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# E-GOVERNANCE IMPLEMENTATION IN UKRAINE AND IN EU MEMBER STATES

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In the context of globalization processes and the rapid development of information and communication technologies in the world there is a trend of active development of e-government. The UN monitors the level of information and communication technology in the world every year. ONN rates the level of e-government implementation according to the following indicators: e-government development index, index of online services and their components, index of telecommunication infrastructure and its components, index of participation in e-government.

The article examines the EU regulations that form the strategy for the implementation of e-government. The European Union has also introduced a number of criteria for assessing the quality of e-government implementation in member states. All the services were divided into four categories: services through which the state receives financial resources from citizens and businesses (mainly taxes, contributions to the social insurance system); registration services; services provided to citizens and businesses on the basis of paid taxes and fees; permits and licenses. In addition, four levels of online accessibility development were identified: online availability of service information; one-way online interaction (online forms); two-way online interaction (online presentation of the form); full service cycle available online.

The directions of implementation of e-government in Denmark, which took the first place in 2020 in the UN rankings, are considered in detail. In particular, such services and portals of interaction of Danes with public authorities and local governments as: borger.dk, virk.dk, NemLog-In and others are covered.

The article focuses on the areas of e-government in Ukraine. Analyzed Areas of e-government such as: Action, e-Court, Trembita and others.

Some aspects of the introduction of e-government in Estonia, Germany and France are considered.

Key words: e-government, e-government, administrative services.

**Formulation of the problem.** Ukraine has committed itself to unifying its legislation with that of the European Union. Legislation that regulates e-governance in Ukraine and EU countries, constantly is evolving and is improving. Ukraine is developing dynamically in this direction. It's introduced a radically

new approach to management of public affairs. The interaction between public authorities, local authorities and civilians is through the use of information technology and the Internet. Given the above, study of trends in e-government in the EU and in Ukraine, its legal regulation are relevant.

The 2021–2022 years witnessed a transformational change in global. The digitalization of user services and administration's internal processes has become an essential element of public action in Ukraine and EU. The COVID-19 pandemic has now reinvigorated the role of digital government in its conventional delivery of public services ensuring business continuity. Global pandemic brought about innovative methods in managing this crisis situation, such as in e-health, online learning and remote working.

The next obstacle for Ukraine became war. Russia's military aggression has further highlighted the need for dynamic interaction between the government and citizens. E-government helps to resolve the issues necessary for Russia's confrontation immediately.

Analysis of research and publications. The topic of e-governance in Ukraine and EU countries is comprehensively presented in the scientific works of A. Ishchenko, Yu. Lozynsky, L. Matveychuk, I. Pogrebnyak and others. However, the study of this phenomen remains relevant due to the dynamic development of e-government

The purpose of the article. Investigate regulatory acts of e-governance in Ukraine and EU countries, explore the features of public administration through IT.

Main material presentation. Adoption of the Laws of Ukraine "On Informatization", "On E-Document Management and Electronic Digital Signature", Information Society Development Strategies for 2007–2015, Concepts of e-Government Development and other normative acts created the corresponding legal and legislative preconditions for the use of information and communication technologies by the public authorities. In recent years ukrainian legislation increased the number of eServices that citizens can obtain online.

Ukrainian State Agency for eGovernance is the main body responsible for the policy formulation and implementation in the sphere of digitalization. The State Agency for e-Governance of Ukraine was created on October 1, 2014, and implements state policy in the spheres of e-government, informatization and information society development. It's main tasks according to the Regulation are: E-services and electronic documents development for businesses and citizens; development of electronic identification; state electronic information resources (registers) development; electronic interaction of registries, development of interoperability and maintenance of registry of registries; open data development; development and implementation of the National Informatization Program; coordination of projects and tasks for the development of e-governance at all levels; participation in the development of the Digital Economy; development of the Ukrainian segment of the Internet and the administration of the domain gov.ua [1].

Digital Government Infrastructure consists of such structural elements as Ukraine's eServices Portal, State Portal of Administrative Services, National Open Data Portal, eData, Open Budget Portal, Inspections Portal, Electronic petitions, National Telecommunications Network, Electronic Court, National Interaction system TREMBITA, The Electronic Interoperability System for Public Agencies, Customs Single Window, National Identification System, ProZorro, DOZORRO, eHealth Information System, The State Registry of Registries and others.

