

Methodology for conducting an information and document audit: An integrative approach

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Abstract. In contemporary conditions, the management of information resources within an institution's professional environment is becoming increasingly complex. An information and document audit serves as a tool for assessing the state of information resources, ensuring compliance with regulatory requirements, optimising document processing and storage processes, and enhancing information security. The study aimed to substantiate the methodology for conducting an information and document audit by its implementation stages and to integrate tools for information interaction and information technology solutions into this process. The study employed methods of analysis, synthesis, abstraction, and comparison. As a result, key stages of the information and document audit were characterised, including the systematisation of existing approaches to its implementation. It was established that an information and document audit is a fundamental tool ensuring a transparent and systematic approach to document verification and analysing an organisation's information resources. The study explored forms of document and information interaction within an institution's professional environment, with a focus on the primary means of their implementation. The main forms of such interaction – traditional and electronic – were identified. The study emphasised that the use of automated information systems, cloud services, and electronic document management facilitates a rapid transition to digital technologies, which was a strategic direction for enhancing the transparency, efficiency, responsiveness, and security of an institution's information and management processes. A review was conducted of software solutions that support information and document interaction within the processes of an information and document audit. Particular attention was given to national security considerations, when selecting software, especially in the context of contemporary geopolitical challenges. The practical significance of the study lies in the applicability of the proposed methodology for conducting an information and document audit, which can be recommended for use in the information and

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analytical support of organisations, contributing to a more efficient and structured operation of information and document processes in the context of an institution's digital transformation

Keywords: documentation management; information interaction; electronic document management systems; automated information systems; information resources; information technologies

Introduction

The rapid development of digital technologies, transforming methods of information processing, storage, and analysis, including documentation, is exerting a critical influence on businesses, institutions, and organisations. The swift pace of digitisation of documentation processes, and information processes in general, which is not only a hallmark of the 2010-2024 period, but also a necessary condition for functioning in an information society, demands increased attention to the implementation of these processes per legislative and other regulatory requirements, as well as considering the specific features of the latest information technologies used in these processes. In this context, information and document audit becomes particularly relevant as a tool for increasing the efficiency of managerial activities, ensuring the transparency of information and documentation processes, optimising organisational operations, and implementing modern information technologies.

Conceptual approaches can be considered those highlighted in the scientific publication by the authors W. Abd Kadir *et al.* (2024) regarding the use of information audit in the activities of internal affairs bodies, in particular, the division of the audit strategy for investigative documentation and information into stages of pre-audit (input data), audit (process), and post-audit (output data). The authors R. Joshi *et al.* (2024) analysed the relationship between various factors influencing the information system and the quality of the audit through the prism of information theory.

One of the prominent trends of 2022-2024 was the discovery of the impact of artificial intelligence on the conduct of audits, particularly information audits. This topic was the focus of a publication by F.A. Almaqtari *et al.* (2024), which described the link between external and internal factors, artificial intelligence, and the use of information audits as a component of financial audits. The authors found that the use of artificial intelligence allows for the offloading of routine big data analysis, freeing up time for other more critical components of the audit.

The study of the composition of library document collections as part of the implementation of an information audit is another area of scientific research in 2022-2024, as evidenced by several publications. In particular, in an article by authors M.E. Emerson & L.G. Lehman (2022), a methodology for auditing was documented, its results were presented, and proposals

and tools were provided for other libraries that can use it, when conducting their own audits to identify gaps in the library's printed book collection. W.H. Walters (2023) described three methods for conducting diversity audits – the catalogue search method, the checklist method, and the book examination method – and explained, how the results of the analysis can be used to create more diverse library collections. C. Sproles (2022) described the technological transformation of the library science of US government documents, emphasising the change in information carriers for such documents.

Research by Ukrainian scholars has often focused on conducting IT audits. Authors Ya. Mulyk *et al.* (2024) analysed the types of audit evidence, methods, and tools that can be used in conducting IT audits. Researchers S. Greben *et al.* (2020) developed a process for organising internal IT audits, which allowed for the rapid identification of weaknesses in this system. O. Skitsko & A. Vavilenkova (2022) investigated methodologies for conducting information system audits.

Specific developments regarding the theoretical and conceptual foundations of information and document audits in a broad sense for various fields of activity were reflected in the publication Yu. Romanyshyn & Kh. Krupa (2024). At the same time, the methodology for conducting information and document audits remained insufficiently studied, particularly in the context of its role as a basic tool in other types of audits, as well as an independent phenomenon in various fields of activity.

This research aimed to provide a scientific foundation for the methodology of conducting information and document audits according to their stages and to use modern information technologies and software tools in their practical implementation based on an integrated approach. The main objectives of the research were: 1) to clarify the concept of information and document audits; 2) to study scientific and practical approaches to the stages of implementing information and document audits, to substantiate a methodology for conducting such audits, taking into account the stages of the life cycle of documents and other information resources; 3) to use IT tools for information interaction in these processes. The scientific novelty of the research lies in the refinement of the methodology of information and document audits following the stages of the life cycle of information, particularly document resources.

Materials and Methods

The methodological foundation of the research was based on theoretical and empirical methods of scientific cognition, including analysis and synthesis, classification, abstraction, objective study of the features of information and document audits, and identification of the specifics of its application in the activities of an institution using information technologies. The method of comparison was used, which involved studying Ukrainian and foreign experience in conducting information and document audits, means of implementing forms of document and information interaction, and electronic document management systems; monitoring – in identifying software products to meet the institution's information and document needs; information modelling – in developing a methodology for information and document audits in combination with elements of methodologies of various scientists.

