SECTION 1. ACCOUNTING, ANALYSIS AND AUDIT

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1.1 Modern features of the information audit of the enterprise

Information technologies are constantly improving and becoming more complex. The positive aspects of using information technology in business are overshadowed by new risks. For example, e-commerce, which is so popular today, is associated with the processing of confidential information of various kinds: financial transactions, personal data, information about trading.

This, in turn, requires additional control from top management, external and internal audit. That is why information technology audits are carried out in companies in order to quickly obtain systematized and reliable information to assess the state of IT and make decisions on IT management.

Of course, audits are different. An audit can be classified according to various criteria, but here we will only talk about IT audit – checking the functioning and protection of information systems.

First of all, it is necessary to form a general understanding of what an IT audit is and why it is needed. The term “IT audit” refers to the process of obtaining systematic and objective data on the current state of IT and assessing the degree of their compliance with “best practices” [1].

The purpose of an IT audit is to improve the IT control system. To do this, auditors, both external and internal, must:

- carry out IT risk assessment;
- help prevent and mitigate IS failures;
- participate in IT risk management;
- help prepare regulatory documents;
- help connect business risks and automated control;
- carry out periodic inspections;
- assist IT managers in the proper organization of IT management;
- take a “look from the outside.”

In Ukraine, as well as abroad, six types of information technology audit services are offered [2]:

- IT survey;
- expert assessment of IT.
- technical IT audit.
- udit of IT business process.
- IT criterion audit.
- comprehensive IT audit (Pic. 1).

Picture 1 – Objectives of the IT Audit Services

IT survey – collecting information to be used to carry out further work, for example, work related to the implementation of a new information system or optimization and modernization of an existing one. In this case, this type of audit is used to correctly collect reliable information about the current state of IT. It is worth noting that in this case we are not talking about analysis and evaluation of the collected information [3].

IT expert assessment is an assessment of the adequacy of financing design solutions and/or investments in the purchase of equipment and IT services. The following types of assessments are possible:

- evaluation of IT projects or design solutions;

- assessing the feasibility of investments in IT;
- assessment of the cost of the company's IT component;
- assessment of current IT projects;
- assessing the possibility of repurposing the IT infrastructure;
- assessment of the organization of IT operation;
- assessment of user training.

An IT technical audit is the collection and analysis of information with the subsequent generation and issuance of recommendations for optimizing the operation of a specific technical element of the IT infrastructure. As a rule, this type of audit has a small scale of work and is aimed at a narrow technical specialization of the study. An IT business process audit is an audit of information technologies and systems that are critical for the implementation of a specific business process of a company with specified quality and efficiency criteria. One of the most important results of this type of audit is a formalized model of the business process under study [4].

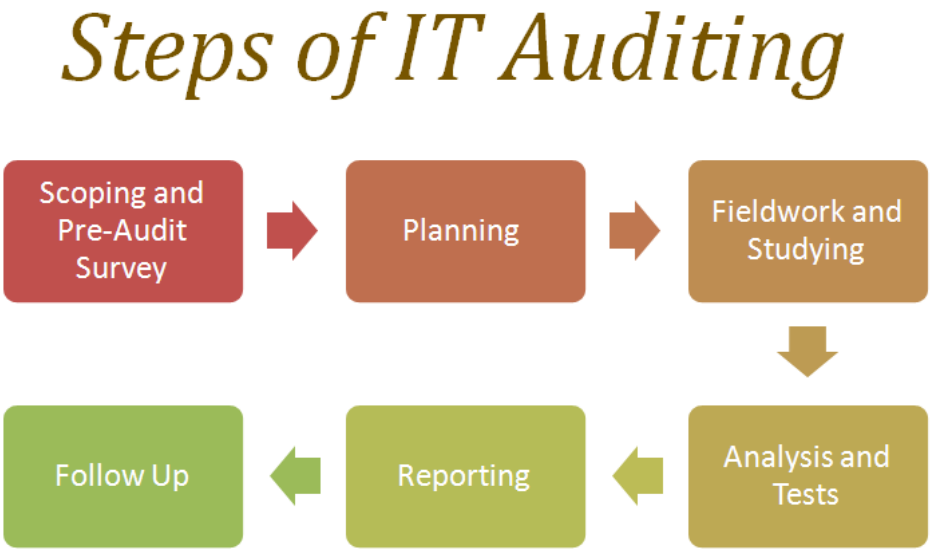
When conducting an audit of an IT business process, as a rule, the following is performed:

- determining who is responsible for the process;
- identification of users and participants in the business process;
- identifying the equipment and programs used;
- assessment of the actions of service personnel and users;
- analysis of design and regulatory documents.

IT criterion audit is the collection, analysis of information and issuance recommendations on some selected IT criterion, for example, security, performance, reliability, availability. When conducting an audit according to a certain assessment criterion, it is customary to examine not only a single element of the IT infrastructure, but also the entire set of software, hardware, processes for their support and maintenance in the entire audited company [5].

