

SWOT ANALYSIS OF DIGITAL TRANSFORMATION IN ELECTRONIC ADMINISTRATIVE SERVICES AT THE MUNICIPAL LEVEL

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Abstract. The aim of the article is to outline strategic perspectives for electronic administrative services in the context of intensive processes of digital transformation in society. Administrative service in the public sector is investigated, and in particular the focus is on attitudes towards transformation from conventional to electronic administrative service. Based on a thematic analysis, the environment for the development of electronic administrative services at the municipal level has been mapped. The results of a study of the level of provision of electronic services by all 265 municipalities in Bulgaria are presented, opportunities and challenges to the process are identified, and public attitudes regarding the prospects for electronic administrative services in the country are examined.

Keywords: digital transformation, electronic administrative service, public sector, SWOT analysis.

JEL Classification: H40, H83.

Introduction

Digitization is greatly affecting all aspects of modern life, but the global pandemic has accelerated the process even further. As a result, daily changes occur in all aspects of work and life; business models for providing goods and services change; new needs emerge; and entire industries are reconfigured.

Digitization initiatives have dismantled long-held administrative and organizational practices in the public sector (Collington, 2021). New modes of public service supply and demand actually require a new institutional logic as well as a new type of relationship with service users. There are still unanswered questions regarding the factors of digital transformation in the context of a broader strategy for the modernization of the public sector, as well as the approaches to operationalizing strategic priorities in an environment that is not sufficiently open to transformation, despite the abundance of research in this area.

The object of the research is Bulgaria's electronic administrative service. The aim of the paper is to outline strategic perspectives for electronic administrative services in the context of intensive processes of

digital transformation in modern society. To achieve the goal, the research team sets tasks that correspond to the individual parts of the paper. In the first part, a literature review of scientific research related to the digital transformation of the public sector is made. The second part is devoted to the research methodology. The third presents an analysis and assessment of the readiness and attitudes towards electronic administrative services (EAS) at the municipal level in Bulgaria, followed by an analysis and assessment of the environment for the digital transformation of electronic administrative services at the municipal level. The fifth section outlines the strategic prospects for the EAS.

Administrative services in the public sector are investigated, and in particular the focus is on attitudes towards transformation from conventional to electronic administrative service. The environment for the development of the electronic administrative service at the municipal level was mapped based on a thematic analysis. The results of a study of the level of provision of electronic services by all 265 municipalities in Bulgaria are presented, supplemented by two additional empirical studies to establish the opinions of experts with managerial functions ($n = 109$) and the attitudes of

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citizens toward using electronic administrative services ($n = 142$). The process's strengths and weaknesses have been identified, as have the opportunities and threats to the process and the prospects for electronic administrative services in the country. The electronic administrative services provided by regional administrations, specialized territorial administrations, and administrative structures established by law remain outside the scope of this study. These will be the subject of future research by the authors.

1. Literature review

The digital transformation of public administration is a specific challenge for the sector, especially in the conditions of the Industry 4.0. To a certain extent, it leads to changes not only in the processes of production of goods, but also in the ways of providing services (Maresova et al., 2018). In this regard, technologies not only increase the level of awareness of users, but also shape their specific preferences by displacing traditional approaches to reach them (Zak & Hasprova, 2020). Unlike the business sector, which is relatively more flexible in adapting to new conditions, public organizations must first of all guarantee equal access to their services for citizens, due to their prominent social role. Considering the increasing use of digital solutions, authors such as McDonnell, Verdin and O'Reilly reasonably emphasize the urgent need to ensure that all citizens have the skills and ability to use information and communication technologies to continue to be an integral part from the country.

In view of this, researchers consider the problematic aspects of the provision of electronic administrative services in two main directions, namely accessibility gaps and user gaps (Negreiro, 2015). While the first group is aimed at the degree of readiness of public organizations to switch to digital service provision, the focus of the second is on the attitudes and opportunities of society to consume this type of service.

To these two aspects of research (the input and output of the digitalization of public services), two more are added – the quality of public management and the impact of digitalization on stakeholders (Durkiewicz & Janowski, 2021). However, they still remain outside the mainstream of scientific research.

A number of authors direct their efforts to study the development of e-government in the part of accessibility gaps, affecting also key moments of the construction of an organization for the provision of electronic administrative services (Charalabidis et al., 2019; Baumgarten & Chui, 2009; Janowski, 2015; Freeman & Loo, 2009; Agostino et al., 2022). Tracing the evolution of e-government, described in the scientific literature, separate stages of the transition from Analogue government to Personalized digital government clearly stand out. The latter is based on a new approach based on the understanding that providing only electronic administrative services is not enough, it is necessary to achieve a higher degree

of personalization based on the events of the users' personal lives (Al-hassan et al., 2009). It is widely believed that technologies enable users not only to consume, but also to create a two-way relationship by actually influencing the process of offering public services together with public authorities and contributing to their public utility (Luna-Reyes, 2017). In this regard, authors such as Scupola and Mergel direct their research precisely in the direction of delineating a theoretical framework that will help answer the question of how to go through a digital transformation of public services using co-production methods (Scupola & Mergel, 2022).

