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**ОСОБЛИВОСТІ УПРАВЛІННЯ ІНФОРМАЦІЙНО-
КОМУНІКАЦІЙНИМ ЗАБЕЗПЕЧЕННЯМ ДІЯЛЬНОСТІ
ВІТЧИЗНЯНИХ БУДІВЕЛЬНИХ ПІДПРИЄМСТВ
THE FEATURES OF MANAGING INFORMATION AND
COMMUNICATION SUPPORT FOR THE ACTIVITIES OF DOMESTIC
CONSTRUCTION COMPANIES**

Анотація. В статті проведено дослідження особливостей управління інформаційно-комунікаційним забезпеченням діяльності вітчизняних будівельних підприємств. Охарактеризовано зміст цифрової трансформації економіки та суспільства та її вплив на виробничу діяльність в цілому та діяльність вітчизняних будівельних підприємств. Визначено місце інформації та комунікацій в діяльності будівельних підприємств в умовах цифровізації будівництва. Встановлено, що

інформація виступає невід'ємним елементом ефективного управління усіма організаційно-економічними процесами в діяльності будівельного підприємства. Визначено роль інформації на різних етапах процесу управління діяльністю будівельного підприємства. Охарактеризовано сутність та зміст управління інформаційно-комунікаційним забезпеченням діяльності будівельних підприємств, а також його основні завдання. Визначено переваги які отримує керівництво будівельного підприємства здійснюючи ефективне управління інформаційно-комунікаційним забезпеченням діяльності підприємства. Охарактеризовано інформаційні та комунікаційні потреби будівельного підприємства (стратегічні, оперативні, тактичні) які можуть бути вирішені завдяки управлінню інформаційно-комунікаційним забезпеченням діяльності будівельного підприємства. Визначено необхідність використання в процесі управління інформаційно-комунікаційним забезпеченням діяльності будівельного підприємства відповідних інструментів комунікацій та інформаційних технологій. Охарактеризовано зв'язок будівельного підприємства з навколишнім середовищем в сучасних умовах господарювання, його мету та орієнтацію на різні цільові аудиторії, а також його спрямованість на формування ефективних комунікацій. Визначено, що ефективність управління інформаційно-комунікаційним забезпеченням діяльності будівельного підприємства залежить від багатьох факторів. Проведено дослідження впливу інформаційно-комунікаційних технологій на підвищення ефективності функціонування будівельних підприємств та цифровізації будівництва.

Ключові слова: *інформація, комунікації, інформаційно-комунікаційне забезпечення, управління, будівельні підприємства.*

Summary. *The article researches features of management of information and communication support of activity of domestic construction companies. The*

content of the digital transformation of the economy and society and its impact on production activities in general and the activities of domestic construction companies are characterized. The place of information and communications in the activities of construction companies in the conditions of digitalization of construction is determined. It is established that information is an integral element of effective management of all organizational and economic processes in the activities of a construction company. The role of information at different stages of the process of managing the activities of a construction company is determined. The essence and content of management of information and communication support of construction companies, as well as its basic tasks are characterized. The advantages that the management of the construction company will receive by effectively managing the information and communication support of the company's activities are determined. The information and communication needs of the construction company (strategic, operational, and tactical) that can be solved by managing the information and communication support of the construction company are characterized. The necessity of using appropriate communication and information technology tools in the process of managing the information and communication support of the construction company's activities is determined. The connection of the construction company with the environment in modern economic conditions, its purpose and orientation towards different target audiences, as well as its focus on the formation of effective communications are characterized. It is determined that the efficiency of management of information and communication support of the construction company depends on many factors. A study of the impact of information and communication technologies on improving the efficiency of construction companies and digitalization of construction was carried out.

Key words: *information, communications, information and communication support, management, construction companies.*

The problem statement. In modern economic conditions, information resources and communication technologies are becoming increasingly important. The quality, efficiency and reliability of management decisions depend on how quickly, fully the information about the state of the external and internal environment is analyzed, and how effectively it is used in the management process. The current level of development of the economy and society is characterized by a high rate of new information and the obsolescence of previous ones, an increase in the amount of information, the extension of information sources and methods of its transmission, the development of automated control systems, the improvement of information systems and information technologies for managing the activities of companies. This is especially relevant to the activities of construction companies. The use of modern information and communication technologies in the management of construction companies is the key to their sustainable development and achievement of competitive advantages.

