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Digitalization of Public Services in Romania. A Critical Analysis Based on the DESI Index (2021–2025)

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Abstract: *The digitalization of public services represents an essential pillar for modernizing the administration and for developing an efficient and transparent society. It simplifies the interaction between the state and citizens, replacing traditional processes with online solutions, reducing bureaucracy, and increasing accessibility and public trust.*
This article analyzes the current state of digitalization of public services in Romania, using as a reference the "Digital Public Services" dimension within the Digital Economy and Society Index (DESI), developed by the European Commission. This index is a key tool for assessing digital progress in EU member states, quantifying the level of digitalization and supporting the foundation of public policies.
The study integrates recent statistical data and sources from the specialized literature, examining both the supply and demand for digital services. Although Romania has made significant progress in terms of connectivity and the development of essential digital platforms (such as Ghișeul.ro, ROeID, and the Single Digital Gateway), the score obtained in the digital public services category (21/100) remains more than three times lower than the EU average, placing the country in last place in the European ranking.
The data published in 2025, for the reference year 2024, reveal significant differences compared to the European Union average, especially regarding demand and the maturity of the digital supply. In contrast, for indicators related to facilities offered to citizens, the differences are smaller.
To reduce this gap, Romania must accelerate the adoption of pre-filled forms, simplify online administrative processes, and strengthen citizens' trust through a user-centered approach and clear security standards.

Keywords: *digital public services; e-Government users; digital platforms; DESI Index.*

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Introduction

The digitalization of public services represents a fundamental element for the modernization of administration and the development of society. By implementing digital solutions, the interaction between the state and citizens is simplified, with traditional processes being replaced by online forms, applications, and payments. This transformation significantly contributes to increasing administrative efficiency, enhancing transparency, and reducing bureaucracy, generating considerable savings of time and resources for both citizens and institutions. At the same time, digitalization expands the accessibility of public services, especially for people in rural or isolated areas, and supports sustainability by reducing the consumption of material resources and minimizing the need for physical travel.

Since 2014, the European Commission has been monitoring the progress of digitalization in EU member states through the Digital Economy and Society Index (DESI).

This index, developed by the European Commission, serves as an evaluation tool for measuring the progress made by EU member states in integrating digital technologies into the economy and society. DESI aims to quantify the level of digitalization, supporting the development of public policies by highlighting both strengths and areas that require interventions and improvements.

DESI includes five main dimensions: Connectivity, Human Capital, Use of Internet Services, Integration of Digital Technology in Businesses, and Digital Public Services.

In this article, we focus on the last dimension — digital public services — analyzing their availability and quality (including e-government and digital health services) in order to assess the progress and challenges faced by Romania.

The context of public administration digitalization in Romania

As Kahneman points out in his book, people naturally tend to conserve energy and choose solutions that require the least effort, preserving their resources for situations where they are truly needed (Kahneman, 2011). In this context, the digitalization of products and administrative processes has the potential to significantly simplify citizens' interactions with public services, thus reducing access barriers and creating more efficient experiences.

A recent study analyzing the determinants influencing citizens' intention to adopt and use e-government services in developing countries shows that, although technology has advanced globally, the adoption of e-government services in developing countries remains insufficient (Saleh et al., 2024).

In Romania, authorities have integrated digitalization into their development strategies, aiming to implement online platforms for providing public services. As a result, essential platforms such as the Romanian Single Digital Gateway (PDURo), Ghişeul.ro, and ROeID (the Unique Digital Identity) have been developed and consolidated. However, despite the diversification and expansion of digital offerings, the majority of citizens continue to prefer traditional channels when interacting with public administration.

Digital public services aim to fully transform classic processes — from completing and submitting forms to making payments — into accessible and fast online solutions. Thus, forms that previously had to be printed and physically submitted can now be completed and sent electronically, generating significant time and resource savings for both citizens and the administration.

The goal of digitalization is to increase efficiency in administrative management and facilitate citizens' access to public services. As emphasized in the specialized literature, the COVID-19 pandemic significantly accelerated this transition, prompting public institutions to shift rapidly from face-to-face interactions to providing services in the digital environment (Vrabie, 2024). In this context, any service that was not available online became practically inaccessible, forcing public organizations to accelerate the adoption of digital technologies and find more innovative uses of existing e-government solutions to manage the crisis (United Nations, 2020).

According to the *Study on National Broadband Plans in the EU 27*, Romania has made progress in recent years, especially regarding connectivity (where it ranks above the EU average for fixed network speeds) (Feldmann et al., 2014; European Commission, 2014). However, it still lags behind other states in terms of digital skills and digital public services. Continued investment and the adoption of appropriate policies are essential to closing this gap.

