The Power of Digitization: Transforming Ukraine's Customs Service

Artem Nazarko[1] & Oleksii Fedotov[2]

The article analyzes the specifics of implementing the processes of digital development, digital transformation, and digitalization of the State Customs Service of Ukraine. The article scrutinizes the legal norms regulating the digital transformation of the State Customs Service of Ukraine to ensure qualitatively new, convenient, and accelerated processes of customs affairs in Ukraine. The article analyzes the trend formulated at the normative level regarding the fulfilment by Ukraine of the international legal obligations of the State Customs Service of Ukraine. The article emphasizes that the implementation of relevant measures should be carried out with the help of timely corrections of national legislation. The article focuses on the fact that the world trends of digitalization set new tasks to ensure the functioning of modern, accessible, managed, and cyber-secure electronic information systems that work under the fundamental principles of customs affairs effectiveness. The article outlines the directions of further implementation of the processes of digital development, digital transformation, and digitalization of the State Customs Service of Ukraine in accordance with European and international requirements in the context of the digital strategy of the development of society. The authors conclude that a new cyber-physical system began to form due to innovations in Ukraine. All elements and participants continuously interact with each other, ensuring the constant optimization of the integrated digital system.

Keywords: customs, digital transformation, digitalization, information technology, electronic customs procedures, automation, Customs Service of Ukraine

1. Introduction

In the conditions of global transformative transformations, the impact of pandemic challenges and threats on the way to establishing Ukraine in the world as a solid and authoritative European state, capable of providing favorable external conditions for the sustainable development and realization of its potential, the economy and Ukrainian society,[3] the level of digitization plays an essential role public administration in general

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[1] Attorney-at-law, PhD Research fellow at London South Bank University, United Kingdom. He is a doctoral student at National University Odesa Law Academy, Ukraine. He holds a Master in International Law from the National University Odesa Law Academy, Ukraine and a Master in Economics at Admiral Makarov National University of Shipbuilding, Ukraine. Emails: s4239455@lsbu.ac.uk & nazarkoaa@onua.edu.ua.

[2] (Dr) Professor of Customs Law at National University Odesa Law Academy, Ukraine. He holds Ph.D. in Customs Law from National University Odesa Law Academy. He has 20 years' experience in teaching customs law. He now teaches courses and performs research in customs law, public administration in customs trand anti-smuggling law. Email: fedotov_ap@ukr.net.

[3] Order n° 448/2021 of the President of Ukraine of 30 Jul. 2021 "On the Strategy of Ukraine's Foreign Policy", Official Gazette of Ukraine, 2021(70), https://zakon.rada.gov.ua/laws/show/448/2021#Text (accessed 27 April 2023).

and the level of digital development, digital transformations and digitalization of the State Customs Service of Ukraine, in particular. Meanwhile, a comprehensive assessment of legislative innovations regarding the use of effective informatization technologies of customs authorities in order to create favorable conditions for the movement of goods across the state border by simplifying, speeding up, and improving customs clearance and control procedures indicates the presence of several not only positive practices but also some issues that need an urgent solution. In the context of the above, it should be noted that despite modern trends, there is currently an urgent need to improve the technical, institutional, and infrastructural direction of reforming the customs authorities to activate the processes of digitization of the customs policy of Ukraine, as well as to analyze the security, fiscal and economic effects of digital transformations of customs procedures.

The authors should note that after analyzing the scientific array related to the research topic, none of the researchers paid enough attention to the issues of the instrumental specificity of implementing the processes of digital development, digital transformation, and digitalization of the State Customs Service of Ukraine. The vast majority of theoretical studies concern only the general issues of "implementation of digital development, digital transformation, and digitalization," and only a few studies are concrete and specific. The process of large-scale modernization and development of the IT component of the State Customs Service of Ukraine, which began, in particular, within the framework of the implementation of the Concept of creating a complex multifunctional system of "Electronic Customs",[4] continued within the Strategic Plan of digital development, digital transformations and digitalization of the State Customs Service of Ukraine[5] and continues to this day. It is the basis of several recent changes related not only to the creation of modern information infrastructure of customs authorities through introducing new IT solutions for the modernization of services and work processes of customs authorities directly but also in general to a fundamental change of the national customs system. Digitalization requires not only the use of digital and computer technologies but also the radical transformation of all spheres of deployment of management processes based on the

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[4] Order n° 1236-p of the Cabinet of Ministers of Ukraine of 17 Sep. 2008 "On the approval of the Concept of creating a complex multifunctional system "Electronic Customs", Official Gazette of Ukraine, 2008(71), https://zakon.rada.gov.ua/laws/show/1236-2008-%D1%80#Text (accessed 27 April 2023).

