ORIGINAL PAPER

DOI: 10.26794/2304-022X-2025-15-2-37-52
UDC 338.24(045)
JEL H50, H61, H83, O21, O33

State Planning in Russia: Challenges of Aligning Strategic Priorities with Budgetary Constraints and Pathways to Solutions

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ABSTRACT

This paper examines the system that integrates two types of planning: strategic (long-term goals) and budgetary (resource allocation). The aim of the study is to identify existing challenges in coordinating these two planning types and to propose solutions for their effective alignment, based on an analysis of the evolution of state planning in the Russian Federation from 1991 to 2024. The research methodology includes systems analysis, evaluation of regulatory documents, and expert data, drawing on the concepts of Results-Based Management and digital transformation. The empirical basis consists of reports from the Accounts Chamber of the Russian Federation, PEFA instruments, and IMF recommendations on the digitalisation of public financial management. The results show that, despite the reforms implemented between 2004 and 2021, a misalignment between strategic and budgetary indicators persists, along with departmental fragmentation, vulnerability to external shocks, digital threats, regulatory inconsistencies, and a shortage of qualified personnel. To address these imbalances, the author proposes improving indicator development through multi-level KPIs supported by machine learning and blockchain; establishing an interdepartmental scenario modeling platform based on artificial intelligence; implementing adaptive budgeting; and unifying the regulatory framework through a State Planning Code. The findings highlight that successful modernization depends on the synchronized development of technology, institutions, and human capital. However, even with the implementation of the proposed measures, a complete resolution of these issues is unlikely due to systemic inertia and external risks. The paper emphasizes the need for a comprehensive approach that combines digitalisation, regulatory reform, and the strengthening of data-driven governance. A complete solution to the identified problems also requires overcoming structural imbalances and investing in institutional capacity-building, particularly under conditions of ongoing uncertainty. The study's findings are intended for state programmes developers, digital architects in the public sector, and institutional reform experts seeking to bridge the gap between long-term strategies and budgetary realities through the integration of advanced technologies (AI, blockchain) and adaptive management practices.

Keywords: Results-Based Management framework; state planning; strategic planning; budgetary planning; state programs; digitalization; adaptive budgeting

For citation: **Vinogradova T.I. State planning in Russia: Challenges of aligning strategic priorities with budgetary contraints and pathways to solutions.** ***Upravlencheskie nauki = Management Sciences.*** **2025;15(2):37-52. DOI: 10.26794/2304-022X-2025-15-2-37-52**

INTRODUCTION

The process of adaptation to conditions of global uncertainty, caused by geopolitical risks, sanction-driven restrictions and technological shifts, requires the Russian economy to modernise the system of state planning, which is becoming the principal instrument for coordinating actions of the state, business and civil society to achieve their long-term objectives.

The term "state planning" is commonly used in scientific literature. In general, this term refers to a complex process involving forecasting and analysis (including socio-economic modelling), the formation of strategies and programmes, target-setting and performance monitoring, budgetary planning, as well as the control and evaluation of plan accomplishment. This approach combines a wide variety of public administration stages and tools, and many Russian authors have addressed this issue in their research [1–10]. However, this article takes a focused approach to state planning in a narrower sense, regarding it as a system of two components: strategic planning (specifying directions of development, long-term goals, and priorities of state policy) and budgetary planning (providing the resources for strategic and programme objectives). Such a point of view is consistent with the concepts and methodologies of Results-Based Management, Programme-Based Budgeting [11–17], and Medium-Term Budget Planning [18–21], all of which focus on the need to link strategic priorities with budgetary resources, as well as help solve the problems related to their coherence and balance [22–25].

The author of this article aimed to identify the challenges that arise in establishing a link between strategic and budgetary planning in the Russian Federation, and to propose solutions for overcoming them based on the analysis of the evolution of the state planning system in the post-Soviet period (1991–2024). The latter, which comprises strategic planning (long-term objectives), state programmes (medium-term instruments) and budgetary planning (resource provision) was the subject of this research.

METHODOLOGY OF RESEARCH

This research employed an interdisciplinary approach, combining the theoretical concepts of state planning, Programme-Based Budgeting, and the digital transformation of the budgetary process with data of their practical application in Russia and international experience.

The methodological foundation was provided by academic articles focusing on strategic planning as a tool for developing socio-economic policy [2, 8, 26–33], as well as the concept of Programme-Based Budgeting, which provides a link between strategic priorities and budget allocation [14, 15, 17, 20–21, 34–35].

The empirical data include expert reports and official reports from the Accounts Chamber of the Russian Federation, [particularly, analyses of the implementation of state programmes and assessments of their alignment with strategic goals].[1] This research also drew on materials on digitalisation of public administration from the TAdviser SummIT 2024[2] Conference [36] to examine the results of piloting digital tools for strategic and budgetary planning.

