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# ВДОСКОНАЛЕННЯ ТЕХНІЧНОГО ЗАБЕЗПЕЧЕННЯ КОРПОРАТИВНИХ ІНФОРМАЦІЙНИХ СИСТЕМ В СУЧАСНОМУ УПРАВЛІННІ

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# IMPROVEMENT OF TECHNICAL SUPPORT OF CORPORATE INFORMATION SYSTEMS IN MODERN MANAGEMENT

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#### Анотація

В даній статті розглянуто роль апаратного забезпечення корпоративних інформаційних систем у сучасному управлінні, визначено структуру корпоративної інформаційної системи підприємства, проаналізовано основні проблеми впровадження корпоративних інформаційних систем та шляхи їх подолання.

#### Abstract

This article considers the role of hardware of corporate information systems in modern management, determines the structure of the corporate information system of the enterprise, analyzes the main problems of implementation of corporate information systems and ways to overcome them.

**Ключові слова:** корпоративні інформаційні системи, управління, інформаційна система управління, методика, проблеми.

**Keywords:** corporate information systems, management, management information system, methods, problems.

**Formulation of the problem.** Technical support is a set of technical means designed for the operation of the information system, as well as the relevant documentation for these means and technological processes. The evolution of hardware, which includes hardware, communication tools, software, is uneven, abrupt. The development of computer technology is still happening in a geometric progression. Every four years, computer performance doubles.

The corporate information system (CIS) is an information system that supports the automation of management functions in the enterprise (in the corporation) and provides information for management decisions. It implements management ideology, which combines the business strategy of the enterprise and advanced information technology.

It is proved that the defining guidelines in solving the tasks set for Ukraine in the field of informatization are the current state and trends of the information sector of developed economies, the experience of the ES to create its own information infrastructure and widespread introduction of information technology.

To solve the existing problems of corporate information systems development, an algorithm of actions to increase the level of informatization and efficiency of enterprises, which will address current issues of corporate information systems, taking into account domestic legislation and features of corporate governance, increase efficiency and transparency of business processes and provide centralized support for management decisions. at all levels.

The purpose of the article is to determine the features of the introduction of corporate information technology in the management system in order to improve and enhance the efficiency of enterprises in the process of globalization. Research and publications. The issue of building corporate information systems (CIS) of large enterprises was dealt with by domestic and foreign scientists: Tatarchuk MI (Corporate information systems: Textbook. - K: KNEU, 2005. - 291 p.); Pavlenko LA (Corporate information systems: Textbook. - Kharkiv: VD "INZHEK", 2003. - 260 p.); Sytnyk VF, Pisarevska TA etc. Fundamentals of information systems: Textbook. manual. - K., 2001. - 420 p.); etc. However, the problem of implementing corporate information systems and their role in modern corporate governance is quite relevant and requires further theoretical and practical research.

#### Methodological Framework.

In the course of the study were used the following methods: theoretical (dialectical logic, rational knowledge, and others), Methods of innovation management, project management, strategic management, marketing and financial management. The study was conducted in three phases:

- Systematization of existing theories and models of implementation of changes;
- A study of old and new change management concepts;
- Identification of factors influence the implementation of the conversion program in the regional and federal holdings [9,10].

The methodological and theoretical basis of research was made by theory and methods of innovative management, projects management, strategic management, marketing, financial management. The concepts and hypotheses that were proved in scientific works of the representatives of organization and administrative direction became a theoretical and methodological research basis: strategic, production, investment, innovative and other management branches; works on changes

management in holding companies, general theory of systems, regional economy, etc. [10].

Methodological research basis is a system interdisciplinary approach that allows using theoretical provisions of both classical and modern management, and other sciences (economic analysis, sociology, social psychology, economy, political science, demographics, ecology, etc.). The methodological basis was made by works of national and foreign scientists that develop issues of social systems, enterprises economies, and social systems management. The sources that were used in research can be divided into some groups depending on a considered perspective [9].

In the course of research, the following methods were used: dialectic and system analysis, scientific abstraction and comparison, methods of economic indicators grouping, received results interpretations, statistical supervision.

