Study on the quality of e-services for citizens in North Macedonia
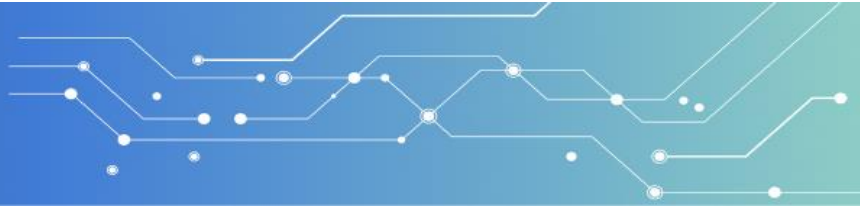
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"Technology will continue to play an increasingly important role in our societies and in our lives"

Margrethe Vestager, Executive Vice President for Europe Fit for the Digital Age

Summary

The study shows the state of digital transformation and the use of e-services in North Macedonia. It focuses on how digital services help citizens while identifying the challenges they face in the digital environment. The key conclusions of the study are distributed on several levels.

North Macedonia has implemented laws regulating digital services for citizens and business entities. This includes laws governing the Central Population Register and electronic governance. Currently, in the Republic of North Macedonia, there is no legal regulation in the area of network and information system security, and it is the weakest link in the legal framework.
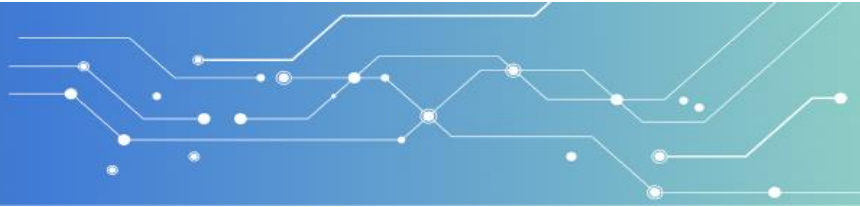
Digital transformation of public services in North Macedonia lags behind the European Union and the countries of the region. In addition to the fact that the development of "Modern and efficient public administration based on digitalization that provides quality and fast services for citizens and business entities" is one of the strategic priorities of VRSM established in the Work Program of the Government of the Republic of North Macedonia (2022-2024), the lack of stable political support for the process is taking its toll. The Digitization Agency has not yet been established, or another body that, as an institution, will directly take care of the digitization processes and will put pressure on the institutions for the digitization of services.

Despite the weak political support and the unclear institutional setting, the road map for the digitization of public services covered by the new Strategy for RJA (2022-2030) as well as the Concept for digital transformation of society, have been developed and adopted through a process of broad consultation with all stakeholders in society . This moment of social consensus can be a catalyst for a faster and more efficient digitalization of public services by 2030. For it to be successful, however, it is necessary that no one is left behind. The weak digital literacy of older citizens, supplemented by the lack of access to digital technologies for citizens with a vulnerable economic and social status, as well as the inadequacy of services for citizens with disabilities, results in poor response and use of digital public services and services.

The recommendations resulting from the research are as follows:

- Improving the quality and accessibility of e-services with a focus on increasing digital literacy among the population
- Increasing the participation of citizens in shaping, optimizing and ensuring better quality of public e-services in North Macedonia.
- Increasing security, transparency of personal data and the application of artificial intelligence
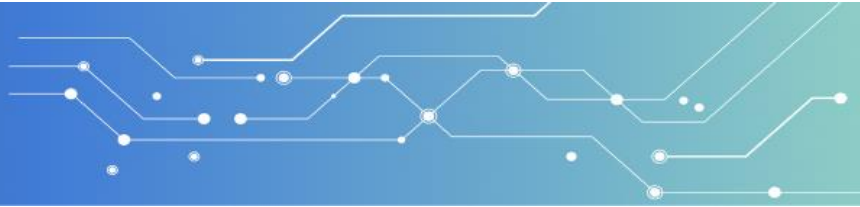
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1. Introduction

North Macedonia is a country that implements activities and projects that should provide a sound basis for the implementation of continuity in the digitization of public services provided for citizens and business entities. Examples of such activities include the adoption of appropriate legislation (for example, the Law on Documents in Electronic Format and Digital Signature, but also the Concept for Digital Transformation of Society), the uslugi.gov.mk platform, the interoperability platform, open data, the electronic public procurement, the My Term in Health platform and other projects that are planned and managed at the highest government level. Several public institutions have also implemented successful projects for digitalization of services, such as the Public Revenue Administration, the Real Estate Cadastre, the Central Registry, etc.
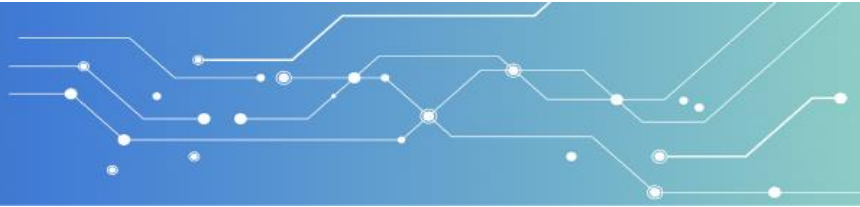
Improving the quality and increasing the number of digitized services for citizens has the potential to modernize public administration, to be a stimulus for professional development of its employees, and an incentive to increase digital literacy among citizens through formal and informal forms of learning. As a result, placing the digitization of public services higher on the political agenda will have a long-term positive impact in the wider context of society. A key argument why more work should be done in this direction is the fact that North Macedonia already has the technological conditions, mostly with the implementation of the interoperability platform and the availability of broadband internet and mobile networks. In addition, the uslugi.gov.mk platform has been successfully operating for several years and represents an excellent basis for analyzing how the existing business processes of public institutions can be adapted to improve e-services.

The challenge in planning and implementing digitized public services has two sides. One side is the absence of a systematic approach to the digitization of public services in all institutions that provide services to citizens, while the other side is the lack of awareness among citizens about the advantages - personal and social - of using digitized public services. The absence of a systemic approach directly affects the optimization of investments, long-term plans for technological development and increasing the capacity of public institutions, and later on the quality and efficiency of public services. Citizens' awareness and digital literacy are critical for mass use of digital services in areas where they are already developed, as well as for ensuring constant input from citizens to improve the quality of services.