Ukraine's eServices Portal is implemented in stages, the first stage continued 2015–2019, practices based on prioritizing the digital means for carrying out all processes in Government documents.

With the start of the second phase, 2019–2023, the EGAP Program has continued to engage in activities related to Ukraine's top priority digitalization spheres, initiatives and projects. First among these

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was implementing the Digital Government initiative, which has resulted in an online portal of government services called Diia or Action. This portal brings together all services that the government provides to individuals and businesses. The Diia national brand, meaning "Government and Me" was also developed with the support of the EGAP Program. What's special about the Diia platform is its completely client-oriented e-services that are fully automated – meaning they are provided without the intermediation of a government employee-, and grouped according to life and business situations [2].

In accordance with the order of the SJA of Ukraine dated 22.12.2018 No. 628 "On testing the subsystem "E-court" in local and appellate courts", on December 22, 2018 in all local and appellate courts began operation of the subsystem "E-court" in test mode. Legal issues of functioning of the subsystem "Electronic Court" are regulated in Section XI of the Regulations on the automated document management system of the court, approved by the decision of the Council of Judges of Ukraine from 26.11.2010 No. 30 (as amended – the decision of the Council of Judges of Ukraine from 02.03.2018 No. 17). Thus, the submission of procedural documents to the court in electronic form is carried out with the help of the Electronic Cabinet. In order to be able to use the E-court service, it is necessary to go through the procedure of registration of the official e-mail address (Electronic cabinet) provided by the subsystem with the obligatory use of your own electronic digital signature [3].

In 2018, the National Interaction system TREMBITA was finalised. It was based on the Estonian interaction system X-Road and aimed at the exchange of data between state information resources, so as to ensure the highest quality level of eServices delivery system. In 2018, TREMBITA received certification for its data protection mechanisms in compliance with the legislatively mandated requirements for technical and cryptographic data protection. Currently, experts are developing a comprehensive data protection system for its central part. The owner of the system is the State Agency for eGovernance of Ukraine. This interaction system guarantees state authorities and service centres access to the information contained in national registers and thereby will enable fast and high-quality provision of public services [4].

On 7.12.2018, the law of Ukraine "On Trust Electronic Services" came into force. This document implemented key principles of the eIDAS Regulation in Ukraine. The law established identification tools such as legal basis for the provision of electronic trust services in Ukraine and abroad; legal grounds for electronic identification; the rights and obligations of all subjects of electronic trust services; the order of state control over compliance with the legislative aspects of electronic trust services [5].

Since 2000, the online availability of 20 services (12 for individuals and 8 for business) has been regularly monitored and evaluated in the European Union. All services were divided into four categories:

- 1) services through which the state receives financial resources from individuals and businesses (mainly the payment of taxes, contributions to the social insurance system);
  - 2) registration services;
  - 3) services provided to individuals and businesses on the basis of paid taxes and contributions;
  - 4) permits and licenses.
  - In addition, four levels of online accessibility were identified:
  - 1) online availability of information about the service;
  - 2) one-sided online interaction (online forms);
  - 3) two-way online interaction (online presentation of the form);
  - 4) full cycle of service, available online.

The Digital Agenda for Europe takes a key role for information and communication technologies to achieve goals her Strategy "Europe 2020" and small with a view to developing a digital single market to ensure smart sustainable and comprehensive growth in Europe, this is about a hundred events with such fundamental strategies: creation of a single digital market; increase the trust and security of users; development of high-speed Internet (broadband access); development of scientific research and innovations; further dissemination of digital literacy and information technology skills; information technology to solve social problems.

On 9.03.2021, the European Commission presented a vision and avenues for Europe's digital transformation by 2030. The Commission proposes a Digital Compass for the EU's digital decade that evolves around four cardinal points: skills, digital transformation of businesses, secure and sustainable digital infrastructures, digitalisation of public services [6].