The methodology of this research involved studying approaches to conducting information and document audits based on information interaction within an institution, particularly using modern information technologies and electronic document management systems. At a general scientific level, the research was based on the following approaches: a systemic approach, which focused on defining the process of information and document auditing as a holistic system, considering the relationships between the aim, objectives, and content of the concept under study in combination with the components of document and information interaction, which allowed for the identification of qualitative characteristics and general systemic properties; a synergetic approach, carried out based on the constant active interaction of document flows with the external environment, leading to changes and improvements in the functioning of documentation support and information resources in the institution. Specific methodological approaches in this study, which determined the features of the implementation of information and document audits, included: a historical approach, which assumed that each phenomenon was considered in dynamics and forecasts its development prospects; an innovative approach, which involved the application of information technologies, electronic document management systems, cloud services in the processes of information and document interaction in the institution; an information approach, which consisted in identifying the features of information and document audits in various fields, which provided grounds for asserting the direct influence of the industry, in which the information and document audit was carried out on the choice of its methodology.

A study of the outlined methodologies for conducting information and document audits led to an

interim conclusion that information and document auditing is a complex phenomenon, with information auditing conditioning the functioning of document auditing. Therefore, the term "information and document audit" was used to comprehensively examine an organisation's information resources and documentation support.

The outlined methodological approaches enabled the identification of common features of information and document auditing that were independent of industry-specific contexts. The regulatory framework for this study included the Order of the Ministry of Justice of Ukraine No. 1886/5 (2014), Order of the Cabinet of Ministers of Ukraine No. 649-r (2017). Also, an analysis of the Standard Instruction on documenting managerial information in electronic form and organising work with electronic documents in record-keeping, and electronic interagency exchange, approved by Resolution of the Cabinet of Ministers of Ukraine No. 55 (2018), was important for the research.

Results and Discussion

Given the justification of the concept of an information and document audit as a combination of two methodologies, the research of scholars, who considered information and document audits in their publications was chosen to characterise the stages of its implementation. A detailed analysis of the researchers' concepts allowed for a comparison of their theories regarding the process of information and document auditing as a comprehensive study of information resources and documentation support for an organisation's activities.

In the research of the authors Yu. Romanishyn & Kh. Krupa (2024), it was found that information and document audits are interdependent phenomena as "information audit conditions the functioning of document audit as a comprehensive analysis of documentation and verification of its compliance with requirements". Given that documents were the material carrier of information, the authors proved the expediency of conducting an information and document audit, which will allow for a more complete and objective view of the organisation's activities, not only in terms of information resources, the analysis of which was carried out during an information audit, but also in terms of specific policies, practices, and the integrity of documents and the optimisation of document flow in the organisation. Researcher S. Henczel (2001) defined a structured model for conducting an information audit, which was divided into seven main components. Each stage was designed to help comprehensively assess information resources. The approach shown in Figure 1 was known for its adaptability to different organisational contexts and information needs, as well as its comprehensiveness and universality.

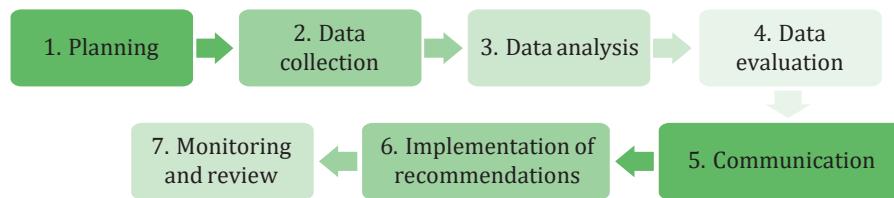


Figure 1. Seven-stage model of information audit

Source: developed by the authors based on S. Henczel (2001)

The outlined model was designed for conducting information audits, but it can also be applied to information and document audits. For example, the audit planning stage involved defining clear objectives, such as verifying compliance with regulatory requirements, improving efficiency, or controlling quality. Additionally, at this stage, it was decided which documents would be audited, the composition of the audit team and their responsibilities were determined, and tools for tracking and verifying documents were prepared, such as checklists or templates. During data collection, originals or copies of documents were processed in paper or electronic form. The data analysis stage involved verifying the information and documents for accuracy, relevance, and compliance with standards. The auditor ensured compliance with legal, regulatory, or organisational requirements, as well as the authenticity and reliability of sources of documentary

information. Data evaluation involved a conclusion about whether the documents contained all the necessary information, identifying gaps and the presence of problems, facts of the absence of correct data, and outdated information. The communication stage was used to clarify discrepancies or unclear points with the relevant parties involved in the information and document audit process. Subsequently, the developed recommendations were implemented through implementation and subsequent monitoring. The final stage was designed to track the implementation of the recommendations obtained as a result of the information audit (Henczel, 2001). Each stage was accompanied by corresponding types of documents. A similar approach to interpreting the stages of conducting an information audit was adhered to by researcher E. Orna (2004), whose methodology included pre- and post-audit stages (Fig. 2).

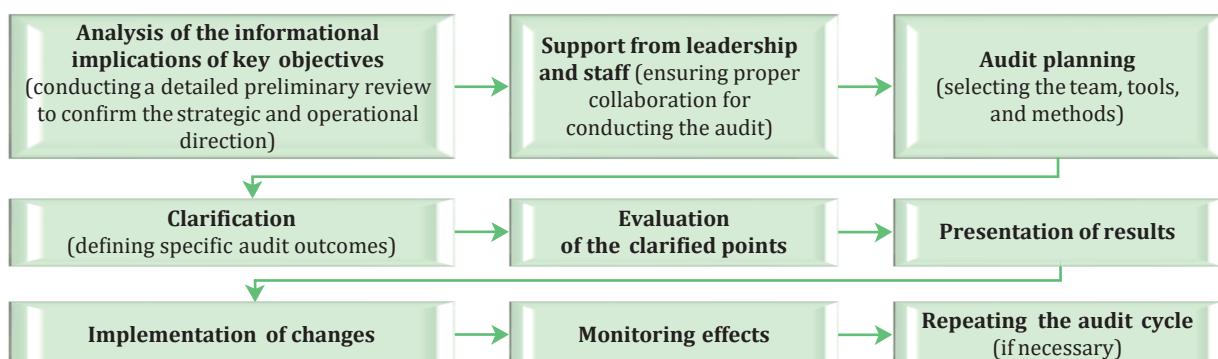


Figure 2. Information audit methodology (stage-based approach)

