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# Communication of EU public servants in the digital environment during the Covid-19 Pandemic

# Комунікація державних службовців ЄС у цифровому середовищі під час пандемії Covid-19

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### Abstract

The COVID-19 pandemic has accelerated the adaptation processes of digitalization in virtually all spheres of public life. The emergence of new e-government platforms and open data, which are currently being actively implemented in many countries worldwide, undoubtedly need to be improved and adjusted. The aim of the article was to conduct a comparative study of the best practices of the leading "digital" EU countries in the field of regulating digital public services and enhancing the communicative competencies of public servants. The key methodological tools applied in the research were the methods of observation and comparative legal analysis. The study showed that the pandemic identified the essential issues of digitalization within the framework of e-government. It was concluded that the rapid introduction of innovations in the area under analysis is associated in the EU with the emergence of adaptive problems, among which the leading ones are corruption, bureaucracy, low digital competence of public

### Анотація

Пандемія COVID-19 прискорила адаптаційні процеси цифровізації практично у всіх сферах суспільного життя. Поява нових платформ електронного уряду та відкритих даних, які зараз активно впроваджуються в багатьох країнах світу, безсумнівно, потребує вдосконалення та коригування. Метою статті було проведення порівняльного дослідження передового досвіду провідних «цифрових» країн ЄС у сфері регулювання цифрових державних послуг підвищення та комунікативних компетенцій державних службовців. Основними методичними інструментами, застосованими в дослідженні, були методи спостереження та порівняльноправового аналізу. Дослідження показало, що визначила панлемія суттєві питання рамках цифровізації електронного в урядування. Зроблено висновок, що швидке впровадження інновацій у досліджуваній сфері пов'язане в ЄС із появою адаптаційних проблем, серед яких провідними є корупція,



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servants and minimal digital literacy of the residents. The research perspective is a comparative analysis of the gradual implementation of the e-government reform updated models by the Member States.

**Keywords:** communicative competence, e-government, artificial intelligence, digitalization, public services, government ecosystem, corruption.

### Introduction

In 2020-2021, the world underwent dramatic changes in the context of the most countries' consolidated actions aimed at implementing the Decade of Action (United Nations, 2020a) in the framework of achieving the goals of sustainable development. Moreover, the situation with the pandemic COVID-19 has qualitatively transformed public relations and worsened the financial situation around the world. Also, some of the most difficult problems of the states, including the provision of a sustainable e-government system, have not yet been tackled at the interstate level. UN Secretary-General Guterres called on Member States and other stakeholders to "launch a decade of work and action for the benefit of the people and the planet" (United Nations, 2021), using the e-government model. The UN Secretary-General emphasizes that today's challenges need to be tackled on a multilateral basis through sustainable national institutions with effective governance capacity in order to be able to prevent and address the challenges facing the entire humanity.

The above factors and the increasing digitalization of all spheres of social life in their entirety have prompted the IT industry to render the speedy assistance to many people in the communication sphere, distance learning, remote work, etc. (United Nations' Conference on Trade and Development (United Nations Conference on trade and development (UNCTAD), 2020) having created a new evolutionary stage in the development of the digital age. The world community is currently taking the most rapid adaptive measures to respond to the distancing of services and deliver an appropriate level of communication between the state and society in a pandemic. Globally the states have the opportunity to engage in unique direct interaction with citizens via the Internet. However, the pandemic revealed gaps in the infrastructure of state information and communication

бюрократія, низька цифрова компетентність державних службовців та мінімальна цифрова грамотність мешканців. Дослідницька перспектива – це порівняльний аналіз поступового впровадження державамичленами оновлених моделей реформи електронного уряду.

Ключові слова: комунікативна компетентність, електронне урядування, штучний інтелект, оцифрування, державні послуги, державна екосистема, корупції.

technologies, as well as the unpreparedness of systems and organizations for such a situation. Researchers state that digitalization in the public sector provides opportunities to support the achievement of the 2030 Agenda and the Sustainable Development Goals (Council of Europe, 2020), by way of improving the efficiency of public services included (Fleron et al., 2021).

