In today's globalized world, digitalization tools represent an extremely important factor in ensuring the efficiency and competitiveness of Ukrainian enterprises. The integration of digital technologies in accounting provides unique opportunities for automation, optimization and improvement of the quality of accounting processes, which has become the main basis for this study. This aspect is becoming key to maintaining and implementing effective and innovative approaches in accounting.

At present, the digitalization of accounting has already come a long way, but there are still several aspects that may be the object of further research. The main possible trends may include: cybersecurity methods in digitalized accounting, creation of interactive interfaces using augmented and virtual reality, application of artificial intelligence in accounting for process automation and data analysis, etc.

Analysis of recent researches and publications

Recent research and publications in the field of introducing digitalization tools for accounting processes in the domestic market show significant progress in this area. Studies have shown that the introduction of digital technologies in the field of accounting can lead to improved efficiency, accuracy and reliability of accounting processes. Leading researchers who have worked in this area are A. Vasylchuk, who studied the introduction of artificial intelligence technologies in accounting to improve accuracy and analytics, D. Ivanov who studied the effectiveness and impact of digital...
The main part

Determining the prospects for introducing digitalization tools for accounting processes at Ukrainian enterprises is an important aspect of modern business. Digitalization is the process of transforming analogue processes and data into a digital format that can be easily stored, processed and transmitted using computer technology. It includes the use of electronic systems, software, cloud technologies, and analytics to automate, optimize, and make accounting processes accessible.

The interpretations of the concept of "digitalization" by different researchers are presented below (table 1).

Table 1. Definition of the term "digitalization"

<table>
<thead>
<tr>
<th>Author</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>O. Abakumenko</td>
<td>The process of converting a certain information field from analogue to digital format for easier usage on modern electronic devices.</td>
</tr>
<tr>
<td>O. Gudz, S. Fedyunin</td>
<td>Based on the capabilities of the modern IT industry, the process of applying modern information and communication technologies by enterprises to achieve their goals is focused on transforming existing business processes through digitalization.</td>
</tr>
<tr>
<td>L. Ligonenko</td>
<td>The process of transferring information into digital form, i.e. converting paper books into electronic books, photographs into images on a screen, etc.</td>
</tr>
<tr>
<td>O. Gribinenko</td>
<td>Transformation, integration of digital technologies to optimize and automate business processes, increasing productivity and improving communication with consumers.</td>
</tr>
<tr>
<td>A. Gurenko</td>
<td>The process of using digital technologies to improve customer service.</td>
</tr>
</tbody>
</table>

The main advantages of digitalization (fig. 1) include data storage and efficient data management (digital data can be easily stored, copied and updated without the need for physical space, which allows storing a large amount of information and managing it conveniently), quick access to information (digital data can be quickly and easily transferred over networks, which allows obtaining the necessary information in real time), convenience and accessibility (digitalization makes it easy to store and retrieve data from various devices, such as computers, smartphones, tablets, etc., which makes it possible to access the necessary information whenever and wherever you need it).

One of the factors prompting the digitalization of accounting is the growing amount of data generated in modern business. Traditional accounting methods may not be efficient enough to cope with the large amount of information. Therefore, the use of digital technologies and tools becomes necessary to ensure the efficiency and accuracy of processes. Digitalization in accounting involves the transformation of traditional accounting processes into modern, digital systems that include automation, data processing and storage in electronic format.

In the context of accounting, the term "automation" refers to the process of replacing manual procedures and operations with automated systems. In this case, automation simplifies and speeds up accounting processes through the use of technologies and tools that provide automatic data collection, processing and reporting. The main
purpose of automation is to improve the efficiency and accuracy of accounting operations, as well as to reduce the risk of errors that may arise when performing manual tasks.

One of the main differences between automation and digitalization is that automation simplifies and automates individual processes and operations, while digitalization covers the entire cycle of accounting processes, including initial data processing, data storage, analytics and usage for management decision-making. Many routine operations can be automated with the help of accounting digitalization tools, which reduces the risk of errors and increases the speed of information processing. For example, the use of electronic document management systems allows you to store the required documentation in an electronic format and provides access to it from any location with an Internet connection. Furthermore, digitalization tools (table 2) enable the automatic analysis and processing of large amounts of data, which improves analytical capabilities and helps to make reasonable management decisions.

