# An Analysis on Digital Public Services in Romania

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**Abstract**. *The digitalization of public institutions brings with it an increased level of efficiency and transparency and should be one of the development pillars of any intelligent community. Through digitalization, the whole activity of public institutions becomes much more efficient on all three levels: internally, intra-institutionally and externally, regarding the relationship with citizens and the rest of the institutions.*

*As research methods, the authors have performed a literature review of the articles published on digital public services to provide an overview of the current situation and challenges in this field. Furthermore, in this article the authors carry out a comparative analysis on the main e-government platform in Romania, using data provided by the online tool Similarweb. As key findings, there are a lot of Romanian citizens that are still not using digital public services, which is also reflected in the DESI index. A series of measures and projects are in progress to increase the accessibility level and develop more platforms to strengthen the relation between citizen and government by providing reliable and secure digital public services.*

**Keywords.** digital public services, citizen engagement, Romanian citizens

## 1 Introduction

Since 2014, the European Commission has been monitoring the progress made by Member States in the digital field through the Digital Economy and Society Index (DESI) reports. Starting in 2023 and in line with the Digital Decade 2030 policy programme, DESI is now integrated into the Digital Decade Status Report and used to monitor progress towards the overarching digital goals.

Digitalization requires public authorities to offer their services at a better quality, via the Internet, without the need to go to a counter. Digitalization brings multiple benefits to the public sector. A digitalized institution is more transparent, fairer and is also able to manage and correlate information faster and more efficiently. The digitalization of local public administration involves the use of information and communication technologies by the public sector with the aim of improving the provision of information and services, encouraging citizen participation in the decision-making process and the accountability of the institutional partner in a transparent and efficient manner.

The lowest level of digitalization performance is found in Romania, which ranks last in the EU in terms of digitalization according to the Digital Economy and Society Index (DESI) of 2021, a document developed by the European Commission, which indicates the weak virtual connection of citizens and the private environment with the administration and public institutions. At EU level (EUR-Lex, 2024), the European Commission is taking steps to help public administrations in member states make the transition to digital, so that all citizens can enjoy the advantages of smart public services. It focuses on reducing barriers to public services and ensuring cross-border access to them. Actions that are already under way include: ensuring that EU platforms can work together and interact with each other; financing large-scale e-participation projects; encouraging public services, businesses, and citizens to exchange solutions through the joined platform, a common space that enables the exchange and reuse of IT solutions and best practices and facilitates communication and collaboration on IT projects across the EU; standardization of electronic health records.

An essential requirement of digital public services is the existence of a secure digital identity. This allows citizens and businesses to prove who they are – or what business they own – and thus access relevant services online.

According to the National Institute of Statistics, in 2020, 78.2% of households in Romania had access to the internet at home, an increase compared to 2019 by 2.5 percentage points, 60.9% of which were concentrated in urban area. In other words, more than three-quarters of the Romanian population today has

access to the Internet, regardless of whether we are talking about the rural or urban environment, a population that could have significant benefits once some of the services offered by the Romanian state and interactions go online. Unfortunately, the statistics show a low percentage of digital literacy of people in the administration who have are specialized in this field at work, a fact that could complicate any digitalization process. However, the challenges can be successfully overcome if they are approached methodically, coherently and without further delay. (Digi, 2021).

The aim of this paper is to highlight the research that has been made in the area of digital public services in Romania. By determining the existing challenges, solutions and strategies can be implemented to support digitalization of public institutions and provide online services that meet both citizens and government expectations.

# 2 Methodology

The objective of this study is to determine the state of digitalization of public services in Romania. Therefore, 3 directions were analysed:

1. The first perspective is represented by scientific research on digital public services in Romania. Thus, bibliographic research was carried out, considering articles from 2015 to 2024, which addressed this topic, and the results and conclusions obtained were presented.

2. The second perspective consisted in the analysis of scientific sources to determine statistics carried out by state organizations, along with ongoing projects or initiatives pursued by the government.

3. The third perspective consisted in using the Similar web tool to extract data related to e-government platforms in Romania and to perform a comparative analysis of them based on indicators. The indicators sought to see the engagement of citizens for digital public services.

To pursue the first perspective a literature review was made, considering scientific papers related to the development and utilization of digital public services in Romania from 2015 until 2024. There were used databases like SpringerLink, ScienceDirect and Google Academic, to identify articles by the following keywords: digital public services, Romanian e-government, digital transformation. A synthesis analysis was performed to highlight the results, challenges, and trends in the field of digital public services.

