

SUSTAINABILITY OF THE DIGITAL TRANSFORMATION OF PUBLIC INSTITUTIONS

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ABSTRACT

The digitization of public services represents, in the 21st century, the main reform that developed countries bring to the interaction between the state and citizens, in almost all its forms and regardless of which field they belong to. The current context shows us more and more the benefits of technology and the digitization of public services, and the development priorities of all states in the near future should also include this essential aspect. Digitization is a tool of the future that offers efficiency and predictability, including in the case of Romania. Digitization involves reducing the number of interactions with officials from public institutions and optimizing the citizen's interaction with representatives of public institutions. The digitization 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 entire activity of public institutions is made more efficient, on all three levels: internally, intra-institutionally and externally, in the relationship with citizens and the rest of the institutions. Through the transparency it implies, digitization increases the accountability of the authorities to the citizens. The transparency of public institutions and their openness in relation to citizens are essential for a functional society.

KEYWORDS: *digitalization; E-governance; globalization; public administration.*

1. INTRODUCTION

The paradigm in which, from a social, economic and technological point of view, the organizations and institutions in Romania carry out their activity is currently found at the interference of some technological fields with a deep and complex transformative role (Calin et al., 2022; Burlacu et al., 2022; Negescu et al, 2021). The transformations we are referring to concern both tangible resources and the intangible spectrum, more precisely, rules, norms, ways of working, sometimes even organizational structures and models. These changes are generated and maintained by technologies at different stages of the exploitation cycle, emerging technologies.

The digitalization phenomenon has gone through several stages globally, and today it can be said that its influences are found in almost all aspects of life or in all types of organizational processes (Aceto et al., 2018). In public administration, digitization generates a multitude of advantages that should be found in the institutional strategic approach and promoted by its leaders.

On the one hand, digitization makes institutional activity more efficient, leading to the efficient use of resources, cost reduction and the institution's contribution to technological and socio-economic progress (Burlacu et al., 2022). On the other hand, digitization generates new opportunities by

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activating institutional capacities and capabilities that can deliver innovative services and products to citizens and public administration stakeholders (Burlacu et al., 2021). The emergence of new forms of interaction based on information technology highlights the opportunity to establish a direct and dynamic relationship between the public administration and its stakeholders, especially with citizens (Burlacu et al., 2021).

Digital technologies allow the administration to provide a more adequate and adapted response to the expectations that citizens have in terms of public services, policies, trust, co-participation, consequently a new perception of the administrative process and new experiences for citizens (Battisti & Brem, 2020).

Digital governance is an opportunity to strengthen and support participatory democracy, consultation and co-creation of value with citizens through the digitized administrative process (Burlacu, 2021).

The process of digital transformation has disruptive valences and involves the transition to digital services with a high degree of decentralization and integration, encouraging a more efficient interaction between citizens and public administration (Legner et al., 2017).

The confluence between the needs of citizens to reduce the times with which the administration responds to requests and the increase of administrative transparency has led to the need to innovate public services, the inclusive commitment of citizens and the adoption of agile practices that better serve the socio-economic requirements that are in a continuous transformation (Profiroiu et al., 2019). The digitization of public services involves rethinking the way in which public institutions design and deliver services to citizens (Popescu et al. 2021; Burlacu et al., 2021), more precisely, the transition from the traditional way of organization and operation to an institutional ecosystem centered on citizens (Moller, 2020).

2. THE EUROPEAN CONTEXT AND THE CONVERGENCE OF DIGITALIZATION POLICIES

A strategic objective of the European Commission, which significantly influences the degree of adoption and use of digital public services, is to facilitate citizens' access to digital environments and services (Rădulescu et al., 2023). The European Commission is taking steps to increase the number of citizens with access to digital media, to develop digitization skills, but also to exploit to a greater extent the strategic potential of institutions for digital transformation (Ciobanu et al., 2019). To be successfully implemented, the process of change and transformation must be accompanied by an extensive process of developing digital skills and abilities in public sector institutions (Lember & Pire, 2019).

