E-Government – Shaping Europe’s Digital Future

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Abstract: E-Government has become one of the most important phenomena of public administration in the 21st century. Digitising public administration is part of the European agenda to help European citizens gain access to public services through information technologies. Integrating electronic solutions into the public administration process provides opportunities for much more efficient public administration that is open, inclusive, citizen-friendly, and able to provide personalised, borderless, end-to-end digital public services. Innovative legislative approaches in conjunction with modern information technologies must be used to design and deliver better services in line with the needs and demands of citizens in the modern world. E-Government has already proven to be an incredibly powerful strategic tool for the transformation of the public sector and to utilise these benefits – it is time that the EU Member States take concrete actions to develop cross-border digital public services. The presented article will take a look at e-Government in general, in context of the EU and provide a case-study on the Slovak Republic’s introduction of the e-Government.

Keywords: administrative reform, e-government, digital divide, data protection, electronic delivery

1. INTRODUCTION

The rise of e-Government has undoubtedly been one of the most important developments in public administration in recent decades. It has introduced new terminology and links between theory and practice. Naturally, e-Government is a term that is ever-evolving, so it might seem like a daunting task to discuss the potential future scope and role of e-Government. Effective digital public services are able to provide a wide array of benefits. These include more financial savings for governments and businesses, greatly increased transparency, efficiency of public services, and the inclusion of citizens in political life. While we primarily look at the question from a legal perspective, it is paramount to understand that the implementation of individual e-Government procedures is highly dependent on computer technology, political decisions, and the willingness to further develop and invest in these procedures. The development of innovative technologies – i.e. various social networks – has increased the expectations of citizens when communicating with public authorities and accessing all kinds of services online. Still, if we look at the practical side of things, cross-border e-Government services are relatively scarce, and even when they are offered, the majority of citizens are reluctant to use them, which tells us there is a need to move towards a more transparent design and delivery of online services. The combination of new technologies, open specifications, innovative architectures, and the availability of public sector information can deliver greater value to citizens with fewer resources. Many countries have recognised the potential that information and communication technology offers in providing services to citizens, organisations and companies. Digital development, therefore, pushes the legislature to provide an adequate legal framework for electronic public administration. Various governments have started to draft provisions in their administrative law to regulate electronic administrative communication and remove legal obstacles that might exclude electronic services from public administration. Governments should be aware of the growing number of digital alternatives avail-

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able to citizens and offer them to provide online services. In a highly globalised world, where borders no longer seem to be relevant, people have free access to information, and it makes them aware of the quality of public administration and the services offered by other governments.

2. DEFINING E-GOVERNMENT

E-Government – or electronic government – refers to the use of information and communication technology (ICT) applications to deliver various government services. E-Government as an application of information and communication technologies in public administration has been an integral part of the transformation process of public administration since the 1980s, although the actual term e-Government only began to be promoted at the turn of the millennium.

According to some authors, e-Government can be defined as all uses of information and communication technology in the public sector, which is a very broad approach to defining this term. The OECD defines e-Government as the use of electronic communications, in particular the internet, as a tool for achieving better governance.

Other authors concentrate on the public services aspect only, according to the concept that e-Government refers to the delivery of information and services online through the internet and other digital means. It should not be overlooked, however, that e-Government is often closely related to other processes of public administration, which are included under the broader concept of governance. Although it is not the same, and governance is a much broader concept, its role in this context cannot be neglected. This broader approach to e-Government highlights that it relates to the entire range of government activities and government roles, utilising information and communication technologies. In this concept, e-Government brings together two elements that have never been naturally joined in the past – the environment created using electronic technologies combined with management models.

Some authors understand e-Government as the use of information technology by public institutions to ensure the exchange of information with citizens, private organisations and other public institutions with the aim of increasing the efficiency of internal functioning and the provision of fast, accessible and quality information services. A very similar definition is that e-Government is understood as an effective way of providing public services by integrating information and communication technologies that enable citizens to participate fully in social and cultural life, including the democratic process.

The Ministry of the Interior of the Czech Republic, as well as the Ministry of Finance of the Slovak Republic (which at the time of establishing e-Government in Slovakia was competently responsible for the informatisation of society), has published a glossary of terms in which it defines e-Government as a process of modernisation of public administration with the use of new possibilities of information and communication technologies, or as a technique of public administration with the use of tools of information and communication technologies, and it considers terms such as electronisation or informatisation of public administration as being equivalent to this term.

According to the European Commission’s vision, public administrations of the 21st century will be “recognised for being open, flexible and collaborative in their relations with citizens and businesses. They use eGovernment to increase their efficiency and effectiveness and to constantly improve public services in a way that caters for user’s different needs and maximises public value, thus supporting the transition of Europe to a leading knowledge-based economy.”

