







# Importance of Using Digital Technology in Organizing Audit Activities

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**Abstract.** The article explores the inevitability of audit digitization in the rapidly evolving technological economy. It examines the integration of artificial intelligence and process automation into auditing activities, enabling the automation of repetitive tasks, enhancing data examination, and improving the accuracy of audit findings. The development of intelligent auditing with the application of machine learning and natural language processing is also discussed, significantly boosting the quality and efficiency of audit procedures. The adoption of modern technologies is reshaping the auditor's role, emphasizing the necessity of possessing not only traditional expertise but also knowledge of digital tools. Special focus is given to data protection requirements and compliance with global regulations. The impact of technological advancements on international auditing practices is also analyzed, where top accounting firms are actively adopting AI-driven solutions and blockchain technology. Additionally, the effect of digital transformation on auditing within the framework of International Auditing Standards is explored. Standard No. 520 encourages the application of advanced data analytics, Standard № 315 highlights concern regarding risks, instability, and cybersecurity, while Standard № 500 outlines innovative methods for gathering audit evidence through artificial intelligence. In conclusion, the article emphasizes that the seamless integration of technology requires a holistic approach, including structural reforms, ongoing professional training, and adaptation to modern challenges, which will ultimately enhance the reliability and accuracy of audit processes while ensuring compliance with current best practices. The recommendations stress the importance of strengthening cybersecurity protocols, standardizing blockchain applications, and actively incorporating cutting-edge technologies. Future research may focus on developing innovative risk mitigation strategies and addressing emerging trends in digital auditing.

**Keywords:** digitization, auditing, AI, RPA, cognitive computing, predictive analytics, cybersecurity, regulations, top accounting firms, blockchain.

## 1 Introduction

Process automation occupies one of the most significant positions across all industries. Robots are being widely implemented, and new software that operates with a higher degree of autonomy is being integrated. The direction of integrating artificial intelligence (AI) into the core business processes of companies from various sectors is actively developing. "Smart" robotic consultants are emerging, sophisticated artificial neural network models are being created to determine the dynamics of quantitative and qualitative business indicators, and other machine learning techniques are being used to forecast key growth or decline factors.

Over the past 10 years, the information technology sector in the S&P 500 index has shown significant growth. As of July 2024, it has increased by approximately 22.42% annually, which equates to a 7.3-fold rise when considering accumulated returns. These figures clearly highlight the inevitability of digitalization, demonstrating the accelerating shift towards technology-driven industries on a global scale.

In Azerbaijan, digitalization is actively developing and affecting many aspects of the country's economy and social life. In recent years, the government has been implementing major projects to modernize and create digital infrastructure. One of the key initiatives is the "Azerbaijan Digital HUB" program, aimed at transforming Azerbaijan into a regional digital center. As part of this program, major fiber-optic backbone networks are being developed to connect the country with neighboring states, positioning Azerbaijan as a strategic transit hub for internet traffic between Europe and Asia [1].

Government expenditure on software and ICT (Information and Communication Technology) serves as an indicator of a country's progress of digitalization. If the government actively invests in digital technologies, software, and ICT infrastructure, it reflects a commitment to modernization and digital transformation. In addition to direct investments, the extent of regulatory engagement and international digital partnerships also play a crucial role in shaping the country's digital landscape.

To gauge this, we should examine ICT-related expenditures over the past five years, along with trends in digital policy, regulatory initiatives, and industry development.

**Table 1.** Expenditure on software and ICT equipment, in million manats.

Expenses	2019	2020	2021	2022	2023
Total	128,6	157,7	216,4	244,4	298,5
including software expenses	38,2	48,5	84,2	103,1	132,1
Share of software expenses in GDP, in percent	0,5	0,07	0,09	0,08	0,09
License expenses	29,9	32,6	64,8	78,8	103,7
Expenses on application software development	8,3	15,9	19,4	24,3	28,4
Expenses on technical support	34,0	44,0	62,5	68,1	74,8
Expenses on employee training and mastering new applications	2,8	4,8	2,9	3,1	7,8

Expenses on ICT equipment	25,4	28,3	27,5	25,0	33,6
Expenses on Internet connection	19,7	23,1	28,2	35,8	41,1
Expenses on information using technical means	7,1	6,4	10,3	7,9	6,3
Expenses on development of other systems	1,4	2,6	0,8	1,4	2,8

Source: [https://www.stat.gov.az/source/information\\_society/](https://www.stat.gov.az/source/information_society/)

Audit automation can be understood as the use of computers and modern information technologies for organizing audit activities, including financial statement reviews, audit report preparation, and the provision of related audit services.

