# SUBJECT AND OBJECTIVES OF THE DISCIPLINE

## Information management - technology management organization

In modern conditions of world socio-economic development, the role of information support for the management process has increased, consisting in the collection and processing of information necessary for making informed management decisions. The interest in management problems on the part of managers is constantly growing. Effective management methods are increasingly recognized as a necessary tool for competent business management, a factor in the growth of an organization’s competitiveness. In modern conditions, effective management is a valuable resource of the organization, along with financial, material, human and other resources. Consequently, increasing the efficiency of managerial activity becomes decisive in improving the activities of the enterprise as a whole.

In recent years, a significant part of the discussions regarding the development of corporate management has been taking place in the light of the practical application of modern information technologies. The problems of building integrated management systems has grown into a separate branch of management science and has led to the development of an entire industry of high technologies.

Particular importance of that is the implementation of information management, which significantly expands the possibilities for companies to use information resources.

In the American literature, the concept of Information Management is used to denote a set of management tasks related to information systems. It includes both internal management tasks in the environment of information systems and issues of its use for solving various problems in the field of the organization’s main activity. Among German specialists, the term Information management, which is also close to Russian information management, has been recognized as a general concept that denotes the whole range of management tasks in the field of

information processing. The basic component of information management is an information resource. Information resource - an organized set of documented information, including databases and knowledge, other arrays of information in information systems. These include handwritten, printed and electronic documents containing regulatory, administrative and other information on various areas of the organization. Information resources transferred to electronic media using computer technology and communications acquire a qualitatively new state, become available for the prompt reproduction of the necessary information and turn into the most important factor in the development of the organization.

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

Information technology is the basic tool of information management. The most obvious way to increase the efficiency of the labor process is to automate it. The rapid development of information computer technologies, the improvement of the technical platform and the emergence of fundamentally new classes of software products have led to a change in approaches to automation of production management today. When performing in-house processes, the function of information technology (IT) ceased to be auxiliary, turning into the most important component of a product or production capacity. However, the use of information technology is one of the most controversial intra-company issues. The management of enterprises often refuses to solve them, because they do not feel competent enough. Decisions are usually left to information service managers or specialized external organizations. Business risks associated with IT are constantly growing, and it is unclear how long enterprise management will underestimate this important strategic resource. Recently, however, senior management has become more attentive to IT. It is from him that decisive initiatives should be taken to change the situation in this area.

In the activities of large firms, which are complexes of a large number of daily connected and interconnected divisions, enterprises, information management is an indispensable and paramount factor in the normal functioning of the company. Moreover, ensuring the efficiency and reliability of information is of particular importance. For many organizations, an in-house information system solves the problems of organizing a technological process and is of a production nature. This applies, first of all, to the processes of providing enterprises with cooperative products coming from specialized enterprises through intra-company channels. Here, information plays an important role in providing information for managerial decision-making and is one of the factors that reduce production costs and increase its efficiency. The forecasting of market processes plays a special role.

Information on the occurrence during the production of deviations from planned indicators that require the adoption of operational decisions is important.

A significant role in decision-making is played by scientific and technical information containing new scientific knowledge, information about inventions, technical innovations. This is a continuously replenished general fund and the potential of knowledge and technical solutions, the practical and timely use of which provides the enterprise with a high level of competitiveness.

Management of an internal company information system at all stages of its life cycle, its strategic development is the tasks of information management.

Summarizing, it can be said that one of the most important factors for successful management is the availability of reliable operational information about the processes occurring at the enterprise.

The objectives of information management is to ensure the achievement of the organization’s goals through effective coordinated management of both the elements, processes and resources of the information system itself, as well as other elements, processes and resources of the enterprise. To one degree or another, these management tasks use information systems and the information resources and technologies implemented in it.

#### The value and place of information technology

The development of human society requires material, instrumental, energy and other resources. A feature of the modern stage in the development of civilization is an unprecedented increase in the volume of information flows. This applies to almost any field of human activity. The largest increase in the volume of information is observed in industry, trade, financial, banking, marketing and various services. The exclusive role of information in modern scientific and technological progress has led to the understanding of information as a resource, as necessary and important as other (material and monetary) resources. Information has become the subject of sale, that is, an information product that, along with information constituting the public domain, forms the information resource of society.

The concept of **"information resources"** is inseparable from the basic, system-forming concept of "information". Information is widely interpreted by various sciences, from private applied scientific disciplines to materialistic philosophy. In the general case, information resources can be considered a set of processed or suitable for processing data recorded on any material media. Thus, information resources include both documentary fixed, paper, and electronic- textual, tabular, multimedia and other data. Depending on the profile of the organization’s activities, the information resource system includes a greater or lesser share of electronic information resources, but a common trend these days is an increase in the share of electronic information resources that are more quickly and conveniently processed by computerized information systems.

Scientific and technological progress and the avalanche-like growth of information and information flows have extremely accelerated the pace of introduction in all spheres of the socio-economic life of the latest achievements in the field of information technologies (IT).

Information technology itself has been developed and applied for a long time. It can be argued that information technology exists from the moment people began to maintain and pass on their knowledge and skills to future generations, namely to process and transmit information. The advent of computers in the mid- twentieth century opened up new possibilities for information processing and management. The power and capabilities of the software gradually increased, and computers began to acquire not only computing, but also other functions - they were directly involved in the production management. It was the use of the latest computer, mathematical and communication tools in information technology that made it possible to use them to solve economic problems.

Information technology is a system of organized for solving management problems a set of methods and means of implementing the operations of collecting, registering, transmitting, accumulating, searching, processing and protecting information based on the use of developed software, used means of computer technology and communications, as well as methods, using whose information is offered to the user manager.