The digital rights and principles outlined in the declaration will complement existing rights, such as those rooted in the Charter of Fundamental Rights of the EU, and data protection and privacy legislation. They will provide a reference framework for citizens on their digital rights, as well as guidance for EU Member States and for companies when dealing with new technologies. They are intended to help everyone in the EU get the most out of the digital transformation. The proposed rights and principles are:

- putting people and their rights at the centre of the digital transformation;
- supporting solidarity and inclusion;
- ensuring freedom of choice online;
- fostering participation in the digital public space;
- increasing safety, security and empowerment of individuals;
- promoting the sustainability of the digital future [6].

Digitalisation of public services establishes that 100 % of key public services must be online, 100 % of citizens have to have access to medical records with e-Health, 80 % of citizens using digital ID.

23.04.2022 – The European Parliament and EU Member States have reached a political agreement on the Digital Services Act (DSA), a proposal put forward by the Commission in December 2020. The DSA sets out an unprecedented new standard for accountability of online platforms, better protecting internet users and their fundamental rights. Once the new rules are formally adopted, the DSA will be directly applicable across the EU entering into force after 15 months or from 1.01.2024, whichever comes later [7].

Since 2001, the United Nations has prepared an annual report on the development of e-government in the world. The report considers the following indicators: e-Government Development Index, Online Service Index and its Components, Telecommunication Infrastructure Index and its Components, e-Participation.

According to the rating, in 2020 Ukraine ranks 69th in the world in terms of e-government readiness – according to the EGDI index. In 2018, Ukraine was ranked 82nd, and in 2016 at 62. The 2020 ranking of the 193 UN Member States in terms of digital government – capturing the scope and quality of online services, status of telecommunication infrastructure and existing human capacity – is led by Denmark, the Republic of Korea, and Estonia, followed by Finland, Australia, Sweden, the United Kingdom, New Zealand, the United States of America, the Netherlands, Singapore, Iceland, Norway and Japan [8].

One of the main and priority directions of the Danish government was approved on June 20, 2011 "Integrated Public Digital Strategy: Digital Road to Future Prosperity 2011–2015", which focused on the implementation of simple and effective e-services. The main goal of the strategy was to achieve it's strategic goals by 2016 that digital self-service was introduced as a normal procedure of public interaction with the public sector. "E-Welfare Strategy for 2013–2020" approved for the general public sector. The strategy aimed to increase the use of information and communication technologies, as well as welfare technologies in the provision of public services through specific initiatives, in particular in areas such as health care, care for the elderly, social services and education. E-government strategy 2011–2015 [9].

The public portal Borger.dk provides access to information and electronic services of the public sector for citizens. The portal is co-financed by the executive and local governments. Thanks to the Portal, citizens have access to information at the national level and at the level of their municipality, information about services. The portal provides an opportunity for citizens to interact effectively with the public sector.

In May 2012, a fully mobile platform for citizens was launched. In order to overcome inequalities in IT skills in Denmark, the IT-formidler.dk Portal was launched. On this Portal, every IT professional in the country can share experiences, create educational materials and constantly update them.

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"NemLog-In" single sign-on service makes it safer to provide services to citizens. Using this service, Danes make a single entry to receive a variety of services. Login is either by electronic signature or NemID.

In Denmark's e-services system, e-mail is key, giving people access to e-mails from private companies and public authorities in a single e-mail account on borger.dk.

The Virk.dk business portal was created to simplify the provision of e-business services, allowing them to report to the public sector through IT.

A community engagement app in Estonia allowed local governments to directly interact with their constituents, including through sharing COVID-19 information, posting photos and videos and even organizing virtual events. In Croatia, a "virtual doctor" is powered by artificial intelligence and developed by technology firms in cooperation with epidemiologists [8].

France launched its open data portal, data.gouv.fr, in December 2011, allowing public services to publish their own data. Etalab is a government agency under the authority of the Prime Minister, set up by a decree issued in 2011. Etalab was commissioned by the Prime Minister to design the Data.gouv.fr portal and to coordinate the reuse of public data. Etalab is now part of SGMAP (Secrétariat général pour la modernisation de l'action publique – General secretariat for the modernization of public action) [10].