Source: developed by the authors based on E. Orna (2004)

While researcher E. Orna (2004) emphasised the importance of organisational analysis, their approach was identified as lacking some of the practical tools and methods necessary to perform certain steps of an information audit. In contrast, researchers S. Buchanan & F. Gibb (2008) developed an approach consisting of five main stages:

1. Promote: informing about the benefits of the audit, ensuring commitment and cooperation, and conducting a preliminary study of the organisation.

2. Identify: top-down strategic analysis followed by the identification of information resources and information flows.

3. Analyse: analysis and evaluation of identified information resources and development of action plans.

4. Account: analysis of the cost/value of information resources.

5. Synthesise: reporting on the audit results and developing the organisation's information strategy.

After analysing the presented methodologies, it was clear that they share a common goal – ensuring effective management of information resources. The stages of the information audit involved collecting, studying, evaluating, implementing, and monitoring the results of changes. That is, these stages were consistent with the stages of the information and document

audit, which also involved an analysis of all aspects of the information cycle and the life cycle stages of documents. However, it was appropriate to generalise that the approach proposed by S. Henczel (2001) was best suited for application in the process of information and document auditing, as it provided a structured

model that covered all key aspects of the assessment of information and document resources. The results of a comparison of the approaches by which researchers revealed the essence of the stages of the information and document audit process were presented in Table 1.

Table 1. Comparison of approaches to interpreting the stages of the information and document audit process

Criterion	S. Henczel	E. Orna	S. Buchanan & F. Gibb
Comprehensive approach (covering the entire audit cycle)	+	+	-
Practical orientation	+	-	+
Simplicity of implementation	+	-	+
Time efficiency	+/-	+	+
Improvement of information management	+	-	+
Real-world practicality	+	+/-	+/-
Monitoring implementation of changes	+	+	-
Repetition of the audit cycle	+	+	-

Source: developed by the authors based on S. Henczel (2001), E. Orna (2004), S. Buchanan & F. Gibb (2008)

The approach proposed by E. Orna (2004) was efficient for conducting a quick information and document audit due to its fewer stages and simpler structure, but it was less suitable for organisations with high demands for detail. The audit stages according to S. Buchanan & F. Gibb (2008) were simplified and convenient, but less effective in the long term due to limited monitoring and the lack of a cyclical approach. Therefore, the view on the structure of the stages of the information and document audit by S. Henczel (2001) was the most comprehensive and practically oriented. It was suitable for organisations that seek to obtain in-depth analysis and long-term results. However, this model required more time to implement, as the author provided a detailed seven-step process. The complexity and duration of each stage affected the overall duration of the audit (Fig. 3).

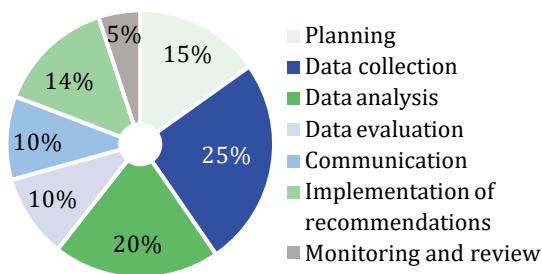


Figure 3. Approximate distribution of time for performing the stages of an information and document audit

Source: developed by the authors based on S. Henczel (2001)

An analysis of the presented scientific approaches to conducting information and document audits had shown that each of the considered authors had proposed an audit model with its own strengths and weaknesses. Despite the differences, all approaches included

the basic stages, including planning, data collection, analysis, evaluation, and development of recommendations. This indicated universal principles of conducting audits that were relevant to various situations and goals.

Based on the analysed methodologies, an attempt was made to develop a methodology for conducting an information and document audit as a comprehensive study of information flows, resources, and documentation support for an organisation's activities. Primarily, an information and document audit can be divided into three phases, with specific stages within each (Fig. 4).

In the first stage, the goal of the audit can be defined as either a comprehensive audit of the entire organisation's activities or a specific part of it, such as the personnel component. Working with personnel was not the same as personnel documentation, therefore, there was a difference in approaches to implementing a document audit, which could aim to verify only personnel documentation, and an information and document audit of personnel activities, which would study approaches to personnel selection, the formation of the organisation's personnel policy, as well as personnel documentation.

In the second stage, an analysis of information interaction was conducted, and its relationship with information and document audits was characterised. In their research, G.V. Shtompel (2020) noted that "in a broad sense, information interaction is the process of exchanging any kind of information that has existed in human society for a long time. In a narrow sense, information interaction is often understood as computer information interaction, which is implemented through information systems and information technologies". Information interaction exists in parallel with document interaction. Document and information interactions encompassed a wide range of processes aimed at creating, transmitting, storing, searching, using, and exchanging information resources. They included

both internal processes related to managerial and operational documentation, as well as external communication with other institutions, partners, and clients.

Determining the forms of such interaction was the basis for ensuring the systematic and effective operation of the institution (Fig. 5).

