

EGOVERNMENT AND DIGITALIZATION IN THE SLOVAK REPUBLIC – CURRENT DEVELOPMENT AND POLITICAL STRATEGIES

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Abstract

Digitalization of public administration's activities, interlinked with smart city concepts and set within the context of the overall digitalization of the society are altogether topics, which have been in the past an integral part of political strategies in the Slovak Republic and which are also currently leading future policy development. Explicit goals towards a better position in the Digital Economy and Society Index in the Government programme objectives, governmental organizational changes, funding of IT expenditures are highlighting a persistent position of eGovernment and digitalisation in the Slovak Republic's policy agenda. The aim of the article is to analyse the current state and development of public administration's digitalization and digitalization of the society in the Slovak Republic, taking into consideration comparative analysis of different international rankings, but also political strategies and decision made at the Slovak Republic's government policy level.

Key words: eGovernment, Digitalisation, Slovak Republic, Municipalities, Digital Economy and Society Index and eGovernment benchmark

1. Introduction

The modern topics of digitalization, informatization, and electronization of public administration are interconnected to such extent at present, that it is difficult to clearly identify the boundaries between eGovernment, the digitalization of society, and smart cities. Each segments and topics can be dealt with individually, but currently it is required to interconnect eGovernment with smart concept and overall with digitalization in the communities. eGovernment is seen as the use of ICT in practical government administration activities, whereby smart city builds upon this with the aim to provide better services for the people. [17][24] We have dealt with these explanations also in our previous research [31][32][30]. The basis for understanding the functioning of eGovernment and smart cities is to explain the preconditions of the overall digitalization of the society, which means the introduction of IT and ICT elements into individual spheres, segments, sectors and subjects in society.

All these topics have been “in” lately, and in case of smart cities even a general understanding has been detected, i.e., if cities do not use the term smart in their management and strategy, they are not presenting a modern direction and vibe. From our point of view, there is a clear connection between smart cities and eGovernment. Municipalities and cities that improve their processes and services via ICT and use eGovernment and digitalization, create a precondition for becoming smart

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municipalities that are focused on the sensible and efficient use of data for a better management and on meeting the needs of the citizens [30][32][24]. Some authors see eGovernment as a prerequisite for the implementation of a smart cities approach [17]. They analyze the question, if it is beneficial for different levels of government (state, regional, local) to become smart by using different information communication technologies.

We believe that currently it is not possible to talk about eGovernment, at least at the level of local governments, without mentioning the connection of eGovernment and the concept of smart cities, and not pointing out their interdependence. By doing so we use the main goals of eGovernment as starting points, about which we can say that the governments are implementing eGovernment strategies in order to achieve the following objectives [27]:

- administrative efficiency and interoperability,
- service improvement,
- citizen centricity.

Within the framework of the National Concept of Public Administration Informatization of the Slovak Republic [25], which was adopted in 2016, the eGovernment goals, formulated as objectives of public administration informatization, were set a little more specifically:

- Shift towards services aimed at quality of life improvement,
- Shift towards services aimed at increasing competitiveness,
- Bringing public administration closer to maximum use of data,
- Enabling the modernization and rationalization of public administration by ICT means (continuous improvement of services using modern technologies),
- Optimizing the use of information technologies in public administration thanks to the shared services platform,
- Cybersecurity.

Within the goals of public administration informatization in the Slovak Republic it is also possible to detect the stated general objectives listed by Pereira et al. [27]. The digitalization of the society is the prerequisite for eGovernment, so the aim of our article will be to analyze the state of digitalization and informatization of society and public administration in the Slovak Republic, mainly in the recent period in the contexts of the political strategies of the Slovak government and of a European comparison by considering the achievements in case of the stated goals of eGovernment, i.e., the three objectives. We will use a series of well-known indicators, The Digital Economy and Society Index and the eGovernment Benchmark report, to analyze the state of digitalization and eGovernment.