The second part of the study was made through the analysis of official sources and state organizations that publish relevant data. The collected data was structured based on specific indicators as digital public services utilization, e-government projects, and legislative initiatives.

For the last perspective, the comparative analysis between the main e-government portals was used the online tool Similarweb to extract the raw data for each. There were identified the main key indicators, and the results were presented in tables and figures to illustrate the Romanian citizens engagement.

# 3 Results

### 3.1. State of the art on digital public platforms in Romania

These days, the crucial process known as "digitalization" controls the growth of businesses, government agencies, and society as a whole. The rules of the game are completely altered by technological evolution, which also brings forth a new paradigm in which cutting-edge technologies like artificial intelligence and big data, as well as block chain technology and conventional computer-based systems, are used. From this angle, Romania's services industry, which is part of the country's expanding economy, needs to follow global trends (RĂBONȚU & Babucea, 2020).

With the digital transformation component, the Romanian Digitalization Authority is presently putting out a new vision for the public sector. It's an outlook on the corporate world. It is predicted that the advantages of digital transformation—such as simplicity, efficiency, and transparency—could result in significantly increased process productivity. The vision that ADR will create in its work is predicated on the realization of public institution leaders for the necessity of new technologies, the ongoing adaptation to citizen's needs, and the provision of high-quality, quick, safe, and online public services. To draw attention to the unique features of Romania, the digitalization processes of public administration in other nations were found to have some peculiarities. It was possible to conduct a comparative study of sustainable development indicators (Burlacu et al., 2022).

The creation of a cogent and integrated digital infrastructure at the level of Romanian public administration, which could offer top-notch digital services to both individuals and businesses, is a key goal of the National Recovery and Resilience Plan. The author's research aims to determine the variables influencing Romania's public service digitalization process and to establish any existing relationships between them (Virlanuta et al., 2024).

To ensure transparency in public administration, it is necessary to guarantee the fact that the citizens have broad access to information held by state authorities. Additionally, individuals must be included in the decision-making process by being informed first and consulted second. As a result, maintaining openness necessitates, particularly in the present, the establishment and ongoing maintenance of the public authority's website, which makes it simple for citizens

to obtain any necessary public information. However, there are some communities in Romania that do not post publicly available information online. To guarantee adherence to the ideal of openness in public administration, a digitalization plan that can be implemented at both the national and local levels is necessary, allowing information of public importance to be readily available to all (Slabu, 2021).

The nuances of the interaction between technology and public administration are analyzed by examining how digitalization affects accessibility, efficiency, and transparency in public services. The benefits and difficulties of integrating cutting-edge technology like blockchain, data analytics, and artificial intelligence are given consideration. The study aims to uncover best practices and lessons learnt by conducting a comparative analysis of digitalization projects across various administrative settings. This provides valuable insights into the elements that contribute to the success of digital transitions (Goldbach, 2024).

The primary goal of digitalization is to create value based on innovation, digitalization, and digital technologies, therefore enhancing performance and efficiency in the public sector, and contributing to the deep change of the economy, public administration, and society. The study intends to demonstrate and raise awareness of the following issues: the population's degree of digitalization skills; the low degree of digital technology integration in the commercial environment; the incompatibility of IT systems in public administration; etc. Romania is ranked lowest in most analysis indicators regarding the level of digitalization in the European Union, according to surveys and data. During the pandemic, small and medium-sized businesses with a strong technological foundation have the best opportunity of finding new business prospects. Public administrations must, therefore, adjust to the new reality and provide services that speed up work completion and simplify procedures. Therefore they must also priorities improving citizen interaction by offering digital solutions, so individuals may avoid needless excursions to governmental institutions with the intent to solve most of their concerns. From the time the epidemic first appeared until today, it can be said that Romania benefited from this erratic and utterly unusual period, particularly the faster digitalization of both private businesses and public administration (Panait & Rădoi, 2022).

Another study examines how Romanian authorities have used present technology to facilitate resident's access to public services, as well as the potential benefits of future technological advancements. In addition, a conclusion is drawn that although Romania has made some progress towards digitalization, its citizens still cannot access it, nor has it established an easily navigable cloud-based government system. Greater training on how to use digital public services and if the connection is secure should be provided by the public administration to people and public personnel. Also, investments in education must be made in advance since digital literacy must be incorporated into a citizen's life from an early age (Cojocaru et al., 2024).

