

# Territories selection criteria for integrated development of residential areas in Russian cities

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**Abstract.** The relevance of the article is determined by the development of projects and programs implementation for the integrated development of territories (IDT) in Russian cities. A necessary condition for the IDT effectiveness as a form of urban development is a methodological basis of the territories selection, involved in the integrated development, taking into account main stakeholders of the urban community: population, city authorities, business. etc. Authors have made an analysis of the current practice of implementing IDT projects in different regions of Russia, positions presented in the expert community on this issue and propose their own approach, according to which the IDT mechanism should be primarily applied to depressed urban areas. The article defines depressive territories, their signs and criteria of allocation. The urban development potential of the territory was assessed, taking into account its significance for the city. As a result of the research, there was proposed an assessment of the economic efficiency of the IDT as an investment project, on the basis of which a decision of its implementation could be made, taking into account necessary and possible participation of city authorities and other stakeholders involved in the process.

**Key words:** Integrated development of territories (IDT); Methodology; Depressed territories; Urban development potential; Economic efficiency.

## 1 Introduction

Recent years have been characterized by significant changes in different directions and forms of urban development activity in Russian cities. At the end of 1990 - beginning of 2000, during the period when the country's investment and construction complex emerged from the deepest crisis of the early-mid 1990s, a point-based construction process was dominated. In the middle of the first decade of the 21st century, it was replaced by the development of depressed territories, as a rule, in the form of integrated development projects.

Currently, the main trend has been a re-development of built-up areas, the main form of which is the integrated development of territories (IDT), including occupied by residential

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areas. Taking into account the demographic situation, the obsolescence of the existing real estate fund of cities, the structural restructuring of urban economies, the tendency to limit the extensive development of cities through the involvement of new territories, this area should be considered as a priority in urban planning.

It was launched in 2017 by the adoption of a Housing Renovation Program in Moscow, although individual projects and even re-development programs, including residential areas development, have already been implemented before in Moscow, Saint Petersburg and other cities in Russia. But it was an example of this Renovation Program that became the impetus for the active development of the regulatory framework and practical activities to promote this direction on the federal level.

The re-development of built-up areas received a new impetus for its development on a federal scale after the adoption in 2020 of Federal Law No. 494-FZ, which introduced a new concept of the integrated development of territories (IDT), defined main types of the IDT and general parameters of state regulation for integrated development processes [1].

Currently, many regions of the country have adopted regulatory documents (mainly of a legislative nature) defining conditions for the implementation of programs and projects of the IDT, and in a number of regions their practical implementation has already begun. The IDT subprogram here refers to a set of IDT projects, linked into one unity at the city level in terms of planning, organization, conditions and deadlines for implementation.

A necessary condition for the IDT effectiveness as a form of urban development is a methodological basis of the territories selection, involved in the integrated development, taking into account main stakeholders of the urban community: population, city authorities, business, etc. The purpose of the article is to formulate a methodological approach for this problem solving, to propose an algorithm and criteria for ranking territories for the IDT.

In the framework of the present research work there were used methods of analytical and comparative analysis, method of working out a set of indicators for ranking and selection territories for IDT purposes.

## 2 Literature review

The practical implementation of the IDT mechanism is currently carried out at the level of individual projects, the choice of territories for which is largely determined by the activity of interested parties, which are most often investors and developers, as well as individual municipalities. At the same time, a transition to the practice brings a whole range of social and economic issues, on the solution of which the prospects for the development of the IDT as a new form of organization of urban planning activities largely depend [2, 3].

Renovation is a term derived from the Latin word "renovatio", which in translation means "repair", "renewal". But the term is usually associated not with any repair, but refers it to the area of territorial reconstruction and re-development. Recent years, the word "renovation", imply the demolition of existing old housing stock, the construction of new houses in its place and the relocation of residents in them [4]. The IDT program involves not only the renovation of the housing itself, but also the gentrification of the adjacent territory, as well as the development of transport and communal infrastructure. Also, such projects should include the full provision of residents with parking spaces and social infrastructure.

At the same time, there are still significant methodological "gaps" in substantiating the necessity and expediency of implementing the IDT mechanism for a particular territory; there is no generally valid methodological basis and criteria for conducting the IDT.

The significance of this issue is determined by the fact that numerous territories in Russian cities, which occupy a significant part of the territory, are potentially experiencing re-development needs. If we assume that in the near and medium term, the need for

transformations will affect territories, occupied by houses belonging to the so-called "housing stock of the first mass series" created in the period 1958-1970, then the scale of the upcoming urban development activities in this direction is simply enormous. So, in Saint Petersburg, the corresponding housing stock is about 9,000 sq. m. of the total area of residential areas, which corresponds to about 10% of the total housing stock of the city. 600,000 citizens live in 190,000 apartments in these houses, which is more than 11% of the city's population. It is obvious that it is impossible to replace, and even to increase such a volume of housing stock, due to a greater intensity of the urban areas use and an increase in building density, even in several years.

