

Roadmapping Development of Municipal Areas: From Creativity to Formalized Procedure

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Abstract

Russian system of strategic planning is formed in a new institutional environment. The system contains new requirements for goal-setting activities, forecasting and planning of territorial social and economic systems development. The new Federal Law "On strategic planning in the Russian Federation" (No. 172, dated June 28, 2014) introduces a strategic management system of local social and economic development on the municipal (local) level. In this regard, methodology and corresponding tools of strategic decisions anticipation and justification are used in a dynamically changing environment. The opportunities of modern roadmapping technologies found broad application in the business environment. However, the tools of roadmapping are innovative in Russia, mainly, in the field of public administration and local (municipal) development management. This article presents research results aimed to determine a methodological base of roadmapping for territorial systems on a municipal (local) level, including the development of a formalized scheme for territorial roadmap. The research carried out in 2011-2013 has solved two main objectives. Firstly, the procedure for territorial (municipal) foresight projects has been developed and successfully approved for specific municipal areas in the Samara region. Secondly, formalized technology of territorial (municipal) roadmaps construction has been created. Graphical roadmap forms of territories (municipalities) were approved during the development of the document "The Strategy of Social and Economic Development of a Municipality" aimed at some specific municipal areas in the Samara region. The research is targeted at the following municipalities in the Samara region: the Kinel-Cherkassky municipal area and the Stavropol municipal area. The research results are intended for local government bodies, participants of foresight projects of Russian municipalities, as well as other countries that are actively engaged in territorial (local) policy design of social and economic development.

Keywords: roadmapping methodology, formalized procedure for roadmapping, graphical roadmap form of territories (municipalities), foresight project, expert panel, public administration, social and economic development strategy, municipal area, municipal territory, local community.

1. Introduction

1.1 Analysis of the Latest Studies and Publications

Scientific publications on this issue contain various approaches to roadmapping research procedures, definitions of "roadmap" and "roadmapping" and typology of roadmaps.

Several distinguished scientific centers abroad are successfully involved in the roadmapping methodology and technologic roadmaps creation. Centre for Technology Management, University of Cambridge is among them. Dr. Rob Phaal, Principal Research Associate of this center, believes that strategic roadmapping has been a key area of ongoing interest, in terms of both research and practice (Phaal R., 2004; Phaal R., 2006; Phaal R., Simonse L. and van Ouden E., 2008). We specify one more paper devoted to the graphical forms which can be used to construct roadmaps because of their potential for supporting communication and dissemination. More than 400 examples have been extracted from the collection of roadmap documents, in order to examine their format. A classification is proposed, focusing on the underlying information structures apparent in these roadmaps, illustrated with 20 representative specimens" (Phaal R., Farrukh C.J.P. and Probert D.R., 2009).

Research on this subject are scarce in Russia. However, let us sum up the main results presented in Russian scientific publications. We consider the papers by V.P. Tretyak (2006), Y. Kuzyk (2010) among the first publications which are devoted to roadmapping technology. They provide the notion of roadmapping, different concepts of how to interpret "roadmap" as a term and roadmaps' typology. E. Baikov (2014) and M.A. Cherepanov (2014) issued

publications which consider roadmapping as a tool of strategic development of enterprise management and reveal advantages of roadmaps for a microeconomic management level. It should be pointed out that most research emphasizes a "utilitarian" characteristic of a roadmap, meaning "visualization" of step-by-step development scenario for a certain object.

Glushko's research is devoted to roadmapping features in public administration (2013, 2014). Here the main problems of roadmaps realization have been exposed on the macroeconomic management level of the Russian economy.

The problem under investigation has one significant aspect consisting in a research into opportunities of how to formalize a roadmapping procedure. The efforts to solve this problem are generalized in K. Lidin's paper (2006).

In the context of our research, a major methodological issue is to understand how Roadmapping is consistent with Foresight technology. Some researchers consider roadmapping as a more perfect anticipation technology than foresight. Others believe that roadmapping is only one of foresight tools which can be used while completing research. We agree with V.P. Tretyak, who supports and develops the second thesis: "Roadmapping is a major Foresight tool at its final stage" (Tretyak V.P., 2014).