Romania is notable for having one of the least developed online public service networks in the EU, despite having a vast telecommunications infrastructure that provides relatively affordable and quick network access. This is caused by the public's resistance, who was skeptical of the provided e-government solutions, as well as the government's policy, which up until 2019 did not demonstrate much interest in the nation's digitalization process or to propose a comprehensive program for its implementation. The COVID-19 epidemic, however, brought about a breakthrough: it compelled Romanian society to use public digital services and prompted the government to implement previously delayed legislation changes and new technology solutions (Calus, 2021).

Significant digital inequality is now present in Romania, and the COVID-19 pandemic epidemic has made it worse. The objective was to determine the obstacles that Romanian older individuals faced while attempting to utilize technology and to set up the groundwork for a more extensive study. The influence of the economic, social, cultural, and political difficulties caused by the pandemic on the well-being and quality of life of the elderly will also be covered in this article, along with public policy in the process of digitalization (Motorga, 2022).

It is also discussed how Romania's public administration is becoming more digitally innovative. For certain payments, including penalties, taxes, etc., there are several platforms/portals; nonetheless, paying these "obligations" in person at a counter is simpler than using platforms. It was analyzed the present state of innovation in Romanian public administration through digitalization. Although the study is theoretical, it will highlight several real-world elements of the problem of digitalization in Romania's public sector and place the country in various ranks for innovation brought about by digitalization. Results: Romania does not place well in the ranks of digitalization, mostly due to the lack of education and distrust of new technology among Romanian residents (Apostol, 2022).

Other researchers analyze Romania's digital technology trends in relation to other EU nations by considering various DESI index metrics for the years 2017–2018. After analyzing twenty-eight European nations, four primary components were developed: digital mass market, advanced digital features, ultramodern broadband access, and pricing or communication consideration. Additionally, clustering techniques identified two primary patterns with respect to advanced digital features: those that score significantly higher on this component and those that do not (highest number of mobile broadband services, highest penetration of digital public services, high usage of Internet content, and high penetration of

advanced digital skills). The younger demographic is more impacted and has the potential to have their behavior changed quickly because they are the true early adopters of new technology. Thus, to make up for Romania's lack of digital capabilities, particular attention should be paid to how digital technologies affect the youth there (Burlacioiu et al., 2018).

### 3.2. Perspective on digitalization of public services in Romania

The special Eurobarometer "Digital Decade 2024" shows that 45% of Romanian respondents believe that the EU protects their digital rights. Confidence in digital privacy is 48%, slightly below the EU average. Concerns include children's online safety (48%) and control over personal data (41%), both showing significant growth. These findings underscore the need to strengthen digital rights at the national level. Positive trends include the importance given by Romanians to digital technologies for accessing public services (64%) and connecting with friends and family (71%). Romania must improve its performance in terms of the targets and objectives of the digital decade, promote competitiveness, resilience, sovereignty and promote European values and climate actions (European Commission, 2024).

| Digital public services | Romania | | UE |
|---|---|---|---|
| | Place | Score | Score |
| DESI 2022 | 27 | 21,0 | 67,3 |

**Figure 1.** Traffic source overview February – April 2024 (Worldwide)

| Indicator | Romania | | | UE | |
|---|---|---|---|---|---|
| Current Usage: Internet and Digital Applications | Q1 2023 | Q1 2022 | Change | Q1 2023 | Q1 2022 |
| % of internet users | 15.5% | 16.4% | -0.9% | 17% | 17.5% |
| Data Consumption | | | | | |
| Average data consumption per user (GB/user/month) | 29 GB | 23 GB | 26% | 61 GB | 55 GB |
| Online Purchases | | | | | |
| Percentage of people who shop online (%) | 43% | 36% | 7% | 63% | 60% |
| Digital Skills | | | | | |
| % of people with basic or above digital skills | 42% | 39% | 3% | 65% | 63% |
| Internet Penetration | | | | | |
| % of households with internet access | 75% | 73% | 2% | 91% | 89% |

**Figure 2.** Traffic source overview February – April 2024 (Worldwide)

The provision of digital public services in Romania remains difficult (Fig. 1). All metrics (Fig. 2), including the provision of digital public services for individuals (44 vs the EU average of 75) and enterprises (42 versus the EU average of 82), show that the nation performs much worse than the EU average. Because just 17% of internet users use e-government services, there is also a limited level of digital contact between public authorities and the general population. The potential to enhance these outcomes is provided by

the significant portion of digital investments and reforms allocated to this aspect in Romania's national resilience and recovery strategy. When these steps are implemented in a timely manner, they will help realize the goal of the Digital Decade, which is to provide 100% of critical governmental services online for European citizens and businesses by 2030.

