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## Content analysis of the category of effective use of urban territory

At the present time, Russia is actively developing mechanisms for integrated territorial development, the main purpose of which is to increase the efficiency of the use of urban areas. The analysis of scientific literature has revealed many different formulations of this concept, however, the most rational way to reveal the meaning of the category of effective use of territories is to divide it into several components. The efficiency of using urban territory as a complex category includes its key components: social efficiency, economic efficiency, architectural and planning efficiency, infrastructural efficiency, sanitary and environmental efficiency and investment efficiency. Based on the analysis of scientific literature, it was determined that in the context of solving the problems of urban development and socio-economic development of the territory as a whole, it is advisable to consider investment efficiency as a basic element of urban development. At the same time, it should be noted that in a large number of cases, urban development projects are not commercial, in such cases investment efficiency is achieved either through mechanisms and means of state support, or by including elements in the content of the project that ensure investment efficiency. A number of principles that contribute to the efficiency of territorial development were also identified. On the basis of the study it was concluded that the problem of managing the development of urban areas to a significant extent can be reduced to ensuring an optimal balance between the individual aspects of urban planning efficiency, the basic one of which is investment efficiency, in the context of project implementation, taking into account strategic goal setting and ensuring the sustainability of urban planning environment.

**Keywords:** *urban planning, efficiency of territory use, urban planning efficiency, investment efficiency, principles of territory development, functional zoning*



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Recently, the number of vacant urban areas in Russia that could be used for housing and any other construction has been decreasing, while in Russia there is a significant percentage of emergency housing, therefore, on December 30, 2020, the Federal Law "On Amendments to the Urban Planning Code of the Russian Federation and Certain Legislative Acts of the Russian Federation in order to ensure a comprehensive development of territories" No. 494-FZ. As a result, a new mechanism has appeared in the urban planning code — the mechanism of integrated development of territories. The main objectives of its introduction are<sup>1</sup>: ensuring balanced and sustainable urban development, creating conditions for the development of transport, social and engineering infrastructure, urban landscaping, and the most interesting goal is to increase the efficiency of urban use. Despite the use of the concept of "efficiency of the use of urban areas", there is no definition of it in the urban planning or any other code.

Based on the results of the analysis of scientific and educational publications devoted to the problems of urban management, it can be concluded that there are a large number of alternative interpretations of the content of the category of effective use of territories [1–4]. In most cases, the authors apply the category of urban planning efficiency to indicators and characteristics reflecting the degree of efficiency of urban use. The concept of urban planning efficiency contains a number of areas that have both internal relationships and an internal hierarchy. Within the framework of this paper, the main areas related, according to various sources, to

the category of urban planning efficiency and reflecting the degree of efficiency of the use of urban territory are presented. In the scientific literature, urban planning efficiency is divided into 6 main components (Fig.) [5–8]:

1. *Social efficiency* — evaluates the diverse effect of the chosen layout, including the possibility of employment by representatives of various professions, the variety of vacancies offered directly in the area helps to reduce the need to make unproductive trips to other parts of the city, which reduces the load on the urban transport network, increasing the comfort of life of residents of the area, as well as reducing their transport costs.

2. *Economic efficiency* — in a general sense is obtaining the maximum possible benefits from available resources [9], however, in this case, this indicator should be perceived as the effect of using the territory in the form of an increase in the number of workers, changes in the level of gross domestic product, changes in the production potential of the territory, and so on.

3. *Architectural and planning efficiency* — evaluates the effect of the selected structure of residential, industrial and recreational areas. With a well-chosen district structure, the interaction of various functional zones creates a synergistic effect that increases the comfort of local residents, which, for example, manifests itself in the convenient location of places of sale of goods of daily demand.

4. *Infrastructural efficiency* — the degree of satisfaction of the local population with the existing social, engineering and transport infrastructure.

<sup>1</sup> Urban Planning Code of the Russian Federation : dated 12.29.2004 No. 190-FZ (as amended on 08.04.2023) (with amendments and additions, introduction. effective from 09.01.2023).

► This indicator is especially important in the complex residential development of new territories, which are often located in areas of the city that do not have adequate provision even with engineering infrastructure, therefore, the construction of infrastructure facilities in such situations is a key task.

