

THE STATE OF E-GOVERNMENT AND DIGITAL ADMINISTRATIVE SERVICES IN THE REPUBLIC OF BULGARIA

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Abstract: The present article³ focuses on the problems of e-government and digital administrative services on a European scale and in the Republic of Bulgaria in particular. This is a controversial topic, important for all economic and social processes. In the context of the evolving Covid-19 crisis, investing in new digital administrative services can bring added value and significantly improve services provided to citizens and businesses. The study focuses mainly on the state of e-government and digital administrative services at a European level and in Bulgaria in particular, as the analyzed data cover the period from 2003 to 2020. As a result, some conclusions are formulated and a course of searching for opportunities to expand the policies towards developing individual components and systems, part of the e-government, to develop and change the administrative services provided, and to increase the efficiency of the services in the public sector is outlined.

Keywords: e-government, information technologies, data analysis and processing.

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Introduction

Modern living conditions and the development of information technology are a prerequisite for the constantly changing needs and requirements of people to persons performing public functions and organizations providing public services. The development of e-government and service delivery processes is an inevitable and necessary condition in the situation in which mankind finds itself, given the COVID-19 pandemic that evolved in 2020. The need for e-services is growing, both from the point of view of service providers and consumers. In this regard, it is important to increase the efficiency of e-government by providing services in an electronic environment through information and communication technologies and in accordance with the necessary control and information security measures.

1. Theoretical formulations of e-government and digital administrative services

The participants in e-government are in constant communication and interaction during the running processes and when satisfying the needs of service users. Organizations performing public functions and providing public services carry out their activities in accordance with the E-Government Act, which defines e-government as “administrative authorities implementing legal reciprocity, administrative processes and services and interacting with consumers, persons performing public functions and with public service organizations through the use of information and communication technologies that ensure a higher level of management efficiency.” With regard to service users, we mean not only people and businesses applying for the relevant electronic administrative services, but also the administration, as an internal electronic administrative services user. In his study, Milev (2018) also argues that public sector organizations in general aim to meet various public needs. The interaction between the participants in e-government is important for building the vision of the e-government in

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Bulgaria until 2023, which is presented in the Updated Strategy for the Development of e-Governance in the Republic of Bulgaria (2019-2023), as:

- Transforming the model for the provision of user-oriented electronic services by changing the technological and administrative processes behind them, resulting in a reduction of the administrative burden for citizens and businesses;
- Building a modern digital administration;
- High level of network and information security;
- High-quality support for shared e-government resources.

Electronic identification is a key element of e-government. Electronic identification in the country is performed on the basis of the provisions of the Electronic Identification Act, according to which “on the basis of the electronic identifier can be made uniquely differentiating one person from other persons in the virtual environment with the aim of providing access to information systems or providing the ability to perform electronic statements.” Electronic identification is needed by users of electronic administrative services for which identification is required. In the case of cross-border electronic identification, Regulation (EU) № 910/2014 of the European Parliament and of the Council of 23 July 2014 is applied, according to which electronic identification “means the process of using person identification data in electronic form uniquely representing either a natural or legal person, or a natural person representing a legal person.” The electronic documents are stored in the information system of the administration. The exchange of electronic documents between the administrative bodies is carried out under conditions of interoperability, while according to the E-Government Act, the general requirements for interoperability between the information systems, electronic registers and electronic administrative services are determined by an ordinance of the Council of Ministers. According to the Ordinance on the general requirements for information systems, registers and electronic administrative services, “the exchange of electronic documents containing electronic statements between administrations is performed according to a technical protocol determined by the Chairperson of the State e-Government Agency. The protocol enables the exchange of documents between different

document management systems in different administrations; tracking the movement of the document and the stage of the procedure for its examination or compilation.”

