including electronic documents) that gives the citizen the ability to decide to whom their data will be shared and for what purpose their information is used. Users should be able to grant, deny or terminate access to their data with equal ease, in a sufficiently granular manner to enable effective control. In short, they become the sovereign of their personal data. This governance framework should comply with the GDPR and the Data Governance Act. Through the ACROSS platform users will be informed through a Privacy Policy about the way in which their data will be processed, the recipients of their personal data, the retention periods, their data subject rights, etc. With regards to their data subject rights, users should be able to access, amend, correct and/or always delete their data, and to be able to obtain a copy of it. This should preferably be done through data subject rights interfaces in the ACROSS Platform.
There is uncertainty over how to accommodate non-EU systems (for credentials, identity management, data sharing, etc.) within a	Data Governance framework	The EU is working on their identity systems, that preserve its values in terms of privacy. This does not preclude the participation of non-EU companies.

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Cross-border services gaps	ACROSS solution	Initial lessons learned
European data infrastructure.		
There is limited use of the eIDAS infrastructure, and no mature digital identity wallet in the market today.	Data Governance framework	By September 2023, all EU member states must ensure that a Digital Identity Wallet is available to all EU citizens, residents, and businesses in the EU and usable not only for identity documents but for all attestations, including those with sensitive personal data, such as health-related data and documents.
Cross-border services are not perceived as safe (like other digital public services). The implementation of robust cybersecurity measures, including the use of encryption and secure authentication systems, is necessary to increase service uptake.	Data Governance framework	Citizens have a low level of trust regarding the safety of the information they share digitally. To combat this, public services (and also private cross-border services) need to ensure that they can demonstrate that their technology is indeed safe by design. This is a different approach than that taken by private companies, which prioritise marketing and communication. In contrast, public services should focus on technical demonstrability (e.g., of privacy-by-design) in order to increase trust.
Undetermined impact of disruptive technologies for cross-border digital public services.	Impact analysis	There are no "off the shelf" and widely accepted metrics or frameworks to evaluate the implementation of disruptive technologies for cross-border services. Policymakers and public sector managers should always consult with experts from the eGovernment field before making investments and choosing the appropriate technology. The impact assessment in ACROSS will help mitigate this gap – however, it is not always possible to find the appropriate metrics in literature or case studies. To define the best way to evaluate the impact, it is necessary to use co-creation methods such as workshops to share common knowledge and define the most efficient metrics, based on the perspective of different stakeholders
Lack of attention to every-day commuters who face issues by working and living in neighbouring countries.	Mobile and web app	Policymakers can take several steps when developing an app for cross-border services to improve the process for everyday commuters who work and live in neighbouring countries in the EU.

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Cross-border services gaps	ACROSS solution	Initial lessons learned
		First, policymakers can involve stakeholders such as commuters, businesses, and government agencies in the design and development of central platforms or apps to ensure that it addresses the specific needs and challenges faced by cross-border workers. This involvement can include conducting user research and testing to gather feedback on the app's usability and effectiveness. Second, policymakers can ensure that the app is designed to be user-friendly and accessible to all, including those with disabilities or those who may not be proficient in the local language. This process can contain providing support for multiple languages and implementing accessibility standards. Third, policymakers can work to integrate the app with existing systems and services such as transportation, social security, and tax systems to make it as seamless as possible for commuters to access the information and services they need. Fourth, policymakers can also ensure that the app is secure and respects users' privacy, by implementing robust data protection measures and ensuring compliance with relevant EU regulations. Finally, policymakers can also work to promote the app and educate commuters on its features and how to use it, to ensure that it reaches the target audience and is effectively used.
Low digital skills which make it difficult for many people to access cross-border services.	User journey	When designing cross-border services, it is important to remember who the potential user is and their needs and requirements. These potential users and their requirements can vary significantly. It is thus essential to conduct user research with a wide spectrum of potential users, keeping in mind the different levels of digital literacy.
People do not know what their workflow is to move abroad (which steps they have to take, and in which order).	User journey	Extensive user research can help to get an understanding of which steps, hurdles, and pain points citizens face when they move across borders. In ACROSS, the team built a user journey methodology aimed at recreating the journey that citizens undertake in preparation for and during

