

# ELECTRONIC GOVERNANCE TECHNOLOGIES IN THE SYSTEM OF PROVIDING ADMINISTRATIVE SERVICES

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The practice of using the term “electronic governance” does not differentiate the concepts of the subject of management, that is, the three branches of government, with forms, processes and technologies of governance [1, p.22], which is not correct, since the use of information technology in state activities is not a top priority. On the other hand, electronic governance technologies cannot be considered separately from the automated governance processes as well as electronic governance technologies are not a supplement or an analogue of the traditional state, as intended to communicate by means of electronic governance technologies to increase the efficiency of the entire system of public administration, in particular in the system of administrative services .

**Goal of this study is** to investigate the state and determine the importance of electronic governance technologies in the system of providing administrative services.

One of the most characteristic features of any modern harmoniously developing state is electronic governance, the introduction of which into the system of providing administrative services will make it possible to transform it into an electronic form, and also provide administrative services remotely to all subjects of circulation, in particular the business sector. The presence of fully functioning electronic governance in the system of providing administrative services is not only an indicator of the state’s involvement in the global information society, but also one of the main universal tools for supporting the development of small and medium-sized businesses, stabilizing the socio-economic situation in the country and further its comprehensive development.

A great contribution to the study of the theoretical foundations of electronic governance technologies was made by such scientists as A. Bell, M. Bonham, M. Bones, S. Zuridis, S. Clift, S. Buras, N. Katris, P. Norris, etc.

The works of such famous scientists as M. Demkov, D. Dubov, S. Dubov, A. Zhuravlev, I. Klimenko, S. Kuznetsov, K. Linev, A. Mitchenko, S. Piskovets, I. Pogrebnyak, V. Sheverd etc. are devoted to the research of the problems of electronic control, its characteristics and the state of implementation in the practical activity of public authorities.

Formation of this concept started in the 70s, having replaced the traditional paradigm of hierarchical state management based on orders, control and submission to management through information technology, which allowed public administration authorities to conduct network interaction.

Nowadays, the system of providing administrative services, transforming into an electronic form, primarily due to the introduction of electronic forms of interaction, is filled with all kinds of information and communication technologies, namely: the portal of administrative services, sites of subjects providing administrative services, the information system «Electronic Government», an electronic document, electronic digital signature, etc., which can be considered as elements of the information and communication system of providing administrative services.

One of the founders of Twitter S. Biz states that «modern high-tech projects should serve one purpose: to simplify any of the actions of the users in their everyday life.» Therefore, the system of providing administrative services, transforming into an electronic form, is supposed to carry out the interaction of the subjects of circulation and the subjects of provision, making this process simple and accessible for individuals and business.

Without delving into the search for truth about what information is, if it exists itself or it is an abstraction, we can state with certainty that it has become a part of the everyday world of modern individuals. In 1957, K. Steinbuch, in the term of informatics, defined activities related to the fact that information can be extracted, converted from one information to another, for example, from one language to another, stored in a database or transferred. This is followed by four fundamental functions: to extract, to convert, to save and to transfer.

Thus, we can discuss two types of technology for working with information: “hard” — technical support and “soft” — technological support to technical support.

The economist J. Galbraith [2, p.14] expounding the concept of technology considers it as a set of methods of development and application of systematic scientific knowledge in practical problems. The scientist emphasizes the special importance of knowledge as the basis of technological development, and also determines the practical focus of knowledge on the organization of the provision of services. The term “technology” in the spheres of public life was popularized due to the synthesis of science and manufacturing.

Polysemicity of the term “technology” allows to assume under it: “the science of the types, processes and methods of multiple obtaining the final result; others focus on the organization and objectives of the activity, and others state that technology is the use of scientific knowledge to determine effective ways and means of doing any work “[3]. To determine the meaningful content of the concept “technology”, which will most fully reflect the purposes of our research, it will address its main features, among which there are the following ones:

- delineation, division and partition of the process to internally related stages, phases and operations;
- coordinated and step-by-step actions aimed at achieving the desired result
- the uniqueness of the implementation of procedures and operations included in it [3, p. 44-47].