The interoperability registers operating at the State e-Government Agency with regard to data exchange are the Register of Registers, the Register of Information Objects and the Register of Standards. Based on an analysis of the current state of the central and territorial administration registers, specific measures have been taken to achieve the main goal of the register reform set out in the Concept for a register reform 2019 - 2023, namely: “To optimize the organization of the state administration registers so as to ensure: the maintenance of registers at the lowest possible cost, the official exchange of information and data for the provision of quality services, the possibility for providing services based on the registers by other administrative bodies, and the quality, completeness and security of data.” The benefits expected from the register reform can be viewed in two directions. The first is benefits for citizens and businesses, where the expected results are with regard to improving data security, providing high-quality services to citizens and businesses and facilitating administrative procedures. The second direction refers to administration, where the expected benefits are increasing people’s trust in these institutions, through their satisfaction with the administrative service, security in the provision of digital services, as well as reducing the costs of providing administrative services.

One of the main challenges facing people, businesses, administration and all spheres of public life is the evolution of digital transformation. These processes take place in different directions and greatly affect the applicable knowledge, skills and competence of the participating specialists. Trends show that lifelong learning as well as career development will have a significant impact on the competence accumulation, which in turn will be an important prerequisite for successful digital transformation processes. In his study Kirilov (2020) pays serious attention to the technical and technological prerequisites for digitalization of the career development of young professionals. With regard to digitalization processes,

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it is important to point out that in 2020 the Council of Ministers adopted the National Strategic Document 'Digital Transformation of Bulgaria for the period 2020-2030'. One of the goals of this document is to increase the efficiency of public administration and the quality of public services. According to the document 'Digital Transformation of Bulgaria for the period 2020-2030' "the process of digital transformation, if the state manages it in a timely, adequate and competent manner, will change the model of interaction with citizens and businesses regarding the provision of public services and will increase the public administration efficiency. Efforts will be focused on reducing the number of administrative services and transforming them into internal administrative ones, making the electronic intervention between citizens and businesses with the state the main and preferred way, eliminating the use of paper documents at the expense of electronic documents and increasing the maturity and trust of society in electronic interactions."

The efficiency of digital administrative services is laid down in one of the priority areas of the National Programme 'Digital Bulgaria 2025', which sets out the basic principles of providing effective public electronic services.

The development of e-government, digital transformation and the provision of efficient digital administrative services is related to trust in institutions and information security. In this regard, organizational, technological and technical measures for network and information security are applied, which guarantee the confidentiality, integrity and accessibility of information. According to the Ordinance on the minimum requirements for network and information security, measures must be diverse, specific and easy to implement, efficient, proportionate to the risks and verifiable.

In the public sector, the effective running of digital transformation processes is an important challenge facing the governing bodies in the state administration. According to Alan Brown, Jerry Fishenden, Mark Thompson (2014), digital transformation requires redesign and re-engineering at every level – people, process, technology and management. Kirilova (2018) analyzes the issues of business process re-engineering in the public sector, stating that "during the implementation of a process, it must be carefully monitored and subsequently analyzed. Multiple repetitions of the process

can provide the necessary information and specific values of measurable indicators, on the basis of which to move to process re-engineering.”

The development of e-government and the provision of digital administrative services must meet the ever-changing needs of society in the context of the dynamic development of digital technologies.

2. E-government and digital services in the EU member states and Bulgaria

The exponential development of computer technology and the Internet over the last 20 years, on the one hand, and the global epidemic crisis in 2020 on the other, have defined the provision of adequate digital administrative services as an essential part of the overall digital transformation of the modern society.