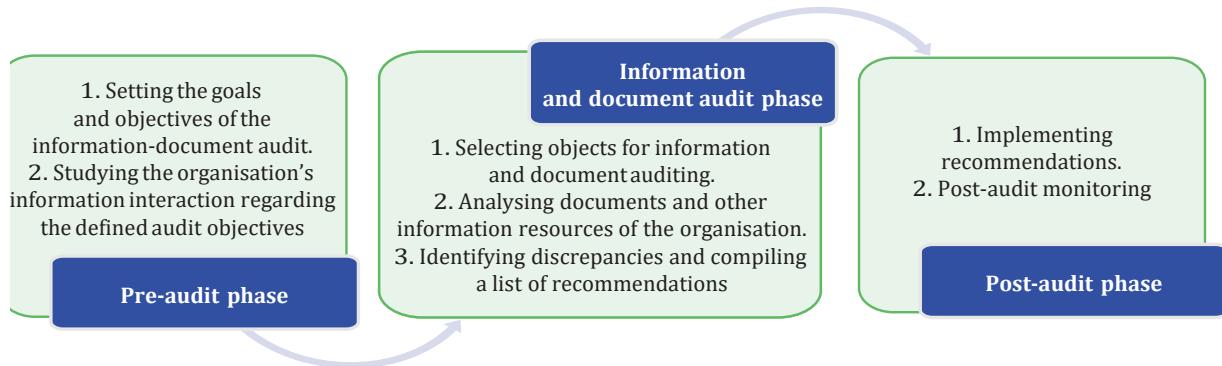


Figure 4. Scheme of information and document audit

Source: developed by the authors

Interaction between the organisation and the external environment

A dynamic process, in which the organisation interacts with factors and subjects existing outside its boundaries. It involves the exchange of resources and information that influence the organisation's stability, development, and operational efficiency

Inter-level interaction within the organisation

Information within the organisation moves through vertical communication channels from higher to lower levels and vice versa. In this way, management informs subordinates about current tasks, changes in priorities, and specific assignments, while upward communication serves to notify about the state of affairs at the grassroots level, with information provided in the form of reports, proposals, and explanatory notes

Personal interaction

Includes all types of information exchange that occur between individuals

Informal interaction

Communication and collaboration between employees that occurs outside the official frameworks defined by the organisational structure or job descriptions

Interaction between different departments (units)

Interaction between departments is primarily based on horizontal communication, leading to equal relationships, which ultimately results in employee satisfaction

Interaction between managers and the working group

Consists of communication, task coordination, staff motivation, and resource provision. The manager sets goals, allocates responsibilities, provides feedback, and monitors task execution, while the working group carries out assignments, proposes ideas, and reports on progress

Figure 5. Primary forms of document and information interaction

Source: developed by the authors based on N.I. Parafiynyk (2010)

Therefore, the forms of document and information interaction were determined by organisational needs, technological capabilities, and the regulatory and legal environment. Modern tools for automation, electronic document management, and cloud services have been actively employed for this purpose. Figure 6 showed the main tools that have been widely used for implementing forms of document and information interaction.

The choice of the optimal form of document and information interaction depends on several factors, such as the specifics of the organisation's activities, the level of digitisation, the volume of information flows, and the requirements for confidentiality and speed of data processing. In the context of conducting an information and document audit, it was important to examine all forms of information and document interaction, as this interaction will generate the information and document resources that will be the subject of the audit. It should be noted that electronic interaction was

not only a current trend for the period 2010-2024, but also a mandatory requirement for compliance with legislative and regulatory acts, in particular, Order of the Cabinet of Ministers of Ukraine No. 649-r (2017), according to which the electronic form of implementation of "any activity of government bodies (including the provision of public services, ensuring interagency interaction, interaction with individuals and legal entities, information and analytical activities)" was defined as a priority, as well as Resolution of the Cabinet of Ministers of Ukraine No. 55 (2018), which defined the main form of recordkeeping as electronic. Accordingly, the implementation of automated information systems, electronic document management systems, the use of corporate planners, chats, and messengers was a necessary condition for the functioning of the organisation. Therefore, auditing the status of the implementation of electronic interaction tools was a mandatory component of an information and document audit.

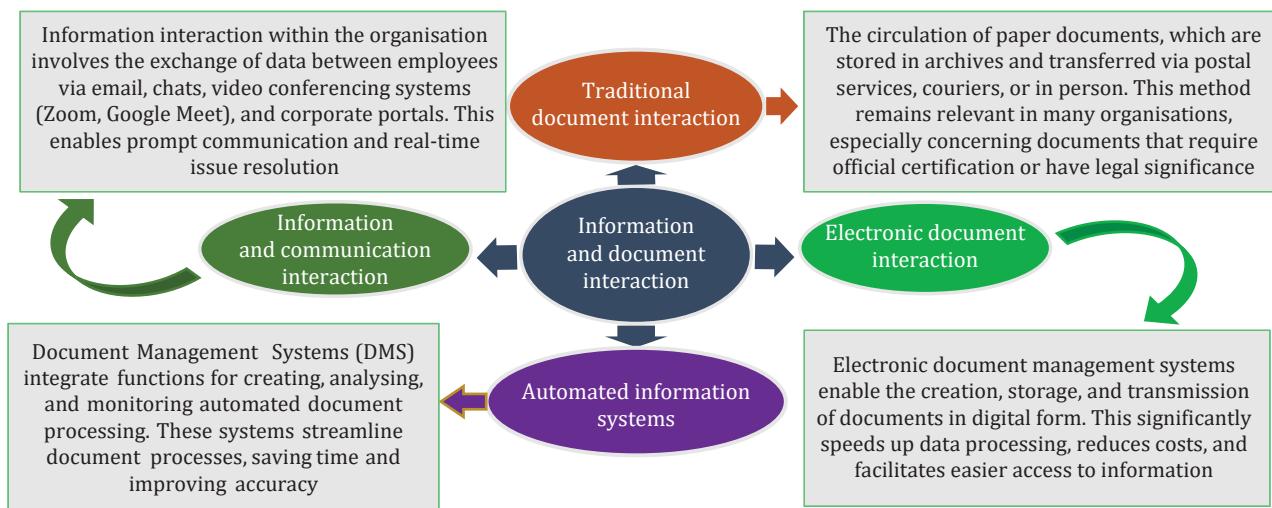


Figure 6. Primary tools for document and information interaction

Source: developed by the authors based on N.I. Parafiynyk (2010), Communications in organizations: Process, types, connections, barriers (2011)