Notably, the recent state experience shows that the effective implementation of e-government models supports good governance and is overall important for the establishment of effective, accountable and inclusive institutions at all levels. The basic principle of e-government, supported by an effective institutional structure of public servants, is to enhance the internal work of the public sector by reducing financial costs and time in order to integrate workflows and processes, ensure efficient use of resources in all areas of various public sector institutions which are in search of sustainable solutions. The development of innovative technologies. especially the concept of open data, according to scientists, provides new opportunities for international, national and local NGOs to participate in various initiatives based on open data, aimed at promoting the components of e-participation and active public participation in the system e-government (Ramsetty & Adams, 2020). Currently, the projects that focus on delivering remote assistance to society in the fight against corruption and poverty, improving transport services, crime prevention, monitoring security standards in the commercial sector, etc., are gradually transforming the traditional mechanism for promoting e-government. Moreover, the savings of both ordinary citizens and budget funding are gradually growing. In Denmark, for example, electronic invoicing annually saves taxpayers €150 million and businesses €50 million (European Commission, 2021a). As part of the gradual integrated





implementation of e-government services in the EU, it is expected that in 2022 the annual savings may exceed  $\notin$ 50 billion (Kabbar, 2021). In Italy alone, e-procurement systems have reduced costs by more than  $\notin$ 3 billion (Organisation For Economic Co-Operation and Development (OECD), 2021b).

That said, the role of civil society is growing qualitatively, though, and consequently this contributes to changes in political culture and social thinking. This entails that new e-government is becoming more user-oriented and at that more resilient. E-government is a powerful tool in the combat against corruption. However, a number of researchers still question the role of e-government, arguing that this model is not only a powerful weapon against thereof, but also a basis for its prosperity. According to Rustiarini (2019), there are internal and external organizational factors that affect the effectiveness of e-government functions in combating corruption.

Nevertheless, as it turned out, with the advent of new technologies in this area, especially in the promotion of various interactive and public services, both public and private stakeholders have faced regulatory, organizational, socioinfrastructural economic and challenges. Apparently, the further development of a unified project of e-government as a sustainable ecosystem requires a large-scale transformation of public administration and, most importantly, public thinking. The efforts in this direction need therefore to focus both on reforming many administrative mechanisms, primarily

bureaucracy, and on strengthening democratic procedures, as the interactivity of e-government aims to promote political dialogue and the growth of political culture in the countries concerned. With that in mind, the competency component of the public servants' activities and the transformation of communication skills while delivering public services need to be qualitatively reconsidered.

In view of the above, the aim of the article was to analyze the legal regulation of public electronic services in the EU Member States, identify and reveal current problems of public servants communication in this area as well as outline the ways to improve them during the pandemic. To achieve this goal, the following objectives were set: 1) to identify the key problems of the e-government mechanism effectiveness in the territory of the EU Member States; 2) to highlight the key communicative competencies of public servants in the framework of public services digitalization; 3) to summarize the key directions of enhancing sustainable national ecosystems of the Member States' e-government.

### **Methods and Materials**

The theoretical and methodological basis of the study were the scientific provisions of the theory of regional economic and digital development, administration and management, planning and forecasting, the scientific works in various fields. The research process, which drew on the recent empirical research and analytical data, had a step-by-step structure, which is laid out in Figure 1.

#### Stage 1 of the study Identifying the key direction

- of research taking into account the recent findings in the field of e-government in the EU during the pandemic.
- to digitalize the public services in modern crisis conditions.

3) Outlining the preliminary tentative analytical conclusions.

#### Stage 2 of the study 1) Conducting comparative analysis of best practices for thim implementation of e-government

 m the EU.
2) Identification of problems or accelerated and low-adaptiv implementation of e-governmen in a pandemic..

3) Processing and generalization of the received information.

#### Main experiment

Shaping the author's position on the basis of observation and analysis of empirical data on the prospects of further reform of egovernment in the EU member states to create the e-government single ecosystem. Outlining the impact of competency skills of public servants on the further development of e-government in the EU.