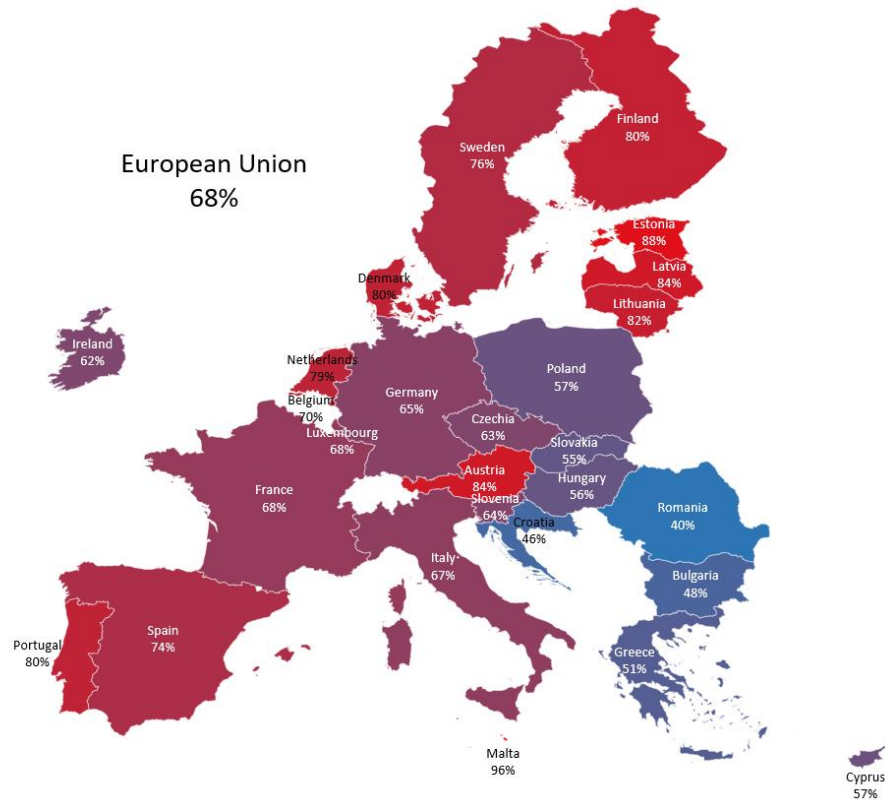
From a research point of view, the so-called eGovernment Benchmark (comparative analysis), conducted annually by research companies (for 2019 these were Capgemini, IDC, Sogeti and Politecnico di Milano) and commissioned by the European Commission is of great interest. This ‘comparative’ analysis is based on gathering information on e-government specific indicators by using the ‘mystery shopper’ technique.

Benchmarking is carried out with regard to various aspects of the state and development of digital management and certain individual services offered electronically. The most important scores, measured on a scale from 0 to 100%, are as follows:

- Overall score;
- User centricity scores;
- Transparency scores;
- Cross-border mobility scores;
- Key enablers scores;
- Performance policy priorities scores.

The overall score of the state of e-government in the EU member states for 2019 is presented visually by the cartogram in Figure 1:

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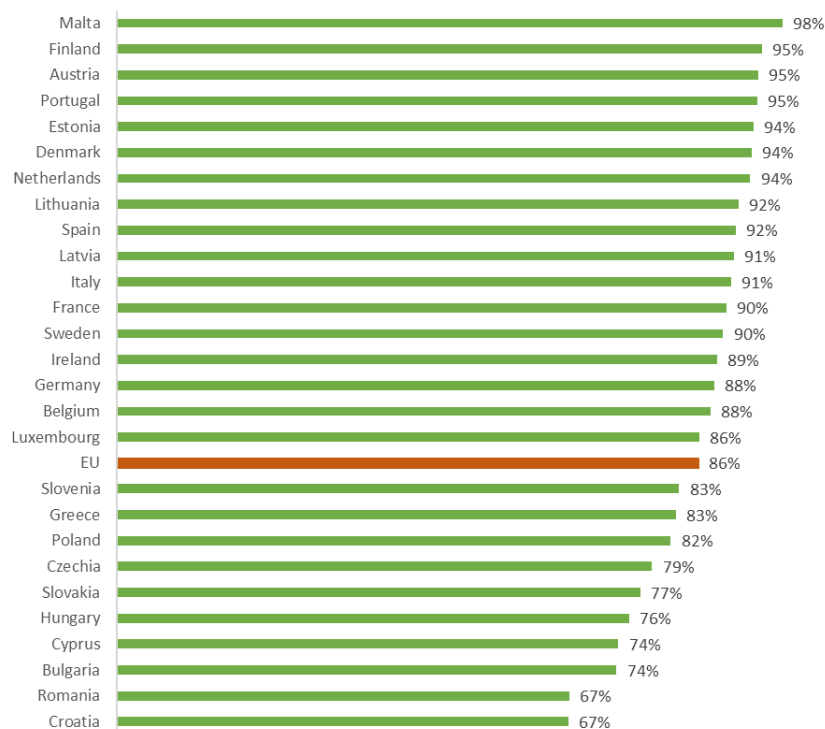


