



International Conference on Industrial Engineering, ICIE 2016

## Rationalization of Strategic Management Principles as a Tool to Improve a Construction Company Services

O.V. Kliuchnikova, O.A. Pobegaylov\*

<sup>a</sup> *Academy of Civil Engineering and Architecture, DSTU, Socialist street, 162, Rostov-on-Don, 344022, Russia*

---

### Abstract

The article presents the research into and the development proposals for, which provide the grounds to meet the economic challenges and to secure sustainable management system for the companies having negative internal, external or complex impact. The research is based on the study of certain organizations, in which the offered methodology was implemented and the results of such implementation were consecutively analyzed. The innovative management and foundation frameworks appear to provide for better resistance to the crisis than the regular ones. Modern conditions in which an enterprise functions are largely dependent on the macroeconomic situation and the organizational and management framework employed in the company. A modern construction company has to function in the situation of instability and economic crisis, while there appear new trends and objectives, which has not been faced by the construction sector before. This has a large-scale influence on the profit, stability and the lifespan of a company. One of the major factors of stability here is an organization and management systems selected for a certain enterprise. Each of the existing organizational frameworks is characterized with a certain degree of sustainability, ability to react to certain economic conditions of the real sector, in which the enterprise functions.

© 2016 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the organizing committee of ICIE 2016

*Keywords:* organization; structure; management; construction; living standards; system; personnel

---

### 1. Introduction

Rationalization of the principles of strategic planning and management of a construction company is a vital issue of both applied and scientific nature. In order to rationalize and optimize the managerial patterns of the company, operating under the up-to date economical conditions, one needs to apply a justified scientific approach. The authors

---

\* Corresponding author. Tel.: +7-863-2019094  
E-mail address: [oc41@bk.ru](mailto:oc41@bk.ru)

here are aiming at generalizing some experience gained from implementing their research results, proven experimentally, in the field of strategic planning and management of the company and also at informing the scientific community about the results of the research performed in the years 2011-15.

Presently, a most effective approach of taking up measures in corporate management consists in implementing some general principles of strategic management that serves as the principal scientific approach of the research in question.

To reach the objective, the authors had to find solutions to the following problems:

- description of the organizational structure of the company prior to the experiment;
- description of the results of implementing the model they have developed;
- generalization of the economic effectiveness of investments;
- determination of the scientifically justifiable regularity of the results of modernizing the organizational structure of the company in view of the model offered.

## **2. The problems of organizing the operations of the construction company in view of the contemporary urban requirements**

Today, the mission of the most of municipal formations in Russia and across the border is to ensure sustainability in the increase in their residents' standards of living supported by the economical growth and the development of social sphere and urban environment.

In developing the principles of designing structures of governance is important to move away from representation of the structure as a frozen set of bodies corresponding to each specialized management functions primarily, you must include a system of goals and their distribution between the different units, since the control mechanism should be focused on achieving the objectives. These include: the composition of units, which are definite connections and relations with one another; distribution of tasks and functions of all units; responsibilities, powers and rights within the construction organization, reflecting the ratio of centralization and decentralization.

The basis on which the whole management activities, organizational structures are being built. Every builder in the process of its creation and development is focused on the achievement of certain objectives, and therefore its organizational structure is intentionally and purposefully created and focused on achieving the set objectives. The effectiveness of achieving the organization's objectives, the implementation of its strategy, the interaction of environment are largely determined by the accuracy of building construction management organization structure.

Organizational structure - is a holistic system designed to achieve the most efficient workers the goal.

The management structure is represented as a system of optimal allocation of functional responsibilities, rights and responsibilities, procedures and forms of interaction between its member governments and workers.

The basic concepts of the management structure are function elements, levels of authority and communication between the authorities and within government.

The elements of the management structure are either individual employees (managers, professionals, employees) or service and controls the apparatus in which a certain number of professionals employed, to perform specific responsibilities. There are two areas of specialization of the elements of governance structures:

- 1) linear bodies dealing with the adoption and implementation of management decisions, monitoring all the processes that are responsible for the activities of the construction company and its structural divisions;
- 2) functional organs, performing certain management functions: research, planning, production, marketing.

Some negative demographic and social trends emerging in the city are caused, on the one hand, by the deindustrialization of the city economics and, on the other hand, they further aggravate the complex negative industrial, economic, and social situation.

The municipal public services require high expenditures on the monitoring and maintenance of their network and facilities. Multiple emergencies and disasters are caused by the low performance of communal services.

The authors have studied the experience of some foreign companies, (e.g. S&Z New York Electric, Ayala Dar Alma - Aty etc.) to have arrived at a conclusion that many companies are facing organizational and managerial problems that interfere with the progress in public services and the city in general [1-4]. The authors have set up a task of developing an optimal managerial structure, applicable for a variety of business entities. Such structure has

been developed and experimentally implemented at JSO Istok Depot, a municipal leader in water supply and sanitation in-city network servicing and construction.