# Analytical stage

Obtaining sound scientific and practical conclusions and formulating proposals for the creation of e-government single ecosystem in the EU, with due regard for a competency characteristics single model of public servants in the digital environment.

Figure 1. The structure of the author's research on the article subject. Source: authors

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A set of general scientific and special methods was used to address the tasks put forward in the article. The leading practical method was the method of observation. As part of the testing of this methodological toolkit, the expediency of refining the methods of implementing e-government in a pandemic by the majority of EU Member States was substantiated. Due to the observation and comparative analysis of the best practices of the EU Member States, the expediency of gradual further full automation of electronic public services with the use of artificial intelligence was substantiated. One of the advantages of this study is the use of available indicators of changes in the attitude of civil society to public e-government, identified by comparing the analytical reports provided before and after the outbreak of COVID-19.

The method of theoretical generalization was used to identify the features of the theoretical foundations of strategic management of the electronic services balanced development, as well as for a comprehensive description of the transformation processes of territorial and economic systems and digitalization; the abstract-logical method was used to substantiate the principles of the legal regulation system of state electronic services, as well as to analyze the conceptual and methodological approaches to strategic management of the development of such services; statistical, graphic analysis, grouping method were used to assess the status and results of introducing the innovative information technologies in the field of public services, to evaluate the characteristics of innovative regional development; the analysis, synthesis, deduction, induction methods were used to substantiate the conceptual provisions and enhance the mechanism of implementing the state electronic services; the economic and statistical methods were used for performing the statistical analysis of the public electronic services development and their efficiency in the EU; the method of expert evaluation was used to assess the degree of achieving a balanced development of electronic public services in the context of modern pandemic transformations; the structural and logical analysis was used to justify the methodological approaches to transformation models in the era of digitalization of public services and the realities of society; the system economic analysis was used to substantiate the model of integration processes of regional innovation development in the context of digitalization in the EU Member States, to determine the directions of digital transformation of national government systems and relevant public services.

The method of historical legal research was applied in studying the development genesis of the main models of effective implementation of public electronic services in the EU; the formal logical method provided an opportunity to identify the gaps in the process of intensified implementation of e-government by the EU Member States. Furthermore, the use of dogmatic method made it possible to formulate the conclusions in accordance with the purpose of the study. The normative-semantic approach, logical methods of cognition and the method of legal modeling were used in the formulation of proposals of unified-national character for the EU.

The theoretical and methodological basis of research were scientific papers, regulations of the European Union and its individual Member States, analytical reports on statistical data in the abovementioned field. The total number of literary sources used in the article is thirty-four.

# Results

Due to innovation and e-government, currently public administration worldwide is becoming more efficient, delivering better services, responding to citizens' demands for transparency and accountability. In the study of general models of the mechanism of communication of public servants with citizens in the context of e-government around the world, the United Nations (2020b) E-Government Survey is worthy of note. The said document is published intermittently and provides an opportunity to evaluate the development of digital governance 193 United Nations Member States. in identifying their strengths, weaknesses and opportunities, as well as providing information on policy and strategy in historical perspective. Since its inception in 2001, the United Nations Department of Economic and Social Affairs has been conducting a comprehensive comparative study of the issues outlined. An indispensable tool has been created by this structural unit aimed specifically at analyzing the development of digital transformations of individual UN Member States, providing a basis for policymakers and analysts engaged in comparative analysis and modern research on e-government.

The E-Government Survey offers an interactive picture of e-government development in each country from a regional and global perspective. The encouragement of citizen participation is a cornerstone of socially inclusive governance. The e-participation index is an additional index of the UN E-Government Survey. It expands the





Survey by focusing on the use of online services to facilitate the provision of information by governments to citizens ("exchange of electronic information"), interaction with stakeholders ("electronic consultation") and involvement in the decision-making process ("electronic decision-making"). The launch of the said survey was at an unprecedented time amid the COVID-19 pandemic.