[5] Order n° 435 of the Ministry of Finance of Ukraine of 15 Dec. 2022 "On the implementation of the decision of the Information Technology Management Committee in the state finance management system" https://customs.gov.ua/web/content/7700?unique=40a67d2a5fe943e39d5d65dd3f7d69a1e4c18275&download=true (accessed 27 April 2023).

latest digital technologies. Thus, the article aims to investigate the instrumental specifics of implementing *digital development* processes, *digital transformation*, and *digitalization* of the State Customs Service of Ukraine.

2. From Paper to Pixels: A Look Back at Customs Digitalization

Chronologically, the introduction of customs information technologies in Ukraine began in 1992. Thus, the State Customs Service of Ukraine created the Unified Automated Information System (hereinafter referred to as: UAIS), which combined all software and technical components necessary to automate customs clearance and control processes.[6] At the same time, the Automated system of customs clearance "Inspector" operating within it covered all processes of customs control both inside the country and at the customs borders.[7] The UAIS includes the following elements:[8]

— the Automated Information System "Center" (AISC);

— the Automated Customs Clearance System "Inspector" (ACCSI);

— the Complex System of Information Protection (CSIP), which should ensure the protection of information resources in automated systems that are part of UAIS through the implementation of a complex of technical, software, cryptographic, organizational, and other measures and means of a comprehensive system of information protection aimed at ensuring confidentiality, integrity, availability, manageability of information;

— the departmental telecommunication network of customs authorities, which provides information exchange between elements of the UAIS;

— the local computer networks of customs authorities, specialized customs institutions, and organizations;

— the mail system of the State Customs Service of Ukraine with access to the Internet involved in the process of electronic customs declaration in the implementation of the "Single Window" mechanism. It is an integral part of the UAIS. It was created for the automation of information exchange between structural divisions of the State

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[6] Order n° 1341 of the State Customs Service of Ukraine of 04 Nov. 2010 "On the approval Unified Automated Information System" https://zakon.rada.gov.ua/rada/show/va341342-10#Text (accessed 27 April 2023).

[7] Order n° 48 of the State Customs Service of Ukraine of 25 Jan. 2007 "On the introduction into experimental and permanent operation of Automated System of Customs Clearance Inspector", https://zakon.rada.gov.ua/rada/show/va341342-10#Text (accessed 27 April 2023).

[8] Art. 1.2. UAIS.

Customs Service of Ukraine, as well as for correspondence and information exchange with state authorities, other legal entities, and individuals;[9]

— the administrative information subsystem that ensures the management of customs authorities at all levels, control, and compliance with legality during the implementation of customs affairs;

— the electronic document management system, which provides automatic forwarding, registration, and processing of documents in customs authorities, specialized customs institutions, and organizations, control over their execution, and maintenance of an electronic archive of documents;

— the cryptographic information protection subsystem, which should ensure secure data exchange between information systems and automated workplaces of the structural divisions of the State Customs Service of Ukraine;

— the Automated System of Electronic Digital Signatures (ASEDS) intended for technological support of providing electronic digital signature services in the electronic document flow of UAIS users.[10]

In 2006, the State Customs Service of Ukraine adopted the Concept of creation, implementation, and development of the electronic declaration of goods system. This Concept established the necessary conditions for using digital and information technologies of electronic document circulation with the help of an electronic digital signature. The Concept also made it possible to optimize electronic declaration processes between customs authorities and business entities.[11] We should note that the legal principles of using an electronic digital signature in electronic documents are currently defined in the Law of Ukraine "On Electronic Trust Services" and are technologically implemented by providing electronic trust services under this Law.[12]

The next step in the electronic declaration was the approval of the Concept of creating a complex multifunctional system "Electronic Customs" in 2008. This Concept initiated the development of a modern technological structure that would provide processes of

[9] Order n° 13 of the State Customs Service of Ukraine of 20 Jan. 2020 "On the approval of the Regulation on the procedure for using e-mail of the State Customs Service of Ukraine with access to the Internet", Official Gazette of Ukraine, 2020(15).