O. Laba (2022) defined automated information systems as an integrative concept that should be used to describe the complex automation of managerial, production, and other processes, including the implementation of electronic document management. This interpretation was supported by the definition of an automated information system declared in the Order of the Ministry of Justice of Ukraine No. 1886/5 (2014), as an organisational and technical system, in which information processing technology was implemented using technical and software tools. According to this approach, the implementation of automated information systems can be universal for most forms of information and document interaction.

The implementation of automated information systems was not only a matter of convenience, but also had a significant impact on national security. This was especially relevant in the context of the Russian aggression against Ukraine. On 8 September 2023, at the Ukrainian software exhibition, Volodymyr Bielov, CEO of

GigaCloud Ukraine, shared: "Currently, more than 70% of Ukrainian businesses use Russian software" (Raksha, 2024). This created several critical problems and risks that cannot be ignored. In addition to moral damage, the risks associated with using Russian software for Ukrainian companies can be conditionally divided into two groups: financial-economic risks and data loss. The situation was complicated by the fact that some organisations do not realise the threat posed by using such software or face difficulties in transitioning to alternative products. Therefore, it was advisable to emphasise the research conducted by Opendatabot and Netpeak that created a list of software of Russian origin (2023), which compiled a list of software of Russian origin used in Ukraine as of 2023. According to open data, Ukrainian businesses actively used 44 such products, including Bitrix24, Tilda Publishing, 1C, AmoCRM, iiko, and Jivosite (Pidhayna, 2023). A list of Ukrainian and global software analogues that can be easily and safely replaced with Russian ones was presented in Table 2.

Table 2. Alternatives for replacing Russian-origin software

Name	Alternatives
CRM (Customer Relationship Management)	
AmoCRM, KommoCRM	Ukrainian – Onebox, NetHunt CRM, Creatio, IT-Enterprise, SalesDrive, KeepinCRM, Asteril CRM, Corezoid, Perfectum, EspoCRM, KeyCRM, Sitniks, EstOffice, Uspacy, RemOnline American – HubSpot, Zoho Estonian – PipeDrive Lithuanian – WiseTeam
Bitrix24	Ukrainian – Onebox, NetHunt CRM, Creatio, IT-Enterprise, SalesDrive, KeepinCRM, Asteril CRM, Corezoid, Perfectum, EspoCRM, UGLA, KeyCRM, Sitniks, EstOffice, Uspacy, RemOnline, RenovateHub Ukrainian – Salesforce, HubSpot, Zoho, Microsoft Dynamics 365 Sales Belgian – ODOO Lithuanian – WiseTeam

Table 2. Continued

Name	Alternatives
Accounting systems	
1C, BAS, UA-Biudzhet, Complex budgetary systems	Ukrainian – Bimp, Quincefin, Finmap, Pipeliner, Bookkeeper, IT-Enterprise, A2v10, Fintellect, Torgsoft, Ukrsklad, Dilovod, MASTER:Bukhhalteriia, Fit-biudzhet, IS-Pro, AB OFIS, Control. Events, Debet Plius, SMARTFIN, UGLA, GMS Office Tools, Masterbuh, Khepi Bukh, Limpid Pro, BJet ERP, KomIntekh.Upravlinnia personalom, Universal ERP, H-profit, UIS.WMS, Sivers Torhivlia, A5, RemOnline, RenovateHub American – Microsoft Dynamics 365 Business Central, SAP
Elba	Ukrainian – Bimp, Quincefin, Finmap, Pipeliner, Bookkeeper, IT-Enterprise, A2v10, Fintellect, Torgsoft, Ukrsklad, Dilovod, MASTER:Bukhhalteriia, Fit-biudzhet, IS-Pro, AB OFIS, Control. Events, Debet Plius, GMS, BJet ERP, Universal ERP, H-profit, Sivers Torhivlia, RemOnline American – QuickBooks, Sage 50cloud Accounting
End-to-end analytics	
Calltouch, Roistat, Utmostat	Ukrainian – Ringostat, OWOX, Binotel Calltracking American – CallRail, CallTrackingMetrics
Antivirus	
DrWeb, Kaspersky Security	Ukrainian – Zillya American – Microsoft Security Essentials Czech – Avast
Chatbots	
Cleversite, JivoSite	Ukrainian – Pipe.bot, Corezoid, Activechat.ai, KwizBot, Skibble, Leeloo.ai, Monster Webby Messenger, Binotel Online chat, Goodpromo American – Tawk.to, Tidio, Intercom Polish – Livechat
LMS (Learning Management System)	
GetCourse, iSpring, ServiceGuru	Ukrainian – AcademyOcean, LMS Collaborator, MOCO, eTutorium LMS, Quickskills, Clevio, Zenedu, WizzyLab American – Goskills, Udemy

Source: developed by the authors based on Opendatabot and Netpeak created a list of software of Russian origin (2023)

It was worth noting that checking automated information systems for compliance with legal and ethical requirements was a mandatory component of an information and document audit as a whole. A significant portion of automated information systems, particularly those related to document management processes, consisted of electronic document management systems (EDMS). In each country, the development of EDMS was based on specific legislative, technical, economic, and cultural aspects, which affected the functionality and architecture of these systems. Ukrainian EDMS were developed with a focus on the specifics of the work of government agencies and businesses in

the local market. Therefore, they may include functionality related to electronic filing, integration with state registers, and Ukrainian accounting systems. Ukrainian solutions were created taking into account the limitations of IT infrastructure, which simplified their integration even in small organisations. Foreign EDMS may have a wider range of functions, as they were developed for the global market. They often include tools for project management, collaboration, and data analysis, such as integration with other global services (CRM systems or analytics platforms). A brief overview of the most popular Ukrainian EDMS was presented in Table 3.

