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Methodological aspects of the formation and reengineering of an integrated management mechanism for investment and construction activities of large enterprises

In current conditions, the system of mechanisms and approaches of corporate management is of crucial importance in ensuring the effectiveness and long-term sustainability of the functioning of subjects of investment and construction activities (ICA) in the context of macroeconomic instability and uncertainty of various factors of the external and internal environment. Scientific understanding and systematization of the elements of the problems of formation and implementation of corporate management approaches allow us to form a holistic view of the complex of methodological dilemmas and strategic alternatives in the field of formation of corporate management models of ICA. In the practical aspect of corporate management, the considered problems are overcome on the basis of a multidimensional mechanism of intra-corporate coordination. In accordance with these prerequisites, an effective corporate management system can be implemented only on an integrated basis, taking into account the variety of aspects and the complex nature of the functioning of corporate investment and production systems of ICA. The results of the process and organizational and functional modelling of investment and production activities of corporate structures allow us to identify key areas for the formation of integration mechanisms within the framework of ICA corporate management system. The implementation of the principle of self-reproduction within the framework of the formation of an integrated corporate management system of ICA requires the development and implementation of approaches to the continuous optimization of the mechanisms of the corporate management system and their adaptation to changes in the conditions of external and internal operating environments. At the technological level, the implementation of the concept and tools of controlling can be carried out on the basis of using a wide range of functions and tools of corporate engineering and reengineering of production, technological, organizational and managerial processes of functioning and functioning of the corporate model. The implementation of these approaches to the formation and development of an integrated corporate management system for large enterprises engaged in investment and construction activities can contribute to strategic stability and efficiency growth in the context of dynamics of factors of the external and internal operating environment.

Keywords: investment and construction activities, integrated management mechanism, management, mechanism, reengineering, methodological dilemmas, strategic development, sustainability.

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The system of mechanisms and approaches of management is of crucial importance in ensuring the effectiveness and long-term sustainability of the functioning of subjects of investment and construction activities in conditions of macroeconomic instability and uncertainty of various factors of the external and internal environment [1].

At the same time, currently the most significant place in the investment and construction complex of the Russian Federation is occupied by large enterprises and associations implementing a set of functional areas of investment and construction activities (ICA) [2, 3].

In accordance with the general provisions of the methodology of management and development of economic systems and, in particular, enterprises and organizations engaged in industrial and commercial activities under market management mechanisms, the construction and implementation of management mechanisms both on the scale of a separate production and economic unit and on the scale of associations and structures of various organizational nature are associated with overcoming the common problems of choosing optimal development alternatives and their combinations [4–8]. The most general aspects of this issue should include:

- problems of reconciling the interests of various stakeholders;

- problems of determining the optimal size of the company and scaling of activities;
- problems of substantiation of optimal development directions;
- problems of choosing metrics for evaluating the effectiveness of functioning;
- problems of accounting and forecasting uncertainty and risk in planning.

Scientific understanding and systematization of the elements of the problems of formation and implementation of management approaches allow us to form a holistic view of the complex of methodological dilemmas and strategic alternatives in the field of formation and management of ICA models.

Exogenous dilemmas — relate to various aspects of interaction and mutual influence of the investment and production system and the external environment of its functioning:

- *Competition – Partnership;*
- *Delegation – Integration;*
- *Localization – Globalization;*
- *Borrowing innovations – Developing innovations;*
- *Price-based competition – Quality-based competition.*

► **Endogenous dilemmas** — concern aspects of the internal organization of the investment and production system and the mechanisms of its management:

- *Short-term performance – Long-term performance;*
- *Sustainability – Economic growth;*
- *Conservatism – Innovation;*
- *Process orientation – Project orientation;*
- *Diversification – Specialization;*
- *Diversity – Unification;*
- *Integration – Differentiation;*
- *Autonomy – Subordination;*
- *Flexibility – Rigidity.*

In the practical aspect of management, the considered problems are overcome on the basis of a multidimensional mechanism of coordination, the main directions of which are:

- coordination between levels and individual functional areas of management, in particular, between planning and control activities;
- coordination by type of activity, including investment, production, financial, etc.;
- coordination between investment objects in their target quantitative, qualitative and time parameters, including in terms of agreeing on the timing of achieving investment results for individual objects (projects, assets) as part of the investment portfolio;
- coordination of levels and elements of infrastructure, including in terms of information support for management.