[10] Order n° 1341 of the State Customs Service of Ukraine of 04 Nov. 2010 "On the approval Unified Automated Information System", https://zakon.rada.gov.ua/rada/show/va341342-10#Text (accessed 27 April 2023).

[11] Order n° 1467 of the State Customs Service of Ukraine of 13 Dec. 2010 "On the approval of the Procedure for the use of an automated system of analysis and risk management during customs control and customs clearance of goods with the use of a cargo customs declaration", Official Gazette of Ukraine, 2011(12), https://zakon.rada.gov.ua/laws/show/z0180-11#Text (accessed 27 April 2023).

[12] Law n° 2155-VIII of Verkhovna Rada of Ukraine of 5 Oct. 2017 "On electronic trust services", Official Gazette of Ukraine, 2017(91), https://zakon.rada.gov.ua/laws/show/2155-19?lang=en#Text (accessed 27 April 2023).

centralized monitoring and management of databases of the State Customs Service of Ukraine, servers, workstations equipped with automated workplaces of customs officials, other telecommunications equipment, as well as systems that enable management of customs control technical instruments.[13]

Also, an important step was the adoption of the Concept of integrating system-forming components of technical instruments of customs control with the Automated Customs Clearance System (ACCS) in 2012. This program document establishes the purpose, key goals, and priority measures of integrating the system-forming components of technical instruments of customs control and the automated customs clearance system. In addition, the Concept outlines the basic principles of information and telecommunication, personnel, and special technical support of the UAIS.[14]

In 2010, the State Customs Service of Ukraine issued Order No. 634, which put into permanent use the Software complex "Information and search system for processing and analyzing price information when determining the customs value of goods moving across the customs border of Ukraine."[15] This step was taken to improve automated information management in the UAIS. This Software complex forms an information array consisting of the corresponding graphs of electronic copies of the customs declaration relating to the customs value of goods. At the same time, access to this software and information complex is available only to officials of the customs authorities, who control the correctness of determining the customs value of goods. At the same time, the issue of the use of price information by officials of the customs authorities of Ukraine is provided for by the Customs Code of Ukraine.[16]

In 2015, the Ministry of Finance of Ukraine approved the Procedure for using the Automated Risk Management System (ASRM).[17] The ASRM was developed to ensure the

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[13] Order n° 1236-p of the Cabinet of Ministers of Ukraine of 17 Sep. 2008 "On the approval of the Concept of creating a complex multifunctional system "Electronic Customs", Official Gazette of Ukraine, 71, https://zakon.rada.gov.ua/laws/show/1236-2008-%D1%80#Text (accessed 27 April 2023).

[14] Order n° 191 of the State Customs Service of Ukraine of 28 Mar. 2012 "On the Concept of integration of system-forming components of technical and special means of customs control with the automated system of customs clearance", Customs Gazette of Ukraine, 2012(8), https://zakon.rada.gov.ua/rada/show/v0191342-12#Text (accessed 27 April 2023).

[15] Order n° 634 of the State Customs Service of Ukraine of 15 Jun. 2010 "About the introduction of software and information complexes into permanent operation", Customs Gazette of Ukraine, 2010(13), https://zakon.rada.gov.ua/rada/show/v0634342-10#Text (accessed 27 April 2023).

[16] Law n° 4495-VI of Verkhovna Rada of Ukraine of 13 Mar. 2012 "The Customs Code of Ukraine", Official Gazette of Ukraine, 2012(32) https://zakon.rada.gov.ua/laws/show/4495-17?lang=en#Text (accessed 27 April 2023).

[17] Order n°684 of the Ministry Of Finance of Ukraine of 31 Jul. 2015 "On the approval of the Methodological recommendations for the work of officials of customs and tax authorities on the risk management and control over the correctness of the determination of the customs value of goods moving across the customs border of Ukraine", Official Gazette of Ukraine, 2015(70), https://zakon.rada.gov.ua/laws/show/z1021-15#Text (accessed 27 April 2023).

selectivity of customs control through the use of a risk management system, improve the efficiency of the work of the State Customs Service during customs control, speed up customs clearance through the use of risk management methods, including risk analysis using information technologies, and targeting. We want to emphasize that during the application of ASUR or other UAIS information systems for customs control and customs clearance of goods, the list of customs formalities is formed with the help of information technologies based on the results of automated control using the risk management system. The list of customs formalities can also be supplemented based on the results of combined control by risk assessment by documentary risk profiles, orientations, lists of risk indicators, methodological recommendations, including the results of the analysis of documents submitted for customs control, the results of the application of technical means of customs control, as well as based on the requirements of normative legal acts regulating the procedure for carrying out customs control and customs clearance of goods.