Noteworthy is the e-government index according to the E-Government Survey 2020 (United Nations, 2020b), which provides an opportunity to guide the further vector of the study taking into account the most successful countries in this domain.



*Figure 2.* Five leading EU countries in e-government development in 2020 (according to the E-Government Survey (United Nations, 2020b).

These countries have achieved a high level of digitalization and ensuring the efficiency of public administration. The activities of these countries in the study area are already fully in line with the direction set by the European Digital Strategy of the European Commission (European Commission, 2021b), which provides a vision and ways of digital transformation of Europe by 2030. In the Strategy, the Commission calls for a digital transition that puts people first and opens up new business opportunities while safeguarding the values of European community. The strategy is based on three benchmarks: 1) technology aimed at helping people; 2) a fair and competitive digital economy; 3) an open, democratic and stable society. Ensuring the effective implementation of these postulates by the states is the result of progress measuring, given in the EGovernment Benchmark (EGovernment Benchmark, 2021), taking into account the best practices in this field.

This document is an annual report published by the European Commission (DG CONNECT), edited by Capgemini, which is aimed to measure the progress of individual Member States in digitizing the public sector, as set out in the eGovernment Action Plan 2016-2020 (European Commission, 2016). According to the EGovernment Benchmark report for 2021 (EGovernment Benchmark, 2021), the European leaders in e-government are Malta (overall score 96%), Estonia (92%), Denmark (85%), Finland (85%), Austria (84%), The Netherlands (82%) and Sweden (75%), which have high results in all four benchmarks.

The analytical data above make it possible to state that social distancing has changed the order of communication between the state and society and the step-by-step introduction of innovations in the public sector. This context led to the adoption on 13 July 2021 by the European Commission (2021d) of the Recommendations on Digital Competences, which include practical steps, key actions, tips and online resources of the EU digital competence framework for digital service users. These recommendations shall help citizens make the best use of their digital competences in terms of the "employability path"

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- from education to sustainable employment and entrepreneurship. However, the declared digital competence recommendations do not contain provisions for digital service providers, i.e. public servants. Therefore, this issue at the crossborder level of the European Union remains uncertain. At the same time, at the national level of the Member States, considerable attention is paid to this issue. It is worth emphasizing that public servants act quickly and efficiently in a pandemic to meet people's needs. However, creating a speedy response is a challenging task.

Analyzing the effectiveness of e-government in EU Member States, we can identify the key areas of online interaction between society and government (Figure 3).



*Figure 3.* The most prevalent areas of digital interaction of society with e-government in the EU (according to the author's own observations).

Thus, in the course of several decades Denmark was considered one of the leaders in digital transformation in the public sector worldwide. This understanding of Denmark as an innovative country is shared by the majority of public servants at all levels of government. Danish public servants are working hard towards improving the digital skills to meet the society needs during pandemic times (European Union, 2021). The available innovative opportunities of the public sector of this state have been particularly pronounced in the context of the COVID-19 pandemic. Thus, the government works with representatives from civil society and the private sector to adapt to changing circumstances and to support the functioning of the civil service in the challenges of today (Organisation For Economic Co-Operation and Development (OECD), 2021c). In the face of today's complex challenges of innovation, Denmark's decentralized governance structure is designated as a citizen-centered innovation effort. This initiative is also supported by the center to ensure a focus on both immediate needs and complex, long-term objectives. In this context, there is a need for a strategic approach to innovation and its support, which encompasses a variety of innovation efforts.

Estonia keeps its position as a confident frontrunner in digital public services. The share of e-government users has been slowly increasing in recent years and currently accounts for 89% of the total number of Internet users in the country (E-Estonia, 2021b). The country has well-developed e-government systems, all central government functions and municipalities provide online services. Despite the fact that Estonia is already a frontrunner in this area, the state continues to make significant investment





into its e-government services to provide the citizens with new effective technologies. The COVID-19 pandemic has also demonstrated that Estonia can offer the EU its own methods of implementing innovative solutions for electronic communication in healthcare. It is worth noting that in the future Estonia plans to abandon the communication of public servants with citizens and legal entities that have applied for public service remotely. At the same time, the introduction of a virtual e-government assistant, the Bürokratt, created on the basis of artificial intelligence for the fastest response to requests, is gaining momentum (E-Estonia, 2021a). In addition, a public-private cooperative electronic hackathon was conducted to overcome the pandemic crisis: the community created several smart solutions, such as a crisis chatbot server and a website linking medical volunteers to hospitals in need. Now, the joint efforts of the government are creating a single platform for policy-making, which allows uniting the effort, involving external stakeholders and experts: This fact is a confirmation of the interaction of the society, building state with social communication.