A lot of attention is paid to expert data processing when foresight research is carried (Sokolov A.V., 2007). In this regard, the research of K. Nagaev and E. Kurbatova (2014) should be noted where methods for expert data processing based on computer systems are presented. The results are used in foresight projects, long-term forecasting and in technology roadmapping.

Successful attempts to form regional Foresight have been made in Bashkortostan, Irkutsk and Perm territorial subjects of the Russian Federation. Bashkortostan is one of the first Russian regions that addressed Foresight to choose scientific and technological priorities whose support will allow to provide a stable growth and a solution of local social problems in the long term (Chasnov S.A., 2007). General scientific results of the foresight in the Irkutsk region are presented in the papers of V.P. Tretyak and N.I. Kalyuzhnova (2008), N. Kalyuzhnova (2008).

Municipal foresights are almost completely absent in Russian practice. In this regard, we can note the project "Development Foresight of the Cherepovets City until 2020" as an example (2010). As for municipal areas, we draw attention to our research for the Samara region (Koroleva E.N., Evdokimov N.N., 2012).

We specify that territorial foresight has not become an object of closer scientific research yet. It is arguable that practice of using runs ahead Foresight methodology development in Russia.

1.2 *Setting a Task*

Technologies of roadmapping are widely applied in a business environment but at that time they are new for the sphere of Russian public and municipal administration. Active development and roadmaps application began in Russia on all levels of public administration only in 2012. Nowadays the Russian government has accepted more than 20 roadmaps as independent documents. Roadmaps are also entered in a format of annexes to legal acts that fix a development strategy in different fields (branches) of Russian economy. For instance, the "Roadmap for public energy policy until 2030 provides the Russian Energy Strategy (it is approved by the Order of the Russian Federation Government dated November 13th, 2009, No. 1715- p). Attempts are made to implement roadmapping on the regional level – for Russian territorial subjects. Roadmaps for various spheres of social and economic territorial development have been approved, for example, in Moscow, the Republic of Altai, the Vladimir region, the Samara region. Roadmaps are hardly developed on the municipal level.

The demand for roadmapping in the sphere of public and municipal administration considerably increases under new institutional conditions, in connection with the adoption of Federal Law "On strategic planning in the Russian Federation" (Federal Law No. 172) in 2014. It establishes that strategic planning is implemented on the federal level, level of Russian territorial subjects and municipal level (Art. 1). For municipal level, strategic planning is defined as activities for goal-setting, forecasting, planning and programming of social and economic municipal development (Art. 3). This activity refers to problem solution for sustainable social and economic municipal development. The characteristic of documentation system for strategic planning is also given in Federal Law No. 172 (Art. 6). For municipalities (city and municipal areas), this system includes the following documents: a strategy of social and economic development, a forecast of social and economic development for medium-term or long-term period, a budgetary forecast for long-term period, an activity plan related to strategy realization of social and economic development, municipal programs. Consequently, Russian municipalities need a modern effective management tool for prediction and implementation of strategic decisions in a precarious environment.

However, the terms "roadmap" and "roadmapping" are not defined in Russian regulatory legal acts. Requirements

to roadmaps development in Russia are just being formed. Findings of development practices and examples of roadmaps constructions for federal and regional management levels show that there are no formal criteria for a roadmapping procedure. In fact, roadmaps represent an agenda which is issued either in a text form, or in a tabular form. Therefore, it is urgent to develop a methodological roadmapping base for territorial systems on a municipal (local) level under new institutional conditions, including creation of a formalized scheme for a territorial roadmap.

2. Methods

We mark essential lines of roadmapping technology which will become a basis for our research.

- 1) Roadmapping is a major foresight tool at its final (result) stage. Therefore, roadmap quality will be defined by quality of a completed foresight project.
- 2) A roadmap is a representation of a long-term prediction process for a considerable time period, not a network schedule (scheme).
- 3) Roadmap type is determined by foresight type and its object.
- 4) Roadmapping as a creative process assumes a wide range of qualified participating experts, that does not deny the possibility of its formalization.

In terms of strategizing social and economic development of municipalities' in the Samara region, roadmapping was based on a foresight technology.