3. The Current State of Digitization of the State Customs Service

Speaking directly about the specifics of the implementation of the processes of digital development, digital transformation, and digitalization of the State Customs Service of Ukraine at the current stage, it should be noted that before the adoption of Law of Ukraine No. 2510-IX[18] , the norms of the Customs Code of Ukraine contained only a mention of information technologies used in customs affairs. The Customs Code of Ukraine did not reveal their essence but only determined that customs affairs are carried out using information technologies, including those based on information and telecommunication systems, which function at the national and international levels. The Customs Code of Ukraine emphasized that the implementation of information and telecommunication systems is carried out in accordance with international and Ukrainian standards.[19]

At the same time, the Law of Ukraine No. 2510-IX brought the provisions of the Customs Code of Ukraine into line with European legislation, in particular, regarding transit, temporary storage, and guarantees, introduced the European system of decision-

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[18] Law n° 2510-IX of Verkhovna Rada of Ukraine of 15 Aug. 2022 "On amendments to the Customs Code of Ukraine regarding some issues of implementation of Chapter 5 of Section IV of the Association Agreement between Ukraine, on the one hand, and the EU, the EAEC, on the other hand", Official Gazette of Ukraine 2022(71), https://zakon.rada.gov.ua/laws/show/2510-20#Text (accessed 27 April 2023).

[19] Law n° 4495-VI of Verkhovna Rada of Ukraine of 13 Mar. 2012 "The Customs Code of Ukraine", Official Gazette of Ukraine, 2012(32) https://zakon.rada.gov.ua/laws/show/4495-17?lang=en#Text (accessed 27 April 2023).

making by customs authorities, the procedure for considering complaints and their administrative appeal, the final use procedure, the possibility to use simplifications for enterprises with negative net assets and reduced solvency indicators for the "stable financial condition" criterion was introduced.[20] In addition to introducing several advantages and simplifications, we think these changes will facilitate effective feedback between business entities and customs. However, such changes bring many challenges for the State Customs Service of Ukraine, particularly reengineering internal processes and creating a new organizational structure.

Outlining the dynamics of the implementation of the Agreement between Ukraine and the EU, we want to note that Ukraine's accession to the Convention on the Common Transit Procedure,[21] the Convention on the Simplification of Formalities in Trade in Goods[22] was an essential step in fulfilling Ukraine's obligations under the Association Agreement with the EU and bringing national legislation into line with EU customs legislation. At the same time, Ukraine's introduction of a common transit regime based on the New Computerized Transit System (NCTS), the Authorized Economic Operator (AEO), and the creation of new IT tools have become vital trends in digitalization, which is based on the implementation of European digital practices in daily activities of the State Customs Service of Ukraine.

Ukraine's accession to the international application of the New Computerized Transit System (NCTS) in symbiosis with the re-engineering of customs simplification systems and the Authorized Economic Operator (AEO)[23] ensures the rapid passage of goods through customs in the common transit mode, which is especially relevant in today's realities. The advantage of using one transit document within the framework of the Convention on the common transit procedure is the possibility of exchanging customs information between each of the 36 countries in real-time. This makes it possible to ensure proper control over the transit movement of goods at each stage of transportation, and

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[20] Law n° 2510-IX of Verkhovna Rada of Ukraine of 15 Aug. 2022 "On amendments to the Customs Code of Ukraine regarding some issues of implementation of Chapter 5 of Section IV of the Association Agreement between Ukraine, on the one hand, and the EU, the EAEC, on the other hand", Official Gazette of Ukraine, 2022(71), https://zakon.rada.gov.ua/laws/show/2510-20#Text (accessed 27 April 2023).

[21] Convention on the Common Transit Procedure of 20 May 1987, Official Gazette of Ukraine, 2022(80), https://zakon.rada.gov.ua/laws/show/994_001-87#Text (accessed 27 April 2023).