In accordance with these prerequisites, an effective management system can be implemented only on an integrated basis, taking into account the variety of aspects and the complex nature of the functioning of investment and production systems of ICA.

The results of process and organizational and functional modelling of investment and production activities of structures allow us to identify key areas for the formation of integration mechanisms within the framework of the ICA management system (Fig. 1):

- integration at hierarchical levels of management of the investment and production system;
- integration by object areas of management — elements of the total potential;
- integration of organizational and functional elements and project management infrastructure;
- integration according to the elements of the process model of the functioning of the investment and production system.

The implementation of the principle of self-reproduction within the framework of the formation of an integrated management system of ICA requires the development and implementation of approaches to the continuous optimization of the mechanisms of the management system and their adaptation to changes in the conditions of external and internal operating environments.

As a modern integrated approach to providing a system of support, optimization and development of management mechanisms aimed at improving management efficiency, coordinating the interaction of management systems at all organizational and managerial levels and monitoring their effectiveness, it is advisable to consider controlling as an actual scientific and methodological management concept, which includes the processes of setting goals and targets, planning, information modelling, management accounting, information support, monitoring, control, plan-based analysis in order to develop optimal solutions that make it possible to best achieve

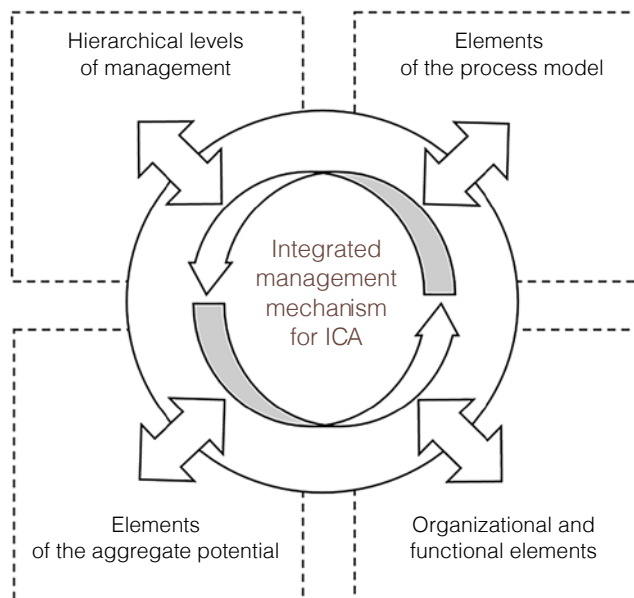


Fig. 1. Diagram of the directions of integration of the ICA management system

the results of strategic development based on innovative methods of analysis and management of projects and processes [9, 10].

At the technological level, the implementation of the concept and tools of controlling can be carried out on the basis of using a wide range of functions and tools of corporate engineering and reengineering of production, technological, organizational and managerial processes of functioning and functioning of the corporate model.

Modern engineering management systems are aimed at ensuring accounting, analysis and forecasting of the parameters of the managed system, modelling management impacts, and supporting effective management decision-making [11–15], including:

- getting information about the status of the control object;
- identification and analysis of problem areas and optimization reserves, forecasting the development of trends;
- defining the goals of management decision — making;
- selection and justification of criteria for the effectiveness of management decisions;
- modelling of a complex of alternative solutions;
- analysis of development scenarios depending on management decision — making;
- formulation of conditions for choosing the optimal (rational, pragmatic) solution;
- specification of the decision for delegation purposes.

The development of reengineering mechanisms is based on an intensive management initiative aimed at identifying and implementing reserves to improve the effectiveness of the corporate management system and the effectiveness of the investment and production system as a whole.

Prerequisites for the formation and implementation of reengineering mechanisms are an understanding of the need for an urgent response to external influences, the development and implementation of solutions aimed at meeting consumer needs, ensuring clear and consistent communication in order to effectively manage processes and projects in conditions of limited resources.

The process of implementing reengineering mechanism generally includes the following stages:

- 1) development of a reengineering strategy;
- 2) development of a detailed reengineering project (roadmap);
- 3) implementation of solutions;
- 4) evaluation of the results of reengineering.

