

The features of the use of information technology in the audit in the Republic of Uzbekistan

Mutabar Khodjayeva Khamidulla qizi

Associate Professor of the Tashkent State University of Economics, Candidate of Economic Sciences,
Uzbekistan, m.xodjayeva@tsue.uz, mutabar2009@mail.ru ORCID:0000-0003-0374-1456

Nodira Shanasirova Abdullayevna

Associate Professor of the Tashkent State University of Economics, Candidate of Economic Sciences,
Uzbekistan, n.shanasirova@tsue.uz, nodirashanasyrova@gmail.com, ORCID: 0000-0003-2158-8395

Abstract

In modern conditions, audit firms require high-quality software tools that expand their capabilities when applying statistical methods, collecting audit evidence, sampling, building an audit, etc. in a word, allowing to reduce the time for the audit as a whole. The article discusses the main specialized computer programs that increase the speed and quality of the audit. This article discusses the features of the use of information systems in the audit. The advantages of an automated approach to the performance of an audit assignment are primarily related to the automation of the auditor's routine operations, which reduces labor costs, avoids mechanical errors, reduces audit time, and maintains the quality of work performed.

Keywords: audit, computer program, application possibilities.automation of audit processes, information systems in audit, digitalization of audit, information technology in audit activities.

Introduction.

Today, any audit organization feels a great need to automate its activities. Modern audit programs allow creating a database and form audit reports of various complexity based on it, as well as help to avoid errors in the audit, save work time and quickly obtain the necessary information. It is better to buy special software products from professional firms that have extensive experience and reputation in automating audits, licenses and quality certificates for the software they sell. When choosing a program, it is necessary to take into account what audit organization and what audit objects it is intended to check, or pay attention to what field it belongs to.

In this regard, it is worth noting that in the decision of the President of the Republic of Uzbekistan dated September 19, 2018 "On measures to further develop auditing activities in the Republic of Uzbekistan" PQ 3946, audit organizations and republican public associations of accountants and auditors the task of developing the "Audit" software complex of the Ministry of Finance of the Republic of Uzbekistan for mutual electronic cooperation with associations, and in accordance with it, the creation of the web service "Personal cabinet of the auditing organization" and "Personal cabinet of the public association of auditors" The "Audit" software complex was developed and put into practice. This is one of the macro-level measures to ensure the transparency of the activity of audit organizations and the introduction of information and communication technologies in the sphere of their cooperation with state bodies. However, today, it is one of the requirements of international standards to organize and conduct an audit in a fully computerized environment.

In our opinion, auditing in a computer environment is the process of using computer programs in the stages of planning, conducting and completing an audit. Surveys and analyzes conducted today on the use of information systems in auditing activities show that special programs are not used enough in the course of audit inspections.

The procedure for using automated software in auditing is expressed in the following documents of the International Auditing Practice Committee of the International Federation of Accountants:

International Auditing Standards "Auditing in a computer information systems (CIS) environment" (ISA "Auditing in a computer information systems (CIS) environment");

ISA "Risk assessment and internal control (CIS) characteristics and considerations" entitled "Internal control and audit risk assessment taking into account the characteristics of the computer information environment";

"Computer assisted audit techniques" (ISA "Computer assisted audit techniques").

In turn, the above programs used in audit practice include many modules that ensure the automation of inspections. They include the planning support module that ensures the formation of the audit schedule, the audit plan creation and audit tasks, and the audit modules embody the main capabilities of the programs.

In the conditions of further deepening of economic reforms, acceleration and liberalization of the market economy in the Republic of Uzbekistan, ensuring the sustainability of the private business sector, the audit system is of great importance. In recent years, as a result of the improvement of legislative documents in the field of auditing, positive changes have been taking place in the audit services market of our Republic. In particular, as of December 31, 2022, the number of audit organizations increased by 30 (31%) to 126 compared to December 31, 2021, and the number of auditors increased by 230 (35%) to 881. Of these, 27 international audit organizations are members of international companies and associations, 4 of which are subsidiaries of audit companies (Big Four).¹

2. RESEARCH METHODOLOGY

The study of historical, organizational, economic, and regulatory features of the subject of research is based on the use of dialectic methods. In the monographic study, the methods of grouping, comparison, scientific thinking, economic, statistical, digital and analytical methods were used. Also, constructive methods were widely used in the presentation of the study and the results obtained.