Thus, the set of interconnected and interdependent processes and methods of “hard” and “soft”, providing high speed of extraction, transformation, saving and transmission of information flow, and also allowing to reduce transaction costs of information services operation allows to designate it as information technology.

The technical basis of modern information technologies is the technology of telecommunication, through which one of the main functions of management activity is realized — organization of internal work and interdepartmental interaction.

We propose to define a set of information and telecommunication technologies implemented and used in management activities to provide

administrative services in electronic form, as information and technology services of the system.

The sphere of providing administrative services in the countries of the developed West is characterized by a long history and a lot of positive practices. A brief overview will make it possible to understand the feasibility of using information technology services to improve the system of providing administrative services in Ukraine.

In most EU Member States, it is important to introduce centralized information technology services that meet the one-stop-shop concept to improve the quality of the provision of administrative services. As noted in [4, c. 1] “an important activity in the development of electronic administrative services are electronic platforms for services of public authorities. This is an administrative portal, created in order to allow the subjects of circulation to use electronic services provided by public authorities. “

Special attention should be paid to the use of information technology services in the provision of administrative services in France. In particular, the “single window” of the City Hall of Paris [5], through which a significant number of electronic services are provided. Individual-subjects of circulation can get registered on the site, creating their own electronic cabinet, and the corresponding administrative services are formed in relation to the life cycles of a person. For example, the “family information service”, through which young parents can use all the necessary services, not only from administrative ones, from birth registration to “forming an electronic dossier for a child, which contains all the necessary data relating to the child” [6, p. 1].

At the same time, a nationwide portal for the provision of services by public authorities operates, which in a month satisfies more than four million subjects of circulation [7, p. 1].

An example for imitation is the provision of administrative services in Belgium, where there is an electronic platform that contains links to regional and municipal information technology services. Belgian e-services provide the possibility of registering with a personal card that allows you to download some of the data from the general register, submit all the necessary documents online, and also receive on-line services such as a certificate of residence, a certificate of family composition and a map of a local resident, excerpts from police registers, coupons for parking, birth certificates, certificates of marriage, divorce, etc. [8, p. 1].

A single database of citizens should be considered as the achievements of the Belgian practice of electronic governance in the provision of administrative services. With the introduction of a personal identification code, most of the necessary information is downloaded automatically, thus, the subject of circulation must fill a small number of special forms. In Belgium, almost all services can be obtained on-line [9, c. 1].

In the UK, the services provided by the public administration authorities are grouped for the convenience of the subjects of circulation in groups and are placed on the “joint service of administrative bodies”, through which you can get the following online services: obtaining benefits; registration of births, deaths, marriages; services in the field of business and entrepreneurs; services for obtaining citizenship or the right to permanent residence in the UK; services in the field of political rights; services in the field of ships and police; services in the field of property rights; services in the field of immigration. Separately, the grouped services for people with disabilities were provided. [10, c. 1].

This service is a vivid example of electronic governance technologies in the service sector, most of which can be obtained remotely. Also in the UK there is an extensive network of “service supermarkets”, called “One Stop Services”.

In Germany, special attention is paid to electronic governance technologies to simplify the registration procedures for small and medium businesses. In particular, this is the developed information and technological service “BundOnline2005” [11, c. 1].

A special portal for the provision of electronic administrative services for business is developed in Sweden, the main purpose of which is to simplify procedures for starting a business. To register an entrepreneurial activity, a personal identification code of the subject of circulation is entered, a description of the entrepreneurial activity that the person plans to engage in is entered and a registration fee is collected from the personal account [12].

With the assistance of information technology services providing administrative services to the population of “Norge.no” in Norway, significant work was done to improve the provision of administrative services. With the help of the service are provided services grouped according to life situations: the birth of a child and the registration of paternity, death and inheritance, marriage, the design of a divorce, change of residence, etc. [13, c. 1].

A bright, but unsuccessful example of a decentralized implementation of electronic governance services is Finland, which, operating in the spirit of a diversity of information technology services, had to spend 60 million euros a few years to create a single platform for providing electronic administrative services to the subjects of circulation.

