

EDN: ILUPAR
УДК 025.5–519: 005.591

Methodology for Achieving Leading Indicators in Strategic Planning at the Meso Level

Olga I. Babina and Vasily V. Nikulenkov*

*Siberian Federal University
Krasnoyarsk, Russian Federation*

Received 03.07.2023, received in revised form 10.07.2023, accepted 22.09.2023

Abstract: Under the conditions of transformational changes typical for the current stage of development of the Russian Federation economy, it becomes extremely important to conduct research on the development of tools in the field of strategic planning at the meso level. The paper proposes a methodology for achieving strategic goals at the meso level. The methodology includes the principles and algorithm for achieving strategic goals. The principles expand the theoretical and methodological basis of planning in terms of achieving leading indicators in the strategic planning of the region. The algorithm of the methodology illustrates the relationship between leading indicators and the goals of strategic planning. The paper may be useful to graduate students, scientists of higher educational institutions, state and municipal employees involved in strategic planning, as well as other interested parties.

Keywords: region, planning, strategic planning, regional planning, leading indicators, lagging indicators, meso level, methodology for achieving leading indicators, algorithm for achieving leading indicators, simulation model.

Research area: state and municipal administration.

Citation: Babina O. I., Nikulenkov V. V. Methodology for achieving leading indicators in strategic planning at the meso level. In: *J. Sib. Fed. Univ. Humanit. soc. sci.*, 2023, 16(11), 2055–2061. EDN: ILUPAR



Методика достижения стратегических целей на мезоуровне с помощью технологии имитационного моделирования

О.И. Бабина, В.В. Никуленков

*Сибирский федеральный университет
Российская Федерация, Красноярск*

Аннотация. В условиях трансформационных изменений, характерных для современного этапа развития экономики Российской Федерации, чрезвычайно актуальным становится проведение исследований, посвященных разработке инструментов в области стратегического планирования на мезоуровне.

В статье предложена методика достижения стратегических целей на мезоуровне с помощью технологии имитационного моделирования. Методика включает в себя принципы и алгоритм достижения стратегических целей. Принципы расширяют теоретическую и методологическую базу планирования в части достижения опережающих показателей в стратегическом планировании региона. Алгоритм методики иллюстрирует взаимосвязь опережающих показателей с целями стратегического планирования.

Статья может быть полезна аспирантам, учёным высших учебных заведений, государственным и муниципальным служащим, занимающимся стратегическим планированием, а также иным заинтересованным лицам.

Ключевые слова: регион, планирование, стратегическое планирование, региональное планирование, опережающие показатели, запаздывающие показатели, мезоуровень, методика достижения опережающих показателей, алгоритм достижения опережающих показателей, имитационная модель.

Научная специальность: 5.2.7 – государственное и муниципальное управление.

Цитирование: Бабина О. И., Никуленков В. В. Методика достижения стратегических целей на мезоуровне с помощью технологии имитационного моделирования. *Журн. Сиб. федер. ун-та. Гуманитарные науки*, 2023, 16(11), 2055–2061. EDN: ILUPAR

Introduction

In conditions of instability and uncertainty of the external environment, it becomes extremely important to conduct research on the study of strategic planning tools at the meso level. The key problem that prevents reaching sustainable growth at the meso level is that the heads of state structures and ordinary employees of departments have a different understanding of the strategic development goals. This leads to the fact that in the current activities, each of them makes operational management decisions in accordance with their ideas. In ad-

dition, in operational activities, managers do not have the tools to achieve strategic goals at the meso level. This determines the necessity and relevance of this study.