3. RESULTS AND DISCUSSIONS

According to the Digital Spread Report, published by Huawei and the Oxford Research Institute of Economics, the world's digital economy is projected to reach \$23 trillion by 2025, and its share of global gross domestic product will increase to 24.3 percent.²

The digitalization of audit reflects the trend of companies in an era of change, when traditional business models are radically changing. Auditors are being impacted by the evolution of the operating environment, business cycle disruptions, changes in organizational models and the overall digitalization of processes. The transformation of technology leads to the transformation of the very approach of auditors to perform their work:

- improving networking;
- automation is introduced;
- frees up additional time to analyze areas that require subjective judgment;
- improved quality of audit, analysis and conclusions³

Digital audit contributes to the goal set by auditors: "improving business - improving the world" - by increasing confidence and trust, in particular through "blockchain" technologies, facilitating interaction in a complex business world.

The release of additional time due to the digitalization of accounting and audit provides an opportunity for auditors to comply with the requirements imposed by a number of regulations. For example, in 2015, the Decree of the Cabinet of Ministers of the Republic of Uzbekistan approved the "Regulation on the criteria for evaluating the effectiveness of joint-stock companies and other business entities with a state share", which were set "Key Performance Indicators" (KPI) and "Integral Performance Ratios" (IQI). According to Article 36 of this Regulation, the calculation of KPIs, IPIs and the percentage of their implementation at the end of the year is subject to verification by an audit organization by providing professional consulting services as part of a separate additional subject of the audit agreement at the end of the year.⁴

¹ www.mf.uz/qr/news/category/yangiliklar/post-1009

² . Abdurakhmanov K.A., Academician of the Academy of Sciences of Uzbekistan - "Digital Uzbekistan-2030 will lead out of the laggards" Narodnoe slovo, 04/10/2020, narodnoeslovo.uz, www.xs.uz/ru)

³ How the digitalization of audit reflects the trend of changing companies in an era of change. Author EY Global. 09/01/2020

⁴ Regulations on the criteria for evaluating the effectiveness of activities joint-stock companies and other business entities with a state share" - PKM N 207 of 07/28/2015

Currently, automation of processes occupies one of the most important places in every field. The direction of introducing artificial intelligence into the main business processes of many companies in various fields of activity is actively developing, "smart" robot-advisors are appearing, complex artificial neural networks are being used to determine the dynamics of quantitative and qualitative indicators of business. models and others are being created.

While every aspect of the economy is developing, auditing is also undergoing a number of changes. Of course, now it is impossible to entrust the verification of the company's financial reports only to artificial intelligence, many things remain on the shoulders of people, because it is impossible to fully formalize the audit process, the structure and volume of the performed actions. The need to form a professional judgment regarding each client remains. However, every year, new information technologies are developed and put into practice, which allow to transfer part of the work to machines.

One of these technologies is electronic document circulation with companies whose financial statements need to be audited. There are now cloud services that allow you to store large amounts of data, share them, and maintain strict confidentiality. Major audit firms have staff responsible for the development and support of such services. Cloud storages are reliably protected by modern encryption methods of data transmission, which allows only a certain group of people to see the information and perform any actions with it.

Information technologies that enable optimization of audit procedures are also being introduced to the activities of audit organizations. The implementation of automation processes in the work of the auditor is provided by the technological possibilities presented in the directions in Figure 1.