Bearing in mind the fact that the digital transformation of the public sector is accompanied by institutional and organizational changes, it is important to distinguish the digitalization aimed mainly at the transition from analog to digital processes from the transformation beyond these aspects, including cultural and organizational changes (Mergel et al., 2019). In this regard, authors such as Meijer and Bekkers come to the conclusion that there is a misunderstanding of digital transformation in its entirety in theory and practice (Meijer & Bekkers, 2015). Expanding on the view that technology is changing the ways in which work processes are carried out (Dunleavy et al., 2006b), researchers such as Dunleavy, Margetts, Bastow, and Tinkler highlight organizational culture and change as a key aspect of transformation (Dunleavy et al., 2006a). What's more, researchers make a connection between digital transformation, knowledge management, and public services with a view to improving the transparency and accountability of public authorities to the public (Bem Machado et al., 2022).

In the scientific literature, the concept of digital transformation in the public sector is often perceived as the development of electronic government and, in particular, the provision of electronic administrative services. From the point of view of the fact that the municipalities implement the direct connection with the users of these services, some research searches were also provoked regarding key challenges to this process. As such, the short-term approach to managing the necessary resources for change without a strategic perspective is distinguished (Khisro, 2020), the complex regulatory coordination and consumer attitudes towards using electronic administrative services (Lazarova et al., 2022). In his research, Janowski found the need for the services provided by public organizations not only to go from offline to online mode, but also to take a systematic look at the processes by revising the very design and purpose of the services (Janowski, 2015). In this way, emphasis is inevitably placed on strengthening the engagement of citizens and businesses as users and the transformation of their role from passive to active.

2. Methodology

An empirical study was carried out in three stages between May 2022 and January 2023. During the first phase,

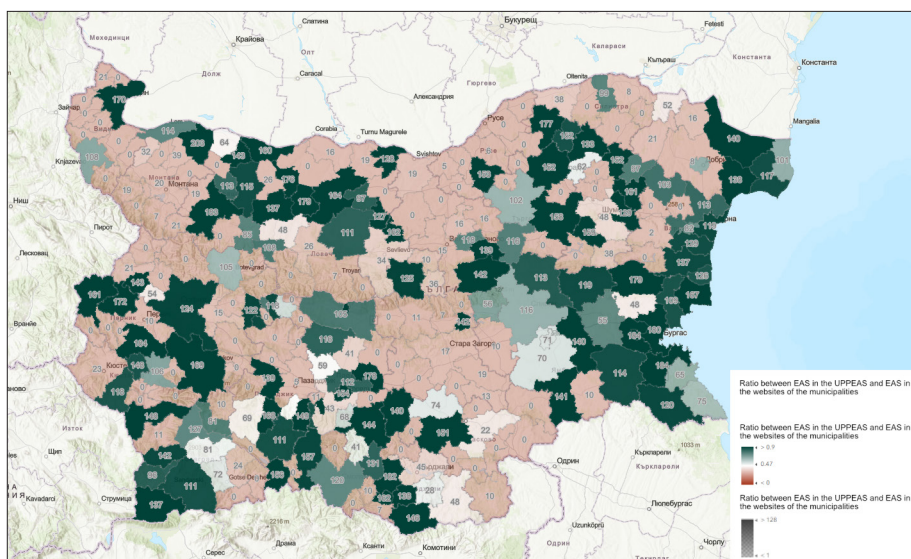


Figure 1. Ratio between EAS in the UPPEAS and EAS in the websites of the municipalities in Bulgaria by districts (source: own calculations in ArcGIS online)

all 265 Bulgarian municipalities were evaluated based on the information that was available on their websites and the Unified Portal for Providing Electronic Administrative Services. This information was used to examine the provision of electronic administrative services. In the second phase, a questionnaire study was conducted to identify the opportunities and challenges in the process of providing electronic administrative services. Online questionnaires were distributed to all municipalities, and 109 (41% of them) responded. During the third stage, the digital attitudes of service users toward the use of electronic administrative services in Bulgaria were investigated by surveying 142 respondents. To complete the data from the representative sample, official statistical samples were added to the survey data.

The research results were visualized using ArcGIS Online, and surveys were conducted using ArcGIS Survey 123, which also enables the collection of geo-data.

In February 2023, in addition to the surveys, in-depth interviews were conducted with 12 municipal administrations in Bulgaria. The interviewees are involved with the administration of work processes, including digitalization and information security, and are representatives of the six planned regions of Bulgaria. The interviews were used to verify the qualitative results of the empirical research and to prioritize factors in the SWOT analysis.