Source: According to a report by the European Commission

Figure 1. Overall score of e-government based on the comparative analysis (benchmarking), carried out for the EU member states for 2019

According to the overall score of the state of e-government, in 2019 the highest 'achievements' are attained by: Malta (96%), Estonia (88%) and Austria (84%). Bulgaria (48%), Croatia (46%) and Romania (40%) rank last with about 20 percentage points below the EU average (68%). Figure 1 clearly shows that the countries in Eastern and South-Eastern Europe form a relatively less developed area in terms of the services offered by e-government.

From the point of view of the extent to which e-government services are oriented to the needs of their potential users, including the extent to which these services are: entirely online based (online availability), usable in terms of the possibilities for online assistance and support (usability) and the extent to which their interface is suitable for use on mobile devices (mobile friendliness), the results are as follows (Figure 2):



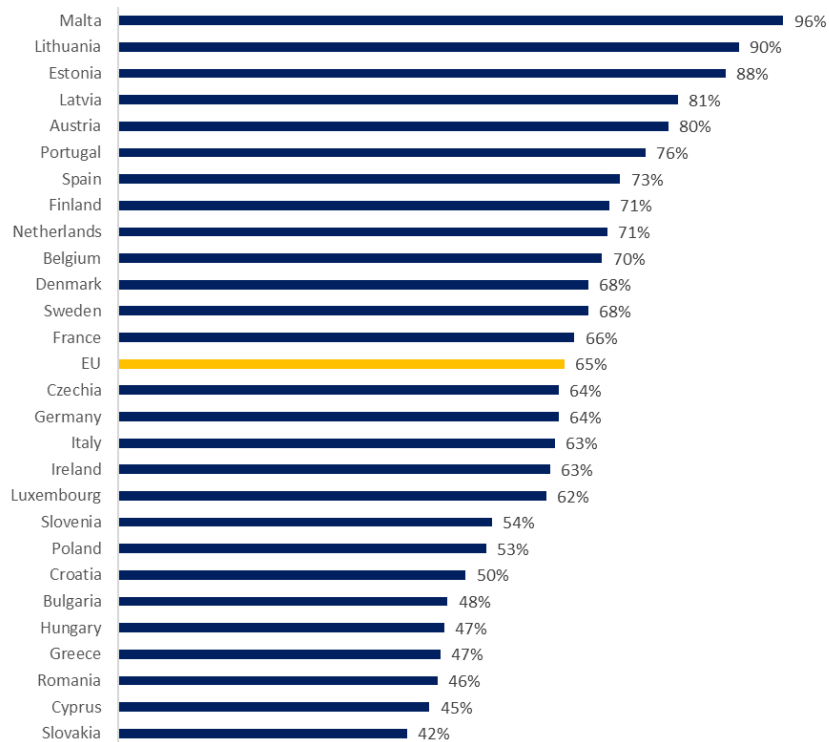
Source: According to a report by the European Commission

Figure 2. User centricity scores in the EU member states for 2019

The most adequate user centricity scores are achieved by: Malta (98%), Finland (95%) and Austria (95%). Below the EU average (86%) and with relatively low results are as follows: Bulgaria (74%), Romania (67%) and Croatia (67%).