The main subject-functional areas of integrated reengineering based on controlling methods and tools, identified on the basis of process and project modelling of ICA at various stages of development of structures, are presented in Table.

Subject-functional complex reengineering based on ICA controlling

Subject-functional areas	Main directions
Strategic planning	• Corporate strategy; • Corporate business model development strategy; • Investment strategy; • Geographic expansion strategy; • Export strategy; • Regional strategy; • Industry strategy; • Strategic asset development strategy; • Master territory planning
Organizational modelling and structuring	• Corporate organizational and functional model; • Organizational structure; • Development of the project management system; • Corporate management system; • Management system for goals and performance benchmarks; • Agile business transformation
Analytical block	• Analysis of markets and industries, development trends; • Confirmation of the sales plan; • Comparative analysis with industry entities, including international ones; • Price analysis and forecasting; • Audit of sales channels; • Research on consumer preferences
Resource provision and sustainable development	• Resource management strategy; • Strategy and roadmap; • ESG transformations; • Preparation of documents for obtaining financing for “green” projects; • ESG diagnostics and recommendations for ESG development; • Support in receiving of ESG rating; • Communication strategy; • Carbon footprint assessment

The implementation of these areas of reengineering within the framework of an integrated management system can be implemented on the basis of an organizational and managerial mechanism of an adaptive ICA performance management model based on the infrastructure of integrated reengineering (Fig. 2).

The implementation of these approaches to the formation and development of an integrated management system for large enterprises engaged in investment and construction activities can contribute to strategic stability and efficiency growth in the context of dynamics of factors of the external and internal operating environment.

Subject-functional areas	Main directions
Investment planning	• Business planning; • Financial modelling; • Due Diligence, M&A support; • Preparation of documents and support in obtaining state support measures; • IPO support and attracting a strategic investor; • Preparation of investment memoranda; • Business assessment
Competitive strategy	• Competition analysis; • Brand portfolio management strategy; • Marketing strategy; • Customer Path (CJM); • E-commerce; • Digital loyalty programmes; • Pricing; • Sales promotion; • Sales and operations planning (S&OP)
Operational activities	• Optimization of the ICP project management; • Construction control; • Cost reduction programme; • Project office management; • Optimization of business processes; • Supply chain management; • Optimization of purchases; • Increased productivity
Digital transformation	• Digital transformation strategy and roadmap; • Development of customer experience in the application of digital solutions for elements of the customer path; • Development of solutions based on artificial intelligence and big data; • Identification and optimization of bottlenecks of individual digital/IT projects; • Preparation of an application for government support for digital transformation; • Development of a digital initiative management model

