Regulatory compliance policies - digitalization of the public administration

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Abstract

Digitization is an important process with applications in many areas of activity, including public administration at EU level, and is regulated to ensure a secure legislative framework, the proper functioning of the state and the protection of fundamental rights. The EU wish is to modernize public administration by increasing the efficiency and transparency of services provided to citizens. The aim of our paper is to see whether the EU regulatory compliance policies on digitization of public administration brings the much sought-after efficiency, both by the state and the end-user. The research methodology is based on the analysis of the EU regulatory compliance policies in the field of digitization and on the examination of the legislation adopted in Romania to align with these standards. The results of our analysis show that Romania, as a member state of the European Union, has adopted and implemented European policies that refer to digitization, interoperability of systems, data protection and data security. The real impact of digitization will be seen when the member states, including Romania, manage to fully transpose and implement these rules.

Keywords: digitization, legislation, data protection assurance, interoperability.
JEL classification: K23, K24, O33, H83

1.Introduction

1.1 The context of digitization of public administration

In recent years digitization of public administration has become an important factor in the day-to-day activities of all institutions in the European Union. Citizens want transparency, speed and quality in public services. In order to increase and improve the relationship between citizens and the state, it must adapt to the demands of its citizens.

The European Union, through the Digital Agenda for Europe 2021-2027 [1], supports and promotes the digitalization of the public sector. Member States are supported and encouraged to invest in digitization. In this regard, Romania has made progress (e.g. the Ghișeul.ro or SPV platforms), but still faces many problems in terms of the organization and functioning of public institutions, the lack of digital skills of public officials, the reticence of the population and digital gaps between regions.

1.2. Need for compliance with current regulations

Romania, as a Member State of the European Union, is obliged to transpose EU rules and directives into national law. Failure to comply with these obligations may trigger infringement proceedings by the European Commission. This can have legal and financial consequences for the Member State concerned [2].

The aim of the study is to investigate to what extent the EU legislation on digitization of public administration contributes to increasing the efficiency of digital public services, as well as their acceptance and use by the population.

The research methodology used is based on the doctrinal analysis considering the European regulatory framework in the field of digitization and the Romanian one, from the perspective of the correlation between the Romanian and EU legislation.

The alignment of Romanian legislation with European standards makes Romania a reliable partner compatible with EU objectives.

2. Legislative and regulatory framework for digitization of public administration
2.1. Relevant European regulations
2.1.1 The Regulation on electronic identity and trust services for electronic transactions in the internal market eIDAS&eIDAS 2.0 was adopted in 2014, respectively 2024. The aim was to establish appropriate foundations and a uniform legislative framework for all EU Member States regarding the security of electronic transactions and interoperability between Member States. The Regulation has undergone amendments and updates, and in March 2024, the Council of the European Union adopted a new legal framework on the European Digital Identity to integrate a secure digital wallet (EUDI) for all EU citizens. This digital wallet supports Europeans and allows them to access public and private services across borders, manage their electronic identity and personal data (e.g. driving licenses, diplomas, bank accounts, digital ID card), share information without disclosing additional data. eIDAS translates into greater security and convenience for any activity that can be carried out online. The digital wallet should, by 2026, be implemented in all EU member countries [3].

2.1.2 The General Data Protection Regulation (GDPR) was adopted in 2018 and has as its main objective the protection and privacy of citizens' personal data. The GDPR [4] is based on seven key principles:
- lawfulness, fairness and transparency - requires the controller of personal data to identify a valid legal basis for the processing. Not to use them in a harmful, discriminatory or misleading way and to inform the data subject very clearly about how it will collect, use and share the data.
- purpose limitation - involves collecting data only for a specified, explicit and legitimate purpose. Further use of the data in a way incompatible with the purpose for which it was collected is prohibited.
- data minimization - involves collecting only that information that is strictly necessary for the stated purpose (no more and no less).
- accuracy - refers to the fact that the data collected must be correct, current, complete and accurate. If it is identified that the data are not compliant, they are corrected as a matter of urgency and as soon as possible.
- storage limitations - data should be kept for no longer than necessary for the purpose for which they were collected. Thereafter the time limit for erasure or anonymization shall be respected.

