

# Socio-Economic Planning of the Economy

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## Abstract

**Objectives:** The economic impact on improving the quality of the strategic management system operation by increasing the quality, reliability and validity of the results obtained is the basis of socio-economic planning and economic design.

**Methods:** The comparative analysis of the expert-analytical support of strategic management, socio-economic planning and economic design in the Russian Federation and a number of foreign countries, carried out in this article, let us conclude that the system of expert-analytical support in general meets the level of the leading developed countries. **Findings:** One of the main scientific tasks in this area is to improve the mechanisms and algorithms of the current support of strategic management in the Russian Federation, as well as to minimize and overcome the negative trends in the economy. The article considers the principles and selection algorithm for research and expert-analytical support that should be used in the further development of national foresight projects. The authors have formulated recommendations for improving the overall efficiency of the system of strategic management, socio-economic planning and economic design which allow creating conditions for a more active involvement of System Expert Societies (SES) to solving strategic problems of the economy. The main differences of the proposed algorithm from the current practice are as follows: A competitive and transparent nature; the possibility to form analytical teams on the principle of efficiency; ensuring the required level of quality of the final outcomes before the competition (since the required level of quality is determined by the SES status of participants that all contestants have). **Application/Improvements:** It is necessary to create a national system of expert-analytical communities, whose planning and forecasting results should be accounted for in the strategic management system, socio-economic planning and economic design at the national and regional levels.

**Keywords:** Budget Planning, Economic Potential, Macroeconomic Forecast, Socio-Economic Planning, Strategic Management of the Economy

## 1. Introduction

Since the beginning of the twenty first century Western Europe has carried out a lot of studies aimed at identifying the prospects for technological and scientific development. These studies were undertaken by particular countries (especially the leading economies such as Austria, France, Germany, Italy, and France) and the whole European Union at the supranational level. Similar studies of the future were carried out in Europe in the 1990s, and they attempted to determine the specific parameters of the development, to predict the value of

quantitative indicators and to determine the development paths. However, modern forecasting has a more flexible approach and is less deterministic. It uses such methods as foresight, development of multiple scenarios, comprehensive analysis of the future, and others to identify possible trends and prospects for the development of science, technology and society. In this regard, it is worth mentioning that in 2004 European Foresight Monitoring Network (EFMN) was launched, which conducts permanent monitoring of foresight practices both in the EU and in the third world countries, as well as provides information about these activities to the policy developers,

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innovation policy researchers and the participants of foresight projects. By now, it includes thousands of different studies conducted at the international level, within various countries, regions, industries and corporations. Annually EFMN publishes about 40 briefs of national and international foresight projects, as well as reports on major perspective scientific and technical trends for the EU and the analysis of foresight projects. EFMN is funded by the EU and is part of the European knowledge-sharing platform. It includes the following organizations: ARC-SA, VDI, PREST, TNO, CKA, Atlantis, Fhg-ISI, Dialogik, Louis Lengand and Associates, Technology Centre Prague<sup>1</sup>. Over the past 15-20 years, foresight has turned into an instrument for politics, strategic planning and management, actively applied within the EU. This methodology is widely used at the national level in the ministries of science<sup>2</sup> to develop long-term strategies for socio-economic development of the countries, to identify priority areas of scientific and applied research, as well as to boost the interaction between the participants of scientific and innovation systems. As a result, it is possible to outline the “desired future”, to create a program to achieve it, to identify potential threats, and to use long-term “anticipating” strategies. Global trends in the building of strategic management systems mainly focus on the development of forecasting methods and models (socio-economic and technological ones) which form the basis of socio-economic planning and design. Considering a great variety of features these complex processes have that depend on the social, economic, political, climatic, temporal and other characteristics of a country (or a particular region), the experts address the certain range of social and economic development issues through specific methods of planning, design and management, many of which have long proven to be effective. At the same time, it is quite difficult to choose a specific method to be applied in each particular case, as the most accurate choice should be made after consideration of specific goals and objectives.

