

# A Project to Improve the Profitability of the Use of Park Areas (Evidence from Zaryadye Park, Moscow City, Russia)



Olga Urzha, Tatiana Evstratova, Valentina Kataeva

**Abstract:** For the effective functioning of a large city, a metropolis, it is extremely important to have in the infrastructure areas and facilities for recreation of citizens, for cultural and entertainment leisure. In this article, it is offered to consider the unique project, which was accomplished in Moscow, the capital of the Russian Federation, in the very city center – the creation of multipurpose Zaryadye Park. The article presents the technology of creating a modern park infrastructure, as well as a comparative analysis of foreign and domestic practices in the development of new recreation opportunities. In addition, the article proposes to intensify the use of the socio-engineering methodology of management decision-making that provides a scientific basis for the project activity. Much attention is paid to the tasks which arise with regard to modern park areas. This includes a broad range of scientific and educational programs that contribute to sparking an interest in different age groups to knowledge and innovation, as well as the uncovering historical and natural resources of Russia, creating an oasis for recreation and walks. Moscow State Autonomous Cultural Institution Zaryadye Park is the first park built within the boundaries of the Boulevard Ring. It is a new cultural driver of Moscow, a key link in the network of walking routes around the Kremlin. Unlike other Moscow parks, which have vast territories for the organization of recreational activities, Zaryadye Park has a number of features, which make it unique, namely, a rather small area, multilevelness, botanical collection that demonstrates the natural diversity of Russia, media complexes, which have no analogues in Moscow, and a broad range of offered scientific and educational programs. Various information kiosks are available in the Zaryadye Park for visitors, as well as tourist information centers, exhibition halls, souvenir and gift shops, cafés and bars, the ice cave, the florarium, Sacred Embassy scientific-educational center; large amphitheater, concert hall, and modern gastronomic food court.

**Keywords:** cultural and leisure activities, project activity, recreation areas, the socio-engineering methodology of managerial decision-making, Zaryadye Park.

## I. INTRODUCTION

The construction of parks, as a mandatory object of the city's infrastructure, has always been carried out. This was especially true of large cities because their inhabitants needed the nature areas in the city. Today there are about 600 parks in Russia. However, in the context of the market economy, parks, like many cultural institutions, have found themselves in a difficult situation: scarce budget funding does not allow parks to fully function and offer a wide range of services to the population. In many cases, this leads to the fact that the parks are in a state of neglect, while some of them are simply forced to cease to exist. Deprived of state subsidies, the parks are in a state of crisis. The amusements operated today in parks are not so much original in terms of attractiveness and entertainment. They are outdated; the house of mirrors, shooting galleries of old structures, and the whirligigs have long become obsolete. At the same time, parks are such a zone of creativity, which in the context of market relations, with the competent use of social design methods and technologies, as well as professionally trained personnel, can become extremely profitable that will allow both the improvement of existing facilities and the development of new, modern, innovative objects. The construction of oceanariums became a kind of innovation in the development of park systems in many countries of the world. Oceanarium is one of the most promising and profitable areas of big business. Having appeared relatively recently, the oceanarium industry literally blew up the entertainment industry and quickly rose to the top of the business Olympus. World practice clearly confirms the high profitability of oceanarium construction projects. A growing number of oceanariums are being built around the world, and each of them shows excellent payback. The USA, Japan, Great Britain, Australia, Germany, Canada, Italy, and France have accumulated the richest experience in the construction and operation of oceanariums. Large oceanariums are built in India, Holland, South Africa, Denmark, Norway, Monaco, and New Zealand.

Famous authors of the park culture development in foreign countries, who made a great contribution in the reorganization and redevelopment of obsolete facilities, improving the comfort of the environment of urban parks, increased their profitability, are Marilyn Evans [1], and Henry Sanoff [2].