The experience of the housing stock renovation in Moscow shows that since the beginning of the renovation program in 2018, even with high activity of city authorities and with almost complete absence of financing problems, only 355 houses have been settled and 228 residential buildings (with an area of 3.1 mln sq. m) have been put into operation by the end of 2022, i.e., within 5 years [5]. Taking into account the need to attract private investors to implement the IDT mechanism in the "non-capital" regions of Russia, the deadlines for the implementation of such programs will be even longer, so that integrated development of territories is the main direction of urban development activity for a number of decades.

Another important term is depressive territories, which is used in practice quite often, when talking about IDT, but not formulated officially in Russian law for architecture and city planning documentation. "Depressed territories are spatially local formations in which economic, political, social, environmental and other reasons cease to act as incentives for development, therefore, an independent way out of the crisis is impossible. There are degradation trends of development and decline" [6]. It is mainly applied to economically backward areas in dire need of state support measures. The problem of their revival, and therefore the return to the city, could be considered as one of the priorities in urban planning. The main indicators of depressive development are population, socio-economic infrastructure, visual perception of the environment and ecological situation.

At the same time, the question of determining priorities inevitably arises when determining the necessity and expediency of the IDT mechanism use for specific urban areas in conditions of limited resources. In modern publications, Russian and foreign, this problem is practically not touched upon, there are separate publications on the problems of prioritizing residential buildings for major repairs [7-9]. Thus, the task is to identify and formulate criteria for selecting territories for integrated development and determining the sequence of their transformation.

Currently, there are no criteria for such a choice in a detailed and systematic form. In the Urban Planning Code, the "issues of choosing territories for the IDT are delegated to regions of Russian Federation' authorities and only general characteristics are formulated that should guide the selection of built-up territories potentially suitable for the use of the IDT mechanism" [10].

Among them, the first item is a set of the territories occupied, by multi-apartments' buildings (MAB), in particular, recognized as dangerous buildings.

As the main criterion, the Russian Federation's authorities allocates territories, the main part of which is built up with apartment buildings recognized as emergency.

Further, the positions on which the decision should be made by the Russian Federation region's authorities are highlighted:

- the level of physical wear of the main structural elements of the building;
- exceeding the cost of maintaining a building of a certain level of the subject of the Russian Federation;
- houses built in the first period of mass industrial housing construction (1958-1970) according to standard projects;

- limited technical performance of the building;
- absence of centralized engineering and technical support systems in homes [10].

As it can be seen from this list, the regions of the Russian Federation are given a fairly large degree of freedom in determining the criteria for recognizing territories of Russian cities in need of integrated development. At the same time, only one criterion is imperative: the presence of dangerous houses on the territory. Therefore, according to the meaning of the document, it is quite possible to do with this criterion, and on its basis to form a list of territories in relation to which it is advisable to use the IDT mechanism. But a number of questions immediately arise. Firstly, only a special interdepartmental commission can recognize houses as emergency, and "the basis for recognizing an apartment building as an emergency and subject to demolition or reconstruction is the emergency technical condition of its load-bearing building structures (structures) or an apartment building as a whole, characterized by their destruction or damage and deformations indicating the exhaustion of the load-bearing capacity and the danger of collapse of an apartment building, and (or) rolls that can cause loss stability of an multi-apartments' building" [11]. Secondly, it is unclear how many dangerous houses there should be on the territory for the IDT mechanism to be appropriate for it?

For example, according to the Information Analytical Agency «DOMINFOSPB.RU», at the beginning of March 2023 in St. Petersburg, there were only 59 such houses, located in different quarters [12]. Is it enough that the presence of even one emergency house was the basis for the comprehensive development of the entire quarter? If we approach the issue formally, then we could do with this as a reason for the deployment of the IDT program, since the Urban Planning Code of the Russian Federation does not limit the possibilities of the region of the Russian Federation [10]. And it follows from its provisions that the IDT can be carried out "within the boundaries of one or more elements of the planning structure, their parts" and based on one criterion. So the presence of one emergency building, formally, is already a sufficient reason to involve the entire quarter, or even several, in the IDT process.

But, obviously, such an approach would mean a complete profanation of the idea of the IDT. The purpose of projects and programs of integrated development of territories is to prevent accidents, and not only residential buildings, but also objects of social and engineering infrastructure, elements of landscaping, the creation of new public spaces, which should ensure an increase in the efficiency of the use of urban areas.

Territories should be transformed, the transformation of which ensures maximum efficiency, taking into account the interests of the main stakeholders, but, first of all, the interests of the city as a whole.