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Next, the degree of transparency in the services provided is expressed in the transparency of public organizations, transparency of service delivery and the extent to which the government provides transparency of personal data. With regard to this summary measure, the results are as follows (Figure 3):



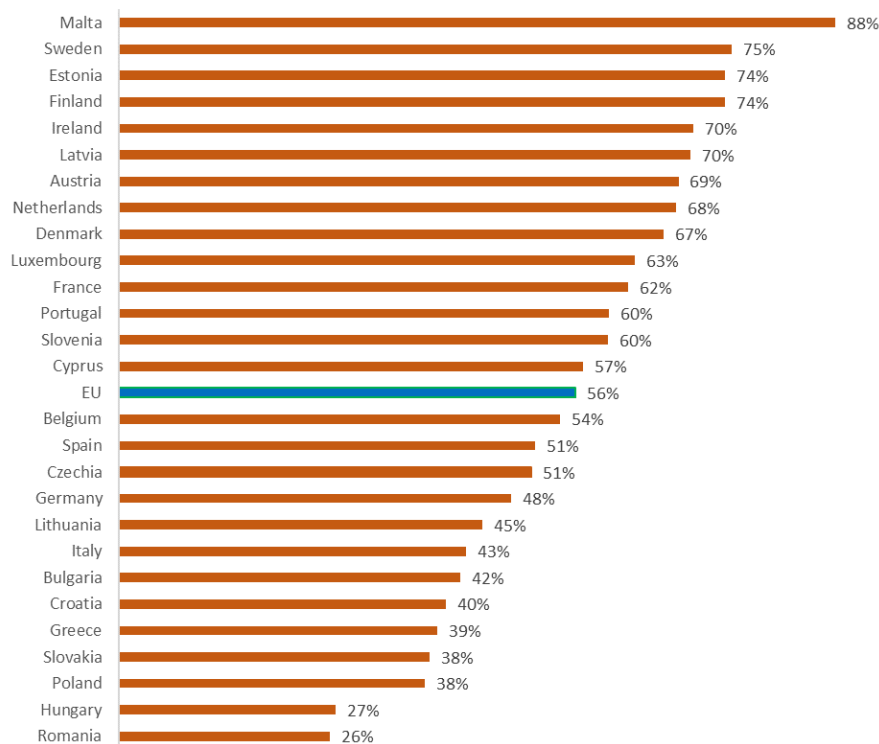
Source: According to a report by the European Commission

Figure 3. Transparency scores in the EU member states for 2019

The graph presented in the figure above clearly shows that the top 3 countries in terms of e-government transparency are the following: Malta (96%), Lithuania (90%) and Estonia (88%). Romania (46%), Cyprus (45%)

and Slovakia (42%) rank last with much lower results. Bulgaria ranks 23rd with 48%, which is by 17% lower than the EU average (65%).

From the point of view of the extent to which individuals and businesses can use a country's e-services abroad, there is some talk about 'cross-border e-government services'. This indicator includes: cross-border online availability, cross-border online usability, the availability of electronic identity documents, incl. electronic identity card (eID) and availability of electronic documents that can be transferred from country A to EU country B (eDocuments). The scores for 2019 are as follows (Figure 4):