Due to space constraints, only a part of the accomplished results are included in this publication.

3. Municipal readiness and attitudes toward electronic administrative service

3.1. Access to electronic administrative services

The first empirical study of all 265 municipalities in Bulgaria regarding the applied approaches to the provision of electronic administrative services (May–July 2022)

found that there is a discrepancy between the electronic administrative services announced on the websites of the municipalities and those in the Unified Portal for providing electronic administrative services¹. This divergence is clearly apparent in Figure 1. A list of EAS provided by the municipality is absent from the websites of nearly one-third (30%) of municipalities. Nearly half (47%) of municipal websites list fewer than 30 EAS. Despite the fact that the announcement of EAS on the municipality's web-site is legally required, it is striking that 25% of the largest regional cities are among the municipalities that are lagging behind, while the municipalities with the most EAS announcements are relatively small. Also, all Bulgarian municipalities have registered EAS in UPPEAS, and 22% of them offer less than 120 EAS, with little difference above this point. Comparing this data, the figure shows 74 municipalities that have announced on the municipality's website the full list of electronic services they provide in UPPEAS (in dark green) and 23 municipalities that have announced at least 50% of EAS on their websites (in light green). At the same time, the figure shows that 64% of municipalities announce less than 50% of their EAS on official municipal websites (visualized in shades of pink).

From what has been said so far, it can be concluded that there is a gap between the EAS listed on municipal websites and the services actually offered in UPPEAS, which is a concerning indicator of the attitudes of public administrations towards digital transformation. Restraint is visible in the process of popularizing the possibilities for electronic provision of services. This requires a more in-depth examination of municipal administrations' readiness for this process.

¹ In the paper, Electronic Administrative Services will be abbreviated as EAS, and the Unified Portal for Providing Electronic Administrative Services will be abbreviated as UPPEAS.

3.2. EAS provisioning readiness

In the second empirical study (August–September 2022), using the method of the respondents, which was distributed to the entire sample, responses were registered from 109 respondents, or 41% of the municipalities in the Republic of Bulgaria. The conducted survey is focused on the opinions of experts with a management function (54.13% of respondents) and a control function (12.84%). The least covered in the survey process are municipal administrators with operational (8.26%), technical (7%) and clerical (5.5%) functions.

Figure 2 visualizes, on the one hand, the relationship between the EAS that are provided in UPPEAS and the EAS announced on the sites, and on the other, the number of EAS that the municipalities that took part in the research have realized in the last month (August 2022), ranked by number (in cyclamen). The Figure shows that municipalities that have announced their EAS portfolio on their websites also report more electronically processed services per month. At the same time, the insufficient activity of the municipalities in the digitization processes is visible; EAS are still not actively used in the Republic of Bulgaria.

In addition, it is striking that the administrative capacity for working with digital content is not at the required level: 62 of the municipalities (56% of the sample) do not have enough qualified staff for electronic provision of services, and 70 of the municipalities (64% of the sample) believe that they need additional training in this direction.

Table 1. Evaluation of consumer attitudes toward EAS based on the municipality's level of EAS provision (source: own calculations)

		EAS users attitude (view of municipality)				
		Often use	Not enough EAS	Consumer restraint	No digital skills	Total
Level of provision of EAS in municipality	EAS over 90%	3%	1%	19%	7%	30%
	EAS 50%-90%	2%	5%	17%	14%	37%
	EAS under 50%	0%	3%	8%	11%	22%
	E-documents	0%	0%	3%	0%	3%
	No EAS	0%	4%	1%	4%	8%
	Total	5%	12%	48%	36%	100%

Table 1 presents the self-assessment of the municipalities regarding the degree of their digital transformation, but the relationship of the process with the user's behavior towards these services is also examined. The municipalities that have achieved nearly complete digitization of processes appear to be more reluctant to apply for EAS (19%), citing the insufficient digital skills of citizens and businesses (7%) as the reason for the limited use of EAS. It is important to note that only 5% of all