Romania does not yet have an electronic identity system in place. For Romanians to connect with public, private, and sectoral entities more easily, digital signatures and electronic identity cards must be implemented. A total of EUR 200 million has been set aside for the issuance of 8.5 million electronic identity cards as part of the PNRR. Two digital certificates that enable (i) online public service authentication and (ii) qualified electronic signatures will be stored on the electronic identification card.

The establishment of a single architecture for the government cloud and the online delivery of necessary public services are the other two goals of investments funded by PNRR. It consists of the following: (i) setting up government cloud infrastructure (675 million EUR); (ii) developing and migrating to the cloud (€187 million); (iii) developing the e-health and telemedicine system (400 million EUR); (iv) digitalizing the judicial system (€162 million); (v) implementing electronic forms in the public procurement domain (0.85 million EUR); (vi) creating an electronic identity card and digital signature (EUR 200 million); (vii) digitalizing the NGO sector (€10 million) and civil service management (€10 million).

By utilizing cutting-edge technologies, these investments seek to modernize public administration while keeping people and companies' requirements front and center. Alongside this, the prerequisites for data-driven policymaking should be guaranteed, and the interoperability of current digital technologies should be strengthened. The construction of an integrated architecture for digital public services is also supported by the changes. The Government Cloud Act and the Information Systems Interoperability Act are the two main pieces of legislation that make up the PNRR's reform of government cloud services.

The Authority for the Digitalization of Romania (ADR) released the Catalog of Public Services, which will be updated annually, to track the advancements made in the digital transformation of Romania's public administration and to assist the government's strategic choices. This will be the programming tool used to design interventions, coordinate the delivery of digital public services, and digitize public services.

In its attempts to digitalize the public services sector, Romania has highlighted one of the main structural problems as being lack of experience in combining IT and administrative procedures inside institutions. Consequently, to fully profit from the significant measures currently in place, it is imperative to consistently enhance the administrative ability to conduct digitalization projects (DESI, 2022).

### 3.3. Perspective on digital public platforms in Romania

An analysis was realized on the internet to find and establish the digital public services that are available for Romanian citizens through web platforms. Even though government institutions have developed web platform to encourage citizens to move some of their public related activity in the online environment, the numbers are quite low (Table 1). The e-government web platforms that have the highest number of visits are Portal.just.ro, followed by anaf.ro and then e-licitatie.ro. If a visit is unique (1 visit per citizen), it means that only 44% of the Romanian population uses portal.just.ro, which is according to the number of visits in the last 3 months the most frequented one. Therefore, Romanian citizens are using e-government portals in a small percentage, meaning the traditional procedure remains the preferred one, according to the numbers.

**Table 1.** Total visits February 2024 – April 2024 (Worldwide)

| Nb. | Platform | Total visits |
| --- | --- | --- |
| 1 | Ghiseul.ro | 26,308 |
| 2 | Regista.ro | 844,834 |
| 3 | Edirect.e-guvernare.ro | 218,392 |
| 4 | E-guvernare.ro | 1,594,000 |
| 5 | Anaf.ro | 8,291,000 |
| 6 | e-licitatie.ro | 2,127,000 |
| 7 | Pasapoarte.mai.gov.ro | 703,298 |
| 8 | Portal.just.ro | 8,718,000 |
| 9 | Cnas.ro | 1,569,000 |
| 10 | Econsulat.ro | 1,625,000 |

From the list of e-government web platforms analyzed, even if are developed to be accessed both by desktop and mobile, the Romanian citizens preferences are split equally: for Regista.ro, Edirect.e-guvernare.ro, E-guvernare.ro, Anaf.ro and e-licitatie.ro most of the traffic comes from desktop devices and for the rest of the 5 platforms the traffic comes from mobile devices. The differences between the desktop traffic and mobile web traffic for almost all the 10 e-government platforms are high, being more than 50% (Table 2).

