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EFFICIENT IT PROJECT MANAGEMENT SYSTEM: FEATURES AND CLASSIFICATION

In recent years, the IT sector has significantly expanded its boundaries and has become a key player in the external economic activities of many countries. Ukraine is no exception, where the IT industry is rapidly developing and making a significant contribution to the GDP. IT projects have become essential for implementing business projects of various scales, serving as the foundation for creating new products, high-tech manufacturing, and information systems.

Ukraine holds leading positions in the field of IT development and services. Ukrainian IT companies provide their services in various countries around the world, including the United States and the United Kingdom. This demonstrates the high quality of work, professionalism, and competitiveness of Ukrainian IT companies [1].

Project management in the IT sphere has its own peculiarities, as IT projects rarely exist “on their own” and often are part of larger business projects. Requirements for IT project management include flexibility, responsiveness, and the ability to implement changes quickly. IT companies

employ modern project methodologies and tools to achieve success in IT project management [2].

IT projects are characterized by high complexity due to the use of modern technologies, rapid industry growth, and constant changes in requirements and technical solutions. Managing such projects requires specific approaches and knowledge.

One of the peculiarities of IT project management is the use of Agile methodologies. Agile is suitable for projects with frequent changes in requirements and can be used for software development and other IT solutions. Agile methodologies promote flexibility, quick response to changes, and the implementation of iterative development, where project outcomes gradually reach a new level. Instead of the traditional linear approach, where the entire project is developed and implemented as a single block, iterative (incremental) development breaks the project down into small iterations or increments. Each increment represents a standalone and functional element of the project that can be tested, implemented, and used independently of other increments. This allows the project team to quickly receive feedback, make changes, and improve the product at each stage of development.

Additionally, IT project management requires active communication and collaboration among different teams and stakeholders. The successful execution of a project depends on clear communication between developers, testers, project managers, clients, and other interested parties.

Standards for IT project management processes include PMBOK, PRINCE2, and others. PMBOK (Project Management Body of Knowledge) is developed by the Project Management Institute (PMI) and includes a set of best practices and project management processes. PRINCE2 (Projects in Controlled Environments) is a project management methodology developed in the United Kingdom.

Due to the specificity of IT projects, there are several characteristics that influence the formation of an effective management system [3; 4]. Some of these characteristics include:

1. Non-standard project lifecycle: IT projects have their peculiarities compared to traditional projects. The IT project lifecycle may include

additional stages such as testing, warranty periods, and post-warranty maintenance. Managing these additional stages is an important component of effective IT project management.

2. Clear requirement definition: Requirements for IT projects must be clearly defined during the project initiation stage. Despite the rapid development of technologies and ambiguity in certain IT areas, clear requirement definition is crucial for the successful execution of the project.

3. Changes during testing: In IT projects, changes may arise during the testing stage. This can create difficulties as changes require prompt adjustments to the project. IT project managers must be prepared for changes and respond to them quickly to avoid falling behind schedule.

IT projects can be classified based on various criteria used in project management. Some of them include [4; 5]:

- By stages of the information system's lifecycle: This classification includes stages from concept formulation and design to the support of an existing information system.

- By the type of product: IT projects can be related to the development of systems, software products, technical tools, software and hardware complexes, materials, works, or services.

- By functional purpose: This classification considers the orientation of the IT project's product towards specific customer activities, such as production, technological, financial, research, marketing, human resources management, project management, gaming, or combined.

- By the type of automated processes: This classification takes into account various types of automated processes, such as core and auxiliary, technological and office processes, management processes, analytical processes, transactional processes, real-time processes, with a focus on data processing, data transmission, storage organization, media content processing, and security provision.

Important factors for the success of new product development projects are the constraints of return on investment timelines. The concept of "Time-To-Profit" reflects the need for a quick return on investment in a new product, which is crucial for project success.

Therefore, IT project management is an integral component of the successful functioning of the IT sector. Considering the rapid advancement of technologies and constant changes in the industry, an effective project management system becomes a significant factor for competitiveness for IT companies [7].

The characteristics of IT projects, such as non-standard project lifecycles, the need for clear requirement definition, and prompt change management, require a specific approach to management. Classifying IT projects based on lifecycle stages, product types, functional purposes, and automated processes allows for a better understanding of the specifics of each project and enables the determination of optimal management strategies [5; 6].

IT project management requires specific knowledge, methodologies, and approaches. The use of Agile methodologies, active communication, and adherence to project management standards contribute to the successful execution of IT projects. Ukrainian IT companies have great potential and are ready to provide quality and innovative IT solutions to clients worldwide.

Ensuring return on investment is a key factor in the success of IT projects. The Time-To-Profit concept emphasizes the necessity of project time constraints to ensure a quick cost recovery and maximum project efficiency.

Overall, understanding the characteristics of IT projects and implementing an effective management system allows IT companies to successfully deliver their projects, ensuring high product quality and customer satisfaction. The development of IT project management is an ongoing process that requires constant updating and the implementation of new methodologies and practices to achieve the best results.

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