### **3 Research results**

In order to reasonably determine the effectiveness of the integrated development of territories, it is necessary to clarify the concept of efficiency in relation to the IDT. At the same time, it is important to take into account two important circumstances, which have a strong influence on the decision-making process for IDT areas selection.

Firstly, the development of urban areas as a subsystem in the city development should correspond to the general orientation of urban development, and therefore. As a conceptual basis for the development of efficiency criteria, the concept of sustainable development can be adopted, within which three main facets of efficiency can be distinguished: economic efficiency, social well-being, environmental safety, and taking into account specifics of the subject – integrated development of urban areas – also urban planning efficiency.

Each of these types of efficiency has a number of indicators that characterize it. The most commonly used concept is economic efficiency, in which commercial, budgetary and

public efficiency are distinguished [13]. At the same time, the definition of commercial efficiency is the most methodically developed, which is reflected by such indicators as a payback period, a net present value, a profitability index, etc. Budget efficiency also refers to economic efficiency, measured by the amount of tax revenues from the territory and their shares in budgets of different levels. There is another aspect of economic efficiency – its social efficiency, reflecting the direction and scale of "external" effects, the impact of the project on the development of related industries, and in our case, territories. Social efficiency is determined by the comfort of living conditions on the territory, which can be assessed through housing conditions, the level of infrastructure development, landscaping, etc. Environmental safety is determined by the degree of air pollution, water and soil quality. Urban planning efficiency can be assessed by the compliance of the development with urban planning standards, balance in the development and use of territories, taking into account the place of the territory in the general system of the city's land and property complex.

Secondly, when determining the criteria for the effective use of urban areas, it is necessary to take into account the interests of stakeholders' main groups in the urban community: the population of territory, falling into the zones of integrated development, taking into account differences in their status as owners of property and other rights to real estate; city authorities representing the interests of the entire urban community; investors and developers involved in the implementation programs and projects of the IDT. Successful and relatively painless implementation of IDT projects is possible only when the interests of these entities are respected or at least taken into account in the process of project implementation. Identification of the main groups of stakeholders' interests is a necessary task that precedes the actual start of the project.

Certain types of efficiency mentioned above can be accurately correlated with the main groups of stakeholders. Thus, the population living on the territory involved in the IDT process is primarily interested in social and environmental efficiency, the governing bodies are also interested in social well-being and environmental safety, but, above all, their interests are in the field of budgetary efficiency. Investors and developers, of course, are mainly interested in the commercial efficiency of IDT projects.

The interests of main stakeholders, as we see, differ significantly. At the same time, the success of the implementation of the IDT mechanism largely depends on how these interests can be combined and harmonized. Under what conditions should such harmonization take place, the interests of which group of stakeholders should be taken as a basis? The problem is compounded by the fact that in conditions of budget resource's shortage, the implementation of projects, and even more so, the programs of the IDT cannot be carried out at the expense of municipal and even state resources of the regions of the Russian Federation, as it is currently happened in Moscow. In these conditions, the IDT projects will be viable only if private investments are attracted. Therefore, it is quite natural to take the position that the main principle of residential areas development projects is to ensure acceptable profitability of the project as a whole, and therefore for all major stakeholders – owners of real estate (both – the owners of demolished real estate and the owners of new real estate), as well as the developer and the city, as it was indicated in the Methodological Recommendations on Spatial and Economic Modelling of Projects for the Integrated Development of Residential Areas, prepared by the Institute of City Economics Foundation commissioned by the Fund for Assistance to Housing and Communal Services Reform [14]. From this position, it is logically concluded that the criterion for selecting projects should be the economic viability of the project, which is determined as primarily by the indicators of the investment efficiency of the project as a whole, which are understood as the commercial efficiency indicators indicated above. In other words, the problem of determining efficiency is reduced to the problem of the effectiveness of an

investment project in the traditional way for evaluating a project from the perspective of a private investor.

However, is this enough to determine the effectiveness of IDT projects, which by their meaning are projects of high public importance and whose goals are not at all limited to obtaining benefits for investors? This is quite clearly stated in Article 64 of the Urban Planning Code of the Russian Federation about goals of integrated development of the territory [10]. Here, the main objectives of the IDT are formulated as ensuring balanced and sustainable development of the area, improving the housing conditions of the population, developing urban infrastructure and creating conditions for attracting extra-budgetary sources of financing for the renovation of built-up areas. As we can see, satisfying the interests of private investors is indicated as one of the goals, since creating conditions for attracting extra-budgetary sources of financing just means that acceptable profitability should be provided to private investors and developers, and without this it is impossible to attract them to IDT projects. However, their interests cannot be put at the forefront at all when choosing territories for integrated development: for them, the best option would be to get free engineering and resource-prepared territories for construction. The problem is to make it attractive for private investors to participate in such IDT projects that are necessary and expedient from the point of view of the city interests.