Domestic practice of electronic governance technologies in the system of providing administrative services does not have a similar level of functionality as in European countries, but this does not justify the negligent attitude of the government to the possibilities of modern information technology services.

When creating a system for the provision of electronic administrative services, Ukraine took as a basis the model of centralized provision of administrative services, under which the procedures for their provision are simplified as much as possible and in which the government is an integral subject of provision.

Currently, the Unified State Portal of Administrative Services is one of three ways to provide administrative services.

Developers of the Unified State Portal of Administrative Services identified two stages of development:

- development of information and consulting component: providing comprehensive information: the register of administrative services, templates and sample documents, provided and approved by law, necessary to obtain the service, information containing contact details of the subjects providing a particular service;

- development of the information and technological component: the consistent transformation of services into an electronic form, the expansion of methods for identifying and authenticating the subjects of circulation and the introduction of transactional services that provide remote payment services for the services provided.

At the moment, the Portal contains all the necessary consulting information on all administratives, and in fact most likely it is an electronic information reference center where all the comprehensive information is collected. It can be stated that the first stage of the formation of the Unified State Portal was passed without difficulties, if not to take into account that the portal contains a huge amount of information exclusively about administrative services. It should be noted that there is still a significant part of public services, which, given the international practice of the functioning

of portals, should be provided through the portal, however, according to the Law of Ukraine “On Administrative Services” [14], they are not considered administrative, so there is no information on them.

Despite the international trends and dynamic processes of development of information technology services that allow public administration authorities to implement new effective approaches to the organization of internal and interdepartmental workflow and interaction, work continues with documents and information, mostly in paper form, which significantly complicates the rapid exchange of information, procedures for the provision of administrative services and management decisions, public information and services Maintenance business.

Exemplary examples of electronic document circulation are the Parliament of Scotland and the Senate of the Netherlands, which completely abandoned paper carriers, and all document circulation is carried out electronically.

Electronic interaction of the subjects of provision prescribes both the exchange of electronic documents and the possibility of obtaining electronic data from information technology services of other delivery entities in an automated mode in accordance with the requests and authorities of these bodies.

In practical terms, the introduction of the electronic interaction of the subjects of provision preassumes the possibility:

- of transfer and receipt by public authorities of organizational and administrative documents in electronic form;
- automated exchange of electronic data (messages) between information technology services of public authorities;
- automated access of the public administration authority to electronic data of information technology services of other public administration authorities in accordance with the authority.

Thus, the totality of processes related to the creation, processing, sending, receipt, storage, use and destruction of electronic documents or messages should be translated into electronic form, providing such processes with legal significance and legal force.

An analysis of the European experience in the construction of national systems of electronic governance technologies demonstrates the existence of a single established approach to the development of an infrastructure or an indicative e-governance model, the central element of which is the system of inter-agency electronic interaction.

The achievement of interoperability and the provision of electronic interaction of various information and technological services of the subjects of provision is identified as one of the main priorities of the Digital Agenda for Europe 2020 and the European Action Plan for e-Governance for 2011-2015 as a prerequisite for the formation of a single digital market in Europe and the provision of cross-border services.

The tasks for ensuring electronic interaction were determined by one of the main priorities, starting with the Law “On Basic Principles of the Information Society Development in Ukraine for 2007-2015” [15], the Concept of the Development of Electronic Governance [16] and the Strategy and Information Society Development in Ukraine [17]. However, currently, the tasks outlined are mostly declarative in most cases.

The concept of e-governance development clearly states that the introduction of electronic document management is an important component of the development of e-governance. It should be noted that with the development of information technology services that allow e-management, electronic document circulation extends to all areas of state activity and ensures interaction between all branches of government and subjects of provision of all levels, as well as subjects of provision and business structures, subjects of delivery and individuals. At the same time, such interactions go beyond the exchange of documents only and there is a need to exchange data (information) in its various forms and applications, which, of course, is more complex in the organizational, scientific, technical and technological sense. The task of creating a single state-wide electronic document circulation is implemented through the introduction of a system of electronic interaction between the subjects of the provision [16].