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Russia has joined the oceanarium construction process later than its western and eastern neighbors. However, the trends of recent years allow hoping that soon Russia will be on a par with the countries, where the largest number of the best oceanariums are built. Today, several such facilities are located in Russia, particularly, in Moscow, St. Petersburg, Voronezh, Krasnodar, Sochi, Vladivostok, Murmansk, and other major cities of the country.

Issues of park culture development in Russia, as an innovative form of cultural and leisure activities, are considered by cultural scientists, economists, and landscape designers, such as I.M. Rodionov, O.S. Mavlyutova, I.Yu. Nagibina and E.Yu. Zhurova [3]-[5], and others.

The construction of Zaryadye Park was based on the idea to reflect the natural wealth of Russia [6]. However, the expositions mainly affect the overworld, while the objects giving visitors the idea of the richest water resources of Russia are practically absent. Thus, the construction of the oceanarium in Zaryadye Park is a universal project extremely attractive for investors, which deserves implementation, requires relatively small costs, and guarantees a quick payback.

## II. PROPOSED METHODOLOGY

### A. General Description

Project management processes are amenable to standardization, and the documents that formalize these processes are called project management methodology. The project methodology is a methodology for achieving success, namely, the ability to manage, coordinate the efforts of people, and effectively use resources using modern scientific methods. All this is aimed at achieving optimal results in terms of time, cost, and quality meeting the interests of all project members.

In managing projects in organizations, technology-centered and human-centered approaches are distinguished often. The aim of both approaches is to focus on human needs, however, they differ in their means and performance indicators. In particular, each of the approaches has its own system of performance measurement indicators as well as feedback methods to track the degree of achievement of the set goals.

The technology-centered approach focuses primarily on infrastructure factors as a means of meeting human needs. This approach assumes the availability of funds to meet the needs [7]. In this case, feedback is provided through the tracking of technical statistical information. When implementing the technology-centered approach, the ultimate consumer of services is largely excluded from governance processes and feedback.

In contrast, a person-centered approach, also focusing on needs, provides feedback directly through the individual based on social rather than statistical information. Indicators of this approach are the human development index, which reflects longevity, level of education, level of well-being estimated, for example, through per capita income, the degree of satisfaction with a variety of services, security status, environmental conditions, and the like.

### B. Algorithm

Project management methodology is set out in the Project Management Body of Knowledge (PMBoK) and ISO 21500-2014. Project management manual is a set of methods that structure the project management system. Project management methodology allows:

- to argue the rationality of investments;
- to create the best work financing scheme;
- to create a work plan which contains the terms of work execution, consumption of resources, and the required expenditure;
- to carry out optimally work performance and the interaction of the project participants;
- to implement planning and quality management;
- to conduct research and project risk management;
- to plan and manage contracts optimally, etc. [8], [9].

The methodology of using the socio-engineering approach in the design of the facility is of exceptional importance [10]. Social engineering is a special branch of sociological knowledge, namely, creative sociology. Carrying the transformative function of sociology, social engineering makes it possible to ensure methodologically and methodically the impact on the social object to modernize or completely renew it. This sphere of sociological activity has special means and methods which allow actively contributing to the solution of urgent problems of public life.

### C. Flow Chart

Revealing the essence of these methods, one can state that social engineering is a chain (stages) of interrelated sequential procedures aimed at transforming social objects in order to improve them, as well as creating new objects, which solve current social problems (Fig. 1).

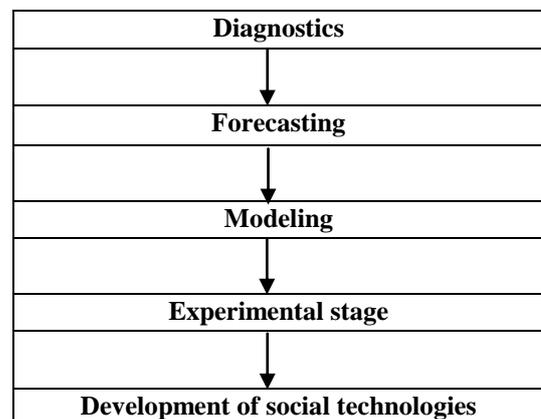


Fig. 1. Stages of interrelated procedures

It is certain that social engineering is a *diagnostics* of the state of the social object, in this particular case – the determination of the feasibility of creating a park on the site of the former Rossiya hotel, both in terms of territorial possibility and demand for this object in this particular place for Muscovites and guests of the capital.

