Blockchain-нің әртүрлі салаларға, атап айтқанда, бухгалтерлік есепке әсері талданды. Талдаудан кейін гипотеза жасалды.

**Кілт сөздер:** бухгалтерлік есептегі blockchain, blockchain жүйесінің түрлері.

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# APPLICATION OF INFORMATION TECHNOLOGY IN MANAGEMENT DECISION-MAKING

*Abstract: The article is written on the topic "Application of information technology in management decision-making". The article highlights and describes the characteristic features of information technology for decision making, gives an overview of the types of information technology for decision making, and also describes the processes of the programs. The article is addressed to a wide circle of readers, interesting for financiers and managers.*

*Key words: management, decision-making, information technology, expert system, automated expert assessment, decision support systems.*

In the 21st century, information technology is an integral part of our everyday life and not only everyday life, information systems are used in management, in decision-making and in finance, everywhere. The advantages of information technology are most fully manifested when solving managerial tasks at enterprises and organizations. Nowadays, information technologies are used by organizations of all types operating in all spheres of social production. Without information technologies, it is impossible to imagine a modern manager today. There are a large number of software products on the market that automate various mechanisms for making managerial decisions necessary to achieve optimal market parameters for the management object.

So, what is decision-making? Decision-making is the foundation of management. Decision-making is the process of making choices by identifying a decision, gathering information, and assessing alternative resolutions. Development and decision-making is a creative process in the activities of a leader at any level, including:

- development and goal setting;
- studying a problem based on the information received;
- selection and justification of performance criteria;
- selection and formulation of the optimal solution;
- making decisions;

• specification of the solution for its performers.

Well, information technology makes it possible to quickly complete these steps, increase the efficiency and quality of information necessary for making managerial decisions, on which, in turn, their quality and effectiveness directly depend. Depending on the purpose and the possibilities provided to the user, three types of information technologies for decision support can be distinguished.
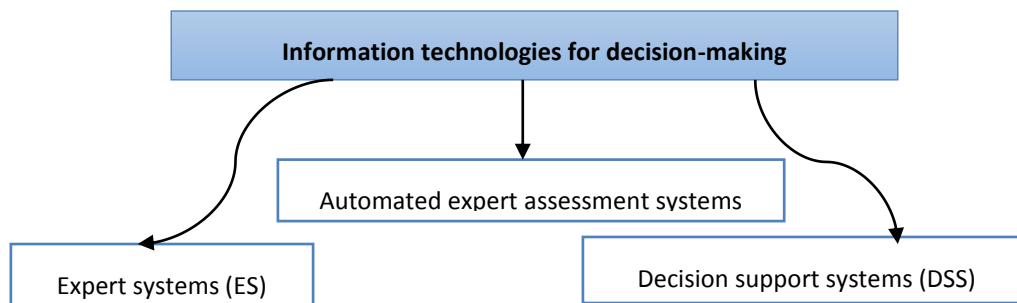


*Figure 1 - Information technologies for decision-making*

**An expert system** is defined as an interactive and reliable computer-based decision-making system, which uses both facts and heuristics to solve complex decision-making problems. It's considered at the highest level of human intelligence and expertise. It is a computer application which solves the most complex issues in a specific domain. The expert system can resolve many issues which generally would require a human expert. It's based on knowledge acquired from an expert. It is also capable of expressing and reasoning about some domain of knowledge. Expert systems were the predecessor of the current day artificial intelligence, deep learning and machine learning systems.

For example:  FINEVA -an expert system for financial analysis of firms. The complete methodology for knowledge acquisition and representation in the field of financial analysis is implemented in the system called FINEVA (FINancial EVAluation) . The FINEVA system is a multicriteria knowledge-based decision support system for the assessment of corporate performance and viability.  In addition, INVEX - an expert system in the field of investment management. Capital investment - deciding which product or business to support - is a very important business issue, because it is largely irreversible, usually involves long-term decisions, and affects the nature and the structure of the business. The INVEX expert system helps the project analyst and investment decision-maker to determine whether a project is acceptable and, if it is, whether it is the best alternative, and to calculate the extent of the decision sensitivity to certain critical assumptions.

**A decision support system (DSS)** is a computerized program used to support determinations, judgments, and courses of action in an organization or a business. A DSS sifts through and analyzes massive amounts of data, compiling comprehensive information that can be used to solve problems and in decision-making.The DSS can be employed by operations management and other planning departments in an organization to compile information and data and to synthesize it into actionable intelligence. In fact, these systems are primarily used by mid- to upper-level management.

For example, a DSS may be used to project a company's revenue over the upcoming six months based on new assumptions about product sales. Due to a large number of factors that surround projected revenue figures, this is not a straightforward calculation that can be done manually. However, a DSS can integrate all the multiple variables and generate an outcome and alternate outcomes, all based on the company's past product sales data and current variables.