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Cross-border services gaps	ACROSS solution	Initial lessons learned
		their move. This methodology consisted of a series of guided interviews in each of the pilot countries. The results were collected in a template which allowed for comparison between the countries. This gave insight into the different parts of the citizens' journeys. Here again it is essential to include people from the wide socio-economic, educational, ethnic, gender, and ability spectra.
Many services are not available in languages other than the local language.	Virtual Assistant	The first set of recommendations focuses on ensuring that the virtual assistant can understand and respond to a wide range of languages and dialects and that it can provide accurate and up-to-date information and services. This understanding comprises of implementing machine translation for all EU languages, providing resources and support for users who may have difficulty understanding or communicating in the local language, and regularly reviewing and updating the assistant's language capabilities. The second set of recommendations emphases on guaranteeing that the virtual assistant is accessible and user-friendly for all users and that it follows EU's relevant regulations. Being user-centred means collaborating with government agencies and public service providers to ensure that the information and services provided by the virtual assistant are accurate and up-to-date, monitoring and evaluating the usage and effectiveness of the virtual assistant, and providing user feedback and report mechanisms.

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Cross-border services gaps	ACROSS solution	Initial lessons learned
Lack of impact assessment of cross-border services.	Impact analysis	Policymakers should always be vigilant to co-create metrics with different stakeholders involved with the services to select the most appropriate KPIs to evaluate the impact of cross-border services, in different categories. As mentioned, there is no "ready-to-use" impact assessment framework to be used. Also, only creating an efficient framework is not useful if the impact assessment is not conducted *regularly* if policymakers wish to understand the impact of cross-border services in their national contexts, these assessments need to be done periodically. As the ACROSS project has shown, the context might change from time to time, entailing different results when applying the same framework. It is also an opportunity to find gaps in the framework itself and improve the evaluation method.

6.3   Road mapping for policymakers and public administration managers

Based on all the information provided thus far, there are several key lessons that policymakers can learn from ACROSS. The road mapping will be updated in the final version of the toolbox, which will also contain metrics and data collection methods – helping policy makers to measure their process and see how far away they are from achieving the provided recommendations.

Table 4 - Policy Road mapping

Addressed issue	Road mapping
Interoperability is crucial	The project highlighted the importance of ensuring that digital public services are interoperable across different countries in the EU, to facilitate seamless access for citizens moving between countries. Therefore, 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. Breaking down silos and 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

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Addressed issue	Road mapping
	Standardization (ISO).[15] 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).
Necessity of creating a unified cross-border service platform	As seen in the piloted countries – a unified platform, where different building blocks from different projects can be used - is necessary to improve the cross-border scenario in each country, for different reasons. To build such a platform that offers cross-border services in the EU, collaboration and coordination between different government agencies and EU member states are essential. Harmonising regulations and standards across the EU can help ensure that the platform is compatible and accessible to all member states. Adopting common technical solutions and infrastructure can help reduce costs and increase interoperability and encouraging private sector participation and partnerships can help bring in expertise and resources. Ensuring data protection and privacy compliance with EU regulations such as the General Data Protection Regulation (GDPR) is crucial, as well as regularly reviewing and updating the platform to ensure it meets the changing needs and demands of users. 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 are also important considerations. Establishing clear and transparent communication and feedback mechanisms is important to ensure the platform is meeting the needs of the users, and to identify potential issues that need to be addressed. Continuously monitoring the performance and usage of the platform and using data to inform and improve the platform's design and functionality is also crucial for the success of the central platform.
User-centred design and creation of user-journeys	The project demonstrated the value of adopting a user-centred design approach when developing digital public services, to ensure that they meet the needs of the people who will use them. Then, as policymakers, it is vital to **involve citizens in the early stages of policy development** for cross-border service design. Doing so will ensure that the needs of citizens are met at the local level and that cross-border initiatives are tailored to the unique needs of communities. The citizens are the final users of such services and their participation in the policy development process is essential for creating truly effective cross-border services. To ensure that citizens are efficiently integrated into the policy development process, a minimum standard of co-creation with public authorities should be established for all European, national and regional initiatives on digital government that are funded by European funding. By working closely with

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[15] Kurt Kosanke, "ISO Standards for Interoperability: A Comparison," in *Interoperability of Enterprise Software and Applications*, ed. Dimitri Konstantas et al. (London: Springer, 2006), 55–64, https://doi.org/10.1007/1-84628-152-0_6.