## 2. Concept Headings

Taking a look at the global practices lets us conclude on the general trend in the choice of strategic management, socio-economic planning and design instruments. These include initial forecasting, followed by determining how to achieve the required indicators. Typically, a short-term prediction (up to a year) is considered to be the

basic one; it enables to construct mid-term (3–5 years) and long-term prospects (from 5 to 15–20 years)<sup>3</sup>. This also proves the experts’ inclination to combine different approaches, which results in their using a greater range of methods simultaneously. The most commonly used ones are the following:

- The Delphi method involves the development of an agreed collective decision by highly qualified experts as a result of the multi-round survey conducted according to the proposed methodology. The evaluated criteria should be quantitative and comparable. Distinctive features of this method are the experts’ anonymity and an opportunity to use the results of the previous round. This method is used for forecasts which lay the basis for long-term planning.
- Scenario writing method is used when the processes studied are difficult to predict. For instance, one of its variations is a situation when the event probability cannot be estimated in advance, so one has to construct a hypothesis with a number of possible scenarios. An example of this is the creation of macroeconomic forecasts on the basis of different prices for oil and other energy resources. This method is chosen when it is necessary to obtain long-term forecasts in very complex system if the raw data are not reliable. Three scenarios are developed in this case: two extreme ones (optimistic and pessimistic) and the most probable one. Along with this, one should determine:
  - Expected benefits from the events according to the optimistic scenario.
  - Consequences according to the pessimistic outlook.
  - Probability of occurrence of the most probable scenario.
- The method of normative and exploratory forecasting allows seeing the result of the intersecting paths of changes in the social needs and technological development for over 20-50 years<sup>4</sup>. An example of this is a forecast on the future of energy consumption depending on changes in environmental conditions or forecasts for various public areas: transport, science, education, etc.
- Extrapolation method is associated with the extension of the law of function variation from its field to the area, lying outside the field of view. This method is based on the assumption that the future is shaped by the same forces and processes that were dominant and directing in the past and the present. It is usually used at the initial stages of short-term prediction, since in

mid-term and long-term forecasts the dispersion of values of extrapolated figures varies so greatly that there is no point in using the method of expected value. The significance of this method stems from the fact that the conditions remain stable over a long period of time both in the past, and in the foreseeable future. An example of the field where such inertia is proven by practice is the industry characteristics of power consumption dynamics, taking into account the seasonal factor. However, this method is not applicable to new industries or new technologies. A variation of this method actively used in real life is the method of exponential smoothing with trend variable, which allows eliminating such property of economic indicators as their “ageing”. SWOT Analysis is one of the most common methods used to assess the impact of external and internal factors on the development dynamics. The analysis considers not only the strengths and weaknesses of an object, but also provides an assessment of the opportunities and threats coming from the external environment. So, the parameters “S” and “W” refer to the state of the object, while the “O” and “T” deal with the external environment Figure 1. When evaluating the external situation, one should consider the legal framework and the political climate in the country, its possible changes that have certain impact, the economic situation in the country (region, enterprise), social and demographic factors, ecology, dynamics and direction of technological processes. The analysis of the internal situation of the object implies evaluation of the following: The potential, available resources, and competitiveness. SWOT-analysis provides an opportunity to fully consider the features and potential of the object under study at the macro, meso and micro levels, which makes it a fairly popular tool of risk assessment and risk management, as well as for taking decisions. In addition to that, McKinsey matrix (industry attractiveness – competitive strength) is another method used in portfolio analysis. The method is applied when it is necessary to work out a strategy for the development of a range of products and services. The model is represented by a matrix consisting of 9 cells which enables a comparative analysis of strategies when searching for the development paths Figure 2. The model of “industry attractiveness- competitive strength” was first proposed by General Electric Corporation and McKinsey&Co consulting company in 1970. By 1980, it became the most popular multi-factor model for the

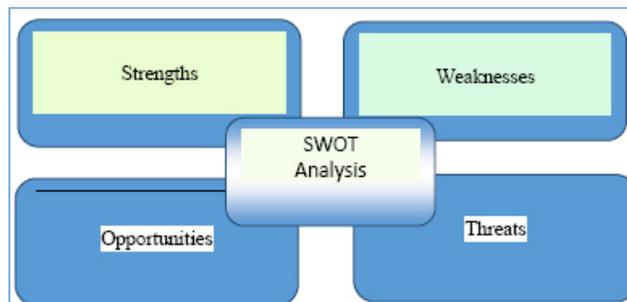


Figure 1. Application of SWOT analysis.