2. Performance of the Slovak Republic according to the Digital Economy and Society Index and the eGovernment Benchmark report

The position of the Slovak Republic in terms of progress in eGovernment and in the overall digitalization of society has become part of the priorities of the Government of the Slovak Republic for 2020 - 2024. In the Program Statement of the Government of the Slovak Republic for 2020 – 2024 [28], in section „Transformation of Slovakia into an intelligent, innovative and transparent country through meaningful informatization“, the placement of the Slovak Republic in the Digital Economy and Society Index is explicitly mentioned, while priorities for the future are set in order to

improve the position of the Slovak Republic in the given index. This suggests that evaluation indices, rankings, and international comparisons are also becoming part of the national political agenda. According to Orbán (2020) [26], while such international assessments mean challenge, and although they capture the situation over a specific period of time, and the indicators also change over time, they can be considered as guidelines or manuals for further development. For a detailed analysis of the current state and development of overall digitalization, and of the state of eGovernment in the Slovak Republic, we use the Digital Economy and Society Index and the eGovernment Benchmark report. Our goal here will not be to analyze the partial indicators and methodology of the selected rankings in detail, but to focus on the results of the evaluation of the Slovak Republic in comparison with the EU average.

Indicator \ Period	DESI	Connectivity	Human Capital	Use of Internet Services	Integration of Digital Technology	Digital Public Services
2020 SK (EU)	45,2 (52,6)	47,5 (50,1)	41,8 (49,3)	53,4 (58,0)	32,6 (41,4)	55,6 (72,0)
2019 SK (EU)	42,9 (49,4)	39,6 (44,7)	44,2 (47,9)	51,3 (55,0)	33,1 (39,8)	50,7 (67,0)
2018 SK (EU)	41,9 (46,5)	37,9 (39,9)	42,9 (47,6)	48,7 (51,8)	35,8 (37,8)	48,0 (61,8)

Table 1: Comparison of DESI and the sub-indicators - Slovakia and EU
Source: [11]

The Digital Economy and Society Index (DESI) evaluates five sub-indicators, namely Connectivity, Human Capital, Use of Internet Services, Integration of Digital Technology, and Digital Public Services. [10] Despite the year-over-year increase in the total score (2018: 41.9; 2019: 42.9; 2020: 45.2), the overall position of the Slovak Republic deteriorated every year in DESI, from position 20 in 2018 to position 21 in 2019 and subsequently to position 22 in 2020. [11]

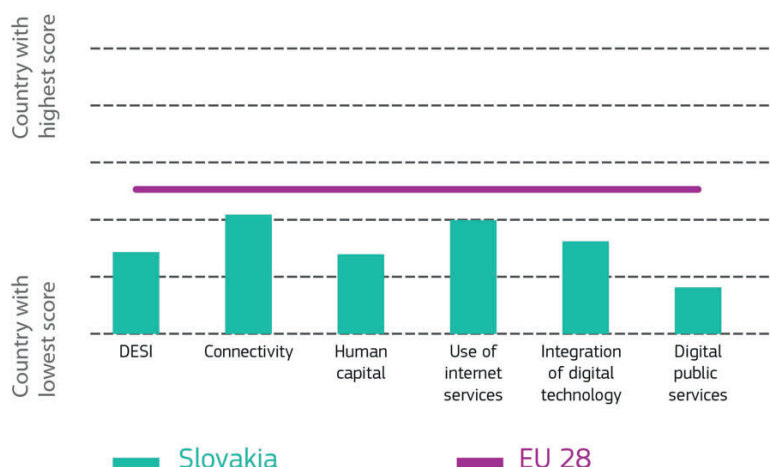


Figure 1: Digital Economy and Society Index – Slovakia 2020
Source: [12]

In each evaluated DESI sub-indicator the Slovak Republic had a score below the EU average, with the largest difference in the *Digital Public Services* sub-indicator. This information also highlights the importance of the fact that despite the improvement of the score of the Slovak Republic, not only in the overall DESI, but also in almost every sub-indicator (except Human Capital), the Slovak Republic has not been able to reach the EU average for a long time. At the same time, in the evaluated period of 2018 - 2020 the difference in the total DESI score between the Slovak Republic

and the EU average continued to increase year by year, from a difference of 4.6 in 2018 to a difference of 7.4 in 2020.

