

## **INTEGRATION MODELLING IN SUSTAINABLE DEVELOPMENT PROJECTS OF ENTERPRISES**

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*The widespread use of project management methodologies shows a fundamental shift in how organizations struggle to cope with the complexity and volatility of the external environment. Decision making plays an important role throughout the entire project life cycle. The article examines the well-known methods of decision-making in project and program management and their analysis, in terms of procedures for systemic completeness and integration methodologies for managing projects, programs and project portfolios. This research focuses on the relationship between project management and decision-making processes, as well as potential opportunities for the integration of these scientific areas.*

### **Introduction**

To successfully solve the problems that Ukraine faces on the way to European integration, highly qualified project managers are needed. The widespread use of project management methodologies shows a fundamental shift in how organizations cope with the complexity and volatility of the external environment. The article examines promising strategies for managing integration in projects in order to describe different approaches to the formation of sustainable development strategies. It is expected that improved decision-making processes will increase the chances of successful project implementation. The implementation of the proposed scientific provisions will also help to ensure the growth of the efficiency of organization development.

### **Review of scientific literature on the topic**

Methodological foundations for the management of qualitative decision-making procedures in the company was reflected in the emergence at the end of the last century by the ideology of continuous improvement management. As defined by Prosci [1], there are four main dimensions of the integration of scientific disciplines, namely: human resources, processes, tools, and results. It is expected that improved decision-making processes will increase the chances of successful project implementation.

Since the formation of the scientific discipline of Project Management, there are many standards or models developed for project management. The main institutions formed were the PMI Project Management Institute, IPMA (International

Association of Management Systems) and some others based in Europe, which were formed around the same time period [2]. The Project Management Institute (PMI) was founded in 1969 and developed the PMBOK (Project Management Body of Knowledge), which is a set of standards established by consensus and approved by a recognized body. Basically, it was founded of how to succeed in project management. The main driving force behind its creation was the development of some form of certification for the profession. The adoption of the PMBOK is primarily based on the use of five groups of processes that integrate with ten areas of expertise, which ultimately aims to contribute to the successful implementation of the project [3].

These areas are recognized as fundamental aspects of integration and can form the structure of any study. The purpose of this study is to understand the experience of practitioners in implementing integration processes using various disciplinary approaches. The results have been analyzed following current scientific research, leading to some key recommendations for potential practitioners. According to many researchers, integrating project management methodology into management processes gives companies a real chance to provide organizational and resource support for the implementation of the enterprise strategy.

The article aims to analyze managerial design solutions and integrate them with the strategy of enterprise sustainable development.

### **Statement of the main material**

At present, the activities of enterprises and organizations are carried out in the conditions of the knowledge economy and are based on the use of modern information technologies. Given the current state of information technology, each enterprise can accompany its products at all life cycle stages. An important aspect of the activities of enterprises is the correspondence of the level of knowledge, and skills of managers to apply the acquired knowledge to solve specific problems. Considering the above, It is expedient to carry out activities to create an integral information environment of the enterprise based on the project management methodology.

The study of the main interrelated factors that affect the level of development of enterprises, as well as the desire to ensure sustainable development [4], gave grounds to assert that one of the components of the strategy of an innovation-leading enterprise should be the widespread use of project management, based on successful international experience and combining the best practices

of administrative management, technical management and others auxiliary disciplines of General Management.

Project Integration Management is a branch of project management that includes the processes necessary to ensure the coordination of various project management processes. Project integration management consists of the following components [5]:

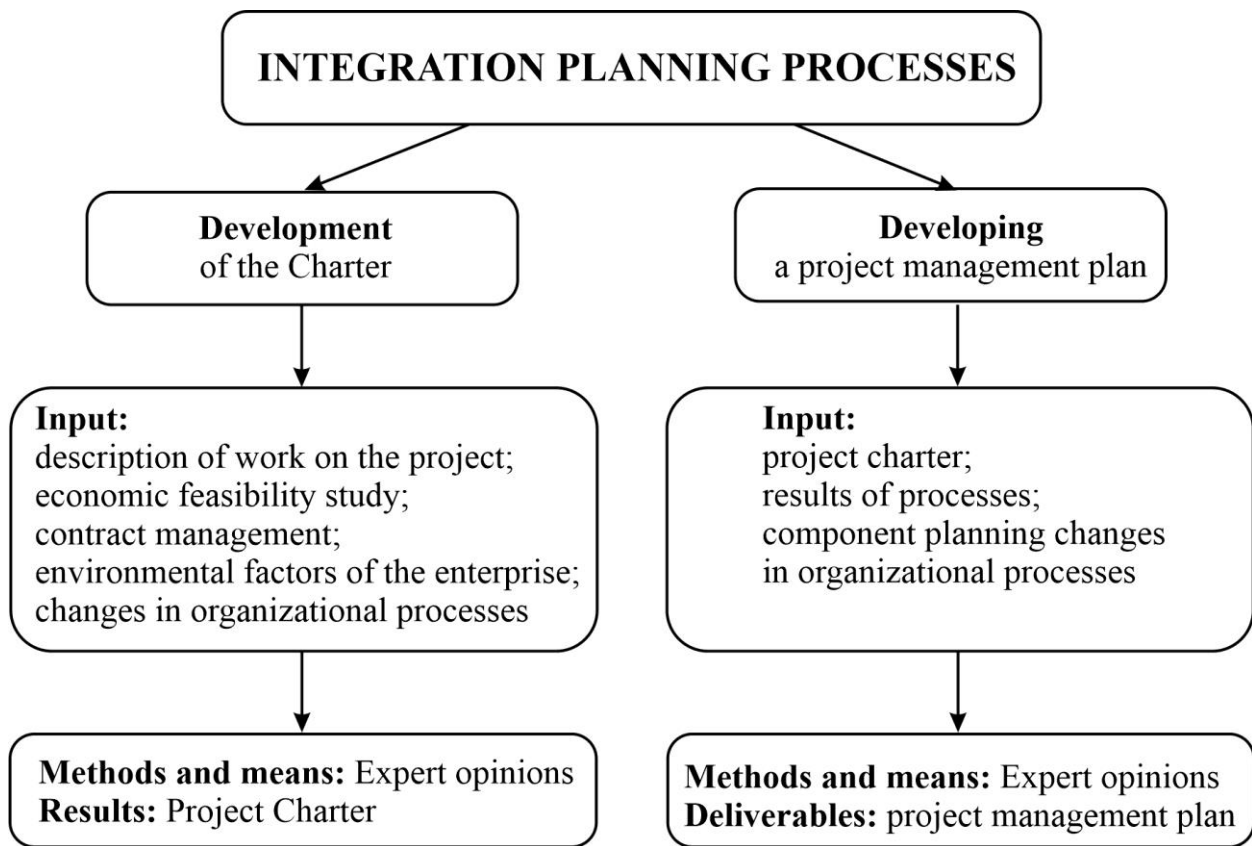
1. Development of a project plan – creation of a final structured document based on the data obtained at the previous stages of planning.
2. Definition of success criteria – development of criteria for evaluating project implementation.
3. Implementation of the project plan – implementation of the project plan by performing the works included in it.
4. Overall Change Management – Coordination of changes across all project parameters.

One of the documents that should be used first is a description of the work on the project that is to be performed during its implementation. Such a description is usually made by the customer when formulating the project, determining its name, purpose and purpose. For external projects, where the employer is another legal entity in relation to the project executors, such a description may be made in the project financing memorandum (loan agreement, grant agreement). The second integration document can be drawn up in the form of a business plan [6]. Where the following sections of the project are contained:

1. Analysis of the market situation, made on the basis of marketing research of the enterprise implementing the project, which provide a market perspective for the implementation of the project product on the market and the return of money invested in the project.
2. Analysis of the needs and internal capabilities of the enterprise that is the customer of the project.
3. Description of the project customer's requirements for time constraints and project financing, as well as quality requirements for the project product.
4. Analysis of modern technical and technological achievements for the possibility of better implementation of the project and obtaining a greater guaranteed effect.
5. Legal and environmental requirements for the implementation of the project and the project outcome.
6. The organizational structure of the project, which should be based on the organizational structure of the enterprise.