France has published its first Open Government National Action Plan 2015–2017 that details its commitment to the promotion of transparent and collaborative public action under 26 Open Government commitments [11].

RIE is a key project in the modernisation of the State's information system of public action in France. It aims to pool the existing networks – and replace them – with a new unified infrastructure in order to connect all governmental sites, central and decentralised administrations in France with a target of 17 000 connected sites by 2017. The key aims of RIE are the following: simplification and streamlining of the exchange of information between ministries and departmental entities, and optimisation of services for agents and users; securitisation of the information system of the State and enhancements in the global IT security as the number of cyber-attacks grows; and optimisation of the infrastructure to provide unified service catalogues and reduce costs through mutualisation [11].

Assocfrom Germany in the fieldapplication in e-governmentinformation and communication technologiesis one of the most powerful in the EU. The "Germany on the Web" program is important in this direction which is oriented to ensure the provision of sunthemderusty services over the Internet, and that's more thousand electronic services – through the introduction of innovative technologies in the management programldocument flow.

**Conclusions.** The pandemic has reinvigorated the role of e-government. E-government in Ukraine and EU countries, as form of public administration system, contributes to increasing the efficiency and transparency of public authorities and local governments with the use of information and telecommunications technologies. There is an ongoing process of forming a new type of state aiming to needs of citizens.

Despite the fact that the processes of implementation of e-government in Ukraine began much later than in the EU, they are developing rapidly and meet today's requirements.

The Ukrainian and Danish systems of e-government have common advantages and achievements. It considered an appropriate and effective practices to use official individuals e-mail to interact with public authorities.

With the help of e-government in the EU and in Ukraine, administrative services are providedservicesusing technical means, the Internet and modernasnihtechnologies. Political participation of EU and Ukraine citizens in government development by using e-government – demonstrates its effectiveness.

The introduction of the so-called "smartphone state" in Ukraine helps in modernization of the entire system of public administration, increase efficiency, establish active interaction between state authorities, individuals and legal entities.

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# ВПРОВАДЖЕННЯ ЕЛЕКТРОННОГО УРЯДУВАННЯ В УКРАЇНІ ТА В ДЕРЖАВАХ-ЧЛЕНАХ ЄС

В умовах глобалізаційних процесів та стрімкого розвитку інформаційно-комунікаційних технологій у світі прослідковується тенденція активного розвитку електронного урядування. ООН щорічно відслідковує рівень впровадження інформаційно-комунікаційних технологій в світі. ОНН здійснює рейтингування рівня впровадження електронного урядування за показниками: індекс розвитку електронного урядування, індекс он-лайн послуг та їх компонентів, індекс телекомунікаційної інфраструктури та її компонентів, індекс участі в електронному урядуванні.

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Досліджено нормативно-правові акти ЄС, що формують стратегію впровадження електронного урядування. У межах Європейського Союзу запроваджено низку критеріїв оцінки якості впровадження електронного урядування в країнах-членах. Усі послуги поділено на чотири категорії: послуги, за допомогою яких держава одержує фінансові ресурси від громадян і бізнесу (переважно це сплата податків, внески в системі соціального страхування); реєстраційні послуги; послуги, що надаються громадянам і бізнесові на основі сплачених податків і внесків; дозволи і ліцензії. Окрім того, визначалися чотири рівні розвитку онлайнової доступності: онлайнова доступність інформації про послугу; однобічна онлайнова взаємодія (онлайнові форми); двостороння онлайнова взаємодія (онлайнове подання форми); повний цикл одержання послуги, доступний он-лайн.

Детально розглянуто напрями впровадження електронного урядування в Данії, яка зайняла перше місце в 2020 році в рейтингуванні ООН. Зокрема, висвітлено такі сервіси та портали взаємодії датчан з органами державної влади та органами місцевого самоврядування, як: borger.dk, virk.dk, NemLog-In та інші.

Зосереджено увагу на напрямках провадження електронного урядування в Україні. Розглянуто такі сфери електронного урядування, як: Дія, Електронний суд, Трембіта та інші.

Розглянуто деякі аспекти впровадження електронного урядування в Естонії, Німеччині, Франції.

Ключові слова: електронний уряд, електронне урядування, адміністративні послуги.