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#### MODERN PROJECT MANAGEMENT METHODOLOGY AND CONTENT

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**Annotation:** The article specifically addresses the main theories and methodologies of project management. In addition, the article also presents the general content of modern project methodology.

**Keywords:** project management, principle, method, methodology, organization, control, planning.

In modern times, various technological, economic and social changes are rapidly occurring on a global scale. Global and local companies are developing and introducing new products and services to adapt to these changes. At the same time, due to these changes, changes should be made not only in the organizational structure of large companies, but also in local organizations, as this is important for sufficient resistance to competitors. In addition, on a global market scale, participants represent different countries and cultures, and this requires the development of new methods and approaches to establish optimal cooperation between them.

It is in this regard that project management is becoming a relevant direction of modern management in order to systematize the changes mentioned in modern management processes, effectively manage them, minimize risks, optimize resources and achieve goals.

Currently, project management is used in most countries of the world. International experience shows that as a result of the gradual development of the project management system, each country has developed its own methodologies with its own tools and standards. The experience of Japan, Switzerland (IPMA) and other European countries is more effective. The unification of most countries of the world helps to develop project management methods and tools and successfully implement them in practice<sup>1</sup>.

In addition to the above, project management has a sufficient level of methodology and tools for implementing new technologies, controlling deadlines, budgets and quality.

Modern project management methodologies are flexible and adaptable, they can quickly respond to requirements and conditions, allow for the systematic identification, assessment and management of risks in uncertain situations, and the successful completion of the project. This is important not only for the economy, but also for other industries.

As the Project Management Institute (PMI) notes, each project has a clear beginning and end. Projects can be implemented independently or managed as part of a larger program or portfolio. A program is a set of related projects, while a portfolio includes related programs or projects.

There are mainly three approaches to project management: traditional (predictive/waterfall), agile and hybrid. While the traditional approach involves implementing a project in stages, sequentially, the agile approach focuses on rapid adaptation to changing project requirements and continuous improvement. The hybrid approach combines the best aspects of both traditional and agile methods. Effective project management helps not only achieve the specified time, budget and quality goals, but also meets the requirements of stakeholders. The task of the project manager is to rationally allocate resources, manage the team, minimize risks and ensure constant communication.

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<sup>&</sup>lt;sup>1</sup> Анпилов С.М. Территориальный анализ уровня развития строительной отрасли в регионах РФ. М., 2015.

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In this article, we will take a closer look at various project management methodologies, including the widely recognized approaches in this field, such as PMBOK (Project Management Body of Knowledge), PRINCE2 (Projects IN Controlled Environments), Agile (edjayl), and Lean Six Sigma, developed by the Project Management Institute (PMI). We will also analyze the practical aspects of applying these methodologies and useful tools.

A brief review of project management methodologies: PMI PMBOK, PRINCE2, Agile, and Lean Six Sigma DMAIC

There are various project management methodologies, each of which offers its own unique approach. The PMI PMBOK (Project Management Body of Knowledge) is one of the most common project management methodologies. It covers the five main phases of project management: initiating, planning, executing, monitoring, and closing. PMBOK also includes knowledge areas such as integration, scope, time, cost, quality, resources, communication, risk, and procurement.

PMBOK collects and describes standards and tools for working in project management. This document helps to systematize professional knowledge. PMBOK is the basis of the PMI Project Management Professional (PMP) certification exam, which is evaluated by employers worldwide.

Agile methodology is widely used, especially in software development projects. It emphasizes flexibility, iterative development and close collaboration with customers. Scrum, Kanban and Extreme Programming (XP) are popular methods of Agile methodology. With Agile, the project team can adapt to frequently changing requirements and strive for continuous improvement. Agile methodology originally emerged as an alternative approach to software development.<sup>2</sup>

Agile was originally created for use in software, game, and interface development teams. Now it is used by Google, Netflix, Microsoft, Spotify, Ericsson, Dell, Adobe, and many other IT companies, industry giants, and very small startups.

But then other companies began to appreciate the benefits of Agile. Currently, individual principles of this family are used almost everywhere, and sometimes all work is built on the agile project methodology Agile.

The Lean Six Sigma DMAIC (Define, Measure, Analyze, Improve, Control) approach is aimed at optimizing processes and improving quality. It helps reduce waste, eliminate defects, and increase customer satisfaction. In project management, Lean Six Sigma is used to analyze processes, identify problems, and develop solutions.

The DMAIC process is important because it allows you to improve your business by creating a systematic approach to identifying problems, creating solutions, and measuring the success of your product or process improvement project.

First, the DMAIC process helps you gain an overview of the situation and identify potential problems with your product or service. Understanding what success looks like is also important in order to know how to measure it.

Second, the DMAIC process helps you look at your resources and see what you have to solve the problem.<sup>3</sup>

<sup>&</sup>lt;sup>2</sup> «Практическое руководство по применению методов Agile в разработке электронных услуг: опыт Великобритании» / Отв. ред.: М.Расулов, сост.: Б.Авлиёкулов, Д.Кабулова, И.Хамидов – г.Ташкент, 2017 г. Ilmiy Texnika Axboroti – Press Nashriyoti, 2017. – 94 с.

<sup>&</sup>lt;sup>3</sup> Allen, T. T. (2006) Introduction to Engineering Statistics and Six Sigma: Statistical Quality Control and Design of Experiments and Systems. 1st ed, Technometrics. 1st ed. Springer. doi: 10.1198/tech.2007.s489.

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Third, the DMAIC process gives you a plan for addressing these issues, so that when you look at your data and make decisions about how to move forward, they are based on facts, not feelings or assumptions.

PRINCE2 (Projects in Controlled Environments) is a project management methodology developed in the UK. It offers a structured approach to project management based on 7 principles, 7 themes and 7 processes. PRINCE2 defines clear roles and responsibilities and provides strict control at every stage of the project.

PRINCE2 is used by the world's largest companies and governments, providing management control to ensure that a project remains a profitable investment. PRINCE2 is the most popular project management methodology in the world and is the standard for project management in the UK public sector and the United Nations. PRINCE2 is particularly popular in the UK, Europe, Australia and New Zealand. PRINCE2 stands for "Projects in a Controlled Environment". PRINCE2 is used by private, public and 3rd sector organizations to help achieve better results from projects.

In general, modern project management methodologies are important for increasing efficiency, rational use of resources and achieving goals at each stage of the project.

Each methodology is based on its own principles, and their choice is determined by the type of project, environment and requirements. While the Agile approach provides flexibility and iterative processes, Lean focuses on minimizing waste. Scrum focuses on achieving rapid results and enhancing team collaboration.

All modern project management methodologies aim to balance the three main aspects - time, cost and quality, and their effective application increases the chances of successful projects. Therefore, organizations should choose the approach that best suits their needs and implement it in practice to ensure effectiveness and competitiveness.

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