Overview of recent research and publications. The analysis of the essence of information and communications and determination of their role in the activities of business is discussed in the works of such foreign and domestic researchers as J. Becker, A. Blyznyuk, M. Borovyk, N. Wiener, M. Volkova, T. Davenport, F. Dretske, I. Korobkova, M. Kyzym, F. Makhlyup, O. Maslak, I. Matyushenko, V. Ponomarenko, M. Porat, K. Shannon, I. Shostak [1-5] and many others. Nowadays, the problems of improving the efficiency of functioning and development of domestic construction companies are devoted to the work of such researchers as O. Demydova, A. Kovrov, L. Lypych, O. Meneyliuk, O. Nikiforov, N. Nikogosyan, V. Tytok, I. Tsybalyuk, I. Chornukha, I. Shatrova [6-8] and many other researchers. Nevertheless, many issues remain out of the attention of scientists, especially with regard to information and communication support for the activities of construction companies. It is the study of the peculiarities of managing the information and communication support of the activities of construction companies that is a topical research theme.

The purpose of the study (task statement). The purpose of the article is to determine the place of information and communications in the activities of domestic construction companies and to study the peculiarities of managing information and communication support of their activities.

Research results. Modern humanity has entered the general historical process called informatization. Unlike the industrial society, in which the main thing was the production of material goods, in the current, post-industrial society, the main activity is the production of information and this process is called informatization. This transfer of emphasis is caused, firstly, by the fact that humanity is aware of the limited natural (natural) resources of the environment, and secondly, by the emergence of global problems (for example, energy, environmental), the solution of which is impossible by the same means. Information becomes the main resource for the development of the world community and significantly affects the development of other industries and spheres of life: science, technology, social spheres [0]. The major values of the information society are knowledge; qualification; independence of thinking; ability to work with information and make reasoned decisions on this basis; awareness not only in a narrow professional field, but also in related areas.

It is the digital transformation of society that should become the primary driver of technological change in the modern economy. Digital transformation involves profound and comprehensive changes in production and social processes associated with the total replacement of analog technical systems with digital ones and the widespread use of information and communication technologies. There is no doubt that those states that will be able to provide a favorable environment and full opportunities for development, mastering the wide replication of information and communication technologies will set the pace in the world market. They will be the first to create a digital economy. Digital transformation is based on the active use of information and communication technologies and covers both production activities and organizational structures of companies and business

models in all sectors of the economy.

Construction is one of the most important sectors of the economy. The volume of construction production is an indicator of its stability. The use of modern information and communication technologies in the management of construction companies is the key to their sustainable development and competitive advantages. Digitalization of construction is the process of transferring all construction processes into digital format, as well as the use of modern technologies to reduce the time and improve the quality of construction. Companies of the investment and construction complex, seeking to gain competitive advantages and optimize business processes, are already actively implementing modern information and communication technologies. The government is also interested in the digital transformation of the construction industry, which is systemically important for the economy, and acts as an initiator in the legislative sphere. Therefore, it should be noted that the digitalization of construction should primarily affect the management system of construction companies and the introduction of modern information and communication technologies in their activities.

In modern society, information and communications are a resource that can give a strong competitive advantage if properly managed. Information resource is a set of information accumulated as a result of any human activity (scientific, technical, economic, political, etc.). In addition, information must be presented in a form suitable for collection and processing and recorded on a material carrier [4].

Information in the activities of a construction company is necessary for the successful analysis, planning, control, development, adoption and implementation of management decisions. It is an integral element of effective management of all organizational and economic processes in the activities of the construction company.

The essence of management in any socio-economic system is the

purposeful processing of information. Nowadays information is considered as one of the most important resources for the development of economy and society along with material, energy and human resources.

Management of a construction company as a complex socio-economic system is associated with information processes, effective information, and communication support of the activity of the company. Highly effective management activity can be carried out only based on impeccable information material, and the actual management process ends with the formation of new information.

Information is the basis of the process of managing the activities of a construction company, because it is the information that contains the information necessary to assess the situation and make a sound management decision.

Information is the source material for theoretical and practical activities of any person, so its absence does not allow the manager to act deliberately and reasonably. In the process of work, the head of the company receives certain inputs and information. These are instructions from above, internal information of the construction company and information coming from the environment.

The role of information is different for various stages of the process of managing the activities of the construction company. Thus, when determining the purpose of the activity, such elements as completeness of information, its relevance, and usefulness are important: the more information is used, the more objectively the goal is chosen.

When analyzing information and developing management decisions, an important role is played by the possibility of its processing, which is determined primarily by the form of information presentation.

Based on qualitatively processed information received through the appropriate communication channels, managers of construction companies can obtain operational knowledge, formulate the necessary management decisions, the implementation of which allows optimizing and accelerating the necessary

construction and production and economic processes. These tools deduce the most important from the point of view of management values from the flow of operational information, compact them connect them with the outside world and draw up taking into account the requirements of the management of the construction company.