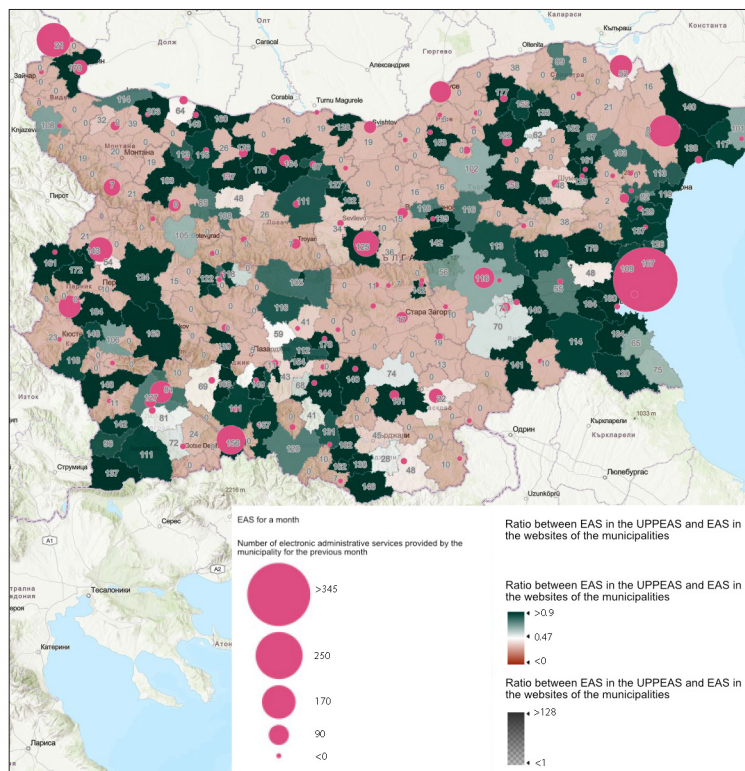


Figure 2. Ratio between EAS in the UPPEAS and EAS in the websites of the municipalities by districts and the number of EAS for the previous month (source: own calculations in ArcGIS online)

municipalities surveyed reported having frequent EAS users. The predominant number of municipalities (37%) that offer between 50 and 90% of their portfolio of services in an electronic environment give precedence to the lack of digital skills and propensity of users for the moderate rates of digitization they apply.

Most respondents to the survey believe that their user behavior demotivates them at this time (48% believe that users are reluctant to use online services, and 36% report a lack of digital skills among consumers). This is also confirmed by 78 municipalities (72% of the sample), which find the EAS offer redundant due to the weak interest on the part of citizens and businesses. At the same time, 82 of the municipalities (75% of the sample) confirm that EAS accelerates the dynamics of processes in the department.

From what has been said so far, it can be concluded that the level of readiness of the municipal administrations involved in the research regarding their active participation in digitalization processes at this moment is very low and depends on many factors, both external and internal.

3.3. Users' digital attitudes

According to the data from the National Statistical Institute (2023) the number of people who used the Internet to interact with public institutions in 2021 was 1,734,263 (26% of the population of the Republic of Bulgaria), and this trend continues in 2022. Women show a greater interest in such a service, and in recent years this difference

has deepened (from 27.8% of women in 2021 to 28.5%, and from 25.3% of men in 2021 to 24.2%). The main flow of information to public institutions in 2022 is of an informative nature and is related to accessing personal information stored online (14.5%), downloading and printing official documents and forms (13.3%), and receiving information about services (9.7%). Real electronic services are performed to a limited extent, being most often related to submitting a tax return online (9.7%), receiving official messages and documents from public institutions (6.9%), and making requests for official documents and certificates (3.9%). 66% of those with online access to public institutions currently live in southern Bulgaria, compared to 34% in northern Bulgaria. Concerning is the fact that by 2022, 13% of the Bulgarian population will not use the Internet, with 15.9% of the individuals living in the South-east region.

These data served the team in the preparation of the third stage of the study. It was conducted during the period December 2022–January 2023 through a survey card regarding the digital attitudes of society towards the use of electronic administrative services. 142 respondents took part in the survey, which makes the sample not representative. The demographic structure of the respondents who took part in the research is as follows: By gender, 66% are women and 34% are men; by education, 51% have a secondary education and 49% have a higher education; and they are mainly located in Northern Bulgaria (74%).

Figure 3 shows that the majority (63%) of respondents have not applied for an EAS to their municipality