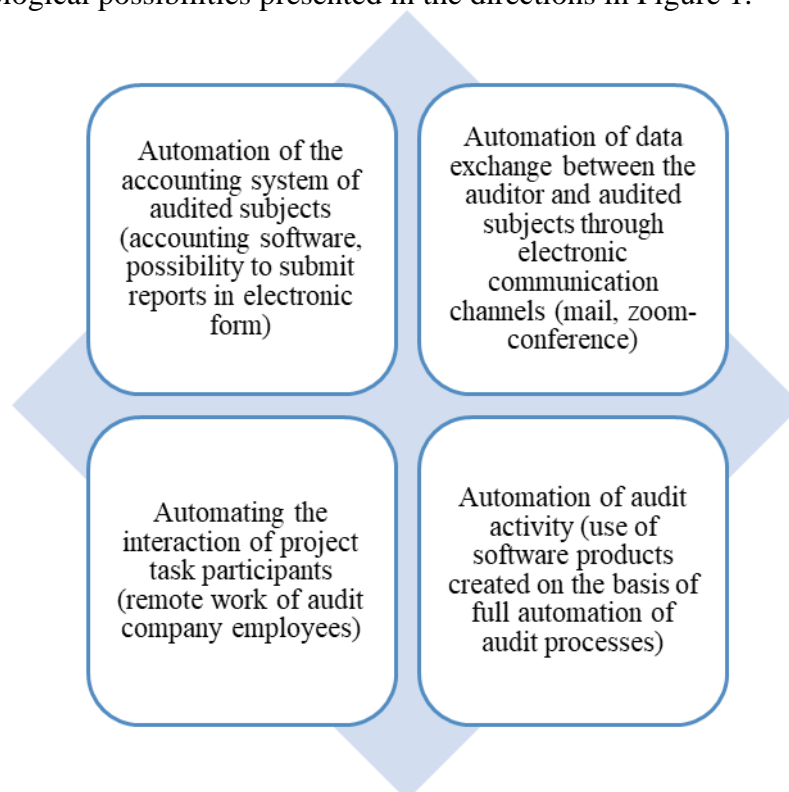


Figure 1. Technological possibilities of introducing automation processes in auditor's work⁵

The technological possibilities of introducing automation processes into the auditor's work, shown in Figure 1, are the high speed of obtaining, exchanging and using the information necessary for conducting audit procedures, including the introduction of electronic document circulation, using cloud storage provides. In addition, the use of information systems at work leads to a decrease in the cost of audit services for the client.

⁵ Izvarina N.Yu.and others. Ispolzovanie informatsionnyx sistem v hode provedeniya audita. Economy and Business: Theory and Practice, vol. 7 (89), 2022

The creation of a single cloud information system allows to manage and adjust the audit activities for use by various participants of business processes, and the available tools for obtaining and analyzing data using MS Excel can process large volumes of information and sort them according to the objectives of the audit task allows.⁶

Communication is particularly important for communication within the audit team. The introduction of computer technologies into the work process helps to speed up communication within the team and thereby increases the effectiveness of cooperation. Video conference communication and group chats eliminate the complexity of remote information exchange, allow the project auditor group to almost completely avoid physical interactions on the territory of the audit organization in the process of preparing for entering the project, in the implementation of planning processes. In such conditions, the speed of performing the audit task can be increased several times, and the transfer (transaction) costs of companies are reduced.⁷

Systematization of information on the sections of audit, regulatory documents and questionnaires allows to automatically create conclusions on the assignment. The qualitative content of such work can be references combined with references to paragraphs of international auditing standards, templates of working documents.⁸

Audit operations that can be carried out with the help of information systems are shown in Figure 2.

