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PREREQUISITES FOR THE IMPLEMENTATION OF E-AUDIT IN UKRAINE

Introduction. Remote forms of control are becoming widespread and popular. In order to effectively introduce e-audit tools into the real sector of the economy, special attention is required for its comprehensive research, analysis and understanding.

Problem. The article presents the author's generalization of the development and implementation of e-audit in foreign countries and provides possible ways of its implementation in domestic practice. The transition of the world's leading countries to the implementation of electronic audit in their practice indicates that control and verification work has reached a qualitatively new level.

The aim of the article is to outline the ways of e-audit development in domestic practice, based on advanced international experience.

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ПЕРЕДУМОВИ ВПРОВАДЖЕННЯ Е-АУДИТУ В УКРАЇНІ

Вступ. Дистанційні форми контролю набувають поширення та популярності. Для ефективного впровадження інструментів електронного аудиту в реальний сектор економіки особливої уваги потребують його комплексне дослідження, аналіз та розуміння.

Проблема. Представлено авторське узагальнення розвитку і впровадження е-аудиту в зарубіжних країнах та наведено можливі шляхи його імплементації у вітчизняну практику. Перехід провідних країн світу на впровадження електронного аудиту в свою практику свідчить про вихід контролально-перевірочної роботи на якісно новий рівень.

Метою статті є визначення шляхів розвитку е-аудиту у вітчизняній практиці, що базується на передовому міжнародному досвіді.



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Methods. General scientific and special methods of observation were used, such as system, abstract and logical analyses. The prospects and advantages of implementing the e-audit concept in modern business conditions are outlined using generalizing and prognostic methods.

Results. The essence of the electronic standardized format of providing information to tax authorities as a basis for e-audit has been considered. An author's approach to optimal ways of implementing foreign experience of e-audit functioning into domestic practice has been formed. The practical significance of this research is in the approximation of the domestic approach to conducting inspections to best international practices, thereby adding transparency to them.

Conclusions. The effective launch and skillful use of e-audit tools will allow to build verification work at a qualitatively new level, providing a risk-oriented approach to control procedures, to improve the accuracy of the performed checks, to reduce the time for checks, and in general, it will allow increasing the confidence of investors in the transparency of doing business in the country.

Keywords: audit, e-audit, control, transformation of activities, digital technologies.

Методи. Використано загальнонаукові та спеціальні методи спостереження: системного аналізу; абстрактно-логічний. За узагальнювальними та прогнозичними методами окреслено перспективи та переваги впровадження концепції е-аудиту в сучасних умовах ведення бізнесу.

Результати дослідження. Розглянуто сутність електронного стандартизованого формату надання інформації до податкових органів як базису при проведенні е-аудиту. Сформовано авторський підхід до оптимальних шляхів імплементації зарубіжного досвіду функціонування е-аудиту у вітчизняну практику. Практична значущість цього дослідження полягає в наближенні вітчизняного підходу проведення перевірок до передового світового досвіду, тим самим додаючи їй прозорості.

Висновки. Ефективний запуск та вміле використання інструментів електронного аудиту дасть змогу побудувати перевірочну роботу на якісно новому рівні, забезпечивши ризик-орієнтований підхід до контрольних процедур; підвищити точність проведених перевірок; скоротити час їх проведення та загалом підвищити довіру інвесторів до прозорості ведення бізнесу в країні.

Ключові слова: аудит, е-аудит, трансформація діяльності, диджитал-технології.

JEL Classification: E62, H20, H32, H71.

Introduction. The successful implementation of e-audit as a form of control requires research, study and analysis of the international experience of electronic audit, which has shown significant effectiveness.

Nowadays, e-audit is widely used in the European Union countries, the USA and Australia during inspecting the compliance of business entities (especially large taxpayers) with tax legislation [1].

In general, in the world practice of auditing, the issue of the use of information technologies is given considerable attention, in particular, by professional organizations. This is evidenced, for example, by the constant renewal (with an interval of 1–2 years) of virtually all International Auditing Standards issued by the International Federation of Accountants, in which the most significant changes are the standard and provisions on International Auditing Practices relating to audit computerization.