At present, russian and foreign scientists pay great attention to the issues of achieving strategic goals at the meso level. Among russian scientists, a prominent place is occupied by the articles of Tatarovsky Yu.A. (Tatarovsky, 2015), Shakirova A. I. (Shakirova, 2013; Shakirova, 2013), Korneeva I. V. et al. (Korneeva, Rusakova, 2017), Aderikho Yu.A. et al. (Aderikho, Kryukova, 2010),

Didenko D. V. (Didenko, 2020), Khotomlyansky A. L. (Khotomlyansky, 2008), Korchagina I. V. et al. (Korchagina, Rogova, 2020), Sultanova D. Sh. et al. (Sultanova, Khaertdinova, 2010) and others. Among foreign scientists, this problem was studied by such scientists as Covey S. et al. (Covey, McChesney, Huling, 2023), Kovey S. R. (Kovey, 2023) and many others.

The purpose of this paper is to develop a methodology that allows you to achieve the key goals of strategic planning at the meso level through the management of leading indicators.

The methodology development for achieving strategic goals will increase the efficiency of the functioning and development of state structures. Measuring leading indicators in the analysis of the region's activities will help to see emerging difficulties, avoid failures, providing an opportunity to adjust the strategic plan in a timely manner. Therefore, continuous monitoring of leading indicators is the starting point for operational management. This approach to planning the activities of the region makes it possible to detect and solve problems before their consequences affect lagging indicators.

The following methods were used in the work: analysis, synthesis, generalization and expert assessments.

Materials and methods

All work carried out within the framework of this study can be divided into two main stages.

At the first stage, a detailed analysis of scientific sources was carried out, on the basis of which it was possible to identify the essence of the concepts of 'lagging indicators' and 'leading indicators' regarding the activities of the region, to analyze existing approaches to achieving leading indicators in strategic planning at the meso level in domestic and foreign science.

At the second stage, experimental work was carried out to develop a methodology for achieving strategic goals at the meso level, which includes the basic principles and algorithm for achieving indicators.

Methodology for achieving strategic goals at the meso level

Under the methodology we will understand the totality of methods and techniques used in the process of analytical study of the region's activities. In this paper, the methodology for achieving leading indicators in strategic planning at the regional level includes the principles and algorithm for achieving these indicators. The methodology allows to determine the order of achievement of the strategic goals of the region. The formulated principles will expand and complement the theoretical and methodological basis of planning. The methodology algorithm illustrates the relationship between leading indicators and principles. The conceptual scheme of the technique is shown in Fig 1. The developed technique is based on the works of such scientists as Covey S. et al. (Covey, McChesney, Huling, 2023) and does not contradict them.

Principles of strategic planning

After analyzing the principles of strategic planning formulated by Ansoff I. (Ansoff, 2009), Seliverstov V. E. (Seliverstov, 2011), Smirnova O. O. (Smirnova, 2013), Razilov Z. V. (Razilov, 1986) and indicated in the Federal Law 'On Strategic Planning in the Russian Federation' dated June 28, 2014 No. 172-FZ, we will choose those that should be guided, first of all, in the methodology when achieving strategic goals at the meso level: *openness and information accessibility, variability of goals, innovativeness, responsibility of participants and continuity.*

The principle of openness and information accessibility, formulated by Seliverstov V. E. (Seliverstov, 2011), implies information openness at all stages of the development of a strategic plan.

The principle of variability of goals (Federal Law of June 28, 2014 No. 172-FZ 'On Strategic Planning in the Russian Federation', 2014). The possibility of assessing the achievement of the goals of social and economic development using quantitative and (or) qualitative target indicators, criteria and methods for their assessment.

The principle of innovation (Seliverstov, 2011). The principle implies a focus on the