The European Commission promotes various initiatives whose main aim is the development of digital skills and competences for the workforce, citizens and the modernization of education at the level of the European Union (Androniceanu et al., 2017). The digitization of public services and their migration exclusively to digital environments requires, as a precondition, the development of digital skills so that citizens and stakeholders of public institutions can access and use these services (Burlacu et al., 2013). The digital economy and society are strategic objectives of the European Commission, as they represent preconditions for a context conducive to innovation, growth and competitiveness (Rădulescu et al., 2018).

From 2021, the digital skills strategy has a new dimension and orientation. Given that most lucrative fields and interaction with digital environments require digital skills, the European Commission will implement the new Digital Europe Programme (Angheluță et al. 2021). This program is essential for the development of digital skills, but, above all, for increasing the degree of capitalization of the institutional strategic potential (Angheluță et al., 2021).

To develop these skills, the European Commission established the coalition for digital skills and jobs (Rădulescu et al., 2020). This coalition brings together member countries, companies, social partners, NGOs and educational institutions to build digital skills in Europe (Burlacu & Jiroveanu, 2009). The Coalition for Digital Skills and Jobs promotes excellence by supporting digitization education

initiatives, and at European Union level there is a repository of digital skills training projects that can be applied at any time in any country. As a strategic objective, the coalition considers digital skills for: citizens, workforce, professionals in the ICT field and in the educational field (Androniceanu & Burlacu, 2017).

Another strategic objective of the Digital Single Market is to create an inclusive digital society (Burlacu & Jiroveanu, 2012). Strategic intentions to innovate public services and digitize them require an enabling context, a flexible infrastructure and a protected framework for investments in digital networks, as well as a certain competitive context (Parida, Sjodin & Reim, 2019).

Digital public services are delivered to citizens through digital platforms, and the European Commission pays particular attention to the central role of digital platforms in the digital transformation process (Munoz & Bolivar, 2018). The current strategic orientation of the European Commission is based on the dynamics of socio-economic contexts and on the focus of activities, regardless of their specifics, on data. Therefore, the role of digital technologies and solutions in the evolution of systems, institutions and society as a whole is evident (Burlacu, 2011).

The European Commission also has a priority orientation on societal challenges, recognizing the need to adapt its strategies to the public sector, and one of the strategic objectives is to accelerate the pace at which the Single Digital Market develops. For the European Commission, the adoption of the new digitization strategy for the post-2020 period, which will define the future of Europe, has become a priority. In this sense, among the most important concerns are the design, development and implementation of technologies for future digital solutions and the modernization of existing systems. The DESI study covers five dimensions of digitization at the level of the European Union, these being: connectivity, human capital, use of Internet services, digital services and their degree of integration. All five dimensions specific to the DESI study have a major impact on the digitization process and are converging in increasing the digitization capacity. As can be seen in the composite index of the DESI study published in 2021, Romania is behind the European average in all five dimensions, being at the bottom of the ranking in terms of the digitization of public services.