Analysis of recent research and publications. Control activity is a perspective and necessary subject to transformations, which is the characteristic feature of the economic systems of many developed countries. Substantial transformations of the structure of the audit activity are due to the liberalization of financial and tax legislation, transformation to global economy,

the invention of new control instruments and the gradual universalization of control activities in general. The issue of determining and practical implementation of the concept of "e-audit" was considered by researchers at different times from the following perspectives: as the automation of the activities of the audit activity subjects (B. Mashayekhi, F. Jalali, Z. Rezaee [2], D. G. Mihret, M. Kansal, M. B. Muttakin, T. Rana [3]); in the format of digital methods of control work (R. Manita, N. Elommal, P. Baudier, L. Hikkerova [4], M. Usman, E. Ezeani, R. I. A. Salem, X. Song [5]); as a part taxes' control tools [1; 6–8]; as an integral part of financial reporting [9–12]; as a future of all audit activity [13–16].

The aim of the study is to outline the ways of development of e-audit in domestic practice, based on advanced international experience.

Methods. The following methods such as theoretical generalization and grouping (to determine the ways of development "e-audit" concept in foreign countries), formalization, analysis and synthesis (to substantiate methodological approaches to the implementation of e-audit, both abroad and local in Ukraine); logical generalization of results (formulation of conclusions and proposals) were used in the research process.

Results. An electronic audit is a computer audit in which electronic data and records are used to conduct and complete an audit of a company. It is noteworthy that the electronic audit uses the same procedures as the traditional audit. The difference is that there is a wide use of electronic means for auditing in a remote format. In practice, you can often hear that an electronic audit is called a remote audit.

It should be noted that this is a relatively new format for auditing procedures. And therefore, as you know, there is a certain resistance in society to everything new and incomprehensible. In practice, a two-fold relationship to the initiation and conduct of an e-audit is felt. There are companies that do not accept or are skeptical of remote audits. But this public concern regarding audit methods is not confirmed by the requirements of the modern world, which is converting all spheres of life into a digital format. The fact that the audit is conducted remotely does not mean that the teams do not communicate with each other and with the customer, and this should not be considered as a decrease in the quality and reliability of the audit results. Moreover, thanks to online technologies, there is constant communication of all involved parties in operational mode, there are more opportunities for testing and coverage of most operations.

E-audit, carried out in a digital environment, also involves a systematic, independent process of obtaining documented evidence using electronic means of communication in order to express a professional opinion on the compliance of activities and reporting with established criteria. Electronic auditing is gaining popularity precisely because many technologies that we use in our daily lives are carried out via the Internet. And therefore, the more authentically and widely we get acquainted with the latest technologies and their advantages – the less concern arises about its interactive use.

The use of e-auditing depends on the technologies used and on the ability of auditors to organize and moderate virtual meetings while coordinating with a remote location to search for (detect) inappropriate evidence. It is clear that such coordination of these activities is not an easy task for persons who do not have the relevant skills and knowledge in the field of IT technologies. Therefore, the main priority for external and internal auditors should be the study of technologies used in electronic audit methods. Countries and companies that invest resources in the development of e-audit allow remote offices to learn from each other. This allows for a better understanding of remote processes and thus allows them to use and standardize common processes in remote locations in their work.

Until 2005, there were several international standards and regulations from international practice, which regulated the methodology of conducting audits in the environment of computer information systems, as well as requirements for auditors' special knowledge in the field of information systems, and starting from 2005 onwards in the new editions of the ISA there were changes regarding the use of information technologies. Audit standards in the context of the application of information computer systems have been removed, and instead the de facto audit is considered computer-based. That is why comments and guidance on these issues are now contained in almost every audit standard.

The Ottawa framework conditions for the taxation of electronic commerce dated 1998 became the basis for the implementation of electronic audits in the activities of fiscal authorities of various countries. And nowadays it is an integral part of conducting audits of compliance with tax legislation by business entities [7].

The first step towards the transformation of the Ottawa framework conditions on the taxation of electronic commerce into practical management was the development by the Committee on Fiscal Issues of the Organization for Economic Cooperation and Development in Europe in 2005 of the concept of e-audit by implementing the standard of electronic reporting – Standard Audit File for Tax (SAF-T is a standardized format for taxpayers to provide accounting and financial information in electronic form to tax authorities, which contains reliable data exported from the original accounting system about the availability and state of assets, equity and liabilities, as well as changes in the financial and economic status of the taxpayer for a certain period). However, based on the request of OECD member countries, an updated version (2.0) of SAF-T was approved in April 2010 (the structure was expanded, and the original specification was improved) [7].