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Addressed issue	Road mapping
	citizens and involving them in the policy development process, we can ensure that digital government initiatives are more effective. Additionally, local authorities can act as a conduit for the adoption of cross-border solutions and compliance with standards developed in these initiatives. Improving transparency and communication with citizens and businesses about the development and implementation of cross-border services can help build trust and ensure that services meet the needs of users.
Deliver data protection and privacy to citizens	The project emphasised the importance of ensuring that data protection and privacy are built into the design of digital public services from the start, to protect citizens' personal data and build trust in the services. To make cross-border services more compliant with data protection regulations is to adopt a risk-based approach to data protection. This approach involves assessing the potential risks to personal data associated with a particular service and then implementing appropriate measures to mitigate those risks. To implement a risk-based approach, public authorities need to conduct a thorough data protection impact assessment (DPIA) of all cross-border services. A DPIA is a systematic examination of a proposed service or project that helps identify the potential risks to personal data and suggests measures to mitigate those risks. Ensuring data protection and privacy compliance is crucial for building trust among citizens and businesses and protecting personal data, this can be achieved through regular audits, training and awareness-raising activities, and through the creation of dedicated data protection and privacy units within member state governments. It is also necessary to implement technical and organisational measures to mitigate the identified risks, such as encryption, pseudonymization, and access controls. They should also establish clear and transparent procedures for data processing and ensure that these procedures are in line with EU data protection regulations. Policymakers should also establish mechanisms for monitoring and enforcing compliance with EU data protection regulations. This includes regular audits of data controllers, as well as sanctions for non-compliance.
Improve mutual trust between member states	Policymakers can take several actions to achieve a high level of mutual trust between different member states and create excellent cross-border services, using EU policies and directives. One of the key actions is to foster mutual understanding and cooperation between different EU member states and government agencies. This fostering can be achieved through regular meetings and consultations between representatives of different member states, as well as through the creation of working groups and task forces focused on specific cross-border issues. EU policies such as the European Semester and the

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Addressed issue	Road mapping
	European Cooperation in Science and Technology (COST) can help facilitate this cooperation.

Another important action is to harmonise regulations and standards across the EU, which can help ensure that cross-border services are compatible and accessible to all member states. EU directives such as the e-Commerce Directive, the Services Directive, and the Digital Single Market Strategy can help member states harmonise regulations and standards.

Encouraging private sector participation and partnerships can bring expertise and resources to the development and implementation of cross-border services, and public-private partnerships can help ensure that services meet the needs of users. EU policies such as the Public-Private Partnership (PPP) and the Single Market Act can help encourage private sector participation and partnerships. Encouraging the use of open standards and open data can help increase interoperability and make it easier for businesses and citizens to access cross-border services, fostering mutual trust and cooperation. Finally, creating an independent body to oversee the cross-border services can help ensure that they are being developed and implemented in a transparent and accountable manner, building mutual trust among member states. |
| **Continuous improvement in cross-border service provision** | ACROSS has demonstrated that it is important to continuously monitor and evaluate the performance of cross-border services, and adjust as needed, to ensure that they meet the evolving needs of citizens and remain relevant over time. Therefore, governments should **monitor the usage of cross-border services,** and provide data that is compliant with open data directives**.** Cross-border services that are user-centred, interoperable and safeguard data can only be implemented at scale with close monitoring. Cross-border services truly need to be monitored to improve their implementation and allow member states to learn from their peers. Current measuring frameworks, such as the eGovernment benchmarking, only cover local websites somewhat, making them insufficient for large-scale, granular digital service rollout. A permanent system or dashboard that monitors a sufficient sample of cross-border services is required. |
| **Create, monitor and improve accessibility in cross-border services** | The project highlighted the importance of accessibility and inclusion (along with other user-centred aspects), making sure that cross-border services are accessible to all citizens, including those with disabilities. Considering this, policymakers should require **mandatory reporting of metrics on the use of cross-border services** from member states. All digital projects funded by European funds should regularly report metrics on usage in a machine-readable format, as a requirement for receiving funding. This transparency will create a positive accountability system that encourages prioritising user needs, interoperability, and data sovereignty. |