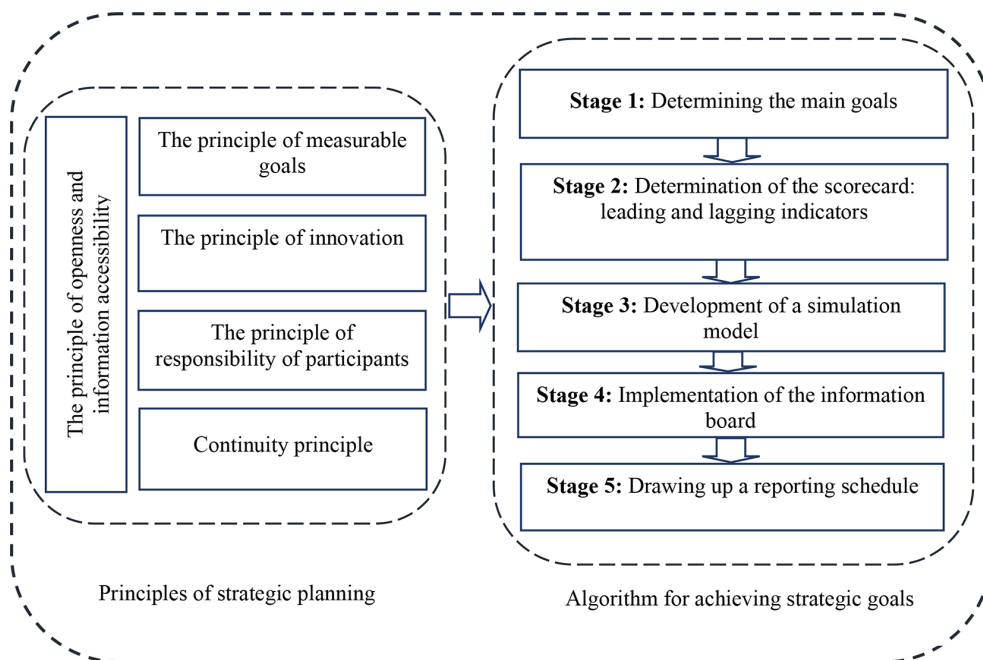


Fig. 1. Conceptual scheme of the methodology for achieving strategic goals at the meso level

search and implementation of new innovative ways in the economic, social and technological development of the region, as well as in management technologies.

The principle of responsibility of participants (Federal Law of June 28, 2014 No. 172-FZ 'On Strategic Planning in the Russian Federation', 2014). According to this principle, the participants in strategic planning are responsible for the timeliness and quality of the development and adjustment of strategic planning documents, the implementation of measures to achieve the goals of social and economic development.

Continuity principle (Smirnova, 2013)). The principle implies the need for a periodic review of the parameters of regional development plans and their prolongation for the next planned period of time, taking into account the results of the planned tasks in the past period.

Algorithm for achieving strategic goals at the meso level

The algorithm for achieving the strategic goals of the region consists of five main stages.

Stage 1. Definition of the main goals

The first step in the methodology for achieving strategic goals at the meso level is the goal definition. The main goal is a goal that marks a strategically important turning point for the region and allows you to unambiguously determine the focus that will raise the organization to a qualitatively new level.

According to the strategy of social and economic development of the Krasnoyarsk Territory until 2030, the main goal of the social and economic development of the region for a long-term period in the region is 'the transformation of the economic model of the region from predominantly raw materials towards industrial and innovative development, carried out on the basis of the advanced development of education, science and innovation: formation on the territory of the system region of deep processing of extracted raw materials and fuel with a priority on the production of products with high added value, the creation and development of high-tech industries, the introduction of innovative technologies and the production of innovative products, the forma-

tion of new areas and directions based on the achievements of modern science and the production of new knowledge', 2021.

The main goal of the social and economic development of the region for the long term can be decomposed into the following main sub-goals:

Goal 1: Ensuring a high level of material well-being of the inhabitants of the region on the basis of effective employment of the population by 2030.

Goal 2: Formation of a modern innovation infrastructure, orientation of scientific and technical developments to promising areas of development of modern society and solving the problems of social and economic development of the region by 2030.

Goal 3: Development of traditional industries of the region based on their modernization and development at a new technological level by 2030.

Stage 2. Definition of a system of indicators: leading and lagging

The next methodology stage is the definition of a indicators system. Existing economic indicators are usually divided into two types:

- delayed;
- leading.