The author of the given article relies on proven international tools for assessing public financial management. One of these is the Public Expenditure and Financial Accountability (PEFA),[3] [37] a framework that has proven effective in many

[1] Bulletin of the Accounts Chamber of the Russian Federation. State Administration. Special Issue. 2024. URL: https://ach.gov.ru/upload/iblock/939/do4a89d041xnqo38hb8jsqwiykjbjbqm.pdf#page=85; Conclusive Statement of the Accounts Chamber of the Russian Federation on the Report on the Execution of the Federal Budget for 2023 17.06.2024 No. ZSP-68/24 (approved by the Board of the Accounts Chamber of the Russian Federation (Protocol No. 41K of 14.06.2024). URL: https://ach.gov.ru/upload/iblock/408/1ya157v6llliuulgrbvgzpnnb4n1newb.pdf

[2] About the "Best IT Practices in Russia" TAdviser SummIT 2024 Conference. URL: https://clck.ru/3JYJVM

[3] PEFA. Framework for Assessing Public Financial Management. World Bank: 2016. URL: https://www.pefa.org/sites/default/files/PEFA_2016_Framework_Final_WEB_0.pdf

countries throughout the world as a reliable analytical method that ensures a structured approach to evaluating the budgetary process. Within the framework of the study special attention was paid to two PEFA components: "policy-based budgeting" and "predictability and control in budget performance". These components contribute to assessing alignment of the state's strategic priorities and their financial provision, as well as identifying existing barriers.

An additional methodological basis for analysing digital tools in state planning was the document of the International Monetary Fund "Digital Solutions Guidelines for Public Financial Management" [38]. This document presents a comprehensive approach to the digital transformation of the budgeting process, encompassing the use of artificial intelligence (AI), digital platforms, automated data analysis, and unified reporting systems. These technologies offer the potential to resolve the identified coordination problems between strategic and budgetary planning, thereby increasing transparency, forecasting accuracy, and the efficiency of public spending. The application of these approaches has helped to find solutions based on international experience and to propose their use in domestic practice.

The author of the article applied systems analysis to determine the relationship between strategic and budgetary planning as elements of a unified public administration system, while using the historical-logical method to examine how approaches to the interaction between strategic goal setting and the budgeting process have changed over time. The study also involved an analysis of legislation on strategic planning and state programmes, as well as reports from the Accounts Chamber of the Russian Federation. Expert methods were used to provide an additional assessment of the practical implementation of the mechanisms mentioned above, supplementing formal data with facts and recommendations.

A key limitation for the research turned out to be the limited availability of information sources regarding the use of digital tools in public authorities. This contributed to making up some conclusions based on the open-data analysis, which requires further empirical verification.

RESULTS OF THE RESEARCH

Evolution of the State Planning System in Russia

In the early 1990s, the country abruptly abandoned the rigid planning mechanisms and switched to the market economy, which led to decentralisation of authority and a change in the forms of state control. Regions were empowered to make independent decisions regarding their socio-economic development.

In 2004, within the framework of ongoing public administration reforms, the state introduced the results-based planning method, and created targeted programmes aimed at linking individual priorities with their financing. Although such programmes had been developed at the federal level ever since the mid-1990s, they had previously existed in a fragmented manner and were funded on a residual basis. The budgetary process reform of 2004–2006, along with the subsequent implementation of these programmes up to 2012 sharpened the focus on expenditure performance, transparency, and accountability.

Other aspects of the reforms included developing mechanisms for strategic expenditure, optimizing the delivery of public services, eliminating red tape, reducing document processing times, and increasing the accessibility of information of public bodies for citizens [8]. These measures made the governance system more open and transparent, thereby enhancing public trust in state institutions.

The introduction of a three-year rolling budget in 2007, although not regarded as direct element of the Results-Based Management framework, was an important step in modernising the state planning system. The formulation of budget fore-

casts for a three-year period made it possible to take into account macroeconomic risks and increased the predictability of the budgetary process [15].

Simultaneously, methods for planning and evaluating the performance of state bodies were refined, including performance reports, which acquired the status of an important management and monitoring tool [10].