Table 3. Characteristics of popular Ukrainian EDMS

EDMS name	Brief description
FossDoc	An electronic document management system developed by FOSS-ON-LINE, designed to automate document processing for organisations of various sizes and profiles
DOCS.UA	An Enterprise Content Management (ECM) class electronic document management system. Provides comprehensive document management and business process modelling mechanisms
M.E.Doc. (My Electronic Document, also Medoc, Medok)	Focuses on electronic document exchange and reporting with regulatory authorities (including the State Fiscal Service of Ukraine, the State Statistics Service, the Pension Fund of Ukraine, and the Treasury). It includes built-in functionality for tax reporting and supports the exchange of invoices, delivery notes, and work completion acts
Vchasno	One of the most widely used platforms for exchanging electronic documents between counterparties. Offers a simple interface and integration with accounting software

Table 3. Continued

EDMS name	Brief description
ASKOD	The ASKOD electronic document management system ensures the creation of a unified information space and a common structured corporate document repository, automates document processing and executive discipline control, reduces document processing time, and improves staff efficiency
Megapolis	A comprehensive software solution from Softline for creating document management systems and automating business processes in public sector institutions. The system covers all stages of the document life cycle: from drafting documents to organising archival storage
Document.Online	A cloud-based electronic document management system. It supports mobile device compatibility and is aimed at small businesses and startups

Source: developed by the authors based on A.S. Ovsienko (2022), Overview of modern electronic office management systems (2024), Top 10 EDS (Electronic Document Management Systems) for Ukraine (2024)

The third stage of the information and document audit involved selecting the objects of study. It should be noted that the audit should not involve an analysis of the entire mass of documents and information resources, but the audit objects should represent a representative sample. The fourth stage was the analysis of documents and other information resources of the organisation, including a study of compliance with legal requirements and modern trends in the information society. Tools such as developed audit checklists can be used here, for example, a checklist of legal acts, a checklist of the life cycle of a document or information resource.

To develop a checklist of legal acts, it was necessary to consider the legislative framework of the information sphere, its documentary component, and the industry, in which the organisation operates. To develop a checklist for the life cycle of documents, it should be considered that there will be certain differences between the life cycles of paper and electronic documents, which was due to the technological features of implementing electronic document management, for example, the precedence of the document registration process over the signing process was characteristic of electronic document management and was not typical for working with paper documents. In addition, the life cycle of an electronic document will include its technical verification, which was absent for a paper document. The fifth, sixth, and seventh stages of the information and document audit, according to the proposed methodology, were the result of comparing the actual state of the objects of verification with the desired (or reference) state. Therefore, the implementation of these stages will depend on specific practical cases.

The issue of information auditing, extending beyond the financial sector, had gained popularity in the research of Ukrainian scientists relatively recently. In contrast, foreign researchers have been studying the concept and content of information auditing for a much longer time. For example, researchers S. Buchanan & F. Gibb (1998) demonstrated a fairly thorough elaboration in the context of recognising information as a strategic organisational resource, arguing that an

important function of an information audit was to implement a method of identifying, evaluating, and managing information resources to fully utilise the strategic potential of information. Continuing to study this topic, S. Buchanan & F. Gibb (2008) explored the issue of choosing an information audit methodology, considering four of the most common information audit methodologies and their complexity and ease of use. These studies laid the groundwork and were highly regarded in analytical reviews of the 2010-2020 period. Similar concepts were observed in the approaches of authors A. Lateef & F.O. Omotayo (2019), who considered information as a strategic organisational resource that was as important as labour, financial, and other resources, and information auditing as an effective tool that can be used to manage information assets and information risks of the institution.

The practical aspects of implementing an information audit, according to the stages and methodologies outlined in early 21st century research, offer valuable insights. Researcher S. Henczel (2001) developed a seven-step model for information auditing, which remained relevant due to its adaptability to various organisational contexts and information needs. Researcher E. Orna (2004) in scientific research proposed a step-by-step approach to developing and implementing successful information strategies in organisations, while emphasising that information management and knowledge management complement each other. Within the context of a dynamically evolving knowledge society, the management, exchange, and dissemination of knowledge in professional environments, both organisational and other social institutions, was a relevant research topic, as explored by authors Yu. Romanishyn *et al.* (2023).

Therefore, researchers had developed various approaches to information auditing, encompassing its stages and implementation methodologies. Researchers had proposed adaptive models and step-by-step strategies for managing information resources, which have contributed to the effective implementation of audits in organisations. This had underscored the importance of information and knowledge management in contemporary society.

Conclusions

This article had provided a rationale for an integrated methodology of information and document auditing, aligned with its stages based on the life cycles of documents and other information resources within an organisation. The study of the information and document audit methodologies developed by both global and Ukrainian scholars across various fields provided a foundation for refining the methodology of information and document audit as a comprehensive phenomenon in the study of organisational management. The implementation of an information and document audit will enable a more detailed and unbiased understanding of an organisation's information activities, encompassing information resources, document interaction practices, document integrity, and the optimisation of document flow, considering the life cycles of documents and information provision.

