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DEVELOPMENT OF REQUIREMENTS FOR INFORMATION SYSTEMS FOR ACCOUNTING OF FIXED ASSETS

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Abstract
The article explores the evaluation of information systems and technologies used for accounting fixed assets within the framework of digital transformation, highlighting areas for improvement. It examines specialized modules that enable the automation of core functions in fixed asset accounting systems. Additionally, the article presents key recommendations for enhancing the development of these information systems.

Keywords: Digital transformation, fixed asset accounting, information system, requirements, artificial intelligence, machine learning, database, requirements, automation, financial reporting.

Introduction

In recent years, systemic reforms in Uzbekistan's economy have been rapidly implemented. As a result, the priorities for the country's socio-economic development are being fundamentally re-evaluated, and new, practical systems of economic growth—capable of genuinely energizing the economy—are being introduced. This creates specific requirements for the role of fixed asset accounting, particularly in the context of transitioning to a market economy, as well as for the peculiarities of accounting, the availability, movement, and condition of fixed assets, and the information on their usage.

A market-based management system requires comprehensive information about fixed assets. Accounting must be structured not only to generate reports but also to enable access to all types of necessary data.

Therefore, to obtain the required data on fixed assets as quickly as possible, it logically follows that the accounting system should be improved according to the nature of the operations. Since enterprises have many different groups of fixed assets, it is impossible to obtain all necessary data without the use of computer

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technologies [1,2]. To solve this issue, our research must provide guidelines for fully utilizing computing technologies. In storing data on computers, a centralized or distributed database system should be used.

Literature Review on the Topic

To obtain the necessary data for fixed asset accounting, enterprises should create an information system (IS) based on modern information technologies, which allows for the storage, processing, and transmission of data. The analysis of literature shows that many economists have dedicated their scientific research to the theoretical and practical aspects of accounting for and using fixed assets. Among them are A.S. Alisenov, Yu.A. Babaev, I.V. Zakharov, N.R. Kondakov, M.V. Melnik, M.Z. Pisengolts, G.V. Savitskaya, S.S. Sergeev, O.A. Tolpegina, and others.

Undoubtedly, works by foreign scholars and economists such as X. Anderson, A. Gilbeau, D. Caldwell, K. Marx, and B. Needles have also sparked great interest in the field being studied.

In addition, the issues of accounting for and utilizing fixed assets have been researched by a number of economists including J. Arnaboldi, S.B. Frey, M. Granlund, K. Drury, J. Karimi, Knudsen Dan-Richard, E. Kolthoff, P. Parviainen, M.E. Porter, J.W. Ross, and C. Horngren.

Uzbek economists such as R. Abdullaev, P. Dusmuratov, A. Ibragimov, A. Karimov, Z. Durbunov, S. Mekhmanov, A. Pardayev, M. Pardayev, B. Dasanov, and S. Toshnazarov have also directly or indirectly examined the issues of accounting for goods and materials in their scientific works.

The aforementioned researchers have discussed general issues related to fixed asset accounting in their scientific articles and books, including classification, valuation, disposal, and other related topics. From this point of view, the automation of fixed asset accounting has also been considered.

Scientific articles and dissertations have focused on more specific aspects of automating fixed asset accounting, for example:

- Developing new methods and models for fixed asset accounting in information systems;
- Improving existing methods and models for fixed asset accounting in information systems;

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- Implementing information systems for fixed asset accounting in organizations.

Reviewing the literature on fixed asset accounting in information systems allows us to draw the following conclusions:

- Automating fixed asset accounting is a relevant and in-demand topic in the modern economy;
- Currently, there are several methods and models in information systems for fixed asset accounting that allow for efficient resolution of accounting tasks;
- The implementation of information systems for fixed asset accounting in organizations increases the effectiveness of managing fixed assets.

The main directions for the future development of literature on fixed asset accounting in information systems can be presented as follows:

- Developing new methods and models for fixed asset accounting in information systems based on modern information technologies such as artificial intelligence and machine learning;
- Improving existing methods and models for fixed asset accounting in information systems, taking into account the requirements of international accounting standards.

Research on integrating fixed asset accounting with other accounting systems, such as cost accounting, production accounting, sales accounting, and others, allows for a comprehensive understanding of enterprise operations. Studying literature on fixed asset accounting in information systems helps form a clear picture of the current state of the field and its development prospects [3,4].

Thus, information on fixed asset accounting serves as input for IT systems and a decision-making tool for responsible personnel. The primary goal of IT systems in an enterprise is to support management processes and provide reliable financial data for making informed decisions about alternative uses of limited resources.

Research Methodology

In information systems, special modules are used for accounting fixed assets, enabling the automation of all key operations related to these types of assets. Typically, such modules include the following functions:

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- **Data Entry and Storage**: The information system records all necessary data about fixed assets, including their name, cost, purchase date, useful life, and other relevant details.
- **Tracking Asset Movements**: The system monitors all operations related to the movement of fixed assets, such as purchase, transfer, write-off, and modernization.
- **Depreciation Calculation**: The system calculates depreciation using various methods and reflects this in accounting records.