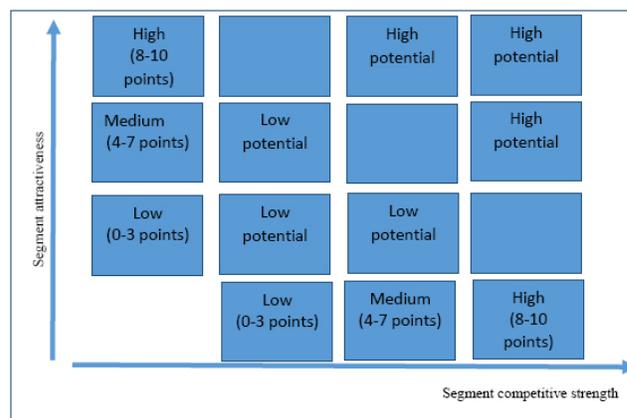


Figure 2. Application of McKinsey matrix.

analysis of business strategic position. The application of McKinsey matrix includes the following stages. Stage1. Selecting criteria for measuring the industry attractiveness and assessing the level of competitive strength of objects in each segment. Here two groups of evaluation indices are formed:

- The attractiveness of the segments is evaluated in terms of potential volume of sales; the ability of new players to enter the studied market segments easily due to low barriers; the ability to secure long-term profits; low market risks;
- Competitive strength in the segment, which is estimated by determining the weight (importance) of each of the criteria; assessment of each segment according to the selected criteria; selection of target segments and allocation of resources; determination of the potential of each segment regarding consumer and market trends. In addition to that, the criteria of competitive strength should include factors describing the value of a competitive advantage of the object, provision of resources, the level of competition; it should also account for the prospects of competition in the long term.

- Stage 2. Weighing each of the criteria.
- Stage 3. Evaluating each segment for the selected criteria.
- Stage 4. Estimating the potential of each segment for the selected criteria.
- Stage 5. Choosing target segments and allocating resources.

As far as global practices are concerned, we should mention the Program-Target Method (PTM), which includes both planning and management, while the objectives of the plan are related to the resources by means of programs. This method is an example of a systematic approach and involves setting the objectives of economic development at any level of management (macro, meso, micro). It is based on the principle of priority and is closely connected with such planning methods as normative, balance, and economic-mathematical ones. At the initial stage of using PTM, it is necessary to estimate the final needs of the community according to the objectives of social and economic development of the country (macro level) or region (meso level). Next, one should determine ways, means and resources to achieve them. By doing this, it is possible to select basic objectives of social, economic, scientific and technological development, to develop interrelated activities, to set a timeframe for their implementation, as well as to ensure a balanced provision of the necessary resources, taking into account their potential Table 1. It should be noted that application of PTM consists of several stages: First, one determines the list of issues, and decides which of them are more important; secondly, one formulates the task of designing the program, sets goals, their parameters and hierarchy, tasks for each period, the resources, timing and performers; third, according to the hierarchy of objectives it is necessary to specify the activities and tasks after the order of their implementation; fourth, one calculates the resources required for the program and identifies the key performance indicators of its implementation; fifth, one creates the documents required for the program implementation, and receives the requires approvals. Programs can be developed for various time intervals and, as a rule, serve as guidelines. For instance in<sup>5</sup> states that road maps allow us to critically assess and review the knowledge on the current economic environment and its major trends. They enable comprehensive understanding of the future and making informed decisions that one has to make today 5. Talking about Russia, there have been at least nine roadmaps designed since 2013 with forecast