Presentation of the main research material. The development of corporate information systems today is due to the need for more detailed information about the market and consumers; collection and use of various information; the need for intensive mutual contact with the consumer, ie the establishment of internal communication; intensive development of information technology. For these and other reasons, corporate information systems (CIS) for the management of medium and large enterprises is a necessary tool to increase the efficiency and transparency of business processes, provide centralized support for management decisions at all levels in all areas of business enterprises [1,5].

Modern CIS must successfully solve three main tasks:

- 1. provide the most up-to-date information;
- 2. the current corporate information system should provide reports in various versions, focused on a strictly defined target audience in accordance with the scope of authority of specific individuals and their needs;

3. use in all reports of a basic set of indicators covering the most important components of corporate governance. The global enterprise systems market is dominated by North America and Europe. Significant market segments remain the Asia-Pacific region and Latin America, where there is rapid growth. According to experts, the development of corporate systems will grow until 2020 and will reach 67.8 billion dollars. USA [5.6].

The main impetus for growth will be an increase in the need of enterprises to integrate all functions and information flows of the enterprise into a single system. Corporate information systems designed to automate different types of business accounting and enterprise management can be divided into three classes: local systems, medium integrated systems, large integrated systems [1].

The paradigm and a business model changed, and an ability to operate changes competently and effectively is very important. Key elements of old and new paradigms of changes management are shown in Table 1.

Old and new paradigms of changes management

Table 1

* - * * * * * * * * * * * * * * * * * *		
Characteristic	Old paradigm	New paradigm
Changes character	Gradual	Fast
Speed of changes	Slow	Fast
Prod	Risk leveling	Rapid changes introduction
Source of changes	From up to down	On all levels
Planning degree	High	Average
Volume of changes	One-time use	Multi-use

Source: N. Tom (1998) Management of changes. Issues of theory and practice of management, 1, 68-74.

Practice shows that the task of coordinating all functions and information flows in the workplace are primarily decided by system administrators and local area network administrators. Their main task is to maintain the performance of computers and the local network segment for which the administrator is responsible. As the number of computers and the number of programs running on them increases, much of the administrator's effort is spent figuring out why a program

is down and finding a newer version. Over time, the company's management comes to the conclusion that the coordination of software versions is a serious problem, and if it is not addressed systematically, sooner or later it will lead to the inoperability of the corporate information system in general [7].

In order to ensure effective management, CIS must meet certain requirements. Determine the following main characteristics of CIS (Table 2)

Table 2

The main characteristics	s of corporate enterprise	e management information systems	,
The main characteristics	s of corporate enterprise	e management information systems	,

Name characteristics	Essence
	One of the important characteristics of information systems of this class, given
Scale	the scale of the enterprise. A large-scale CIS must operate on a large-scale soft-
	ware and hardware platform.
Multi-platform service	There is a need for the application to run on multiple platforms. At the same
	time the same interfaces and logic of work and all platforms should be provided.
Work in an inhomogeneous	Ability to work in networks that include computers running different operating
computing environment	systems or built on different computing platforms.
Distributed calculations	This is a type of client-server architecture where data coming from client ma-
	chines or requests is shared between multiple machines, such as multiple serv-
	ers, which increases user bandwidth and allows many tasks to be performed.
	This helps to maximize the use of computing resources, reduce losses and in-
	crease system efficiency

Thus, the construction of corporate management information systems, taking into account its main characteristics will depend on the scale and specifics of enterprises.

Corporate information systems can solve the following tasks: to organize effective planning of all financial and economic activities; increase investor confidence by forming maximum business transparency; reduce risks and increase profits through prompt decision-making and their accuracy, intuitive management system, delimitation of access to information in accordance with the positions of employees, and the implementation of its security functions; to reduce the quantitative aspect of loss of working time by eliminating duplication of data by different services and the organization of unimpeded data exchange between departments of the enterprise [3]. In Fig.1. the generalized scheme of management of Uladovo-Lyulinetsky research and selection station of institute of bioenergetic

cultures and sugar beets of national academy of agar sciences of Ukraine is resulted. [1,4,6].