Lagging metrics are benchmarks for critical goals. These indicators, as a rule, reflect the results of actions already taken. They are easy to identify, measure and compare, which makes lagging indicators very useful. Knowing and tracking these indicators helps to understand how to achieve the desired results at the meso level. However, the obvious disadvantage of lagging indicators is that they can give an idea of the current state of affairs too late for quick response and decision making.

Lagging indicators at the meso level include such indicators as: Population, Average per capita cash income (per month), Average consumer spending per capita (per month), Average monthly nominal accrued wages of employees of organizations, Gross regional product, Balanced financial performance organizations and others.

Unlike lagging, leading indicators identify the most significant actions that need to be

taken to achieve the main goal of the region. Leading indicators are factors that directly affect the result. Their value lies in the fact that leading indicators help to predict the future result and serve as a starting point on the path to improvement.

Leading indicators include: The number of negotiations held with stakeholders or organizations, The number of agreements between organizations under discussion, The number of initiated projects, The number of events held where stakeholders can contact, etc.

The list of lagging and leading indicators in the strategic planning of the region is given in Table 1.

Stage 3. Development of a simulation model

The most important methodology stage is the development of a simulation model. A simulation model is a model that can be used to determine ways and means to achieve goals in solving the problems of social and economic development of the constituent entities of the Russian Federation, as well as to explore multivariate scenarios for its development through a series of computer experiments, evaluate their effectiveness and choose the most optimal one from them. option for further socio-economic development of the region. You can get acquainted in detail with the methodology for developing a simulation model at the meso level in the works Babina O.I. et al. (Babina, Vladimirova, 2021), Babina O.I. (Babina, 2022).

Stage 4. Implementation of the information board

For the convenience of tracking progress in the implementation of lagging and leading indicators, it is necessary to use an information board. The main task of creating a scoreboard is to stimulate the active participation and involvement of all team members. The scoreboard should be visual, simple, not overloaded with data, up-to-date and always in the field of view of all team members. Tools for creating an electronic information board – Scoreboard Builder Tool, Google Data Studio, Power BI, Oracle Business Intelligence, Foresight, Tableau, Qlik, SAS, DataFan, etc.

Stage 5. Drawing up a reporting schedule

The last stage of the methodology is the compilation of a reporting schedule. The reporting schedule allows you to report on progress or lack thereof using numbers. Regular planning and action reports are aimed at changing the numbers on the scoreboard. Action reports are regulated by means of collective meetings, in which each participant reports on the results achieved in the past week, reports on the commitments made for the next week. In addition, the meeting jointly discusses effective and inefficient methods of work to achieve the strategic goals of the region.

Conclusion

Based on the study, the author formulated the following conclusions.

When forming a strategy for the social and economic development of the region, it is necessary to competently build not only priorities, but also look for new tools to achieve them.

For effective management of the region's economy, a methodology for achieving strategic goals has been developed, which includes the principles and algorithm for achieving indicators. The principles expand the theoretical and methodological basis of planning in terms of achieving the strategic goals of the region. The methodology algorithm illustrates the relationship between leading indicators and the goals of strategic planning. The methodology is an ordered model of behavior, with the help of which it is possible to ensure the achievement of the organizational goal of the region at a high level. Using a system of lagging and leading indicators to develop a region's strategy increases the effectiveness of strategic planning and puts into practice a systematic approach to management.

The methodology presented below for achieving leading indicators in strategic planning at the meso level entails not only results, but also the development of operational management to achieve the most important goals.