SAF-T 1.0 contained 4 sections: "Header", "Main files", "Journal of accounting entries" and "Primary documents"; in version 2.0, 8 subsections were added to the Main Files section: Taxonomy, Table of Measurement Units, Analysis Table, Operations Guide, Products, Inventory, Owners, and Assets, the "Primary documents" section was also expanded with information on the movement of goods and transactions with assets [7].

Due to SAF-T, tax authorities are given unhindered access to relevant data to ensure the efficiency of tax audits and reduce the number of any additional requests. File requirements are expressed using XML, but the OECD does not impose any specific file format [17].

The tax audit file is currently the most widespread basis for conducting an e-audit. This international standard for the electronic transfer of accounting data from enterprises to national tax authorities has been implemented in many countries, in particular – in Singapore (the first country that uses the tax audit file for e-audit purposes), Portugal (the first European country that implements SAF-T in practice of fiscal authorities), Germany (the first country whose government decided to develop its own audit file format), Austria, Luxembourg, Norway, Lithuania, Poland, the Netherlands, Sweden, France, the Czech Republic and other countries, which allows the fiscal authorities of these countries to obtain the data necessary for effective tax audits, perform analytical procedures in full and volume, and minimize additional document requests [1].

The main advantage of a standard tax audit file is the possibility of using the data it contains for e-auditing with the help of specialized software. Well-known GAS tools in the field of e-audit are software products developed by Audit Command Language (ACL) and Interactive Data Extraction and Analysis (IDEA), namely: ACL AuditExchange2 and IDEA Version8, as well as SESAM (ESKORT Computer Audit).

Today, ACL is used in more than 150 countries (France, Croatia, Finland, Bulgaria, Austria, Netherlands, Belgium, Great Britain, Poland). This software is also used by the "Big Four": PricewaterhouseCoopers, Ernst & Young, KPMG, Deloitte & Touche (Deloitte Touche Tomatsu International). The IDEA software product has been leading the international market for two decades. According to Case Ware IDEA data, the IDEA system is used by organizations in more than 90 countries performing financial analysis and audit tasks.

It should be noted that ACL and IDEA support the loading of any structured information from SAF-T, because this format is developed on the basis of the XML programming language, and to load it into SESAM it is necessary to use specially developed (purchased) converters.

It should be noted that simple borrowing of a standard tax audit file is impossible due to the specifics of each individual state. Therefore, it is necessary to take into account the peculiarities of the tax system and the country's administration practices, which actualizes the need to analyze the world practice of using tax audit files in order to choose the most optimal way of its implementation.

A comparison of the SAF-T electronic format of different countries of the world is demonstrated in the *Table 1*.

Table 1

Comparison of the implementation of SAF-T in different countries of the world

Country	Name	Year of implementation	Structure (sections)	Software
Singapore	The fourth version of the IAF	2005 – initial version of IAF v. 1 (IRAS Audit File), 2008, 2009 and 2014 – amendments	3 ("Enterprise Information", "Main Files", "Primary Documents" (contains "Journal of Accounting Records"))	ACL
Portugal	SAF-T (PT)	2008 – on a voluntary basis only for large taxpayers, 2010 – as a mandatory measure for all economic entities that keep records in the electronic system	4 ("Header", "Main files", "Journal of accounting entries" and "Primary documents")	IDEA
Austria	SAF-T (AT)	April 2009	6 ("Header", "Main files", "Journal of accounting entries", "Inventory Balances", "Primary Documents" and "Asset Information")	ACL
Germany	E-Bilanz	2011 – pilot project E-Bilanz, 2013 – mandatory for all taxpayers who prepare financial statements in electronic form	E-Bilanz for Germany – Versions Taxonomy and E-Bilanz Sheet	IDEA
Luxembourg	FAIA (FAIA 2.01 full, FAIA 2.01 v. A and FAIA 2.01 v. B)	2008 – adoption of the regulatory act on cooperation between tax authorities, November 2009 – first edition (November 2010 – implementation), 2013 – published FAIA v. 2.01	4, based on OECD SAF-T version 2.0 (FAIA 2.01 full); v. A – less subdivisions, v. B – only 3 sections (no "Primary Documents"), fewer subsections	Program based on SAP ERP
Norway	SAF-T Financial 1.2	2014 – SAF-T Financial 1.0, June 2017 – SAF-T Financial 1.2	3 ("Header", "Main files", "Journal of accounting entries")	ACL, SESAM
France	SAF-T FEC	January 1, 2014 – a unified file format and structure was put into effect	4 different XML schemas	ACL
Sweden	Standard Import Export (SIE) XML	2014	4 types: balance; additional balance; profit; operations, transactions	ACL, SESAM
Lithuania	SAF-T	2015	Complies with the SAF-T version 2.0 framework	SESAM (IC ESKORT)
Poland	JPK	2016 – only large taxpayers had to submit JPK to the fiscal authorities; January 2017 – the obligation was imposed on small and medium-sized enterprises	7 parts (JPK VAT ("Title", "Entities", "Sales", "Tax liabilities", "Purchases", "Tax credit") – mandatory; JPK KR, JPK WB, JPK MAG, JPK FA, JPK PKPIR and JPK EWP – submitted within 3 days at the request of the supervisory authority)	ACL