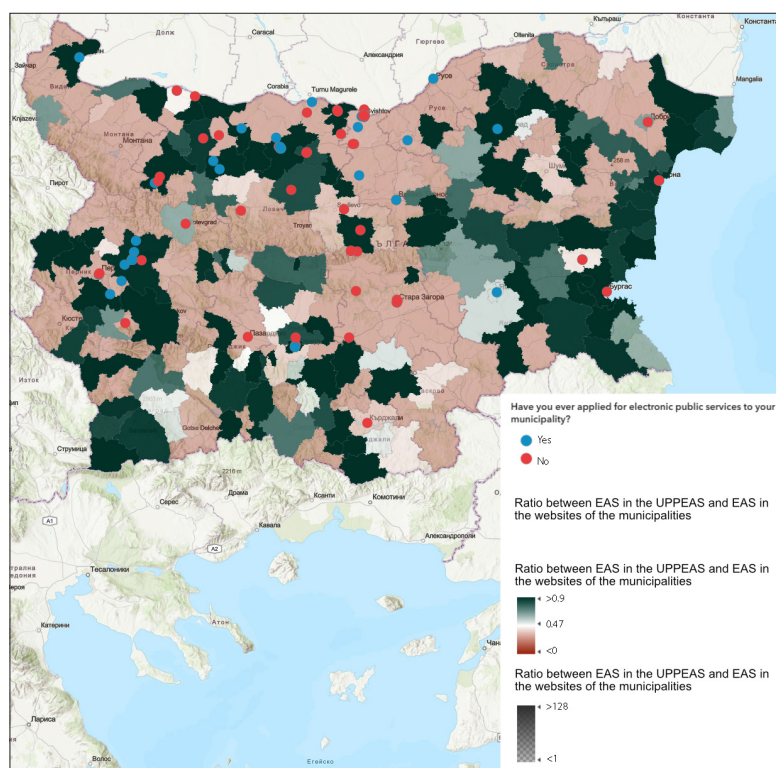


Figure 3. Ratio between EAS in the UPPEAS and EAS in the websites of the municipalities by districts and requested EAS by users (source: own calculations in ArcGIS online)

so far. Also, the research shows that the majority of responses from citizens who applied for EAS appear right where the EAS portfolio is announced on the websites of the municipalities (in the green shades). It is important to note that 37% of those who have used EAS say that they will continue to use online services, with 8% categorically saying that they prefer only such services now, and only 3% redirecting mainly to in-person service in the municipality.

The relationship between consumer behavior when submitting an EAS in the applicant's residential municipality and when applying for an EAS in other municipalities is analyzed in Table 2. It is noteworthy that 37% of the respondents applied for electronic services by location, of which more than half (19%) applied for services in other settlements as well. This is an indicator of growing confidence in the use of EAS in municipalities.

Table 2. Relationship between user attitudes when applying for EAS in the municipality in which it is located and applying for EAS to other municipalities (source: own calculations)

		Requested EAS by other municipalities		
		Yes	No	Total
Requested EAS by local municipalities	Yes	19%	18%	37%
	No	25%	37%	63%
	Total	44%	56%	100%

Contrary to expectations, 63% of respondents did not use e-services from the municipality in which they live, while 25% of respondents applied for services in other municipalities. This leads to a discussion of the benefits of requesting e-services to save time and resources. An indicator of the growing importance of inter-settlement EAS is the convergence of the difference between applicants and non-applicants. 44% of respondents applied for EAS to other settlements, and 56% refrained from such actions at the time of conducting the research. The share of respondents who used neither services from the municipality in which they live nor from other municipalities is 37%, which means that 67% of respondents have applied for EAS at least once.

More than half (77.5%) of the survey respondents want access to more EAS in municipalities. Some of them – 6.34% – believe that such services are not offered by the municipalities in which they are located, and 16.2% admit that until now they did not know about the possibility of online submission of services to the municipalities.

From what has been said so far, it can be summarized that the digital attitudes of users at the moment are an untapped potential for the development of the regions. The research data indicate the positive attitudes of the users, who declare a desire to deepen the use of EAS, not only in the inter-settlement aspect but also at the local level. To increase the digital competence of the society,

however, it is necessary to apply a complex strategic approach to the digital transformation in the municipalities with consideration not only for administrative capacity, but also for EAS users.

4. Environment for digital transformation of electronic administrative services at the municipal level

As a result of the empirical research, two groups of factors emerged – external and internal, which have a strong influence on the process of implementation and provision of EAS at the local level. Consumer attitudes, regulatory constraints, investments in information infrastructure, policy coordination, etc. shape the key external factors of the environment. The most important internal factors include – specificity of e-services, administrative capacity, etc.

Key external factors

A certain caution is registered regarding the **attitudes of users towards the use of EAS**. According to 83.49%, citizens and businesses are reluctant to apply for EAS, as the reason for this is society's lack of digital skills.

Regulatory restrictions are a barrier for 74.31% of respondents due to the complex and non-synchronized legal framework, the requirements for a qualified electronic signature, lack of instructions and technological maps of the processes.

Next, the problems related to **the coordination of the EAS policy** and application are outlined. More than half of the respondents (53.21%) indicate that the lack of synchronization of procedures is a prerequisite for a slower transformation of digitization in municipalities. There is a lack of continuity between the individual administrative systems, as municipalities often use different administrative information systems in the administrations.

The communication in connection with the promotion of EAS at the national level has a campaign character. At the municipal level, this process is even more disorganized. There is no clear and permanent policy for disseminating information to the public about the benefits of EAS at all levels, which leads to low awareness.

Limited funding hinders the overall process of digital transformation at the local level. It is unstable and irregular – including during crises, such as Covid-19 (Ganchev, 2022a).

Key internal factors

A challenge faced by local administrations (81.65% of respondents) are problems related to **the nature of services**. This is a consequence of the reluctance of some institutions to accept electronically signed documents, as well as the absence of digital databases, due to a lack of funds for the digitization of registers, which means that most documents are stored on paper carriers. Investments in e-government at the local level, incl. and regarding the digitization of existing registers, are key

in the digitization process (Ganchev, 2022b). Increasing staff competencies is important according to 60.55% of survey respondents, with 54.12% even stating that there is a lack of qualified personnel to provide EAS.