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Addressed issue	Road mapping
Internationalisation of services by providing them in all EU supported languages	ACROSS showed the importance of the internationalisation of cross-border services, making them available in multiple languages. **Service standards should be included in the EIF.** The EIF is the back-office architecture concept for European cross-border services. It serves as a model for national interoperability frameworks. To speed the adoption of such standards, it should be expanded to include service standards compatible with the objectives of the 2020 Berlin Declaration on Digital Society and Value-based Digital Government.

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7   Next steps to improve and finalise the toolbox

As presented in this report, the implementation of cross-border services can often be complex and challenging, requiring coordination and cooperation among different countries and regions. To facilitate the efficient implementation of these services, policymakers can use and access this comprehensive toolbox for resources and recommendations. The toolbox is designed to provide guidance on the development and implementation of cross-border services and to support policymakers in achieving their goals. The following bullet points to outline key elements that should be included in the toolbox to ensure that it is effective and useful for policymakers in its final version:

- **Revise the recommendations based on the project's development:** As ACROSS is still an ongoing project, the proposals made in this report will need to be updated as the use cases of the projects are developed. Partners will be encouraged to log the lessons learned during the project's development so this crucial information can be used to update the toolbox.
- **Research possible metrics and data collection methods to make the recommendations measurable, if applicable:** Creating metrics and data collection methods for a recommendation of the toolbox are steps to help the toolbox in being effective and useful for policymakers. Whenever possible and applicable, the research team will provide metrics and data collection methods. The first step in creating these metrics and data collection methods is to clearly define the goals and objectives of the recommendations. This clarification will help to ensure that the metrics and data collection methods are aligned with the overall goals of the EU digital agenda and, potentially, boost the cross-border perspective such as the one used in the e-government benchmark.

Once the goals of the recommendations are clear, the next step is to select appropriate metrics to measure the effectiveness of the recommendations. These metrics should be SMART (specific, measurable, achievable, relevant, and time-bound) and should be able to provide a clear picture of the progress and success of the recommendations. After selecting the appropriate metrics, the next step is to develop data collection methods to gather the data needed to measure the metrics. These methods should be reliable, valid, and efficient. It could be either quantitative or qualitative data collection methods. Before implementing the metrics and data collection methods, the team will test and refine them to ensure that they are effective. All metrics are then linked with the policy roadmap, depicting to policymakers what is necessary to be done and how to get there based on the ACROSS results. However, research will be conducted to evaluate if the provided recommendations can be a good fit for metrics and data collection methods.

- **Create a visual handbook of the toolbox:** An interactive and visual version of the toolbox will take the form of a visual handbook and/or applied in an online version, which is easily accessible to policymakers and other stakeholders. The visual version will have a user-friendly interface, making it easy to navigate and find the information needed. The

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handbook will be organised into different sections or categories, such as "recommendations", "data and metrics", "training and capacity building", "cross-border coordination", "best practices", "stakeholder engagement", and "support for implementation". Each section will contain relevant information (already presented in this initial version), resources, and tools related to that specific topic.

For example, the "recommendations" section can include detailed information on the specific recommendations and their goals, as well as any relevant documents or reports to support it. The "data and metrics" section could include information on the data collection methods and metrics used to measure the effectiveness of the recommendations. The "training and capacity building" section could include information on the training programs available, as well as any relevant training materials or guides.

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8   Conclusions

In conclusion, the toolbox presented in this document is intended to assist policymakers and public administration managers in the EU in the application of digital public cross-border services. The toolbox provides a set of initial recommendations and best practices for building a central platform and other solutions that offer cross-border services in the EU.

These recommendations include the importance of collaboration and coordination between different government agencies and EU member states, harmonizing regulations and standards, adopting common technical solutions and infrastructure, encouraging private sector participation, and ensuring data protection and privacy compliance.