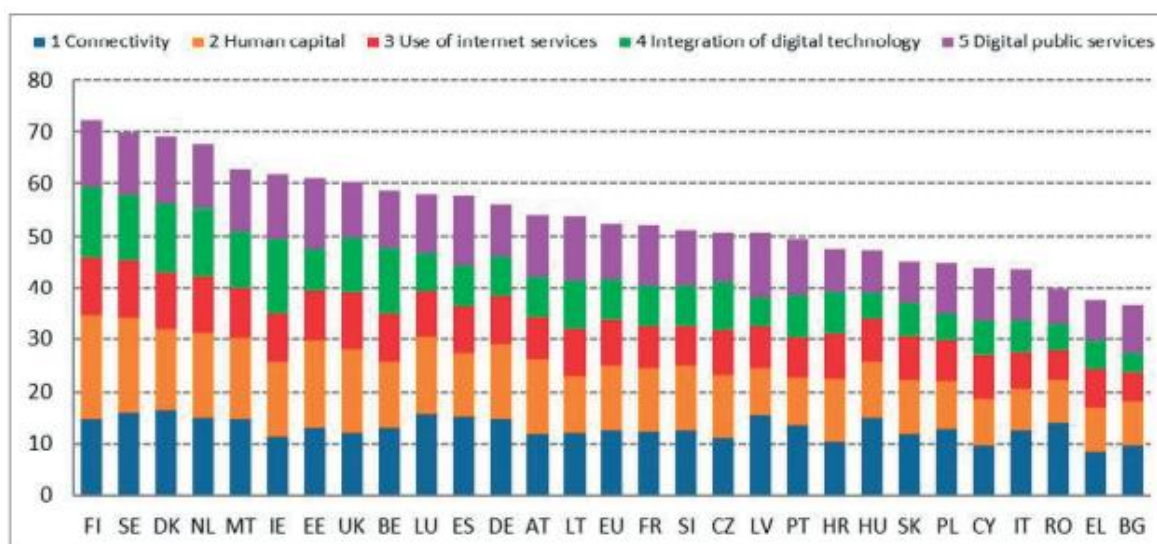


Figure 1. DESI 2021 composite index

Source: European Commission, 2021

2.1. Digital public services

At the European level, as indicated by the latest EUROSTAT statistics, the demand for digital public services is increasing, given that over 65% of European Union citizens use public services available online. Electronic public services reduce the time that citizens spend in the relationship with the public administration, and this is an encouraging element for the migration to digitized services.

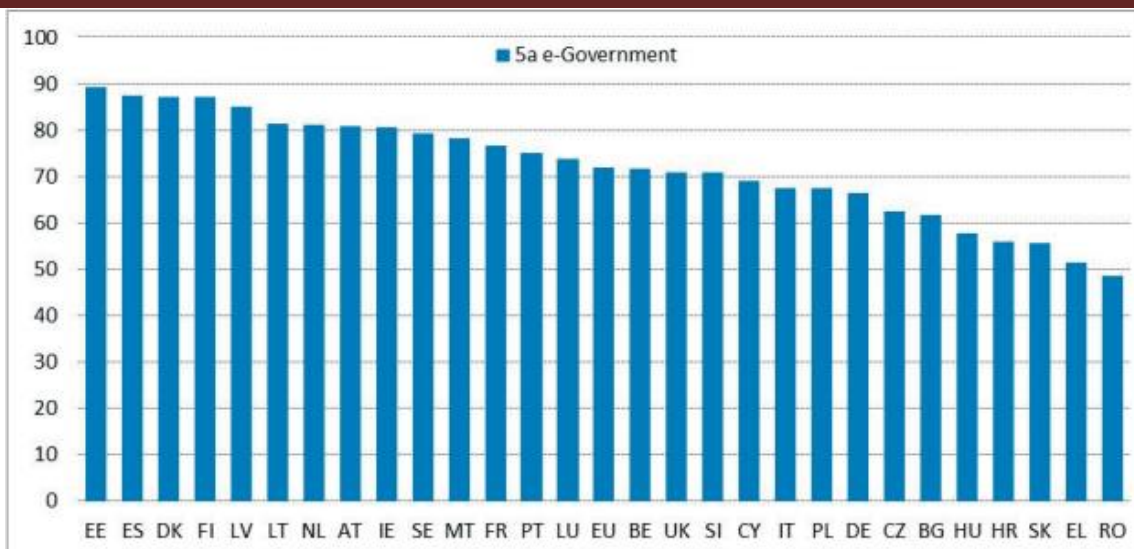


Figure 2. Digitization of public services in the European Union

Source: European Commission, 2021

Romania is found, from the point of view of the number of users of online services, above the European average. Romania is included in the group of countries where the number of citizens who use digital services has increased to send the authorities forms in which they address various requests or provide evidence of certain activities.