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- integrity and confidentiality - requires strict security measures to ensure data is protected against theft, loss, destruction or damage.
- accountability - refers to the fact that the data controller is responsible for compliance with all GDPR principles and must be able to demonstrate this.

2.2. National regulations on digitization

Romania, wishing to align itself with European standards, has transposed EU regulations in the field of digitization into national legislation. Here are some of the laws implemented:

Among the most important rules established at national level, the Law 9/2023 that was adopted in January 2023 amends the Emergency Ordinance no. 41/2016 on simplification measures in the administration [5]. The main changes are: the obligation for institutions to publish electronic information and forms for all public services provided, the implementation of electronic communication between the administration and citizens, the prohibition to request documents already issued by other institutions (digital circulation of these documents is envisaged, but there must be the express consent of the applicant) and the prohibition to request office stationery or stationery from the public [5].

Another normative standard is represented by the Implementation of the National Interoperability Platform and Interoperability Reference Standards (NRRI), adopted in 2024, that establishes the technical rules and standards that underpin the interoperability and compatibility of IT platforms, applications and systems [6].

Emergency Ordinance No 155/2024 transposes EU Directive NIS 2/2022 into national law. It refers to increased cyber security of critical infrastructure, strict obligations to report cyber incidents and regular risk assessments. It now covers 18 application areas, including: energy, transportation, financial services, health, digital infrastructure, public administration [7].

The National Action Plan for the Digital Decade for Romania 2030 - adopted in 2024 focuses on four main strands: digital skills, digital business transformation, digital infrastructure and digital public services. This plan is, in fact, Romania's commitment to the essential coordinates of the national digital system that will be aligned with the values and objectives of the European Union [8].

3. Legal obligations for public institutions

3.1. Digitalization of public services

For public administration services to become efficient, transparent, accessible and, ultimately, to gain the trust of citizens, they need to keep up with the evolution of digitization technologies. The European Union wants services offered to citizens to be 'digital by default' as a first option. Access to these services should be fast, easy and secure for all beneficiaries, cutting red tape [9].

3.2. Interoperability of systems

Given the high level of digitization that some countries have already reached, it was necessary to move to a higher level, that of interoperability. Interoperability is the mechanism by which systems and organizations exchange information efficiently and securely. Thus, all the digital systems of a state are more productive if they are interconnected. By taking this vision further, the European Union has succeeded in providing the legislative and technical framework for Member States' systems to interact with each other without the need for citizens to physically move from one country to another.

3.3. Ensuring data security and protection

In the context of digitalization, the protection of personal data is very important. The rules and principles imposed by the GDPR are not optional but mandatory for all public and private institutions. The GDPR basically protects the fundamental rights of citizens and, at the same time, supports the creation of a relationship of trust between the authorities and the final beneficiary.

3.4. Accessibility and digital inclusion

For digitization to be a fair process, access to digital technologies and services must be ensured for all citizens, regardless of age, health, education, social status, financial status or place of residence. The European Commission aims to ensure that everyone in Europe develops basic digital skills, not just high-speed internet. Moreover, it wants institutions to adapt digital services so that people with disabilities can also benefit [10, 11].

4. Challenges in achieving compliance

4.1. Lack of digital infrastructure

One of the main challenges is the lack of modern digital infrastructure, especially in rural, marginalized or isolated areas of Romania. Here, time has almost stood still, technical equipment is old and morally worn out, the current software is not compatible with rudimentary equipment, the internet connection is poor and low-speed. In 2023, only 76% of households had high-speed internet access, but the urban-rural differences were very large, according to the DESI survey [12].

On the other hand, the European Union is also facing various challenges, but at a different level, in terms of eIDAS 2.0 deployment. These stem from differences in the technical solutions and platforms developed by each Member State to achieve interoperability. The right solution has to be found to interconnect these national systems.

4.2. Human resources and digital

In Romania, the majority of administrative employees have minimal digital skills, which hinders the process of implementing new technologies or they are not used to their full potential.

Another factor is the population's resistance to change, which distrusts digital solutions, considers them complicated to use and difficult to understand. One explanation could be the insecurity of being on their own without being supervised by a civil servant, but also the perception that too much technology leads to job losses [13].