In Europe, Finland is also a leader in digital governance. Today, Finnish government agencies are implementing artificial intelligence technologies and other innovative technologies to improve public services, as well as streamline government support functions, for instance #AuroraAI on Twitter. The Finnish government has launched projects with the private sector to support those who cannot use digital services (Finland Toolbox, 2021). There is a lot of crosssectoral cooperation and the government is quickly adapting to new circumstances. The state is accelerating the development of better services by creating ecosystems around people's life events and the life cycles of business. These ecosystems include the organization of both the public and private sectors. The government is also building customer-centric cross-sectoral service models for people and companies arriving to Finland. The state considers a high level of trust to be the main guarantee of successful e-government. In Finland, citizens and businesses trust government agencies and consider services to be reliable, impartial and timely. Government trusts citizens and businesses. Finland is one of the least corrupt public sectors worldwide. Also a promising feature of the country in the field of digitalization of services is the exchange of experiences, best practices and groundbreaking trends.

Sweden's representative and organizational policies, as well as its leadership role in ensuring strategic planning, long-term financial investment and the power to address the hampering factors, have had a major impact on the development of an integrated approach to e-government services and resources to support them. The Swedish government recognized that the foreseen benefits of transforming public service delivery in the digital environment do not automatically apply to everyone and require a focus on connectivity, digital literacy and accessibility to ensure that the "digital divide" is not widened (Organisation For Economic Co-Operation and Development (OECD), 2021a). To that end, the government has introduced a permanent interaction between digital government programs, digital infrastructure and the digital economy (Government offices of Sweden, 2021). Moreover, the Agency for Economic and Regional Growth, together with the Swedish Higher Education Authority, analyzes the evolution of competencies in advanced digital technologies in the short and long term and provides policy actions guidelines to public servants (European Commission, 2021c). The work is aimed at improving the supply of relevant competencies, as well as improving statistics and forecasts of future needs of Swedish e-government.

The pandemic has challenged Dutch public officials to rely heavily on digital technology to mitigate the numerous effects of COVID-19. The state had to launch a process of digital acceleration and completely reformat business models to make them less physical and more virtual (Digital Government of The Netherlands, 2021). For example, museums in the Netherlands have started to provide online services through social networks, actively introducing 3D tours similar to creative industries and exhibition centers. Some experiments were unsuccessful due to the lack of expertise and had to be corrected. Work on creating competency characteristics of public servants in this country today is based on effective strategic personnel planning. Such actions are not just work for HR teams: recruitment and development policies should be closely linked to the strategic plans of the government employer. The state has changed staff incentives, performance management, and goal setting in accordance with the current and projected needs of the government. Currently, the country's goals in the area under study are to promote cross agency cooperation and the need to create a more highly qualified workforce.



Overall, it can be drawn that during the COVID-19 pandemic, EU public servants reached a new level, for example, by using online hackathons, research advisory groups and private sector volunteers to articulate policies and deliver services. However, the optimization of the human resources of public servants in EU Member States still needs further adjustment. Currently, the EU has not approved and agreed on a single model of competency characteristics of public servants, which would take into account all levels of government in different countries. At the same time, the analysis of the experience of states indicates that managers must have "hard skills" and "digital skills" to perform e-government functions. The latter have become the most widespread and relevant. They can be provisionally subdivided into skills during strategic tasks and tactical decisions in the context of digitalization of public administration. Digital skills belong to the field of special knowledge, the acquisition of which is only possible provided the systematic self-training or in the process of professional training and retraining. When it comes to strategic tasks, new competencies of professional development public servants face the problem of developing and post-adjusting communication programs of the authority's presence in the Internet space and big data analysis. At the level of tactical decisions, public servants are required to have skills and knowledge in the field of content creation (data visualization, convergent text development).