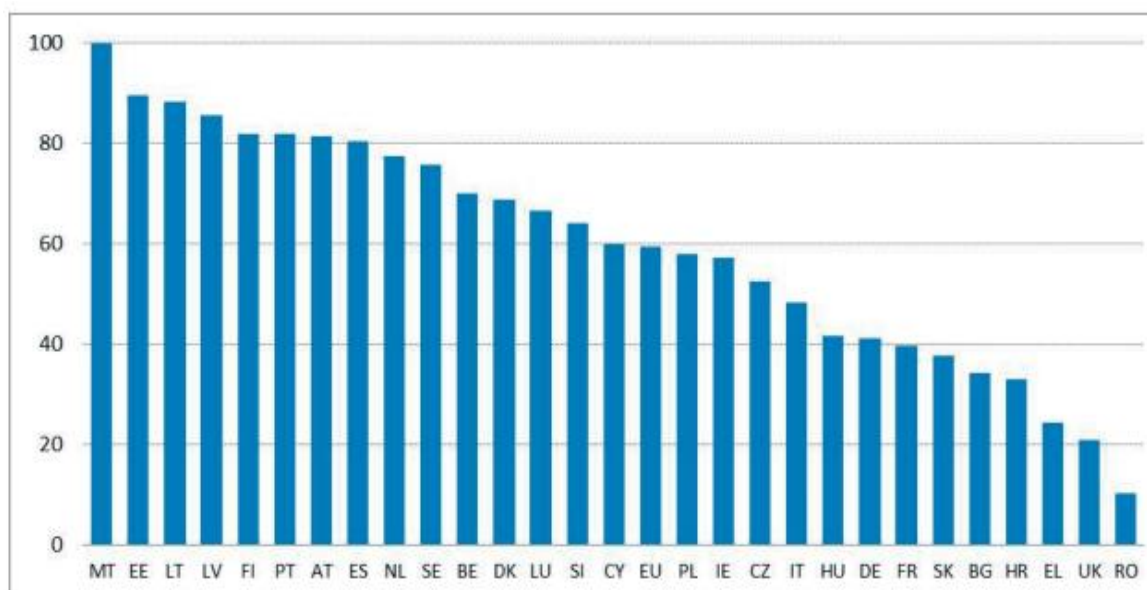


Figure 3. Index of pre-filled forms with personal data and information

Source: eGovernment Benchmark, Capgemini, 2021

The willingness of citizens to use online services is an encouraging fact, and this trend represents an additional reason for public administration to migrate citizen services to the digital environment. This reorientation towards digital services must be complementary with other actions. An example of this is the availability of a wide variety of information about citizens, and for this information to be retrieved automatically according to their profile.

Figure 3 shows the fact that, compared to other countries in Europe, Romania is in last place in terms of automatic retrieval of information from portals and online forms.