The research in the study has the main goal of contributing to the improvement of the quality of public e-services in North Macedonia, and the questions to which it answers are the following:

1. How does the Government of North Macedonia approach the development of public e-services for citizens (current and planned strategies)?
2. How is the quality of these services (services) ranked compared to the quality of public e-services in the EU and other Western Balkan countries?
3. What can be done to improve the quality of public e-services in the country in the short and medium term?

The study is organized into several subchapters. First, the scope of the study and the methodology used are explained, then the eGovernment Criteria of the European Commission and the ranking for the quality of e-services in North Macedonia are considered, then conclusions are drawn and recommendations are developed.

2. Methodology

The scope of the research is limited to North Macedonia, although it uses a harmonized EU methodology for ranking member countries and related countries according to the quality of their public services - the eGovernment Criteria of the European Commission. The research methodology includes a combination of qualitative and quantitative data analysis, collected through secondary sources and field research.

Data is classified into three types:

- Qualitative secondary data, resulting from the legislative framework and strategies in North Macedonia, which cover the issue of digitization and the quality of public services.
- Quantitative secondary data, which refer to the quality of e-services, collected and processed by the European Union through the eGovernment Standard.
- Qualitative data from field research that includes 12 interviews with experts from the IT industry, representatives from Macedonian chambers, ministries and the civil sector working in the field of digitization, transparency and public services. These interviews were conducted during the months of November and December 2023.

Combining these types of data allows a full understanding of the context and analysis of the quality of public e-services in the country. These key points of the research provide a complex and complete approach to understanding and improving the state of e-services to citizens.

3. Current commitments to improve the quality of e-services in North Macedonia

Through a strategic approach, North Macedonia strives to reduce the gap that exists not only between the level of digitization between the state and the EU member states, but also the gap that exists between the public sector institutions themselves by creating an environment that quickly and with optimal resources will it can adapt to the changes brought by the digital age in order to meet the expectations of the citizens.

The Ministry of Information Society and Administration is the responsible institution for coordinating the implementation of digital transformation and e-Government. Developing "Modern and efficient public administration based on digitization that provides quality and fast
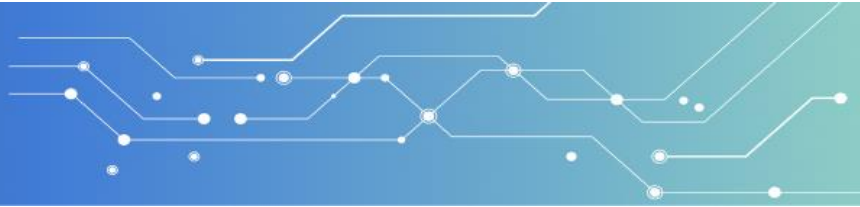
services for citizens and business entities" is one of the strategic priorities of VRSM established in the Work Program of the Government of the Republic of North Macedonia (2022-2024)[1].

3.1 Legal frame

To advance the digital transformation, North Macedonia has adopted three laws that laid the foundations for the implementation and promotion of digital services for citizens, businesses and public administration, namely:

- The Law on the Central Population Register[2], which regulates the structure, content and exchange of information between the Central Population Register and competent authorities and entities.
- The Law on Electronic Management and Electronic Services[3], which regulates the operation of electronic exchange of data and documents, as well as the functioning of the National Portal for e-services, service catalog, single point of service and interoperability.
- The law on electronic documents, electronic identification and fiduciary services[4], regulates the creation, storage and processing of electronic documents, electronic identification and trust services and gives the same legal value to electronic documents and e-signatures as traditional documents and signatures.

In order to improve the legal framework, the Ministry of Information Society and Administration undertakes the following activities and[5]:

In July 2022, the process of amending and supplementing the Law on the Central Population Register was initiated. After three years of application of the law, as well as the beginning of the application of the Law on the Protection of Personal Data, improvement and mutual harmonization are needed, all with the aim of consistent application of the same. With the amendments and additions to the Law on the Central Population Register, the upgrading of the data will be established with connection, the right of exchange for the purpose of unifying and improving the quality of the same, as well as the protection of the entire system will be improved.

In October 2023, the Government of the Republic of North Macedonia, at the proposal of the Ministry of Information Society and Administration, established the Draft Law on Amendments and Supplements to the Law on Electronic Documents, Electronic Identification and Confidential Services, which provides for a simplified exchange of documents created in electronic form issued

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[1] *The work program of the Government of the Republic of North Macedonia (2022-2024). Government of RSM. (2022).* *https://vlada.mk/sites/default/files/programa/2022-2024/programa_na_vladata_2022-2024.pdf*

[2] Assembly of RSM. (2019). The Law on Electronic Management and Electronic Services. https://dejure.mk/zakon/zakon-za-elektronsko-upravuvanje-i-elektronski-uslugi

[3] Assembly of RSM. (2019). The Law on Electronic Management and Electronic Services. https://dejure.mk/zakon/zakon-za-elektronsko-upravuvanje-i-elektronski-uslugi

[4] Assembly of RSM. (2020). The Law on Electronic Documents, Electronic Identification and Trust Services.

[5] Ministry of Information Society and Administration (2023). Official website. www.mioa.gov.mk
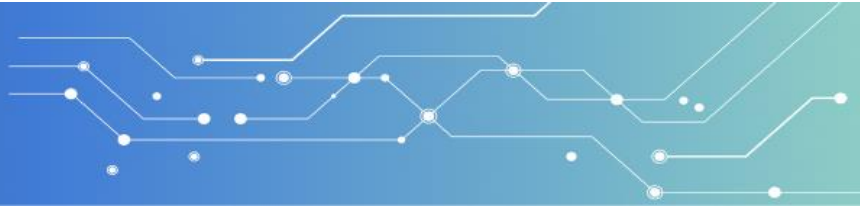
by public authorities, if they are reproduced on any printed media, and at the same time they are issued in accordance with the Rulebook on Mandatory Elements of Electronic Documents.