The next stage of the socio-engineering methodology is *forecasting* the future state of the planned object, both in terms of meeting the needs of vacationers and its profitability.

*Modeling* of the planned object, creation of its prototype, and the approbation of its elements are the next mandatory stage of the socio-engineering study, namely, the *experimental stage*. Only after making sure that the model works, it is possible to start developing a full-scale project. The stage of *creating a social project* necessarily requires the *development of social technologies* for project implementation.

In this article, we will limit ourselves to the consideration of the social project planning.

### III. RESULT ANALYSIS

To improve the profitability of Zaryadye Park, the project to establish oceanarium in the park was developed.

The planned area of the oceanarium premises is 1,500 square meters. The facility will be built in three stages. The planned payback period is just over three years. The number of aquariums will amount to 70. The total volume of water that will be used to fill the aquariums is 800 cubic meters. The oceanarium is designed for 1,700 specimens of different species composition, about 120 species of aquatic inhabitants.

Below is the basic information concerning the facility under construction:

- Construction volume – 2,700 cubic meters.
- Construction duration – 36 months.
- The peak power consumption – 750 mW/h.
- Water consumption – 900 m<sup>3</sup>/year.
- Water discharge – 560 m<sup>3</sup>/year.
- Loading intensity on the basis – up to 6 tons/sq m.
- Floor load – 2 tons/sq m.

Main work stages are as follows:

1. design work involving the creation of a unique concept, development of design solutions;
2. construction stage involving the construction of basic structures, production of aquariums, laying communications;
3. finishing work involving decorating the main areas of the oceanarium;
4. installation and start-up of equipment, putting the oceanarium into operation.

The total cost of the construction of the oceanarium amounts to USD 2,550,000, which includes USD 1,900,000 for basic materials, utilities, and auxiliary materials; USD 420,000 – for subcontracting costs; USD 33,600 – for labor costs; and USD 196,000 for advertising and equipment. An important role in this situation was played by investment policy [11], advertising activities, and the formation of an attractive image of the project under development.

For the construction of the oceanarium in the Zaryadye Park, it is proposed to use a two-hectare site with a natural reservoir.

It is planned to build a three-story building. The central hall of the oceanarium will be a composition of several thematic and functional areas located in a single architectural volume and oriented to different age groups of visitors. Each functional area will be provided with the installation of appropriate exposures.

The latest and traditional high-quality finishing materials, such as ceramic coverings, paving with various natural stones cladding, panels with laminated surfaces, metal, and glass in various combinations, as well as live plants and plants subjected to the special conservation, will be used in the interior design of the complex.

The exterior walls of the building are planned to be faced with facade systems of colored plastic panels of white and blue color. Stained glass windows and roof lights will be made of anodized aluminum with double-glazed windows. The base can be faced with stone, and granite slabs. Vertical sections of the stylobate walls will be faced with granite slabs in combination with ledges. The steps will be made of solid granite.

The following risk groups have been taken into account when developing the investment project:

*Internal nontechnical risks.* The risk of not having enough workers is minimal. To implement the project in a timely manner, the salary is offered higher than in other areas. The risk that suppliers will fail, delay the delivery of materials or project development is minimal. All parties involved are interested in the timely implementation of the project.

*Legal risks.* Risks associated with a license and patent law are insured by contracts with external partners, patent-protected license and technology, patent protection of own trademarks and developments.