E-Government is similarly defined by Prins, Professor of Law and Informatisation at the University of Tilburg, who also uses a broad definition of e-Government, understanding it as administrative communication and processes carried out electronically.

A comparison of the above listed definitions of e-Government and an analysis of the concept of e-Government in foreign literature, in legally binding legislation as well as in conceptual and stra-
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strategic materials allows us to conclude that a clear definition of what e-Government is or should be in the future is lacking. However, awareness is gradually rising that the development of e-Government may coincide with an unprecedented challenge to the institutions and procedures through which public governance is traditionally delivered.

In principle, the legislation that regulates e-Government in European countries can be divided into two types:
- special laws that directly regulate the use of electronic tools, such as the law on electronic signatures or the laws on registers,
- amendments to general procedural rules that enable the use of established institutions.

While the introduction of new tools to the legal framework is crucial, it is important to note that the regulation itself does not guarantee the actual use of these tools in the public administration process. Therefore, procedural regulations must also be amended in the context of e-Government. The introduction of electronic procedures in public administration means in most cases a duplication of existing possibilities and not their full transformation into electronic form. This is also why the procedural legislation retains the original procedures (e.g. filing in paper forms or oral procedures) and new electronic forms are only added as additional alternatives. This is because e-Government tools are not universally available and will undoubtedly continue like this for some time to come, so those “digitally excluded” must also be given access to the law. The question remains, however, do we know if citizens actually utilise the digital tools at their disposal? Are the EU Member States gathering data on the percentage of submissions made electronically? There is surprisingly little statistical data in this area in most countries, but the data we do have shows that the proportion of electronic methods has been increasing over time. If we look at surveys at the EU level, it is remarkable to note that there is hardly any empirical data available on the use of electronic public services by citizens.

Literature often talks about the four stages of e-Government.12 The first stage is referred to as emerging or web presence, where individual public administration organisations passively provide electronic information including the same level of information as printed brochures would. In this stage, the e-Government online presence usually consists of a web page, links to ministries or other departments may or may not exist, links to local governments may or may not exist; some archived information may be available online, but most information remains static with the fewest options for citizens.

In the second stage, the interaction stage, communication occurs mainly through conventional emails between G2C, G2B and G2G. This includes providing email contact forms for collecting questions and providing information in response. In the interaction stage, the government provides greater public policy and governance sources of current and archived information, this includes various policies, laws and regulations, as well as reports, newsletters, and databases. Citizens can easily search for documents and information – making this stage a lot more sophisticated than stage one, even though the interaction is still mostly passive and one-sided, with the information flowing from the government to the citizens.

The third stage, referred to as the transactional stage, is characterised by the creation of specific applications for the trusted electronic delivery and execution of submissions, in other words, the government implements tools that help the public gain access to public services, but does not use the internet as a tool for systemic transformation. This stage involves the ability to make financial transactions for use of government services. Compared to the first two stages, the flow of information is no longer unidirectional, but allows two-way interaction between the citizen and the government. Generally, this means options for paying taxes online; applying for ID cards, birth certificates, passport or license renewals – allowing citizens to approach public authorities easily, and most importantly, 24/7. Various fees and taxes can be paid online with credit or debit cards. Providers of services can bid online for public contacts via secure links, which not only increases
the efficiency of public services, but also ensures greater transparency.

The final stage of the transformation (also referred to as interactive democracy or connected presence) means integrated electronic services covering all electronic transactions, including electronic payments, developed portals providing various electronic services with enhanced accountability and elements of direct democracy. This stage involves making use of available data and learnings from transactions to transform governance and existing processes. This stage is the most sophisticated level in the online e-Government initiatives, and typically enables efficient two-way interactions of G2G, G2C and C2G. The government encourages participatory deliberative decision-making and open dialogue. In this model, the government actively solicits citizens’ views on public policy, law-making, and democratic participatory decision-making.

Recent studies show that most governments are still at the first two stages of e-Government development. To be able to achieve higher development level goals, most governments should reorganise completely. Interestingly, while we often emphasise the citizen-centric aspect of e-Government, the citizens themselves have scarcely been consulted in these reform processes. In the era of digitalisation, governments are looking for ways to reorganise their public services to their citizens, integrating information and communication technologies – which should ultimately result in better services for citizens.

