

## THE STRATEGY OF SPATIAL DEVELOPMENT OF THE CITY: ON THE WAY TO BALANCE AND SUSTAINABILITY

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### ABSTRACT

In accordance with the implementation of the concept of sustainable development and the need to implement policies aimed at creating an enabling environment for a decent life of citizens, the main strategic objective of the spatial development of a modern city is to ensure sustainable and balanced development of urban space in order to improve the quality of life of citizens.

The unevenness of the economic development of the territories within the boundaries of the city determined the need for strategic planning and establishing a balance in their development. The authors consider the solution of this strategic task by ensuring the development of urban space with a diversified economy and infrastructure, as well as the high quality of life of the population.

It is proposed to form an integrated approach for the representation and development of the potential of the city's territories and their unique features with a view to further creating an enabling environment for the life of citizens. At the same time, the development of urban spaces is possible through the integrated interaction of three structural elements: transport infrastructure, urban areas and urban environment.

**Keywords:** urban environment, urban area, the image of the city, spatial potential, multifunctional areas

### INTRODUCTION

The main trend of territorial development of many modern cities is the development and construction of remote peripheral territories. This "scenario" does not contribute to the sustainable development of the city's territories, leads to a violation of the integrity of the formed city structure and creates problems in the development of transport and engineering infrastructure, urban areas and environment, and also worsens the ecological situation in the city. In addition, the predominant share of places of employment is located in the central part of the city, which leads to daily pendulum migration of the population from the peripheral areas of the city [1].

The main problems of the development of modern cities are presented in Figure 1.

Problem-solving and definition of ways of their decision (forms, means, methods) make the essence of program work at strategic planning of spatial development of the city.

Urban areas are of special value and are a limited urban resource that needs to be rationally and effectively used. Their functional purpose should be supplemented in accordance with the principle of multifunctional use of territories, which is of particular

importance in strategic planning [2].

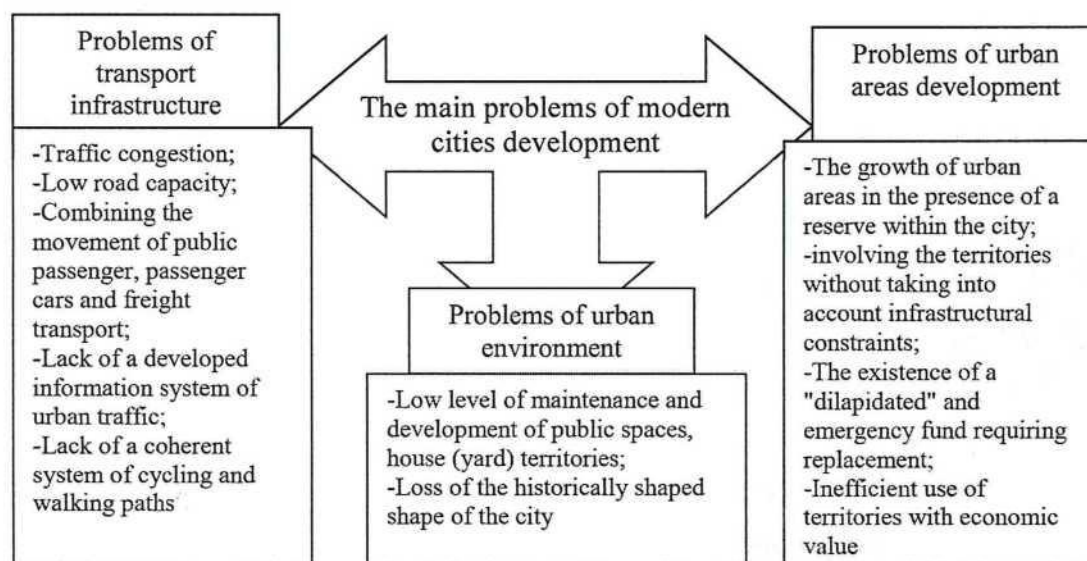


Figure 1-The main problems of modern cities development

The most important aspects of urban policy are: to ensure harmony between the urban transformations being carried out and the preserved historical and cultural heritage; integration of innovations without destroying the historically formed context; maintaining the principle of continuous, sustainable and balanced development [3].

Achievement of the strategic goal of the city development implies realization of a number of strategic objectives:

1. Development of the urban transport network, which promotes mobility, connectivity and accessibility;
2. Transformation of urban territories, aimed at social and economic development of the city;
3. Formation of a comfortable and unique urban environment aimed at improving the quality of life of citizens.

The principles of sustainable spatial development of the city are a kind of "bearing structure", uniting the activities of all the subjects of urban planning in a single consistent complex (table 1).