*External unpredictable risks:*

- risk of material and technical supply: independence from external suppliers, use of in-house raw materials produced at the leased field;
- risk of environmental protection: production is carried out at a small plant using new environmentally friendly production technologies;
- risk of design and production standards is taken into account by the installation of competitive equipment and the purchase of technology in accordance with the requirements of the main consumers and standards;
- risk in pricing is taken into account by the chosen method of pricing, namely, focus on the prices of competitors with high profitability;
- tax risk is reduced due to full accounting in the calculations of the current tax system of the Russian Federation [12].

The creation of theme parks is one of the cost-effective options for the development of territories. The oceanarium of Zaryadye Park is a really promising and significant project for Moscow in the field of tourism and recreation, which will bring socio-economic benefits.

### IV. DISCUSSION

The project implementation necessarily provides for a preliminary prediction of its payback. In this case, it is extremely important to assess the profitability of the planned object. The profitability of the object use largely determines the feasibility of its construction.

One of the most important conditions for the profitability of the oceanarium is its high attendance. Mega-oceanariums are located in large agglomerations.

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The exceptions are small, but very popular resort towns, where the attendance of the oceanariums is usually provided by an endless stream of tourists. For small towns, the best solution would be the construction of a mini-oceanarium.

Using the socio-engineering method, i.e. modeling of the future object, let consider three models of existing oceanariums.

*The Georgia Aquarium.* The object is located in Atlanta, Georgia, USA. The population is about 5.6 mln people. At the time of commissioning, in 2005, the Georgia Aquarium was positioned as the largest oceanarium in the world. The total volume of water amounted to more than 31 thousand cubic meters, the area of the oceanarium was 81,000 square meters. Numerous aquariums contain more than 500 species of living inhabitants or 120 thousand species. Capital investments amounted to USD 290 mln. The main investor was Bernard Marcus, the co-owner of the Home Depot company; he invested most of the amount – USD 250 mln. The rest of the investment came from large corporations with a worldwide reputation. Construction began in 2002 and lasted 27 months. On November 23, 2005, the oceanarium was put into operation. The ticket price for adults and children amounted to USD 26 and USD 19.5, respectively. As early as 98 days after opening, the oceanarium was visited by a millionth visitor, while nine months later, the number of visitors exceeded the three-million mark. On June 25, 2009, i.e. 43 months after the opening, 10 mln people visited the oceanarium. During this period, the profit from the sale of tickets, not counting the additional income from related paid services, amounted to USD 215 mln. It can be concluded that the project payback period was four years.

*The Ozeaneum oceanarium.* The object is located in the small seaside town of Stralsund, Germany. The population is about 58 thousand people. Ozeaneum was built in 2008. The complex consists of 39 aquariums, of which the total volume is 6,000 cubic meters. The number of species living in the oceanarium is about 7 thousand, while the number of animal species is about two hundred. The construction costs were borne by the federal government of Mecklenburg and the German Maritime Museum. Capital expenditure amounted to EUR 60 mln. The object was built in a small town. At that, the main purpose of construction was a scientific and educational attraction, rather than commercial. The ticket price was set more than affordable by the country standards, namely, from EUR 8 to EUR 14. But even in a town with population of several tens of thousands of people, the attendance of the oceanarium exceeded all expectations. It was originally planned that the oceanarium will be visited by half a million people per year, while in fact, this figure has grown to 900 thousand people [13].

*Yokohama Hakkeijima Sea Paradise.* The facility was built in the Japanese city of Yokohama with the population of 3.6 mln inhabitants. The oceanarium is part of the entertainment complex, occupying 30% of its total area. The aquariums are home to more than 100 thousand animals of five hundred species. The construction period was two years. The amount of invested funds was USD 250 mln. In the first year after its commissioning, the oceanarium opened its doors to 10 mln visitors. The ticket price was about USD 44. The oceanarium paid off in a year's work. The average annual profit from

ticket sales today is about USD 200 mln. About 5 mln people visit the complex every year [14].

