# PORTAL "DIIA" AS AN ELEMENT OF E-GOVERNANCE IN UKRAINE: ADVANTAGES AND DISADVANTAGES

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**Abstract.** This article is concerned with one of the most pressing issues of today's world, namely, e-government. The article defines e-government and the opportunities that arise in connection with its implementation. Particular attention is paid to the situation regarding e-governance in Ukraine, using the example of the Diia portal, as the author, a citizen of Ukraine, was interested in studying the situation in her country.

The definition of the Diia portal and the legal status of this system are described in detail. A list of legal acts regulating issues related to Diia is provided. The main achievements and novelty of this application globally are outlined.

The main problems relating to the functioning of the Diaa application are discussed, namely: 1) the problem of accessibility for the population; 2) the lack of a sufficient number of analogues abroad, which in turn leads to experimental ways of introducing certain services; 3) security issues, which include the threat of data leaks, a lack of public trust and the creation of artificial analogues of the Diia application with the aim of falsifying documents. I suggest ways to solve these

problems that I consider appropriate and effective.

The need to adopt the experiences of leading countries who have developed such portals is emphasized. Therefore, the example of Estonia, with its eesti.ee portal, was reviewed and analysed. This central platform provides various public services to citizens and businesses, enabling access to a wide range of public services online. The experience of South Korea is also discussed, as it has an advanced e-government system that uses innovative technologies, including artificial intelligence. One of the key elements of this system is the GovNet portal. Ukraine should definitely investigate such examples, as they could be the beginning of solving the existing problems and shortcomings in the country's e-government system.

**Keywords**: e-government, public services, Diia portal, Diia app, GovNet portal, eesti.ee portal.

## Introduction

The relevance of the issue is due to the development of new technologies and their gradual introduction into all spheres of life, including administrative ones. The introduction of e-government opens up new opportunities for all of us. For example, we can observe the simplification of administrative services, as well as improvements in their quality and speed. However, given that e-government is a relatively new institution, it has not yet been fully formed and researched. For example, we still do not know what challenges and consequences it may bring in the future.

The main purpose of this research was to establish what problems exist in relation to e-governance in Ukraine. A further purpose of this paper was to study the state of e-governance in Ukraine and Europe and the prospects for its development and improvement in terms of administrative services.

The object of this research article was to analyse e-governance in Ukraine,

based on the Diia portal as an example, as well as practices in other countries.

In writing this research article, I used the methods of analysis and comparison.

This topic was previously studied by such scholars as Rachel Silcock, who described the concept of e-government. Anna Tsyganenko studied practices in other countries and compared them with the Ukrainian situation. Zhyla Hanna considered the introduction of digital technologies and their impact on everyday life in terms of the dematerialisation of services and administrative documents. In their papers, Bilous Yulia and Ogloblin Victoria comprehensively studied the problems of organising the provision of public and administrative services and considered possible ways to improve them. David Ramiro Troitiño, Viktoria Mazur and Tanel Kerikmäe analysed the overall impact of e-governance in the European Union and explored the potential of e-government fostering European integration to a new level, given the new digital possibilities.

In writing this article, I do not refer to case law due to its practical absence. The subject matter is relatively new to Ukrainian legislation, so no relevant court practice has yet been formed at the level that would be desirable.

## 1. The concept of e-government

In today's realities, we can observe the rapid development of the latest technologies and their introduction into our everyday lives. One of the most important, I believe, is the introduction of e-government. In simple terms, e-government is the use of technology to enhance the access to and delivery of government services to benefit citizens, businesses and employees. It has the power to create a new mode of public service, in which all public organisations deliver a modernised, integrated and seamless service for their citizens. The relationship is no longer just a one-way 'us-versus-them' proposition; rather, it is about building a partnership between governments and citizens[1]. David Ramiro Troitiño, Viktoria

1 Rachel Silcock, "What is e-government?", *Hansard Society for Parliamentary Government*, (2001): 88.

Mazur and Tanel Kerikmäe emphasise in their work that e-governance, defined as the use of information and communication technology (ICT) to enhance the efficiency and effectiveness of governance processes, has emerged as a critical tool for modernising public administration worldwide. Within the European Union, e-governance represents more than just a technological advance; it serves as a strategic tool for advancing the goals of European integration and promoting good governance practices[2]. So, it is intended to greatly improve the quality of public services. This is manifested primarily in the simplification of administrative services, the accessibility and speed of their provision, increased transparency and a reduction in the risk of corruption. Ukraine only started implementing e-government relatively recently, but in a short period of time, it has managed to become one of the leaders among the countries of the world, as evidenced by the Diia portal.