7. A list of economic indicators and their expected parameters at the project end.
8. Investment and financial plans, production plan, etc.

As a third required document for the formation of the project charter, we can use the terms of the contract (agreement) for project management. Such an agreement provides a description of the composition and processes of a project management team forming, defines the working week, working conditions and reporting. Part of this contract can also be considered the terms of the contract for the financing of the project, which define the specific features of the project, in particular the requirements for procurement processes or sales of products [7]. The essence of the integration approach in the project documents is shown in Fig. 1.



**Fig. 1.** The essence of the integration approach in the project

The main document on integration management is the project charter. The project charter is a brief description of the main data about the project: the main goals, objectives and main provisions of the project, the resources and conditions necessary for successful implementation, the timing and plan of the project. It is an official document that confirms the existence of the project, authorizes the project. The project charter is drawn up after conducting a project analysis, the purpose of which is to determine the value of the project. Project

analysis includes such components as technical, financial, economic, commercial, social, environmental, and organizational analysis. The project charter performs various functions:

1. For the project manager, it is the basis for organizing work to achieve project goals and forming a project management system.
2. For the company's divisions, this is a regulatory document;
3. For contractors it is recommended actions that are defined in the contractual documentation for the project.

In general, the simplified structure of the charter has the following components: characteristics of the project; information about the project; the purpose of the project; project structure; participants of the project; project results, and restrictions of the project. The Charter may also contain: a description of the sources of the project funding; general description of the organizational structure of project management; distribution of responsibilities, functions and powers for project management.

As we know, the main objects of project-oriented management are several system concepts [8].

The concept of 3Ps (Project – Process – Product) is the basis of the model for creating a unique product or service within the framework of the implementation of innovations through projects.

The concept of 4Ps (Program – Project – Process – Product) forms the basis of the development model of any large-scale system (city, region, etc.) focused on the production of products or the provision of services.