<table>
<thead>
<tr>
<th>Digitalization tools</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic document management system</td>
<td>It ensures the storage and processing of documents in electronic form, simplifies the processes of signing and sending documents.</td>
</tr>
<tr>
<td>Electronic signature</td>
<td>A cryptographic tool which is used to ensure security and confidentiality in electronic systems.</td>
</tr>
<tr>
<td>Cloud-based accounting systems</td>
<td>Provides storage and processing of accounts in a cloud platform, which allows convenient access to and collaboration with data.</td>
</tr>
<tr>
<td>Blockchain technology</td>
<td>A distributed database that ensures the security, non-duplication and integrity of information by storing data in the form of blocks.</td>
</tr>
</tbody>
</table>

Source: the authors' own elaboration

In the process of digitalization of the accounting process, it becomes inevitable to connect additional intellectual resources, cloud platforms, knowledge base and data systems that make accounting and reporting transparent and understandable in terms of internal and external business processes of the enterprise. The digitalization of accounting and reporting also results in the introduction of its tools (table 3), which have been developing at an accelerated pace in recent years [7].

<table>
<thead>
<tr>
<th>Digitalization tools</th>
<th>Advantages</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic document management system</td>
<td>Reduction of time and resources required for document processing; improvement of accuracy and preservation of documents; easier access to documents</td>
<td>The requirement to implement new procedures and staff training; ensuring cybersecurity and data privacy</td>
</tr>
<tr>
<td>Electronic signature</td>
<td>Ensures a high level of security in accounting; allows you to identify users of accounting systems uniquely; facilitates accounting automation</td>
<td>The requirement to ensure reliable protection by using complex passwords, encryption, etc.; the need for a data backup system</td>
</tr>
<tr>
<td>Cloud-based accounting systems</td>
<td>Providing access to credentials from anywhere; collaborating on data; reducing hardware and maintenance costs</td>
<td>The requirement for high speed and reliability of the Internet connection; cybersecurity and data privacy risks</td>
</tr>
<tr>
<td>Blockchain technology</td>
<td>Ensures a high level of security; automates and simplifies accounting processes; reduces errors and improves the efficiency of operations</td>
<td>The requirement to develop data protection mechanisms; the requirement to expand the network to support more transactions</td>
</tr>
</tbody>
</table>

Source: compiled by authors on materials [8-11]

Electronic document flow as a tool for organizing and administering economic information, compared to paper, allows to bring enterprise planning, accounting and control at all stages of management to a new level, namely the level of an integrated approach, system analysis and forecasting, which increases the sustainability of the enterprise in the face of frequent crises and reduces risks in conditions of uncertainty (saves time and resources; combines all information flows of the enterprise, including internal, external, mixed; simplifies management) [8].

It is also important to note that the electronic document management system contributes to increasing the level of confidentiality of information. It allows you to set access rights to documents and control their use. For example, you can restrict access to certain documents to a select number of employees or grant rights to view, edit or print documents depending on the user's role. This allows to increase the protection of confidential information and avoid unauthorized access to documents.

An example of the use of an electronic document management system is when a company has a large amount of financial statements that need to be processed and sent to stakeholders on a regular basis. Instead of the traditional process of printing, signing and mailing documents, an electronic document management system allows you to scan and upload
financial reports to an electronic system. This reduces the time and resources spent on processing and sending documents, and provides quick access to reports for stakeholders through the electronic document management system.

An electronic digital signature (EDS) is a type of electronic signature obtained as a result of cryptographic transformation of a set of electronic data that is attached to or combined with this set according to a certain logic, allowing to confirm its integrity and identify the signatory. In terms of legal status, an EDS is equivalent to a person's handwritten signature or the seal of an enterprise (organization, institution). The use of an EDS makes it possible to identify the signatory of an electronic document, and allows to unambiguously determine the origin of the information (source of information) contained in a document signed with an EDS. Therefore, EDS can be considered a reliable means of delimiting responsibility for information activities in society, in particular, responsibility for misinformation [9].

An example of the use of an electronic digital signature in an accounting system is the signing of financial statements. Companies usually have an obligation to prepare financial statements that must be signed by competent persons. An electronic signature can be used to sign the documents, ensuring their authenticity and preventing further manipulation.

A blockchain is a distributed public register based on modern cryptographic algorithms that contains a database of all previously performed transactions, which is decentralized and contained in public sources of the network. It is a structured system with certain rules for building transaction chains and access to information. An example of the introduction of blockchain technology in accounting is the "Request" system, which has wide and interesting possibilities and applications. The advantages of the system are numerous: from online payments and invoicing to accounting and auditing, not to mention possible applications for the "Internet of Things" [11].