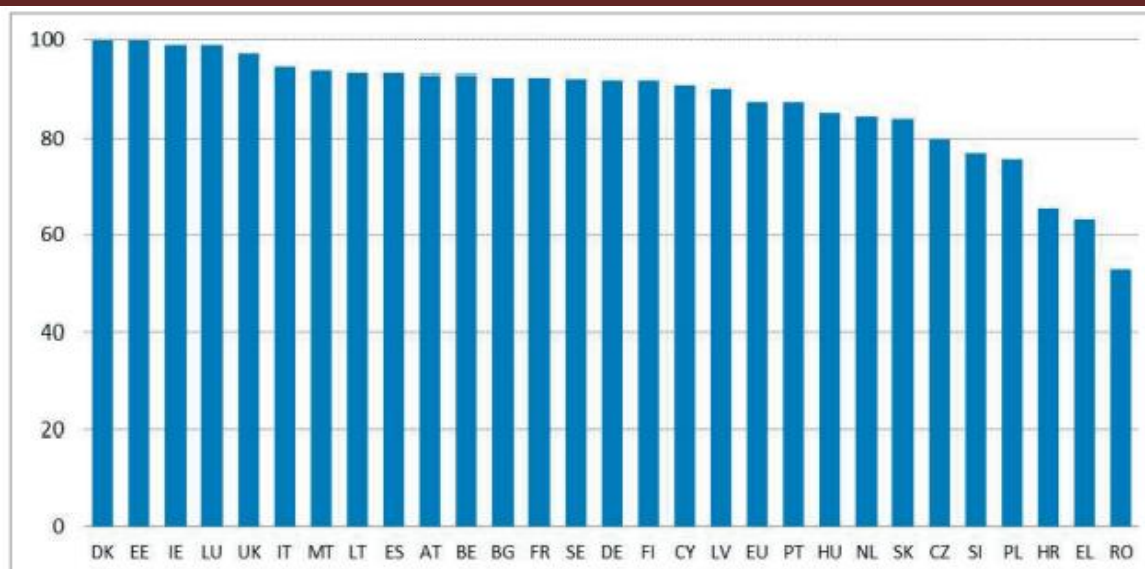


Figure 4. Availability of digital public services for businesses

Source: eGovernment Benchmark, Capgemini, 2021

It can be observed that in this ranking Romania occupies the last place in Europe, which indicates that it is not a "friendly" country from the point of view of digitization services for commercial organizations. A key component, without which the services and digitalization potential could not be exploited both within the institution and in the relationship with citizens, is human capital. Digital skills and the frequency with which citizens access public services available online are key indicators of the DESI study.

Although Romania is one of the member countries of the European Union with the best communications infrastructure, the citizens do not have the necessary skills to exploit these resources on a larger scale. In terms of advanced digital skills, specific to professionals working in the IT&C field, Romania is close to the European average.

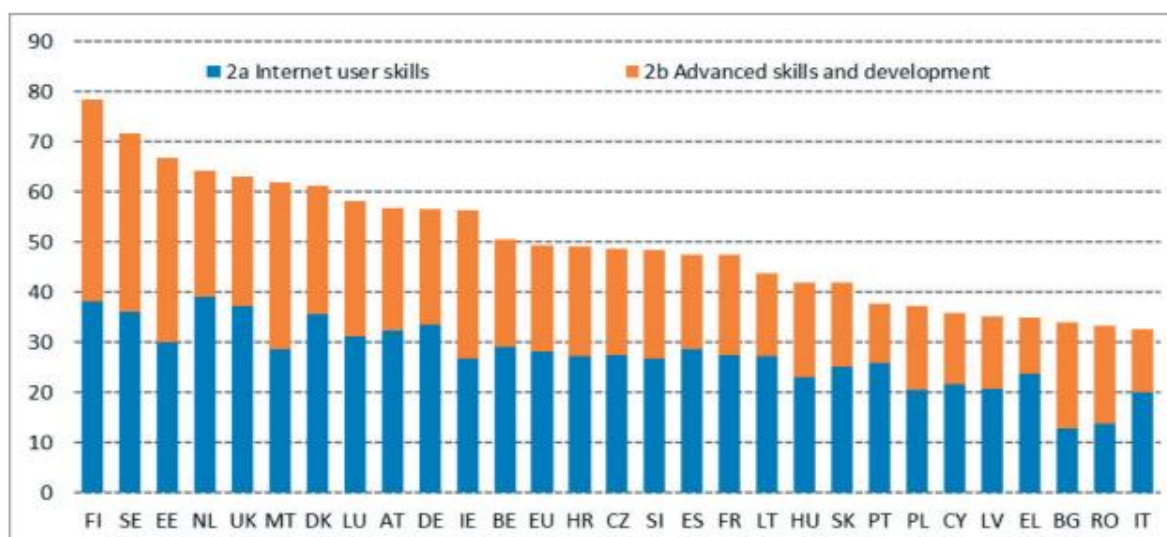


Figure 5. The specific dimensions of human capital in the context of digitization

Source: European Commission, 2021

Regarding the evolution over time of the degree of use of the Internet, we note the fact that Romania has not made notable progress compared to other countries in the European Union in the period 2015–2021. Considering that the interaction between citizens and public institutions takes place exclusively through the Internet, the increase in the degree of use of these services will lead to a migration of citizens from non-digital classic public services to digital public services.

2.2. Digital transformation and eGovernment

Technology and digital transformation represent an opportunity for digital public administration or e-governance to improve and develop the relationship citizens have with public administration (Castelnovo & Sorrentino, 2018). The trust that citizens have in public administration is particularly important, because it legitimizes and gives stability. If the trust in public institutions is decreasing, then the acceptance of public decisions will be under the sign of distrust. The more citizens trust the integrity of political, administrative and legal processes, the more involved and open they will be to accept the results of the administrative process.