### 1.1. The Diia portal: legal regulation

What does the Diia portal look like? The Diia portal is an organised set of ICT systems that operate as a whole and in interaction with other ICT systems[3]. It brings the relationship between the state and its citizens into a new dimension: dematerialised and simplified. The key concepts relate to access to administrative documents via a mobile application and providing an administrative services portal for individuals and professionals. The main goal is to make 100% of administrative services available online[4]. The legal status of the Diia portal is regulated by a number of legal acts. Article 17 of the Law of Ukraine 'On

2 David Ramiro Troitiño, et al., "E-governance and integration in the European union", *Internet of Things* Volume 27 (October 2024), https://doi.org/10.1016/j.iot.2024.101321.

3 Issues of the Unified State Web Portal of Electronic Services and the Register of Administrative Services: Resolution of the Cabinet of Ministers of Ukraine No. 1137 of December 4, 2019, https://zakon.rada.gov.ua/laws/show/1137-2019-%D0%BF#n15.

4 Zhyla Hanna, "Digital economy: essence and challenges", *International scientific journal "Grail of Science"*, Volume 39, (2024): 79-83, https://archive.journal-grail.science/index.php/2710-3056/article/view/2302/2327.

Administrative Services' stipulates that the provision of administrative services in electronic form and access to information about administrative services by applicants using the internet must be provided by the Unified State Web Portal of Electronic Services, which is the official source of information on the provision of administrative services in Ukraine[5]. The Regulation on the Unified State Web Portal of Electronic Services, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 1137 of December 4, 2019, is key to the functioning of the Diia portal. Clause 5, subparagraph 1 of this regulation states that one of the main tasks of the Diia portal is to provide electronic public services, in particular, integrated electronic public services, to provide them in an automatic mode with the receipt and use, if necessary, of information from national electronic information resources, or other ICT systems necessary for the provision of such services[6].

This application eliminates the need for paper versions of documents. Furthermore, these electronic versions have the same status as paper versions. The Law of Ukraine 'On Peculiarities of Provision of Public (Electronic Public) Services' No. 1689-IX of July 15, 2021, fully equates e-documents with their paper or plastic counterparts, making Ukraine the first country in the world with official electronic documents available via a smartphone[7]. Such documents include passports, international passports, individual tax numbers, educational documents such as certificates and diplomas, birth certificates, and driving licences. In addition, Diia allows you to perform various public services online, including paying taxes, signing documents with an e-signature, and even registering a marriage, which is the most recent option added and is unlikely to be the last.

5 About administrative services: Law of Ukraine No. 5203-VI of September 6, 2012, https://zakon.rada.gov.ua/laws/show/5203-17#n175.

6 Issues of the Unified State Web Portal of Electronic Services and the Register of Administrative Services: Resolution of the Cabinet of Ministers of Ukraine No. 1137 of December 4, 2019, https://zakon.rada.gov.ua/laws/show/1137-2019-%D0%BF#n15.

7 On Peculiarities of Provision of Public (Electronic Public) Services: Law of Ukraine No. 1689-IX of July 15, 2021, https://zakon.rada.gov.ua/laws/show/1689-20#Text.

### 1.2. The main problems encountered by Diia

However, along with simplification, we also face certain challenges. The first and most common is the issue of accessibility. Most of the population of Ukraine is physically unable to use the services of the Diia app. This is due to two factors. The first is the lack of appropriate technology, and the second is the use of old-style documents instead of biometric documents. The first reason is due to the fact that the older generation often does not use modern smartphones that could support such an application, which makes it impossible for them to use it. The second reason arises because there are currently two types of documents in use in Ukraine: biometric and paper. While there are no problems with biometric documents (they can easily be pulled up into the Diia app with all the necessary information), with paper documents, it is not so easy. They can still be found in the app, but without an individual's photograph, so, for example, all of the information about a person's passport and driving licence will be displayed in the app, but without their photo. Such documents are still de jure recognised as valid at the state level, but de facto law enforcement agencies may not accept them, as they may doubt whether they are genuine documents. Given that biometric documents were introduced relatively recently, and there is no obligation to change old paper versions to biometric ones, it is likely that this problem will exist for decades to come. While the latter case could be remedied by introducing the compulsory replacement of paper documents with biometric versions, it is virtually impossible to fix the former factor.