**Table 1.** Share of international companies doing macroeconomic forecasting

Company name	Number of forecasted variables	Forecasting methods (tentative assessment)	The share of the method in the total volume
Chase Econometrics	Approx. 700	Econometric models	70%
		Expert assessment	20%
		Time series analysis	5%
		Analysis of current data	5%
Data Resources, Inc	Approx. 1000	Econometric models	55%
		Expert assessment	30%
		Time series analysis	10%
		Analysis of current data	5%
Wharton Econometric Forecasting Associates	Approx. 1200	Econometric models	60%
		Expert assessment	30%
		Analysis of current data	10%

horizon of 5 years, which aim at the implementation of such national strategies as increasing workforce productivity, improving the investment climate, supporting the development of competitiveness and entrepreneurship, raising the quality of life, improving normative legal regulation in various business areas, etc. However, there are yet no available results of implementing the projects, designed using the method of the road maps of the future. What's more, it can be argued that, without a clear mapping algorithm, the prescribed form and structure of the map, its implementation is obviously dependent on the creativity of its designers and the professionalism of the performers. All in all, using the roadmaps method in strategic management, planning and design has become a popular trend. However, its use requires the creation of methodical guidelines on the mapping and development of its algorithm implementation according to the level of economic systems (macro, meso, micro)<sup>6</sup>. Here, let us identify the following basic procedures of design:

- Setting the boundaries, the main goal is to find the limits with an acceptable solution lying within. This includes the following steps: First, one should give a complete description of the requirements that must be attributed to an object or a system; second, one should determine the interval of uncertainty; and third, it is necessary to develop a model which can be used to vary the basic parameters within the set uncertainty; fourth, required tests should be done.
- Page's cumulative strategy is used to accumulate the necessary resources in a given direction and to eliminate unviable projects<sup>7</sup>. Although the probability of achieving this goal is largely determined by the number of proposed design solutions, one should understand that project costs will be increasing along with an increase in the number of project options.
- Morphological analysis and solutions synthesis is a combination method, as a rule, implemented through computer technology and which involves: Selecting the main features of the system, choosing several alternatives for each characteristic, obtaining a variety of solutions by options combination.
- The method of studying the structure of the problem, which allows investigating the structure in the following forms: interaction matrix, interaction network, system transformation, and the design of new features. The matrix of interactions is used to search for interdependencies and interrelationships of system elements within the formulated problem<sup>8</sup>. The interaction network is represented by a graph, a flow chart or a block diagram. The transformation of the system involves identification of the components of the system that can be used to deal with or eliminate existing drawbacks<sup>9</sup>. The method is applied when it is necessary to create a fundamentally new system or its configuration that would use new behavioral patterns and/or features.

### 3. Statistical Methodology

When developing an algorithm for constructing the scientific and expert-analytical support for strategic management, planning and design, we used the system of principles with the following characteristics:

- Cost effectiveness, without compromising the quality of the final outcome of scientific and expert-analytical work.

- Efficiency, compliance with the stated objectives and issues to be addressed.
- Adaptation to changing conditions of external and internal environment and conditions of the specific scientific and expert-analytical tasks.

To meet these conditions at the initial stage, it would be recommended to create a national system of expert-analytical communities (system expert societies- SES), the members of which are characterized by the following essential feature that distinguishes them from those not belonging to this system: their forecasts, projects, plans and programs in the past demonstrated the required level of accuracy, reliability and efficiency, so that in the present and future it is possible to use their ideas when preparing government forecasts, projects, plans and programs of socio-economic development<sup>10</sup>. We would like to highlight the features that distinguish the SES members from other scientific and practical institutions, engaged in strategic management issues, socio-economic planning and design to one extent or another. This is an issue of maintaining the required level of accuracy, reliability and efficiency of the results of their research which can be evaluated by the retrospective analysis of their past developments, the degree of involvement into the strategic management, planning and design of the state in any form.

Depending on the problem statement and characteristics of a particular SES member, we consider three levels of their involvement in solving the tasks of strategic management, socio-economic planning and design:

Level 1 – as a developer /co-developer of certain planning and forecasting documents;

Level 2 – as an expert in public assessment of the quality of the developed planning and forecasting documents;

Level 3 – as an analyst, whose opinion is taken into account when developing the planning and forecasting documents without immediate participation in the process.