## 2 Discussions and Conclusions

The integration of digital technologies into auditing is becoming increasingly relevant, especially with the transition to International Standards on Auditing (ISA). Programs such as ACL Analytics, IDEA (Interactive Data Extraction and Analysis), AuditBoard, TeamMate+, Galvanize (formerly HighBond), CaseWare IDEA, and others are widely used in international practice, significantly facilitating auditors' work. However, these tools are generally focused on automating specific processes and do not replace auditors' cognitive functions. Naturally, choosing the right software depends on the specific needs, scale of business, and budget. Many of these tools offer trial versions, allowing users to evaluate their functionality before purchasing [2].

The auditing profession requires high qualifications, and established audit methodologies are an essential part of the intellectual capital of both individual specialists and audit firms. The quality of audit services and reports directly depends on the analytical skills and professional judgment of auditors, which are formed through experience, years in the field, and the ability to identify potential risks and irregularities. Therefore, enhancing the methodological and organizational framework of auditing requires the adoption of digital technologies, which will serve as the foundation for the development of intelligent assistants.

Modern trends are transforming not only audit methods but also its objectives. Technological advancements and globalization demand a reassessment of international audit strategies in response to new challenges and opportunities. In this context, analyzing the organization and future of international auditing is not only relevant but also a strategically important step in helping auditors adapt to a rapidly evolving environment.

These changes affect not only the technical aspects of auditing, such as cybersecurity and the adoption of new technologies like blockchain and big data analytics, but also the fundamental principles of audit standards and approaches. The rapid growth of the digital economy requires auditors to go beyond traditional skills, adapting flexibly to new realities and challenges faced by global businesses.

This study is based on academic research exploring the use of digital technologies and artificial intelligence systems in auditing and audit procedures [3], [4].

The study employed an integrated methodology to examine strategies for auditors to adapt to economic challenges. It also analyzed best practices from leading firms such as KPMG, Deloitte, and PricewaterhouseCoopers (PwC), demonstrating the practical benefits of digital innovations, including artificial intelligence, big data analytics, and cybersecurity [5].

Additionally, the study referenced existing standards such as GDPR and ISO 27001 to understand cybersecurity and data protection requirements in the auditing context. Together, these aspects create a comprehensive foundation for the analysis and conclusions presented in this research, providing a well-rounded perspective on the modern challenges and prospects for auditing in the digital age.

This article aims to systematize key trends in the development of auditing practices, driven by technological advancements in the digital economy, and identify promising directions for the evolution of intelligent auditing.

One of the key technologies shaping the future of auditing is Robotic Process Automation (RPA), a solution that enables the automation of repetitive and routine tasks using software robots or bots [6]. These bots can mimic human actions such as data entry, copying and pasting information, filling out forms, processing transactions, managing spreadsheets, and interacting with various applications and systems.

In auditing, RPA is widely used to automate tasks such as sending emails, monitoring audit plan execution, tracking key risk indicators, and completing standardized templates.

Thanks to its ability to automatically collect and process data, verify information against established standards, and perform other tasks, RPA significantly enhances auditing efficiency. Some of its core advantages include continuous operation without breaks, high-speed task execution, reliability, reduced risk of human error, and flexibility with easy adaptability to changing processes [7], [8]. These features make RPA one of the most important tools in the advancement of AI-auditing, aimed at integrating intelligent solutions for deeper analysis and optimization of audit workflows.

The implementation of digital technologies such as artificial intelligence, big data analytics, and RPA is shaping a new paradigm in auditing. Intelligent auditing is becoming a key development area, ensuring the automation of routine processes and improving analytical accuracy. In the future, further exploration and integration of these technologies will not only enhance audit quality but also ensure compliance with the modern requirements of the global market.

