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VALENTYNA LUKIANOVA

<https://orcid.org/0000-0003-0036-3138>

e-mail: lukianivww@ua.fm

VALENTYNA POLOZOVA

<https://orcid.org/0000-0002-2528-587X>

e-mail: val812p@gmail.com

Khmelnytskyi National University

THEORETICAL FUNDAMENTALS OF USING INFORMATION TECHNOLOGIES IN MANAGEMENT OF BUSINESS ENTITIES

The article is devoted to the issues of informatization of public relations, namely the consideration of theoretical issues related to the use of information technology in the management of economic systems - business entities. Information in management is considered as a determining factor and a leading resource that can provide competitive advantages of both individual enterprises - business entities - and the national economy. It is substantiated that the efficiency of modern enterprise will be determined by the development and efficiency of information infrastructure and quality application of information technology. The views of scientists on information in the following areas are analyzed: resource-information resource; data / knowledge; factor / property. The place and role of information procedures, which is to reduce uncertainty, as it is the circulation of information inside and outside the company allows you to streamline financial and economic processes and reconcile them with the external environment and internal requests of the entity. It is substantiated that the main direction of change of management, enterprises of adaptation to modern changing conditions, should become wide use of the newest computer and telecommunication equipment, new information technologies, formation on this basis of highly effective information and management technologies and processes. It is shown that management, as an information process, is carried out in a certain sequence; always has a certain algorithm, specific rules and procedures. Thus, the main purpose of information technology within the management information system is to ensure the implementation of the information process, and its purpose is to meet the information needs of all employees involved in the development and decision-making process at any level of management.

Keywords: information, information process, information procedure, information technologies, management of business entities.

ЛУК'ЯНОВА В. В., ПОЛОЗОВА В. М.

Хмельницький національний університет

ТЕОРЕТИЧНІ ЗАСАДИ ВИКОРИСТАННЯ ІНФОРМАЦІЙНИХ ТЕХНОЛОГІЙ В УПРАВЛІННІ СУБ'ЄКТАМИ ГОСПОДАРЮВАННЯ

Статтю присвячено питанням інформатизації суспільних відносин, а саме розгляду теоретичних питань щодо застосування інформаційних технологій в управлінні економічними системами – суб'єктами господарювання. Обґрунтовано, що ефективність функціонування сучасного підприємства визначатиметься розвитком та дієвістю інформаційної інфраструктури та якісним застосування інформаційних технологій. Виділено місце і роль інформаційних процедур, яка полягає в зниженні невизначеності, так як саме циркуляція інформації всередині та поза підприємством дозволяє впорядкувати фінансово-господарські процеси та узгодити їх із зовнішнім середовищем і внутрішніми запитами суб'єкта господарювання.

Ключові слова: інформація, інформаційний процес, інформаційна процедура, інформаційні технології, управління суб'єктами господарювання.

Formulation of the problem in general and its connection with important scientific or practical tasks

Modern economic conditions are characterized by the uncertainty of changes in the external and internal environment of enterprises that exist in the global and national economy. These changes pose significant threats to the stable operation of enterprises and opportunities for efficiency, which necessitates new management tools to ensure the effective operation and development of enterprises

Analysis of research and publications

We can identify the following researchers who analyzed the use of information technology in the management of economic systems at various levels, including business entities (enterprises): Vashchenko LO [1], Glivenko SV [2], Dyatlov SA [3], Krupyak TP [4], Kulinich AA [5], Melnik LG [6], Saliga S. Ya. [7], Shannon K. [8], Heilman H. [9] and others. Both general issues concerning the place of information, information support and the use of modern information technologies are considered.

Presenting main material

The enterprise, as an open system, in the long run is not static and receives constant action of many factors, which causes the need for its constant transformation, adaptation, adaptation to a significant number of influencing factors. Ensuring effective management, in such circumstances, involves the development and adoption of sound

strategic and tactical decisions on the current operation and development of the enterprise, requires the use of clear and effective management tools and levers.

In modern conditions, when the information society, based on information processes and technologies, is developing rapidly, when the external market environment is dynamic and changing very quickly, the processes of development and decision-making must have adaptive capabilities. Therefore, the issue of determining the place of information technology in enterprise management is becoming more acute and the need to develop an information strategy of the enterprise is becoming more urgent. It is the purpose of this article to consider these issues.

Today, with the development of global economic relations, the company is changing mainly through information and information technology. This explains the growing role of information in the management of both the determining factor and the leading resource, because it provides a competitive advantage for both the national economy and for each individual enterprise. H. Heilman singled out the triple content-target nature of information [9]. That is, it is: a social phenomenon; an important factor in the production of goods and services; a tool to ensure the competitiveness of the enterprise by forming its differences from competitors.