Automating fixed asset accounting through information systems enhances process efficiency, reduces the likelihood of errors, and improves reporting quality. Such automation significantly increases the effectiveness of the process, minimizes errors, and ensures data reliability.

Key Operations in Automated Fixed Asset Accounting

In information systems, the following operations are performed in fixed asset accounting:

- **Data Centralization**: All information about fixed assets is stored in one place, simplifying search and data processing.
- **Process Automation**: Many operations such as asset commissioning, depreciation, leasing, and disposal are automated. This reduces the time and labor costs involved in accounting.
- **Monitoring and Analysis**: The system allows for monitoring the condition of fixed assets, tracking their depreciation, and identifying potential issues.

Thus, in a market economy, the process of managing fixed asset accounting requires detailed data about their availability, movement, condition, and usage. Market management systems demand complete information on fixed assets. Therefore, accounting must be structured not just for reporting but also to provide any necessary data when needed.

Conclusion and Discussion

Digital transformation refers to the process of changing business processes and operating models using digital technologies. In the context of fixed asset accounting, digital transformation includes the following aspects:

- Using cloud technologies to store and analyze fixed asset data.

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- Automating status tracking and forecasting processes through artificial intelligence and machine learning.
- Integrating fixed asset accounting systems with other business systems.
- Implementing blockchain technologies to ensure data reliability and security.
- Developing electronic document circulation and automating inventory processes.

- **Training Employees to Work with New Technologies and Changing Accounting Approaches**

Currently, under conditions of digital transformation, modern information systems for managing fixed asset accounting are being developed.

The following key requirements have been formulated for the development of information systems:

- **Transition to a Unified Information System for Fixed Asset Accounting**

This allows all data on fixed assets to be consolidated in a single centralized system, which simplifies search, analysis, and control processes.

- **Automation of Fixed Asset Accounting Processes**

Automation reduces labor costs and increases the accuracy of accounting records.

- **Use of Artificial Intelligence (AI) and Machine Learning (ML) Technologies**

AI and ML can be used to automate fixed asset accounting processes, analyze data, and detect potential issues before they arise.

- **Integration of Modern Information Systems and Fixed Asset Accounting Technologies with Other Systems**

This enables data exchange between different systems, thereby improving the overall efficiency of fixed asset management.

The specific set of recommendations depends on the unique characteristics and needs of each organization. However, in general, implementing modern information systems and fixed asset accounting technologies is a necessary condition for improving management efficiency in the context of digital transformation.

Requirements for the Architecture of Fixed Asset Accounting Systems

- **Ensuring Centralized Accounting of Fixed Assets**

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- **Centralized Accounting of Fixed Assets**

Centralized accounting of fixed assets ensures the consistency and reliability of information about fixed assets across the entire organization.

- **Utilizing Integrated Accounting Systems**

Integrated accounting systems allow data on various types of assets, including fixed assets, to be consolidated in one field.

- **Implementing Big Data and Artificial Intelligence Technologies**

Big data and artificial intelligence technologies allow for the analysis of large volumes of data on fixed assets and the identification of hidden patterns.

Functional Requirements for Fixed Asset Accounting Systems:

- **Automation of All Fixed Asset Accounting Operations**

Automating fixed asset accounting operations improves efficiency and reduces accounting costs.

- **Support for Various Types of Fixed Asset Accounting**

The fixed asset accounting system must support different types of accounting, including accounting for assets based on their value, revalued value, and exchange value.

- **Support for Various Depreciation Methods**

The system must support different methods of asset depreciation, including linear depreciation, declining balance depreciation, and the method of subtracting useful years.

Security Requirements for Fixed Asset Accounting Systems:

- **Use of Modern Information Security Tools**

The fixed asset accounting system must be protected from unauthorized access, data manipulation, and uploads.

- **Regular Audits of Fixed Asset Accounting Systems**

Auditing fixed asset accounting systems helps identify vulnerabilities and facilitates uploads.

Practical Results of Using Modern Information Systems and Fixed Asset Accounting Technologies:

- **Automation of Fixed Asset Accounting Processes**

Automation reduces labor costs by 50% or more, freeing employees to focus on important tasks like data analysis and decision-making.

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- **Using AI and ML Technologies**

AI and ML help identify potential issues related to fixed assets at an early stage, preventing their occurrence. For example, AI can be used to analyze the condition of fixed assets and identify possible defects.

- **Integration of Modern Information Systems with Other Systems**

Integrating fixed asset data with purchase, repair, and shipping management systems helps optimize the management process.

The recommendations provided above have increased the efficiency and reliability of fixed asset accounting in the organizations where they were implemented, as well as reduced accounting costs.

Conclusion:

In the context of digital transformation, each organization must develop specific recommendations for improving fixed asset accounting systems based on its unique characteristics and needs. By implementing advanced information systems for fixed asset accounting, organizations gain the following advantages:

- Improved efficiency of fixed asset accounting
- Increased quality of information about fixed assets
- Reduced costs of fixed asset accounting
- Higher level of automation in fixed asset accounting
- Improved ability to analyze fixed asset data

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