Source: arranged by the authors based on [1; 7].

Despite the SAF-T in different countries has a similar format based on the OECD SAF-T SCHEMA VERSION 2.0, local legislation defines the mandatory fields to be filled in the report differently. Therefore, it is important to consider these specific rules and standards in each individual country.

World experience shows that the introduction of audited tax files was gradual and needed further correction, but none of the countries that started this process refused to implement it. Each tax office faces various challenges, such as the legislative environment, administrative practices and the tax culture of taxpayers. Therefore, the standard approach is neither practical nor desirable. It is necessary to carefully consider the country's experience and assess in detail the factors that have shaped each approach.

During studying the international experience of implementing e-audit, it is also necessary to pay attention to the fact that today one of the main international processes which taking place is the harmonization of national accounting and financial reporting systems of different countries, which is implemented through the creation of International Financial Reporting Standards (IFRS). The goal of developing and implementing IFRS was achieved by transitioning to the preparation of financial statements in a single electronic format – eXtensible Business Reporting Language (XBRL is a data markup language that allows financial or other information to be transmitted in a structured form). XBRL is used to display and provide reporting compiled using the IFRS taxonomy. IFRS taxonomy technical files can be downloaded and viewed using XBRL-enabled software and tools. The format is based on the XML language, extended through specifications that allow you to focus on the economic essence of the transmitted information. These specifications were developed by the international non-commercial consortium XBRL International [9; 12].

The first international taxonomy XBRL US GAAP was developed in 2000 (released on 2001) for commercial organizations and recommended by the American regulatory body for financial reporting. The XBRL taxonomy for IFRS (IFRS) was created in 2006 [9].

Currently, the United States and the European Union are the largest users of XBRL, but XBRL has become quite widespread not only in the European Union countries and the G20, but also beyond them. To date, more than 50 foreign organizations have implemented XBRL reporting in their activities, both for intra-departmental exchange and in terms of providing financial reporting to regulatory bodies, namely: national banks and regulatory bodies (Austria, Belgium, Germany, Spain, France, India, Japan, Lithuania, Poland, South Korea, Luxembourg); fiscal authorities (Germany, Japan, the Netherlands, Great Britain); Ministries of Finance and Treasury (Belgium, China, Spain, Singapore); stock exchanges (Belgium, China, Germany, Spain, India, Iran, Japan, South Korea, Poland) [12].

Various conditions for submitting financial statements in XBRL format and examples of countries in which these conditions apply are presented in the *Table 2*.

Table 2

Basic conditions for submitting financial statements in XBRL format

Terms of submission	Countries
Voluntary application	Sweden, Switzerland
Mandatory application	Canada, France, Germany, Italy, Japan, USA, Israel, Poland, Spain
Mandatory application under the condition of reporting according to IFRS	Australia, Great Britain, Belgium
Mandatory application under the condition of reporting according to IFRS and providing an independent audit opinion	China, India, Denmark, Netherlands

Source: arranged by the authors based on [9].