Table 1-Principles of sustainable spatial development of the city

Principle	Content
Functional and spatial diversity	Avoidance of large monofunctional zones. Increased diversity in the choice of types of housing, work and leisure activities within the same area. Preserve unique ways of using territories.
Efficient, rational and lean use of urban space	Restriction of construction on free territories and increase of efficiency of use of built-up territories. Improving the connectivity of the areas within the area and

(compact city development)	between different areas of the city. Balance of transport accessibility and intensity of development of territories. Preservation of the Green Zone of the city, including its development.
Preservation of natural landscapes	Preservation of existing and integration of new natural landscapes into urban environment [4]. Formation of continuous urboecological structure.
Priority development of comfortable public transport	Formation of an integrated, multimodal transport system. Improving the quality of public transport and the level of mobility of the population.
Creating a system of quality public spaces	Formation of accessible, safe and qualitative public spaces, taking into account interests of different social groups [5].
Balance of private and public spaces	Formation of understandable boundaries between private and public space. Formation of a barrier-free aesthetic environment. Increase the level of security.
Human scale	Formation of environment (buildings, territories, spaces), oriented on pedestrian movements. Observance of comfortable for the person scale in designing of buildings and public spaces. Priority of horizontal density and average storey building. Efficient, rational and economical use of urban space (compact development of the city). Restriction of construction on free territories and increase of efficiency of use of built-up territories. Improving the connectivity of the areas within the area and between different areas of the city. Balance of transport accessibility and intensity of development of territories. Preservation of the Green Zone of the city, including its development.
Originality and recognition	Development of the city's identity due to preservation and revitalization of cultural heritage objects, creation of expressive new architecture and system of spatial landmarks [6]. Consistency of the new building with the existing urban environment. Uniqueness of the city districts.
Balance of social and economic interests	Economic feasibility of planning and volumetric-spatial solutions. Taking into account the interests of the population and business.

Effective use of territorial resources will allow to form rational, compact planning structure of the city.

The main tasks of sustainable spatial development of the city are shown in Figure 2.

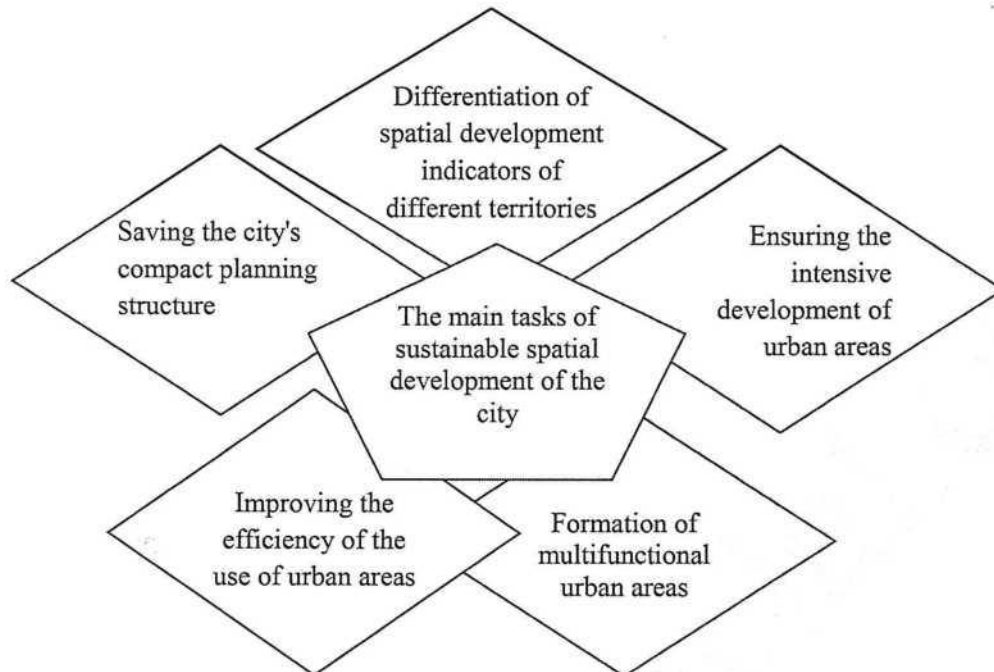


Figure 2-The main tasks of sustainable spatial development of the city

In order to slow down the processes of extensive development of the city it is proposed to divide the city territory into "development territory" (their development will be maintained) and "stabilization territory" (construction on these territories will be limited). The boundaries between these zones can be defined by topographic and planning elements, natural objects and contours of the existing building on the territory of the city.