According to the DESI 2022 report (*Digital Economy and Society Index*), in the category of digital public services, Romania ranks last among EU member states, with a score (21.0) more than three times lower than the European Union average (67.3).

Table no. 1 The Digital Economy and Society Index (DESI) 2022 for Digital Public Services in Romania

DESI 2022	Romania – Rank	Romania – Score	EU Average – Score
Digital Public Services Indicator	27 / 27	21,0	67,3

Source: based on data from the report *Romania in the Digital Economy and Society Index* (European Commission, 2022)

A direction promoted in the specialized literature for improving public services and increasing their usage rate is the development of proactive public services, defined by the direct approach of beneficiaries by public organizations, without requiring any initiative from them. Concretely, citizens no longer need to submit requests or initiate procedures, as proactive public services are designed so that the administration contacts them directly and automatically provides the necessary services (Scholta & Lindgren, 2023).

Another solution proposed in an article that evaluates the current state of e-government and open innovation, presenting research results from the last five years, identified two directions that can contribute to increasing the adoption level of digital public services in society. The first direction refers to citizen involvement and participation, and the second to e-government and digital transformation (Popescu et al., 2024).

Additionally, another study shows that digital transformation is today one of the most important developments in the relationship between public service providers and citizens, and the major challenge remains finding ways for digitalization — although inevitable and often perceived as distancing the relationship with organizations — to become more personal and closer to people's needs (Pol et al., 2025).

Statistical data and performance indicators on the digitalization of public services in Romania

The indicators that measure the digitalization of public services reflect the level of digital maturity of the administration and its capacity to effectively respond to the needs of citizens and businesses. Among the most relevant indicators is the e-Government service usage rate, which indicates the proportion of citizens who prefer to interact online with authorities, whether for submitting documents or making payments. Equally important are the quality and accessibility of digital public services, both for individuals and for the business environment, allowing, for example, certificates to be

obtained or businesses to be registered without physical presence. The use of pre-filled forms significantly contributes to reducing bureaucracy, while transparency regarding the provision of services and the protection of personal data strengthen users' trust in digital platforms.

In addition, user support, compatibility with mobile devices, and easy access to complete electronic medical records complete the picture of a modern, efficient, and citizen-centered administration.

The DESI indicators regarding the digitalization of public services are presented in the table below. The units of measurement used are: Percentage of individuals who used the Internet within the last 12 months for the first indicator, and Score (0 to 100) for the remaining indicators.

Table no. 2 DESI indicators on the digitalization of public services in Romania compared to the EU average (2024)

Indicator	Romania	EU Average	Difference (percentage points)	Romania as % of EU
e-Government users	26,91%	74,71 %	-47,8	36%
Digital public services for citizens	62,75	82,32	-19,6	76%
Digital public services for businesses	55,14	86,23	-31,1	64%
Pre-filled Forms	24,38	70,98	-46,6	34%
Transparency of service delivery, design and personal data	43,10	69,46	-26,4	62%
User support	71,69	88,75	-17,1	81%
Mobile friendliness	85,48	96,13	-10,6	89%
Access to e-health records	75,10	82,70	-7,6	91%

Source: based on data from the report *Romania in the Digital Economy and Society Index* (European Commission, 2025).

The comparative data between Romania and the European Union average for the DESI 2025 indicators (data from 2024) are presented in the figure below.