**Table 2.** Main components of artificial Intelligence.

1	Natural Language Processing (NLP)	Enables the understanding and interpretation of human language, including speech-to-text conversion and vice versa, machine translation, and real-time processing of voice and text data. NLP is used for scanning large volumes of documents to
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		extract important information in auditing. This tool can be combined with other AI components, such as machine learning, deep learning, and RPA, for document classification, information extraction, and data analysis.
2	Natural Language Generation (NLG)	Allows the creation of text from data, such as generating reports, graphs, and charts.
3	Computer Vision	Helps extract information from videos and images. AI-based applications can analyze millions of visual elements captured by cameras to identify patterns, detect anomalies, and enhance decision-making processes.
4	Machine Learning	Based on the use of decision templates for similar tasks. In auditing, machine learning can be applied for forecasting, analyzing large data volumes, and identifying risk distortions.
5	Virtual Agent	Performs customer support functions, responding to inquiries and client requests.
6	Cognitive Technologies	Simulate human cognitive processes in a computerized form to enhance automation and decision-making capabilities.
7	Orchestration	In the context of automation, it refers to the management and scheduling of AI tools to optimize workflows. Orchestration can be performed manually, on a schedule, or based on past results to determine the best execution time for tasks.

Source: Compiled by the author

Other technologies that support artificial intelligence include big data analytics, the Internet of Things (IoT), blockchain, and other digital advancements.

The International Auditing and Assurance Standards Board (IAASB) recognizes the growing role of digitalization in auditing and has introduced various guidelines and recommendations to help integrate modern digital tools into audit practices. These efforts aim to improve the accuracy and efficiency of audits in today's rapidly evolving technological environment.

IAASB encourages auditors to use data analytics in their work to better assess risks and identify unusual patterns that could indicate potential issues. They are also exploring artificial intelligence and machine learning to automate repetitive tasks, enhance data analysis on a large scale, and support auditors in making more informed decisions.

Blockchain technology has also drawn attention due to its potential impact on financial reporting and auditing, offering greater transparency and security. In response, IAASB is developing guidelines for auditing companies that use blockchain. Cybersecurity is another major area of focus, as protecting data and ensuring reliable audit processes are crucial for maintaining trust in the profession.

To address modern challenges, IAASB has issued recommendations on remote auditing, particularly in response to the COVID-19 pandemic, ensuring that audits can still be conducted effectively even when physical access to client locations is limited. The board also supports continuous auditing methods, which allow for real-time monitoring and ongoing assurance rather than traditional periodic checks.

IAASB also highlights the need for auditors to continuously develop their skills and keep up with new digital tools and technologies to remain competitive in the changing audit landscape.

A report by the World Economic Forum predicts that by 2025, digital transformation will significantly reshape auditing. Artificial intelligence, data analytics, and automation will play a major role in improving audit accuracy and efficiency while reducing time spent on routine tasks.

AI and machine learning will enable auditors to process vast amounts of data more effectively, spot irregularities, and improve audit quality, ultimately reducing the risk of errors. Blockchain adoption will make financial transactions more transparent and traceable, strengthening confidence in audit reports. Additionally, robotic process automation (RPA) and workflow optimization will help cut costs and enhance productivity in auditing.

As digitalization progresses, auditor training and education will also need to adapt, requiring professionals to learn new digital tools and methods to perform their work effectively. Over time, auditing will become more accurate, transparent, and efficient, increasing its value and credibility for all stakeholders.

## **2.1 Cognitive Technologies in Auditing**

Cognitive technologies are tools based on artificial intelligence, machine learning, and data processing that mimic human thinking, including learning, reasoning, and decision-making.

The increasing use of digital technologies in data analysis has made audits faster [11], [12], improved their efficiency, expanded the range of factors considered in financial and business performance, and ultimately led to more accurate audit results. Today, AI, machine learning, and blockchain technology are playing a major role in the auditing industry.