I would also like to highlight the lack of sufficient appropriate analogues abroad as another problem. On the one hand, being a pioneer is a major advantage because it brings recognition and gives you the role of being a leader in a certain field; however, on the other hand, developing and introducing new ideas can have unpredictable consequences. Thus, some of Ukraine's public services

have been implemented via e-governance on an experimental basis and are often not perfect at the first attempt, as was the case with marriage registration through the Diia app. The Resolution of the Cabinet of Ministers of Ukraine of March 29, 2024, No. 345, approved the procedure for implementing a pilot project on state registration of marriage in electronic form[8]. This procedure works as follows. An individual submits a request to their partner directly through the Diia application and waits for a response within 14 days. Following a positive response, it is necessary to take part in a ceremony via a video call with a civil registry officer and sign a marriage certificate with an electronic signature. However, it is important that the individual's partner meets certain requirements, namely, not to be of the same sex (because same-sex marriage remains prohibited in Ukraine), they must be a citizen of Ukraine, and they must be 18 years old on the day of state registration of marriage (although in certain cases marriage is allowed from the age of 16 years in Ukraine, it can only be done through a court, not online via the Diia application). Following the launch of this service, the app became overloaded. One of the reasons was that many people tried to send a proposal of marriage to people who did not meet the requirements of the law (same sex, minors), which overloaded the system. However, the main problem faced by people who wished to get married was the lack of free appointments for the civil registration video call. The demand was so great that many people received an error message or a date that was a year in the future. This was problematic because the main driver in creating this service was the military. In addition, the app currently only has a marriage function, but not a divorce function, which complicates the situation. The most likely scenario is an increase in the number of traditional divorces in Ukraine and an even greater burden on the relevant institutions than before. Therefore, the

8 On the implementation of a pilot project on state registration of marriage in electronic form: Resolution of the Cabinet of Ministers of Ukraine №345 of March 29, 2024, https://zakon.rada.gov.ua/laws/show/345-2024-%D0%BF#Text.

best solution to this problem would be to develop the concept of online divorce and improve the existing functions to optimise the application.

Another, and probably the most fundamental, problem is the issue of security, as the protection of personal data is an extremely important and, at the same time, the most vulnerable aspect. A section of the population is sceptical about this application, believing that the state can control them in this way. The reasons for this fear are somewhat justified by the fact that the Diia app processes and stores personal data. This is explicitly stated on their official website[9]. Clause 7 reads as follows: 'Personal data is stored by the Ministry of Digital Transformation of Ukraine for the duration of the personal data subject's electronic cabinet on the Diia portal, but not longer than 5 years, unless the legislation provides for a different period of storage'. Although in the next paragraph they assure Diia portal users that their personal data received from the registers is not stored, the data-in-transition approach is used, according to which data from the registers is transferred and stored on the user's device, not on a server, and such personal data is deleted along with the deletion of the electronic cabinet[10]. However, the public's lack of trust in the state plays a major role. Information leaks are also possible in the case of fraudulent actions. After all, Diia may not store data, but this does not mean that it is secure. Cyber attackers are diverse and very inventive, first of all, the app has access to the registry, and this may be enough.

Furthermore, there have already been attempts to create a fake version of the Diaa application to falsify documents. Information about the fake software was first disseminated in the media on October 23, 2021. The fraudsters claimed that the fake was of such high quality that 'there are no questions when they show a document from this application'. The sellers of the fake app offered a certain set of documents: a student ID, a passport of a citizen of Ukraine, taxpayer cards and

9 Notification of personal data processing: electronic resource, https://diia.gov.ua/policy.

10 *Ibid*.

COVID certificates. Users could enter and edit the data themselves. Law enforcement officers identified the offender, a 21-year-old resident of Zaporizhzhia. He faces up to six years in prison for developing a fake copy of the app. Law enforcement officers have already blocked all channels where the fake app was distributed and identified people who had already purchased and used the fake app[11]. It is interesting to note that the detained developer of the fake application was given a chance to reform and offered an internship at the Ministry of Digital Transformation before the trial. However, the court has not yet heard the case. But this is not the only case of counterfeiting this app; more and more similar cases have been reported recently. It is encouraging that none of the counterfeiters has been able to reproduce an exact copy of the application, but the state would do well to develop extremely effective data protection and verification measures to prevent negative consequences.

## 2. Possible ways of solving the problem

Among the possible ways to improve the aforementioned shortcomings of the Diia app, I can single out gradualism. The developers are trying to add all possible public services rapidly and chaotically, which does not indicate that their provision is of high quality. New products should be introduced gradually. In addition, it would be useful to learn from the experience of other countries in developing similar portals. One of the best practices that can teach us something is Estonia's eesti.ee portal. This central platform provides various public services to citizens and businesses, providing access to a wide range of public services online. The portal allows users to carry out various transactions and receive various services from government agencies without visiting offices or applying in person. The use of electronic signatures and identification is a key element of this system,

11 Yevheniia Kostina, "A fake "Diya" has appeared in Ukraine. How it differs from the real one", https://zaborona.com/v-ukrayini-zyavylasya-fejkova-diya-chym-vona-vidriznyayetsya-vid-spravzhnoyi/.

ensuring the security and authenticity of interactions between citizens and government agencies via the internet. This approach helps to improve the quality of public services, increase the efficiency of government agencies and reduce bureaucratic procedures for citizens and businesses[12].