The national portal for e-services www.uslugi.gov.mk

represents a single point of contact between citizens and businesses (service users) and service providers. It offers the availability of online "life events" for citizens and businesses and provides faster and simpler services. The e-services portal provides easy navigation, W3CG standards and is linked to the Interoperability Platform, National Population Register and the Service Catalog.

With this amendment, an increase in the use of electronic services, i.e. the issuance of documents in electronic form by 20% by 2025, is planned in the next 2 years. However, urgent harmonization of the Law on Electronic Documents and the Law on Administrative Procedure is needed in order to be able to implement the digitization processes, as well as a Legal Regulation to oblige all institutions to access the National Portal.

The new Law on archival activity has been published on ENER and its future adoption will create full legal conditions for the official creation of electronic documents. Certain proposals for amendments to several provisions of the Decree on Office and Archive Operations that enable electronic documents to be validated with an electronic signature and that they do not have to be printed and have an imprint of the institution's official seal were adopted by the Government at the end of November 2023 year.

Currently, in the Republic of North Macedonia, there is no legal regulation in the field of network information system security. There is also a need to transpose Directive (EU) 2022/2555[6] of the European Parliament and the Council of December 14, 2022 regarding the measures for a high common level of cyber-security throughout the Union, i.e. the NIS 2 Directive. Hence, a Draft Law on the Security of Networks and Information Systems has been prepared[7] which aims to ensure a high level of cyber security in order to protect and further develop society, more efficient and effective building and expansion of the IT infrastructure, i.e. more efficient and effective digital transformation of the public sector, a higher degree of openness in order to ensure the development of innovative software solutions and cyber security and digital skills training for public sector employees and citizens of the Republic of North Macedonia.

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[6] DIRECTIVE (EU) 2022/2555 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL. THE EUROPEAN PARLIAMENT. (2022). https://eur-lex.europa.eu/eli/dir/2022/2555/oj
[7] Ministry of Information Society and Administration. (n.d.). NETWORK AND INFORMATION SYSTEMS SECURITY LAW. ENER. https://ener.gov.mk/Default.aspx?item=pub_regulation&subitem=view_reg_detail&itemid=51471

3.2 Strategic Framework

3.2.1 Concept for digital transformation of society

In the direction of intensifying the activities for a successful digital transformation of society, as a prerequisite for progress in the fight against corruption and the strengthening of transparency and good governance, the Government of the Republic of North Macedonia in March 2023 adopted a Concept for the digital transformation of society[8].

The concept of digital transformation of society defines the basic principles that should guide the digital transformation of all areas of society in close cooperation between the government, public institutions, private companies, the civil sector and the academic community. The basic principles of this concept are the rule of law, social cohesion and public-private partnership, free access to public information, reliable sources of data, "digital is standard" and the "only once" principle (by which data once entered into a public register , will not be requested again by individuals and legal entities). This document aims at fundamental changes in the way institutions function and improve their efficiency as a service to citizens.

Achieving the goals set by the Concept has been captured by the establishment of the Digitization Agency, responsible for managing the environment for secure data exchange, setting standards for ICT and cyber security for all stakeholders, providing guidelines for managing changes during the digital transformation of the administration. and raising public awareness of this problem.

3.2.2 National ICT Strategy

3.2.3. National Operational Broadband Plan 2019-2029

The National Operational Broadband Plan[9], as the successor of the National Strategy for the Development of the Next Generation Broadband Internet, it determines the national broadband targets that should be reached in the future period and determines measures and activities to achieve them. Increasing the coverage and access (technical and price) to quality 5G networks for citizens and households is indicated as a key prerequisite until 2029.

3.2.4. Strategy for reform of public administration

The Strategy for Public Administration Reform (2023-2030)[10] is directly aimed at achieving the strategic priority of the government for a modern and efficient public administration based on

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[8] Concept for digital transformation of society. Government of RSM. (2024*).* Линк

[9] Ministry of Information Society and Administration. (2019). National Operational Broadband Plan. https://portal.mioa.gov.mk/sites/default/files/pbl_files/documents/reports/nacionalen_operativen_brodbend_plan_finalna_verzija_02.04.2019.pdf

[10] Ministry of Information Society and Administration. (2023). The Public Administration Reform Strategy (2023-2030). Assembly of RSM. https://mioa.gov.mk/content/Strategija%20RJA_MK%2003.pdf

digitization that provides quality and fast services for citizens and business entities through the defined goals that provide a strategic framework for the development of the public administration until 2030. In the strategy in priority area 4: Providing services and ICT support to the administration, the general goal is "Providing services and digital transformation" aimed at building a digital environment for better operation of the administration. In order to increase the quality and availability of services for citizens and business entities, special attention in this strategic document is devoted to digitizing the registers for providing services, such as and the increase in the number of e-services and the number of "One point for services" centers, improved accessibility of institutions for people with disabilities, adults, people who are at a low level of digital literacy, as well as measuring the satisfaction of the users of the services of state authorities, promotion of digital services and raising awareness of the digital transformation, that is, of the need and benefit of applying digitalization. In addition, the National ICT Strategy (2023-2027), which is in the process of preparation, foresees measures and activities aimed at improving services for businesses, as well as services in activities, that is, in health, education, etc. The strategy has been prepared in a process of broad consultation with all stakeholders, non-governmental organizations and relevant institutions in terms of policy making. Display of performance indicators for digitization, increased quality and availability of services according to the Strategy for the 2023 RJA[11]

> *„ The government's strategy can help overcome certain problems, but there is room for improvement in its efficiency, especially in increasing the number of e-services, in improving access to services, and in raising public awareness of using them...“*
>
> *Interview*