Expanding the functionality of accounting systems also includes the use of analytical tools and artificial intelligence. Analytical tools allow for detailed analysis of financial data, identifying trends, forecasting results and making informed decisions. The use of artificial intelligence in accounting allows automating the processes of classifying, recognizing and processing data, which contributes to more accurate and faster analysis of large amounts of information.

However, the introduction of digitalization tools in accounting also brings certain challenges and risks. One of the most important challenges is to ensure cybersecurity and protection of confidential information. The increasing amount of electronic data and dependence on technology require a high level of protection against unauthorized access and cyberattacks. In addition, the integration of new digital tools may require significant investment, time and effort to train staff and transition to the new system. Management support and implementation of changes is required, as well as consideration of individual needs and characteristics of the enterprise. Furthermore, there is a risk of technological issues such as system failure, software bugs, or improper integration with existing systems.

Ways of digitalization may include the use of electronic documents, cloud storage, business process automation software, etc. Special software is often used to digitize accounting processes, allowing you to store and process data in electronic format, generate reports, and provide access to data from various devices and locations with an Internet connection.

Popular software for digitalizing accounting processes includes systems such as QuickBooks, Xero, FreshBooks, Wave Accounting and others. These programs are powerful tools that allow businesses to automate accounting and financial accounting, tax reporting, invoicing, and other accounting processes.

QuickBooks, Xero, FreshBooks, and Wave Accounting are popular financial accounting and management software for small businesses. They provide the ability to keep records of financial transactions, create invoices, track payments and bank account transactions. These applications often have an intuitive interface that makes them easy to use for users without specialized accounting experience. Furthermore, they often integrate with other digital tools, such as payment systems and e-commerce platforms, to automate the exchange of data between different systems.

QuickBooks is a popular solution for small businesses and freelancers. It allows you to keep track of financial transactions, including entering income and expenses, creating invoices, tracking payments, and managing bank accounts. QuickBooks also provides the ability to integrate with other digital tools, such as payment systems and e-commerce platforms, which automates accounting processes and simplifies interaction with customers and suppliers [12].

Xero is another popular programme that specializes in financial accounting and small business management. It provides a wide range of functions, including accounting for expenses and income, generating reports, tracking payments, and conducting banking transactions. Xero also supports integration with a variety of third-party applications and services, which allows you to extend its functionality and tailor it to the specific needs of your business [13].

FreshBooks and Wave Accounting are also known for their ease of use and understanding. FreshBooks is an application aimed at the needs of small businesses and freelancers. It allows you to keep records of financial transactions, create professional invoices and track payments. FreshBooks also allows you to keep track of expenses, manage expense categories, and generate reports to analyze the financial status of your business.

Wave Accounting is another popular application for small businesses and the freelance sector. It allows you to keep records of financial transactions, including income, expenses, invoices and payments. Wave Accounting also has an integrated tax
accounting function that simplifies the process of tax reporting. These applications have an intuitive interface that allows users without specialized accounting experience to quickly master their functionality. They also provide convenient access to financial information, such as reports and analytical indicators, which contributes to a more efficient analysis of the company's financial performance. Further, they can be easily integrated with other digital tools, such as payment systems or e-commerce platforms, which allows automating accounting processes and simplifying interaction with customers and partners [14].

A comparative description of the considered programs for the digitalization of accounting processes is presented below (table 4).

### Table 4. Comparative characteristics of digitalization tools

<table>
<thead>
<tr>
<th>Criterion</th>
<th>QuickBooks</th>
<th>Xero</th>
<th>FreshBooks</th>
<th>Wave Accounting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of use</td>
<td>from $15/month</td>
<td>from 25$/month</td>
<td>from 8$/month</td>
<td>free</td>
</tr>
<tr>
<td>Mobile application</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Multiple currency support</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Advanced reports</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Size of enterprises</td>
<td>Businesses of all sizes</td>
<td>Businesses of all sizes</td>
<td>Small businesses and freelancers</td>
<td>Small businesses and freelancers</td>
</tr>
</tbody>
</table>

*Source: compiled by authors on materials [12-15]*

Cloud-based accounting systems are another important digitalization tool. They allow users to store accounting data and documents in cloud storage, providing access to them from any location and device with an Internet connection. This facilitates collaboration and data exchange between different departments and divisions of the enterprise, facilitates quick search and analysis of information, and ensures reliable data storage.