As a result of the research, the interconnectedness of information and document auditing with information and document interaction had been substantiated, as these interactions gave rise to the objects of study: an organisation's document and other information resources. It has been determined that not only was the electronic form of organisational interaction a current trend, but also a requirement of legislative acts. Given the ban on the use of Russian software in Ukraine during the war, and the fact that many organisations had not fully complied with this ban, the methodology for conducting information and document audits had been expanded to include verification of the software used within the organisation. Alternative automated

information systems had been suggested as replacements for those that are unethical to use in Ukraine.

A key component of automated information systems within the context of document management had become electronic document management systems. A brief description of the most popular Ukrainian electronic document management systems will enable the assessment of whether the system used by the organisation aligns with its goals and operational tasks. It was proposed to implement an analysis of documents and other information resources based on audit checklists developed by auditors. Within a universal methodology, it was most appropriate to develop a checklist of legislative and other regulatory provisions governing the organisation's activities, as well as a checklist of the life cycle of documents and other information resources.

The prospects for research can be considered the implementation of the proposed methodology for specific sectors of the economy, as an intermediate conclusion has been drawn about the interdependence of the methodology of conducting an information and document audit and the organisation's field of activity.

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Conflict of Interest

None.

References

- [1] Abd Kadir, W., Mokhtar, U.A., & Yusof, Z.M. (2024). Strategy for auditing investigation records and information: A case study of records and information management in the Royal Malaysian Police. *Records Management Journal*, 34(2-3), 131-150. [doi: 10.1108/RMJ-11-2023-0068](https://doi.org/10.1108/RMJ-11-2023-0068).
- [2] Almaqtari, F.A., Farhan, N.H.S., Al-Hattami, H.M., Elsheikh, T., & Al-dalaien, B.O.A. (2024). The impact of artificial intelligence on information audit usage: Evidence from developing countries. *Journal of Open Innovation: Technology, Market, and Complexity*, 10(2), article number 100298. [doi: 10.1016/j.joitmc.2024.100298](https://doi.org/10.1016/j.joitmc.2024.100298).
- [3] Buchanan, S., & Gibb, F. (1998). The information audit: An integrated strategic approach. *International Journal of Information Management*, 18(1), 29-47. [doi: 10.1016/S0268-4012\(97\)00038-8](https://doi.org/10.1016/S0268-4012(97)00038-8).
- [4] Buchanan, S., & Gibb, F. (2008). The information audit: Methodology selection. *International Journal of Information Management*, 28, 3-11. [doi: 10.1016/j.ijinfomgt.2007.10.002](https://doi.org/10.1016/j.ijinfomgt.2007.10.002).
- [5] Communications in organizations: Process, types, connections, barriers. (2011). *Osvita.ua*. Retrieved from <https://osvita.ua/vnz/reports/management/15040/>.
- [6] Emerson, M.E., & Lehman, L.G. (2022). Who are we missing? Conducting a diversity audit in a liberal arts college library. *The Journal of Academic Librarianship*, 48(3), article number 102517. [doi: 10.1016/j.acalib.2022.102517](https://doi.org/10.1016/j.acalib.2022.102517).
- [7] Greben, S., Mihus, I., & Odarchyk, K. (2020). State and prospects of IT audit development in Ukraine. *Scientific Notes of the University "KROK"*, 2, 60-66. [doi: 10.31732/2663-2209-2020-58-60-66](https://doi.org/10.31732/2663-2209-2020-58-60-66).
- [8] Henczel, S. (2001). *The information audit: A practical guide*. Berlin, Boston: K.G. Saur. [doi: 10.1515/9783110974645](https://doi.org/10.1515/9783110974645).
- [9] Joshi, R., Ranade, C.M., Patvardhan, N., & Joshi, A. (2024). Information entropy and audit quality: Exploring the role of information theory in enhancing audit quality. In *15th International conference on computing communication and networking technologies (ICCCNT)*. Kamand: IEEE. [doi: 10.1109/ICCCNT61001.2024.10725316](https://doi.org/10.1109/ICCCNT61001.2024.10725316).