Along with this, the status of a SES member should be granted after objective evaluation of the quality of a candidate's scientific and analytical forecasting and planning activities, which represent the characteristics of the final planning and forecast product, created by the society. It should be noted that SES operating in Russia are mainly engaged in forecasting activities, so that the final product can be evaluated by standard methods of the forecast quality assessment. For those carried out by for-

malized methods, one can use the weighted average of the deviations of actual values of the basic parameters from their predicted values as an evaluation criterion:

$$FQA = P_1 \times (R_1 - F_1) + P_2 \times (R_2 - F_2) + \dots + P_N \times (R_N - F_N), \quad (1)$$

Where FQA is forecast quality assessment,  $P_i$  is the weight of the  $i$ -th parameter of the forecast, estimated by the significance level of this parameter in the general forecast (significance levels can be determined by experts), the sum of the weights must be equal to 1;  $R_i$  and  $F_i$ , respectively, are the actual (retrospective) and predictive values of the  $i$ -th parameter of the forecast;  $N$  is the number of forecast parameters considered when assessing the quality. For forecasts, some or all of the resulting parameters of which are represented by time series (trend forecasts and the like), in the formula 1 one should use the standard deviation of the actual and forecasted series of the forecast parameter instead of the difference ( $R_i - F_i$ ). So, the formula would be:

$$FQA = P_1 \times a_1 + P_2 \times a_2 + \dots + P_N \times a_N, \quad (2)$$

Where,  $a_i$  is the standard deviation of the actual and forecast time series in the evaluated forecast. The quality of the forecasts made with non-algorithmic or combined methods should be evaluated by experts only. Moreover, if the simplest of them can be assessed as a flipflop variable (correct/incorrect), then in case of detailed forecasts that involve elements of the scenario method, it is necessary to use a comprehensive assessment, which will take into account at least the following typical qualitative characteristics of the forecast:

- The right choice of the main scenario/development trends, the forecast was based on.
- Complete a priori consideration of all trends, influencing factors, etc., arising in the course of the forecast.
- Complete composition of the resulting forecast parameters, etc.

The following formula is used in peer reviews of detailed forecasts to determine the numerical value of the evaluation criteria:

$$FQA = P1 \times ER1 + P2 \times ER2 + \dots + PN \times ERN \quad (3)$$

where  $ER_i$  is expert evaluation of the  $i$ -th estimated parameter of the forecast; the numerical value of  $ER_i$  may be expressed as a percentage, in points or using a binary system (“yes” – 1, “no” – 0), depending on the characteristics of a particular forecast.

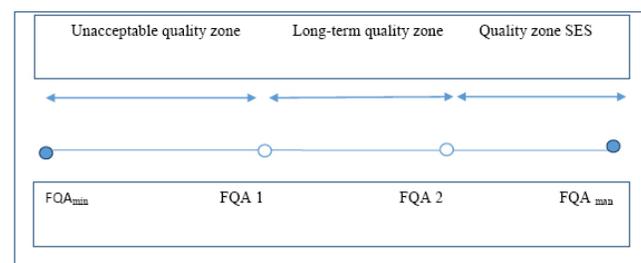
Evaluation of the possibility of the expert-analytical society to obtain the SES status on the basis of the analysis of the obtained FQA value can be carried out by zonal method shown in Figure 3. The values  $FQA_{min}$  and  $FQA_{max}$  for the zonal division, shown in Figure 3, are calculated according to the selected system of assessment as the minimum and maximum possible values. The values FQA 1 and FQA 2 are set by experts, depending on the quality requirements imposed on the SES.

## 4. Results

Despite the fact that one can actually provide a posteriori assessment of the forecast, the assessment of the quality of SES expert-analytical work by evaluating the quality of forecasts cannot be considered the best option. The main factors that reduce the level of its efficiency are:

- Strong dependence of the accuracy of the forecast on the object of the forecast, the number of analyzed factors, the forecast method and prediction of the forecast period, which will inevitably lead to a distortion in the overall assessment of the SES performance quality.
- Weak comparability of forecasts developed by different SES in their quality characteristics, which will also lead to a distortion in the assessment of performance quality (with the distortion mechanism similar to the previous one).
- A long period of collecting source data for quality evaluation, which will lead to serious difficulties in the SES quality assessment (in some cases making it completely impossible), without long-standing (over several decades) experience of developing forecasts of the required level, etc.