5. *Sanitary and environmental efficiency* — evaluates the rationality of the relative location of residential areas and industrial zones, it is worth placing the latter away from residential areas, it is also necessary to take into account the wind direction. With the correct arrangement of these mutually exclusive associations of similar objects, the harm to the health of residents of residential areas will be minimal due to the absence of air pollution with harmful substances.

6. *Investment efficiency* — Most researchers agree that the basic element of urban planning efficiency, which provides the opportunity to attract resources for the implementation of urban development projects, is investment efficiency, which includes certain aspects that ensure the effectiveness of investment, taking into account alternative financing mechanisms and alternative organizational models for the implementation of investment and construction activities.

In the context of solving the tasks of urban development and socio-economic development of the territory as a whole, it is advisable to consider investment efficiency as a basic element, however, it should be noted that in a large number of cases urban development projects are not of a commercial nature, in such cases investment efficiency is achieved either through mechanisms and means of state support, or other forms of support, or by including elements in the content of the project that ensure investment efficiency. In this case, the key aspect of urban planning is the search for an optimal balance between the individual components of the project in the context of solving the tasks of urban development, taking into account the investment attractiveness for individual participants of the investment and construction project.

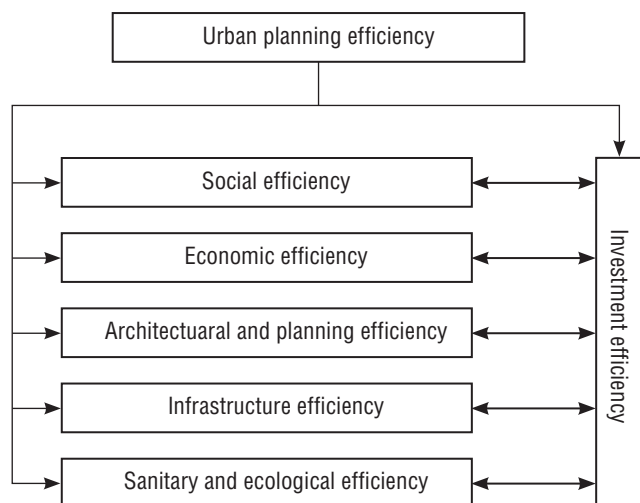
In order to achieve the goals of urban development of territories, namely, to ensure a favorable living environment and create conditions for the effective use of territorial resources [10] in scientific sources [11–14], the following basic principles of effective development of territories are proposed:

1. The principle of *suboptimization* — according to this principle, optimization of individual subsystems does not lead to optimization of the system as a whole. Thus, when planning a territory, it is necessary to take into account the interconnection of its individual elements, and not focus on isolated areas-subsystems. For example, the efficient location of an oil refinery can significantly reduce the efficiency of the location of the entire city.

2. The principle of *long-term planning* — the layout of the territory should be developed taking into account the duration of its existence. The consequences of planning decisions will have consequences in 50–100 years or more.

3. The principle of *consistency and continuity* — when designing, it is necessary to take into account the relationship with neighboring territories, the possibility of combining into a single system, that is, it is necessary to take into account the advantages associated with the potential growth of the system.

4. *Complexity* — integrity and balance of the urban environment, the quality of life of the residents of the district depends on compliance with this principle, an excess of some and a shortage of other infrastructure facilities or functional zones may cause dissatisfaction of the local population or, at least, inefficient use of the territory, for example, with an excess of shopping centers, some of the rented premises will not be available after some time have a tenant.



Structure of elements of urban planning efficiency

5. *Functionality* — ensuring the maximum balance of diverse functional connections of the population within the territory by reducing unproductive citywide trips.

6. *Compactness* — ability of the project to concentrate on a limited area all the objects necessary for the functioning and development of the city. Multifunctional complexes can serve as an example of solving the problem of compactness, increasing the height of a building can also solve the problem of increasing the compactness of buildings, however, the need to place all the necessary facilities in the area one way or another leads to a decrease in the area of residential buildings.

7. *Environmental friendliness* — principle implies reducing the negative impact of capital construction projects at the operational stage, which has a positive effect on the environmental situation of the entire city, which somehow increases the standard of living of all residents of the city.