In order to advance the strategic framework for digital transformation and in accordance with European strategic guidelines and good practices, the Ministry of Information Society undertakes the following activities:
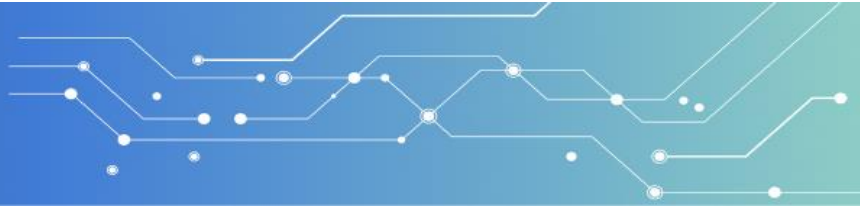
- Preparation of the National ICT Strategy 2023-2030[12] in which digital connectivity and ICT infrastructure, digital skills, digital government, digitization of businesses, ICT enablers and digital innovations are planned as the main priorities. This document will be based entirely on the Digital Compass of the European Union. Preparation of the National ICT Strategy 2023 -2030[13] in which digital connectivity and ICT infrastructure, digital skills, digital government, digitization of businesses, ICT enablers and digital innovations are planned as the main priorities. This document will be entirely based on the Digital Compass of the European Union. As of 2019, the National ICT Strategy has not yet been

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[11] ibid

[12] Ministry of Information Society and Administration. (n.d.-b). NATIONAL ICT STRATEGY FOR 2023-2027 - DRAFT. ENER. https://ener.gov.mk/Default.aspx?item=newdocumentdetails&detalisId=46

[13] Ministry of Information Society and Administration. (n.d.-b). NATIONAL ICT STRATEGY FOR 2023-2027 - DRAFT. ENER. https://ener.gov.mk/Default.aspx?item=newdocumentdetails&detalisId=46

adopted and the country is far from drawing up its Action Plan and budget. This strategy has been comprehensively changed several times, and taking into account the now adopted Concept of Digital Transformation of Society, the question arises of its relevance, even if it is adopted in its current form.

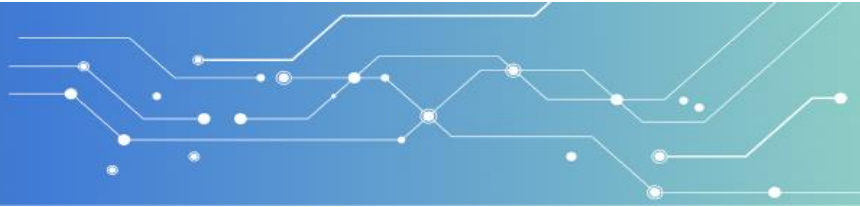*Table 1. Performance indicators for digitization-RJA Strategy (2023-2030)*

Measure	Score indicator	Initial value 2022	Transition value 2026	End value 2030
Digitized public administration	EU Directive on eGovernment (e-government benchmark)	47,4%	55%	70%
Increased quality and availability of services	Percentage of citizens using electronic services (Balkan Barometer public opinion survey)	22%	30%	60%
Increased quality and availability of services	Number of one-stop services	83	120	300
Increased quality and availability of services	Number of established digital registries	0	7	12
Increased quality and availability of services	Number of e-Services on the National e-Services Portal	95	302	500
Increased quality and availability of services	Number of ETU – one-stop shops	5	8	12
Increased quality and availability of services	Number of accessible web pages with the WCAG standard	2	15	30
Increased quality and availability of services	Institutional Quality Index Rating	70%	75%	85%
Increased quality and availability of services	Number of staff trained for the digital-first principle, acquiring knowledge about national systems and agile work in administration in each institution	0	2000	5000

- Preparation of the National Strategy for Cyber Security 2023-2026, which, apart from maintaining security and resilience (cybersecurity and resilience) on the Internet, should ensure continuous building and strengthening of cyber resilience and security. This strategy should ensure the continuous improvement of the foundations introduced in 2018 with the first strategy and represent an appropriate response to the new challenges we encounter in cyberspace.

3.3. Challenges related to the existing technical infrastructure

The technical framework or infrastructure for e-government (e-government) includes a set of technological solutions, systems and network infrastructures that enable the implementation and operation of various e-services and e-processes. In the Strategy for Public Administration Reform (2023-2030), several challenges related to technical infrastructure have been identified, which the Strategy aims to cover by 2030.

 The first challenge is related to the need for the procurement of IT equipment, the development of e-solutions, colocation services and maintenance to be subject to a single standard approach that will ensure efficiency and consistency throughout the public sector. Furthermore, it is necessary to harmonize and standardize the level of digitization of registers and development of electronic services among the various institutions, in order to ensure consistency and equal quality service for citizens and business entities. In doing so, it is necessary to improve the utilization of the interoperability platform so that institutions actively exchange data. Every institution should have a functional system for electronic document management to improve efficiency and reliability in information processing.

The challenges identified in the public administration reform strategy are repeated in the findings of the field research. Experts and representatives from civil associations and institutions note that there is no central database for the use of electronic services in the country, which prevents a precise analysis of the number and type of electronic services provided. They also note the rate of use of e-services by citizens, which, taking into account the statistics from the National Portal, is very low, which is due to a lack of awareness and promotion of these services. There is a consensus on the potential of new technologies to accelerate digitization, but the need to first tackle the underlying problems, including eID and digital literacy, is emphasized.

> *„ Example of Birth Certificate. The request can be made online, but the document must be picked up physically. We still do not have an electronic document that will be accepted by the institutions as an electronic document. The number of services that would fully respond to the needs of citizens is still small. The framework of interoperability of services should be strengthened."*
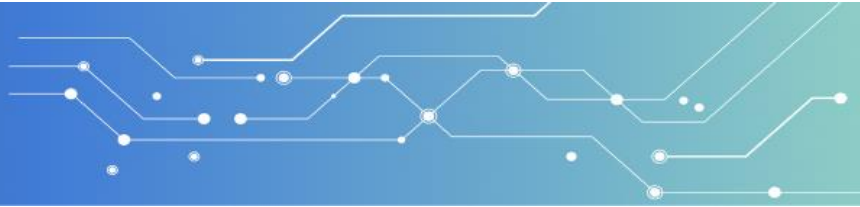> *Interview with a representative Association*

3.4. Challenges related to the organizational and institutional setting

In the Public Administration Reform Strategy (2023-2030), several challenges related to the organizational and institutional setting when it comes to the digital transformation of public services have been identified. In order to realize a successful digitization of public services, it is necessary to find a solution for the limited number of IT professionals in the public sector. Only about half of the systematized 431 jobs in the IT departments of the ministries have been filled. This problem is further compounded by the impossibility of competing with the private sector in terms of wages and other benefits. The law on the protection of personal data and the General Regulation on the protection of personal data (GDPR-General Data Protection Regulation 2016/679) are key, which will strongly influence the strengthening of the IT capacities of the institutions, which is the basis for building a digital society. Also a program should be developed to Strengthen the ICT curriculum in the education system, which would be essential for ICT literacy, thus bridging the ICT skills gap.