[22] Convention on the Simplification of Formalities in Trade in Goods of 20 May 1987, Official Gazette of Ukraine, 2022(80), https://zakon.rada.gov.ua/laws/show/987_012#Text (accessed 27 April 2023).

[23] Law n° 141-IX of Verkhovna Rada of Ukraine of 16 Apr. 2022 "On amendments to the Customs Code of Ukraine regarding some issues of the functioning of authorized economic operators (AEO)", Official Gazette of Ukraine, 2022(54), https://zakon.rada.gov.ua/laws/show/141-IX#Text (accessed 27 April 2023).

reduce cargo delays at the border due to the increased effectiveness of risk analysis and determination of the list of necessary control procedures for goods even before they arrive at the customs border of Ukraine, reduce the cost of customs procedures, and form safe chains supply of goods, provide significant simplification of customs formalities for enterprises with a high degree of trust.

Meanwhile, the creation of the updated Automated Risk Management System (ASRM 2.0) is ensured in 2021 with the help of international technical assistance.[24] The updated Automated Risk Management System (ASRM 2.0) allows transferring a significant part of data into digital format and processes into online mode, immediately finding out the sources of risks that led to the generation of customs formalities, instantly assessing the effectiveness of risk profiles, and, if necessary, update the profile promptly or terminate its operation. Moreover, the Automated Customs Clearance System "Inspector" (ACCSI)[25] is also integrated with the NCTS system. We want to emphasize that the NCTS is mandatory for the EU member states when carrying out customs procedures related to external and internal transit. At the same time, with the beginning of the functioning of NCTS in Ukraine, enterprises still have the option of using either NCTS or the national system for controlling the delivery of goods. After bringing national legislation into line with European regulations, NCTS should become a single system for controlling the transit movements of goods.

In May 2021, the Cabinet of Ministers of Ukraine issued Resolution No. 462, obliging the State Customs Service of Ukraine to develop software and provide access to depersonalized information for statistical purposes and information on specific export-import operations.[26] To implement the requirements of Resolution No. 462, the State Customs Service of Ukraine issued the following orders:

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[24] Order n° 104 of the State Customs Service of Ukraine of 17 Feb. 2021 "On introduction of the Automated Risk Management System (ASRM 2.0)", Customs Gazette of Ukraine, 2021(3).

[25] Order n° 99 of the State Customs Service of Ukraine of 16 Feb. 2021 "On introduction of the Automated Customs Clearance System "Inspector" (ACCSI)", Customs Gazette of Ukraine, 2021(3).

[26] Decree n° 462 of the Cabinet Of Ministers of Ukraine of 12 May 2021 "On the approval of the Procedure for providing and publishing depersonalized summary information for statistical purposes and depersonalized analytical information regarding specific export-import operations and other information on customs issues", Official Gazette of Ukraine, 2021(40), https://zakon.rada.gov.ua/laws/show/462-2021-%D0%BF#Text (accessed 27 April 2023).

— "On the introduction into the experimental operation of the access interface to depersonalized information for statistical purposes and information on specific export-import operations";[27]

— "On the approval of the Regulation on the access interface to depersonalized information for statistical purposes and information on specific export-import operations";[28]

— "On the approval of the Regulation on the management analytics module".[29]

The publication of depersonalized information regarding specific export-import operations, including information related to the customs value of goods, began on June 16, 2021.

As part of the updating of the software "Official Portal of the State Customs Service of Ukraine," the conditions for the transfer of permit documents by executive authorities exclusively through the Unified State Information Web Portal "Single-window for International Trade" (USIWP) and their use during customs control and customs clearance. The USIWP also includes the functionality of the software "Customs Register of Intellectual Property Object" (CRIPO). [30]

To date, the State Customs Service has developed and put into trial operation the software "Register of Customs Brokers", which includes the implementation of the mechanism for submitting applications for obtaining, reissuing, canceling, and suspending the validity of a permit to carry out customs brokerage activities through the personal office of the USIWP.[31] To implement the newest, multifunctional systems in customs affairs, based on modern approaches in the field of information technologies and digitalization, the State Customs Service developed the software module "Register of tax notices-decisions" based on the UAIS.[32]

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[27] Order n° 371 of the State Customs Service of Ukraine of 27 May 2021 "On the introduction of the access interface to depersonalized information for statistical purposes and information on specific export-import operations", Customs Gazette of Ukraine, 2021(5).