Popular cloud-based storage solutions for digitalizing accounting processes include Dropbox, Google Drive, Microsoft OneDrive, Box, and Amazon S3. Dropbox, for example, allows users to store their credentials and documents in a virtual space hosted by the company. Users can upload files to their Dropbox and access them from any device connected to the Internet. Google Drive, Microsoft OneDrive, Box and Amazon S3 work on similar principles and provide users with similar functionality.

Like any transformation, cloud accounting has positive and negative characteristics. The main and obvious advantage of such technologies is the ability to use a single data set by all users simultaneously, from different locations and in a convenient mode, while the information will always be relevant to the query that arises. Other advantages include reduced capital expenditures (software, support servers, etc.), improved business response due to faster information flow and processing, relatively unlimited storage, processing and automatic data backup, timely software updates, and user-friendly functionality with a widespread analytical component. All this allows generating not only accounting reports, but also other types of analytical information that is available to users of different levels [10].

As a result, the use of cloud storage helps to improve efficiency and provides greater mobility for businesses. For example, employees can work with credentials and documents from anywhere with an internet connection, reducing dependence on a specific workstation or equipment. In addition, the use of cloud storage reduces the risk of data loss as it is stored in a secure online environment with backups.

Other ways of digitalization include the use of automated cost accounting systems, electronic payment systems, financial data analytics software solutions and artificial intelligence. They help to simplify and speed up accounting processes, ensuring accuracy, efficiency and reliability of accounting. It is important to keep in mind that the choice of digitalization programmers and pathways should be tailored to the specific needs and characteristics of the organization, and that cybersecurity and data protection requirements should be met to ensure the security and confidentiality of accounting information.

### Conclusions

Thus, the analysis has shown that digitalization tools for accounting processes, such as electronic accounting systems, financial management software and cloud storage, have a significant impact on the automation and optimization of accounting work. They help to improve the efficiency of accounting for financial transactions, provide quick access to financial information, simplify reporting and analytics, and allow for convenient storage and exchange of documents.

The study emphasizes that the use of these tools contributes to the efficiency and accuracy of accounting, facilitates teamwork and promotes data centralization. The use of cloud storage provides convenient access to credentials and documents from any device with an Internet connection, and ensures automatic data synchronization and backup.

In the future, further research will be aimed at developing proposals for the introduction of new technologies, improving accounting processes, reflecting digitalization tools in accounting, considering their compatibility with other accounting systems, ensuring the reliability and security of storage and processing of accounting data, and determining their role in the transfer of accounting information to other users.

73
Abstract

This article is devoted to the study of prospects for the introduction of digitalization tools for accounting processes at Ukrainian enterprises. In today's world, digitization has become a necessary stage of business development, and accounting processes are no exception. The introduction of digital tools into the accounting process at Ukrainian enterprises opens up new perspectives and opportunities for effective financial management and increased competitiveness.

Possible prospects for the introduction of digitalization tools for accounting processes at Ukrainian enterprises are characterized, their advantages and disadvantages are highlighted. The software products that are freely available for business entities of Ukraine have been analyzed. Possible areas of research and improvement of accounting processes with the help of digitization tools are considered.

In the scope of this study, a comparative characterization of the most used software products used in accounting was carried out according to the defining criteria. Also considered are the most popular cloud environments used in accounting processes during the economic activity of enterprises.

In the future, further directions of research are defined, which will be aimed at the development of proposals for the introduction of new technologies, improvement of accounting processes, reflection in accounting of digitalization tools, consideration of their compatibility with other accounting systems, ensuring the reliability and safety of storage and processing of accounting data and determining their role in transfer of account information to other users.

In conclusion, the prospects of introducing digitization tools into accounting processes at Ukrainian enterprises are significant. This provides an opportunity to automate routine operations, improve analytical capabilities, reduce costs and improve communication between internal departments. However, for successful implementation, it is necessary to solve the problems related to personnel training and ensuring data security.

Список літератури:

7. Пасічник І.Ю. Особливості визнання та відображення в обліку електронного цифрового підпису / Пасічник І.Ю. // Підприємництво і торгівля. – 2021. – № 32. – С. 11-16.
11. Ярошук О. Технологія блокчейн в бухгалтерському обліку та аудиті / Ярошук О., Белова І. // Інститут бухгалтерського обліку, контроль та аналіз у умовах глобалізації. – 2020. – Випуск 3-4. – С. 28-44.

References:


Посилання на статтю:

Reference a Journal Article:

This is an open access journal and all published articles are licensed under a Creative Commons "Attribution" 4.0.