The study reports that municipal administrations note an increase in the dynamics of processes in the municipality after the implementation of remote services, with 70% of respondents evaluating the change as positive. More than half of the respondents (53%) believe that the remote provision of services does not hinder the connection of the municipality with the users, even improving the processes in the administration based on feedback from citizens and businesses is reported.

These key factors at the municipal level should be considered when planning the strategic prospects for the development of e-government in Bulgaria, in general, and of electronic administrative services at the local level, in particular.

5. Strategic perspectives for the EAS

Despite the current regulatory framework and implemented public policies in Bulgaria, the digital transformation of the public sector lags significantly behind the average level for Europe (United Nations, 2022). At the municipal level, the provision of electronic services to citizens and businesses is interpreted by the stakeholders as the main criterion for digital maturity. In practice, however, the implementation of electronic administrative services must be based on strategies adapted to the dynamics of the environment for the modernization of municipal administrations, which will ensure the transition to digital management. Currently, cities such as Sofia, Plovdiv and several others have documents – strategies, concepts, etc. similar, to concretize the guidelines and measures to achieve digitization of the local government's activities in the process of implementing its functions in all areas of public policies in which it is granted powers. In practice, in Bulgaria, the municipal government and administration is closest to the people, it functions in conditions of a high degree of decentralization in terms of the performed functions and powers in many public activities. This requires a search for digital solutions that are adequate to the capabilities and needs of service users.

Increasing civic participation, socio-economic development in municipalities is associated with accelerated digitization. The aims today are directed not only to electronic service, but to personalization of the provided electronic public services (Council of Ministers, 2020). At this stage, this is a challenge for the Bulgarian local authorities, since the necessary prerequisites such as infrastructure – hardware and software, organizational re-engineering of analog processes, capacity of employees for personalized administrative service and above all citizens, as users of such services (European Commission, 2022).

The effort that municipalities need to make to introduce accessible, operationally compatible and easy-to-use tools for providing electronic administrative services

requires a financial resource that is not available in municipal budgets. Limited local revenues and insufficient funding through the central budget make it difficult to build a modern infrastructure for implementing customized digital solutions at the local level that are resistant to cyber-attacks and provide a high level of information security.

The following key opportunities, threats, strengths and weaknesses of the EAO environment are derived based on the authors' observations in in-depth interviews with representatives of 12 municipal administrations in Bulgaria in February 2023. The interviewees are representatives of the six planning regions of Bulgaria and are engaged in the management of work processes, incl. digitization and information security. To a large extent, the defined factors co-respond with those presented in strategic public documents in the field of e-government development in Bulgaria. The factors proposed below are ranked by the experts according to their degree of influence on the processes of digital transformation of the public services provided at the local level.

Opportunities

- Political commitment to digitization of public administration.
- A large set of public policies at the European and national level in support of e-government and digital public administration.
- Development of ICT, incl. and regarding the possibilities of offering personalized solutions for public authorities and users of public services.
- Business needs to reduce the administrative burden, increase transparency in the work of the public sector.
- High level of fixed broadband coverage (95% against EU average of 98%) and NGA (next generation access) coverage (74% against EU average of 76%).
- Improving fiscal policy and optimizing public spending.
- Threats.
- Unsynchronized legislative framework, lack of regulatory instruments.
- Insufficient investments in building digital infrastructure for e-government and provision of e-services at the local level.
- Changing the strategic vision for the development of e-government in Bulgaria in the context of political instability in the country.
- Lack of standards to ensure technological compatibility of the digitization of local administrations.
- Limited readiness of citizens to use electronic services, due to technical limitations or lack of ICT skills.

Strengths

- The perceived need for digitization of the activities of local authorities, including and in relation to public services.

- Foundations of digital infrastructure and information systems laid, such as the Unified Portal for electronic administrative services (<https://egov.bg>), Open data portal of the Republic of Bulgaria (<http://opendata.government.bg/>)
- A unified model for the provision of electronic administrative services has been developed (Council of Ministers, 2014).
- Accumulated experience in the implementation of ICT in the activities of municipal administrations.

Weaknesses

- Limited investments for the development of e-governance.
- Inefficient management of social change.
- Partially and uncoordinated digitized work processes, unsatisfactory level of operational compatibility.
- Inefficient risk management and implementation of limited countermeasures against cyber-attacks.
- Lack of reengineering of analog processes and their automatic digitization.
- Insufficient digital skills of public sector employees.
- Low level of data exchange between institutions.
- Availability of large data sets in electronic format in the form of scanned documents, which prevents their further processing.
- Limited managerial competence regarding the real needs of the local administration regarding the provision of quality administrative services.
- Weak use of cloud services by public administrations.
- Limited and poorly effective communication policy.