The combination of various research methods was applied to realize it, including experts' questionnaires, SWOT analysis, brainstorming, scenario approaches, expert panels, roadmaps.

The following results testify that a foresight was essentially realized in the municipality.

1. Active participants of the foresight project formed the group which could generate its field of operation on a consensus basis.
2. The prediction of social and economic territorial development was implemented as a result, including attempts to catch "weak signals" at strategic planning. It allowed to create alternative development scenarios for a planned object, to define key points and limits of decision-making parameters that lay a future movement for the municipality.
3. The long-term planning horizon was chosen that assumes to change at least one, or two generations of active foresight subjects. It is established depending on the election terms for the Head of the area and local deputies. According to the chosen reference points, territorial development should not transform its direction essentially depending on the change of local elite.

The foresights that were realized in municipal areas of the Samara region can be referred to the following types under the criterion: 1) social and economic; 2) territorial (municipal); 3) on the basis of an initiative from authorities. In a similar way it is necessary to classify also the roadmaps that were created on the basis of a foresight.

The methodological base of roadmapping and visual representation was being developed directly during the process of strategic planning taking into account features of a conceptual approach that was used as a basis when foresight projects were being implemented. In this regard, an important feature is consideration of a municipality as a complex system formed by crossing four key aspects. As a strategizing object, a municipality is understood as a society, a businessman, a habitat and a local government institution (Koroleva E.N., 2006). During strategic process, from a stage of forming work groups formation and carrying out any analytical procedures, this approach defines foresight's organization for a territory and influences its intermediate and final results considerably.

3. Results

The main results were received during foresight implementation including application of a roadmapping tool. We consider them on the example of two municipalities in the Samara region: the Kinel-Cherkassky municipal area and the Stavropolsky municipal area.

The foresight was being carried out within two days and provided mostly a learning process in the first case (2011). In the second case it was being performed for several months and has eventually become the basis for project development of social and economic territorial development strategy for a long-term period (2013).

The structure of foresight participants was approximately the same in both cases: deputies, regional representative body employees, local administration officials, representatives of business and public organizations, higher school experts and other persons concerned.

A prediction step preceded roadmaps development stage. The vision of the Kinel-Cherkassky area was formulated

on the basis of result compilation of a questionnaire which has been filled out by participants of the foresight project. They were offered to answer three closed questions characterizing prospects of the municipal area in 2030. Processing answers on the first question allowed to allocate three of the most important area characteristics: territory conveniences, financial and political independence and guarantee for high social standards of the population. With regard to the second question three key epithets can be considered: economically developed, advanced and competitive municipal area. The third question promoted understanding of the Kinel-Cherkassky area as a municipality. According to the results of questionnaires processing the following formulation of a collective vision was concluded: "The Kinel-Cherkassky municipal area is a prospective economically developed municipality, which possesses financial and political independence and guarantees high life quality: coziness and good infrastructure".

The purpose of the second questioning procedure – "Growth points of the Kinel-Cherkassky area" – is to derive a general expert concept about its municipal strengths and strategic resources, which can be the basis for structure formation of the roadmap that displays a transition from an initial condition of a municipal social and economic system to a vision. Answers to the questions were especially methodically significant as they were taken as a basis to assemble three working groups which further developed roadmap fragments of the Kinel-Cherkassky area.

Three expert groups were created as a result of the analysis of the sampled strategic resources for area development: 1) reliance on human potential; 2) reliance on entrepreneurship and business; 3) reliance on a brand and policy of its active promotion.

Subsequently, each group concretized a general vision of a municipal area for its roadmap development. Thus, the first group defined a vision as a presumable image of an area resident in 2030: patriot of "a small homeland"; professional education; healthy and vigorous; with an active civic position; intelligent, harmoniously developed.

System engineering of strategic benchmarks of the Stavropolsky municipal area development was preceded by an outdoor event during which an on-campus questionnaire was accomplished including open and closed questions to respondents. In particular, the question concerning essential area characteristics was asked. The most popular answers were natural and recreational wealth, attractiveness for business, migratory attractiveness. Another question denoted the most suitable epithets to the Stavropolsky area: financially independent, competitive, open for partnership, progressive.