- [10] Laba, O. (2022). The periodization of the formation of electronic records management in Ukraine (1991-2020). *Res Historica*, 53, 649-660. [doi: 10.17951/rh.2022.53.649-660](https://doi.org/10.17951/rh.2022.53.649-660).
- [11] Lateef, A., & Omotayo, F.O. (2019). Information audit as an important tool in organizational management: A review of literature. *Business Information Review*, 36(1), 15-22. [doi: 10.1177/0266382119831458](https://doi.org/10.1177/0266382119831458).
- [12] Mulyk, Ya., Pirniak, A., & Sheiko, K. (2024). Status and development of IT audit in the conditions of the digital economy. *Economic Space*, 190, 47-56. [doi: 10.32782/2224-6282/190-9](https://doi.org/10.32782/2224-6282/190-9).
- [13] Opendatabot and Netpeak created a list of software of Russian origin. (2023). *Opendatabot*. Retrieved from <https://opendatabot.ua/analytics/russian-software>.
- [14] Order of the Cabinet of Ministers of Ukraine No. 649-r "On Approval of the Concept of e-Government Development in Ukraine". (2017, September). Retrieved from <https://zakon.rada.gov.ua/laws/show/649-2017-p>.
- [15] Order of the Ministry of Justice of Ukraine No. 1886/5 "On Approval of the Procedure for Working with Electronic Documents in Office Management and their Preparation for Transfer to Archival Storage". (2014, November). Retrieved from <https://zakon.rada.gov.ua/laws/show/z1421-14>.
- [16] Orna, E. (2004). *Information strategy in practice*. London: Routledge. [doi: 10.4324/9781315252261](https://doi.org/10.4324/9781315252261).
- [17] Overview of modern electronic office management systems. (2024). *Studlancer*. Retrieved from https://stud.com.ua/53380/informatika/oglyad_suchasnih_sistem_elektronnogo_dilovodstva.
- [18] Ovsienko, A.S. (2022). Current directions of use of electronic resources by government bodies. *Economics. Management. Business*, 1-2, 80-85. [doi: 10.31673/2415-8089.2022.018085](https://doi.org/10.31673/2415-8089.2022.018085).
- [19] Parafiynyk, N.I. (2010). *Document and information communications*. Kharkiv: National Aerospace University "Kharkiv Aviation Institute".
- [20] Pidhayna, Ye. (2023). Analogues of "1C", "Bitrix", "UA-Budget", Advego: Why Ukrainian business is so "promptly" getting rid of software from a terrorist country. *Mind*. Retrieved from <https://mind.ua/publications/20262546-analogi-1s-bitriks-ua-byudzhet-advego-chomu-ukrayinskij-biznes-tak-operativno-pozhavlyatsya>.
- [21] Raksha, L. (2024). Russian software is used by over 70% of Ukrainian businesses. Why did this happen and what to do about it? *Vector*. Retrieved from <https://vctr.media/ua/rosijskim-pz-koristuyetsya-ponad-70-ukrayinskogo-biznesu-chomu-tak-stalosya-ta-shho-z-czim-robiti-211524/>.
- [22] Resolution of the Cabinet of Ministers of Ukraine No. 55 "Some Issues of Documenting Management Activities". (2018, January). Retrieved from <https://zakon.rada.gov.ua/laws/show/55-2018-%D0%BF#Text>.
- [23] Romanishyn, Yu., & Krupa, Kh. (2024). *Information and documentary audit: Theoretical and conceptual foundations*. In *Documentary and information communications in the context of globalisation: State, problems and prospects: theoretical and conceptual foundations. Materials of the IX International scientific and practical conference* (pp. 30-36). Poltava: National University "Yuri Kondratyuk Poltava Polytechnic".
- [24] Romanishyn, Yu., Sheketa, V., Pikh, V., Pikh, M., Vovk, R., & Petryshyn, R. (2023). Structural elements of knowledge-oriented information exchange in the universities. In *18th International conference on computer science and information technologies (CSIT)* (pp. 1-4). Lviv: IEEE. [doi: 10.1109/CSIT61576.2023.10324163](https://doi.org/10.1109/CSIT61576.2023.10324163).
- [25] Shtompel, G.V. (2020). Information interaction as a basic characteristic of the information culture of the future specialist's personality. *Innovative Pedagogy*, 2(23), 129-133. [doi: 10.32843/2663-6085/2020/23-2.26](https://doi.org/10.32843/2663-6085/2020/23-2.26).
- [26] Skitsko, O., & Vavilenkova, A. (2022). *Planning of an IT audit*. *Information Security of the Person, Society, State*, 1-3, 104-113.
- [27] Sproles, C. (2022). Technological transformation of United States government documents librarianship. *The Journal of Academic Librarianship*, 48(2), article number 102498. [doi: 10.1016/j.acalib.2022.102498](https://doi.org/10.1016/j.acalib.2022.102498).
- [28] Top 10 EDS (Electronic Document Management Systems) for Ukraine. (2024). *LiveBusiness*. Retrieved from <https://www.livebusiness.com.ua/ua/tools/sed/>.
- [29] Walters, W.H. (2023). Assessing diversity in academic library book collections: Diversity audit principles and methods. *Open Information Science*, 7(1), article number 20220148. [doi: 10.1515/opis-2022-0148](https://doi.org/10.1515/opis-2022-0148).

Методика проведення інформаційно-документного аудиту: інтегративний підхід

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Анотація. У сучасних умовах зростає складність управління інформаційними ресурсами в професійному середовищі установи. Інформаційно-документний аудит виступає інструментом, що дозволяє оцінити стан інформаційних ресурсів, забезпечити їх відповідність нормативним вимогам, оптимізувати процеси опрацювання та зберігання документів, а також підвищити інформаційну безпеку. Метою дослідження було обґрунтування методики інформаційно-документного аудиту відповідно до етапів його проведення та інтеграція, використання інструментів інформаційної взаємодії та засобів інформаційних технологій у цьому процесі. У дослідженні було використано методи аналізу, синтезу, абстрагування та порівняння. У результаті проведеного дослідження охарактеризовано ключові етапи інформаційно-документного аудиту, зокрема здійснено систематизацію наявних підходів до його виконання. Встановлено, що інформаційно-документний аудит є фундаментальним інструментом, що забезпечує прозорий та системний підхід до перевірки документації та аналізу інформаційних ресурсів в організації. Досліджено форми документної та інформаційної взаємодії в професійному середовищі установи, зосереджуючи увагу на основних засобах їх реалізації. Виокремлено основні форми такої взаємодії – традиційну та електронну. У дослідженні було акцентовано увагу на тому, що використання інформаційних автоматизованих систем, хмарних сервісів та електронного документообігу сприяє швидкому переходу до цифрових технологій, що є стратегічним напрямком для підвищення прозорості, ефективності, оперативності та безпеки інформаційно-управлінських процесів установи. Проведено моніторинг програмних продуктів, що забезпечують інформаційно-документну взаємодію в процесах інформаційно-документного аудиту. Особливу увагу було приділено питанням національної безпеки при виборі програмних продуктів, особливо в умовах сучасних геополітичних викликів. Практична цінність роботи полягає в тому, що запропоновану методику проведення інформаційно-документного аудиту можна рекомендувати для використання у процесах інформаційного-аналітичного забезпечення організації, сприяючи більш ефективному та структурованому функціонуванню інформаційно-документних процесів в умовах цифрової трансформації установи

Ключові слова: документаційне забезпечення; інформаційна взаємодія; системи електронного документообігу; інформаційні автоматизовані системи; інформаційні ресурси; інформаційні технології