Moscow State Autonomous Cultural Institution Zaryadye Park has its own mission: everyone can relax, play sports, participate in the events, and choose the best leisure options. And this is applied not only to the city residents but also to numerous guests. The Park has been opened for visitors relatively recently, and currently, it is impossible to assess the effectiveness of its operation. But it is safe to say that Zaryadye Park has great potential in terms of economic efficiency and profitability.

According to the report on the results of the activities of Moscow State Autonomous Cultural Institution Zaryadye Park, subordinated to the Moscow Department of Culture, and on the use of state property assigned to it, as of January 01, 2019, the actual revenues of the Zaryadye Park for 2018 amounted to more than USD 15,500,000.

Revenues of Zaryadye Park from the provision of paid services (works) in 2018 amounted to USD 1,200,000. This figure is actually fulfilled by 90% of the planned value.

In 2018, 1,094,357 people used the services of the Zaryadye Park free of charge. Of them, 934 people participated in the organization of club activities and amateur folk art formations, while 1,093,423 people were involved in various cultural events. Note that 170,214 people used the services of the Park on a fully-paid basis.

Most of the revenues of the Zaryadye Park, received from the provision of paid services (performed works), fell on attractions (64.78%); the Park's revenues from excursions and museum and educational programs amounted to 8.75%; besides, 5% fell on various services; 4.65% of revenues came from the sale of products (souvenirs, toys, and other nonfood products) [15].

It can be concluded that Zaryadye Park has great potential for economic efficiency and profitability. To increase the profitability of the Park, it is planned to supplement the existing infrastructure with the construction of an oceanarium. This will allow receiving additional profit.

In 2018, the American magazine Time included Zaryadye Park in the list of 100 best places in the world – as the only object from Russia. This is the best project in the field, the winner of the ArchDaily-2018 award in the category of Public Architecture, which according to experts, has become "the highest international recognition in the history of post-Soviet architecture." The Park was also awarded InAVation Awards for multimedia technologies and equipment of *Flight* and *Time Machine* media complexes, as well as POPAI AWARDS in the nomination of Digital Media for the project of interactive terminals of the Park.

## V. CONCLUSION

Thus, as exemplified by this project, the trend of active use of the project management methodology in the activities of state bodies and municipal authorities is clearly manifested.

First, this increases the transparency of spending budgetary and extrabudgetary resources. Citizens can see the real activities aimed at the implementation of the planned projects.

Secondly, this is the formation of a professional project team to combine the efforts of various specialists in order to achieve results. State and municipal authorities need specialists in project management, able to manage in a new manner in accordance with the requirements of the time.

Thirdly, based on the project management experience, it can be concluded that this entails a reduction in time, financial, and other costs. Thus, using the project management methodology in the activities of public authorities, one can expect high results at lower cost [16].

In recent years, Russia has been actively developing domestic tourism. Cities, individual territories, and entire regions are actively working to increase the attractiveness for both domestic and foreign tourists. Besides, work is underway on the creation of recreation areas of different kinds available for everyone [17].

Parks play a huge role in the lives of citizens. If they are not available, this will lead to deterioration in the psychological and physical condition of many residents, as well as to higher level of air pollution. Currently, chaotic and disorderly building construction, the growth in the number of private cars, and the low environmental culture of the population have become a serious threat to park areas in the country. Each park area is unique and is usually designed for a large number of vacationers. Usually, the landscaping is carried by landscape designers involved in the park creation project [18].

Zaryadye Park has great potential in terms of economic efficiency and profitability. Zaryadye is the first park built within the boundaries of the Boulevard Ring. It is the new cultural driver of Moscow, a key link in the network of walking routes around the Kremlin. This is a platform offering a dialogue about the history, natural wealth of Russia, science, art, the future of Moscow, and the country in general. The Park welcomes people, ideas, and technologies, encourages interest in knowledge and innovation. Zaryadye Park is intended to become the flagship in park construction in the country, to set the standard for the development of public park spaces in Russia.

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