Modern economic relations require the application of new approaches to the use of information, its optimization and further analysis, assessment of the impact of external and internal changes and influences. Analyzing the economic literature, it can be noted that the information factor changes economic relations and emphasizes not on the material, but on information production. Thus, the works of scientists [4] considered the development trends of modern enterprises and determined that they are due to complications of information infrastructure under the influence of changes in business conditions, high rates of scientific and technological progress, organizational change and increasing business ties. Thus, it can be noted that modern management should be based on "streamlining information and information processes that will provide access to data and necessary resources in the current mode during the process of developing and making management decisions" [5]. The efficiency of the enterprise, as a result, will be mainly determined by the development and efficiency of information infrastructure and quality application of information technology. The mechanism of updating information to the level at which it will give the greatest effect, is very important and decisive for the management of the enterprise [10]. Everyone knows that the operation of the enterprise, although taking place under ever-changing conditions and threats to the environment, allows you to make a significant profit. Therefore, for stable development, in which all processes at the enterprise will work effectively, it is necessary to determine the possibilities of using modern information technologies and change the mechanism of their use.

The category "information" is considered in the works of such scientists as: BI Valuev, LO Vashchenko, SO Dyatlov, S. Saliga, A. Khimchenko and others [10, 1, 3, 7, 11]. Consideration of the definitions, provides an opportunity to combine them into groups that provide information from different points of view: resource; data; factor or property. Information as a resource exists in a form that must be suitable for both accumulation and subsequent use. This approach emphasizes the multifaceted nature of information, which allows for its quality use and processing. Other scholars define information as information about phenomena, events, and operations that occur in society, the state, and the environment. This approach is contained in the Law of Ukraine "On Information" [12].

Some authors talk about information in terms of management of the enterprise, considering it as a set of information about the state of the control and management subsystems, as well as the environment. It is with the help of information, as advocates of this approach claim, that the stage of the management process is cyclically repeated - obtaining and processing data on the state of the managed object and transmitting commands to it for management. In the management process, the main task of information is to reduce the level of uncertainty, as it is the information that allows you to streamline all the processes in the company and reconcile them with the external environment and internal needs of the entity. When reducing the level or eliminating uncertainty, information is "the basis for developing enterprise strategy and determines ways to achieve the goals set at the enterprise" [4, p 222]. LG Melnyk, considering the essence of the category "enterprise", emphasizes that "information acquires the characteristics of a production resource that has value, exists in the form of goods, participates in economic turnover and has the opportunity to reproduce" [6, p 137].

Summarizing the considered definitions of information, taking into account its characteristics, content and functions, we can emphasize that information is an intangible resource used in the management of production and commercial and other activities of enterprises to ensure their sustainable development and operation, while meeting the needs and interests of business entities. Thus, the need to use information technology in management processes is based on the theory of "information explosion", according to which the amount of information available to society increases (according to various estimates - doubling the array of information now occurs at least annually), which leads to qualitative economic change - information management of the enterprise. Based on the approaches of Shannon K. [8, p 215] on the scientific understanding of the concept of "information", the principle of unity of information, management and organization, which is important for the analysis of information processes in socio-economic systems capable of self-organization, self-development and self-management (including enterprises).

Scientists and practitioners believe that every company is interested in achieving a set of goals that can be ranked according to their importance. The company needs to formulate both strategic and tactical goals in management processes, including include an information strategy based on the widespread use of modern

information technologies and tools. Challenges may arise when setting priorities to achieve when choosing between actions to achieve current financial performance or managerial influences that provide long-term competitive advantage.

According to the type of information that is the subject of the information procedure, as well as its subject (technical device, person, team, society as a whole), we can distinguish global (macro-procedures) and local (micro-procedures) information procedures. Tactical and strategic information procedures serve, respectively, the current and future activities of the enterprise and are equally important to ensure the effectiveness of the latter. Thus, in the process of enterprise activity the main role of information procedures is to reduce uncertainty, as it is the circulation of information inside and outside the enterprise allows to streamline financial and economic processes and reconcile them with the external environment and internal requests. Analysis of information procedures becomes especially important when information is considered an integral part of the management of any economic system. This element must be effectively used to achieve certain strategic goals and address the tactical challenges facing the company. Some scholars believe that the development and decision-making in the enterprise is based on management processes that can be identified with information processes (procedures). That is, the correctness and value of management decisions depends mainly on the effectiveness of information procedures and modern information technology.

American scientists B. Ikes and R. Ritterman [13] say that the modern enterprise has significant differences in the goals of operation and methods of achieving them than before, which requires the use of fundamentally new management methods. However, managers of domestic enterprises often decide that it is better to adapt the existing management system to changing market conditions, which can no longer be the basis for solving accumulated problems and crises. The defining element in the process of studying the essence of modern enterprise management in the context of global informatization are management technologies that determine the level of interaction and speed of response of enterprise management to changes in the market and institutional environment, its ability to generate and use profits.