Increasing citizens' trust in the administrative process must be a basic concern of the leaders who coordinate the governance process of the public administration. There are two mechanisms that can be used to generate and maintain trust in public administration. On the one hand, trust in the administrative process is created and maintained through an iterative process that involves repeated exchanges and interactions between citizens and local public administration (Caputo, Pizzi & Dabić, 2021).

On the other hand, trust in institutions is a general judgment that often depends on the image or reputation of the institutions, and these are not always based on direct interaction with the citizen (Bodemann, 2018.). Through information technology and digitization, public administration can be convergent with society's expectations, and this process is based on mutual trust. There are several types of names for the digitization process specific to public institutions, such as: digital or digitized public administration, digital administration, digital governance, e-governance, or e-governance.

Digital governance involves the use of information and communication technology, in particular the Internet, to transform the relationship between public administration and citizens in a positive way. In our opinion, digital governance leads to increased trust in the processes within public institutions, but also the specific processes that define the relationship with citizens.

Digitization offers accessibility and availability to public services, all of which increase confidence in the new public management. (Vial, 2019). Digital governance improves citizens' perception of the fairness and impact of public administration decisions through access to information, and by ensuring the ethics of personal information, public administration is perceived as fair and transparent. The biggest impact felt by both the employees of public institutions and the citizens is, on the one hand, the increase in the efficiency and effectiveness of the activities carried out and, on the other hand, the efficiency of requests addressed to public institutions (Mali, 2020). Digital environments ensure availability and a quick response to the requests that citizens address to public institutions.

The digital transformation of public administration also proposes other secondary strategic objectives (Walker & Weinberg, 2019). On the one hand, information technology represents the support for public and administrative decisions and for the direct promotion of participatory e-democracy. This perspective has the role of revitalizing trust in the administrative process through transparency, responsibility and the co-creation of contexts in which citizens and stakeholders will find themselves. On the other hand, from the perspective of public service innovation, digital administration is closely related to the digitization and modernization of public services.

To facilitate and accelerate the digitization process and for the focus to remain primarily on the citizen and the users in the institution, the capabilities, capabilities and technologies must be able to be integrated into solutions adapted to the needs.

Digitalization technical solutions must follow the processes specific to the administrative act, procedures and internal rules, and e-governance must become part of the management of public services (Becker & Jaakkola, 2020.).

2.3. Multidimensional Model for the Digital Transformation of public institutions

In the process of defining a coherent strategic approach, we propose a multidimensional model for the digital transformation of public sector institutions. In the digitization process, an institution goes through several stages up to a high level of maturity, which involves the acquisition of capacities, capabilities, skills and abilities that favor digitization and the transformative process. The multidimensional model has relevance from two perspectives.

The model becomes useful to assess the stage in the digitization process in which the analyzed institution finds itself and the intelligent strategic orientation towards a higher level of digitization. The dynamic context causes institutions to adapt their strategies to proactively develop their capabilities.

These approaches are necessary to increase the degree of understanding of technological changes, but also to increase their adoption rate for the benefit of the institution and the citizens. A

global trend is the convergence of digitization solutions towards products and services available on a digital platform of the "one-stop-shop" type integrating digital services for citizens. The model we propose has four levels of digitization and encompasses the integration of the four dimensions in a synergistic manner. The proposed model is multidimensional and is built on four dimensions that define the digitization stage of an organization.

The first dimension has an internal orientation and is represented by the digitalization potential of the institution. This dimension presupposes a priority focus on defining and leveraging capabilities, technological capabilities, skills and abilities. The degree to which these four components are found in the institution, but, above all, the way in which they are valued contributes to identifying the level of digitization at which the institution is found and decisively influences the path towards a higher level of digital maturity.

The second dimension has an external orientation on the citizen or the beneficiary of digital public services. This dimension also has an effect on an internal institutional level, because the public institution must adapt its digital services and infrastructure, capabilities, capacities and competences to respond both to the needs of a constantly changing society, but also to the new strategic orientations to national and European level. The second dimension of the model is the dimension specific to the level of integration of the institution with the ecosystem of which it is a part.