### 3. Experiments in improving the construction company's organizational structure

Before the onset of the experiment, JSO Istok Depot had a linear-functional managerial pattern basing on separating competence and responsibilities along the managerial functions in terms of vertical decision making [3,4]. The corporate structure included some principal and subordinate production divisions, and functional services.

Selection of the structure is the responsibility of senior management of the company, with indirect participation in the development of the key decisions of the lower links. It should draw attention to the deliberate Distributed polnomolchy in the selection of the company's strategy of formation and development, in which the strategic control unit stands out clearly link the operational management of crucial current issues and implement global solutions to the company's management, as well as an actuator, directly implements a main product company. Note that the functional categorization is not equal to status or physical embodiment of the system elements: one and the same person can be both operational and executive level in different categories of the system, especially when combining the posts and responsibilities. A situation where the combined elements of the strategic and operational management are also quite common, especially in small and medium-sized businesses.

For each there is a construction company is the best and only her inherent organizational structure of production and management. At the same time each individual company has its own specific use of the process equipment, professionalism and personal qualities of the staff, order and tradition between employees vertically and horizontally. From a philosophical point of view, every company is the epitome of a microcosm consisting of a practical implementation of the comprehensive ideas about the nature of the organizational structure, goals, company mission, and its development strategy and positioning in the global market for space products and services. Therefore, there can be no two identical companies: each will have the culture, history, philosophy and technology personnel. To their harmonious interaction and it is the only one most suitable for them organizational structure. The originality of the specific organizational structure of management is achieved through the use of existing types of linear, functional, divisional, matrix and project structures through the inclusion or exclusion of any units or bonds.

When choosing the design of control structures by the following factors must be considered:

- The relevance of organizational forms, avoiding deformation of organizational structures and systems of management of the company;
- The use of IT-technologies, automated systems of planning and management of production;
- The use of multi-component circuits, with scientific justification and proven;
- The use of the professional capacity of those responsible for the design, an inventory of the human factor in planning.

The authors have introduced a corporate model featuring higher personnel effectiveness and more effective operational control in the conditions of the contemporary urban environment, suffering from instability, high technogenic hazards, and obsolete corporate production facilities [5,6,7]. Basing on international and national experience, the authors have developed a set of steps aimed at increasing the quality of information chain, setup of a consultancy service, personnel advanced training, and more effective personnel management.

The computer-aided modeling of the organizational structure has enabled extension of the information chain, redistribution of personnel duties, higher level of responsibility and monitoring [8,9].

The model the authors introduced at the Depot included:

- optimization of the systems of information-technological and documentary supply and document flow of JSO Istok Depot divisions;
- functional real-time support of the systems of information and technological managerial infrastructure by introducing some contemporary innovative programs, monitoring and information systems, including world-wide web network;
- support of the clients, timely processing of their requests, elimination of flaws, care of clients' recommendations;

- interaction with mass-media in view of marketing, company's image advancement, treatment of technological aspects, informing general public about the actual operational news of the company.

In terms of organizational matters, the company's structure has become more complex after two new divisions have been added[10,11,12]. These divisions report to the company's top management and perform the functions of management, monitoring, and production.

Some positive results gained include the company's image-building success in the market of communal services, increase in the effectiveness and quality of operations [13,14]. As an example of the progress, the following has become most evident:

- introduction of application software packages to facilitate monitoring and operations of the whole spectrum of services[14,15];
- increase in the infosecurity of corporate data;
- better monitoring of the total system-wide and technological servicing of the hardware and software complex and better compliance with their rules of operations;
- higher quality of methodological support of those workers who operate production systems;
- faster response to the clients' needs;
- fewer accidents and general unjustified breakdown losses, higher economic benefits from the company's operations[16,17].

Bureaucracy, currently, although one of the most common in the world, however, undergoes considerable criticism. Among its disadvantages include, first of all, little flexibility and mobility of the structure in the area of operational decision making, respond to changing environmental conditions, primarily the market. Tight regulation of the activities of the staff of special regulations affect the quality of work within the company and with customers, has an impact on systemic thinking responsible managers in general. The inertia of the relationship, the low level of the passage of the need for urgent action signal patterns and automatisms of all parts of the structure leads to a loss of initiative, loss of time and loss of considerable freedom of action, which is fraught with financial and other losses in the market.

A most critical negative effect has become an increase in the number of conflicts among workers due to thinking inertia and also stricter monitoring of some workers' performance[18,19,20]. There have been reported some professional and interpersonal conflicts caused by misunderstanding of the new patterns of monitoring.

On generalizing the experience gained, the authors argue that, after introducing the above innovations, the economic gains of JSO Istok Depot have grown 1.3 times[20]. The flow of positive feedback via mass-media from consumers and independent experts has increased. The number of contracts concluded with governmental bodies and businesses has grown. The company's total compatibility factor has also come up.