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4.3. Inter-institutional coordination

The public system is encumbered by complex, time-consuming, fragmented procedures and poor coordination between institutions. This is because each institution tries to find its own solutions, which are often incompatible with other authorities' systems.

5. Good practices: Comparative study Estonia and Romania

5.1. Digitalization in ESTONIA

Estonia is one of the EU countries that can be considered a role model in digitizing public administration. Moreover, it is seen as an example of a fully functioning digital society thanks to the transparent, unit and secure system it has developed.

Here are some of the digital platforms implemented:

- X-Road – is the national interoperability system equivalent to the "Estonian highway" as it is used for secure data transfer between all national digital systems. X-Road connects 1300 systems, 450 organizations and provides 3000 services [14].
- National digital (e-ID) – is the system whereby every citizen has a digital identity which gives them access to public services (taxes, health, education), online voting (i-Voting), digitally signing documents.
- e-Residency – is the program that allows non-Estonian citizens to obtain a digital identity to access the country's digital services. For example, they can set up businesses and run them 100% online. There are currently over 118,000 e-residents from more than 170 countries around the world generating significant revenue for the Estonian economy. It should be noted that e-Residency is not synonymous with obtaining citizenship, it does not grant physical residency rights or access to the country.
- e-Tax și e- Business Register – the first service offers the possibility to check and pay taxes or file tax returns. The second one offers the possibility to register companies online, change company status and file documents. Access is online 24/7 for both citizens and companies.
- e-Health și e-Prescription – are health systems integrated into the national platform. Access to the patient's medical record is provided to any authorized provider in a secure and confidential manner. 99% of prescriptions are issued electronically.

5.2. Digitalization in Romania

In recent years Romania has given particular importance to the digitalization of public administration by integrating new technologies. This evolution is necessary to reduce bureaucracy, increase efficiency and create a mutual relationship of trust between the state and the citizen.

Here are some of the digital platforms implemented:

- Ghișeul.ro – is a platform that allows citizens and companies to pay taxes, duties and fines online. Payments can be made in full or in part. Since January 2023 the mobile app is also available, so payments can also be made from your mobile phone. In January 2025 the app registered more than 2.4 million active users, 1600 institutions and 400 payment types [15].

- Spațiul Virtual Privat (SPV) – is a digital platform of the National Agency for Tax Administration (ANAF) through which you can request documents, file tax returns or check tax obligations.
- e-Factura – is an official system that issues, transmits and receives tax invoices in digital format. As of January 1, 2024, all economic agents liable for VAT are obliged to issue invoices only via e-Factura. Only invoices accepted by ANAF are considered as legally issued.
- RoeID – is an electronic authentication and identification system, but is currently being piloted in a few counties.

Table 1. Comparative analysis: Estonia and Romania

Criterion	Estonia	Romania
Strategic vision	Early and coherent implementation of a national digital vision since the 1990s.	Recent vision, fragmented, often reactive and dependent on European projects (PNRR, POCD).
Digital architecture	Unified interoperability system through the X-Road platform, present in all institutions.	Lack of real functional interoperability; Law 242/2022 is in its infancy.
Digital identity	e-ID mandatory for citizens, integrated with over 99% of public services.	Pilot projects (e.g. ROeID), but without national application and without full integration into public systems.
Access to digital services	Over 99% of public services are available online.	Less than 40% of administrative services are fully digitized (ADR, 2023) [16].
Digital civic participation	Functional online voting system (i-Voting) since 2005.	Online voting is not implemented. Digital participation remains limited.
Digital infrastructure	National high-speed internet access, government cloud infrastructure.	Unequal connectivity (76% of households have internet access in 2023, with urban-rural differences).
Digital education and literacy	Sustained digital literacy programs in schools and for the general population.	Low level of digital literacy: Romania ranks last in the EU according to DESI (2024) [16].
Organizational culture	Digitalized public administration at all levels; civil servants use digital platforms.	Resistance to change, lack of continuous learning, reliance on paper and physical processes.
Trust in the system	High trust in digital services, underpinned by transparency and security.	Low level of trust in digital institutions and systems due to previous negative experiences.