Regardless of the favorable environment for the development of e-governance, in general, and e-administrative services in particular, the Bulgarian public administration registered results significantly below the EU average. Efforts made for reforms in the field of digital governance, to increase the quality of public services provided, to implement more expedient public policies, including with the support of ESIF, have not led to the desired effect and registered e-governance indices register this lag compared to the European average (European Commission, 2022). This finding gives rise to the need to identify **strategic perspectives** and a new action plan to accelerate the implementation of the e-government strategy, which is aimed at “achieving an irreversible digital transformation in the public sector” (Council of Ministers, 2021, p. 35). The strategic perspectives should specifically include:

- transformation to a customer-centered model of providing electronic administrative services;
- use of big data for overall digital transformation of the public sector, including minimization of waiting times and customization of services (tailored services);
- implementation of online tools for stimulating citizen participation;
- high level of network and information security;

- high quality of support of shared e-government resources of e-government.

Achieving the presented vision requires *targeted analysis* at the organization level and identification of critical points to intervene on.

In addition, an *active communication policy with interested parties and competent methodological assistance* to local authorities will significantly accelerate the process of introducing quality electronic administrative services, as part of the process of digital transformation of local authorities in Bulgaria.

Operationally, the achievement of strategic imperatives requires a change in technological and administrative processes. Without a doubt, this is a significant change in the activity of the administration, but it is also the most important condition for achieving both efficiency and effectiveness, i.e., achieving quality while at the same time reducing service costs.

Conclusions

The results of the analysis confirm the conclusions of studies in other countries about the presence of two main groups of deficiencies in the provision of EAU, namely accessibility gaps and user gaps (Durkiewicz & Janowski, 2021). Both sides of the process are mutually disincentives, as supply is demotivated by low demand and consumers will not change their attitudes towards higher use of e-services once they are offered in a limited manner (Durkiewicz & Janowski, 2021).

In a broader plan, the conclusions of Meijer and Bekkers are also confirmed: there is still a misunderstanding of digital transformation in its entirety, both in theory and practice (Meijer & Bekkers, 2015). As a result, individual “piecemeal” interventions are observed, which, however, lead to partial and unsatisfactory results.

The analysis shows a varied picture of e-government service practices, in which a decentralized approach to the application of digital tools dominates. Regional differences are obvious and they are due to the non-systematic management of the digital transformation in municipalities in Bulgaria. The contribution of the present study outlined regional differences in the provision of EAU, which enriches the picture of the necessary strategic perspectives and outlines more clearly the need for additional interventions in regions that are lagging behind.

In order to increase the digital competence of both the administration and the society, it is necessary to apply a complex strategic approach to digital transformation, as well as to identify a new action plan for the accelerated implementation of the e-government strategy, which is realized with great delays.

In Bulgaria, there is a relative consensus regarding the need for digitization, incl. in public services, but for a number of reasons this issue is *not among the top priorities*. For this reason, it is permanently behind the agenda of society, which is why the results are sporadic and unsustainable. At the same time, the balance of strengths

and weaknesses, opportunities and threats suggest that the country has potential, but it must be used purposefully and consistently.