The computerisation of public administration is not linked merely to technological advances, but also to the concept of citizenship in its dynamic form. Generally, e-Government policies have been strongly linked to a citizen-centric approach in government reform efforts. Over time, these efforts have evolved into something more ambitious – transforming from a tool for modernising government to a strategic approach to transforming government from a citizen’s point of view. Public administration in the offline world is mainly paper-based and supported by face-to-face contact. Traditionally, citizens get access to public services based on filling out a form, submitting a written request and providing official documents (driving licence, passport, birth certificate, etc.). The official documents serve to identify the citizen as an authorised user of public services – this verification of identity lies at the heart of government service provision. Throughout history, the authentication processes public administration bodies use have remained unchanged – showing an official document at one end of the equation and having a public official check and verify the official document at the other end. If we are to move towards becoming e-citizens, it is crucial to find a way to secure individual identification online that is transparent, unambiguously demonstrable, durably verifiable and above all – secure.

Most statistical data available only shows the quantitative side of things – the percentage of citizens utilising digital public services – but the data fails to delve deeper to touch on the qualitative aspect of the behaviours of e-citizens. In general, we can conclude that e-Government services are still rather limited in most countries, and in some countries, we see a declining trend (e.g. Slovakia 2010 results compared to 2020). Survey results also show that although a large part of the European population is online in the 21st century, still a relatively small proportion of internet users make use of e-Government services (11%).

3. E-GOVERNMENT IN THE SLOVAK REPUBLIC

In the Slovak Republic, the term e-Government is nowadays commonly used in legal terminology in a theoretical setting, but only rarely in legal acts. In general, the Slovak legislator has paid virtually no attention to the proper adoption of terminology and the unification of e-Government terms is sorely lacking. Terms in the field of information and communication technology law are often adopted into the Slovak legal order with phonetic versions of English terms, and are seldom used in actual Slovak terms and/or language. The first
An attempt at a unifying explanation was the Methodological Instruction on the Use of Professional Terms in the Field of Informatisation of Society, issued by the Ministry of Finance of the Slovak Republic in 2006. The original idea was that the Methodological Instruction should be regularly updated, however, this is yet to be done. Apart from the absence of a legal definition of e-Government, it is important to note that the term e-Government appears in many strategic documents of the Government of the Slovak Republic dealing largely with the informatisation of society, the informatisation of public administration or information security. The Methodological Guideline states that the equivalents to the term e-Government are mainly the terms e-governance, electronic government and electronic public services. The term e-Government is defined as the use of information and communication technologies online in public administration, coupled with organisational changes and new skills to improve public administration services and the application of democratic practices.

The next milestone in the Slovak Republic was the e-Government Act in 2013, which, among other things, introduced new concepts and institutions into our legal order and laid the foundations for the legal regulation of the electronic form of exercising the powers of public authorities. Strictly speaking, in terms of definition, even these two sources are not in alignment with what e-Government is. The understanding of this concept is significantly narrower in the Methodological Guideline, compared to the legal regulation defined in the e-Government Act. The primary reason being that the term e-Government cannot be narrowed down to the area of public administration only, according to the Act it is "the exercise of public authority electronically" and it also includes internal relations and internal processes of public authorities (e.g. internal decision-making processes, electronic filing and record-keeping).

The e-Government Act is a general legal regulation on the manner of exercising public authority in electronic form, which defines the related legal institutions and aims to enable the electronic services of public authorities to be implemented in a uniform manner. It is interesting to note that this act has made it obligatory to exercise public authority electronically, while giving citizens the option of choosing the form of communication. To accomplish this – to exercise public authority electronically – legal institutions such as electronic filing as well as electronic mailboxes and electronic delivery are crucial for the regulation of electronic communication with state and local government authorities. The e-Government Act is the first legal regulation in the Slovak Republic that codifies electronic communication as one of the main forms of communication with public authorities and the communication of public authorities with each other, in addition to the very basic, but so far still decisive and necessary, paper format. The legal regulation for the exercise of public authority by electronic means prior to the e-Government act was governed in a large number of special regulations, and in many proceedings it has been completely absent.

Some of the concepts and legal institutions regulated in the e-Government Act are new concepts and occur in our legal order for the very first time – but they are essential for the full exercise of public authority. Interestingly, Slovak law consistently distinguishes between the concepts of electronic communication and electronic official communication. The essence of electronic communication is the exchange of electronic messages containing electronic documents between two or more communicating entities. The Slovak e-Government Act attaches the same legal effects to an electronic filing as to a traditional paper filing. Electronic filing does not replace the methods of filing under the special rules, but does provide that if an electronic filing is made in the manner provided for in the e-Government Act, it is equal to filings made under the special rules.