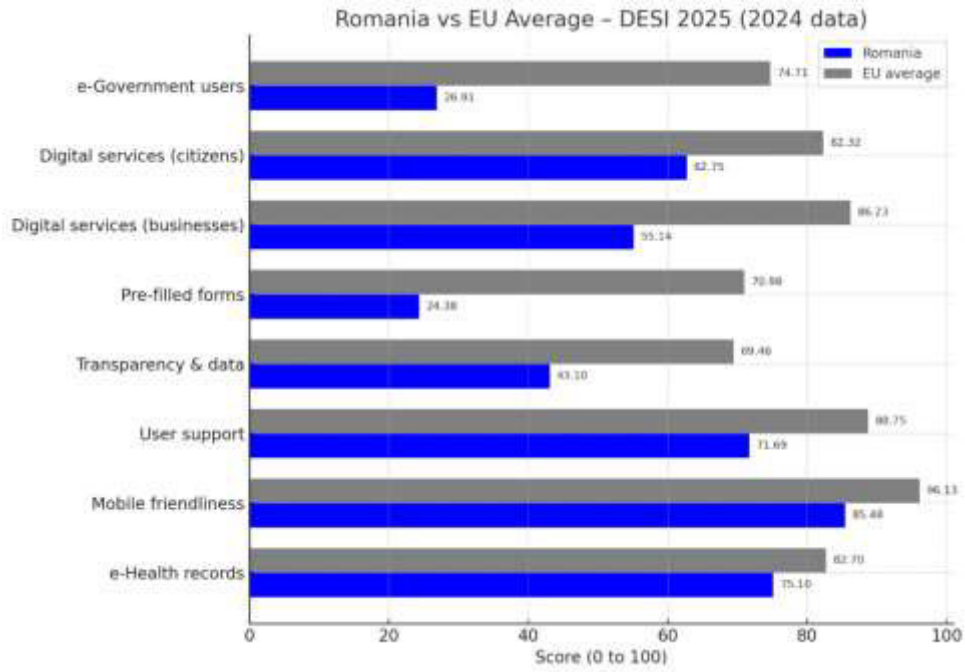


Figure no. 1 Percentage differences between Romania and the EU average for DESI indicators on digital public services (2024)

The data published in 2025 (referencing the year 2024) within the Digital Economy and Society Index (DESI) highlight significant differences between Romania and the European Union average regarding the digitalization of public services.

The first indicator, e-Government users, shows the level of demand for digital public services. In Romania, only 26.91% of citizens use such services, compared to the EU average of 74.71%. This major gap suggests the existence of significant barriers to the adoption of digital solutions by the population, which affects both administrative efficiency and the accessibility of public services.

The following indicators — Digital public services for citizens, Digital public services for businesses, Pre-filled Forms, and Transparency of service delivery, design and personal data — provide information on the maturity level of the digital supply. Romania's performance in these categories remains below the European average: for citizens, the score is 62.75 (compared to 82.32 at EU level), and for businesses, 55.14 (compared to 86.23 in the EU). These values highlight that, although a digital infrastructure exists, the available services do not yet meet the quality and coverage standards of the European Union.

In particular, the Pre-filled Forms indicator (24.38/100) reflects one of the largest deficiencies (only 34% of the EU level). Pre-filled forms are meant to reduce user effort by automatically presenting data already held by public administrations. Their absence forces citizens to manually fill in redundant information, thus reducing efficiency and satisfaction in using online services.

Furthermore, the indicator Transparency of service delivery, design and personal data, where Romania scored 43.10 compared to the EU average of 69.46, signals the need for additional measures to increase transparency and strengthen personal data protection.

Regarding User support, Romania obtained 71.69 points, below the European average of 88.75. Although this result shows that there is some support for users, it remains insufficient to compensate for deficiencies in other areas of digitalization.

The last two indicators, Mobile friendliness and Access to e-health records, highlight facilities aimed at citizens. In these cases, the differences from the European average are smaller. Romania achieves a high score for Mobile friendliness (85.48), approaching the EU average (96.13), suggesting that most digital services are optimized for mobile access — an essential aspect in the current digital context.

At the same time, the score for Access to e-health records is 75.10, relatively close to the EU average (82.70), reflecting notable progress in the digitalization of the healthcare sector and in facilitating citizens' access to their own health data.

The DESI indicators for Romania from 2020–2024 regarding the digitalization of public services are presented in the table below. The unit of measure is: Percentage of individuals who used the Internet within the last 12 months for the first indicator and Score (0 to 100) for the remaining indicators.

Table no. 3 Evolution of DESI indicators on the digitalization of public services in Romania (2020–2024)

Indicator	Romania 2020	Romania 2021	Romania 2022	Romania 2023	Romania 2024
e-Government users	15,89%	16,72%	23,55%	24,64%	26,91 %
Digital public services for citizens	44,37	44,24	47,58	52,18	62,75
Digital public services for businesses	49,29	42,27	44,61	50,03	55,14
Pre-filled Forms	5,55	19,05	40,74	39,58	24,38
Transparency of service delivery, design and personal data	44,28	41,02	43,82	42,60	43,10
User support	58,93	71,96	68,25	71,16	71,69
Mobile friendliness	71,17	74,79	77,16	75,96	85,48
Access to e-health records	-	-	57,06	58,58	75,10

Based on the data presented above, we created a chart illustrating the evolution of Romania's scores for the DESI indicators during the period 2020–2024.