A comprehensive IT audit is an audit that involves identifying and analyzing the relationships between business processes, their requirements, information and related technologies, and a set of software and hardware in order to compare the adequacy of

IT to the company's business needs. If we talk about an IT audit within the framework of a financial audit, then it contains some parts of the above types. Thus, it represents a certain generalized view without going into detail in certain areas. The peculiar "superficiality" of the audit in this case is due to the specifics and ultimate goal - confirmation of financial statements, and not a detailed check of the enterprise's information systems and its security systems, as well as the management processes of these systems (Pic. 2).



Picture 2 – Audit process

Currently, there are many standards, regulations, and best global practices that are used by auditors when checking the functioning of information systems.

In Picture 2 presents a list of information security standards, divided into some groups:

- international standards;
- state (national) standards;
- governing documents.

Also, audit teams quite often use other standards, such as Cobit, ITIL, TOGAF, PMBOK, CMM and others. The concept of information systems audit is based on the assumption that the main object is the information system. Today there are a large number of definitions of the concept "information system". Here are just a few of them:

- an information system is a set consisting of one or more computers, corresponding programming tools, operators, physical processes, telecommunications and others, forming an autonomous whole capable of processing or transmitting data;

- information system – a set of information contained in databases and information technologies and technical means that ensure its processing;

- an information system is a set of software and hardware, as well as organizational support, which together provide information support to a person in various areas of his activity [6].

No matter how great the variety of definitions may be, the authors agree that an information system is, first of all, a set of information and software and hardware used for its processing, storage and transmission. When assessing the effectiveness of the operating principles of an information system, a reasonable degree of confidence is achieved with respect to the inviolability and complete harmonization of the elements of the information system, the adaptability of the information system to environmental influences, as well as the compatibility of the information system for processing financial information with other information systems.

When assessing the effectiveness of the methods of functioning of the information system, a reasonable degree of confidence is achieved in relation to administrative decisions regarding the mandatory execution of laws, directives, orders and similar regulations aimed at using the information system in the business processes of an economic entity, as well as in relation to economic and socio-ideological decisions in terms of material and social motivation of employees aimed at operating and improving the current characteristics of the information system. When assessing the effectiveness of the way an information system operates, a reasonable degree of confidence is achieved regarding the consistency of the descriptive model contained in the technical documentation with the actual performance of the information system, as well as the effectiveness of the hardware.

Controls in IT-enabled systems consist of a combination of manual and automated controls (eg controls built into computer programs). Manual controls may be independent of IT, may use information generated by IT, or may be limited to

monitoring the effective functioning of IT or automated controls. Whether an organization uses manual and automated controls simultaneously depends on the nature and complexity of the organization's use of IT. According to the Auditing Standards: "Generic controls in information systems (GCIS) are policies and procedures that have broad scope and are designed to ensure the effective operation of application controls, helping to ensure the proper, uninterrupted functioning of information systems". Testing of general controls can provide a superficial picture of the functioning of the information system, as well as a completely sufficient basis for deciding whether to continue the IT audit. If serious deficiencies are identified at the OSKIS level, then further testing may be pointless [7].

In understanding the level of testing of common controls in information systems, it is necessary to achieve an understanding of the relevant IT-specific controls that apply to the relevant applications, data files and technology components. It is also useful to understand the organization's approach to information technology management. For example, it is necessary to understand how data centers are organized, how and where software change processes are managed and controlled, the organization's security architecture and approach to security, and the use of third-party service organizations or enterprise-wide services.

Thus, after collecting the necessary information, the auditor can make a conclusion about the effectiveness of the IS. From all of the above, we can conclude that an audit of information systems is a rather complex process that requires the auditor to have good technical training and a clear understanding of what he must do and why it is being done. It is also necessary to take into account the specifics of the company's industry in which the IT audit is being conducted, since for companies, for example, the telecommunications and oil-extracting industries, the approach to conducting an audit may differ.

Why is an IT audit so necessary in the modern world? First of all, the results can be useful for the company's management. Based on the results of an IT audit, you can understand whether the built IT infrastructure is functioning correctly and what impact it has on business development. On the other hand, the IT department may be interested

in the positive results of such an audit, since the further development of the department and its employees within the company may depend on this: the better the results, the more willing the company's management will be to invest in IT [8].

An IT audit allows you to assess the compliance of information systems with business requirements and various standards designed to increase IT efficiency, as well as build a long-term strategy for the development of information technology. As a result of an IT audit, an estimate of the cost of IT services can be obtained, on the basis of which a decision can be made in the future to outsource some functions or to concentrate all functions within the company, as well as to identify potential risks and bottlenecks in the IT infrastructure to develop appropriate procedures to minimize them (Pic. 3).

Picture 3 – Software audit tools

The IT auditor will evaluate the audit criteria for a specific task, checking their consistency with the main characteristics. The importance of the skin characteristics of a particular task is clearly the basis of the auditor's professional judgment.

