

As the manuscript

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IMPROVEMENT OF PROJECT MANAGEMENT PROCESSES OF
IMPLEMENTATION OF INFORMATION SYSTEMS IN ORGANIZATIONS

Specialty 08.00.05 – Economy and national economy management
(Management)

ABSTRACT OF THE DISSERTATION

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Relevance of the research topic. The effective development of the Russian economy in an unstable situation on the global market is not possible without the use of advanced information technologies, modern approaches to organizing the process of their implementation and effective management methods for such projects aimed at a dynamic and qualitative growth in the competitiveness of all sectors of the economy. Best practice in project management for the implementation of information systems (IS) shows that investing in such systems is one of the most risky types of projects in the field of information technology (IT), which is confirmed by the results of many years of research conducted by the Standish Group, stating that the probability successful completion of an IT project, i.e. within the triple limitation, is no more than 1/3 of all initiated projects.

Currently, science-based project management in the field of information technology is becoming especially important in the national economy. The introduction of modern information technologies into the organizational activities of state, commercial and non-commercial enterprises in the Russian Federation is one of the most important tools for the implementation of the state program "Information Society", developed to create a unified and most effective system for the application of information technologies at all levels, with the use of which citizens and organizations receive maximum benefits: the formation of a system of standards and guidelines for the management of the implementation of information and communication technologies in public administration, the development and implementation of information systems. It follows from the commentary to the program that this task is due to the lack of general requirements for managing the implementation of individual programs and projects for the introduction of information and telecommunication technologies at the level of public authorities, as a result, reduces the effectiveness and quality of their implementation, leads to a significant number of unsuccessfully completed projects or projects. completed with delay or excess costs. The lack of a general classification of information systems used in public authorities, as well as basic standards and recommendations for their implementation in practice, leads to the use of ineffective methods.

The program outlined above, focusing on the Strategy for the Development of the Information Society in the Russian Federation for 2017-2030, proceeds from the fact that the digital economy is an economic activity in which digital data is a key production factor, and contributes to the formation of an information space with taking into account the needs of citizens and society in obtaining high-quality and reliable information, developing the information infrastructure of the Russian Federation, creating and applying Russian information and telecommunication technologies, as well as forming a new technological basis for the social and economic sphere.

Research in the field of project management shows that the need for a scientific approach to project management in the field of information systems and information technology implementation remains in demand. As follows from the Global Competitiveness Report for 2017–2018, which is published by the World Economic Forum (WEF), the Russian Federation in terms of technological readiness in 2017–2018. takes 57th place - after Brazil and Azerbaijan. Leading countries in terms of technological readiness are: Luxembourg, Switzerland, the Netherlands.

It should be noted that the management of projects for the implementation of information systems has its own specifics and a number of features that must be borne in mind when implementing and managing them. The main feature inherent in such projects is a significant number of uncertainty factors, which have a high degree of uniqueness and innovative nature due to the special tasks they solve. The next important feature of projects for the implementation of information systems is the presence and use of a significant number of heterogeneous software and technologies.

From the above, the need to identify and study factors of a material and intangible nature that affect the successful implementation of projects in order to solve the problem of increasing the number of successfully implemented implementations of information systems, factors leading to minimization of possible risks of unsuccessful implementation and maximizing the satisfaction of the expectations of project participants is revealed.

In connection with the growth of consumed and produced information by enterprises in the process of strategic and tactical planning, solving operational problems, as well as the influence of this information on the economic stability and position of the enterprise in the market, there are needs for the development and implementation of new, more effective and efficient methods and practices of project planning. approach and management.

Based on the foregoing, theoretical substantiation and development of methodological approaches and practical recommendations for project management in the field of information systems implementation is relevant and significant.

The degree of knowledge of the problem. Research in the field of project management for the implementation of information systems originates in the middle of the 20th century. and continue to this day.

A significant contribution to the study of the problems and prospects of management of implementation projects, as well as the assessment of the effectiveness of the use of IP in the activities of the organization was made by such scientists as: Balabanova L.V., Batyuk A.E., Bell D., Voinov I.V., Volchanka I. S.S., Grigoruk P.N., Grabskikh S., Drucker P., Zavgorodnyaya T.P., Zelinsky S.E., Savina G.G., Stadnik V.V., Makhlop F., Mizyuk B., Myasishchev A.A., Nizhnik

V.M., Orlov A.A., Pleskach V.L., Ponomarenko V.S., Umesao T., Khayashi Y., etc. However, the problems of assessing the effectiveness and management of implementation projects and the use of information systems requires further development and the development of more advanced implementation mechanisms.

Despite the elaboration of some aspects of project management for the implementation of IP, the existing studies do not pay sufficient attention to the problems of identifying and using the factors that affect the success of IP implementation as a means of increasing the efficiency of project management. For enterprises planning to implement IP implementation projects or are already in the process of implementing certain information systems, the lack of relevant information on implementation creates a number of problems and requires the development of theoretical and practical recommendations for the implementation of relevant projects.

The main working hypothesis, which is revealed and proved during the research process, is the assumption that the efficiency and success of project management can be increased by identifying and systematizing the factors that most affect the achievement of operational, tactical and strategic goals set for the IP implementation project.

The purpose of the study is to develop theoretical and methodological recommendations for improving project management for the implementation of information systems in organizations.