Important in the use of this indicator is also the fact that five DESI partial indicators create a precondition for the introduction, implementation and progress in the electronization of public administration services.

Subsequently, we can use another rating to evaluate the real progress in the field of eGovernment and for this task we have chosen the eGovernment Benchmark report.

The eGovernment Benchmark report evaluates the use of ICT in the public sector annually, and focuses on several sub-areas, such as User centricity, Transparency, Citizen cross-border mobility, Business cross-border mobility and Key enablers. [8]

Indicator \ Period	Biennial averages 2018 + 2019 SK (EU)	Biennial averages 2017 + 2018 SK (EU)	Biennial averages 2016 + 2017 SK (EU)
User Centricity	84,6 (86,5)	77,4 (84,8)	75 (82,8)
Transparency	46,6 (65,6)	41,9 (62,3)	37,3 (58,6)
Citizen cross-border mobility	34,8 (50,8)	26,0 (47,5)	26,0 (47,8)
Business cross-border mobility	67,0 (67,0)	62,0 (63,0)	53,5 (61,0)
Key enablers	66,9 (61,4)	57,8 (58,3)	56,5 (53,5)

Table 2.: Comparison of partial indicators by the eGovernment Benchmark report - Slovakia and EU
Source: [9]

Following the patterns presented in DESI, the comparison of the individual sub-indicators within the eGovernment Benchmark report also shows that the Slovak Republic did not reach the EU average at almost any of the sub-indicators. Based on Table 2 the Slovak Republic achieved a score higher than the EU average only in the case of the Key enablers indicator (2018-2019 by 5.5 points higher and 2016-2017 by 3 points higher). The highest difference in the scores, where the Slovak Republic presented the weaker results, was in case of the indicators Transparency and Citizen cross-border mobility within the evaluated period. Even though the Slovak Republic did not manage to reach the EU average, a gradual progress was recorded in case of each sub-indicator. However, the pace of this progress was sufficient only to move slightly closer to the EU average.

Both measures have been used to point out how the Slovak Republic society is digitalized and thus prepared for eGovernment.

3. Current trends in the Slovak Republic in the field of eGovernment and informatization

As we have previously stated [31], the area of eGovernment and informatization of society in the conditions of the Slovak Republic is distributed among several central state administration bodies. In connection with the change of government in the spring of 2020, changes took place in this area, that were mainly related to the transformation of the former Office of the Deputy Prime Minister of the Slovak Republic for Investments and Informatization into the Ministry of Investments, Regional Development and Informatization of the Slovak Republic. Based on the Resolution of the Government of the Slovak Republic No. 282/2020, a proposal to amend Act No. 575/2001 of Law Code on the organization of activities of the Government and organizations of the central state

administration, as amended by subsequent provisions was submitted to the National Council of the Slovak Republic, which aimed to achieve a competence change and to establishment a new ministry. According to the explanatory memorandum of the submitted resolution, the aim was to move the new regional development agenda from the Ministry of Agriculture and Rural Development of the Slovak Republic to the new ministry, in addition to the informatization agenda, while also centralizing and concentrating the regional development agenda and the Eurofunds. [18][16]

According to the Statute of the Ministry of Investments, Regional Development and Informatization of the Slovak Republic [36] approved by the Resolution of the Government of the Slovak Republic No. 417 of 1 July 2020 as amended by the Resolution of the Government of the Slovak Republic No. 613 of 30 September 2020 and in accordance with Act No. 575/2001 of Law Code on the organization of activities of the Government and organizations of the central state administration, as amended by subsequent provisions [1], four main areas of the Ministry's tasks were defined: 1.) management, coordination and supervision over the use of European Union funds; 2.) investments; 3.) regional development; 4.) central management of the informatization of society and single digital market policy-making. Within the field of central management of the informatization of society and single digital market policy-making an effort was made to manage this agenda comprehensively and centrally, with the Ministry focusing in particular on:

- central management of the informatization of society,
- preparing and managing the policy of the single digital market,
- coordinating the policies and measures to mitigate the negative impact of technologies and digitalization on the society, including the fight against misinformation in the online space,
- administration, operation, and development of the Govnet, the Central Public Administration Portal, and other information systems used within the eGovernment of the Slovak Republic,
- coordinating the development of information technologies of the public administration,
- preparing strategies, monitoring the current situation, developing, innovative solutions, cooperation within the institutions of the Slovak Republic and with foreign countries concerning cyber and information security.

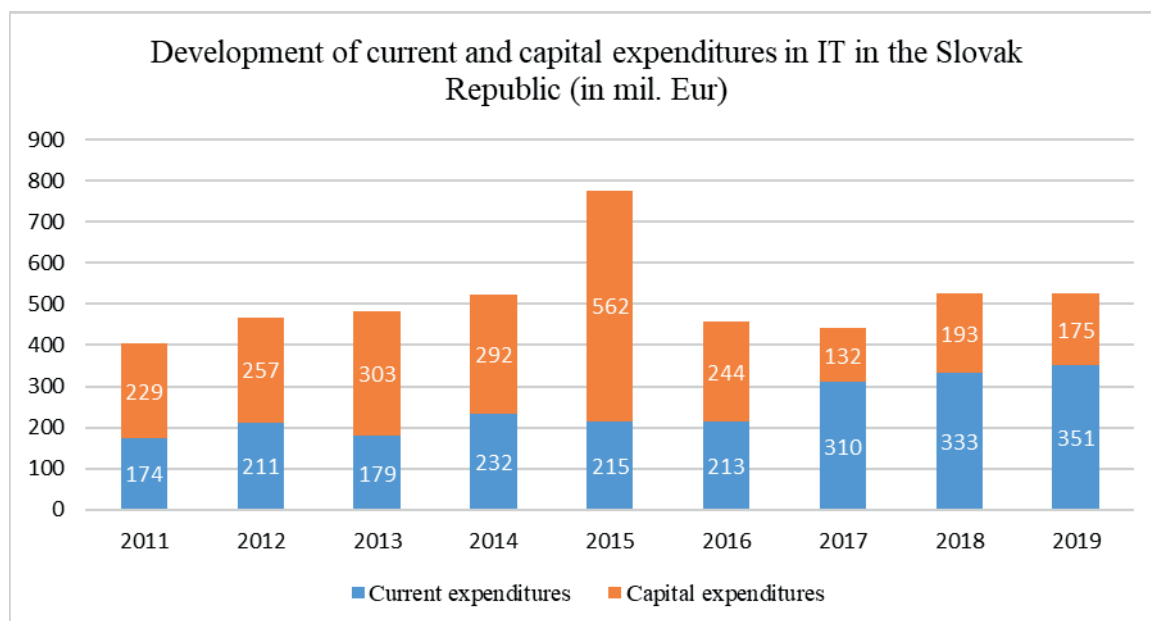
Of course, these intentions go beyond the intentions of eGovernment and are generally related to the digitalization of society, not only to the introduction of ICT in public services.

The intention to establish the Ministry of Investment, Regional Development and Informatization of the Slovak Republic was already declared directly in the Program Statement of the Government of the Slovak Republic for the period 2020 – 2024 [28]. The Government of the Slovak Republic has also incorporated another entity into the management of eGovernment in the Slovak Republic, namely the newly established state joint-stock company Slovensko IT, a.s. The establishment of a state joint-stock company was not a manifestation of the implementation of the government's program statement, as the explicit mention declaring this intention is absent in the government's program statement. However, the communication of the Ministry of Investment, Regional Development and Informatization of the Slovak Republic as well as of the Prime Minister of the Slovak Republic [37][38][15] indicated that the declared intention is an effort to implement some of the priorities of the Government of the Slovak Republic, as well as a response to the dissolution of the Slovak branch of the Wire Card IT company.

