

# **COMPUTER SYSTEM OF AUTOMATIC PROJECT MANAGEMENT**

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## **Abstract**

*Currently, information systems (IS) in many companies become «blood vessels», which allows quickly and efficiently transmit, process and store information for making key strategic and operational decisions. The quality of the implemented IS and their timely support and maintenance largely determine the quality management of the enterprise as a whole. Accordingly, the necessity of the activity on project management in the field of IT is obvious not only to the employees of IT departments, and senior executives. The implementation of IT projects can be carried out by the employees of the IT department of the company, and third-party contractors (outsourcing). In any case, this activity has a several specific features, which will be discussed in this article.*

**Keywords:** *project management, it-projects, the information system of enterprise management*

## **Introduction**

Information systems are now critical to the implementation of both the day-to-day and strategic activities of the company. Their introduction into the company and further maintenance are often carried out in the form of an IT project, which can be implemented on their own or with the involvement of third party services. IT projects are a special variety of innovative projects and have specific features.

The purpose of the work is to identify the key features of the implementation of projects in the field of information technology and on this basis to formulate a list of recommendations for the effective management of IT projects.

## **Tasks and Methods of IT Project Management**

Successful and productive project activity of the organization is impossible without the use of information technology. For process automation and consolidation of project management data, the Project Management Information System (PMIS) is a balanced organizational and technological complex of software, technical and information tools and tools aimed at implementing, maintaining and improving the effectiveness of project management processes. PMIS is an integral part of the Corporate Project Management System (CPMS).

Project Management Information System is an organizational and technological complex of methodological, technical, software and information tools aimed at supporting and improving the efficiency of project planning and management processes [1, 2].

The basis of the project management information system is a single information space, which allows at times to improve the quality and efficiency of project management in the organization throughout the life cycle of the project and program by supporting the project management processes. Some PMIS are focused not only on projects and programs but also on the automation of company portfolio management processes, which enables strategic planning to be managed. The functionality of the project management information system performs the following tasks:

- automation of project management processes (planning, execution control, reporting);
- consolidation of all plans of corporate projects of the company in a single database;
- creation of a single resource directory available for use, planning, control and management of resources;
- automation and reduction of time spent on project communications between project participants;
- automation of workflows for the project, program, project portfolio, and project office;
- formation of the archive and knowledge base of project management [3].

In complex projects, it is necessary to process a lot of information, for these purpose information systems of project management are used. These systems, regardless of their level and cost, are based on network planning and management methods.

Network planning methods are based on the critical path method and the plan analysis and evaluation method. The critical path method is to find the longest duration of the work (critical path) and agree it with the project schedule if a reserve is obtained, then the critical path is corrected. The method of analysis and evaluation of plans is to evaluate the work for a certain period of review and compare them with the plan if a reserve is obtained, then the analysis of work and the work is adjusted.

The basis of the PMIS is a single information space, which provides: a single database of plans for all corporate projects; a single directory of resources used in projects; common document forms, project templates, and reports.

Positive results in the project activity can be achieved only with the help of complete, reliable and timely information that accumulates all information processes in the project activity.

In general, the PMIS consists of two parts: security and functional.

The following components are included in the security part: organizational support; legal support; technical support; information support; Software.

The functional part includes those elements (subsystems) that determine its purpose, control functions and information processing functions [4].

The implementation of the functions of the PMIS is accomplished through information technology (IT). The tasks of information technology project management are to create a wide range of functionalities for project activities, namely: description of project parameters and establishing logical links between the works; multilevel project presentation; entering a list of available resources, the nomenclature of materials and cost items, workloads; calendar - network planning; resource and cost planning; graphical representation of the project structure (Gantt charts, PERT charts); monitoring the progress of the project; creation of reports, documentation of the progress of project works; organization of communications (work in a network environment).

The implementation of the above means involves the use of the software. The market for software products offered for project management automation is quite saturated. Among the most common software products in this class are the following: Microsoft Project; Open Plan Professional; Spider Project; Sure Trek Project Manager; Primavera Project Planner (P3); Time Line [1, 4].

### **Conclusions**

Therefore, project management information systems increase the efficiency, validity, and speed of managerial decision making and allow the automation of all major operations of the project activity.

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