Source: own proccesing

According to DESI 2024, Romania ranks 6th, above the EU average, in terms of the number of ICT graduates, but unfortunately, they do not find themselves further on the national job market. Which means the state educates them and then they either leave the country or work for international IT firms. Romania ranks second-bottom in the ICT specialists indicator, while for the other three indicators assessed, the country is in last place [17].

Table 2. DESI Index 2024 indicators
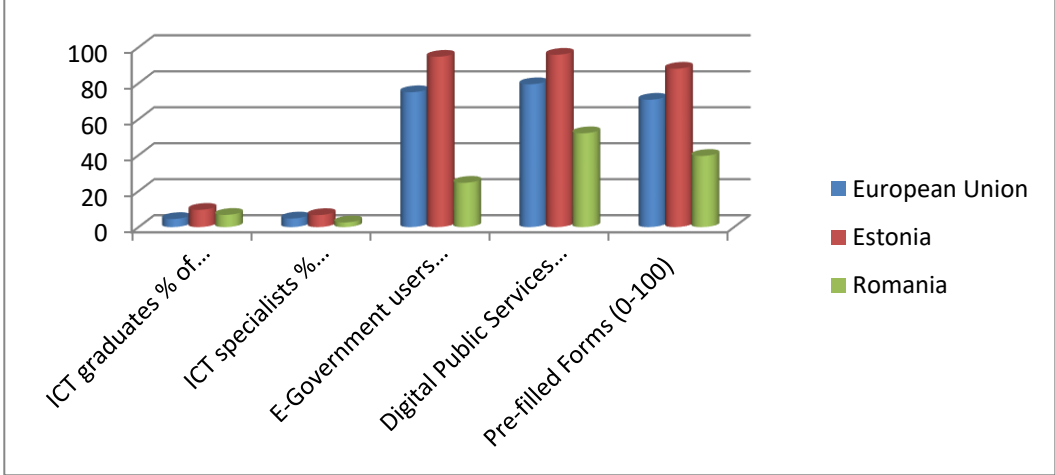
6. Recommendations for public institutions

The digitalization of public administration in Romania is, in fact, the road to modernization, to finding solutions that meet the current needs of society. There is potential for achieving this goal, but it requires involvement, will, assumption of responsibilities and a clear direction for all state institutions.

Here are some recommendations:

- Interoperability between all the institutions - each institution has set up its own IT system to deal with the different situations it faces, but now a solution has to be found so that these individual systems can be connected to each other.
- Extend the digital identity (ROeID) nationwide, to all public and private platforms, but with a focus on security and protection of personal data.
- Pay special attention to the end user, the contact with digitization to be perceived as easy, fast, intuitive, easy to learn.
- Constant, real feedback.
- Possible takeover of X-ROAD from the Estonian state - Cybernetica has implemented similar models in 35 countries (Ukraine, Malaysia, Japan, Namibia, Benin), adapted to the specifics of each country.

7. Conclusions

The aim of the study is to identify the extent to which EU legislation on digitization of government contributes to the improvement of digital public services such as accessibility of services, reduction of processing time or interoperability of systems. Another important aspect is their acceptance and use by the population.

The research methodology used is based on a comparative analysis of the European regulatory framework in the field of digitization with the Romanian one. The aim is to obtain a clear picture of the degree of correlation between the two legislative frameworks in order to understand Romania's progress in the process of digitization of public administration.

The results of the study show that Romania has recently made progress in the field of public digitization also thanks to the transposition of EU regulations into national legislation. Their implementation has brought benefits for those administrative units that had the budget or were interested in implementing EU recommendations. Unfortunately, Romania is still facing digital divides between different areas of the country, lack of digital skills of civil servants and resistance to novelty. According to the DESI index, Romania is still at the bottom of most indicators. A unified, pro-citizen approach is needed, with investment in infrastructure and human capital development.

Estonia is an example of best practice, it has benefited from a well-structured legislative framework focusing on data security, interconnectivity and transparency of administrative systems. Financial support has played an important role, attracting EU funds which have been used intelligently and pragmatically.

Future research should include studies on the identification of barriers that prevent the digitization process from expanding and becoming fully functional, on how to increase the digitization literacy of the population. We believe that the level of literacy is closely linked to the level of use of digital public services.

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