References

- Agostino, D., Bracci, E., & Steccolini, I. (2022). Accounting and accountability for the digital transformation of public services. *Special Issue: Accounting and Accountability for the Digital Transformation of Public Services*, 38(2), 145–151. <https://doi.org/10.1111/faam.12314>
- Al-Hassan, M., Lu, H., & Lu, J. (2009). A framework for delivering personalized e-government services from a citizen-centric approach. In *The iiWAS'2009 – The 11th International Conference on Information Integration and Web-based Applications and Services*. Kuala Lumpur, Malaysia. <https://doi.org/10.1145/1806338.1806419>
- Baumgarten, J., & Chui, M. (2009). E-government 2.0. *McKinsey Quarterly*, 4(2), 26–31.
- Bem Machado, A., Secinaro, S., Calandra, D., & Lanzalonga, F. (2022). Knowledge management and digital transformation for Industry 4.0: A structured literature review. *Knowledge Management Research & Practice*, 20(2), 320–338. <https://doi.org/10.1080/14778238.2021.2015261>
- Charalabidis, Y., Loukis, E., Alexopoulos, C., & Lachana, Z. (2019). The three generations of electronic government: From provision to open data and to policy analytics. In *The Electronic Government: 18th IFIP WG 8.5 International Conference*. San Benedetto Del Tronto, Italy. https://doi.org/10.1007/978-3-030-27325-5_1
- Collington, R. (2021). Disrupting the Welfare State? Digitalisation and the retrenchment of public sector capacity. *New Political Economy*, 27(2), 312–328. <https://doi.org/10.1080/13563467.2021.1952559>
- Council of Ministers. (2014). *Strategiya za razvitie na elektronnoto upralenie v Republika Bulgaria 2014 – 2020 g.*
- Council of Ministers. (2020). *Natsionalen strategicheski dokument "Tsiprova transphormatsiya na Bulgaria za perioda 2020–2030/National strategic document "Digital transformation of Bulgaria for the period 2020–2030"*. Sofia.
- Council of Ministers. (2021). *Aktualizirana strategiya za razvitie na elektronnoto upralenie v Republika Bulgaria 2019–2025 g.*
- Dunleavy, P., Margetts, H., Bastow, S., & Tinkler, J. (2006a). New public management is dead – Long live digital-era governance. *Journal of Public Administration Research and Theory*, 3(16), 467–494. <https://doi.org/10.1093/jopart/mui057>
- Dunleavy, P., Margetts, H., Tinkler, J., & Bastow, S. (2006b). *Digital era governance: IT corporations, the state, and e-government*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199296194.001.0001>
- Durkiewicz, J., & Janowski, T. (2021). Chain action – how do countries add value through digital government? In *The Proceedings of the 54th Hawaii International Conference on System Sciences*. <https://doi.org/10.24251/HICSS.2021.284>
- European Commission. (2022). *Report on Bulgaria 2022 accompanying the Recommendation of the Council on Bulgaria's 2022 National Reform Program and containing the Council's opinion on Bulgaria's 2022 Convergence Programme*. Brussels.
- Freeman, R., & Loo, P. (2009). Web 2.0 and e-government at the municipal level. In *2009 World Congress on Privacy, Security, Trust and the Management of e-Business* (pp. 70–78). IEEE. <https://doi.org/10.1109/CONGRESS.2009.26>
- Ganchev, A. (2022a). Investment characteristics of Indonesian government bond market during the COVID-19 pandemic. In *The 12th International Scientific Conference "Business and Management 2022"* (pp. 441–449). Vilnius Gediminas Technical University Press. <https://doi.org/10.3846/bm.2022.825>
- Ganchev, A. (2022b). The performance of hedge fund industry during the COVID-19 crisis – theoretical characteristics and empirical aspects. *Ikonomicheski Izsledvania*, 31(1), 18–37.
- Janowski, T. (2015). Digital government evolution: From transformation to contextualization. *Government Information Quarterly*, 32(3), 221–236. <https://doi.org/10.1016/j.giq.2015.07.001>
- Khisro, J. (2020). Utilizing an investment instrument for digital transformation: A case study of a large Swedish municipality. In *Electronic government* (pp. 71–81). Springer. https://doi.org/10.1007/978-3-030-57599-1_6
- Lazarova, E., Veselinova, N., Gospodinov, Y., & Stoyanova, M. (2022). Challenges faced by municipalities in Bulgaria in the implementation of electronic administrative services. In *The 88th International Scientific Conference on Economic and Social Development – "Roadmap to NetZero Economies and Businesses"* (pp. 243–253). Varazdin.
- Luna-Reyes, L. (2017). Opportunities and challenges for digital governance in a world of digital participation. *Information Polity*, 22(2–3), 197–205. <https://doi.org/10.3233/IP-170408>
- Maresova, P., Soukal, I., Svobodova, L., Hedvicakova, M., Javanmardi, E., Selamat, A., & Ondrej, K. (2018). Consequences of Industry 4.0 in business and economics. *Economies*, 6(3), 46. <https://doi.org/10.3390/economies6030046>
- Meijer, A., & Bekkers, V. (2015). A metatheory of e-government: Creating some order in a fragmented research field. *Government Information Quarterly*, 32(3), 237–245. <https://doi.org/10.1016/j.giq.2015.04.006>
- Mergel, I., Edelman, N., & Haug, N. (2019). Defining digital transformation: Results from expert interviews. *Government Information Quarterly*, 36(4), 101385. <https://doi.org/10.1016/j.giq.2019.06.002>
- Negreiro, M. (2015). *Bridging the digital divide in the EU*. EPRS-European Parliamentary Research Service, ENPE 573.884, Briefing. [https://www.europarl.europa.eu/RegData/etudes/BRIE/2015/573884/EPRS_BRI\(2015\)573884_EN.pdf](https://www.europarl.europa.eu/RegData/etudes/BRIE/2015/573884/EPRS_BRI(2015)573884_EN.pdf)
- Scupola, A., & Mergel, I. (2022). Co-production in digital transformation of public administration and public value creation: The case of Denmark. *Government Information Quarterly*, 39(1). <https://doi.org/10.1016/j.giq.2021.101650>
- United Nations. (2022). *E-Government Survey 2022. The Future of Digital Government*. NY.
- Zak, S., & Hasprova, M. (2020). The role of influencers in the consumer decision-making process. In *Globalization and its Socio-Economic Consequences 2019, SHS Web of Conferences* 74, 03014. <https://doi.org/10.1051/shsconf/20207403014>