The experience of South Korea is also interesting. This country has an advanced e-government system that uses innovative technologies, including artificial intelligence. One of the key elements of this system is the GovNet portal, which is a centralised online platform that combines various government resources and services in one place. This portal provides access to a variety of public services, as well as opportunities for electronic interaction with government bodies and agencies. However, the most interesting and innovative aspect of South Korea's e-government system is the use of artificial intelligence. This is being implemented to automate data processing, analyse information and support decision-making. It also allows for fast and efficient processing of citizen requests and optimisation of the work of government agencies. The GovNet portal also contributes to improving the transparency and openness of government agencies, as it provides citizens with access to various information resources and data about government activities. This helps to increase public trust in the government and promotes public involvement in decision-making processes. In general, South Korea's approach to e-government, in particular the use of artificial intelligence, is probably the best example of how modern technologies can help improve the work of government agencies and increase citizen satisfaction with public services[13]. Ukraine should definitely look to such examples, as they can help us begin to solve the existing problems and shortcomings in our own e-government system.

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12 Anna Tsyganenko, "Implementation of e-government in the of state authorities: best practices abroad", *Materials of the VIII All-Ukrainian remote scientific and practical conference "Information and document in the modern scientific discourse"*, May 16, 2024. Ivano-Frankivsk: 71, https://nung.edu.ua/sites/default/files/2024-06/Zbirnyk_InfDoc_May%2016_2024_kaf_DID.pdf#page=72.

13 Ibid., 72-73.

## Conclusions

To summarise, one of today's most important achievements is the introduction of e-government. This is the use of ICT to improve the efficiency and effectiveness of management processes. In other words, e-government is intended to greatly improve the quality of public services. In this paper, I paid special attention to the experience of my country, Ukraine, and specifically the Diia portal. The Diia portal is an organised set of ICT systems that operate as a whole and interact with other ICT systems.

Although Ukraine has made significant progress in e-governance, particularly by introducing the first electronic documents recognised at the state level and providing a variety of public services, the Diia portal is still not perfect. There are certain drawbacks, including: 1) the problem of accessibility for the population; 2) the lack of sufficient analogues abroad, which in turn leads to experimental ways of implementing certain services; 3) security issues, which include the threat of data leaks, a lack of trust among the population and the creation of artificial analogues of the Diia application for the purpose of falsifying documents.

However, as of today, Ukrainian society is not ready to completely abandon physical versions of documents and public services and switch to a full e-government system. This will take time, probably more than a decade.

# PORTALAS "DIIA" KAIP E. VALDYMO ELEMENTAS UKRAINOJE: PRIVALUMAI IR TRŪKUMAI

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**Santrauka.** Straipsnis skirtas vienai aktualiausių šiandienos pasaulio problemų – elektroninei valdžiai. Straipsnyje akcentuojamas elektroninės valdžios apibrėžimas ir galimybės, atsirandančios ją įgyvendinant. Ypatingas dėmesys skiriamas e. valdymo situacijai Ukrainoje Diia portalo pavyzdžiu, nes autorė, būdama Ukrainos pilietė, domėjosi padėtimi savo šalyje.

Nurodomos pagrindinės problemos, kurios iškyla veikiant aplikacijai 'Diia': 1) gyventojų prieinamumo problema; 2) analogų užsienyje trūkumas, o tai savo ruožtu lemia eksperimentinius tam tikrų paslaugų teikimo būdus; 3) saugumo klausimai, apimantys duomenų nutekėjimo grėsmę, visuomenės pasitikėjimo stoką ir dirbtinių Diia programos analogų kūrimą, siekiant suklastoti dokumentus. Kartu autorė siūlo jų sprendimo būdus, kuriuos laikau tinkamais ir efektyviais.

Autorius pabrėžia, kad kuriant tokius portalus reikia perimti pirmaujančių šalių patirtį šioje srityje. Dėl to autorė apžvelgė ir išanalizavo Estijos pavyzdį su portalu eesti.ee – ši centrinė platforma teikia įvairias viešąsias paslaugas piliečiams ir verslui, suteikdama prieigą prie plataus spektro viešųjų paslaugų internetu, taip pat Pietų Korėjos patirtį – apibrėžia pažangi elektroninės valdžios sistema, kurioje naudojamos inovatyvios technologijos, įskaitant dirbtinį intelektą. Vienas iš pagrindinių šios sistemos elementų yra GovNet portalas. Ukraina tikrai turėtų pažvelgti į tokius pavyzdžius, nes jie gali būti mūsų elektroninės valdžios esamų problemų ir trūkumų sprendimo pradžia.

**Reikšminiai žodžiai:** e. valdžia, viešosios paslaugos, Diia portalas, Diia programėlė, GovNet portalas, eesti.ee portalas.