Strategy developers considered opinions of participants who contributed to the foresight project when they assigned reference points at all levels of an "objective tree" that is well illustrated by final formulations. For example, the following vision of the Institute of Local Self-Government was developed: "Progressive, financially independent institute of local self-government in the Samara region, combining the best practices of municipal management with active involvement of local community in the process of area management".

Successful realization of prediction process in municipalities has laid a foundation for succeeding roadmaps formation in the integrated directions of strategies generation of social and economic development. The received results significantly differ from each other in spite of the fact that the used methodology was similar. Various degree of experts' influence as well as distinctions in time resources of roadmaps developers should be accepted as the explanatory hypothesis in this case.

4. Discussions

Let us consider a roadmap of expert group "Reliance on Human Potential" which was created within a business game conducted during the strategic session in the Kinel-Cherkassky area of the Samara region (see Figure 1). Note that the emphasis was placed on that the object is not all population but only young people living in the area (the population not above 35).

Expert groups worked separately, in one big room, there was some "rivalry" between them, even unwillingness to communicate with representatives of other groups and attempts "to hide" information until its presentation. Preparation took about three hours.

We can see in Figure 1 that formation of new human potential quality is supposed to be done in five basic directions, each of whose is realized by means of 2-3 actions formulated as a certain intermediate or total result in a different time horizon. Also special roadmap representation seems to be interesting: time "passes" on it from top to down what allows to optimize mapping space taking into account that only three time spans are allocated.

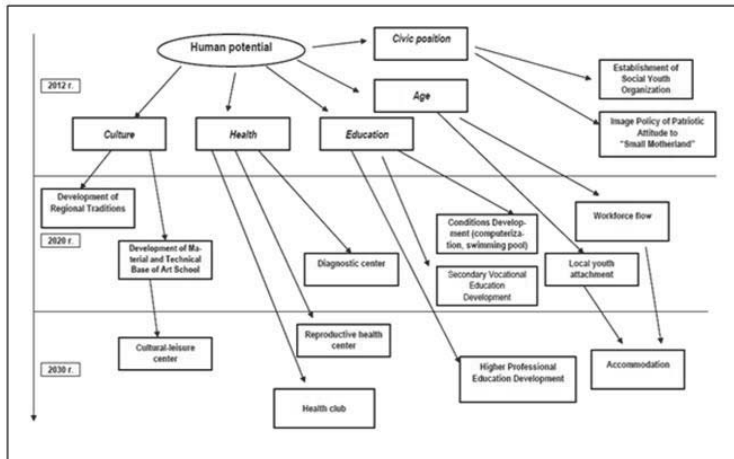


Figure 1. A roadmap of the Kinel-Cherkassky area " Reliance on human potential"

Results of expert panels operation in a form of "training" in the Kinel-Cherkassky area can be considered as satisfactory. The developed roadmap quite corresponds to the basic principles of roadmapping (we remind that they are formally not approved in Russia), and the generalized vision drawn up by experts reflects views in the local community. From methodical positions, the vision does not cross other ideals of area development (for example, area mission).

Nevertheless, it is necessary to draw attention to a rather "primitive" format of a roadmap: it has a mixture of directions and actions that form a basis to achieve results at strategic planning. Undoubtedly, such a roadmap format as well as its content cannot be applied to promote a strategy project of social and economic development in the Kinel-Cherkassky area.

This conclusion gives the authors the task to develop a certain roadmapping methodology.

When a strategy project of social and economic development for the Stavropolsky municipal area was being developed, interest working groups created their roadmaps in a form of a business game. Then their elements have been added to the last variant of the complex of roadmaps.

These roadmaps, as well as the ones in the Kinel-Cherkassky area, might not be treated as good enough with regard to the used technique. However, many ideas that were reflected in them, positively increased quality of roadmapping procedure and a strategy project of social and economic development for the Stavropolsky municipal area in general. Thus, completing the field of roadmaps from the present moment to resultant future factors was being conducted in a form of active interaction with participants of the foresight project.