Resolution No. 588 of the Government of Russia "On Approval of the Procedure for the Development, Implementation and Evaluation of the Efficiency of State Programmes of the Russian Federation" approved the methodology for their implementation.[4] Decree No. 596 of the President of Russia "On Long-term State Economic Policy" strengthened the role of state programmes and defined Russia's long-term socio-economic development priorities, which were to guide the development and implementation of these projects.[5]

It is worth noting that documents that set the direction for national goals and projects covering the 2019–2024 and up to 2030 periods played a special role in strategic goal-setting and in ensuring a comprehensive approach to the country's development. Presidential Decree No. 204 of 7 May 2018, defined medium-term national goals and objectives, while Decree No. 474 of 21 July 2020 defined long-term national goals and objectives, covering the development of human potential, improving the quality of life, and accelerating economic growth.[6] In 2024, a new Decree was issued updating priorities and key indicators through 2036.[7]

The Federal Law No. 172-FZ "On Strategic Planning in the Russian Federation" (hereinafter referred to as 172-FZ)[8] adopted on June 28, 2014, formalised the strategic management system by establishing the key elements of state planning and their hierarchy. This law defined the role of state programmes as the linking element between the long-term objectives established in the strategy of socio-economic development and the specific activities aimed at their achievement.

In practice, however, the implementation of these federal-level projects was hindered by several systemic problems, including overlapping functions, the inefficient use of resources, and conflicts of interest between developers and implementers [16, 29]. In light of this, in 2021, the Russian Government revised its approach to developing state programmes in order to improve their effectiveness by introducing a more compact and structured format. The legal basis for these changes was the Resolution No. 786 of the Russian Government, as well as the Methodological Recommendations[9] of the Ministry of Economic Development. The innovations included rules allowing for the reallocation of up to 10 per cent

[4] Resolution of the Government of the Russian Federation No. 588 dated August 2, 2010 "On the Approval of the Procedure for the Development, Implementation and Evaluation of the Effectiveness of State Programmes of the Russian Federation". URL: http://pravo.gov.ru/proxy/ips/?docbody=&prevDoc=102349190&backlink=1&nd=102140511&rdk=0

[5] Presidential Decree of the Russian Federation No. 596 of May 7, 2012 "On Long-Term State Economic Policy". URL: http://www.kremlin.ru/acts/bank/35260

[6] Presidential Decree of the Russian Federation No. 204 of 7 May 2018 "On National Goals and Strategic Objectives of the Development of the Russian Federation for the Period Until 2024". URL: http://www.kremlin.ru/acts/bank/43027; Presidential Decree of the Russian Federation No. 474 of 21 July 2020 "On National Goals of the Development of the Russian Federation for the Period Until 2030". URL: http://www.kremlin.ru/acts/bank/45726

[7] Presidential Decree of the Russian Federation No. 309 of 7 May 2024 r. 2020 "On the National Development Goals of of the Russian Federation for the Period Until 2030 and a Perspective to 2036". URL: http://www.kremlin.ru/acts/bank/50542

[8] Federal Law No. 172-FZ of 28 June 2014 "On Strategic Planning in the Russian Federation". URL: http://pravo.gov.ru/proxy/ips/?docbody=&firstDoc=1&lastDoc=1&nd=102354386

[9] Resolution of the Government of the Russian Federation No. 786 of 26 May 2021 "On the System of Management of State Programmes of the Russian Federation" (as amended and supplemented). URL: https://base.garant.ru/400820533/; Order of the Ministry of Economic Development of the Russian Federation No. 500 of 17 August 2021 "On Approval of the Methodological Recommendations for the Development and Implementation of State Programmes of the Russian Federation". URL: https://www.garant.ru/products/ipo/prime/doc/402601751/

of funding within state programmes for operational adjustments; a differentiation between project-based activities (capital investments) and process-based activities (current expenditures); and a refinement of the programme structure to enhance control [35].

It should also be noted that since 2018, as part of the "Digital Economy" national project, digital technologies have been introduced to optimise public administration processes and improve the quality of public services. These technologies accelerate decision-making, improve coordination between levels of government, and ensure greater accessibility of information to citizens.

Digital platforms enhance the ability of the government to collect and analyse vast amounts of information about citizens, businesses, and the economy as a whole. This enables the identification of trends, the forecasting of developments and the management of risks, as well as the development of more accurate plans and programmes. For example, analysing information on electricity consumption can help optimise energy networks, while analysing population migration data can inform infrastructure development plans in specific regions.

Personalised, data-driven services are more effective and contribute to greater citizen satisfaction. Notifications about upcoming payments and suggestions for customised educational or healthcare plans are generated automatically. The transition to the e-Budget system, as part of the "Digital Economy" national project has optimised the programme formation process: the coordination of parameters, including funding, is now conducted digitally, reducing time costs and lowering the risk of errors. The system integrates data with the SAIS,[10] enabling real-time monitoring and ensuring that financing is aligned with results. The strict linking of state programmes to the budget forecast since 2023 eliminates inconsistencies between long-term plans and operational objectives.