In fact, information technology is the methods and processes of operating information. This extremely generalized definition differs significantly from the widespread interpretation of information technology, which is associated primarily with the use of software and hardware. Thus, information technology is a method of processing, transmitting and storing information using modern computer tools. Information technology is inseparable from the computer hardware base and software, despite the fact that even memory techniques or spoken language skills are terminologically acceptable as information technology.

Almost all of the managers has to make decisions all of the time in conditions of great uncertainty and significant amounts of information. Computer information technologies are able to quickly calculate possible solutions to the problem and give accurate forecasts of the situation. They are simply indispensable in financial and accounting, in the construction of analytical reports and in the storage of large amounts of information. The indispensability of computer technology is that it makes it possible to optimize and rationalize the management function through the use of new means of collecting, transmitting and converting information. Information technology in the economy is constantly being improved. Their development has gone from elementary, the so-called inherited systems, to uniting various links and divisions of the company - ―corporate information systems‖.

Information technology is closely related to *information systems*, which are its main environment. Information systems (IS) have become a necessary tool in almost all areas of activity. A variety of tasks solved with the help of information systems has led to the emergence of many heterogeneous systems that differ in the principles of construction and the rules for processing information embedded in them. The purpose of the information system is the organization of storage and transmission of information. The information system is a human-computer information processing system.

Under automated information systems understand the purposeful and coordinated use of technical means of informatization, software, databases and human labor in order to manage the enterprise. Currently, all these systems can be conditionally divided into ERP-systems (enterprise resource planning), CRM- systems (customer relationship management), financial and analytical systems, information protection systems, help systems, design systems, etc. There are quite a lot of such systems on the software market today. In recent years, according to various experts, there has been a significant growth in the system integration market - enterprise-wide corporate information systems. The growth of the market for automated systems is 47% per year, the growth of the market for consulting services for the implementation of information systems is even greater - 65%. However, not only the market growth rate is impressive, but also the cost of implementing information systems: the cheapest project to implement an ERP system is rarely cheaper than $ 50,000, and the most expensive can cost more than

$ 30 million.

Management and marketing are one of the most intensively developing sectors of the information technologies application market, since automation of information processes in this area in the context of intensive development of market relations is a strategic factor in competition. Only modern information technologies make it possible to almost instantly connect to any electronic arrays, receive all the necessary information, use it for analysis, forecasting, management decision-making, and provide Internet access to enterprise corporate resources.

The most important resource of a modern enterprise that can significantly affect its competitiveness, investment attractiveness and capitalization are corporate information resources and knowledge. The solution to the management problem is possible only in close contact between specialists from various fields of the enterprise and information technology specialists. And most importantly - with the interest of the top and middle management of the enterprise in obtaining operational access to any information resources of the enterprise in a convenient, comparable form and to the results of the analysis of the received information in real time.

At the present stage of development of the market, the vast majority of companies are participating in fierce competition. The use of information technology can increase the competitiveness of firms. The implementation of management and marketing tasks at the enterprise becomes impossible without the optimization of external and internal information sources. This served as an impetus for the creation and wide distribution of the so-called corporate information systems (CIS).

A corporate information system is a system for automating all the basic business processes of an organization and all types of accounting. Corporate information system is inherently the "nervous system" of the enterprise management system and ensures the coordinated operation of all its components. At the same time, it should be noted that corporate information systems are a special case of information systems, and besides CIS there are information

retrieval, reference, expert and other information systems distinguished by various criteria.

Until recently, information about the enterprise market and consumer segments was scattered and used locally. Today, when there is an intensive saturation of markets, more and more attention is paid to building a customer relationship management system based on which a development and enterprise management strategy is built. Such management methods are based on systematized and formalized databases of knowledge and knowledge (data warehouses), a unified corporate information system.

In modern conditions, production cannot exist and develop without a highly effective information technology based management system. Constantly changing market requirements, huge flows of information of a scientific, technical, technological and marketing nature require the personnel of the enterprise, which is responsible for the development strategy and tactics of the high-tech enterprise, to make decisions quickly and accurately aimed at maximizing profit at minimal cost. Cost optimization, increasing the reactivity of production in accordance with ever-increasing demands of consumers in the face of fierce market competition cannot be based only on the speculative conclusions and intuition of even the most experienced employees. Comprehensive control over all cost centers in the enterprise, sophisticated mathematical methods of analysis, forecasting and planning, based on taking into account a huge number of parameters and criteria and a well-organized system of collecting, accumulating and processing information are required. These goals are achieved by maximizing the automation of business processes in the areas of production, finance, supply, marketing, storage and maintenance. The transition to modern technologies and the reorganization of production cannot bypass such a key aspect as management, e.g., the creation of corporate information systems.

However, information technology is not able to completely cancel the production process, eliminate competitors and the human right to make the final decision. We can talk about the intensification of all processes of the enterprise into a single information system. The toolkit itself in the management of the company has changed, which, in turn, has influenced all business processes to which managers relate: planning, organization, management, control.

The possession of information technology guarantees success, therefore, the main difference between mature corporate information systems is not the amount of funds spent on information technology, but the added value. For investments to be beneficial, you must be able to use information technology, not just possess them. The head makes decisions based on the information that is available to him at the time of the decision, and subordinates are taken with varying degrees of diligence to execute this decision as soon as they become aware of it.

The main goal of information technology in the economy is to increase productivity, save finances, and prepare informed decisions that relate to ways to achieve tactical, short-term advantages. The strategic goal of information technology is to promote management, respond to market dynamics, create,

maintain and deepen competitive advantage. It is necessary to understand that a computer information system is not an end in itself or a panacea, but only a powerful and effective tool in the hands of purposeful and competent specialists.