[28] Order n° 397 of the State Customs Service of Ukraine of 28 May 2021 "On the approval of the Regulation on the access interface to depersonalized information for statistical purposes and information on specific export-import operations", Customs Gazette of Ukraine, 2021(5).

[29] Order n° 398 of the State Customs Service of Ukraine of 28 May 2021 "On the approval of the Regulation on the management analytics module", Customs Gazette of Ukraine, 2021(5).

[30] Order n° 100 of the State Customs Service of Ukraine of 16 Feb. 2021 "On the approval of the Unified State Information Web Portal "Single-window for International Trade" (USIWP)", Customs Gazette of Ukraine, 2021(2).

[31] Order n° 88 of the State Customs Service of Ukraine of 11 Feb. 2021 "On the approval of the software Register of Customs Brokers", Customs Gazette of Ukraine, 2021(2).

[32] Order n° 471 of the State Customs Service of Ukraine of 30 Oct. 2022 "On approval of the Software Module "Register of tax notices-decisions", Customs Gazette of Ukraine, 2022(14).

Currently, the State Customs Service has implemented the Support Module for preferential customs clearance of cars based on ACCSI. The State Customs Service also implemented a mechanism for refunding customs payments from the state budget through the USIWP. In addition, the State Customs Service implemented a mechanism for obtaining four types of new permits: from the State Service of Ukraine for Food Safety & Consumer Protection, and the Ministry of Agrarian Policy of Ukraine.

On February 24, 2022, the Russian Federation launched armed aggression against Ukraine. This attack was, without a doubt, a humanitarian disaster. On March 1, 2022, the Cabinet of Ministers of Ukraine approved Resolutions No. 174,[33] which approved the list of categories of goods recognized as humanitarian aid without the procedure for recognizing such goods as humanitarian aid in each specific case, for the period of martial law, and allowed customs clearance of humanitarian aid with e-declarations. In compliance with the requirements of the Cabinet of Ministers of Ukraine, the State Customs Service of Ukraine has developed a system of electronic declaration of humanitarian aid goods.

Currently, humanitarian aid importers can create an electronic declaration (e-declaration) for humanitarian cargo in the Personal Account on the USIWP. For this, such persons need to be identified using an electronic digital signature or any of the way of the Integrated Electronic Identification System (e.g Bank ID). The IT division of the Office of the President of Ukraine and the State Customs Service of Ukraine have jointly created the electronic service "State System of Humanitarian Aid", with the help of which the e-declaration for humanitarian cargo can be submitted in advance from any country in the world. In addition, the State Customs Service of Ukraine has developed software for information exchange with the Office of the President of Ukraine and the Ministry of Economy of Ukraine, which enables the executive authorities to receive real-time information on the import of goods with humanitarian aid into the customs territory.

According to the Report of the State Customs Service, simplifying and digitizing the procedure for customs clearance of humanitarian aid made it possible to import 1.1 million tons of humanitarian aid into Ukraine![34]

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[33] Decree n° 174 of the Cabinet of Ministers of Ukraine of 1 Mar 2022 "Some issues of the passage of humanitarian aid through the customs border of Ukraine under martial law", Official Gazette of Ukraine, 2022(25), https://zakon.rada.gov.ua/laws/show/174-2022-%D0%BF#Text (accessed 27 April 2023).

[34] Report of the State Customs Service of Ukraine of 20 Jan 2023 "Key performance indicators in 2022" https://customs.gov.ua/news/zagalne-20/post/u-2022-rotsi-derzhmitsluzhba-pererakhuvala-do-derzhbiudzhetu-3008-mlrd-grn-chomu-ne-bilshe-1062 (accessed 27 April 2023).

4. Enhancing Cross-Agency Collaboration for Digitalization Success

We would like to draw your attention to the issue of digital information exchange between the State Customs Service of Ukraine and other state authorities. Thus, the State Customs Service of Ukraine received the status of a subject of electronic interaction with the unified information system of the Ministry of Internal Affairs and introduced the exchange of information with the National Police of Ukraine. In addition, the State Customs Service of Ukraine is connected to the system of electronic interaction of state electronic information resources of the National Police of Ukraine called "Trembita." "Trembita" ensures the use of uniform standards of access to the state's digital information resources, a reduction of the level of data duplication in state registers, and an increase in the level of interoperability of information systems.[35]

In accordance with the Regulation No. 1845/0/15-21[36], a tool that ensures the automation of activity processes in the justice system, including document flow, automated distribution of cases, and the participation of the parties in the judicial proceeding is the Unified Judicial Information and Telecommunication System (UJITS). According to Clause 10 of Regulation No. 1845/0/15-21, lawyers, notaries, private executors, forensic experts, state authorities, and private legal entities must register their official e-mail addresses in UJITS.