The first real steps to introduce information and technology services for electronic interaction were made in 2012, by means of introduction of the Concept of the creation and operation of an information system for electronic interaction of state electronic information resources [18]. In 2013, a comprehensive plan for the implementation of this Concept was approved, and it prescribed the development of a number of regulatory and legal and technical documents necessary to achieve interoperability and ensure the electronic interaction of information technology services.

However, today the developed plan requires clarification and refinement due to non-compliance. Since the formation and use of information



technology services of the subjects of provision is characterized by poor coordination, consistency and permanence, which reduces the efficiency, effectiveness and flexibility of e-governance. As a result, entities providing administrative services have introduced a significant number of integrated information technology services, including departmental registries, in-house electronic document management systems, typical activity automation systems, and management decision support systems that do not interoperate with various technologies, standards and formats.

Currently, there are more than seven hundred various information and technological services in the public administration bodies of Ukraine. At the same time, it is necessary to note the fact that there is no National Register of Information Technology Services of Public Administration Bodies, despite a number of decisions of the President of Ukraine, the Government and Parliament on its creation and operation.

The foregoing resulted in considerable difficulties in organizing electronic interaction between the numerous implemented information and technological services, and the absence of mandatory requirements (standards, formats) and a single national coordinator in this field led to the establishment by separate central public authorities of their own rules for electronic interaction of information technology services, developed for a specific urgent task and not compatible with each other.

For example, currently, only the State Fiscal Service of Ukraine approved a dozen different protocols for the exchange of information by information technology services with other public authorities. Also, similar rules for the needs of electronic interaction are established by the Ministry of Social Policy of Ukraine, the State Treasury Service and others.

To solve the problem of electronic interaction between departmental services of electronic document circulation, in 2012 the Electronic Interaction System of Public Administration is being integrated in Ukraine, which should ensure the creation of a single information and technological infrastructure for the exchange, processing and storage of organizational and administrative electronic documents and create prerequisites for transition to the domestic electronic document management. It is assumed that regardless of the availability or absence of electronic document management in the internal service department, the above-mentioned system will allow integrating to it all legally significant orga-

nizational and administrative documents of all central and local public administration authorities.

Currently, sluggish implementation of the system is accompanied by a critical number of comments from public authorities, mainly questions of technological perfection of the system and the unresolved issue of property rights.

In addition, the work on the creation of a unified system of electronic interaction of information services, which should ensure the automated exchange of data from various information systems of public administration authorities and address the compatibility of these services, has started.

Also, separate projects for the formation of the Electronic Parliament Information System, which should unite all existing databases of the Verkhovna Rada of Ukraine and the Electronic Court system for the exchange of electronic documents between courts and participants in the trial, should be mentioned.

Taking into account the abovementioned, the following main problems of integrating the electronic interaction of subjects providing administrative services can be defined:

- the presence of a large number of heterogeneous inherited and implemented information technology services of granting entities that are not intended for electronic interaction. Subjects of provision in the process of decentralization, not coordinating their actions and not adhering to common rules, have formed internal information technology services that are not at all compatible either technically or normatively;

- low quality of information technology services of the subjects of provision, since the vast majority of these services are put into operation in violation of the requirements of the current legislation regarding the design, development and operation of such services, as well as information protection requirements;

- the absence of unified identifiers that connect the same type of information in various information technology services, which leads to significant difficulties at the stage of achieving organizational-legal and semantic interoperability of information technology services;

- the absence of minimum requirements for interoperability of information technology services of granting entities, at the design and development stage it does not allow to take into account the further electronic interaction of its services with external services;

- uncertainty of unified requirements to electronic interaction of information technology services (formats, standards, order) of the subjects

of provision, the absence of which allows creating separate departmental and, in some cases, regional electronic interaction systems that present a problematic compatibility;

- the absence of a unified functioning electronic interaction system, the operation of which will ensure the automated exchange of information from information technology services of the subjects of delivery in accordance with standardized rules;

- the lack of basic state electronic registers, such as the demographic register and the register of addresses.

Particularly, we can mention the problems associated with the regulatory uncertainty of the archiving process of electronic documentation, departmental closeness and reluctance to attach their services to the electronic document management system.