8. The principle of *zoning the territory* — principle implies that when designing it is necessary to plan several functional zones and provide for their further growth. Compliance with this principle will avoid the appearance of undesirable chaotic intersection of industrial, residential, transport and recreational zones, as a result of which it will be possible to prevent serious economic losses, air pollution, as well as the rise in the cost of transport and engineering communications.

Based on the results of the analysis, it can be concluded that the category of effective use of urban territory is complex, including certain aspects characterized by mutual influence and variability over time. In this case, the problem of managing the development of urban areas to a significant extent can be reduced to ensuring an optimal balance between certain aspects of urban planning efficiency, the basic of which is investment efficiency in the context of project implementation, taking into account strategic goal setting and ensuring sustainable development of the urban area.

REFERENCES

1. Balabenko E.V. *Methodological approach to assessing the effectiveness of the use of the territory for housing construction. Proceedings of Universities. Investment. Construction. Real estate.* 2017; 4(23). URL: <https://cyberleninka.ru/article/n/metodicheskiy-podhod-k-otsenke-effektivnosti-ispolzovaniya-territorii-dlya-zhilishchnogo-stroitelstva> (accessed: 12.11.2023). (rus.).

2. Toleukazy A.N. Theoretical bases of effective use of urban territories. *Forum of Young Scientists*. 2019; 4(32):1037-1041. URL: <https://cyberleninka.ru/article/n/teoreticheskie-osnovy-effektivnogo-ispolzovaniya-gorodskih-territoriy> (accessed: 12.11.2023). (rus.)
3. Remarchuk S.M. The efficient use of intra-city areas. *Journal of Construction and Architecture*. 2015; 5(52):33-40. URL: <https://cyberleninka.ru/article/n/otsenka-effektivnosti-ispolzovaniya-vnutrigorodskih-territoriy> (accessed: 12.11.2023). (rus.)
4. Merkur'yeva K.R. Development of urbanized territories: the development of renovation and the experience of its implementation on the example of the city of Tyumen. *International Agricultural Journal*. 2022; 2:32. DOI: 10.55186/25876740\_2022\_6\_2\_32 URL: <https://cyberleninka.ru/article/n/development-urbanizirovannyh-territoriy-razvitiye-renovatsii-i-opyt-ee-realizatsii-na-primere-goroda-tyumeni> (accessed: 12.11.2023). (rus.)
5. Percik E.N. *Territorial planning : textbook for universities*. 2nd ed., cor. and add. Moscow, Yurait Publ., 2023; 362. URL: <https://urait.ru/bcode/512489> (accessed: 12.09.2023). (rus.)
6. Astafyev S.A., Sarchenko V.I., Yakubovsky A.V., Khirevich S.A., Pukhova V.V. Developing evaluation mechanism of socioeconomic efficiency of urban planning projects by local government bodies. *Baikal Research Journal*. 2020; 11(2):6. DOI: 10.17150/2411-6262.2020.11(2).6 URL: <https://cyberleninka.ru/article/n/formirovanie-mehanizma-otsenki-sotsialno-ekonomicheskoy-effektivnosti-gradostroitelnykh-proektov-organami-mestnogo-samoupravleniya> (accessed: 12.11.2023). (rus.)
7. Ivantsova E.A., Gorelkina Ya.A. Documentation for the planning of the territory as a basis to ensure the effectiveness of its use. *Interexpo Geo-Siberia*. 2018; 8:20-27. URL: <https://cyberleninka.ru/article/n/dokumentatsiya-po-planirovke-territorii-kak-osnova-obespecheniya-effektivnosti-ee-ispolzovaniya> (accessed: 12.11.2023). (rus.)