Thus, the mentioned factors require conducting a special multidisciplinary study on the development of principles and methods of assessment of SES performance quality. However, the creation of the national system of expert-analytical soci-



**Figure 3.** Zone division of the FQA numerical value for selecting SES.

eties, with subsequent systematic and targeted involvement of its members in addressing the tasks of strategic planning of the state, can bring the following benefits:

- Increasing SES involvement in the strategic management of the state and, by doing this, the transparency and quality of its public evaluation.
- Improving the plans and programs verification, with their development on a competitive basis, this increases the quality of the final outcome, i.e., planning and program activities.
- Creating an incentive for scientific research including the improvement of methods, techniques and tools of planning and program activities.
- The state making a better choice of SES which can solve specific problems of strategic management, giving a more adequate assessment of the quality of the SES final product in terms of planning and program activities, as well as in forecasting.
- Improving the quality of regional planning and regional programs since they will be developed by SES that possesses all necessary knowledge.

The regional component in the general system of planning and forecasting in the Russian Federation necessitates the formation of two-level SES:

- Federal level of SES, specializing in expert-analytical support of the federal administration, development of national forecasts, plans and programs.
- Regional level of SES, developing the forecasts, plans and programs at the regional and interregional level. To achieve this, it is necessary to choose a range of qualified large interregional scientific and analytical organizations and institutions.

In turn, SES is selected on the basis of the following principles:

- The principle of equality with focus on choosing the highest quality is the basic criterion, determining the advantage of one candidate *ceteris paribus*. For example, the leading factor is the quality assessment of the analytical work previously done by SES; in this case the organizational and legal form, the sources of financing, and etc., cannot be of critical importance;
- The principle of functional correspondence: Each SES should solve the problems in a particular area, within the stated profile or specialization.
- The principle of competence: Proven previous positive experience in solving similar problems;

- The principle of competitiveness and integrity that enables an objective selection from a large number of societies, offering their scientific and expert-analytical services, so that certain problems can be successfully solved; the formation of integrated project teams, including representatives with proven expertise and SES with visible potential.
- The principle of monitoring and independence of the SES quality evaluation: Mandatory reports on the performance dynamics of the society and a periodic review of its quality evaluation, as well as making it impossible to lobby interests of a certain SES or any other, which can lead to negative consequences.

Thus, it is the Ministry of Economic Development of the Russian Federation that should develop SES system, requirements on the quality of its members, analysis and monitoring of their activities, as well as coordination of SES expert-analytical activities and the application of its results in the national system of strategic management, socio-economic planning and design (macro level). The regional executive authorities and their constituent committees (subcommittees) for fiscal and economic policy should be involved at the meso level. At each of the levels of management it is viable to have a peer review made by independent experts (consultants) who can provide a quality selection of SES for solving specific problems arising in strategic management, socio-economic planning and design Table 2. Here it is necessary to mention the main differences of the proposed algorithm from existing practices: Transparent competition; the possibility to form research teams on the principle of highest efficiency; ensuring the required level of quality of the final results before the competition (as the required level of quality is guaranteed by the status of a SES member, which all contestants possess).

## 5. Discussion

The compliance (agreement) of objectives and priorities at all levels of management, including municipalities, as noted above, is crucial for the effectiveness of strategic management, socio-economic planning and design. So, it is necessary to develop proposals and recommendations for the improvement of both management and its scientific and expert-analytical support at the municipal level, apart from the regional and federal ones, as the prospects for regional development and the effectiveness of strategies

**Table 2.** The findings of the study of the Russian Federation subjects ranking according to SES planning and forecasting performance

Rank	Federal subjects of Russia	Dynamics	Official rating	APEC rating	FCSD rating	National rating 2015
1	Tyumen region	0	7	7	4	3
2	Republic of Tatarstan	+1	1	2	5–6	1
3	Yamalo-Nenets Autonomous Okrug	-1	9	9	1–2	4
4	Kaluga region	+1	-	8	1–2	11
5	Belgorod region	-1	-	1	3	2
6	Krasnodar region	0	17	10	14	14
7	Kemerovo region	+1	-	3	5–6	5
8	Chechen Republic	-1	2	6	7	12
9	Komi Republic	+4	-	13	-	6
10	Federal City of Moscow	-1	-	4	8	7
11	Federal city of St. Petersburg	+1	6	16	24	9
12	Voronezh region	-1	4	14	19–20	8
13	Stavropol region	-3	-	64–65	42	18
14	The Republic of Khakassia	+1	-	31–32	-	-
15	Kamchatka Krai	+3	-	38	15	13
16	Khanty-Mansi Autonomous Okrug	-2	15	20	41	10
17	Samara Region	-1	-	11	32–33	-