A structured unit of information intended for perception, formalized and fixed in a certain order in compliance with the form of its submission and the formation of mandatory features, such as functionality, authorization and registration is called a document [19].

When a document is executed in written, an important component is its signing. It is the signature that guarantees the legality of what is being implemented and the condition for providing the document with legal force.

The development of information technology resources led to the appearance of an electronic document and an electronic signature, which are rapidly penetrating the economic activities of highly developed countries.

Today, there are many variations of electronic signature in the world, which, first of all, should be distinguished by the level of security, scope and methods of their implementation. However, in Ukrainian practice, the most controversial and ambiguous in the need for use is a kind of electronic signature, namely an electronic digital signature.

In this context, let us pay attention to the essence of the contents of these signatures. If the electronic signature is nothing more than data in electronic form, the main purpose of which is the identification of the subject of electronic data circulation, then the digital signature is the data obtained by cryptographic transformation of the set of electronic data, which firstly makes it possible to verify the integrity of the document, as well as to identify the subject of circulation.

If it is necessary to have a paper version of the electronic document, the authenticity of the copy is certified by the electronic key certification centers in accordance with the current legislation [19, part 6, Art. 7; 20]. A paper copy of an electronic document obtained in another way, for example, the use of readers or the use of the printscript function of an electronic document, is not coded and can only be used for informal electronic document circulation.

In addition to all above mentioned, according to [19, part 3 of Art. 6] it is possible to have parallel existence of an electronic document and a paper original identical in information and requisites, with the same legal force.

The proponents of the digital signature claim that it is designed to legitimize the remote provision of administrative services, thus significantly saving time and volume of paperwork. Accordingly, it can be concluded that this type of electronic signature, firstly, has a wide scope of application, in particular in business, banking and customs, with electronic reference to the subjects of providing administrative services. Secondly, when using the digital signature, it does not matter in governmental or business structures, there is a significant reduction in the volume of paperwork. Third, it protects the integrity of the document.

However, the electronic signature, like any other innovation in Ukraine, calls into question its application according to Ukrainian legislation, presuming several conditions under which an electronic signature can be similar to a handwritten one. Observance of such conditions requires an enhanced certificate, which is not defined by international law.

Therefore, using an electronic signature for the implementation of international treaties between legal entities or individuals in which one party is located within Ukraine, can provoke disagreements, and in case of conflict it will be difficult to decide on the legality of a document.

A storage place of such a signature, for example, a flash card, the loss or theft of which can not be ruled out, and as a result allows you to take certain actions in favor of third parties without the real consent of the person, unlike the signature that is carried out with your own hand and is inseparable from the author can also be referred to the risk zone.

Electronic signature with the greatest difficulty is spreading in the Ukrainian business sphere, the reason for this how this sphere is regulated and the need for additional costs for its receipt and use.

Despite the importance of the digital signature for an electronic document, the Electronic Signature Law prescribes the possibility of using other types of electronic signatures, for example, Mobile ID or Bank ID, which are actively used in all countries of the world.

For certainty, the Law of Ukraine “On Electronic Trust Services” was adopted with alternative types of electronic digital signature. The law prescribes the improvement of regulatory and legal regulation in the sphere of using the public key infrastructure, the development of a unified system of electronic confidential services, the mutual recognition of Ukrainian and international certificates of public keys and digital signatures, taking into account international trends, thereby ensuring the active development of cross-border cooperation of Ukraine, and its harmonious integration into European society.

**Conclusions.** Technologies of electronic governance in the system of providing administrative services have both significant advantages and disadvantages, but based on the above mentioned, it can be stated that at this stage they are a negative phenomenon, and in fact, they develop spontaneously and fragmentarily. In our opinion, the technologies of electronic management will enable harmonious functioning of the the system of providing administrative services:

- when the norms of ukrainian and international legislation on provision of administrative services are agreed;
- the procedure for providing administrative services will be simplified, and after that it will be translated into an electronic form;
- after the improvement and systematization of the regulatory and legal regulation of electronic governance technologies in ukraine in general.

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## Chapter 6. Priority sectors for small and medium enterprises as drivers of economic growth

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