**Table 2.** Device distribution February 2024 – April 2024 (Worldwide)

| Nb. | Platform | Device distribution (%) | |
| --- | --- | --- | --- |
| | | Desktop | Mobile Web |
| 1 | Ghiseul.ro | 43,32 | 56,68 |
| 2 | Regista.ro | 88,6 | 11,4 |
| 3 | Edirect.e-guvernare.ro | 53,49 | 46,51 |
| 4 | E-guvernare.ro | 86,67 | 13,33 |
| 5 | Anaf.ro | 74,4 | 25,6 |
| 6 | e-licitatie.ro | 93,55 | 6,45 |
| 7 | Pasapoarte.mai.gov.ro | 14,27 | 85,73 |
| 8 | Portal.just.ro | 32,66 | 67,34 |
| 9 | Cnas.ro | 33,3 | 66,7 |
| 10 | Econsulat.ro | 38,35 | 61,65 |

There is no website rank present for 2 of the 10 e-governments web platforms, neither global nor local (Table 3). The best rank for both categories is held currently by anaf.ro. This rank is given after analyzing all the web platform that are used at the time being by Romanian citizens, including all web platforms that have content and are available worldwide. ANAF has the mission to ensure the resources for the public expenses of the society by collecting effectively and efficiently administering the taxes, fees, contributions, and other amounts due to the general consolidated budget, as well as to improve the relational state of taxpayer – institution through which the new requirements of the citizen are met in this dual role of user and beneficiary.

**Table 3.** Country rank 2024 (Worldwide)

| Nb. | Platform | Rank | |
| --- | --- | --- | --- |
| | | Country | Global |
| 1 | Ghiseul.ro | 317 | 59,131 |
| 2 | Regista.ro | 867 | 162,932 |
| 3 | Edirect.e-guvernare.ro | - | - |
| 4 | E-guvernare.ro | 676 | 125,775 |
| 5 | Anaf.ro | 75 | 15,423 |
| 6 | e-licitatie.ro | 296 | 59,149 |
| 7 | Pasapoarte.mai.gov.ro | - | - |
| 8 | Portal.just.ro | - | - |
| 9 | Cnas.ro | 700 | 126,084 |
| 10 | Econsulat.ro | 1,217 | 74,335 |

Engagement of citizens can be measured by monthly visits, visit duration, pages per visit and bounce rate. Each of the 10 platforms analyzed along with the number associated for each factor that is representing the engagement is presented in Table 4. Anaf (2.763M), Portal.just.ro, (2.906M) and Ghiseul.ro (1.158M), have the most visits per month. This can indicate that these are e-government platforms for services that frequently used by Romanian citizens to acquire different services and resolve state duties. If the duration of visit as an average is considered, on Regista.ro and E-licitatie.ro the citizens spent more time than on the other digital platforms for public services. On Anaf (8.57) and E-licitatie (9.08), Romanian citizens visit more pages on each visit to

accomplish their purpose. The bounce rate, which indicates the proportion of users who arrive at the website, exit (or "bounce"), and do not browse additional pages on the same website, is higher on Cnas (64.66%) and Pasapoarte.mai.gov.ro (57.86%).

**Table 4.** Engagement overview February – April 2024 (Worldwide)

| Nb. | Platform | Engagement overview | | | |
|---|---|---|---|---|---|
| | | Monthly visits | Visit duration | Pages / Visit | Bounce rate |
| 1 | Ghiseul.ro | 1,158M | 00:05:04 | 5.11 | 32.72% |
| 2 | Regista.ro | 281,611 | 00:12:01 | 7.81 | 17.78% |
| 3 | Edirect.e-guvernare.ro | 72,797 | 00:02:41 | 3.09 | 43.43% |
| 4 | E-guvernare.ro | 516,384 | 00:05:15 | 2.27 | 45.53% |
| 5 | Anaf.ro | 2.763M | 00:08:39 | 8.57 | 20.91% |
| 6 | e-licitatie.ro | 709,250 | 00:11:42 | 9.08 | 29.08% |
| 7 | Pasapoarte.mai.gov.ro | 234,433 | 00:01:38 | 2.04 | 57.86% |
| 8 | Portal.just.ro | 2.906M | 00:05:28 | 6.43 | 32.63% |
| 9 | Cnas.ro | 523,167 | 00:02:27 | 2.37 | 64.66% |
| 10 | Econsulat.ro | 541,938 | 00:08:49 | 7.38 | 37.33% |