Notably, not all EU countries are successful in the area under study. The digital literacy deficit among public servants is a significant risk factor of discrediting the entire public administration system. Governments are actively combating this phenomenon, involving public servants in specialized courses and competency training. To this end, there are dozens of administrative schools and massive open online courses in the EU. Online seminars, lectures, in-service training programs, modules, etc. are held on specialized educational platforms. The existing need for professional development of public servants involves continuous changes in the forms and methods of training, the elaboration of quality educational products that meet the objectives of present-day government management.

Furthermore, the leading difficulties in communicating with civil society include the functional fragmentation of governments into designated departments, which entails issues in coordinating government communication with the public through social media. The said barriers considerably restrict the ability of governments to fully digitize their work. The human factor currently has an essential significance. Given the customary conditions, digitization can draw heavily on artificial intelligence algorithms that are able to self-adjust and adapt to normal pattern changes. However, the speed and scale of the pandemic underscored the importance of both human experience and the constant need for human intervention in highly digital processes. The pandemic has also shown the low effectiveness of e-government for vulnerable groups of people (such as those living in rural areas, the elderly and the unemployed).

The best practices of the top-ranked EU countries in the field of effective implementation of e-government allow us to identify further vectors for the development of effective interaction between the state (public servants) and citizens and legal entities (Table 1).

# Table 1.

The most relevant measures to reform e-government in the EU.

# VECTORS OF REFORMING THE APPROACHES TO E-GOVERNANCE IN THE EU TO CREATE A SUSTAINABLE AND EFFICIENT ECOSYSTEM

- .1 Reconfiguration of basic digital public services and safe transition of public services to cloud infrastructure to increase their resilience, security and reliability.
- .2 Development of online services for business, which improves the efficiency of public services and reduces the administrative burden for business.
- Reconstruction of several public services to ensure their automatic provision on the basis of .3 life events or business events experienced by citizens (for example, marriage, birth of a child
- or starting an enterprise).
- .4 Creation of a national platform of virtual assistants to improve the accessibility of online public services.
- Establishment and development of a data center of excellence for data management to enhance z control over the data collected and stored by public authorities. This aims to improve the data
- .5 quality, increase its use for managerial decision-making and make data available as open data so that other stakeholders also could reuse it.





### Discussion

The conducted study showed that in a relatively short period of time the countries of the European Union have achieved significant changes in the provision of public services and e-government. The leading positive features of the respective transformations of the management sector are as follows: (1) information on public services has become more transparent; (2) the physical infrastructure of customer service has significantly improved; (3) public services have become more accessible through e-government portals; (4) public servants have acquired new knowledge, gained new communication and professional skills in delivering a wide range of services in one place; (5) the consultation mechanism has become more transparent with the participation of international experts and business associations in the discussion of e-government issues. It can be stated that the formation of a single and adaptive model of e-government for the EU remains on the agenda, taking into account the positive experience of leading "digital" countries. In addition, states need to form a unified model of competency characteristics of public servants in the field of e-government.

Although the positive effects of the use of digital technology during a pandemic seem undeniable, some difficulties and weaknesses are also expressed by scientists in the context of the COVID-19 pandemic. Supporting the position of the author of the article, Carroll and Conboy (2020) point out that organizations have been forced to accelerate the implementation of e-government in an unprecedented and limited time, which has caused serious difficulties. Similarly, Faraj et al. (2021) suggest that factors such as insufficient infrastructure, lack of digital literacy and limited compatibility of public servants hinder the digitalization of work processes. Fletcher and Griffiths (2020) argue that digitally less mature organizations have been particularly affected by quarantine and need to take into account the best practices of countries with more developed digital governance ecosystems.