In an institutional and organizational context, digital transformation is also exposed to other challenges. The lack of an institution responsible for the implementation and inspection of digital transformation policies complicates the internal organization. Judicial authorities, in particular, show skepticism in digital connection with other institutions.

> *„ In the institutions, we have appointed persons, Officers for the protection of personal data, but the question is how much they understand the requirements of the position.“*
>
> *Interview with a representative Association*

What has been done on the National e-Services Portal is fully functional, and can be easily accessed by citizens. But the quality and technical services are provided by the institutions. They should, within appropriate terms, comply with the legislation with the needs of the National Portal and access by providing a specific se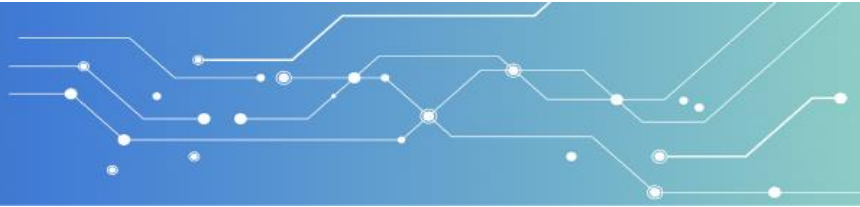rvice. The Ministry of Information Technology and Administration, which is responsible for the National Portal, faces challenges in this area, as the institutions do not want to be actively involved in the digitization process.

It is necessary to establish the Digitalization Agency, because as an institution it will directly take care of the digitalization processes and will put pressure on the institutions to apply digital measures. It is expected to have the authority to propose and amend laws that are an obstacle to digitalization processes at the moment. An additional challenge is inconsistency. At the moment there is a portal for e-services of the Ministry of the Interior and e-services of the National Portal for the same services. It is necessary to harmonize them in order to channelize the effects and improve communication with citizens in the direction of increasing trust in e-services and increasing their use.

The organizational and institutional challenges identified in the Public Administration Reform Strategy are also repeated in the findings of the field research, where experts and civil society representatives highlight common concerns about the quality of e-government services and the need for their improvement. The findings emphasize the importance of appropriate institutional frameworks for effective application of laws and utilization of ICT infrastructure, emphasize the lack of compliance in laws for the protection of personal data, interoperability between institutions and the need for consistent institutional priorities. Common challenges include changing political priorities, issues of alignment between strategy and implementation, and the need for improved digital literacy.

Hence, the need for political support is emphasized to speed up the access of institutions to the portal for e-services and digitization of services, but also for the allocation of resources that will support the process. There is an inconsistency of the processes, and the constant change of priorities in the institutions that are the bearers of the digitization processes. The need to raise the level of protection of each service, depending on its complexity and complexity, and the need to create a unique ID number generated by the system, which will not be a sequence, but a more complex number that has a protection mechanism, is highlighted.

The progress achieved in digitization and efforts to implement new methods and technologies are confirmed. Although there is progress in digitization, the interviewed stakeholders emphasize the need to prioritize digital literacy, citizen involvement and transparency. In doing so, the importance of institutional engagement for increasing public awareness and spreading digital literacy among the population is highlighted, as well as the need for support centers for using e-services.

Despite the fact that Service Centers, known as "One Point for Services", have been introduced, which enable citizens to get services and information in one place, with an increase in users during 2021 and 2022, the number is still low in compared to the real needs of the citizens, an average of 3,000 users of five centers per month in 2022. Due to the improvement of the management and the discipline of the counter clerks, the waiting time has been shortened to about 15 minutes. In the same period, more than 2/3 of the visits to Edna Tochka za Servizis were in Skopje. However, non-software challenges and issues arise in various aspects of the One Stop Service operation. They range from the lack of training for counter clerks when introducing new services, through the lack of system integration and integration with other systems, to financial constraints and weakened legal and legal frameworks.[14].

4. North Macedonia in the E-Government criteria of the EU

The e-Government benchmark is a comparative analysis of the quality of public digital services in 35 countries or 27 EU member states, EFTA members, and candidate countries for membership. It is an internationally recognized methodology that explores how public e-services for citizens, businesses, tourists and expatriate communities continue to change and improve.

The benchmark shows that during the last years, many countries in Europe are strengthening and modernizing their e-Government to improve public services and communication with citizens. Most institutions have web platforms, mobile applications and other digital channels to access various services and information[15].

The data from the biennial evaluation of the e-Government Benchmark conducted by the European Commission is organized into four main dimensions:

> 1. User focus, which assesses how many services are available online, how responsive they are to mobile devices and whether institutions provide online support and feedback;

> 2. Transparency, which evaluates whether the public administration provides and publishes clear information about its services and whether it is transparent about the responsibilities of the institutions and the way of processing personal data;

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[14] ibid

[15] European Commission. (2023). Determinant for eGovernment 2023.

3. Key enablers, which evaluate the technological factors that support and facilitate the provision of digital public services;

4. Cross-border services, which evaluates how easily foreigners can access and use online services.

These four dimensions are an integral part of the Maturity Index - Figure 1, which is the main ranking index of countries participating in the EU eGovernment Benchmark.

Figure 1 EU e-Government Definition (Key Dimensions)

Source: European Commission. (2023). eGovernment Benchmark 2023.