It can be said that the steps taken — from adoption the Federal Law No. 172-FZ, to the 2021 reform of state programmes, and to the introduction of digital platforms — have considerably strengthened the interrelationship between strategic and budgetary planning. The new simplification of programme structures, the introduction of flexible mechanisms for reallocating funds, and data integration through the e-Budget system have contributed to reducing the gap between long-term objectives and their financial coverage. Digitalisation has not only automated these processes, but also laid the foundation for data-driven management.

Despite the obvious progress, several limitations persist, such as a reliance on manual operations in data processing, the inadequate adaptation of federal requirements to regional specifics, and fragmented digital solutions that complicate end-to-end analysis. This highlights the need for further study of the issues concerning the kinkage between strategic and budgetary planning, and for the development of effective solutions.

Problems of state planning in the Russian Federation and proposed solutions

Inconsistency between indicators of strategic documents and budget parameters

The scientific literature and expert reports of the Accounts Chamber of the Russian Federation point out inconsistencies in the objectives found in various strategic documents, ranging from national projects to state programmes and the public financial management system[11] [39]. An

[10] SAIS — The State Automated Information System "Management".

[11] Report on the Work of the Accounts Chamber of the Russian Federation in 2023. URL: https://ach.gov.ru/reports/report_2023; Bulletin of the Accounts Chamber of the Russian Federation. State Administration. Special issue. 2024. URL: https://ach.gov.ru/upload/iblock/939/do4a89d041xnqo38hb8jsqwiykjbjbqm.pdf#page=85; Conclusion of the Accounts Chamber of the Russian Federation on the Report on the Execution of the Federal Budget for 2023, 17 June 2024, No. ZSP-68/24 (approved by the Accounts Chamber of

excessive focus on quantitative indicators often results in resources being allocated to achieving nominal targets, instead of ensuring the essential institutional transformations [40]. In addition, studies point out the superficial nature of the performance indicators of state programmes, which makes it difficult to evaluate their actual impact and leads to discrepancies for their interpretation [28]. The practical consequences of such inconsistency have been reported in the cases of the inefficient expenditure of 19.2 billion rubles of federal funds in 2023, as was revealed by the Accounts Chamber of the Russian Federation.[12]

Besides, due to lack of a unified structure of strategic documents and vague definition of concepts (such as "strategic architecture of planning") resulted to the situation, that government agencies develop their own strategies which are not always matching with their resource capabilities [28]. This fragments the management system into different parts and directions, where long-term risks of inconsistency between strategic priorities and budgetary decisions remain, despite the existence of emergency adaptation mechanisms.

To solve this problem, it is required to enhance furthermore the methodology for forming indicators in order to ensure a logical inter-relationship between them and compliance with the national long-term objectives of development. Although existing methodological guidelines regulate the development and effectiveness evaluation of state programs, and the revision of strategic priorities and reallocation of budgetary resources in recent years have demonstrated the system's capacity for rapid adaptation in crisis situations, state planning under normal conditions remains insufficiently flexible, and revising indicators remains a labor-intensive process. Therefore, it is important to strengthen the dynamic component of the methodology by including mechanisms for prompt adjusting of performance targets based on the analyses of the socio-economic situation.

Introducing a multi-level system of KPIs, synchronised and updated by machine learning algorithms will enable to take into account the changes in macroeconomic conditions, such as exchange rate fluctuations, demographic shifts and sanctions restrictions. This will ensure more accurate forecasting of budgetary requirements and reduce the probability of imbalances between strategic objectives and financial capacity. Using the blockchain technology to fix indicators in an immutable register will enhance transparency in decision-making furthermore by eliminating unwarranted adjustments.

In view of the current initiatives, subsequent improvements of the mechanisms for the integration of strategic and budgetary planning can be based on expanding the functionality of the digital strategic management platform, which is developed as part of the "Digital Strat-Planning project".[13] This work is already underway aimed to eliminate redundant documents, reduce duplicating processes, as well as expand transition from a "document-based" to a "data environment" approach. This will lay the foundation for the automated analysis of interrelationships between strategic and financial documents. In the future, the key task could be the integration of predictive analytics and scenario modelling tools, allowing for the real time assessment of macroeconomic impacts on budgetary parameters and the corresponding adjustment of key priorities. Developing artificial intelligence (AI) and machine learning algorithms within the framework of such a platform will enable to assess more accurately

the Russian Federation Board on 14 June 2024, No. 41K). URL: https://ach.gov.ru/upload/iblock/408/1ya157v6llliuulgrbvgzpnnb4n1newb.pdf

[12] Ibid.