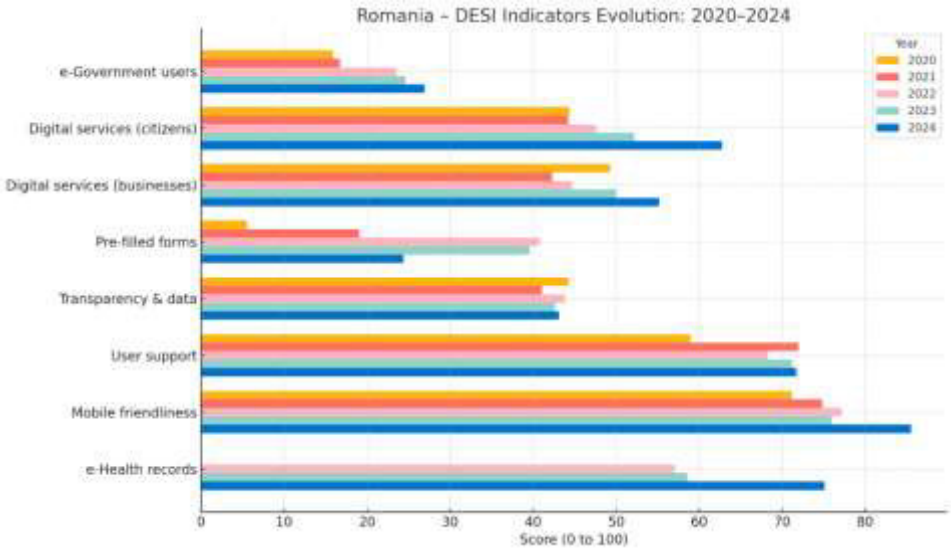


Figure no. 2 Dynamics of DESI scores for Romania on digital public services (2020–2024)

The data for the period 2020–2024 highlight a gradual yet uneven evolution of Romania's performance regarding the digitalization of public services.

In terms of demand for digital services, the proportion of people who used the Internet to interact with public authorities increased from 15.89% in 2020 to 26.91% in 2024. Although this growth corresponds to an average annual rate of approximately 14%, it remains insufficient to reach the European Union average. Nearly three-quarters of the population still do not use these services, which underscores the need for additional measures to promote and simplify access.

In contrast, the scores reflecting the maturity of supply (the next five indicators) show more consistent progress. Digital services for citizens increased from 44.37 to 62.75 points, with accelerated growth starting in 2022, coinciding with the expansion and integration of digital platforms. Regarding services dedicated to the business environment, these showed fluctuations: after a decline in 2021, they returned to an upward trend, reaching 55.14 points in 2024. This evolution suggests that, although modernization resumed, progress is still not sufficient to adequately meet the needs and expectations of the business sector.

The Pre-filled Forms indicator recorded significant growth, increasing more than sevenfold between 2020 and 2022, reaching 40.74 points, but subsequently decreased to 24.38. This regression indicates persistent issues related to interoperability and the updating of core databases, as well as the absence of a well-structured system for automatic data management.

Regarding Transparency of service delivery and personal data protection, the score stagnated at 43.10 points in 2025, a value almost identical to that in 2020. This stagnation suggests that technological progress was not accompanied by the strengthening of transparency and security mechanisms.

On the other hand, the User support indicator showed positive evolution, increasing from 58.93 to 71.69 points, reflecting an improvement in the support provided to users.

Concerning citizen-oriented facilities, the Mobile friendliness indicator remained one of the strongest performances, steadily increasing to 85.48 points.

The Access to e-health records indicator has been reported in DESI only since 2022, indicating that at the European level, its monitoring was introduced recently. In Romania, this indicator recorded rapid growth, reaching 75.10 points in 2024. This evolution shows that, in priority areas such as healthcare, digitalization can advance rapidly when supported by dedicated resources and favorable social pressure.

Conclusions

Through the digitalization of public services, Romania aims to simplify and make more efficient the relationship between citizens and public administration, thus ensuring quick and convenient access to various administrative processes — from completing and submitting forms to filing applications and making payments, all via online platforms.

The analysis shows that although Romania has made significant progress, especially regarding connectivity infrastructure, mobile optimization, and facilitating access to electronic health records, these achievements are not sufficient to generate a significant impact on the widespread use of digital services.

The persistence of major obstacles, such as the low level of e-Government usage, the lack of pre-filled forms, and concerns related to transparency and data security, limits the positive effects of the investments made. Although DESI scores for digital services addressed to citizens and businesses are increasing, they remain considerably below the European average, confirming that the current digital offering is still not attractive enough, intuitive, or adapted to users' real needs.

The overall evolution highlights important steps toward digital modernization; however, the progress achieved must be consolidated through coherent and sustained measures. It is essential for Romania to focus on increasing citizens' trust in digital services, improving user experience, and simplifying online administrative procedures.

In the medium and long term, investments in developing the population's digital skills, expanding the use of pre-filled forms, and implementing rigorous data protection standards will be decisive for closing the gap with the European Union average and for creating a modern public administration centered on citizens' needs.

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