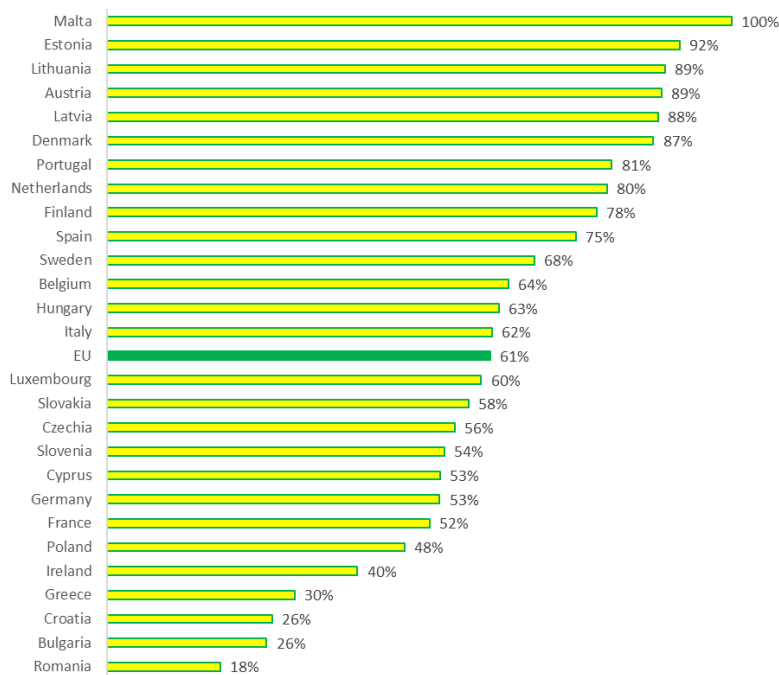
Source: According to a report by the European Commission

Figure 4. Cross-border mobility scores in the EU member states for 2019

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The figure above shows that the largest opportunities for the use of services 'abroad' are offered by: Malta (88%), Sweden (75%) and Estonia (74%). Significantly weaker is the 'performance' of the e-government in Bulgaria with its 42%, which is by 14 percentage points lower than the EU average (56%). Hungary (27%) and Romania (26%), which rank 27th and 28th respectively, need to pay attention to cross-border services.

The so-called key enablers are essential for the usability of digital services offered by e-government. They refer to: electronic identification of persons (eID), electronic document management (eDocuments), the automatic retrieval of data from existing sources (authentic sources) and the digital communication (digital post).

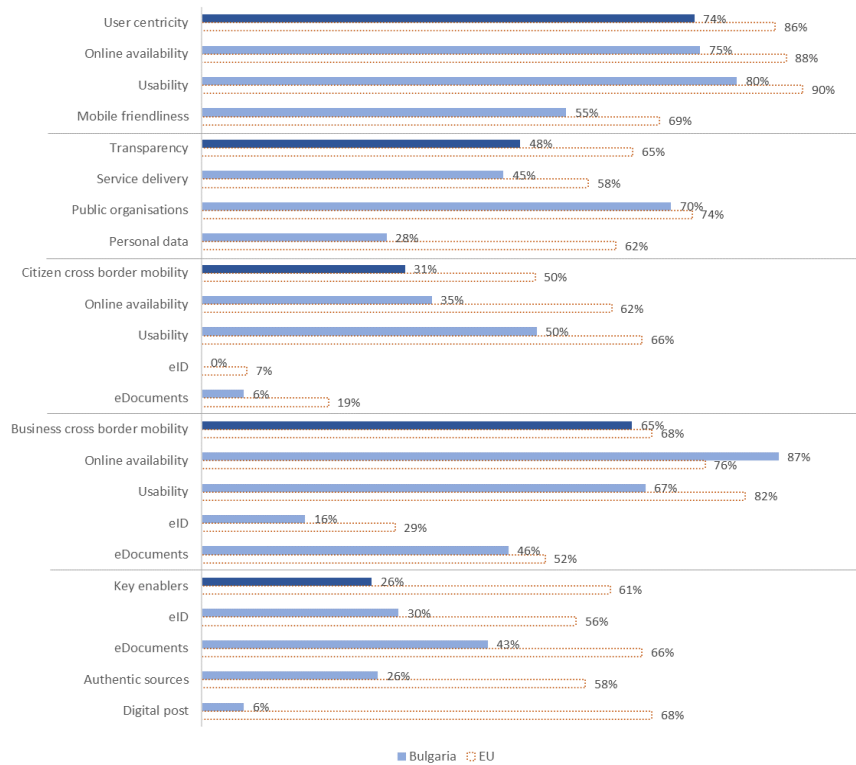


Source: According to a report by the European Commission

Figure 5. Key enablers scores in the EU member states for 2019

Figure 5 shows that a big difference exists in the EU member states in terms of the level of development of the key enablers for e- government. While countries such as Malta (100%), Estonia (92%) and Lithuania (89%) rank at the top with a high level of development, there is a huge digital ‘gap’ for countries such as Bulgaria (26%) and Romania (18%), where the development is more than twice lower than the European Union average (61%).