In practice, the concepts of e-audit and digital audit are often equated. This is primarily due to insufficient awareness and a certain lack of acceptance by our society of advanced methods of conducting inspections. Should be note that the main difference between these types of audit is the legislative regulation; subject, initiator and executor of the inspection. *E-audit* is an integral part of the documentary check of large taxpayers, regarding the completeness of the calculation and payment of tax obligations, while the *digital audit* is an independent check of accounting data and financial reporting indicators of a business entity, which is carried out by audit firm using advanced information systems and technologies.

It is interesting to recall European experience in the further improvement of e-audit. Such, the Single European Electronic Format (ESEF is an electronic reporting format based on ESMA's regulatory requirements for issuers on EU regulated markets to submit financial statements in the Inline XBRL format (abbreviated as iXBRL) is a significant step forward for the availability and comparability of issuers' financial information on regulated EU markets. Therefore, each EU Member State have to develop the ESEF implementation and maximize the benefits that digitization can offer [18].

The stages of ESEF implementation and their characteristics are disclosed in *Table 3*.

Table 3

Implementation phased of ESEF

Date	Obligation
January 2021	Voluntary filing of the ESEF can begin. The national depository mechanism has been updated to accept annual financial reports in the ESEF
2022	The first stage of mandatory requirements for reporting in electronic format applies to issuers included in the scope of activities that prepare consolidated financial statements in accordance with IFRS. Annual financial reports for all issuers, which must be published and submitted in an electronic format defined by technical standards. Mandatory marking of basic financial information
2023	The second stage – issuers included in the scope of activity, as indicated above, must mark the notes to the annual financial statements

Source: arranged by the authors based on [10].

Based on the analysis of regulatory and legal support of e-audit in Ukraine, we established the stages of its development which is demonstrated in the *Table 4*.

Table 4
Development of E-audit in Ukraine

The stage name	Characteristic
Preparatory	Development of requirements for electronic documents, conducting electronic checks
Organizational	Adoption of the concept of e-audit in Ukraine, which defines the basics and methodology of electronic tax audit. Development and review of the draft Law of Ukraine "On Amendments to the Tax Code of Ukraine regarding the introduction of electronic audits (e-audit)" No. 6255 dated November 2, 2021
Practical	Establishment of mandatory submission: a) by large taxpayers at the request of the supervisory body during the inspection of the standard audit file (SAF-T UA) and its analysis with the help of specialized software using modern audit methods is expected from January 1, 2023; b) by large taxpayers the standard audit file (SAF-T UA) is expected from January 1, 2025 (subject to the adoption of relevant changes to the tax legislation); c) VAT payers of the standard audit file (SAF-T UA) may be introduced no earlier than January 1, 2027 (subject to the adoption of relevant changes to the tax legislation)

Source: arranged by the authors.

At the preparatory stage of the development of e-audit in Ukraine, a number of legislative acts were adopted, namely:

- Tax Code of Ukraine dated 02.12.2010, No. 2755-VI;
- Law of Ukraine "On Accounting and Financial Reporting in Ukraine" dated July 16, 1999, No. 996-XIV;
- Law of Ukraine "On Electronic Documents and Electronic Document Management" dated May 22, 2003, No. 851-IV;
- Law of Ukraine "On Electronic Digital Signature" dated May 23, 2003, No. 852-IV;
- Law of Ukraine "On Electronic Trust Services" dated October 5, 2017, No. 2155-VIII;
- Order of the Ministry of Finance of Ukraine "On approval of the Regulation on documentary support of records in accounting" dated 05/24/1995, No. 88;
- Order of the Ministry of Finance of Ukraine "On approval of the Procedure for providing documents of a large taxpayer in electronic form" dated November 7, 2011, No. 1393;
- Order of the Ministry of Finance of Ukraine "On Approval of the Procedure for Exchange of Electronic Documents with Controlling Bodies" dated June 6, 2017, No. 557;
- Decree of the Cabinet of Ministers of Ukraine "On the approval of the Strategy for reforming the state finance management system for 2017-2020" dated February 8, 2017, No. 142;
- Letter of the State Fiscal Service of Ukraine dated January 4, 2017, No. 30/6/99-99-15-02-02-15, which in turn became the basis for the formation of the organizational stage.