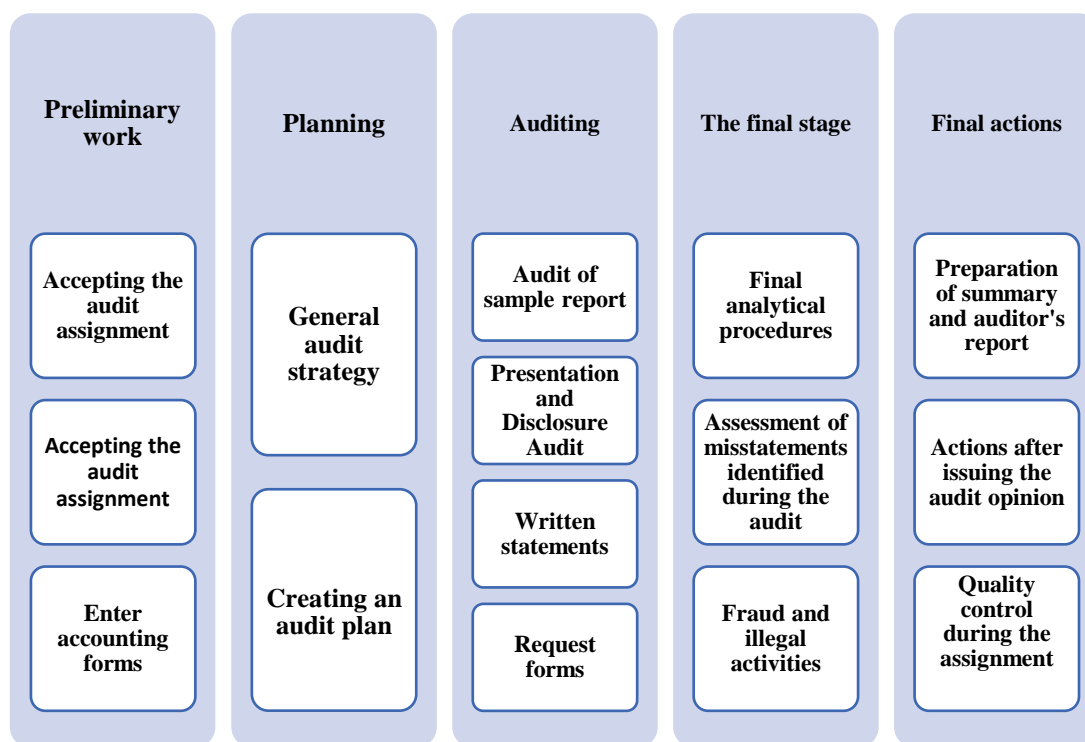


Figure 2. Audit operations that can be carried out with the help of information systems

In automating the audit operations shown in Figure 2, the function of the auditor shifts to control the accuracy of initial data, risk assessment and analytical operations, and software tools allow conducting an audit within the defined parameters. The integration of each audit engagement is limited to a set of

⁶ Boginskaya, Z.V. Distance audit v sootvetstvii s mejdunarodnymi standartami audita / Z.V. Boginskaya, T. Yu. Gladkova // *Ekonomika i predprinimatelstvo*. – 2020. – No. 9 (122). - S. 1155-1159.

⁷ Kuznetsova, E.V. Automatization audit kak instrument control distansionnoy raboty auditorskoy organizatsii / E.V. Kuznetsova, A.V. Spesivtseva // *Innovative economic development: trends and perspectives*. - 2020. - T. 1. – S. 264-271.

⁸ Ispolzovanie informatsionnyx tekhnologiy v audite / N.Yu. Izvarina, A.A. Lermontova, K.E. Gutnik, S.A. Nikitin // *Economics and business: theory and practice*. – 2022. – No. 5-2 (87). - S. 23-27.

standardized audit procedures. The advantages of an automated approach to performing an audit task are summarized in Figure 3.