Slovensko IT, a.s. was established on 5 September 2020 as a joint-stock company of the Slovak Republic, on whose behalf the Ministry of Investment, Regional Development and Informatization

of the Slovak Republic acts. From the original staff of the Slovak branch of the Wire Card IT company approximately 85% of the employees moved to Slovensko IT, a.s., which was an effort to use the personnel capital of the IT sector in the Slovak Republic and to create a state IT center focused on providing comprehensive IT services for the state. The primary intention of Slovensko IT, a.s. is to focus on projects within the competence of the Ministry of Investment, Regional Development and Informatization of the Slovak Republic and on the needs of strategic IT projects of the state. [34][35][7]

At this point, we consider it necessary to emphasize that the distribution of tasks, competencies, and management among several central government bodies, with the coordinating position of the newly established Ministry of Investment, Regional Development and Informatization of the Slovak Republic, is not perceived as a comprehensive summary of all entities in eGovernment and informatization in the Slovak Republic. Other entities also play a substantial role, including all municipalities and cities, which provide electronic services for the inhabitants of the municipalities in the exercise of their original competencies. We provided a detailed description of the position and specific activities of municipalities and cities in the conditions of the Slovak Republic in the areas of providing electronic services, eGovernment and overall electronic activities of local governments in some of our previous articles. [32][31] Therefore, we did not aim to provide an inventory of all entities at various levels of state administration and self-government, or to list other interested actors in eGovernment and informatization from the private and non-profit sector, but to point out the current and new changes in this area in the Slovak Republic for the last period.



Graph 1: Slovak Republic expenditures in IT
Source: [19]

In addition to the institutional management of eGovernment and informatization in the Slovak Republic, we would also like to point out the expenditures that have been invested in recent years as current and capital expenditures in IT in the Slovak Republic. Based on the Summary implementation report for 2019 [19], the Slovak Republic spent 526 mil. EUR per year in the last two evaluated years on IT operations and investments. Within operating costs a year-over-year increase in these expenses can be seen. Despite these annual additional investments and an increase in operating expenses, the Slovak Republic has long remained below the EU average in the eGovernment benchmark reports and DESI assessments.

4. Discussion

An ambitious step in the management of eGovernment in the Slovak Republic is the establishment of the state joint-stock company Slovensko IT, a. s., which should provide comprehensive IT services for the state. Such a step, however, contradicts the emphasis on the importance and effectiveness of outsourcing IT services in the private sector. According to Kubán (2020) [22], IT outsourcing is a necessity. Based on the summary of Gorla and Somers (2014) [14] IT outsourcing represents 67% of all global outsourcing activities with the potential for further growth, while its positive effects can be detected mainly in the modernization of IT infrastructure, in the involvement of quality human capital, and cost savings, and on the other hand the negative effects represent themselves in the risks of slower response to changing user needs, in potential delays in service delivery, or in slow implementation. The president of the IT Association of Slovakia, which was founded 22 years ago, unites more than 100 members from the IT industry in Slovakia and represents more than 30 thousand employees of associated companies, stated that in principle they are not against the establishment of a state IT company, but at the same time this effort contradicts the reality of the IT market, where the number of project managers, analysts and architects are insufficient even in the commercial sector. [13][20] It needs to be considered and evaluated over time whether the centralization of IT services within a state-run company will mean a step towards improving eGovernment and improving the position of the Slovak Republic in eGovernment rankings, or to reduce spending on IT services. The outputs of a state-owned company would need to be examined via three criteria, i.e., whether there was an increase in performance, effectiveness, and productivity (Administrative efficiency and interoperability), whether the quality of the provided public services improved (Service improvement), and whether there was an increase in transparency and trust in government (Citizen-centricity).