are determined by the effectiveness of measures aimed at solving problems and achieving targets set by municipalities. One should keep in mind that strategic management, planning and design at the municipal level have certain distinctive features, that is why one should consider the improvement of both management and its scientific and expert-analytical support separately from the regional and federal levels of government. Such features include, for instance, the following:

- A fundamentally significant reduction in the scope tasks solved, which would call for the use of their own tools or simplified versions of standard forecasting and planning tools.
- A shift in emphasis of the expert-analytical support of strategic municipal management to planning.
- Much more stringent requirements to the resource intensity of forecasting and planning projects, so that it is most often unviable to implement expensive projects at a certain level (and often impossible due to budget restrictions).
- Specific tasks of planning and design that do not occur or are extremely rare at the regional and federal levels.
- Greater (compared with the regional level) possibility of sharing the experience of creation and implementation of projects and programs of municipalities development.
- Existence of two fundamentally different types of municipalities: Urban and rural, developed in different ways, so that a tailored development and application of scientific and expert-analytical support are required. It should be said that the current SES that deal with strategic management, planning and design at the municipal level are mainly focused on urban municipalities. To improve the scientific and expert-analytical support of strategic management processes, socio-economic planning and design at the municipal level, we propose to target the development path after the previously mentioned possibility of replicating successful projects and programs of municipalities development<sup>11,12</sup>. The central idea of our proposal is the creation of a specialized database of the best municipal development projects (Database of Municipal Development Projects, DMDP). It should serve as:
  - Communication medium for transmitting best practices in various fields of municipal management.

- Assessment indicator of the management quality in the municipality.
- A reference point when selecting paths for reforms at the municipal level.

One of the main advantages of the DMDP system is low resource intensity of obtaining the final planning-program product for municipalities, since the only requirement for access to information is the availability of the Internet access<sup>13</sup>. Another important positive feature of this project was providing the contact information of the person responsible for the implementation of the project included in DMDP in the description of the specific practices<sup>14</sup>. Thus, the representative of the municipality could not only have access to the project description, but also had an opportunity, if necessary, to directly contact the person in charge for further details. At the same time, this approach has the following shortcomings:

- It was a commercial project, so it did not provide full information on the principles of DMDP formation, except the most general ones<sup>14</sup>.
- The project was terminable, and its support was stopped upon completion of the project.
- It did not provide a description of the mechanism of search, evaluation and including the municipal development projects in DMDP<sup>15</sup>.
- The project aimed at urban municipalities only.

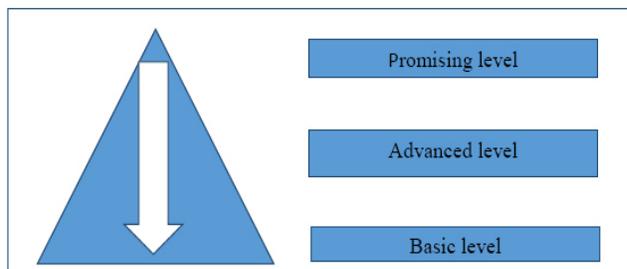
In this regard, we would like to note that the weak points, mentioned, except for the last one, will be repeated during another implementation of the project in case it is done by a commercial organization. Furthermore, in this case it is highly probable that the access to the database will be granted on a paid basis. Therefore, in this context, it is advisable to pay special attention to the choice of the “owner” of DMDP. It can belong to either a federal agency institution (federal level would ensure the equal right of all municipalities both to add their practices into the database of the best projects and to access its content) or a federal state institution of higher education, implementing the project as part of its research. In the latter case, if due to any circumstances, the federal state institution of higher education requests the termination of this base, it must transfer all data, technology and other components of DMDP to a similar institution (possibly being part of federal bodies of power).