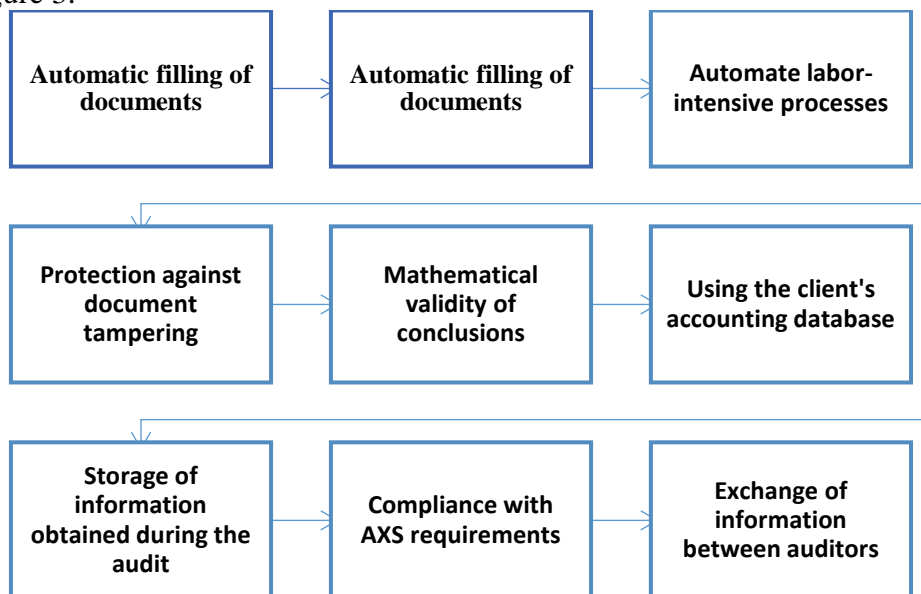


Figure 3. Advantages of an automated approach to auditing

The advantages of the automated approach to the execution of the audit task presented in Figure 3 are primarily related to the automation of the auditor's usual operations, thereby reducing labor costs, avoiding mechanical errors, reducing audit time, and improving the quality of the work performed. save

Automation is a natural and necessary process in the audit services market. Due to the decrease in the volume of mandatory audits, increased competition and increased requirements for the number of auditors are forcing the business community to look for new ways of developing and interacting in the market. It is for this reason that modern information technologies and software solutions in the field of auditing based on updatable modules help to increase the efficiency of work in the field.

Table1
Types of software used in international audit practice⁹

№	Program	Program Purpose	Manufacturer	Publication Year
1	AuditNET	Automation of audit activities	"New effective technologies"	2009
2	IT AUDIT: Auditor	Automation of auditing in a complex volume	"Master-soft" LLC www.audit-soft.ru	2005
3	AUDIT XP «Complex	Automation of audit activities	«Goldberg-Soft» company	2005
4	“Ekspress audit:PROF	A complex system of auditing automation	"Termika" N.P. Baryshnikov consulting	2004
Types of software created in Uzbekistan				
5	AUDITSOFT	Designed for automation of internal audit services and audit companies of commercial banks and business	Chamber of Auditors of Uzbekistan (Karimov N.F.)	2007
6	Audit Sampling	It is intended for the audit of credit activities of commercial banks and	Saxobov O.U., Bubnov A.A.	2008

⁹ Meliyev I.I. Improvement of planning and conduct of audit. Doctoral Dissertation Abstract for Doctor of Philosophy (PhD) degree. T.: -2019, 62 pages

7	First-Audit	It is intended to conduct internal audits of commercial banks and large	Karimov J.F., Karimov X.X.	2010
8	"AUDIT" software	Receiving and transmitting information in electronic form	Economy and Finance of the Republic of	2018

In the current global audit practice, special types of audit software are widely used together with office programs, regulatory and legal information systems, accounting software, and financial analysis software. In our opinion, due to the complexity of the tasks to be solved in the automation of audit activities, the effectiveness of the software application is directly dependent on its introduction and training of users. As a result of the research, it was found that currently in the audit practice of Russia and developed European countries, high-quality audits are carried out on the basis of short periods and procedures using the most professional software tools such as AuditNET, ITAUDIT: Auditor, AUDIT XP "Complex Audit" and "Express audit:PROF".