Artificial intelligence, as a cognitive technology, can process massive amounts of information, taking audit automation to a new level. AI-powered software solutions use machine learning to analyze data, detect inconsistencies, and assess risks [13]. These

systems continuously improve as they process new information. However, at this stage, AI is primarily used by large audit firms that conduct external audits. For example, Deloitte has implemented Argus, a machine-learning-based tool that can analyze vast amounts of data, extract key insights based on predefined criteria, and speed up audit procedures while improving accuracy. Despite the growing capabilities of AI, the expertise and professional judgment of experienced auditors remain critical when forming audit conclusions.

Cognitive auditing has undergone significant changes, particularly in how audit procedures are structured and classified. These developments emphasize the increasing importance of expertise, experience, and critical thinking in modern auditing [11].

Traditional audits involve many procedures, some of which do not have strict rules or predefined methods, requiring auditors to use their professional judgment. In such cases, auditors must analyze different possible approaches, weighing the benefits and risks of each option. This is where cognitive procedures come in, helping ensure high-quality audits even in uncertain and complex situations.

Key elements of cognitive auditing include several important steps. The first is audit planning, which involves setting objectives, developing a strategy, and selecting the right methods for the specific company being audited [13]. At this stage, auditors rely on their experience to predict potential risks and identify the most critical areas for review.

The second is audit process management and organization, which goes beyond just overseeing tasks—it requires strategic thinking. Auditors need to coordinate teams, track deadlines, ensure smooth communication between stakeholders, and consider both internal and external factors that could impact the audit results.

Quality control is another key aspect of cognitive auditing. Auditors must ensure that the audit complies with standards, detect any errors, and verify the completeness and accuracy of the evidence collected. The quality of an audit directly affects its reliability and the level of trust it receives from stakeholders.

During the evaluation and analysis phase, auditors use analytical tools to interpret data gathered during the audit [14]. Critical thinking is essential here, allowing auditors to identify not just obvious red flags but also hidden patterns that might influence their conclusions.

Another crucial part of cognitive auditing is evidence assessment [11]. This involves applying professional skepticism, double-checking data accuracy, and looking for additional proof to ensure objective and reliable conclusions.

Lastly, risk assessment and internal control analysis are vital. Auditors need to recognize potential risks, evaluate their impact, and develop strategies to minimize them. Internal control analysis helps identify weaknesses in a company's management and propose solutions to strengthen oversight, reducing the chances of future errors and violations.

Cognitive auditing combines analytical and problem-solving processes to ensure audits are both high-quality and reliable. It requires expertise, experience, creativity, flexibility, and attention to detail. These skills help auditors build trust in their findings, making audits more valuable to businesses and society as a whole.

S.E. Bonner and N. Pennington, in their research, identified 28 different tasks that auditors face and described in detail the cognitive processes involved in solving them. Additionally, they defined the corresponding knowledge base necessary for performing these tasks [12].

For example, one of the key tasks in auditing is understanding the business of the audited organization. To successfully carry out this task, the auditor must have knowledge of the current economic situation in the country where the audited company operates. This includes awareness of external and internal factors that may affect the business, such as economic conditions, legislative changes, competition, and market trends. This knowledge allows the auditor to more accurately assess the risks associated with the company's activities and make well-informed decisions during the audit.

Another important task is performing analytical procedures and identifying potential issues. For this, the auditor needs to be aware of the frequency of errors that may occur in financial reporting and understand the typical situations encountered by similar companies. For example, knowing which errors are most common in the financial statements of companies within the same industry enables the auditor to quickly identify anomalies or discrepancies in the data. It is also crucial to consider the specifics of the audited organization's activities to correctly interpret the data and make conclusions that reflect the true state of affairs.

M.A. Alnaimat, in his research, argues that success in international auditing is closely tied to the effective use of modern technologies. He highlights the importance of innovative tools such as blockchain and big data analytics, emphasizing their ability to enhance the efficiency and reliability of audit processes. His study provides specific examples of how these technologies are successfully applied in auditing practices [3].

S. Cheng conducted an extensive study on technological transformations in international auditing. In his in-depth analysis of the industry, he underscores the critical role of blockchain in ensuring transparency and security of financial information. Specifically, he identifies blockchain as a key tool for preventing financial data manipulation [15]. Unlike other researchers, Cheng focuses on the continuous access auditors have to the complete transaction history provided by blockchain technology. He emphasizes that due to blockchain's decentralized nature and its resistance to tampering, auditors can quickly and reliably verify financial transactions [17].