The author's standpoint as regards focusing on the digital reform of the public sector and the economy is considered the number one priority for EU Member States and has been substantiated by a large number of scholars. At the same time, some lawyers (Mergel et al., 2020) express concern that the rapid introduction of e-government during the pandemic is too early and even dangerous for the social stability and political security of the EU. However, a study conducted by Mergel et al. (2020) concluded that the use of e-government can only be achieved through the efforts of government and society, which are currently is effectively demonstrated by the studied states, and it is too early to dwell on the extremely negative risks.

In the framework of scientific research, it is substantiated that in the rapidly transforming technological world, EU Member States utilize more innovations, which is bound to maintain their competitiveness on the global market. The author's analysis of the leading EU Member in the field of e-government States implementation showed that the states favor the gradual transition to the introduction of artificial intelligence in public services. Some scholars consider this perspective critical (Scroxton, 2020). Others collectively emphasize that the effective delivery of public services solely through artificial intelligence is erroneous, mechanical, and poorly adaptive to the demands of service recipients (Agostino et al., 2021; Feijóo et al., 2020). Other scholars pinpoint that the introduction of artificial intelligence and the provision of public services remotely is an effective tool for overcoming corruption and bureaucracy, increasingly citing Finland as an example (Farooq et al., 2021). Yet, Fletcher and Griffiths (2020) argue that e-government creates a digital divide between bureaucrats themselves or between bureaucrats and citizens. At the same time, the problems that cause the digital divide include technological literacy, ease of use, accessibility and functionality. Pittaway and Montazemi (2020) points to the fact that the digital divide arises when the implementation of e-government requires special knowledge of public servants to implement this system, who may abuse their competence for deviant behavior. Inequality in literacy and access to technology allows corrupt public servants to perpetuate corruption or even more aggressive actions. As researchers rightly point out, a citizen who has a better understanding of digital technologies is also more likely to receive better public services, thus, the "digital divide" creates new opportunities for corrupt employees (Zilber & Goodman, 2021). It is difficult to fully support this position, because the successful experience of the studied countries has shown the minimization of corruption due to the full automation of services and artificial intelligence technologies. Undeniably, innovations cannot be completely devoid of mistakes; however, they already show better results than previous public services.



### Conclusions

During 2019-2021, COVID-19 has affected almost all countries and more than 50 million people worldwide. Governments operating in a context of radical uncertainty face difficult tradeoffs due to health challenges, economic and social challenges. The pandemic has significantly accelerated some existing trends, including digitalization. Many governments at all levels have responded quickly by adopting a regional approach aimed at improving the efficiency of e-government services and introducing national and subnational measures to respond to distancing.

That said, one of the most common problems in the public policy sphere is the insufficiently appealing image of public servants and politicians, the lack of public confidence in the state and e-government overall. The technical shortcomings of digital platforms and low competence skills of communication in the digital space today are the driving factor in distancing society from the political and socially significant activities of the state in all its forms. At the same time, statistics shows the positive dynamics digitalization of of political communication between government and society in the European Union. The competence component of the interaction of public servants with society is constantly improving. EU Member States have created institutional mechanisms and algorithms for the professional development of digital literacy of public servants: relevant national programs have been developed, distance learning formats have been introduced.

The findings of the EU's immediate response to the pandemic and digital communications issues point to the need to adapt government models, service delivery and citizen engagement, which include GovTech options to modernize services to citizens and businesses. The analyzed experience of the leading EU Member States in the field of e-government implementation (Denmark, Estonia, Finland, Sweden and the Netherlands) yields a high level of service provision to the population during the COVID-19 pandemic, which can be adapted throughout the European Union. At the same time, the development of a single model of competence characteristics of public servants in the European Union is currently quite relevant.

The scientific openness of the topic under analysis showed that the issues covered will ultimately require additional, thorough study. The COVID-19 pandemic continues to introduce adjustments to the e-government of EU Member States. Therefore, the renewal of communication skills and approaches to service delivery will require a comparative analysis to boost the effectiveness and feasibility of innovation in the historical perspective, which will be carried out by the author of the article.

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