The ability to respond quickly to the emergence of new opportunities and use their potential is the main condition for the effective operation and sustainable development of domestic construction companies. That is why in such conditions the issues of effective management of information and communication support of domestic construction companies are of particular significance. That is, to make the necessary management decisions requires the availability of appropriate information and communication support, which allows timely and adequately characterize the state of internal processes and the external environment of the company. That is why an essential task of the management of construction companies is to create an effective system of management of information and communication support of the construction company, which allows to collect and process internal and external information necessary for making informed management decisions to ensure the development of domestic construction companies and the use of modern methods of effective management of their activities.

Management of information and communication support of the construction company should solve the current problems of strategic and tactical planning, accounting and operational management of the construction company. Many accounting tasks (accounting and material accounting, planning, control, etc.) are solved without additional costs by secondary processing of operational management data. Accounting is a necessary additional means of control. Using the operational information obtained during the functioning of the automated information system, the head of the construction company can plan and balance resources (material, financial and human resources), calculate and evaluate the

results of management decisions, establish operational management of operational activities, the progress of the plan, the use of resources, etc.

Management of information and communication support of the construction company allows:

- to increase the degree of validity of management decisions due to the prompt collection, transmission and processing of management information;
- to ensure timely decision-making on the management of the construction company in modern economic conditions;
- to achieve the growth of management efficiency through the timely provision of necessary information to managers of all levels of management from a single information database;
- to coordinate management decisions made at different levels of management of the construction company and in its various structural departments;
- due to the awareness of management personnel about the current state of the economic object to ensure the growth of labor productivity, reduction of non-productive losses, etc.

The aim of information and communication support of the construction company is, first, to create an effective system of information support of management processes. The main attention should be paid not to the issues of technology and organization, but to the creation of information that will pass through the system of information and communication support.

Management of information and communication support contributes to the creation of favorable communication conditions for improving the efficiency of the construction company and achieving the planned goals of its development.

In order to ensure timely and high-quality information for employees of the construction company, as well as to achieve a certain level of understanding and cooperation with various social groups and organizations, it is necessary to start with the identification of information and communication needs and problems.

The most important stage in the process of managing the information and communication support of the construction company is the collection of information about the internal and external environment in which the company operates. Information about the goals, objectives, structure, technology, personnel and management indicates the state of the internal environment of the construction company. The analysis of the external environment gives an idea of the economic, political, socio-cultural situation, the state of the relationship with key contact audiences. In addition, the information and communication needs of the construction company depend on:

- characteristics of the external environment of the construction company (its dynamism, complexity, uncertainty, interconnection);
- tasks that are solved in the activities of the construction company;
- the main characteristics of the construction company.

Management of information and communication support of the construction company should provide information and communication needs at three levels:

- 1) strategic needs (implemented through the communication policy of the construction company);
- 2) operational needs (implemented through information and communication technologies);
- 3) tactical needs (implemented through information and communication activities).

The presented needs of the construction company are closely interrelated and complementary. At the same time, the task of achieving strategic goals can be solved if the needs depend on the planned strategic goals of the construction company.

It should also be mentioned that communication barriers that constantly arise in its current activities hamper the provision of information and communication needs of the construction company.

In general, the management of information and communication support for the activities of a construction company requires communication and information technology tools that allow:

- study the level and degree of awareness of staff and informal groups, structural units on key issues of the construction company;
- to determine the level of administrative and managerial staff availability for evaluation of their activities by managers;
- identification of obstacles, distortions, rumors that fill the information field;
- identify informal communication networks and carriers of certain communication roles to provide them with appropriate support;
- to have a system of internal corporate information of employees, which provides "transparency" of the activities of all structural units of the construction company and strengthening of organizational communications.

The connection of the construction company with the environment in modern economic conditions is aimed at the formation of effective communications. The basic target of such communication is to create a balance between the input and output of the organization as a system and information and communication support of this balance. Such communication is usually focused on different target audiences (ordinary consumers, suppliers, competitors, public organizations or pressure groups, state executive and legislative authorities, etc.)

It should also be emphasized that the effectiveness of information and communication management of a construction company depends on many factors: the level and scale of tasks, organizational structure, organizational culture, managerial qualifications, leadership style, etc.

Conclusions. The digital transformation of the economy contributes to the fact that the means and methods of information processing and its distribution are constantly being improved, so changes in the field of information and communication management today are not an exception, but the norm in the

behavior of the management of construction companies. The result of effective management of information and communication support for the activities of construction companies and the use of the latest information management tools and modern means of communication can significantly increase the competitiveness of construction companies, as it provides timely information about critical success factors. Further research should be directed to the development of a model of the management system of information and communication support of the construction company.

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