8. Nikolaenkova A.A., Vedmanova O.O. Principles of sustainable development of urban territories. *Electronic Science*. 2021; 2(2):5. URL: <https://cyberleninka.ru/article/n/printsiipy-ustoychivogo-razvitiya-territoriy-gorodskih-poseleniy> (accessed: 12.11.2023). (rus.)
9. Samuelson P., Nordhaus U. *Economics*. Moscow, Williams Publ., 2014; 55. (rus.)
10. Ershova S.A., Shishelova S.A., Orlovskaya T.N. Efficiency assessment of urban planning transformations: economic and legal aspects. *Vestnik MGSU [Monthly Journal on Construction and Architecture]*. 2020; 15(9):1308-1320. DOI: 10.22227/1997-0935.2020.9.1308-1320 URL: <https://cyberleninka.ru/article/n/ekonomicheskie-i-pravovye-aspekty-otsenki-effektivnosti-gradostroitelnykh-preobrazovaniy-territorii> (accessed: 12.11.2023). (rus.)
11. Roy O.M. *Fundamentals of urban planning and territorial planning : textbook and workshop for universities*. 2nd ed., cor. and add. Moscow, Yurait Publ., 2023; 249. URL: <https://urait.ru/bcode/515075> (accessed: 12.11.2023). (rus.)
12. Kotlyarov M.A. *Economics of urban planning : textbook and workshop for universities*. Moscow, Yurait Publ., 2023; 152. URL: <https://urait.ru/bcode/516330> (accessed: 12.11.2023). (rus.)
13. Tsop N.V., Kovalskaya L.S., Malakhova V.V. On the need to assess the territorial potential for effective management of municipal education. *Economics and Ecology of Territorial Entities*. 2017; 2:54-62. URL: <https://cyberleninka.ru/article/n/o-neobhodimosti-otsenki-territorialnogo-potentsiala-dlya-effektivnogo-upravleniya-munitsipalnym-obrazovaniem> (accessed: 12.11.2023). (rus.)
14. *Organization of construction and real estate development : textbook for students: in 2 hours. Part 1. Organization of construction*. P.G. Graboviy (ed.). 4th ed., rev. and add. Moscow, ASV ; Prosvetitel' Publ., 2018; 645. (rus.)

## Анализ содержания категории эффективного использования городской территории

В настоящее время в России активно развиваются механизмы комплексного территориального развития, основной целью которого является повышение эффективности использования городских территорий. В результате анализа научной литературы было выявлено множество различных формулировок данного понятия, однако наиболее рациональным способом раскрытия значения категории эффективного использования территорий является разделение его на несколько составляющих. В результате рассмотрения эффективности использования городской территории как комплексной категории были выявлены ее ключевые составляющие: социальная, экономическая, архитектурно-планировочная, инфраструктурная, санитарно-экологическая и инвестиционная. На основе анализа научной литературы было определено, что в контексте решения задач градостроительного развития и социально-экономического развития территории в целом целесообразно рассматривать инвестиционную эффективность как базовый элемент градостроительного развития. Вместе с тем следует отметить, что в большом количестве случаев проекты градостроительного развития не носят коммерческого характера, в таких случаях инвестиционная эффективность достигается либо за счет механизмов и средств государственной поддержки, либо путем включения в содержание проекта элементов, обеспечивающих инвестиционную эффективность. Также был выявлен ряд принципов, способствующих повышению эффективности развития территорий. На основе проведенного исследования был сделан вывод о том, что проблематика управления развитием городских территорий в существенной степени может сводиться к обеспечению оптимального баланса между отдельными аспектами градостроительной эффективности, базовым из которых является инвестиционная эффективность, в контексте реализации проектов с учетом стратегического целеполагания и обеспечения устойчивости градостроительной среды.

**Ключевые слова:** градостроительство, эффективность ис-

пользования территории, градостроительная эффективность, инвестиционная эффективность, принципы развития территории, функциональное зонирование