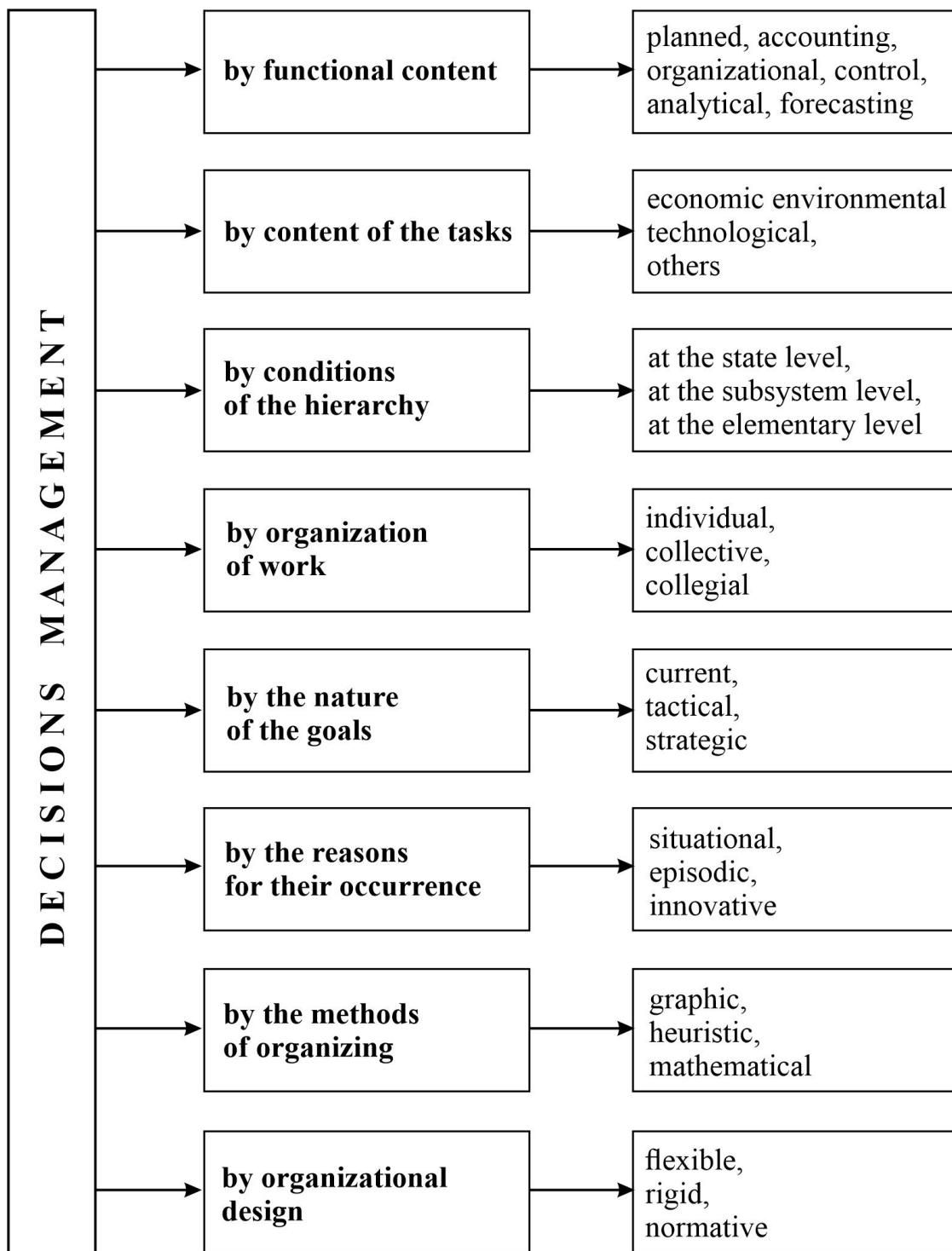
The concept of the 5Ps (Portfolio – Program – Project – Process – Product) forms the basis of the model for creating a platform for the harmonious development of an organization or region.

Integration planning for project management is the process of developing a single internal project management methodology that combines the management of all objects (portfolio, program, project) and will ensure the implementation of the developed strategy and the achievement of its long-term goals. According to the definition of the project management standard:

A portfolio of projects is a set of projects that are implemented by an organization under resource constraints and ensure the achievement of strategic goals.

A program is a set of interconnected projects, the management of which is coordinated to achieve benefits and degrees of manageability that are not available when managed separately. The projects included in the program are united by a common goal, resources, deadlines, technology, etc.

Development project management is the continuous process of making management decisions by the project manager, regarding effective coordination of actions, in the project as a holistic system with unique indicators of value, quality, time, cost and stakeholder satisfaction. Classification of managerial decisions is necessary to determine general and specific approaches to their development, implementation and evaluation, which allows to improve their efficiency and quality. An example of a possible classification of management decisions is shown in Fig. 2.



**Fig. 2.** Classification of management decisions

Rational technology of making and implementing a managerial decision involves the following stages: preparation, adoption and implementation of the decision.

1. Preparation stage – conducting a systematic analysis of the situation at the micro and macro levels; It covers the search, accumulation, processing of information, identification and formulation of problems that need to be solved and a thorough study of influencing factors.

2. The adoption stage includes the development and evaluation of alternative solutions, the determination of criteria for choosing the optimal solution, the selection and decision-making. Within the existing constraints, those solutions that meet the agreed criteria for solving the problem are selected from the developed solutions. The number of options proposed to solve the problem depends on the available resources, time, information needed to justify the decision, etc.