Furthermore, the toolbox highlights the need for regular review and updates, provision of training and support, central governance, clear and transparent communication and feedback mechanisms, and continuous monitoring and data-driven improvement. By following the guidelines in this toolbox, policymakers and public administration managers can ensure that digital public cross-border services are implemented more efficiently and effectively, providing benefits for citizens and businesses throughout the EU.

9   References

[1]   D2.1 "User Journey Methodology definition (Initial)." https://across-h2020.eu/sites/d8across/files/D2.1%20User%20Journey%20Methodology%20definition%20-%20Initial.pdf

[2]   D2.3 "Cross-border service gap analysis, (initial)." https://across-h2020.eu/sites/d8across/files/D2.3%20Cross-border%20service%20gap%20analysis%20-%20Initial.pdf

[3]   D2.4 "Cross-border service gap analysis, (final)." https://across-h2020.eu/sites/d8across/files/Deliverables/D2.4%20Cross-border%20service%20gap%20analysis%20%E2%80%93%20Final.pdf

[4]   D6.1: Use case scenarios and roadmap, https://across-h2020.eu/sites/d8across/files/D6.1%20Use%20case%20scenarios%20and%20roadmap.pdf

[5]   D6.2: Use case evaluation and impact assessment – Initial

[6]   Ceccanti, Davide, Angelo Legge, Marie Eichholtzer, Alexander Kuhl, Peter McNally, Alexandra Ongono Pomme, Sebastiaan van der Peijl, and Ciara Walsh. "Evaluation Study of the Regulation No.910/2014 (EIDAS Regulation): Final Report." Luxembourg: Publications Office, 2021. https://data.europa.eu/doi/10.2759/850876.

[7]   "EGovernment Action Plan | Shaping Europe's Digital Future." Accessed January 25, 2023. https://digital-strategy.ec.europa.eu/en/policies/egovernment-action-plan.

[8]   European Commission. "The Digital Europe Programme | Shaping Europe's Digital Future." Accessed January 9, 2023. https://digital-strategy.ec.europa.eu/en/activities/digital-programme.

[9]   ———. "The New European Interoperability Framework." Text. ISA[2] - European Commission, October 1, 2023. http://webserver:8080/isa2/eif_en.

[10] European Commission. Directorate General for Communications Networks, Content and Technology., Capgemini., Sogeti., IDC., and Politecnico di Milano. *EGovernment Benchmark 2022: Synchronising Digital Governments : Background Report.* Luxembourg: Publications Office, 2022. https://data.europa.eu/doi/10.2759/204448.

[11] Fritsch, Manuel, and Roman Bertenrath. "Cross Border Services in the Internal Market: An Important Contribution to Economic and Social Cohesion." Luxembourg: Publications Office, 2019. https://data.europa.eu/doi/10.2864/06095.

[12] Kalvet, Tarmo, Maarja Toots, Anne Fleur van Veenstra, and Robert Krimmer. "Cross-Border e-Government Services in Europe: Expected Benefits, Barriers and Drivers of the Once-Only Principle." In *Proceedings of the 11th International Conference on Theory and Practice of Electronic Governance*, 69–72. ICEGOV '18. New York, NY, USA: Association for Computing Machinery, 2018. https://doi.org/10.1145/3209415.3209458.

[13] Kosanke, Kurt. "ISO Standards for Interoperability: A Comparison." In *Interoperability of Enterprise Software and Applications*, edited by Dimitri Konstantas, Jean-Paul Bourrières, Michel Léonard, and Nacer Boudjlida, 55–64. London: Springer, 2006. https://doi.org/10.1007/1-84628-152-0_6.

[14] Mitta, Chrysoula, Charlotte van Ooijen, and David Osimo. "User-Centricity: What It Means, How It Works, Why It's Needed. How Relentless Focus on End-Users Raises Adoption and Delivers Better Services to Citizens," 2021, 13.

[15] Your Europe. "Questions on Your Rights in the EU? Or Your Obligations?" Accessed January 27, 2023. https://europa.eu/youreurope///index_en.htm.

[16] "SEMIC 2022." Accessed January 27, 2023. https://semic2022.eu/.

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[17] "Single Digital Gateway." Accessed January 30, 2023. https://single-market-economy.ec.europa.eu/single-market/single-digital-gateway_en.

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