The Big Four accounting firms - Deloitte, Ernst & Young (EY), PwC, and KPMG - are the largest providers of accounting, auditing, and consulting services. In today's rapidly evolving digital economy, these firms are heavily investing in advanced technologies like artificial intelligence to optimize their operations, improve accuracy, and minimize human errors.

Artificial intelligence helps the Big Four manage increasingly complex tasks, such as investment advisory, which requires analyzing massive amounts of data [4]. These tasks often exceed human capabilities and would be extremely time-consuming and difficult to analyze manually. AI can process and analyze vast amounts of data quickly and accurately, identifying patterns and trends that traditional methods might overlook.

AI also automates repetitive tasks such as data processing and financial reconciliation, allowing auditors and consultants to focus on more strategic decision-making [6]. It significantly reduces human errors, particularly when handling large volumes of data.

As a result, AI enhances the quality of audit services and speeds up data processing, which is especially crucial for auditing large multinational organizations.

Additionally, AI's ability to analyze data in real time enables the Big Four to provide their clients with more accurate forecasts and insights, helping them make well-informed strategic decisions. For example, Deloitte has developed a tool called SONAR, which analyzes data related to VAT [16], product codes, and local tax regulations. It assesses the likelihood of tax compliance by cross-referencing at least 2,500 products with benchmark data, displaying results in percentage format.

Another Deloitte tool, Argus, compares documents and identifies even the smallest discrepancies. It analyzes variations, adjusts classification categories based on significance, and generates risk assessment reports. GRAPA is used in audit inspections, helping auditors determine audit strategies and assess their effectiveness.

At Ernst & Young (EY), most AI-powered programs are still in the pilot phase. Some of these programs are focused on tax compliance and documentation, while others deal with lease agreements, rental payments, and related financial aspects. EY's Australian branch has already begun using AI to automate routine audit tasks.

EY has also introduced a computer vision program that enables drones to monitor inventory during audits. These drones can, for instance, count the number of vehicles at a manufacturing site and transmit the data directly to the company's global digital audit platform [17]. According to EY, using drones helps auditors collect more data during audits, allowing them to focus on risk areas instead of manually recording inventory details. This drone initiative is currently in the research and development stage.

PwC has developed an artificial intelligence program called GL.ai in collaboration with H2O.ai. This AI-supported system is capable of analyzing documents for report preparation. GL.ai has already been tested on audit databases in Canada, Germany, Sweden, and the United Kingdom. The main advantage of GL.ai is its ability to analyze a vast amount of data without being limited to a sample.

The audit firm KPMG has created its own portfolio of artificial intelligence tools called KPMG Ignite. This system is designed to enhance business decision-making and processing on a digital platform. Key features of KPMG Ignite include a mechanism that uses artificial intelligence to analyze and extract information from leasing or investment transactions.

Another application of artificial intelligence at KPMG is the Call Center Analytics Engine product, which uses natural language processing to develop a model for predicting future events and even converting customer calls into unstructured text [19]. This text is then structured to identify key terms, analyze customer sentiments, and forecast future trends.