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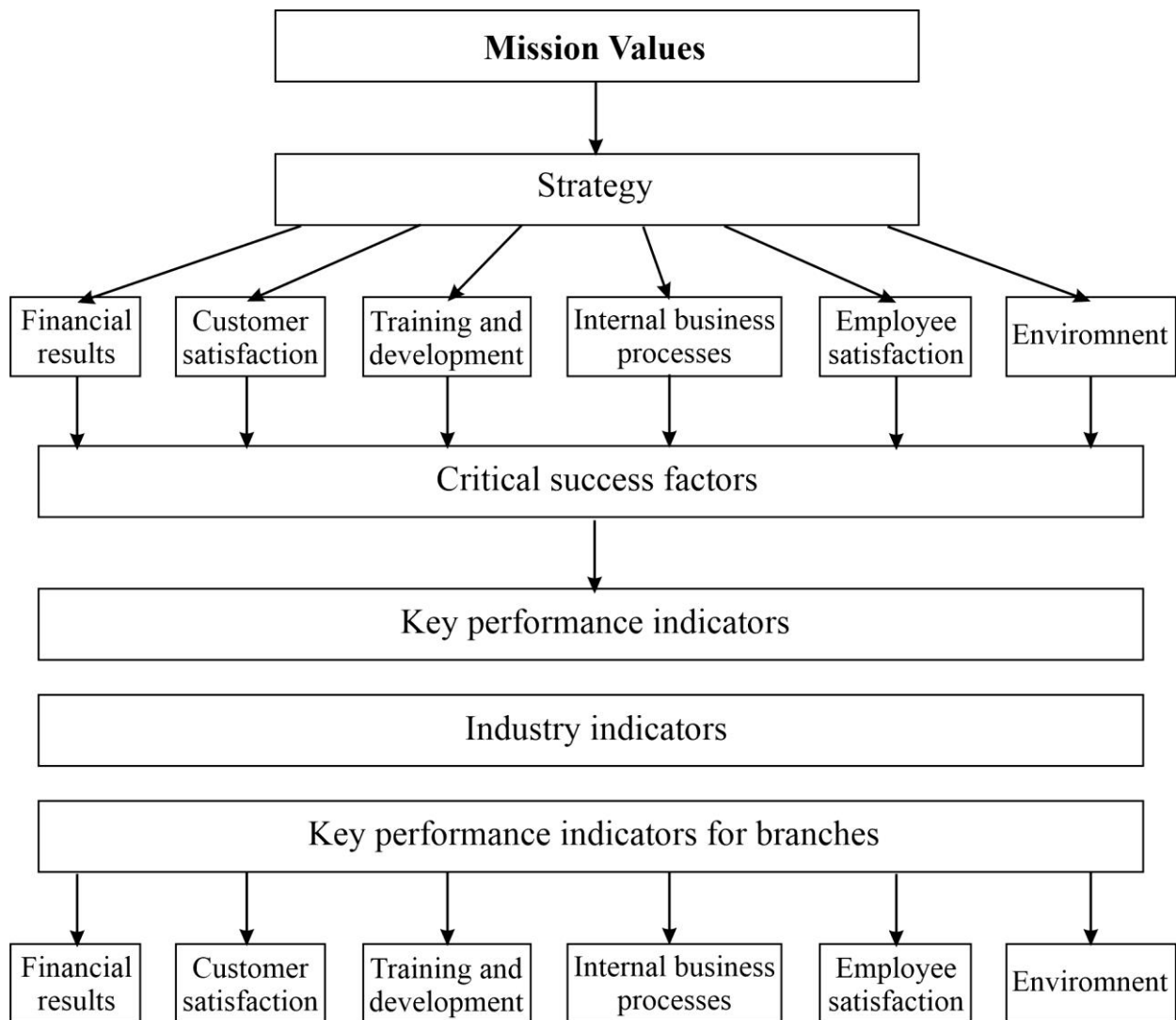
3. Implementation stage – development of measures to specify the solution and bring it to the executors; monitoring its implementation; making the necessary adjustments; evaluation of the obtained result after decision implementation.

Successful management of the implementation of decisions requires not only a rational distribution of work among subordinates, but also the ability to set them up to perform tasks, to promote initiative. Motivation in the field of implementation of specific management decisions is stronger, the more significant is the participation in decision-making of direct participants in the performance of tasks [10].