[13] Digital Strategic Planning. Ministry of Economic Development of Russia (official website). (n.d.) URL: https://www.economy.gov.ru/material/directions/strateg_planirovanie/cifrovoe_stratplanirovanie/

the risks of underfunding of state programmes and identify optimal models of resource support for strategic objectives.

In addition to the abovementioned, an expanded expert assessment is required to upgrade the system of regular examination of strategic documents, especially in terms of realistic evaluation of performance targets. Such expert assessment can be provided by involving independent specialists, as well as representatives of business and academic community. In this context, a promising approach is to integrate expertise mechanisms into the digital platform of strategic management aimed to automate this process.

Furthermore, it is necessary to enhance the transparency of the budgetary process including by expanding the practice of public monitoring of spending and use of digital tools [37], such as the Federal Information System for Strategic Planning (FIS SP).

The effectiveness of state planning largely relates to the extent to which its participants assume responsibility for the achievement of the established objectives. Nowadays, control mechanisms for the implementation of plans are not enough well managed in various countries, including Russia. This can lead to adjustment of the original objectives, so that they become simplified, which can have an adverse impact on management discipline when working on long-term projects. In Russia, for instance, Deputy Prime-Ministers and heads of relevant ministries and agencies are in charge to control over the achievement of national project indicators. Besides, members of the government also control over certain KPIs in person, which links their work with the results of the national projects. However, as in many other countries, in case of failure to fulfil tasks, the relationship is not always transparent between formal performance indicators and personnel decisions. To improve the quality of implementation of the objectives determined in strategic documents, it is important to strengthen the interdependence between these objectives through personal responsibility and the results obtained.

The problem of coordination of strategic and budgetary planning within the scope of division of functions

Differences in approaches between the bodies responsible for strategic and budgetary planning can affect the alignment of development objectives and their financing mechanisms. Thus, for instance, the Ministry of Economic Development establishes long-term priorities, meanwhile the Ministry of Finance is in charge to ensure the balanced budget and the efficient use of public resources. This leads to a conflict of logic: strategic documents focus on long-term development, however, the budget framework does not often take into consideration long-term objectives, which complicates the process synchronisation [28]. It is necessary to separate these functions as it creates a system of checks and balances, that prevents unbalanced decisions and ensures control over financial stability. In practice, however, the lack of a clear mechanism aimed to integrate strategic and budgetary planning complicates the coordination of programme documents, and this can result in a discrepancy between strategic objectives and financial capabilities [29]. Differences in methodologies and priorities in federal and regional levels cause supplement problems. Adapting national strategies to local contexts, presents challenges related to both the regulatory framework and resource allocation [8].

To overcome this problem, attempts have been made through the introduction of digital tools, specifically, the “Electronic Budget” system, which facilitates information sharing interaction between agencies. However, technological solutions cannot eliminate differences in institutional priorities: even a common platform may not discourage agencies from championing their own interests.

One of the methods to resolve existing disagreements is to analyse and optimise existing cooperation mechanisms between authorities, to make formalised procedures in order to ensure transparency and publication of decisions taken [37]. Currently, the Ministry of Finance, the Ministry of Economic Development and other agencies interact between each other through collegial bodies, such as government commissions and interdepartmental working groups. Strengthening their role and expanding their authorities to balance strategic and budgetary priorities would enable a more effective coordination.

Contemporary technologies for data analysis can provide additional opportunities for synchronising strategic and budgetary planning. Firstly, machine-learning algorithms can be employed to synchronise KPIs, and in turn, to improve accuracy and correctness of forecasts, as well as to take into account the influence of external factors on budgetary needs [38]. Secondly, the integration of generative adversarial networks into the stress-testing process of strategies would create the conditions for the automatic adjustment of resource allocation in response to changes in the macroeconomic situation. Combining these tools with platform-based solutions that integrate all levels of governance, will enhance the planning system's adaptability and increase its resilience to external shocks.

To overcome institutional disunity, it is necessary as well to sophisticate the regulatory framework and to set up a unified system of requirements and standards for the regulation of the processes of strategic and budgetary planning; such requirements are mandatory for all authorities and must address inconsistencies among existing legislative acts. A significant step in this direction could be the use of natural language processing algorithms to analyse regulatory document texts and automatically detecting conflicts [39]. These measures will ensure a more accurate adjustment for legislative norms and reduce the risks of legal uncertainty.

Risks of reducing the effectiveness of state planning in the context of external shocks

The state planning system of Russia combines elements of adaptability and inertia, which affects its capability to promptly respond to changes in the external environment, including such factors as economic sanctions, pandemics or technological changes. Nevertheless, in times of crisis, the system also demonstrates flexibility, enabling the reallocation of resources and the adjustment of strategic priorities. In the years following 2022, emergency response state mechanisms have supported key industries operating under the pressure of sanctions by expediting the approval of anti-crisis budgetary measures and utilizing digital platforms for real-time monitoring. However, such flexibility is typically maintained only during acute crises whereas in periods of stability planning remains rigidly structured and less responsive to changes that require a proactive approach.