The "Development territories" include urban areas with existing buildings and territories where capital construction facilities are to be placed. Such territories are allocated for their active and effective use; construction on these territories is allowed. In the formation of development on the developed "Territories of growth" is supposed to improve the quality of social, transport and engineering infrastructure.

The main target characteristics of the "development territories" are the following:

- Comfortable city building;
- Accessibility of transport infrastructure (including public transport);
- Developed socio infrastructure.

The "territories of stabilization" include functional zones, which include forest and foliage arrays, isolated forest areas, flood areas of rivers, water bodies, meadows, agricultural use zones, as well as territories, development which is contrary to the formation of a compact urban plan. Construction in "stabilization zones" is limited; these territories are mainly intended to meet the recreational needs of the population.

In order to ensure the intensive development of urban areas, it is necessary to prevent the placement of buildings in the new territories and thus to stimulate the reconstruction of existing built-up areas of mixed, residential and production assignments.

The city consists of city territories, which perform various functions. As elements of such system are allocated the following functions-residential, public-business, industrial, transport, engineering, recreational. To increase the efficiency of the use of territories should form a unified system of interaction functions.

The following principles are proposed in the framework of multifunctional territories formation (Figure 3).

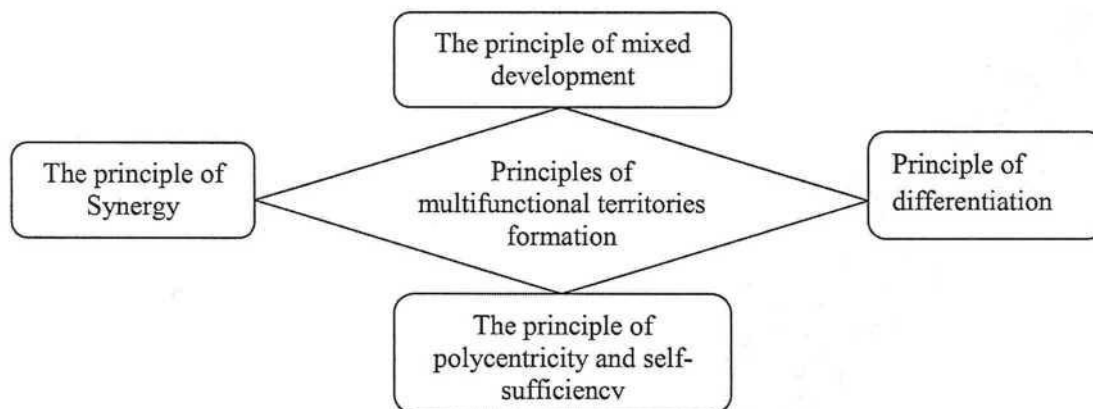


Figure 3-Principles of multifunctional territories formation

#### 1) The principle of mixed development.

Mixed development of the territories involves the integration of functions (residential, public-business, industrial, transport, engineering, recreational), which promotes the involvement of the population. Mixed development is possible at the level of a building, residential group or residential quarter. It can be carried out using private or budgetary investments, as well as using municipal-private partnership.

The main advantages of mixed development:

- formation of a compact urban structure;
- increasing the diversity of residential development;
- reduction of distances between places of residence, application of work and places of "attraction" of the population;
- strengthening the identity of the territories;
- formation of demand for the bicycle-pedestrian infrastructure.

#### 2) The principle of synergy.

In the formation of multifunctional territories the result expected from a combination of two or more functions is characterized by the fact that their interaction is much more effective in comparison with the efficiency of each function separately. This principle is suitable for territories of different scales.

#### 3) The principle of polycentricity and self-sufficiency.

Interaction of multifunctional territories should form self-sufficient planning areas. Within the framework of this principle, regional centres should be formed, which will

remove the load from the central part of the city by fulfilling the needs of the population at the place of residence. Self-sufficiency also implies the provision of each element of the planning structure with the objects of urban infrastructure corresponding to the scale of these elements. Transport and engineering infrastructures providing full planning elements should be considered as priority elements.

#### 4) The principle of differentiation.

The differentiation of the urban environment is important because the needs and tastes of the inhabitants of the city diverse and therefore cannot be satisfied by the formation of standard or homogeneous space. The differentiation of the functions of urban areas allows people to create new opportunities and a wide choice of what is of particular value to them in a certain period of life. For this purpose it is necessary to change state and level of development of city not on the basis of averaged normative indicators, and proceeding from spatial arrangement of the city territories including such conditions, as the town-planning value of territory, availability of social, transport and engineering infrastructures.