The current legislation of Ukraine (Article 6 of the Code of Commercial Procedure of Ukraine;[37] Article 18 of the Code of Administrative Procedure of Ukraine;[38] Article 14 of the Code of Civil Procedure of Ukraine[39]) defines the list of subjects for which the obligation to register official e-mail addresses in UJITS. This obligation exists to speed up and simplify communication between the court and the participants in court proceedings, which include, among others, state bodies. Thus, customs authorities are also obliged to register official e-mail addresses in UJITS in order to facilitate the automation of activity processes in the justice system, the development of electronic justice taking into account

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[35] System of electronic interaction of state electronic information resources "Trembita" https://se.diia.gov.ua/trembita (accessed 27 April 2023).

[36] Order n° 1845/0/15-21 of the Higher Council of Justice of Ukraine of 17 Aug 2021 "On the approval of the Regulation on the procedure for the functioning of individual subsystems of the Unified Judicial Information and Telecommunication System", Official Gazette of Ukraine, 2021(73), https://zakon.rada.gov.ua/rada/show/v1845910-21#Text (accessed 27 April 2023).

[37] Law n° 1798-XII of the Verkhovna Rada of Ukraine of 6 Nov 1991 "Code of Commercial Procedure of Ukraine", Official Gazette of Ukraine, 1991(6), https://zakon.rada.gov.ua/laws/show/1798-12#Text (accessed 27 April 2023).

[38] Law n° 2747-IV of the Verkhovna Rada of Ukraine of 6 Jul 2005 "Code of Administrative Procedure of Ukraine", Official Gazette of Ukraine, 2005(32), https://zakon.rada.gov.ua/laws/show/2747-15 (accessed 27 April 2023).

[39] Law n°1618-IV of the Verkhovna Rada of Ukraine of 18 Mar 2004 "Code of Civil Procedure of Ukraine", Official Gazette of Ukraine, 2004(16), https://zakon.rada.gov.ua/laws/show/1618-15#Text (accessed 27 April 2023).

world standards in the field of information technology, its integration into the national infrastructure of electronic government.

We want to emphasize that the State Customs Service of Ukraine has identified the possibility of using the Analytical and Legal System "ZakonOnline" by the State Customs Service of Ukraine officials to ensure proper support of court cases. The "ZakonOnline" is an up-to-date source of legal information. This universal legal portal combines the functionality of the Unified State Register of Court Decisions, the official portal of the Verkhovna Rada of Ukraine, and other resources, available 24/7/365. In the "ZakonOnline," user can search documents according to two main types: special characters and logical operators - ordinary search by keywords; search using special filters – search by characteristics the searched document must meet. At the same time, access to the "ZakonOnline" is provided under the domain name customs.gov.ua and can be used by all State Customs Service of Ukraine officials.[40]

The communication activity of the State Customs Service of Ukraine has become one of the essential tools for implementing an effective state customs policy. Communication activities are aimed at improving the image of the State Customs Service of Ukraine by introducing system communications, establishing an effective dialogue between the state and the public, increasing the level of trust in the State Customs Service of Ukraine, forming priority areas of communication with its target audiences and implementing the reform process.

An important means for effectively implementing communication activities is creating and approving the Communication Strategy of the State Customs Service of Ukraine. The Communication Strategy is a complex of interrelated activities that are developed and implemented to create and maintain permanent relations between the State Customs Service of Ukraine and its target audiences for the formation of a positive image and virtuous reputation by informing about its activities, in particular, highlighting the results of the reform of the State Customs Service of Ukraine. The Communication Strategy defines the algorithm of actions to confront crises, levelling information that can negatively affect the State Customs Service of Ukraine reputation, as well as undermine the trust in customs authorities on the part of the public. At the same time, compliance with

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[40] Letter n° 10/10-05/7/50 of the State Customs Service of Ukraine of 24 Feb 2023 "About the Analytical and Legal System "ZakonOnline", Customs Gazette of Ukraine, 2023(2).