**Table 3.** Comparative Overview of Digital Audit Elements in the Big Four Firms.

PwC	Deloitte	EY	KPMG
<p>1. Professionalism - Highly qualified and experienced auditors, equipped with the potential of modern digital technologies, deliver services of unmatched quality.</p> <p>2. Accuracy - Impeccable quality, audit plans tailored to the business specifics, and targeted testing.</p> <p>3. Transparency - Comprehensive real-time global view — unprecedented maximum coverage.</p> <p>4. Efficiency - Minimal effort required for data preparation and minimal disruption to client specialists, saving time.</p> <p>5. Customization - Automation tools developed by the audit team specifically for the client.</p> <p>6. Analytical Insight - Valuable analytical insights about the client's business derived from the audit results</p>	<p>1. Quality The foundation of confidence; defines what can be expected from Deloitte.</p> <p>2. Focus on Quality Represents a complete commitment to making well-informed judgments.</p> <p>3. Strength of the Global Network- Supported through specialized centers of audit excellence accessible to professionals.</p> <p>4. Consistent Audit Approach - A methodology applied to all tasks, especially for international clients, ensuring flawless audit experience.</p> <p>5. Ongoing Investment - In the development of advanced technologies and new approaches and perspectives.</p> <p>6. Commitment to Revolutionize - Not just updating what audit does and how it does it, but aiming to revolutionize it.</p>	<p>1. Greater Confidence and Trust - Working with artificial intelligence tools reduces the chances of human error.</p> <p>2. AI Tools Provide Consistent Justification - With high accuracy, objectivity, and precision.</p> <p>3. Enhanced Quality - Quality is improved by aiding in the analysis of large datasets.</p> <p>4. Increased Value - Artificial intelligence allows for tailored approaches, optimizes time, and delivers better service to clients.</p>	<p>1. Greater Transparency - 24/7 access to the client's audit status.</p> <p>2. Benefits of Transformational Capabilities - Leveraging transformative opportunities.</p> <p>3. Globally Consistent Execution - Consistent implementation across the globe.</p> <p>4. Effective Data-Driven Operations - Efficient work based on analytical data.</p>

	<p>7.Striving to Enhance Value - Ensuring that every aspect of the audit process is more valuable so that clients have the confidence needed to pursue their aspirations.</p>		<p>5.Real-Time Collaboration and Interaction - Collaboration in real-time and interaction with the team.</p> <p>6.More Meaningful Engagement with the Audit Team - Enhanced interaction with the audit team.</p> <p>7. Quality, Professionalism, and Independence - Upholding quality, business integrity, and independence.</p>
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Source: Nikolashin, A. O. "Digital Audit: Fundamental Elements and Innovative Technologies." Investments: Practice and Experience, 2023, no. 9, pp. 75–80. URL: <https://cutt.ly/qwHjXVTV>

Deloitte has identified and systematized ten future audit trends that are expected to shape the industry in the coming years.

**Table 4.** 10 future audit trends.

Trend	Purpose
Agile Internal Audit	Breaking away from traditional methods and exploring new ways of working together based on agile methods.
Integrated Assurance	Aims to align quality activities with the value drivers in the organization and to ensure risk visibility and risk management effectiveness while improving efficiency.
Culture Assessment	Supporting business strategy, understanding and managing cultural values. Key to success and performance, but also a source of legal and reputational risks.
Data Security Assurance and Recommendations	Risk-based regulation that does not prescribe how to protect customer data but sets expectations for data based on its sensitivity and potential risks. Rather than a one-size-fits-all approach, seeks customized methods to protect the types of data processed by the organization, taking into account the risks associated with the data.
Cyber Audit	Management accountability for cybersecurity with maximum protection. Exploring vulnerabilities with tools and measures used to address specific risks, such as data protection, identity and access management, cloud security and risk monitoring.
Using Robotic Process Automation and Cognitive Intelligence	Applying a systematic approach based on the operating model, infrastructure and use cases throughout the audit lifecycle to further develop and launch a pilot project.
Disruptive Technology Risk Audit	Breaking away from traditional methods and exploring new ways of working together based on agile methods.
Future Workforce	Aims to align quality activities with the value drivers in the organization and to ensure risk visibility and risk management effectiveness while improving efficiency.
Continuous Risk Assessment	Supporting business strategy, understanding and managing cultural values. Key to success and performance, but also a source of legal and reputational risks.

Assurance Automation	Risk-based regulation that does not prescribe how to protect customer data, but sets expectations for data based on its sensitivity and potential risks. Rather than a one-size-fits-all approach, seeks customized methods to protect the types of data processed by the organization, taking into account the risks associated with the data.
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Source: Kondratiuk O. M., Rudenko O. V., & Chernobrovkina A. Y. (2021). Opportunities and Prospects of Using Artificial Intelligence in Auditing. *Effective Economy*, (1).