Public spaces play an important role in shaping the conditions for the complex and sustainable development of the city, increasing its investment attractiveness, as well as creating a unique architectural and town-planning shape.

Under public spaces the authors understand separate city territories having historical and cultural significance for the city and formed for social interaction and rest of townspeople.

These are: green arrays located in the city limits and intended for mass daily rest of the population (parks, squares); streets, including boulevards, green alleys; square; organized recreation areas near the water. Formation of the idea about their development is carried out taking into account the basic qualitative characteristics (which should have public spaces meeting modern requirements of quality and comfort), namely: structural-functional, visual-aesthetic and value-meaning content.

The main tasks include the following:

- expansion of the network of public spaces and recreational areas;
- creation of a single network of convenient pedestrian space in the city;
- renewal of urban appearance and development of the image of the city, preservation of its identity taking into account historical and cultural heritage;
- preservation and development of the spaces having historical and cultural significance for the city, and also creation of opportunities for creation of places of individual and collective memory;
- creation of conditions for communication and creative activity of townspeople, and also spaces for carrying out of actions and maintenance of initiatives on development of city;
- improvement of aesthetic quality, as well as quality of beautification and maintenance of public spaces for maintenance of physical, psychological and social health of townspeople;
- improving the level of security of urban spaces.

Integration of public spaces into city life is based on expansion of existing and introduction of new functional filling of their territory, and also on intensity of their use during organization and realization of important for city projects.

The development of public urban spaces should take place on the basis of the continuity of historically formed structures; maintaining vertical and horizontal compositional relationships that define the city's appearance; integration of modern development into the historical environment of the city; understanding of the city's historical and cultural heritage.

Development of public urban spaces should take place from the standpoint of filling them with semantic content, which is based on the representation of citizens about the historical and cultural heritage of the city, its identity and local specificity of development.

Formation of semantic filling of city spaces should be conducted taking into account interests of different groups of inhabitants of City. The active participation of residents in the development of public spaces contributes to the formation of a sense of belonging to the place and the integration of urban communities. The manifestation of civic activity (civic initiatives in decision-making in the context of the discussions of urban development) promotes the conditions for the creative self-realization and communication of citizens, so the city takes a vector to create sites for implementation of initiative projects on the development of the city and the embodiment of the most successful concepts in the real environment of the city. At the same time, the creation of a full-fledged creative environment will be possible in determining the territories that can be adapted to new functions, subject filling, operation mode, as well as updating existing spaces to attract innovation, business and startups.

Such public involvement will enable the municipality to achieve the following:

- to formulate the most comprehensively solved problems and corresponding decisions;
- to increase the efficiency of use of limited resources;
- reduce the risk associated with the increase of project implementation time;
- to raise the level of public awareness about the implementation of projects.

## CONCLUSION

Implementation of the Spatial Development Strategy:

- allow the city to achieve sustainable development on the basis of integrated development of inefficiently used existing spaces with potential for transformations, development and renewal of transport communications system and other elements urban infrastructure;
- will allow to make the mechanisms of management and planning of the city open, will enable the population, public organizations and representatives of various professional branches to take part in choice of strategic decisions and to promote in their successful implementation;
- reveals the main objectives and guidelines of spatial development of the city for the long term, promotes the improvement of the quality of life of citizens and

implementation of all planned spatial transformations of the city;

- demonstrates to citizens the direction of action of local authorities not only to solve private problems in the development of urban areas, but also to setting goals designed to ensure sustainable spatial development and prosperity of the city;

- contains ideas, principles of spatial development, defines places of application of external and internal investments taking into account vision and perspectives of spatial development of the city;

- is an effective tool for forming and maintaining the competitive ability of the city in the course of the systematic development of its territories in comparison with other cities, its advantages in attracting investments and acquiring advanced positions in international cooperation;

- involves the population of the city in quality partnership (in the context of the development of urban spaces) relations with local authorities, public organizations, entrepreneurial structures;

- allows to consolidate the efforts of active representatives of the city community, aimed at the development of the city's territories, which are the most promising;

- is a prerequisite for the implementation of projects that transform urban space.

The strategy of spatial development of the city can be realized in conditions of full functioning of the power structures understanding the importance and necessity of the new approach in strategic planning, oriented on search of optimum decisions in economically constrained conditions and aimed at forecasting strategic results;

The creation of such conditions will ensure sustainable spatial development of the city and have a significant impact on the quality of life of citizens through the multifunctional use of the territories. Identification of inefficiently used territories with additional development potential within the boundaries of the city will allow to involve the existing territorial resource which, unlike the remote territories, is already provided by transport-engineering Infrastructure.

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