In addition to that, the structure of the database should have the following features:

- The included projects should contain descriptions of the municipalities’ development of various levels: urban development projects, rural development projects, development projects that could be implemented in urban and rural municipalities<sup>16</sup>.
- Projects should be organized by thematic areas: Development of management systems, economic development, social development, environmental development, crisis management, infrastructure management support, integrated development projects, etc.
- Projects should be divided by the levels representing the actual possibility of replicating the particular project.

In this case, we recommend considering at least the following levels: the basic one- projects of this level can be implemented by most municipalities; the advanced one-projects can be implemented with some set restrictions (budget restrictions, social restrictions, policy restrictions, etc.); the promising (strategic)- which includes the data on the experience of implementation of the most advanced projects and which are currently being implemented in individual cases, but prove high efficiency, so that in the future these projects should be improved in order to transfer them to more advanced levels Figure 4. Thus, developing the system of principles and indicators which will enable to include the most successful municipal development projects in DMDP system, one should consider the specific key indicators of the output that meet the following criteria:

- Economic efficiency of the project (the ratio of economic benefit to the project costs).
- Social assessment of the project (can be estimated as a numerical score based on population surveys conducted, where possible, through the systems of electronic referendum).



**Figure 4.** Intersegment distribution of SES projects in DMDP system.

- How well the project complies with the requirements of sustainable development (this can be estimated as an integrated index on the basis of different evaluations of environmental impact).
- Impact on the competitiveness of a municipality (this indicator should be specifically designed; it aims to provide an overall assessment of the impact that the implementation of the project had on the economic and social competitiveness of the municipality)<sup>17</sup>.

With that in mind, to improve the quality of assessment, to select what projects should be included in the DMDP system and to increase public trust to the system itself and projects comprising it, it is recommended at the stage of projects selection, in addition to identifying the initial values of indicators, to ensure its public evaluation by SES specializing in the issues of municipal strategic management. Thus, one should:

- Collect, systematize and summarize the information about potential social, scientific, educational and other organizations and institutions as well as individual experts and scientists to be included in these SES.
- Perform a quality examination of potential candidates to be included in the system of municipal SES, the selection principles being generally the same as the selection of candidates to be included in SES.
- Form the SES system, whose members are actively and systematically involved not only in the examination of what projects should be included in DMDP, but also in the development of these projects, for example, projects that can be potentially included in the projects of a more advanced level.

The information about DMDP projects should be clearly structured, so that it can solve the following tasks:

- Positioning of the project according to the abovementioned structural segments of DMDP.
- Ability to find the project optimal for the conditions and objectives of a particular municipality.
- Ability to obtain the information about the timing of the previous project implementation, fundamental terms and features of its implementation, the costs, the distribution of responsibilities in its implementation, and other important technological and economic properties of the project<sup>18</sup>.
- The ability to monitor the project popularity (how many times it has been replicated), as well as the confirmation of indicator values of the project effect.

Thus, the devised structure of the data on a DMDP project should be studied separately, but it is viable to consider how the following information elements can be included into it:

- A project code (preferably a semantic one), positioning the project in the general structure of DMDP.
- A project passport, created as the passport of the special-purpose program.
- A brief description of fundamental conditions for the project implementation (rigid structure).
- A description of the specifics of the project implementation (prepared by the first performers of the project)<sup>19</sup>.
- Data on the project replication (with information about the municipality replicating the project, the timing of its replication; the number of these elements will depend on the number of the project replications)<sup>20</sup>.
- The confirmation of the initial data of the project after its replication.
- The description of the project passing through structural elements of DMDP (the date of including the project and its initial level, the date of transition to the lower levels; the date of excluding the project from DMDP and reasons for this)<sup>21</sup>.

Summing up, it appears to be most viable to create DMDP as a specialized database, developed with the help of IT-technologies, since this will ensure the required ease of access to the database information, the possibility of using it to solve a number of analytical tasks that increase scientific and expert-analytical support of the municipal strategic management, as well as provide the necessary efficiency in updating DMDP information, which makes it relevant and adequate to the current conditions of socio-economic development of the country.

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