At the current stage of cognitive technology development, AI systems based on neural networks are the most promising. These systems have the ability to self-learn and self-organize, which sets them apart from expert systems and genetic algorithms [16]. Neural networks mimic the way the human brain works, consisting of interconnected units that process data, respond to external stimuli, and exchange information with each other.

The main difference between neural networks and expert systems is that deep learning models can work with much larger and more complex datasets containing diverse empirical data. These datasets, combined with machine learning and deep learning technologies, allow AI systems to develop the ability for conceptual and abstract thinking.

AI training is based on labeled data, which is formed from previous audit reviews, typical tasks, and problem-solving algorithms [18]. The process of extracting knowledge from databases includes several stages: selection, cleaning, transformation, modeling, and interpretation of information. The configuration and fine-tuning of the AI system continue until the desired results are achieved, patterns are created, and successful validity testing is completed.

Machine learning is divided into two main approaches: supervised learning, which is used for classification, regression, ranking, and forecasting, and unsupervised learning, which is used for clustering and finding associative relationships between objects.

International Standards on Auditing (ISA) are regulated by the International Auditing and Assurance Standards Board (IAASB), which actively works on adapting its standards to digitalization and the implementation of new technologies in the auditing process. In recent years, IAASB has focused on digital transformation, the integration of artificial intelligence, data analytics, and other modern technologies in auditing.

Digitalization within the framework of International Standards on Auditing (ISA) has a significant impact on audit processes. ISA 520 ("Analytical Procedures") recommends that auditors use modern data analysis methods, such as big data and predictive models, for deeper financial analysis and early risk detection. ISA 315 ("Identifying and Assessing Risks of Material Misstatement") emphasizes the importance of understanding a company's internal processes, including automated systems, which requires knowledge in information technology and risk assessment [19], particularly in cybersecurity.

In the digital era, auditors have access to new methods of obtaining audit evidence, described in ISA 500 ("Audit Evidence"), using automated systems and artificial intelligence, which changes traditional approaches to auditing. Technologies also influence the content and format of audit reports, and IAASB is developing recommendations for integrating digital tools into the auditing process. In this regard, IAASB is initiating the creation of new standards focused on the use of digital technologies in auditing.

Another important aspect is the training of auditors, which requires continuous updating of knowledge and skills to effectively apply new technologies in accordance with modern standards.

### 3 Conclusion

The conclusion of the article summarizes all the key aspects of digital technology adoption in auditing and its impact on the profession. It highlights that automation of audit processes and the use of artificial intelligence (AI) open up new opportunities for improving the efficiency and accuracy of audits. At the same time, digitalization requires auditors to acquire new skills and knowledge, emphasizing the importance of continuous learning and adaptation to emerging technologies.

Here are the main takeaways from the article:

First, digital transformation is taking place across nearly every industry, and auditing is no exception. In the fast-evolving digital economy, adopting new technologies is not just a logical step but a necessity for maintaining competitiveness.

Second, integrating AI and robotic process automation (RPA) in auditing is primarily aimed at automating routine tasks, improving data analysis, and increasing the accuracy of audit conclusions.

Third, modern cognitive technologies that simulate human thought processes enable auditors to tackle new challenges. Techniques such as machine learning, big data analysis, and natural language processing (NLP) help enhance audit quality and improve efficiency.

Fourth, as new technologies are implemented, the skill set required for auditors is also changing. Besides traditional auditing expertise, professionals must develop digital competencies. This shift makes professional judgment more important than ever, as it remains the key factor in evaluating various processes and operations.

Fifth, security and regulatory compliance should not be overlooked, as they are particularly crucial in the digitalization of auditing. The IAASB and other international auditing bodies actively work on ensuring compliance with security standards in the audit sector.

Sixth, digitalization is reshaping global auditing practices. The Big Four firms are at the forefront of adopting new technologies, demonstrating how digital transformation can redefine the entire industry and establish new auditing standards.

The conclusion emphasizes that successfully integrating new technologies into auditing requires a comprehensive approach—one that goes beyond technological inno-

vation. It involves organizational changes, staff training, and adaptation to new conditions. By implementing AI and other digital tools, auditing processes can be significantly improved, ensuring higher quality audits and compliance with modern standards.

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