Life events in the context of e-services refer to key moments in the life of citizens or business entities in which several services of the same nature are grouped. For citizens as users, these events include different stages, such as Career, Family, Study, Health, Relocation.

Figure 2 EU e-Government Directive (Life Events)
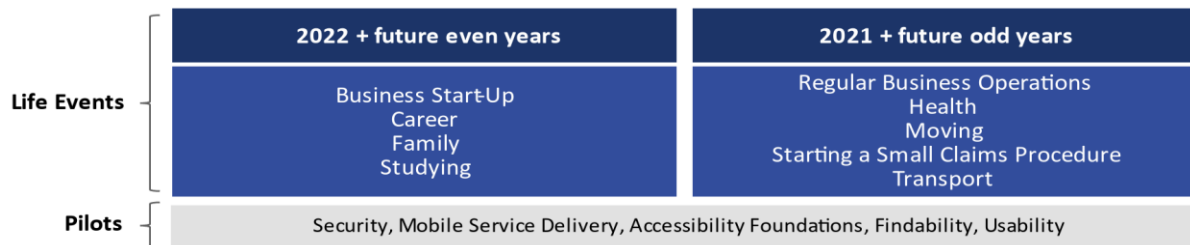
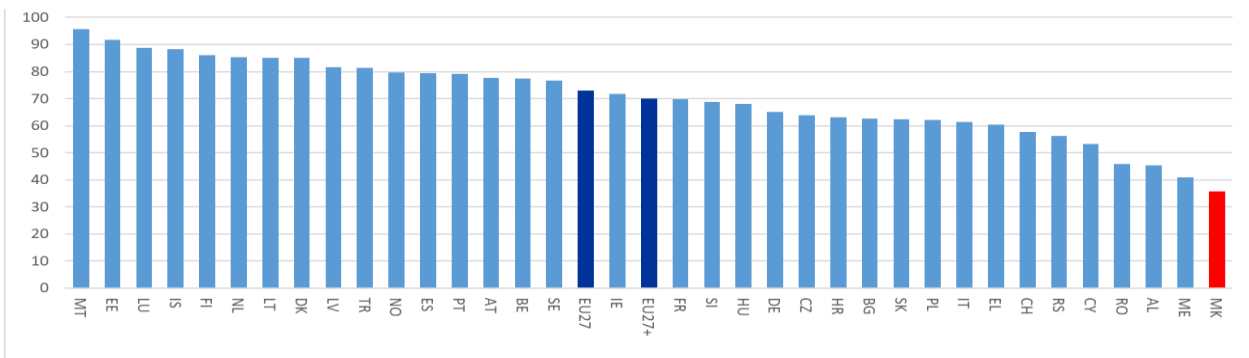Source: European Commission. (2023). eGovernment Benchmark 2023.

The results of the ranking of North Macedonia on the maturity index shows that the country is in the last place compared to the EU countries and the countries of the Western Balkans - Figure 3. This result of the last country has been repeated for years, i.e. since the moment we started. to participate in the research.

The value for each of the key dimensions is shown in Figure 3, where it is noted that North Macedonia is best positioned under Focus on the User with 66 points, while Cross-border mobility (services) is the least valued with a value of 21.

Figure 3 Maturity Index of Digital Services

Source: European Commission. (2023). eGovernment Benchmark 2023

The main reason for this is the commencement of operations of the national e-services portal. Under this index, North Macedonia is significantly below the average of the EU members as regards the online availability indicator. This indicator indicates that, in North Macedonia, there is online information about e-services, but there is a lack of a sufficient offer of current electronic services for citizens and legal entities. According to MIOA statistics, there are 93 digital services on the National Portal. Compared to Albania, where we have more than 1200 online services to Albanian citizens and businesses, this figure is unsatisfactory. The detailed analysis of the data reveals that the lowest number of electronic services are available in the transport sector, the same situation is observed under the indicator for the use of e-services, with low digital availability in transport services and relocation services (internal or external migrations).). None of the websites of the institutions processed by the eGovernment Benchmark provide the possibility of electronic support and assistance to users, or even the possibility of feedback from users, which would allow measuring their experience with this process. The data for 2021/2022, processed in the eGovernment Benchmark 2023, show that North Macedonia is the

Figure 4 Online Availability

country with the lowest ranks according to the average of the calculation for each of the above indices. North Macedonia's last position can be attributed to challenges such as limited availability of data and insufficient awareness among citizens about available e-government services. From the conducted research, it can be concluded that in 2022, 4 out of ten services in North Macedonia can be completed online (44%). For 89% of services, North Macedonia offers information online, while users cannot find information in electronic form for 11% of all services in North Macedonia. From the attachment, it can be seen that North Macedonia is seriously lagging behind in terms of ranking with the countries of the Western Balkans and the countries of the European Union.
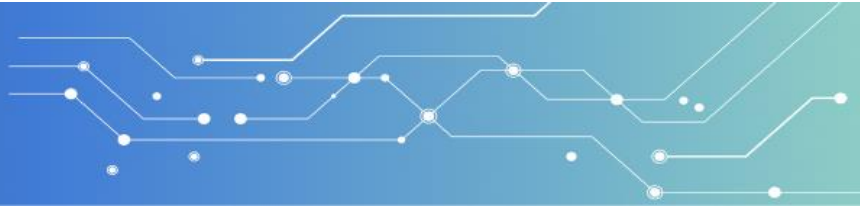
Figure 5 Life Events
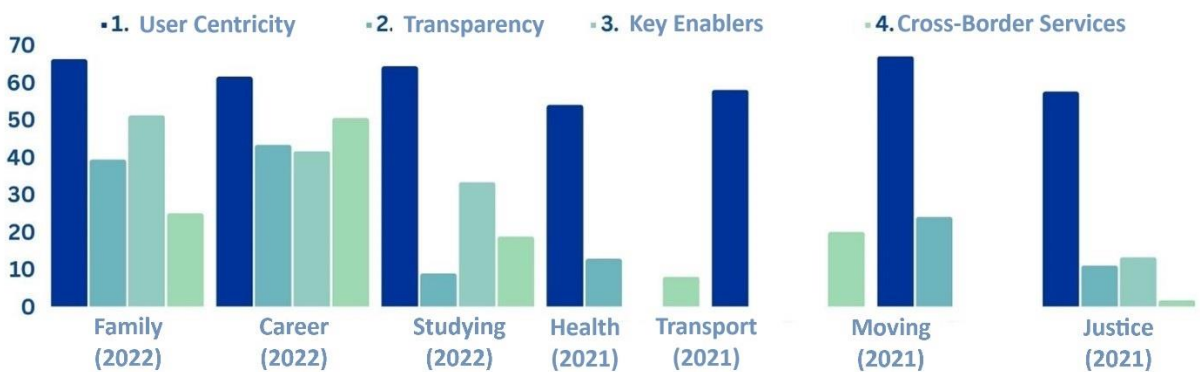
Key enablers are a challenge in all life events. We are still late with the wider application of electronic identification and eID. However, it is mostly late in enabling the electronic identification for the services of the life events Health, Transport, Relocation and Justice. Transparency is a challenge for all services, but mostly for services/services from life events Studying, Health, Transport and Justice. Cross-border services are poorly digitized in all life events.