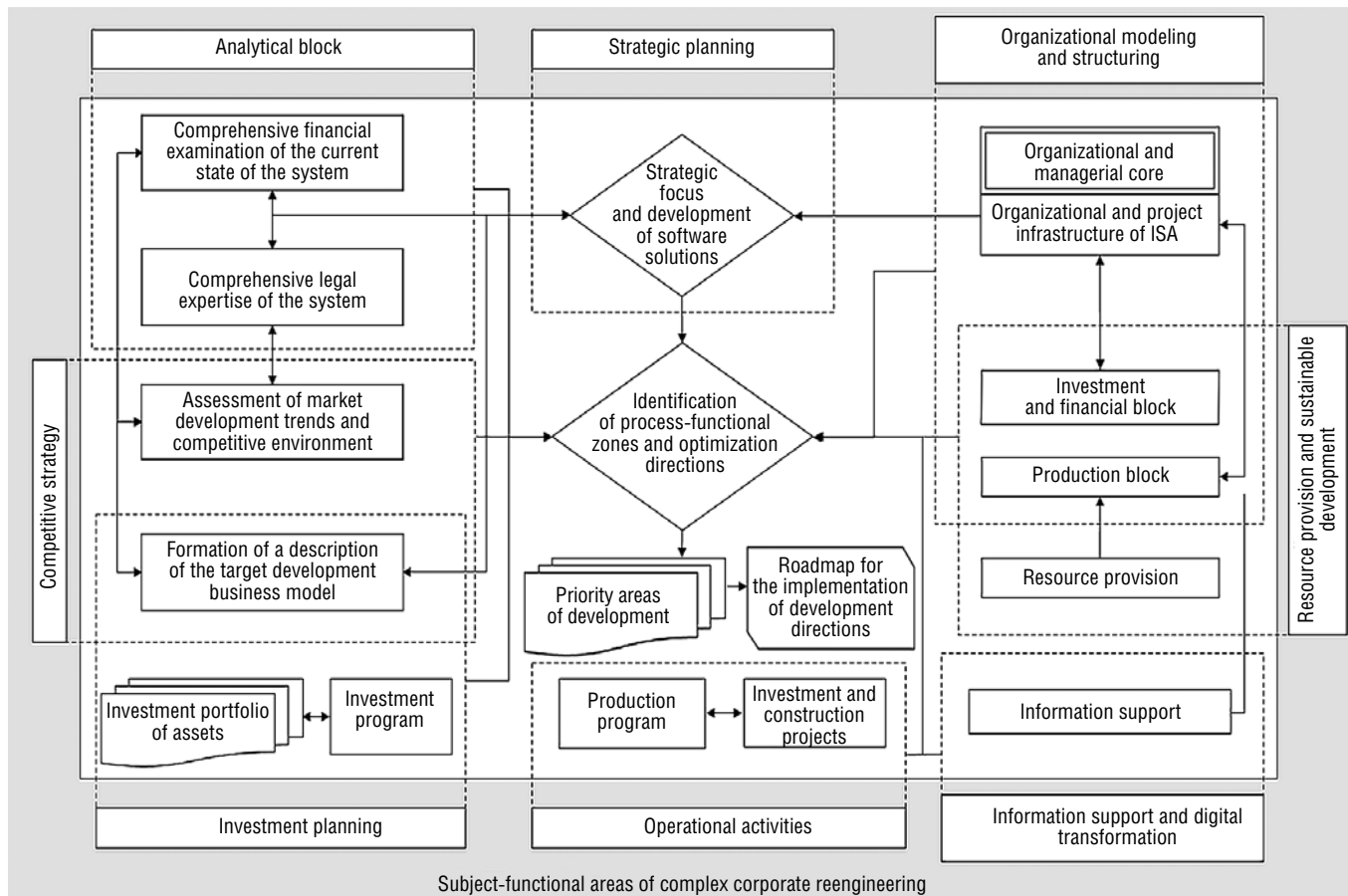


Fig. 2. Diagram of the organizational and managerial mechanism of the adaptive performance management model of ICA based on the infrastructure of integrated reengineering

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Методологические аспекты формирования и реинжиниринга интегрированного механизма управления инвестиционно-строительной деятельностью крупных предприятий

В актуальных условиях система механизмов и подходов управления имеет определяющее значение в обеспечении эффективности и долгосрочной устойчивости функционирования субъектов инвестиционно-строительной деятельности при макроэкономической нестабильности и неопределенности различных факторов внешней и внутренней среды. Научное осмысление и систематизация элементов проблематики формирования и реализации подходов управления позволяют сформировать целостное представление о комплексе методологических дилемм и стратегических альтернатив в области формирования и управления субъектами и моделями ИСД. В практическом аспекте управления рассмотренная проблематика преодолевается на основе многомерного механизма координации. В соответствии с данными предпосылками эффективный механизм управления может быть реализован только на интегрированной основе, учитывающей многообразие аспектов и комплексный характер функционирования территориально-воспроизводственных систем ИСД. Результаты процессного и организационно-функционального моделирования инвестиционно-производственной деятельности позволяют определить ключевые направления интеграции в рамках формирования механизма управления ИСД. Реализация принципа самовоспроизводства в рамках формирования интегрированного механизма управления ИСД требует разработки и внедрения подходов к постоянной оптимизации и адаптации к изменениям условий внешней и внутренней сред функционирования. На технологическом уровне реализация концепции и инструментария контроллинга может выполняться на основе использования широкого функционала и инструментария инжиниринга и реинжиниринга производственно-технологических и организационно-управленческих процессов. Реализация указанных подходов к формированию и развитию интегрированного механизма управления крупными предприятиями, осуществляющими инвестиционно-строительную деятельность, может способствовать стратегической устойчивости и росту эффективности в условиях динамики факторов внешней и внутренней среды функционирования.

Ключевые слова: инвестиционно-строительная деятельность, интегрированный механизм управления, управление, механизм, реинжиниринг, методологические дилеммы, стратегическое развитие, устойчивость.

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