#### **4. 4. Conclusions**

Examining the different types of organizational structures, we have identified a pattern in the development of the economy and a certain type of civilization produced by the organizational and management schemes in the workplace.

Each new economic system requires the use of its organizational scheme, which achieves optimum control, the efficiency of production, costs, profits and losses.

On the other hand, the analysis showed the inability to create a uniform and constant production management scheme. The current economic situation does not allow to make a clear choice in favor of a scheme or set of schemes, and requires constant monitoring and upgrading of enterprise management system. This makes it possible to ascertain the nature of procedural management system, permanently dependent on the specifics of the economic situation.

On the other hand, this same factor indicates that the current model of economic development of the society does not ensure stability and stability in development. And this, in turn, says anything about the existence of some unaccounted for so far (hidden) economic criteria, or of non-compliance parameters of economic models existing organizational concepts. In any case, the only effective way to respond adequately to changing economic conditions remain constant monitoring of the organizational structure and its modernization in conditions of a going concern, ie Additional risks and losses. This aspect must be considered when planning the company's operations.The

contemporary management of urban economy and public services may not operate effectively in the lack of proper managerial information and communication support. Any organizational improvements in the pattern of corporate management should include an innovative approach to the choice of a communication strategy, support of the company image, and effective marketing. Up-to-date technologies cannot be neglected both for technological support as well as for better interaction among the company's structural elements. Thus, one of the key features of the managerial process today is the focus at rationalization and innovation.

## References

- [1] I.Y. Zilberova, Analysis of the scientific bases of organizational and process design and modern methods and pricing models of organizational and technological solutions, *Scientific Review*. 9 (2013) 582–585.
- [2] O.V. Klyuchnikova, V.V. Kostyuchenko, E.V. Pobegaylova, *Organization management from psychological components to its structuring*, Rostov-Don, 2014.
- [3] O.V. Klyuchnikova, The effectiveness of the project excavate for laying utility networks, *Inženernyj vestnik Dona*. 4 (2013). URL: <http://www.ivdon.ru/magazine/archive/n4y2013/2072>.
- [4] *Encyclopedia of the Don region. The jubilee album devoted 70 years the Rostov region*, Rostov-Don, 2007.
- [5] R.P. Keeling, Horizontal and Vertical structures: The dynamics of organization in higher education, *Liberal Education*. (2007) 22–31.
- [6] P. Masse, *Optimal investment decisions*, Englewood Cliffs N.J., 1962.
- [7] P.P. Oleynik, *Organization of construction, Conceptual framework, models and methods, information and engineering systems*, Profizdat, Moscow, 2001.
- [8] O.A. Pobegaylov, A.A. Voronin, The key component of the human resource management system, *Inženernyj vestnik Dona*. 3 (2013). URL: <http://www.ivdon.ru/magazine/archive/n3y2013/1778>.
- [9] G.L. Tsipes, *Projects and project management in a modern company: Scholastic allowance*, ZAO Olympus-Business, Moscow, 2009.
- [10] V.V. Kostyuchenko, *Organization, planning and management in construction: textbooks*, Rostov-Don, 1998.
- [11] I.I. Mazur, V.D. Shapiro, I.M. Karolinska, *Management of projects*, High School, Moscow, 2001.
- [12] O.A. Pobegaylov, Calculation of the number of frames of the building organization, *Inženernyj vestnik Dona*. 3 (2012). URL: <http://www.ivdon.ru/magazine/archive/n3y2012/962>.
- [13] B. Näslund, Simultaneous determination of optimal repair polisay and service life, *Swed J. Econ.*, 1966.
- [14] V.V. Kostyuchenko, *New information technologies in construction: the textbook*, RSSU, Rostov n / D, 1999.
- [15] O.V. Klyuchnikova, S.S. Kadilin, The use of elements of the theory of graphs in the allocation of power resources to the type of linearly extended objects, *Inženernyj vestnik Dona*. 2 (2013). URL: <http://ivdon.ru/magazine/archive/n2y2013/1666>.
- [16] O.V. Klyuchnikova, The role of strategic management for the co-production work for the engineering infrastructure, *Naukovedenie*. 5 (2013). URL: <http://naukovedenie.ru/PDF/18trgsu513.pdf>.
- [17] V.V. Kostyuchenko, *Organization, planning and management in construction: textbooks*, Rostov-Don, 1998.
- [18] E.V. Mirin, *Cities and districts of Rostov region, Historical and local lore essays*, Rostov-Don, 1987.
- [19] V.V. Kostyuchenko, K.M. Kryukov, O.D. Kudinov, *Construction Management*, Rostov-Don, 2002.
- [20] O.A. Pobegaylov, E.M. Khrapova, V.A. Pogorelov, The effectiveness of the organization of construction companies working, *Inženernyj vestnik Dona*. 2 (2013). URL: <http://ivdon.ru/magazine/archive/n2y2013/1685>.