The organizational stage of e-audit development is characterized by the adoption of the Concept of e-audit in Ukraine, as well as further directions of its development. At this stage, consideration and adoption of the draft Law of Ukraine "On Amendments to the Tax Code of Ukraine Regarding the Implementation of Electronic Audits (e-Audit)" dated November 2, 2021, No. 6255 is proposed, which will affect the needs (requests) of interested parties (*Table 5*).

Table 5

Impact of the draft Law of Ukraine "On Amendments to the Tax Code of Ukraine on the Implementation of Electronic Audits (e-Audit)" on the Stakeholders Needs

Stakeholders	Impact of the act implementation on the Stakeholders	Explanation of expected impact
Taxpayers	Positive	Creation of opportunities for taxpayers to self-verify submitted tax returns; reduction of personal contacts between the taxpayer and the controlling body, reduction of the influence of the "human factor"
Controlling bodies (State Tax Service of Ukraine)		Improvement of risk-oriented approaches at the pre-verification and verification stages; improving the quality and effectiveness of tax control due to automatic analysis and testing of tax and financial reporting indicators, identifying discrepancies and risks

Source: arranged by the authors.

The practical stage is characterized by the planned introduction of e-audit for the electronic verification of certain groups of taxpayers. It will enable the state in the form of the State Tax Service of Ukraine to strengthen the control and verification work of such taxpayers, and as a result will form an effective tool that will make it possible to detect violations in the field of taxation. Along with this, the above-mentioned measures will provide additional revenues to the state budget of the country, which is a positive phenomenon that has been used in European countries for a long time and it is not appropriate to neglect it. The introduction of e-audit as a modern form of tax control of legal entities will:

- contribute to more effective performance of the functions assigned to tax authorities;
- resolution of conflict situations in the relationship between taxpayers and tax authorities;
 - reduce business pressure;
 - strengthen the protection of the rights and interests of taxpayers;
 - increase the attractiveness of conducting business and improving the investment environment in Ukraine.

It is clear that legislative initiatives and innovations are an undoubted step towards the future of our Country. However, we must also understand that it is still too early to talk about the complete transfer of the audit to an electronic format, and perhaps it is not even advisable. We suggest that Companies should focus on the specifics of the business and consider the format of the audit case by case. The hybrid audit format, could include a combination of multivariate models, such as: onsite audits, e-audits, reviews of document information and procedures testing.

An approach where a hybrid audit format is used is relevant for organizations to fully examine internal and external issues in order to meet stakeholder requirements.

Hence, e-auditing is a progressive, effective and efficient way of thinking based on a real-time risk-based approach that allows for better understanding requirements among all stakeholders.

Conclusions. Therefore, we have much more qualitative and effective audit thanks to the use of IT technologies. That's why, the relevance and importance of e-audit implementation cannot be overestimated.

It should also be mentioned that in 2014, after signing the Association Agreement with the European Union, Ukraine undertook to reform national legislation according to European standards. This also applies to the legislative regulation of audit activities in the country.

Therefore, it can be confidently stated that the introduction of e-audit in Ukraine is a mandatory future step that is expedient and rational.

The development of e-auditing of taxpayers is an important direction in the modern activity of tax authorities. For Ukraine, several ways of developing electronic audit are possible.

One of them is the development of electronic reporting. For the successful implementation of e-audit, modern electronic reporting is necessary, which provides the possibility of automatic data exchange between the taxpayer and the bodies of the State Tax Service of Ukraine. Ukraine should continue to develop electronic reporting and ensure its interaction with the electronic audit system of taxpayers at a qualitatively new level.

Another option is the development of legislation. It is necessary to create a legal framework for the development of e-audit, which would ensure the security and confidentiality of the exchange of information between the taxpayer and the tax authorities, as well as guarantee the legality of the use of electronic documents during its implementation.

It is necessary to ensure the training of qualified personnel who have the necessary knowledge and skills to work with electronic systems and relevant software, as well as understand the specifics of e-audit implementation.

In addition, Ukraine can create its own methods and standards for the e-audit of taxpayers, which will meet the requirements of international institutions and the best practices of its implementation.

It is also necessary to create an information campaign for taxpayers and employees of tax authorities so that they learn about the advantages of e-audit and the possibility of its implementation in practice. Ukraine can cooperate with international partners to gain experience in the use of e-audit in other countries and introduce it into the Ukrainian practice of auditing taxpayers.

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