An even more detailed ‘picture’ of the state of the digital administrative services offered in the Republic of Bulgaria according to the aforementioned evaluation indicators and their components can be presented in the following figure:



Source: According to a report by the European Commission

Figure 6. Comparative analysis (benchmarking) of the performance policy priorities scores for Bulgaria and the EU for 2019

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The graph presented in Figure 6 shows that only in terms of cross-border online availability of e-government websites concerning business organizations (87%), Bulgaria is above the EU average (76%). In all other cases there is a serious room for development and improvement in our country. The following components need the most significant improvements: digital communication between public organizations and consumers (61 percentage points difference as compared to the EU average), transparency when processing personal data of users (34 percentage points difference), automatic retrieval of data from existing sources (31 percentage points difference), the use of digital services by persons outside the country (27 percentage points difference), electronic identification of persons as a key enabler (27 percentage points difference), including cross-border electronic identification which currently is at zero level.

Data show that at national level there are several **main reasons** for lagging behind in digitalization processes, namely:

- a need to increase investments in information infrastructure;
- a need for continuous description and modelling of business and work processes;
- a need for continuous training of employees providing administrative services in order to accelerate digitalization processes;
- a need to promote the use of digital identity and digital administrative services, etc.

Analyses and studies show that the Bulgarian economy is facing several **priority areas** where the processes of digitalization should be accelerated:

- **Healthcare.** This field has become particularly relevant and important with the rise and evolution of the global Covid-19 health crisis. Its national governance shows that investment in health infrastructure and services is particularly topical. This refers to: introducing an electronic health card, the problems of creating mobile health applications, electronic systems and registers for managing unoccupied hospital beds, issuing digital health certificates, information problems with immunization processes, electronic management of persons to be quarantined, etc.;

- **Education.** Digitalization in education has become a serious challenge since the beginning of 2020. At the initial stage, efforts were

focused on providing platforms and environment for conducting electronic lessons and classes. At the next stage, some of the more serious issues of digital education were raised, namely: the development of digital content, interactive learning systems, opportunities for embedding VR (virtual reality) and AR (augmented reality) in the interactive systems, distance exams, etc.;

- **Production and logistics.** As a result of the pandemic situation, a number of businesses, industries and logistics chains have changed. The processes of economic recovery will impose and require additional efforts to make new business processes and those in the reengineering phase digital;

- **Digital administrative services.** This field is also one of the changing ones as a result of the health crisis. Investments in information and communication technologies will allow faster recovery after the end of the pandemic situation.

A number of other similar examples can be pointed out where efforts need to be made to make processes and services digital.

Conclusion

In conclusion, the relevance of the studied problem area from the point of view of the development of social and economic processes at national, European and global levels should be emphasized. Undertaking the respective measures to achieve the goals in the field of e-government is a precondition for sustainable results in the e-government development and the digitalization of administrative services.

The digital transformation in Bulgaria has started and a certain level of success has been achieved. At the same time, however, in the next few years Bulgarian e-government will face serious challenges related to providing better quality digital administrative services that are more efficient and widely available both for individuals and business organizations inside and outside the country.

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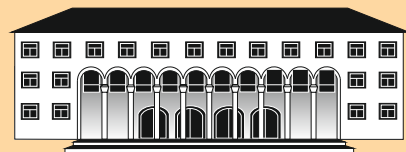
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