Traffic of Romanian citizens can be direct (visitors who access the website without using a search engine, links from other sites or social networks. They reach the site either by directly entering the URL in the browser or by bookmarking), email (visitors that enter the site via email marketing campaigns), referrals (visitors that enter the domain who did not find the domain from a Google search and arrived from other websites. Google monitoring systems identify a visitor as a referral when they click on a link from a social network or website and land on another website), social (traffic coming to the website, mobile site or mobile app from social networks and social media platforms), organic search (a search engine's method of finding and ranking website content naturally, without the influence of paid advertising), paid (any customer that visits a website after seeing paid advertising promotions. Many platforms offer paid traffic services including search engines, social media platforms, and media networks. One of the most common forms of paid traffic is Pay Per Click (PPC) advertising which utilizes Google Ads), display ads (images, videos, or gifs shown to users on websites or apps). As seen in Fig. 3, the most traffic on the e-government platforms come as direct traffic and organic search. Also regista.ro, e-licitatie.ro and econsulat.ro receive the highest values from direct traffic. The organic search contributes to platforms as cnas.ro, pasapoarte.mai.gov.ro and edirect.e-guvernare.ro. Therefore, the traffic for Romanian digital public services does not come from paid advertising or digital marketing.
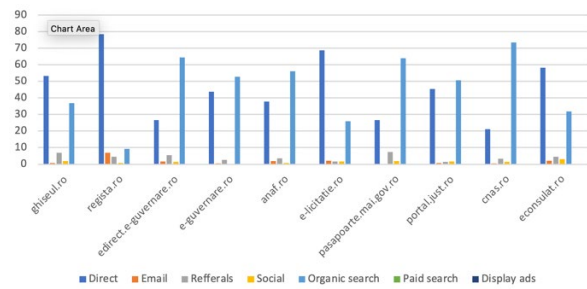


**Figure 3.** Traffic source overview February – April 2024 (Worldwide)

# 3 Conclusion

The conclusion taken based on the literature review shows that there are still challenges when it comes to digital public services, mainly due to the apprehension towards change. Even though the implementation of digital technologies in public administration has benefits such as process optimization and accessibility for citizens, there are rural areas where resources are limited. Therefore, digital divisions and data security concerns can be observed.

From the statistical data performed by specialized institutions from Romania, the efficacy of digital public services varies considerably. Data indicates a continuous necessity of investment in digital infrastructure and in the education of citizens to improve their digital skills and assure equal access to these services.

As a result of the platform analysis, the action to attract new users and maintain them due to potential issues such as accessibility, functionality, or not enough promotion is difficult. To improve upon this, the government should prioritize user experience and increase visibility of digital platforms. Also, Romania must improve its performance in terms of the targets and objectives of the Digital Decade, to stimulate competitiveness, resilience, sovereignty and to promote European values and climate actions.

In the last seven years, the DESI index for Romania increased by only 3.7 points, compared to 13.4 – the average increase of EU countries. Romania ranks last in the EU ranking, with a score of 30.6 points, compared to an EU average of 52.3 points. Finland, Denmark, the Netherlands, and Sweden continue to be in the top spots in the EU.

Romania has relatively good results in terms of connectivity, this being the dimension for which it gets the best score. The proportion of use of services with fixed broadband coverage of at least 100 Mbps (57 %) and via very high-capacity fixed networks (87 %) exceeds the EU average. This is also important given the Digital Decade's goal of 100% coverage of all households by gigabit networks by 2030.

Regarding digital public services, the current state is due to several reasons, one of which is the lack of implementation of the national digital identity.

However, there is PSCID (Centralized Software Platform for Digital Identification) in implementation. Specialists point out that a significant change in Romania's pace of training in terms of digital skills is essential for the EU to achieve the Digital Decade objective of basic digital skills and ICT specialists. Even though Romania has a strong IT sector, recognized at an international level for innovation and technological competences, this potential was not used to develop public services. A stronger collaboration between government and IT companies may accelerate the modernization of digital infrastructure, improve cybersecurity, and increase efficiency and accessibility of services provided to citizens. Therefore, Romania can benefit from a robust and competitive e-government system, adapted to current needs of population.

This study has its limitations, the first one being represented by the limited access to detailed data and updated information towards government projects and public data that can be incomplete or optimistic. Also, the generalization of results may not reflect the reality in all areas and among all citizens, since are differences in the regional parts of Romania. The lack of a close collaboration with these institutions and IT sector has limited a deep understanding of challenges and opportunities in the field of digital public services.

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