The established budgetary framework limits the ability to make amendments in the state programmes and national projects in response to long-term challenges, such as technological innovation or demographic trends. Although the three-year budget cycle envisages medium-term priorities, revising its parameters requires interagency coordination, which slows down the reallocation of resources. While rapid adjustments are possible in extraordinary situations, however, the lack of flexible mechanisms for adapting strategic objectives can lead to manual management of funding. This was visible during the COVID-19 pandemic, when delays in changing budget expenditure reduced the effectiveness of state support measures [28].

Another challenge remains the limited autonomy of regional authorities in determining strategic priorities [29]. Federal strategies do not always take into account the specific features

of economic development of regions, and the mechanisms for adjusting regional programmes lack sufficiently development. Consequently, regional authorities are compelled to adhere to centralised guidelines, even when they do not fully align with local needs. This reduces the effectiveness of local strategic planning and limits opportunities for flexible management of regional development.

One of the approaches to increase the flexibility of the planning system is to make transition to adaptive budgeting, which involves dynamically adjusting budget parameters according to the changes in economic circumstances. In contrast to the traditional three-year rolling budget, this approach involves continuous monitoring of macroeconomic indicators, as well as social parameters and factors of external pressures, which allow for prompt changes in resource allocation. Automated forecasting systems integrated into the budgeting process are can analyze economic dynamics economic dynamics and propose adjustments to financial priorities based on identified trends. At the same time, the formation of stabilisation funds tailored to specific risks would ensure the availability of provide a reserve for use in crisis situations without compromising the long-term financial strategy [39].

Another element for increasing adaptability could be the integration of Internet of Things technologies into the public administration system. Real-time data collection and analysis would allow for monitoring changes in the economy, infrastructure, and the social sphere, which would ensure a more accurate diagnosis of risks and the early detection of problems. Integrating such tools into the planning process not only increases the accuracy of forecasts but also optimises the allocation of budgetary funds based on the current situation.

In line with the foregoing, the development of scenario modelling and stress testing should be taken into consideration. By studying possible crisis scenarios and preparing specific courses of action for each, it is possible to minimise risks and reduce reaction time to threats. The use of machine learning and AI algorithms in these processes significantly expands analytical capabilities, by identifying potential threats and predicting their consequences with a high degree of accuracy. Generative models applied in stress testing can analyse the impact of various macroeconomic factors and propose optimal response strategies, thereby reducing the likelihood of a crisis scenario.

The integration of all the elements described above into a unified system for managing strategic and budgetary planning will significantly enhance the flexibility of public institutions. The development of mechanisms that ensure rapid reallocation of resources, risk forecasting and adaptation to changes is necessary to enable the state planning system to not only withstand external challenges, but also use crises as an opportunity for economic growth and structural transformation.

Challenges of digitalization

Digitalisation plays a prominent role in the integration of strategic and budgetary planning[14] [8, 9, 22]; however, its implementation is accompanied by risks that require systemic solutions. One of the key challenges is the digital divide caused by disparities in internet access, the high cost of required equipment, and different levels of digital literacy, particularly in small communities and remote areas. In a context where access to digital platforms is becoming the basis for effective interaction between levels of government, such disparities lead to asymmetries in strategic management and budgetary planning, reducing the regions' capacity to use modern management tools.

Additional risks are associated with cyberattacks. State information systems, such as The

[14] About the "Best IT Practices in Russia" TAdviser SummIT 2024 Conference. URL: https://clck.ru/3JYJVM

Electronic Budget system, are increasingly becoming targets for unauthorised access. This creates the threat of confidential data theft. Inadequate attention to cybersecurity issues may therefore undermine the reputation of government digital platforms and limit their effectiveness in managing resources.

Equally important is the resistance to digital transformation from professionals accustomed to traditional ways of working. Adopting modern technologies requires not only mastering new tools, but also changing managerial logic and established approaches to decision-making. Insufficient digital competences coupled with a psychological resistance to change, slows down the introduction of modern tools and limit their potential.

To counteract the above-mentioned challenges, it is necessary to accelerate the development and implementation of an AI-based data quality management system. The system should automatically verify information for compliance with established standards, identify errors, eliminate duplication and contradictions, and, in some cases, supplement missing data by taking context into account [39]. The high-accuracy of information used in strategic and budgetary planning will make it possible to minimize risks associated with incorrect calculations and unjustified decisions.