Determining the necessity and expediency of using the IDT mechanism from the perspective of the city is the basis for the selection of such territories and the sequence in their transformation. Before using traditional approaches to assessing efficiency from the standpoint of commercial expediency of investment, which is proposed, for example, in the methodological developments of the Institute of Urban Economics Foundation, it is necessary to determine which urban areas primarily need the use of the IDT mechanism.

## 4 Discussion

In the authors' opinion, with this approach, integrated development should primarily affect depressed urban areas, which are understood as territories characterized by inefficient and irrational use of land (excessively low building density, outdated location and architectural planning solutions of buildings); a high degree of physical and functional deterioration of buildings and structures); unfavourable environmental conditions and underdevelopment and deterioration of infrastructure; loss of budget revenues due to inefficient use of land and real estate. The depressiveness of territories finds its internal and external expression [15]. Internal manifestations of depression are manifested in a decrease in the quality of life of the population living on the territory, the low social status of the territory, the low cost of real estate. The external influence of depressive territories finds its expression in the inhibition of the balanced development of the city, the violation of its spatial connectivity, the integrity of its architectural and urban appearance.

As indicators characterizing the depressiveness of the territory, it is proposed to use the following:

- the proportion of emergency and dilapidated houses,
- the degree of accidents,
- the level of the territory with engineering needs provision,
- transport and social facilities in comparison with the normative, taking into account their availability,
- the degree of deterioration of engineering networks (for example, using data on the accident rate of networks) needed for their repair, modernization or replacement;
- the level of environmental pollution,
- the proportion of "neglected" (unused, cluttered, empty) objects and land plots.

The ranking of territories according to the degree of depression, taking into account their internal state and external effects, is the first stage of choosing territories for integrated development.

The next stage in determining the feasibility of the IDT is to assess the urban development potential of the territory through indicators of the territory's actual balance, the density of residential areas, the availability of free land spots, the availability of capacities and networks of engineering and utilities, the potential impact of the territory transformation on its environment, including the territory of the city as a whole.

The assessment of the urban development potential of territories is a condition for further elaboration of the issue of choosing territories for development, while it is necessary to provide, if necessary, the possibility of clarifying the boundaries of the territory under consideration, its expansion or reduction in order to increase the urban development potential.

The third stage in the algorithm for selecting territories for development – the assessment of the economic efficiency of IDT projects consists in assessing the economic feasibility, taking into account the totality of costs associated with the implementation of IDT projects, which should include: the costs of demolition and construction of residential and non-residential buildings and structures; the costs of resettlement (provision within the boundaries of the developed territory) of the population, living in the territory of integrated development; costs of replacing/updating engineering infrastructure; costs of creating/expanding social infrastructure facilities [2, 3].

## 5 Conclusion

The proposed methodological approach and algorithm for prioritizing the selection of territories for the integrated development, combined with the active involvement of the population on the developed territories in the discussion and decision-making process regarding the IDT, allows us to take into account the interests of the population, city authorities and a business when applying the mechanism of integrated development of territories, reduce socio-economic tensions and increase the effectiveness of the IDT as a form of urban development.

In conclusion, main dimensions of using the IDT advantages can be identified:

1. A variety of functional zones. The IDT allows one to provide a variety of functional areas, which in turn contributes to improving the comfort and convenience of city residents.

2. The efficiency of the territory use. The use of the territory, taking into account an integrated approach, makes it possible to effectively use the space of the city, thereby increasing the density of development and ensuring a clear organization of transport infrastructure.

3. Environmental stability. As part of the IDT process, environmental protection is of great importance. Taking into account environmental factors in the planning processes of the city allows to preserve natural resources, increase the level of environmental safety and improve the quality of life of citizens.

4. Increase and diversity of social facilities. The IDT allows to place various social facilities on the territory of the city, such as hospitals, schools, parks and other infrastructure facilities, which contributes to improving the quality of residents life and the convenience of their daily life.

5. Economic efficiency. The IDT makes it possible to increase the economic potential of the city by increasing the volume of production and services in the city, which contributes to the growth of residents' well-being and the economic potential development of the region as a whole.

6. The IDT increases the attractiveness of the city for investments and business, which contributes to the development of entrepreneurship and the creation of new jobs.

In general, the integrated development of territories is one of the most important and strategic approach for Russian regional cities development, improving their competitiveness in economic, environmental, aesthetic and spatial spheres. Based on the present research study results, the process of the areas selection for IDT projects and programs could be developed further and be more detailed and clear for population and residents of such areas, which would have a positive influence on the social acceptance.

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