In modern conditions, management is very diverse and available in a variety of forms. However, it is important to focus on efficient management in terms of scarcity of resources, reducing the regulation of all economic processes by administrative methods, intensification of production, consumer focus, environmental friendliness and more. Issues of flexibility and adaptability of management systems and methods to constant changes in the external and internal environment are becoming very important; rapid increase in the importance of changing environmental factors due to the complexity of the system of social relations and significant institutional changes; identification of the most important factors, the impact on which is the basis for effective achievement of the goal; leadership and modern leadership style, employee skills and corporate culture, behavioral motivation, etc. Therefore, the main direction of change in management and its radical restructuring, adaptation to modern changing conditions, should be the widespread use of the latest computer and telecommunications technology, new IT technologies, the formation on this basis of highly efficient information and management technologies and processes. After all, new technologies based on computer technology and IT technologies require significant changes in organizational structures of management, its regulations, staffing, changes in the system of documentation, recording and transmission of information. That is, the introduction of information management is of particular importance, which significantly expands the opportunities for enterprises to use information resources and technologies. The development of information management is closely related to the organization of large data and knowledge processing systems, their consistent development to the level of integrated automated management systems, covering all levels and levels of production and marketing, all other enterprise processes.

All management functions require development and decision-making, all of them require communication, exchange of information to obtain information for a balanced and sound decision and make this decision clear to the entire staff. The implementation of all stages of the management process without exception requires specific information processes (goal setting, planning, regulation). In other words, management today is one of the types of intellectual work, the process of which is characterized by observation of facts, recording and storage of large amounts of data in information, their control and analysis, development, selection and decision-making. Therefore, management, like any of its functions, is impossible without information (information process), and this is a must.

The enterprise, as an open system, operates taking into account the properties of its individual elements and due to the presence of certain relationships between management processes in this system. It can be noted that there is a need to separate the receipt of information, development / decision-making and the impact of information processes on business management. That is, the management function, which is explored through the information process of management, is distributed among the elements that are interconnected by the information flow - the subject and object, the information process. Thus, management, as an information process, is carried out in a certain sequence; always has a certain algorithm that can be used to read the contents of the information in the system, as well as the rules by which these procedures can be transferred to specific control objects.

However, the information that is in the management system of the enterprise "is not an ordinary mechanical combination, but is two types of information that grows into a new species and loses its independence and acquires new qualitative and quantitative characteristics" [2]. The information management process is the result of selection and selection and serves all business management processes. It is the basis for quantitative and qualitative evaluation

of each object of management (managed object) from the standpoint of forming management decisions. The content component of the information management process is created under the influence of management entities, but, at the same time, depends on information about objects, regulatory, scientific and technical information and information (intermediate and source) obtained as a result of specific actions management facilities. Effective operation of enterprises in modern market conditions requires significant mobility and efficiency in development and decision-making at all levels of government. Any delay in the necessary information or its low information quality can threaten the functioning of the enterprise or even its existence. Thus, under such conditions, information gradually began to play a leading role in the enterprise and became essential in the process of making management decisions, but also became a commodity. This is very important for decisions concerning the search for new ways of enterprise development, strategy development, reduction of all types of risks, prompt detection of changes in external market and institutional environment and development of timely responses to them through developed adaptation strategy, organizational structure and new business structures. processes in enterprises.

Management processes that take place at any enterprise also include procedures for obtaining, storing, converting and transmitting information between the manager and the managed objects through the channels of direct (control signals) and feedback (information about the status of the managed object) communication. Thus, information, acquiring special importance, gradually became a fundamental scientific concept, the characteristic feature of which is universality, ie the possibility of use in virtually all spheres of human activity and, above all, business management. The main component of the automated information system is information technology (IT), based on which the tasks of automation of information processes are solved, information is structured and formed in the form of knowledge, as an independent component in any subject area and in society as a whole. , which gradually acquires a material character" [9, p. 26].

Conclusions from this study and prospects for further exploration in this direction

Thus, it can be noted that the main purpose of IT within the management information system is to ensure the implementation of the information process, and its purpose is to meet the information needs of all employees involved in the development and decision-making process at any level of management. However, the development of modern information technology necessarily involves the appropriate level of hardware, the latest software, information security tools, large data warehouses and skilled workers in various fields and services. Summarizing the above, it should be noted that the information needs of management staff are met as a result of the implementation of certain information processes and with the help of modern information technology. Therefore, the main functional purpose of information systems should be considered to provide information processes, including invariance to the types of information (information resources) and the types and types of information technology used to form these information processes.

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