## СПИСОК ИСТОЧНИКОВ

1. Балабенко Е.В. Методический подход к оценке эффективности использования территории для жилищного строительства // *Известия вузов. Инвестиции. Строительство. Недвижимость*. 2017. № 4 (23). URL: <https://cyberleninka.ru/article/n/metodicheskii-podhod-k-otsenke-effektivnosti-ispolzovaniya-territorii-dlya-zhiliщного-stroitelstva> (дата обращения: 11.12.2023).
2. Толеукажы А.Н. Теоретические основы эффективного использования городских территорий // *Форум молодых ученых*. 2019. № 4 (32). С. 1037–1041. URL: <https://cyberleninka.ru/article/n/teoreticheskie-osnovy-effektivnogo-ispolzovaniya-gorodskih-territoriy> (дата обращения: 11.12.2023).
3. Ремарчук С.М. Оценка эффективности использования внутригородских территорий // *Вестник Томского государственного архитектурно-строительного университета*. 2015. № 5 (52). С. 33–40. URL: <https://cyberleninka.ru/article/n/otsenka-effektivnosti-ispolzovaniya-vnutrigorodskih-territoriy> (дата обращения: 11.12.2023).
4. Меркурьева К.Р. Развитие урбанизированных территорий: развитие реновации и опыт ее реализации на примере города Тюмени // *International Agricultural Journal*. 2022. № 2. Ст. 32. DOI: 10.55186/25876740\_2022\_6\_2\_32 URL: <https://cyberleninka.ru/article/n/development-urbanizirovannyh-territoriy-razvitiye-renovatsii-i-opyt-ee-realizatsii-na-primere-goroda-tyumeni> (дата обращения: 11.12.2023).
5. Перцик Е.Н. *Территориальное планирование : учебник для вузов*. 2-е изд., испр. и доп. М. : Юрайт, 2023. 362 с. URL: <https://urait.ru/bcode/512489> (дата обращения: 09.12.2023).
6. Астафьев С.А., Сарченко В.И., Якубовский А.В., Хиревич С.А., Пухова В.В. Формирование механизма оценки социально-экономической эффективности градостроительных проектов органами местного самоуправления // *Baikal Research Journal*. 2020. Т. 11. № 2. Ст. 6. DOI: 10.17150/2411-6262.2020.11(2).6 URL: <https://cyberleninka.ru/article/n/>

formirovanie-mehanizma-otsenki-sotsialno-ekonomicheskoy-effektivnosti-gradostroitelnyh-proektov-organami-mestnogo-samoupravleniya (дата обращения: 11.12.2023).

7. Иванцова Е.А., Горелкина Я.А. Документация по планировке территории как основа обеспечения эффективности ее использования // Интерэкспо Гео-Сибирь. 2018. № 8. С. 20–27. URL: <https://cyberleninka.ru/article/n/dokumentatsiya-po-planirovke-territorii-kak-osnova-obespecheniya-effektivnosti-ee-ispolzovaniya> (дата обращения: 11.12.2023).

8. Николаенкова А.А., Ведьманова О.О. Принципы устойчивого развития территорий городских поселений // Электронная наука. 2021. Т. 2. № 2. Ст. 5. URL: <https://cyberleninka.ru/article/n/printsiyu-ustoychivogo-razvitiya-territoriy-gorodskih-poseleniy> (дата обращения: 11.12.2023).

9. Самуэльсон П., Нордхаус У. Экономика. М. : Вильямс, 2014. С. 55.

10. Ершова С.А., Шишелова С.А., Орловская Т.Н. Экономические и правовые аспекты оценки эффективности градостроительных преобразований территории // Вестник МГСУ. 2020. Т. 15. Вып. 9. С. 1308–1320. DOI: 10.22227/1997-0935.2020.9.1308-1320 URL: <https://cyberleninka.ru/article/n/ekonomicheskie-i-pravovye-aspekty-otsenki-effektivnosti-gradostroitelnyh-preobrazovaniy-territorii> (дата обращения: 11.12.2023).

11. Рой О.М. Основы градостроительства и территориального планирования : учебник и практикум для вузов. 2-е изд., испр. и доп. М. : Юрайт, 2023. 249 с. URL: <https://urait.ru/bcode/515075> (дата обращения: 09.12.2023).

12. Котляров М.А. Экономика градостроительства : учебник и практикум для вузов. М. : Юрайт, 2023. 152 с. URL: <https://urait.ru/bcode/516330> (дата обращения: 11.12.2023).

13. Цопа Н.В., Ковальская Л.С., Малахова В.В. О необходимости оценки территориального потенциала для эффективного управления муниципальным образованием // Экономика и экология территориальных образований. 2017. № 2. С. 54–62. URL: <https://cyberleninka.ru/article/n/o-neobходимosti-otsenki-territorialnogo-potentsiala-dlya-effektivnogo-upravleniya-munitsipalnym-obrazovaniem> (дата обращения: 11.12.2023).

14. Организация строительства и девелопмент недвижимости : учебник для студентов : в 2-х ч. Ч. 1: Организация строительства / ред. П.Г. Грабовый. 4-е изд., перераб. и доп. М. : Изд-во АСВ ; Просветитель, 2018. 645 с.

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