Another important endeavour is to create regional competence centres for the digitalisation of public administration to train specialists in modern methods of working with digital tools, and provide methodological support during the implementation of new technologies, thereby reducing the imbalance in skill levels across different territories in this area.

Furthermore, coordination mechanisms between different state information systems must be improved to avoid their duplication and increase the speed and efficiency of data exchange.

The integration of strategic and budgetary planning requires the use of a unified platform capable of ensuring data standardisation and the synchronisation of analytical tools. These measures will help minimise digital risks and lay the technological foundation for improving managerial efficiency.

Normative and methodological contradictions

Although the Russian legislative framework for strategic planning continues to evolve, the issue of aligning strategic objectives with budgetary resources remains only partially resolved. While the Federal Law No. 172-FZ law stipulates the need to align strategy and budget, it does not provide clear mechanisms for this alignment. The document lacks a defined sequence of steps that specifies how strategic priorities should be transformed into budget programmes, and what procedures ensure that strategic initiatives are aligned with financial capabilities. There are regulatory acts aimed at regulating these processes in greater detail. The Resolution of the Government of the Russian Federation "On the System of Management of State Programmes of the Russian Federation" establishes rules for the development, implementation, monitoring and evaluation of state programmes, defining their connection to the budgetary process, while Resolution No. 752[15] of the Government of the Russian Federation approves the rules for forming a consolidated annual report on the progress of implementation and evaluation of state programmes, which contributes to transparency and accountability in the use of public funds. However, despite the existence of these documents, practical difficulties

[15] Resolution of the Government of the Russian Federation No. 752 of 15 May 2023 "On Approval of the Rules for the Formation of a Consolidated Annual Report on the Implementation and Assessment of the Effectiveness of State Programmes of the Russian Federation, and the Annulment of Certain Acts and Certain Provisions of Certain Acts of the Government of the Russian Federation" (as amended and supplemented). URL: https://base.garant.ru/406891816/

can arise during their implementation as the methodological recommendations developed by line ministries do not always contain detailed action plans, focusing instead on general principles and targets. Consequently, state programmes are not always properly linked to strategic goals, and the required level of financing is determined based on current budget constraints rather than on definite methodologies.

Thus, to improve the effectiveness of integrating strategic and budgetary planning, it is necessary not only to refine the regulatory framework but also to ensure its practical implementation through detailed methodological guidelines at the level of line ministries, combined with enhanced control over their execution.

The "Fundamentals of State Policy in the Field of Strategic Planning", adopted in 2021, also failed to bridge the existing normative gaps. While the document proclaims the need for a unified architecture of strategic documents, it does not offer mechanisms for determining priorities and their connection with the budgetary process [28]. Consequently, the development of strategic documents and budget programmes is still carried out in parallel, which limits their coherence.

As part of the budgetary process, there are requirements for reporting on the implementation of state programs and control mechanisms from the Accounts Chamber of the Russian Federation. However, these tools relate to budget execution rather than the procedure for aligning strategies and financial commitments. Russian legislation does not provide for sanctions for developing unfunded strategic documents; their financing can remain undefined even after strategies are approved [29]. To eliminate these contradictions, specific procedures for the integration of strategic and budgetary planning must be enshrined in law. One possible approach is to develop a single state planning code that consolidates disparate regulations and establishes common definitions of key concepts such as "strategic planning", "state programme", "national project", and "budgetary forecasting". This document should clearly specify the mechanisms for coordinating strategic goals and budget parameters (including principles for forming performance indicators and resource allocation procedures), as well as the tools for monitoring and evaluation effectiveness, thereby eliminating discrepancies and the duplication of norms and making the planning procedure more transparent and coherent.

An additional measure could be the introduction of an automated system to monitoring and controlling compliance with regulatory requirements. The use of analytical algorithms (including AI) to analyze the text of strategic documents and budget requests would make it possible to reveal discrepancies between declared objectives and envisaged resources, and to monitor compliance with procedures for linking strategy and budget. This would make it possible not only to identify existing deviations but also to propose corrective measures, thereby increasing the managed flexibility of planning and its ability to adapt to changes in the external environment. The introduction of such tools will contribute to clearer coordination among all participants in the strategic and budgetary planning process, thereby reducing the impact of departmental disunity.

The shortage of specialists at the intersection of strategy and budget at the local level

Finally, let us consider the problem of the shortage of personnel with competencies in both strategic and budgetary planning [41], which is especially noticeable at the local level. This directly affects the quality of documents and their alignment with budgetary capacities, making the process of coordinating strategies and budgets less efficient, since — despite the development of information tech-

nology — it is still people who develop and implement the documents.