This goal has led to the need to solve a number of the following tasks:

1. Study the trends and conditions of the IT market in the Russian Federation; reasons for the implementation of information systems, the main methods of development and implementation; explore the concepts and essence of project success and critical success factors;

2. Identify and systematize a set of critical factors affecting the results of projects for the implementation of information systems;

3. Develop a methodology for assessing the importance of critical factors for IP implementation projects;

4. Conduct an empirical study of the importance of critical success factors of projects for the implementation of information systems at the stage of IS implementation;

5. Propose a model for assessing the likelihood of project success based on the significance of the identified factors and develop recommendations for the use of factors taken into account in the model.

The object of the research is project management for the implementation of information systems.

The subject of the research is the organizational and economic relations arising in the process of project management for the implementation of information systems, as well as factors influencing the successful completion of the project for the implementation of information systems.

The theoretical and methodological basis is the results of studies devoted to identifying the factors affecting the implementation of IP in enterprises, the works of foreign and domestic scientists in the field of management theory, project management, strategic management, corporate governance, knowledge management. The research methodology is based on a systematic approach. In the process of work, the methods of logical analysis, analogy, observation, questionnaires, the method of comparative analysis, interviews were used. The study was carried out on the basis of a statistical study using the methodology of expert assessments.

The information and empirical base of the dissertation was made up of special foreign and domestic publications, scientific articles, data from consulting companies, materials of scientific and practical conferences, "round tables" on project management, materials of domestic and foreign scientists and practitioners, legislative and regulatory acts of the Russian Federation, presidential decrees Of the Russian Federation, decrees of the Government of the Russian Federation, information and analytical reports, data on the objects of research, collected and processed by the author using statistical methods.

The hypothesis was confirmed on the basis of the author's empirical research. Questionnaires were conducted among project managers and business leaders with subsequent analysis of the results.

Scientific novelty lies in the identification and assessment of critical factors that have the greatest impact on the success of projects for the implementation of information systems and the development of theoretical and methodological recommendations to improve the management of projects for the implementation of information systems in organizations:

- Identified and defined the main organizational and economic reasons and benefits of initiating projects for the implementation of information systems. As a result of analysis and systematization, the author obtained 11 main reasons for the implementation of information systems and 22 benefits from implementation. Clarified the definition of the category "project success" that the project is successful only if the goals of 3 areas are met: operational (project output), tactical (project goals) and strategic (main project goal / economic benefit); the definition of the concept "critical success factors of an IP implementation project (KFUPVIS)" is

proposed as factors of the internal and external environment directly or indirectly affecting the effectiveness of the IP implementation project, through the definition and management of which it is possible to predict whether the strategic, tactical and operational goals set for the project will be achieved and tasks in conditions of triple limitation;

- Identified and systematized a set of critical success factors, the joint action of which most affects the results and success of projects for the implementation of information systems at enterprises - disclosed their content and areas of influence. The factors are divided into 8 main groups: 1. Degree of compliance of IP with the needs of the organization; 2. Minimal revision of the implemented IS; 3. Vision, planning and management of the implementation project; 4. Organizational support; 5. Technical resources of the enterprise; 6. External influence and support of the implementation project; 7. Change management; 8. Testing and evaluation;

- A methodology has been developed to assess the importance of the critical factor (CRF) for the successful completion of information systems implementation projects. PZKF combines assessments of the frequency of occurrence of a factor (CWF) in the implementation project and the force of influence of the factor (CWF) on the project, contributing to the improvement of project management and increasing their effectiveness according to the proposed methodology, a study was carried out, the results of which made it possible to assess the potential of the influence of critical factors on the success of the project.

- The existence of differences in the factors taken into account in successful and unsuccessful projects for the implementation of information systems in organizations was determined and proved; the difference between the frequency of their manifestation and the power of influence on the project of introducing information systems has been established. It is shown that the increase in the probability of successful implementation of information systems is the result of taking into account and applying factors in the strongest way that affect the progress of the implementation project. It is determined that the effectiveness of the implementation project depends on the number of considered critical factors of the implementation project;

- Practical recommendations and a model for assessing the likelihood of success of an information systems implementation project have been developed, intended for use by practitioners: management of organizations, directors of information technology departments, managers of IT projects in order to assess and predict the likelihood of successful implementation of information systems implementation projects. The basis of the model is the significance of the factor for the successful implementation of the IP implementation project.

The theoretical and practical significance lies in improving the project management for the implementation of information systems, taking into account the

identified factors affecting the project. As a result of the study and the findings, the developed concept of the influence of factors on the implementation project will allow state and commercial companies to ensure effective and efficient management of information systems implementation projects in their structures. Also, the results can be useful and used in the activities of system integrators and consulting companies that provide services for the implementation of information systems in order to minimize the risks of implementation of information systems.

In addition, the results presented in the dissertation research can be used in the preparation of project managers for the information technology sector, be used in the educational process in higher educational institutions, including those specializing in the training of management personnel for the information technology industry.

Degree of reliability and approbation of research results.

The work was discussed and recommended for defense at the Department of Theory and Systems of Sectoral Management of the Faculty of Engineering Management of the Russian Academy of National Economy under the President of the Russian Federation.

The reliability of the results of the dissertation research is confirmed by the use of scientific research methods, the completeness of the analysis of theoretical developments, as well as testing in practice in the organization of LLC “KeyDiDiAy RUS”, which is confirmed by an appropriate certificate of implementation of the research results.

The structure and scope of work are determined by the goal and objectives of the study. The work consists of an introduction, three chapters, a conclusion, a list of sources used, a list of abbreviations and symbols, a list of references and applications. The thesis is presented on 210 pages of text (including 11 pages of appendices), includes 24 tables, 53 figures. The list of references includes 197 titles.

Orlov M.A.

A handwritten signature in black ink, appearing to read 'M.A. Orlov', is written over a faint, circular official stamp. The signature is fluid and cursive.