The third dimension of the model is represented by the digitization tools used within the institution. A variety of digital technologies and innovations, equipment and applications, and digital platforms can be used in the digital transformation process.

Institutional digitization has two sub-dimensions. On the one hand, it is necessary to digitize internal processes, more specifically to augment the procedures with technology and digital media, and to carry out the activity through digital media that provide efficiency, accuracy, effectiveness and safety. On the other hand, digitization implies the use of digital resources and tools in the relationship with citizens.

Part of the institutional digitization potential is used outside the institution by citizens, especially when requesting services that are within the competence of directorates, services or departments. A particularly important aspect of this dimension is represented by the interconnection of digital tools, the collaboration between them, the exchange of open data, but above all, the connection at the level of internal processes and procedures.

The first level of the Multidimensional Model for Digital Transformation is characteristic of institutions that do not sufficiently capitalize on their digitalization potential or do not own it. These organizations have not developed their internal potential, more specifically, their capabilities, capacities, competencies and skills.

The second level of digitization is characteristic of organizations that partially exploit their digitization potential. Competencies and skills exist for digitization, but the organization has not internally developed capabilities and capabilities for digital transformation. Capabilities and capabilities are required to implement digital transformation models and strategies.

In these organizations, there is an intention to set a strategic direction for digitization and the key capabilities and capacities to be developed are defined. Having established the strategic direction of the organization, there are links with stakeholders within the ecosystem and common projects for digitization. To the same extent, the institution understands the needs of citizens, and digitization services become a strategic priority. From a digital infrastructure point of view, the institution generates data that is not open or is partially open to other systems or organizations. This is an obstacle to the integration and development of digital infrastructure.

The organization has defined its capabilities and capacities as well as a strategy to capitalize on them while developing competencies and skills. The institution has a higher capacity to attract its collaborators from the ecosystem, and their involvement in the digitization process increases the institution's potential to capitalize on its capabilities and capacities by attracting resources and know-how from the ecosystem. Systems and tools generate open data that is reused, thus developing and exploiting the potential of digitization. Applications and systems acquire new functionalities, and interaction with citizens becomes partially digitized in the online environment. At this level, the institution uses exclusively the online environment, internal capabilities and capacities to digitize the interaction with citizens.

The fourth level of digital transformation involves the acquisition and capitalization of a complex institutional potential in which all four components are capitalized. The organization acquires flexibility and adaptability, on the one hand to calibrate its capabilities and capacities in a dynamic and proactive manner, but also to quickly develop the skills and abilities needed in the digitization process.

Integration with the local or regional ecosystem gives the institution new capabilities for co-creation and innovation, but, above all, for attracting the resources and know-how necessary for digitization.

3. CONCLUSIONS

The digital transformation of public institutions has not been an option for a long time, but an obligation and necessity. We are on a one-way street; the administrative performance of any public institution is currently and will continue to be judged also according to the level of digitization.

The process of digital transformation is a particularly complex one, and the time in which this transformation must take place is relatively short. Recently, citizens have become much more demanding in relation to the public administration. Their expectations primarily concern the provision of fast, simple and transparent services. The use of digital tools can transform the interaction between citizens and public administration into a positive, constructive one.

Effective digitization of public administration first of all requires will and flexibility, both on the part of the administration, but also on the part of the citizens. As I mentioned above, in the digitization process, an institution goes through several stages until a high level of maturity involves the acquisition of capacities, capabilities, skills and abilities that favor digitization and the transformative process.

We need, on the one hand, a new organizational culture, the development of new skills and abilities, the provision of high-performance technology, but also a permanent interaction with citizens for the adaptation and development of new digital procedures according to their needs. The digital transformation process should be an integrated one, with the interconnection of digital tools and the exchange of open data being the framework within which the whole process should take place.

The digital transformation must not be limited to the digitization of the administrative bureaucracy, but requires a context favorable to the revision and simplification of administrative procedures.

The transparency, speed, debureaucratization that the digital transformation process entails, but also the ease of use of digital tools by citizens leads to increased trust in public institutions, acceptance and better legitimization of public decisions

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