The informatization of society, as well as the management of electronic services by the state, proved to be crucial even during the Covid-19 pandemic. On the one hand they positively affected the management of measures and the transfer of public administration activities to the online space, but on the other hand they were also perceived negatively because of the shortcomings in the management of electronic activities by the state. An example is the electronic registration system for vaccination, which has been assessed by IT professionals [23][33][21] as a failure. The negative reviews of the electronic registration system led subsequently to its redesign into a "waiting room", while considering the recommendations, suggestions, and proposals of the private IT sector. However, the introduction of the so-called "waiting room" did not end the problems of the state-controlled electronic registration system for vaccination, they only acquired a different character, which was also confirmed by Tomáš Szalay, the Director of the Health Department of the Bratislava Self-Governing Region, who coordinates two large-capacity vaccination sites within the Bratislava Self-Governing Region. Szalay stated that the waiting room is a fiasco of the state registration system for vaccination, for which the National Health Information Center is responsible as a state-funded organization founded by the Ministry of Health of the Slovak Republic, and he emphasized in particular the inconsistency of the system from the point of view of the truthfulness of the entered data, the absence of verification of the applicant's eligibility, the poor design, and he thinks that the transfer of registration to the self-governing regions would be the best solution, which would subsequently manage the registration independently. [6]

The failures of the state in digitalizing and electronization of the activities during the Covid-19 pandemic were substituted by the recommendations and proposals of IT experts from the private sector, and the local governments also played an irreplaceable role in this regard, who were represented mainly by the Association of Towns and Communities of Slovakia. The Association of

Towns and Communities of Slovakia, as a non-governmental organization that unites altogether 2784 municipalities, including 131 cities in the Slovak Republic [2], has provided invaluable advice, guidance and practical solutions for municipalities and cities since the beginning of the pandemic, including recommendations to conduct the meetings of municipal and city councils online, a free online reservation system for testing, assistance in the management of mobile sampling points for testing and more. [3][4][5]

5. Conclusion

The electronization of society, electronization of state activities, and eGovernment management were and clearly are defined as priority areas for the state, which were also emphasized in the Program Statement of the Government of the Slovak Republic for 2020-2024, and in practice they were applied, for example, in the establishment of a new ministry and of a state-owned IT company. In the period of 2011-2019 a total of more than 4.6 billion euros were spent on IT in the form of current and capital expenditures. [19] The Recovery and Resilience Plan of the Slovak Republic, as a response to the crisis period caused by the Covid-19 pandemic, projected to spend 584 mil. euros on the digitalization of the Slovak Republic in the areas of state electronic services, digital economy and innovation, development of the digital skills of seniors, cyber and information security. [39][29] However, the shortcomings and failures in the management of electronization and eGovernment by the state, especially in the crisis period of the Covid-19 pandemic, led to a situation in Slovakia, when the roles of the central state authorities had been taken over by the private sector, IT experts, and local governments. On the one hand, the joint efforts of the various stakeholders may help to reach the desired results, but on the other hand, this situation identifies the shortcomings in the management of electronic activities at a time when these state services are needed the most.

From the perspective of future development, it will be necessary to analyze the overall contribution of the following factors to the improvement of the level of eGovernment and informatization in the Slovak Republic when compared to the international trends: changes in the institutional management of eGovernment and informatization in the Slovak Republic, establishment of a state joint-stock company, growth of current and capital expenditures in IT, prioritizing the improvement of the position of the Slovak Republic in the international evaluation within the Digital Economy and Society Index, as it was declared by the Program Statement of the Government of the Slovak Republic. Such an analysis will then have to consider other success factors as well when identifying the strengths and weaknesses of the process. In the framework of public policy-making for the field of electronization of society and eGovernment it proves to be crucial for the state to take into account the suggestions of the professionals when managing the individual activities, who should not only point out the shortcomings and failures *ex post*, but their suggestions should be incorporated into the process of formulating and executing specific public policies, since they can be key to the success of the formulated effort and the achievement of the set goals.

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