References

- Aderikho Yu.A., Kryukov A.F. Indicators of entry and exit from the recession [Electronic resource]. In: *Statistics and economics*, 2010, 6. Access mode: <https://cyberleninka.ru/article/n/indikatory-vhoda-iz-vyhoda-iz-retsessii> (date of access: 06.15.2023).
- Ansoff I. *Strategic management*. M.: Economic, 1989. 519 p.
- Babina O.I., Vladimirova O.N. Theoretical and methodological foundations of the organization of strategic planning of the region. In: *Bulletin of the Chelyabinsk State University*, 2021, 3 (449), 24–33.
- Babina O.I. *Theory, methodology and practice of regional strategic planning*. Scientific thought Publ. Moscow, 2022.
- Covey Sh., McChesney K., Huling D. *How to achieve the goal: Four disciplines of execution*. Moscow: Alpina Publisher, 2023. 366 p.
- Didenko D.V. Relationship between the processes of human capital formation and economic growth: new evidence at the dawn of the industrialization of Russian regions [Electronic resource]. In: *Theoretical economics*, 2020, 6 (66). Access mode: <https://cyberleninka.ru/article/n/vzaimosvyazi-protsessov-formirovaniya-chelovecheskogo-kapitala-i-ekonomicheskogo-rosta-novye-svidetelstva-na-zare-industrializatsii> (date of access: 06.15.2023).
- Federal Law No. 172-FZ 'On Strategic Planning in the Russian Federation' (as amended). System GARANT [Electronic resource]. Access mode: <http://base.garant.ru/70684666/#ixzz4YicJ97yG> (date of access: 02.14.2023).
- Khotomlyansky A. L. *Improving methods of economic forecasting based on regression modeling* [Electronic resource]. Priazovsky State Technical University, 2008, 18–1. Access mode: <https://cyberleninka.ru/article/n/sovershenstvovanie-metodov-ekonomicheskogo-prognozirovaniya-na-osnove-regressionnogo-modelirovaniya> (date of access: 06.15.2023).
- Korchagina I. V., Rogova K. V. Strategy for the formation of an innovative ecosystem of technological entrepreneurship in the region based on a balanced scorecard [Electronic resource]. In: Management is-

sues, 2022, 1 (62). Access mode: <https://cyberleninka.ru/article/n/strategiya-formirovaniya-innovatsionnoy-ekosistemy-tehnologicheskogo-predprinimatelstva-regiona-na-osnove-sistemy-sbalansirovannyh> (date of access: 06.15.2023).

Korneeva I. V., Rusakova G. N. *The system of key performance indicators of personnel management (KPI), features of its use. Rationing and wages in industry*, 2017, 3.

Kovi S. R. *Leadership based on principles*. Moscow: Alpina Publisher, 2023. 366.

Razilov Z. V. *Strategic planning of social and economic development of territories*: PhD (economy sciences). Krasnodar, 2009. 166 p.

Shakirova A. I. Forecasting a change in the phase of the economic cycle in the region using leading indicators (on the example of the Republic of Tatarstan). In: *Economy and entrepreneurship*, 2013, 3 (32), 142–145.

Shakirova A. I. Leading indicators used by the economic authorities and the economic community in Germany and the United States to analyze the situation and make economic decisions. In: *Questions of forecasting*, 2013, 6, 8–13.

Seliverstov V. E. *Regional strategic planning: methodology, practice, tools, institutions*: PhD (economy sciences). Novosibirsk, 2011. 425 p.

Smirnova O. O. *Fundamentals of strategic planning of the Russian Federation*: monograph. M.: Nauka Publ., 2013. 302 p.

Strategy for the social and economic development of the Krasnoyarsk Territory until 2030 [Electronic resource]. Krasnoyarsk, 2021. Access mode: <http://www.krskstate.ru/2030/plan>. (date of access: 06.06.2023).

Sultanova D. Sh., Khaertdinova A. A. Forecasting cycles of economic activity in Russian regions [Electronic resource]. In: *Digest Finance*, 2010, 10. Access mode: <https://cyberleninka.ru/article/n/prognozirovanie-tsiklov-ekonomicheskoy-aktivnosti-rossiyskih-regionov> (date of access: 06.15.2023).

Tatarovsky Yu. A. Using a system of leading and lagging indicators as an analytical support for managing the financial condition of a business. In: *Siberian financial school*, 2015, 1 (108), 149–153.