The "AUDIT" software package of the Ministry of Economy and Finance of the Republic of Uzbekistan is a software package for information interaction with auditing organizations and public associations of auditors, as well as applicants for auditor qualification certificates, 2018 was developed on the basis of the Resolution of the President of the Republic of Uzbekistan dated September 19, 2018 No. PQ-3946 "On measures to further develop audit activity in the Republic of Uzbekistan".

Objectives of the "AUDIT" software package:

Receiving and transmitting information in electronic form between the Ministry of Economy and Finance and audit organizations;

Receiving and transmitting information in electronic form between the Ministry of Economy and Finance and republican public associations of accountants and auditors;

Receiving and transmitting information in electronic form between the Ministry of Economy and Finance and the Agency;

Receiving information in electronic form between the Ministry of Economy and Finance and the State Tax Committee;

Receiving information in electronic form between the Ministry of Economy and Finance and the Ministry of Employment and Labor Relations;

Receiving information in electronic form between the Ministry of Economy and Finance and the Ministry of Higher Education, Science and Innovation;

Display the information entered by the audit organizations in the software package;

Reflecting the information entered by the public associations of accountants and auditors in the software package;

Representation of the information entered by the agency in the software package;

Reflecting the information introduced by the State Tax Committee in the software package;

Display of the information entered into the "Electronic Labor Book" database by the Ministry of Employment and Labor Relations in the software package;

Reflecting the information included in the "On Higher Education" database by the Ministry of Higher Education, Science and Innovation in the software package;

Presentation of the journal of mutual cooperation with the above organizations on the official website of the "AUDIT" software complex.

The tasks of the "AUDIT" software package are: designed for information exchange between the Ministry of Economy and Finance and: auditing organizations; republican public associations of accountants and auditors; Information about commercial organizations for the legality of using the phrase "auditing organization" in the name of the company by business entities to the State Services Agency under the Ministry of Justice of the Republic of Uzbekistan; Information on business entities that are subject to mandatory audits by the State Tax Committee of the Republic of Uzbekistan, as well as on business entities and their officials who have evaded mandatory audits on applicable financial sanctions. Regarding the provision of "Electronic Labor Book" information (as soon as it is ready) from the database of the Ministry of Employment and Labor

Relations; Ministry of Higher Education, Science and Innovation to provide information from the database "On Higher Education" (as soon as it is ready).

The list of services provided electronically in the "AUDIT" software package includes:

1. Applying;
2. Applying for a certificate;
3. Information about auditors and audit organizations;
4. Providing information to the agency;
5. Interaction and provision of information.

The main subsystems of the "AUDIT" software package information system:

1. Management;
2. Private cabinet;
3. Journal writing;
4. Database;
5. Access control;
6. Search subsystem.

Each participant of the "AUDIT" software package has its own office, which sends reports and data to the Department of Combating Economic Crimes under the Ministry of Economy and Finance and the General Prosecutor's Office. At the same time, the confidentiality of the data is preserved. Digital technologies, along with increasing the quality of products and services, reducing costs, and ensuring information transparency, are an effective tool in the fight against corruption, which is the most serious problem that the country's leadership is paying great attention to.¹⁰

4. Conclusion And Recommendations

As a result of our research, the following scientific proposals and practical recommendations have been formulated:

-The use of audit programs in the course of audits allows the auditor to perform the following tasks with quality and in a short period of time:

- a) checking the balances of transactions and bank account numbers carried out at the client-enterprise through a computer database;
- b) the ability to perform analytical operations in the computer database to determine the differences between property and funds in the document and in practice;
- c) checking the database of the audited economic entity;
- d) the possibility of testing the technical, mathematical and informational software used in the activities of the audited economic entity.