The main objective of the e-Government Act was to create a legal environment to implement the exercise of public authority electronically and naturally to simplify, speed up and unify communication processes, and at the same time to eliminate the unnecessary fragmentation of the legal
regulation in a number of existing legal regulations regarding the provision of electronic services by public authorities to citizens, and by public authorities to each other – which in turn would lead to increased transparency. The e-Government Act created a functional model of electronic public administration services. An integral part of the electronic exercise of public authority was to create and legally ensure functional electronic mailboxes with the aim of reducing paper use and the ability to convert paper into electronic form, which represents, especially for citizens and businesses, an acceleration of processes and a simplification of administrative tasks.

While very important, the Methodological Guideline and the e-Government Act were not the only sources of the public administration reform, the implementation process was very complex and was preceded by a very demanding preparation phase. The preparatory process required a strategic approach embracing all areas affected by the mere existence of e-Government. Therefore, the strategic documents were – and are to this day – extremely important, forming the basis for building a well-functioning and efficient e-Government.

In 2008, the Government of the Slovak Republic approved two basic, strategic documents regarding the informatisation of public administration (e-Government Strategy and the National Concept of Public Governance Informatisation). In 2009, a more detailed discussion of objectives arising from these documents began. One of the fundamental strategic documents for managing the informatisation of public administration in the Slovak Republic is the Strategy for the Informatisation of Public Administration (also known as the e-Government Strategy), which defines the objectives of the process for introducing e-Government and defines the steps leading to the modernisation of public administration and the computerisation of its services.

The National Concept of Public Governance Informatisation (also known as the National Concept of eGovernment) introduces a new approach to e-Government, especially by focusing on the digitalisation of administration service sections in line with objectively defined competencies of state administration and local self-government. According to this document, the application of the principles and priorities combined with public administration information systems development, in line with integrated public administration information systems architecture, will result in a qualitative change in the provision of public administration services to the public, but also in administration services themselves.

Both documents mentioned above are based on the best practices of informatisation and building e-Government in other EU Member States and from the European i2010 initiative, which enabled the monitoring and comparison of the Slovak Republic in the European context. In 2011 another strategic document was approved, a Revision of the Building of e-Government, which at that time did not aim to replace the existing approved strategic documents but evaluated the practical level of project implementation. Both the Government Strategy and the National Concept of 2008 were revisited a few years later. The Government Strategy of 2008 was revamped in the form of the Strategic Document for Digital Growth and Next Generation Access Infrastructure, which defines a strategy for further development of digital services and next generation access infrastructure in Slovakia and focuses on the fulfilment of the ex-ante conditionalities by means of which the European Union evaluates the readiness of Member States to implement investment priorities of their choice. The previous strategic document clearly takes a very systematic approach to the digitalisation of public administration, whereas in 2014 the vision is much more functional and citizen-oriented. The Strategic Document contains a vision of e-Government development in Slovakia until 2020 and includes actions to move from the process of e-Government development to a functioning information society, with public administration alone having smart government features. Based on this concept information technologies would become inherent in people’s everyday lives and an essential driver of Slovakia’s competitiveness.

In this period of 2001-2018, several other strategic documents were developed and action plans pre-
pared, yet many of the plans did not progress from the planning stage and have not been implemented for public use. In comparison with other EU Member States, the digital transformation of public administration was significantly lagging behind. Informatisation was not completely stagnant, but the improvements were being rolled out at a much slower rate than the rest of the EU countries. 2019 reinvigorated the interest in digital transformation and The Strategy of the Digital Transformation of Slovakia was published with a catchy subtitle – Strategy for transformation of Slovakia into a successful digital country. It set forth the priorities in the context of the ongoing digital transformation of the economy and society in the Slovak Republic. The Strategy accelerated ongoing processes in terms of building the digital market and carrying out various measures that arose from the most recent cross-sectoral policies of the EU. The Strategy also reflected on the strategic materials and recommendations of international organisations (EU, OECD, UN, G7 and G20) that consider digital transformation to be the key to inclusive and sustainable growth. The Strategy represents a key and decisive document for the Slovak Republic at the beginning of the 21st century, when governments all over the world are feeling the need to change as industrial societies turn into information societies. This Strategy covers the period from 2019 to 2030 and it has been prepared as part of processes – already launched and partially managed – of digitalisation, informatisation and the single digital market agenda of the European Union. To achieve these goals, the Strategy puts the emphasis primarily on current innovative technologies such as Artificial Intelligence, Internet of Things, 5G Technology, Big Data and Analytical Data Processing, Blockchain and High-Performance Computing that should become the catalyst of economic growth.