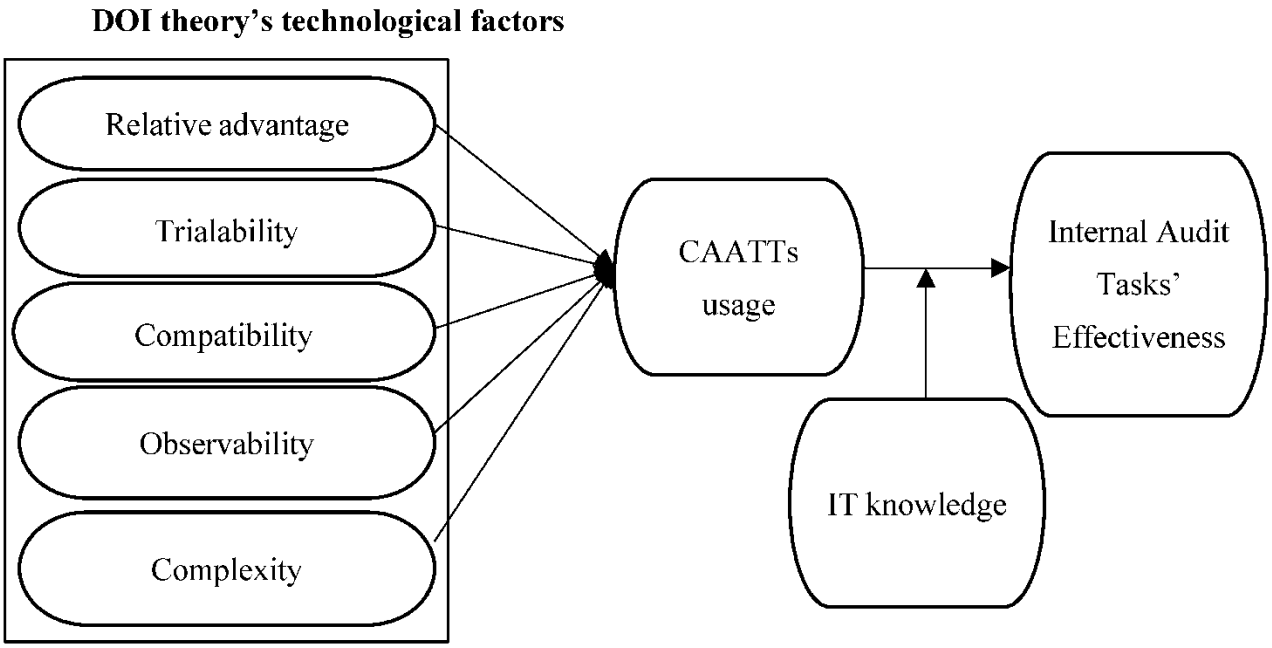
The audit criteria can be adapted to the individual IT audit object. Audit criteria are necessary for the final assessment or assessment of the IT audit object for the purpose of providing a (professional) audit certificate. Without a basis for alignment,

which is created by adapted (selected for IT audit) audit criteria, any revision does not exclude the possibility of different interpretations and inconsistencies [9].

Audit tools are becoming increasingly important for the IT auditor. IT environments, application programs, transactions and other platforms are complex nowadays, so audit tools are important for understanding functioning of information systems. For an individual IT audit, the auditor can determine whether he or she will need special tools. An IT auditor can audit who can conduct an audit of all relevant aspects of the IT audit object and who can identify all the facts without vicarious tools.

The official name for specialized audit tools is Computer Assisted Audit Tools and Techniques (CAATTs). CAATTs means that the IT auditor uses computer application programs for automation and assists the IT audit to process audit-relevant data that resides in the information system. Keeping CAATTs in place helps ensure that the power is properly stored when monitoring application program monitoring, especially when thousands or possibly millions of transactions are occurring during the test period. In such situations, it would be impossible to obtain adequate information in a format that can be viewed without the use of automated tools. CAATTs fragments provide the ability to analyze large amounts of data, IT audits supported by CAATT testing can conduct a new look at all transactions and identify insights (duplication of sellers or transactions) or other p behind important nutritional control (eg, distribution of muscles).

CAATTs are also important for testing the reliability of websites and general understanding of IT infrastructure (hardware and wiring). The lower directions of the CAATTs move to a number of tool butts. For the skin instrument there are equivalents, which are, of course, no less significant (Pic. 4).



Picture 4 – Research model

In the minds of the rapid development of infrastructure and the absorption of informatization of government processes, the efficiency of the activities of enterprises, the establishment and organization of the future is more dependent on information technologies (IT), what to study in control systems. This middle ground of information technologies (IT middle ground) as a structural warehouse organization is a complex system that integrates a variety of information, software, technical, human and other and types of resources to achieve the goals of the organization, business, installation. This means an increase in demand for increased efficiency and cost-effectiveness of the use of IT, an increased transfer and reduction of deficiencies from their stagnation, as well as a reduction in costs for IT [10].

IT audit is a key component for ensuring efficiency information systems and application software. Without reliable information systems and effective IT controls, the organization is unable to correctly complete operations/transactions and establish reliable financial integrity, which, in turn, contributes to the of the goals set before her.