Methodological bases of roadmap creation, including its formalized scheme, were developed by authors on the basis of the results that had been received from the working groups in light of earlier experience.

Roadmapping as a procedure of strategic planning connects the present and the future of an object. Understanding the present is a result of the analytical stage within the framework of strategy development what is generalized in various forms, for example, in a SWOT matrix regarding strengths and weaknesses. The future is mainly defined by strategic reference points: a vision and a general purpose of municipal development. They focus on those results which have to be achieved at the planning stage. The logic and content of roadmap construction are presented in Figure 2.

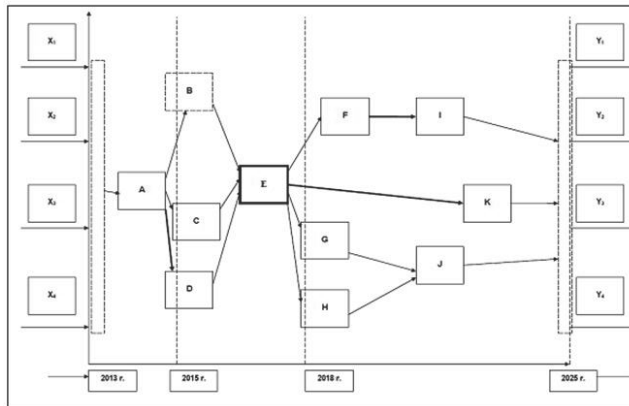


Figure 2. The graphical roadmap form that was applied for policy design of social and economic development in the Stavropolsky municipal area.

The left part of the scheme introduces input X-factors, i.e. crucial areas within the directions which can be characterized as weaknesses at present. The input factors are revealed at an analytical stage of a foresight project by means of special tools which were realized in the Stavropolsky area (expert panels, questionnaire, "brainstorming", etc.). The output Y-factors mean those key objectives which have to be achieved due to roadmap implementation. They were specified within strategic vectors on the basis of the goal-setting procedure and the "objective tree" for social and economic development in the Stavropolsky area.

The field of a roadmap is formed by blocks and communication lines between them. Blocks A ... K designate intermediate results (objectives) which are achieved to a certain time point.

As we see in Figure 2, the block B is marked with a dashed line. This designation corresponds to blocks in various roadmaps, which are directly connected with the flagship project "penetrated" all strategy, generating a new quality of area development.

The roadmap feature is to account an expected transfer of state programs mechanism to the municipal management level in 2015 - 2017. The block E, marked with heavy lines, represents such a program within the direction. At the same time, this block is a peculiar bifurcation point when saved-up tactical changes in the period 2014 - 2015 - 2017 will give a chance to develop and launch a strategically focused program within the offered scheme. This program will allow to reach a desirable state in this direction by 2025.

The lines that connect blocks imply actions which need to be made to provide a transition. The heavy lines showed those pieces where the implementation of comparatively isolated and reference project is supposed. Each such action contains the description of an indicators system that allows to assess the degree and efficiency of results achievement (blocks) including certain quantitative values.

Therefore, the presented graphical roadmap form is characterized by a unified construction logic formed by cause-and-effect relations between its blocks. This presentation format is simplified to increase clearness and opportunities to easily integrate some maps into a unified system.

Each block in a scheme and a communication line in a strategy text is deployed in a detailed description and evaluation of results and actions up to local projects. Hence, the integration of a foresight, roadmapping and management by objectives for social and economic development has been accomplished for the first time within the framework of a municipal strategy.

5. Conclusion

Due to Federal Law No. 172 adoption in the Russian Federation, the next years will become the period of active strategic planning at all levels of public authorities including local government authorities. Each Russian municipality will have to develop its own strategy and a plan of measures how to realize it as well as a municipal program by January 1, 2017.

In this regard, the experience of implementation of foresight projects, which is accumulated by the authors, and the first offered formalized technology of roadmapping will be used in research on the matter.

It will enable to improve mapping methodology for territorial objects. In view of a small amount of information on how to draw up roadmaps as a tool of local government strategic planning, this paper will arguably be interesting both for participants of foresight projects for Russian municipalities and other countries which are actively engaged in strategy development at the municipal management level.

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