Practical research shows that in most cases, poor quality data is caused by the failure of computer equipment and carelessness and inexperience of operators. In our opinion, the following risks may arise as a result of the use of software in audits:

- technical risks - risks related to technical conditions, accounting data development methods, these risks are directly used in the implementation and use of automated information systems in the organization of accounting and internal control. Low-quality operation of technical tools is explained by the use of unofficial and unlicensed software, differences in the characteristics of technical and software tools, lack of appropriate general maintenance and control;
- risks associated with the accounting information processing system - errors in the development of the system, as well as its small circulation and misuse may be associated. Except for cases of using programs not intended for accounting. In this case, the auditors will have to determine whether the accounting system of the client-enterprise is being used correctly;

¹⁰ Minavar Tulakhodjaeva and Mutabar Khodjaeva. 2021. FEATURES OF DIGITALIZATION AND ENSURING TRANSPARENCY OF ACCOUNTING AND AUDIT IN UZBEKISTAN. In The 5th International Conference on Future Networks & Distributed Systems (ICFNDS 2021), December 15, 16, 2021, Dubai, United Arab Emirates. ACM, New York, NY, USA, 4 pages. <https://doi.org/10.1145/3508072.3508201>

- risks associated with internal control when using software at the client-enterprise - insufficient use of the accounting data processing system, lack of clear definition of the level of obligations and responsibilities of the client-enterprise's employees, dissatisfaction with the operation of the internal control system, client-enterprise information occurs as a result of non-availability of the protection system and loss of data due to unauthorized access to the database;

- risks related to the auditor's professional skills - incorrect assessment of accounting and analytical data processing systems, incorrect use of methods such as software testing and questionnaires, and problems related to misinterpretation of audit evidence.

All the above-mentioned factors are necessary for the development of automation as a means of improving the quality of services provided in the field of auditing, and on the other hand, they serve as a subject of controversy between auditors and software developers. It should be noted that no software can replace an auditor. However, in the course of the audit, it is advisable to use the capabilities of specialized audit software to the extent possible.

In our opinion, the following factors influenced the emergence of the need for digitization in the world auditing practice:

high level of software market development;

wide use of software in accounting;

the complexity and time-consuming nature of large volumes of information and audit operations;

standardization of the audit and the development of its methodology;

that it is based on software and mathematical models and that they are used in inspection objects;

the creation of information search systems and the need for their wide use in audit activities;

creation of the legal framework for the creation of a digitized audit activity system.

However, despite many advantages, the following factors prevent the widespread distribution of digital audit programs in the local market:

high purchase price;

cost of training and observation. In this case, taking into account the changes in the legal documents requires additional processing of the programs for a long time (from 2 to 3 months) by the specialists of our representative offices of the developing companies;

long-term - implementation for half a year or more;

requiring adaptation and correction by a professional programmer to the specific needs of the user.

In our opinion, due to the complexity of the task of digitization of auditing activities, the effectiveness of using the software mainly depends on its implementation, training of users, adaptation of the developments and methods of the auditing organization to the new software product.

Today, the specialized software of auditing allows, first of all, to organize the work of all employees of auditing companies in accordance with current legislation, international audit standards and internal standards. In a word, the digitalization of the audit process will reduce the duration of the audit service as much as possible, reduce the costs of the audit service, increase the productivity of the auditor and his assistants, store and analyze client-enterprise data in a complete and accurate volume, audit work documents it allows to form in a simple and understandable content for everyone, without technical and orthographic errors.

The use of digital technologies in audits has greatly facilitated the work, allowed to focus on more important factors in the examination of financial statements of enterprises. Thus, auditors spend less time analyzing each company's risk areas, focusing on detailed analysis of high-risk items in financial statements and business as a whole. Thanks to modern methods of information processing, less time is spent on analyzing the company's financial data. The result of the introduction of information technologies in the audit is to reduce the time of the audit, increase the quality of the services provided, and improve the working conditions of the members of the audit organization.