These key technologies should be supported by the government in the following areas:
- artificial intelligence and blockchain, which are crucial in order to use the most revolutionary current technologies;
- data and privacy protection, necessary for creating a functioning data economy where consumer rights are ensured;
- high-performance computing and quantum computing;
- next generation fixed and mobile networks to allow Slovakia to get access to high-speed broadband connections, extension of NGA technologies to transfer data quickly and seamlessly;
- 5G networks to support autonomous and connected mobility and smart transport systems with massive utilisation expected in the future;
- the Internet of Things (IoT), in particular in the context of education. In fact, various primary and secondary school and university curricula in Slovakia have already been extended with matters concerning the Internet of Things.

This wind of change also meant a transformation of digital administration legislation and in 2019, Act No. 95/2019 Coll. on Information Technology in Public Administration entered into force replacing the former Act on information systems in public administration. The new legislation brought a very significant systemic change into the management of information technologies in public administration. This meant the creation of some new public offices, as well as expanding the competencies of some existing public offices. It is pretty clear that the efforts started in 2019 were not left merely on the planning table, but the government took immediate steps towards implementing them as well. As an example, the Ministry of Finance of the Slovak Republic approved a feasibility study for the creation of an eInvoicing information system, which would offer a user-friendly interface facilitating the issuing, sending and receiving of electronic invoices. Another significant development was the practical implementation of Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market (eIDAS Regulation) which was adopted on 23 July 2014 to provide a predictable regulatory environment to enable secure and seamless electronic interactions between businesses, citizens and public bodies. The electronic identification card is intended to serve as a means for ensuring unambiguous identification and guaranteed authentication of natural persons. The means of electronic identification is being used
for electronic services provided by public administration, but also for electronic services provided by other organisations or institutions at the national or supranational level. The introduction of the electronic identification card places the Slovak Republic among countries such as Austria, Finland, Estonia, Belgium, etc. In 2019 Slovakia launched an option to log into online public services with an ID or residence card for foreign nationals as well.

It is clear that the government has moved on from providing action plans and stepped onto a path of action. Five priority areas have been identified by the government to focus on in the run-up to 2030, these are: Economy, Society and Education, Public Administration, Territorial Development, and Science, Research and Innovation. As mentioned before, Slovakia has been at the tail end of the digital transformation, but if the very ambitious plans laid out in the past years are fulfilled, it would be able to transform Slovakia by 2030 into a modern country with a knowledge-based data economy and very efficient public administration. Naturally, the Covid-19 pandemic forced many governments to accelerate the process of digital transformation and Slovakia was not exempt from this. We are at the brink of an opportunity to hop on the digital bandwagon and include Slovakia among the digital leaders by 2030, making the country one of the top digital states worthy of following.

4. CONCLUSION

E-Government has become one of the most important phenomena of public administration in the 21st century. Since it is strongly linked to computer technology it requires special regulations, which, however, are still necessarily intertwined with the regulation of traditional institutions of public administration. In the 21st century, information technology can create the government of the future, the citizen-centric electronic government. E-Governments have the opportunity to overcome the hurdles of time, distance and state borders to perform public services in a truly efficient and transparent manner. Undoubtedly, smaller countries with smaller budgets do have a certain disadvantage in this area – just like it was presented in the case of the Slovak Republic. Budgetary and operational constraints often place these countries at the tail end of the digital transformation, therefor a strong strategy to implement modern public administration practices is needed in these countries. Slovakia has decided to step on this road, although it is too early to say if it will become the land of the envisioned digital administration by 2030.

In recent years, we have increasingly been surrounded by information and communication technologies, which are experiencing an ever-increasing boom, bringing fundamental changes to our lives and our view of the world around us. Credit and debit cards, mobile phones, televisions, personal computers and many other conveniences of the modern world have become completely commonplace for us. The penetration of new information and communication technologies into all levels of social life is what is fundamentally changing our society – and this naturally includes communication with public authorities. The European Union is taking many steps to make the most effective use of the changes brought about by the information society. The European Union’s priority in the field of e-Government is not only to support the development of electronic public administration services in the individual Member States, but the direction of these activities carried out by the individual Member States towards ensuring the interoperability of these services, which is an essential prerequisite for achieving the priority objective of building cross border pan-European public administration services.

Notes
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Act No 305/2013 Coll. on the electronic form of exercising the powers of public authorities and on amending and supplementing certain acts.


Act No. 95/2019 Coll. on information technology in public administration and relevant implementing rules within the scope of the conditions under Directive (EU) 2016/2102.

Act No. 275/206 Coll. on information systems in public administration.

Regulation (EU) No 910/2014 on electronic identification and trust services for electronic transactions in the internal market.