**Automated expert assessment systems** are designed to automate complex expert procedures and increase the efficiency of using highly qualified specialists as experts in developing management decisions. The main task of automated expert assessment systems is to solve complex management problems based on reliable, professionally processed and correctly applied information. Information systems allow to:
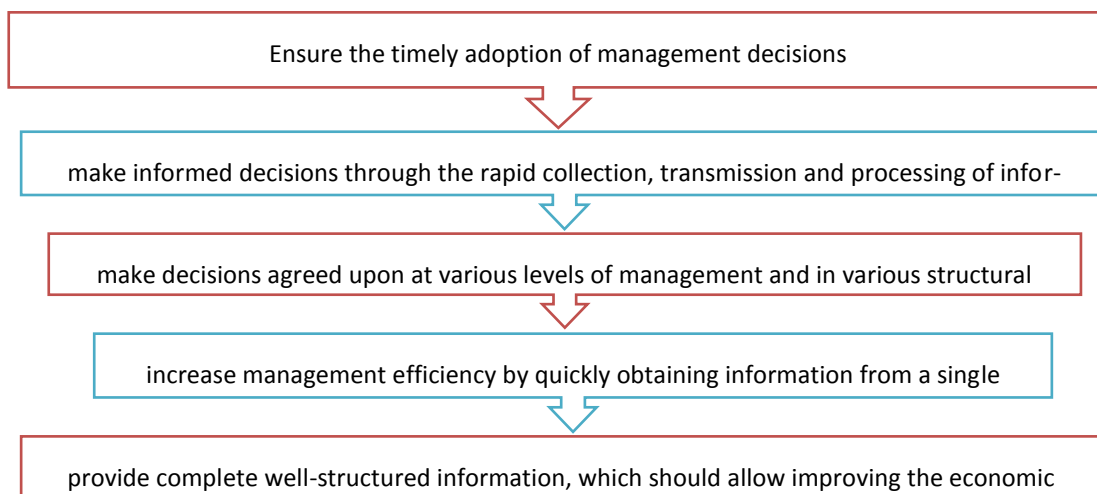
*Figure 2 - Automated expert assessment systems*

Information technology decision support can be used at any level of management. They allow you to strengthen the analytical capabilities of a person in decision-making processes, which are understood as the composition and sequence of procedures leading to the solution of problems of the organization in combination with methods for the development and analysis of alternatives. Despite the fact that information support for the development, adoption and implementation of government decisions is an important part of the decision-making process, one should not exaggerate the role of computer technology. The role of modern technologies consists only in storing, processing and promptly issuing information necessary for making a decision through the use of new means of collecting, transmitting and converting information, which makes it possible to optimize and rationalize the management function.

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**Конысбаева А.Ж., Жандильдинова А.А.**
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**Басқару шешімдерінде ақпараттық технологияларды қолдану**

**Аңдатпа.** Мақала «Басқару шешімдерінде ақпараттық технологияларды қолдану» тақырыбында жазылған. Мақалада шешім қабылдауға арналған ақпараттық технологиялардың сипаттамалары баяндалады және сипатталады, шешім қабылдауға арналған ақпараттық технологияның түрлері туралы түсінік беріледі, сонымен қатар бағдарламалардың процестері сипатталады. Мақала қалың оқырмандарға арналған, қаржыгерлер мен менеджерлер үшін қызықты болады.

**Кілт сөздер:** менеджмент, шешім қабылдау, ақпаратты технологиялар, сараптама жүйесі, сараптаманың автоматтандырылған жүйесі, шешімдерді қолдау жүйесі

**Конысбаева А.Ж., Жандильдинова А.А.**
**Научный руководитель: Омаров Г.Б.**

**Применение информационных технологий в принятии управленческих решений**

**Аннотация:** В статье выделяются и описываются характерные особенности информационных технологий для принятия решений, дается обзор о видах информационных технологий для принятия решений, а также раскрываются процессы работы программ. Статья адресована для широкого круга читателей, интересна для финансистов и менеджеров.

**Ключевые слова:** управление, принятие решений, информационные технологии, экспертная система, автоматизированная экспертная оценка, системы поддержки принятия решений.

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## MARKETING TECHNOLOGIES IN THE DIGITAL WORLD

*Abstract: The article presents the main concept of the impact of information technologies on the development of trade services. The main trends in the development of marketing activities in the trading service are identified. The directions of innovative development of marketing activities in the trading service are defined.*

*Keywords: innovation, information technology, marketing, trade.*

Marketing technologies are a set of techniques, methods of action and decision making that determine the company's activity in managing its position in the market, in choosing and achieving by the company its main goals. In the course of applying marketing technologies, they allow the company to achieve profitability and efficiency in the market through planning, organizing work, analyzing and monitoring the results of the company's market activity, its competitors and the market situation.

Marketing technologies are currently very numerous, but usually five main marketing technologies are distinguished: segmentation, goal setting (goal setting), positioning, analysis and forecasting. Segmentation as a marketing technology involves the work of dividing the market into separate specific segments for research and study of consumer demand, consumer attitudes to certain products. Targeting (goal-setting) as a marketing technology allows you to select the target audience for certain parameters of a specific product of a company for which this or that advertisement of this product is designed from the total number of consumers.

Positioning is a marketing technology that allows a company's product using certain tools to take a more advantageous position in the market than the position of products of competing compa-