Persons in leadership positions constantly have to make managerial decisions of a strategic and tactical nature. Improving the quality of organizational management can be achieved by improving the quality of management decisions, coordination, control, as well as by creating more advanced management systems.

An organization can achieve much more success if it identify and articulate its vision, mission, and values. They should be defined in such a way that both the staff and the manager feel them on an intuitive level and keep them in mind on a daily basis.

Indicators of project activity are devoid of their significance as long as they remain untied to the key indicators of the organization, which constitute a balanced system of indicators in relation to the organization strategic goal (Fig. 3).



**Fig. 3.** A strategic goal depending on the mission and vision

The implementation of the key performance indicators system in an organization can take place in several stages.

*Stage 1. Strategy formation*

A well-articulated strategy describes the main steps to be taken to achieve the goal and desired results. The strategy should be broken down into specific strategic initiatives, within the framework of which tasks for individual structural units are



allocated. The most important element of this stage is the prioritization of strategic initiatives and coordination between departments.

*Stage 2. Identification of the most important success factors*

At the second stage, the most important success factors are determined, that is, the parameters of the economic aspects of the organization's activities, which are vital for the implementation of its strategy.

*Stage 3. Definition of key performance indicators*

At this stage, indicators for the implementation of the strategy are being selected. The number of KPIs should be limited (for the feasibility of their implementation and the quality of monitoring). A tool for determining the most important success factors is KPIs, which, as quantitative indicators, are expressed digitally. In addition, the selected KPIs should incentivize employees to take appropriate actions.

*Stage 4. Development and evaluation of the Balanced Scorecard*

At this stage, a generalized system of financial and non-financial indicators is being developed, which will then be presented to management. Thus, the importance of this level is determined, since the combination of indicators, their informativeness and sufficiency will affect managerial decision-making.

The key indicators of successful integration of the KPI system are:

1. Pre-development of a strategy, which is a determining factor of success. The system of key performance indicators is only a tool for information support of the management decision-making process.
2. Determination of the goal of the enterprise, taking into account how much the achievement of the set goal increases financial costs.
3. Availability of an information system that is a source of data and a base for determining key performance indicators.
4. Management support, change in the style of corporate management and the system of staff incentives, since the system for evaluating key performance indicators is based on the assessment of the activities of a particular employee.
5. Constant use of the system, its introduction as a necessary permanent tool in the activities of management.

The positive effect of the implementation of the KPI system is a clear understanding of the purpose of this methodology and its limitations, which is really a very effective tool for information support of the decision-making process. It is important not only to have a KPI system, but also to constantly use it in practice, monitoring the implementation of strategic tasks. However, it should keep in mind

that KPIs are unique for each industry; They can change in accordance with the progress of the organization towards the intended goal.

When implementing KPI technology, it is very important that the indicators used are clear to all civil servants involved in the process.

As projects become increasingly complex and require a more flexible, adaptable approach. Project management is moving away from a one-size-fits-all methodology, instead encouraging the adaptation of practices to meet the unique requirements of each project. Therefore, PMBOK 7 represents a paradigm shift from a process-based approach to a principles-based approach. While in PMBOK 6 integration management was about aligning and coordinating specific processes, PMBOK 7 emphasizes productivity areas. The focus is on integrating people, data, processes, and business systems to create, maintain, and develop a product or service throughout its lifecycle.

## **Conclusions**

The article discusses the concept and essence of managerial decisions; which uses the project management methodology for sustainable development projects of organizations. The most important reserve for improving the efficiency of project management is to improve the quality of decisions made, which are achieved by improving the process of managerial decision-making.

The carried-out analysis makes it possible to visually assess the strategies of integration management in organizations that carry out project activities. A strategy for the development of the organization has been proposed, which is used to solve the strategic tasks of the system as a whole, with the help of the most significant key performance indicators combined into a system of balanced indicators. Key indicators of success and criteria for knowledge transfer, which are laid down in the universal model of strategic methodology, can and should be transformed into tools of different subject areas and can be transferred, ensuring the development of a methodology for managing projects, programs and project portfolios based on the balance of decisions made.

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