Solving this issue requires the creation of a comprehensive professional development system that combines digital educational platforms, mentoring mechanisms, and interaction between authorities and educational institutions. Online courses, webinars and virtual masterclasses will provide municipal employees with access to up-to-date knowledge and consultations with leading experts. This will not only raise their level of competence but also create the conditions for the interregional exchange of best practices, ensuring a more even dissemination of advanced experience.

A mentoring system, as one such training format in which experienced specialists share their knowledge and experience with young managers, contributes not only to the development of professional skills but also to the formation of a unified methodological approach to planning at all levels of authority. Combining distance learning with practical work under the guidance of mentors makes it possible to accelerate the training process and to bridge the gap between theoretical knowledge and its application in specific managerial tasks.

Partnerships between the authorities and educational institutions that train professionals in public administration, economics and finance play a paramount role in solving the problem of personnel shortages. Developing specialised training programmes focused on the practical tasks of strategic and budgetary planning will provide graduates with in-demand skills while involving faculty in the analysis of real strategic documents will strengthen the link between academia and management practice. This approach will contribute to the systematic professional development of personnel, the creation of a professional community of specialists in this field, and the elimination of disparities in methods and approaches used in different regions.

CONCLUSIONS

The evolution of the state planning system in Russia since the 1990s reflects a complex transformation from a Soviet planned model to market-oriented mechanisms incorporating elements of strategic management. The abandonment of rigid centralisation in favour of a results-based, programmatic approach (2004–2006), the introduction of a three-year budget (2007) and the adoption of the Federal Law No. 172-FZ in 2014 laid the institutional foundation for integrating strategic objectives with budgetary resources. However, as the given analysis has shown, these measures have not entirely eliminated systemic contradictions. The 2021 reforms aimed at simplifying state programmes, along with digitalisation efforts (such as the implementation of the "Electronic Budget" and "Digital Economy" national project), have enhanced the speed and transparency of processes. Nevertheless, critical issues persist, including information duplication, manual data management and regulatory conflicts.

Challenges such as inconsistent indicators and institutional disunity among agencies are rooted in the system's inertia, a legacy inherited from its prototypes. For example, the fiscal orientation of the budget, established by the reforms of the 2000s, continues to dominate long-term strategic priorities, while the duplication of functions between the federal and regional levels can be traced back to the period of decentralisation of the 1990s. Even the updated decrees of 2024, which set targets until 2036, require adequate synchronisation mechanisms with the budgetary process, which to date remain fragmented.

The solutions proposed in this article are based on both Russian and international experience. The transition to adaptive budgeting and the implementation of AI-powered stress-testing strategies builds on the ideas of the three-year rolling budget and digital platforms introduced

between 2018 and 2023, but supplements them with predictive analytics recommended by the International Monetary Fund. The introduction of blockchain technology to immutably record indicators and create inter-agency digital profiles of territories continues the work of the e-Budget initiative, eliminating data fragmentation. Legislative initiatives as a Single State Planning Code, are designed overcome the regulatory gaps inherent in Federal Law No. 172-FZ by drawing on Public Expenditure and Financial Accountability (PEFA) standards in order to enhance transparency. Nevertheless, digital instruments, including stress-testing of strategies and IoT monitoring, can increase the resilience of the system, but only if institutions evolve in tandem. Otherwise, manual control will continue to prevail in crisis situations.

Due to the weak engagement of local communities, there is a risk that strategies at the municipal level may persist unnecessarily or overlap. AI algorithms for budget forecasting can be hampered by data distortions or a lack of computing power.

The personnel issue remains a key challenge. The experience of 2021–2024 has shown that even sophisticated digital tools, such as an automated monitoring system, are ineffective without specialists, capable of combining strategic thinking with budgetary analytics. In this regard, proposals to create competence centres and partnerships with universities echo the experience of past reforms, where a shortage of qualified personnel has repeatedly hindered the progress of innovations.

The modernisation of the state planning system is a non-linear and high-risk process, requiring a synthesis of accumulated experience, technological capabilities, and international practices.

Even with implementation of all the proposed measures, compromises between flexibility and stability, and between innovation and bureaucratic inertia, are likely. Success will depend not only on technology, legislation, investment in human resources, and cybersecurity, but also on the capacity of the system for institutional learning, which will enable it to adapt to changes while maintaining controllability. In that case, state planning will not only respond rapidly to crises, but also use them as opportunity to implement the structural transformations set out in the updated national objectives for 2036.

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Conflicts of Interest Statement: The author has no conflicts of interest to declare.

The article was submitted on 20.01.2025; revised on 26.02.2025 and accepted for publication on 08.04.2025. The author read and approved the final version of the manuscript.