The institutions that provide the services for the citizens in the life events Health, Transport and Justice lag behind others. With the services in the life events Health, Transport, Relocation, there is no possibility of receiving the services electronically, because electronic identification is technically not possible. In addition, in the services/services that are digitized in a very small number of cases, there is the possibility of feedback to the users, which informs them where the process for issuing the document/service is, or information that the request has been received in general. Proactive information through electronic channels does not exist. For example, when the validity of the bank cards expires, a notification is sent that the validity has expired, and for the new digital opportunities from the National Portal, no information has ever been forwarded for anything, nor has any promotional campaign been made. For these reasons, when it comes to the digitization of public services, institutions are also lagging behind in the key dimension of Transparency. Transparency, however, is not well evaluated in all life events, placing particular emphasis on the security of citizens' personal data when using e-services.

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However, it is necessary to state that in some parts of the E-Government Criteria, North Macedonia has good results, such as the rank for the use of completed forms, which facilitates the use of services. The rank of North Macedonia is 73.3, unlike the EU which is 68.2. But success in this sub-indicator is negligible because it depends on the availability of digital services. These findings are identified with the findings of the field research, where experts and representatives from civil associations indicate that citizens face a limited number of electronic services provided by the state. This can be a challenge due to inconsistency of the state in exploiting the potential of the national portal.

,, When it comes to the application of e-services, we should first divide them into age groups, and then into sectors and institutions. Age groups approach digital tools differently. That initial basic division of how we should approach digitization and the application of e-services. An under-18 target group doesn't need you to tell them how to approach. Those over 60 are afraid to use the tools, and won't click and use. But that limit is the key to looking for those who are missing, that is, from the 30-60 age group. "

Interview with a representative Association

In addition to these challenges, there is also a low use of existing e-services, which is due to the poor digital literacy of the population, which is also aging, and to insufficient promotion by the competent institutions for using them. At the same time, the need for a redesign of digital services is indicated to take into account the digital literacy of older citizens as well as citizens who, due to their social or economic status, do not have the resources or knowledge to use the services. Experts believe that special consideration should be given to the redesign of services intended for the elderly so that they are adapted to their age and the speed with which they acquire digital skills. In doing so, customer support, one of the lowest rated sub-indexes, is crucial. Some web pages have artificial intelligence support, some sites have short explanations of how to use the site, some have no support at all. Rightly, the interviewees note that there is a problem with the English versions of the government websites where harmonization of all institutions should be done. The national portal for e-services has an English version, but it is not yet open for use by foreigners, while the institutions that are connected to it, not all have English versions of the sites. The same has a negative impact on the digitization of cross-border services, where the country has the lowest rating on the eGovernment Benchmark.
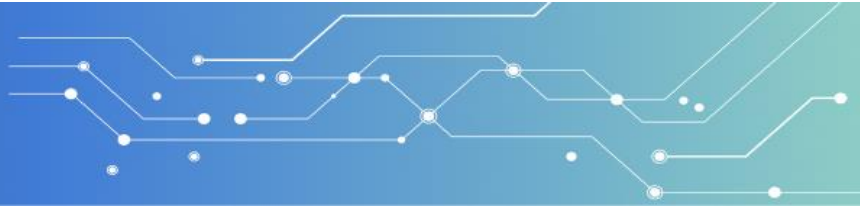
5. Conclusion

Digital transformation of public services in North Macedonia lags behind the European Union and the countries of the region. In addition to the fact that the development of "Modern and efficient public administration based on digitalization that provides quality and fast services for citizens and business entities" is one of the strategic priorities of VRSM established in the Work Program of the Government of the Republic of North Macedonia (2022-2024), the lack of stable political support for the process that does not depend on the everyday political issues that political opponents oppose is taking its toll. Common challenges include changing political priorities,
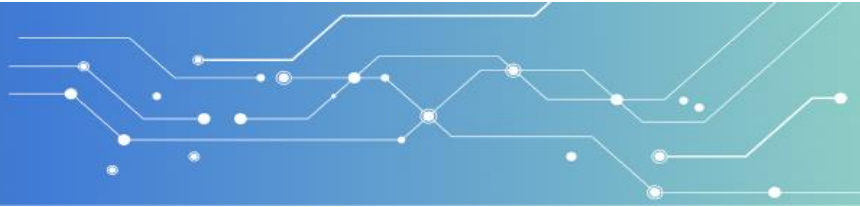
which change with changing Cabinets in Ministries. For example, as of 2019, the National ICT Strategy has not yet been adopted, and the country is far from drafting its Action Plan and budget. This strategy has been comprehensively changed several times, and taking into account the now adopted Concept of Digital Transformation of Society, the question arises of its relevance, even if it is adopted in its current form.