Practice shows that the task of agreeing versions of programs in the workplace is primarily solved by system administrators and LAN administrators. The main task of these employees is to maintain the performance of computers and the local network segment for which the administrator is responsible. With the increase in the number of computers and the number of programs running on them, the lion's share of the administrator's effort is spent on finding out the cause of the inoperability of a program, and finding a new version [2]. Over time, the company's management comes to the conclusion that the coordination of software versions is a serious problem, and if it is not addressed systematically, sooner or later it will lead to the inoperability of the corporate information system as a whole.

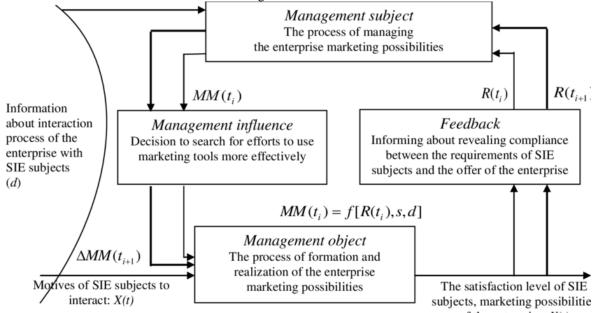


Fig.1. Generalized scheme of enterprise management

The very structure of the corporate information system at a given enterprise is a set of its separate parts, which are called subsystems. A subsystem is a part of a system that is allocated on some basis. The general structure of the information system can be considered as a set of subsystems, regardless of the scope. In this

case, we talk about the structural features of the classification of subsystems that provide the information system [3,5]. Thus, the structure of any information system can be represented by a set of supporting subsystems (Fig. 2).

The systems and subsystems of this enterprise allow to achieve coherence of work of various divisions, at the same time reducing administrative expenses and eliminating a problem of data for various applications. These subsystems are a tool to improve management

efficiency, making the right strategic and tactical decisions based on timely and reliable information. The use of corporate systems allows to achieve competitive advantages by optimizing the business processes of the enterprise and reducing costs [8].

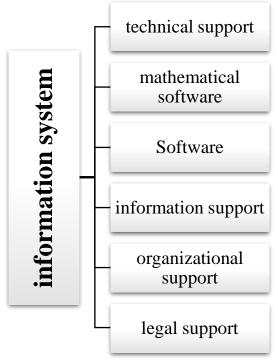


Fig.2. The structure of the corporate information system and a set of subsystems

In addition, there are problematic aspects of the implementation of CIS in the management of the enterprise, so before the computerization of management it

is necessary to pay attention to a number of problematic aspects that, if used correctly, can minimize the risk of failure (Table 3).

Table 3

Problematic aspects of effective implementation of corporate information systems

Problematic aspects of computerization	Characteristic
It is necessary to make sure that the project is	It is necessary to choose the right project manager for the
organized correctly	implementation of the system.
Before proceeding to the implementation of the system, it is necessary to analyze existing business processes	It is important to define the organizational structure and find out to what extent it meets the goals of the enterprise.
Creation of the necessary technical infrastructure	It is worth evaluating the proposed requirements of the new system. The role of the information systems department and the changes it undergoes in the new environment must be defined.
The system must meet the needs of all users	To do this, you need to document the needs. Priorities must always be clearly defined.
Changes in the organization of management should be made in accordance with the needs of employees	Changes must be made gradually, not forgetting that people are able to absorb a limited amount of information at a time.

Thus, the use of CIS to manage the enterprise makes any enterprise more competitive by increasing its manageability. Construction of CIS management taking into account its main characteristics (scale, multi-platform computing, distributed computing, work in a heterogeneous computing environment) will depend on the scale and specifics of the enterprise.

**Conclusion.** Thus, having studied corporate information systems, namely the problems of implementation and analysis of efficiency in the management process, we concluded that today there is a problem of lack

of objective information about specific management systems, as developers and vendors only provide information about the benefits of their software products. shortcomings (limited functionality, inadequate cost, lack of after-sales support, outdated solutions, etc.).

Therefore, a modern corporate information system is impossible without the latest information technology, and the main condition for achieving this success should be maximum integration should help manage and ensure the efficient operation of the enterprise.

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