the Communication Strategy involves: ensuring the presence of the State Customs Service of Ukraine in the information space by creating its original news and press releases (at least 3-4 news per week), promoting the reproduction of key messages of the State Customs Service of Ukraine in mass media publications; organic growth of the audience on the pages of the State Customs Service of Ukraine in social media through the posting of the news; positive changes in the results of surveys/research regarding the work of the State Customs Service of Ukraine both among broad circles of society and representatives of business and professional associations.[41]

5. Final Thoughts

Taking into account all of the above, we can conclude that the key difference between digital development, digital transformation, and digitalization comes down not only to the use of digital and information technologies but also to the radical transformation of all areas of management processes based on the latest digital technologies. As a relevant consequence of innovations, a new cyber-physical system began to take shape in Ukraine, in which all elements and participants, continuously interacting with each other, ensure constant optimization of the integrated IT system.

At the same time, the main directions of digital development, digital transformation, and digitalization of the State Customs Service of Ukraine became the unification and standardization of automated systems by creating a multifunctional centralized, integrated automated system, the components of which are the following subsystems:

— Automated Customs Clearance System (ACCC);

— Automated Risk Management System (ARMS);

— New Computerized Transit System (NCTS);

— The single state information web portal "Single-window for International Trade" (USIWP).

At the same time, the accompanying tasks that the State Customs Service of Ukraine directed toward achieving strategic goals are:

— unification of approaches to the collection, processing, and exchange of information within and outside the State Customs Service of Ukraine by systematizing and

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[41] Order n° 569 of the State Customs Service of Ukraine of 12 Dec. 2022 "On approval of the Communication Strategy of the State Customs Service of Ukraine", Customs Gazette of Ukraine, 2022(29).

minimizing the number of directories in automated systems (Master Data Management);

— involvement of experts in the process of modernization of information and information and communication systems, which provide relevant customs services;

— creation of a project monitoring and coordination group to ensure quick and comprehensive coordination between automated systems;

— creation of a unified Data Repository of the State Customs Service of Ukraine with further integration with other state information resources, particularly state registers, and gradual inclusion in the private cloud of the state financial management system.

Thus, we can talk about the relative readiness of Ukraine for rapid harmonization of customs services in line with European legislation, even in the conditions of martial law and the post-war period. At the same time, one of the main tasks caused by the intensification of measures to prepare for Ukraine's integration into the European Union is the ability of the State Customs Service of Ukraine to transform processes rapidly. After all, it is crucial to ensure a high pace of implementation of new solutions, which, in turn, requires new unified approaches to the architecture of IT processes, a balanced approach to personnel, and financial support of all stages of implementation of transformational projects - from the analysis and optimization of operational processes, project and resource management, to the principles of the unification of IT solutions and the creation of a new flexible and reliable information and communication infrastructure.

Admittedly, the State Customs Service of Ukraine currently has a significant number of various-format information databases, digital libraries, and small computer mini-centers (server rooms), which significantly complicates the systematization, storage, and analytical processing of information. As a result, there is no opportunity to generate reliable statistical information on the effectiveness of the implementation of tasks assigned to their spheres of responsibility, which, in turn, makes it impossible to make both proper perspective forecasting and rapid adoption of effective management decisions.

6. Conclusion

We want to summarize that the trends of world development in the conditions of digitalization set new tasks for ensuring the functioning of modern, accessible, managed, and cyber-secure electronic information systems that work in accordance with the

fundamental principles of the effectiveness of the information support of customs affairs. In our opinion, in the conditions of the digital development strategy, the further implementation of the processes of digital development, digital transformation, and digitalization of the State Customs Service of Ukraine in line with European and international requirements should be carried out simultaneously in three directions: in technological (ensuring the appropriate level of development of information systems, their technical, technological, safety, certification and standardized characteristics), institutional (formation of relevant legislative, regulatory and methodological support, adequate to international requirements for information systems in the field of processing, analysis, and systematization of information in customs affairs), and infrastructural (information products, which ensure the proper exchange of information between the information bases of customs authorities of Ukraine, business entities, and international participants).

To recapitulate, the development of information technologies and digitalization are integral to the modern world. The State Customs Service of Ukraine should actively work on introducing digital technologies and infrastructure improvements to ensure effective customs affairs in the contemporary world.