Currently, in the Republic of North Macedonia, there is no legal regulation in the area of network and information system security, and it is the weakest link in the legal regulation. Hence, there is no high level of cyber security for the purpose of protection and further development of society, more efficient and effective building and expansion of the IT infrastructure, ie more efficient and effective digital transformation of the public sector. At the same time, there are also solutions that would help the country deal with the overwhelming ranking of the country in the eGovernment Benchmark in the key dimension of Transparency, which covers all the processes that governments undertake to ensure transparency and security in the process of collecting the data of users. digital public services.

The weak political support for the process results in unclear roles of the institutions in the digitization process. What has been done on the National e-Services Portal is fully functional, but the technical services are provided by the institutions. They should, within appropriate terms, comply with the legislation in their area with the needs of the National Portal and access by providing a specific service. The Ministry of Information Technology and Administration, which is responsible for the National Portal, is facing challenges in this area because the institutions do not want to be actively involved in the digitization process. This part lacks an institution responsible for the implementation and inspection of digital transformation policies. The Digitization Agency has not yet been established, or another body that, as an institution, will directly take care of the digitization processes and will put pressure on the institutions for the digitization of services. It is also expected to have the authority to propose and amend laws that are currently an obstacle to digitization processes.

Despite the weak political support and the unclear institutional setting, the road map for the digitization of public services covered by the new Strategy for RJA (2022-2030) as well as the Concept were developed and adopted through a process of broad consultation with all stakeholders in society. This moment of social consensus can be a catalyst for a faster and more efficient digitalization of public services by 2030. For it to be successful, however, it is necessary that no one is left behind. The weak digital literacy of older citizens, supplemented by the lack of access to digital technologies for citizens with a vulnerable economic and social status, as well as the inadequacy of services for citizens with disabilities, results in poor response and use of digital public services and services. The existence of Centers where citizens can be helped to bridge the gap is only a medium-term measure and it depends on whether citizens are informed about the services or not. The weak awareness of the services both from the state institutions and from other stakeholders, mostly from the civil associations increases the problem. Unfortunately, this also means less public pressure on the institutions and slower digitalization of services.

6. Recommended measures and policies

Based on the above analysis, the following recommendations for measures and policies are defined

1. Strengthening the involvement of citizens, through digital literacy in shaping, optimizing and ensuring better quality of public e-services in North Macedonia

Significant, reliable and inclusive participation of citizens and representative groups in decision-making processes, supported by an enabling environment, is an essential condition in identifying their needs, priorities and opinions when covered by these policies, digital government services, strategies and guidelines, as and protecting rights in the digital age.
The Republic of North Macedonia needs to support the process of active involvement of citizens in the development, implementation and monitoring of digital policies and initiatives, because they play a significant role in the process of creating policies, creating services and their further development. Citizens can support the process of identifying and dealing with obstacles to access and use of digital services and respond to their needs proactively and effectively in terms of the existing ecosystem, challenges, needs and digitalization initiatives in general. Key in this direction are significant involvement, as well as transparent and structured channels for information exchange. Policy makers need to support the feedback received from citizens, in terms of developing safe digital services and fully exploit the freedom of the digital space, while mitigating the risks in the digital space (surveillance, cyberbullying, wrong information, i.e. disinformation) etc.). Therefore, policy makers need to create conditions for strengthening citizens' abilities, for recognition, representation and judicial realization of digital rights and other relevant aspects related to digitalization, while strengthening their ability to influence digital policy, at different levels and in different contexts.
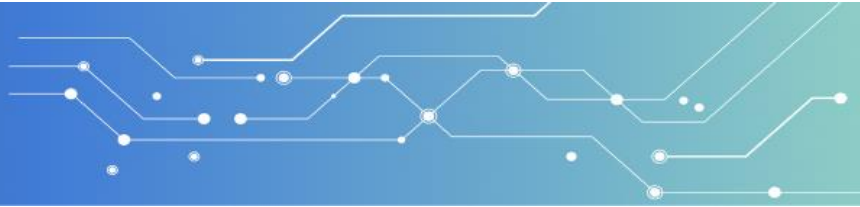
2. People and their rights at the center of digital transformation

A people-centric approach puts users at the center, while providing high-quality and easily accessible digital services for everyone. Citizens can benefit from the digitization process in a way that will enable them to access quality and affordable services in addition to effective and efficient processes.

In order to put people's needs and rights at the center of digital transformation and create policies that do not harm, it is important to identify who are the people under analysis, what are their concerns and needs, etc. As inclusive digital transformation goes hand in hand with participation, this measure will further encourage the transition to digitalization.

In its activities, the Government should prioritize those who are lagging behind and put affordability, accessibility, affordability and inclusiveness at the heart of digital transformation.

3. Зголемување на безбедноста, безбедноста и зајакнувањето на поединците, транспарентноста на личните податоци и вештачката интелигенција.

Government institutions often use citizens' personal data (address, date of birth, etc.) to provide them with certain services. Public administration often owns personal (including sensitive) information about users throughout the life cycle of service provision. These data may be kept by the competent institutions and used for processing for the purposes of providing other services. Therefore, the government has a legal duty to protect this information in accordance with the Personal Data Protection Regulation. Failure to fulfill this obligation would undermine public confidence in government services.

Given that personal data is usually collected during the provision of public services (addresses, dates of birth, etc.), it is essential that citizens can provide this personal data in a secure environment, without fear that third parties parties were able to access them illegally. Risk management teams need to ensure that public e-services meet security requirements and regulations, without jeopardizing the delivery of public digital services. In this regard, threats to security and privacy should also be actively identified, while applying a comprehensive and proportionate approach to securing information and managing fraud risks. The security of government websites is an increasingly serious concern for citizens.

Governments are expected to protect citizens' interests from personal data breaches and threats of attacks in the digital space (cyber security). Therefore, the choice of appropriate technology is a significant investment not only for the public or local institution responsible for providing the service, but also for the users because they are subjects who will learn and act according to the technological possibilities offered. In this direction, the public or local institution will have a huge impact on the possibility of creating, providing and repeating the service in a sustainable way. The potential use of artificial intelligence, in turn, means that governments must carefully consider and address the potential risks of implementing artificial intelligence technology in the provision of public digital services.