References

1. Kushnarev A. The problem of audit automation. // Audit today. -2007. - No. 4. - S. 20-22.
2. L.M. Makarova, D.T. Utesheva. Comparison of domestic audit automation programs. <https://docplayer.ru>

3. Goremykin A. Audit automation // Financial newspaper. 2012. No. 10.
4. Emelin V. N., Veretennikova M. N. Problems of audit practice in conditions of automated data processing // Young scientist. 2014. No. 1. 362 pages
5. Meliyev I.I. Improvement of planning and conduct of audit. Doctoral Dissertation Abstract for Doctor of Philosophy (PhD) degree. T.: -2019, 62 pages
6. Boginskaya, Z.V. Distance audit v sootvetstvii s mejdunarodnymi standardami audita / Z.V. Boginskaya, T. Yu. Gladkova // Ekonomika i predprinimatelstvo. – 2020. – No. 9 (122). - S. 1155-1159.
7. Kuznetsova, E.V. Automatization audit kak instrument control distansionnoy raboty auditorstroy organizatsii / E.V. Kuznetsova, A.V. Spesivtseva // Innovative economic development: trends and perspectives. - 2020. - T. 1. – S. 264-271.
8. Izvarina N. Yu. i second. ISPOLZOVANIE INFORMATSIONNYX SISTEM V HODE PROVEDENIYA AUDITA. Economy and Business: Theory and Practice, vol. 7 (89), 2022
9. Ispolzovanie informatsionnyx tekhnologiy v audite / N.Yu. Izvarina, A.A. Lermontova, K.E. Gutnik, S.A. Nikitin // Economics and business: theory and practice. – 2022. – No. 5-2 (87). - S. 23-27.
10. www.mf.uz/qr/news/category/yangilikar/post-1009
11. Minavar Tulakhodjaeva and Mutabar Khodjaeva. 2021. FEATURES OF DIGITALIZATION AND ENSURING TRANSPARENCY OF ACCOUNTING AND AUDIT IN UZBEKISTAN. In The 5th International Conference on Future Networks & Distributed Systems (ICFNDS 2021), December 15, 16, 2021, Dubai, United Arab Emirates. ACM, New York, NY, USA, 4 pages. <https://doi.org/10.1145/3508072.3508201>
12. Khodjayeva M., Karimova D. Audit report: National standards of uzbekistan and international practice <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85083763835&partnerID=40&md5=4f9fbbe0b04dc3b9bd97b5d62356014d>
13. Khodjayeva M., Muqumov Z. Features of obtaining audit evidence in accordance with international audit standards <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078821776&partnerID=40&md5=b47bca1d19e0fd6022eee60101a67c10>
14. Meliev I.I. O'zbekistonda auditorlik tekshiruvini o'tkazish amaliyotini takomillashtirish masalalari. Toshkent, "International Finance & Accounting" ilmiy jurnali, 2022 yil, avgust. №4,- 12 bet.
15. Meliyev I.I. A Quantitative approach to existing issues of audit planning in appropriateness and relevance analysis // International Journal of Management Science and Business Administration. 2018. Volume 4. Issue 3. March. P. 15 -18. (№5; Global Impact Factor - 0.652).
16. Meliyev I.I. Auditorlik tekshiruvini rejalashtirish va o'tkazishni takomillashtirish. Falsafa doktori (PhD) ilmiy darajasini olish uchun doktorlik dissertatsiyasi avtoreferati. T.: -2019 y. - 62 bet.
17. To'laxodjayeva M.M., Ilhomov Sh.I. Xodjaeva M.X. va boshqalar. Audit. Darslik. II-jild. T.: "IQTISODIYOT". 2018 y.
18. Axmedjanov K.B., Sattorov A.X. Auditga kirish. Darslik. – T.: «Innovatsion rivojlanish nashriyot-matbaa uyi», 2021y.-448 b.
19. Xodjayeva M. MAudit nazariyasi va amaliyoti. Darslik – T.: «Innovatsion rivojlanish nashriyot-matbaa uyi», 2022y.-242 b.
20. Qo'ziyev I.N. Auditorlik hisobotlarini tuzish va ularni umumlashtirish: nazariya va metodologik masalalar. Monografiya. -T.: IQTISOD-MOLIYA, 2015y. - 196 bet.