Methodical approaches to justify the sustainable development of a historically established city using the principles of revitalization of territories

The task of urban development is to synthesize resource flows and create adequate anthropological conditions for the implementation of rational programmes and plans for the revitalization of urban spaces. Turning to the essence of the methodological principle of relativism, which consists in the absolutization of relativity and conditionality of any knowledge, and, consequently, restricts the description of the object of research to their immanent properties, the presence or absence of the latter ensures the priority not only of integrity, systemic reality over individual parts, but also of development over preservation. In other words, urban development should be regarded as a managerial functional of expanded reproduction (capitalization) of urban assets in its modern development. In relation to the city, it is also important that the material should not dominate and cannot be considered in isolation. The property of the integrity of urban space creates the basis for the realization of the advantages of systematicity and prioritization of development goals.

The preservation of real estate objects over time allows us to study the dynamically changing parameters of real estate and the logic of urban development, reflecting the meanings of urban life, transformations of production methods, challenges and overcoming, values and preferences. A comparative analysis of the causes of emergence and factors of the development of settlements in Russia and Europe shows the similarity of evolutionary trends. At the same time, the study of natural conditions, specialization and peculiarities of mentality of the population of different countries, urban planning traditions allow us to identify common features and differences in the urban development of cities.

The close relationship between urban development and the socio-economic development of the city has a dual nature of interaction, determined by historical periods, which are essentially discrete projections of each other. It is proved that urban planning activities affect the social and economic life of the country in the long term. The problems of maintaining a balance between opportunities and needs in the social, financial, cultural and environmental aspects of urban development lead us to the need to determine the vector of sustainable development.

It is generally accepted to carry out the processes of real estate conversion in historically developed cities within the framework of the Redevelopment Concept. The change in functionality and operational characteristics is currently subordinated to the logic of the market economy, i.e. the support and multiplication of cash flows at all stages of the life cycle of real estate. The decision on the degree of construction and architectural intervention is subordinated to these motives. Targeted focus on solving social problems significantly changes the conceptual foundations of redevelopment, giving them a social focus on creating a comfortable living environment. In this regard, emergency housing, mothballed or abandoned real estate are subject to not just repurposing, but literally "revitalization", i.e. recreating conditions for comfortable human habitation. In terms of the theory of sustainable development, this means the revitalization of the living space. According to the author, the term "revitalization of urban space" corresponds much more to the targeted focus of National Development projects.

Keywords: revitalization, sustainable urban development, urban environment regeneration, spatial and territorial development, cognitive approach, anthropological conditions of project implementation

INTRODUCTION

The desire of people to improve living conditions has led to the rapid development of urban spaces. The synthesis of these directions makes it possible to highlight the strategic context of urban development (Fig. 1). The practical experience of development of various cities on the regulatory basis of inclusive models due to the underestimation of economic, social and cultural heterogeneity came across inevitably low efficiency of urban development [1].

At present, as a result of numerous studies of the theory of sustainable urban development, five synthesized basic patterns are distinguished:

1) Unevenness and heterochrony (management of synchronization processes of development of branches and segments of urban economy);
2) Instability and cyclicity (management of cyclical dynamics of development of urban economy systems);
3) Sensitivity and manageability (stimulating the perception and processes of overcoming the backlog and parrying the challenges of urban economy);
4) Cumulativeness and continuity (planning and analysis of continuity and multiplication of the results of management decisions in the sphere of urban economy);
5) Divergence and convergence (expanded reproduction of diversity and convergence of all elements and systems of urban economy).

Taking into account the projections of urban space analysis proposed on the basis of the analysis of the patterns of urban development, as well as synthesizing points of view on the determination of the concept of urban development, as a result of...
the ontological analysis carried out by the author, we agree that the main focus of the study concerns [2]:

- the use of the concept of an integral urban space of life activity, acting in the form of socio-economic and natural-technological geosystems within the fixed territorial boundaries of historically developed buildings, new areas of complex development, as well as territories with hidden investment potential with objects of cultural and architectural heritage of the historically developed city;

- striving for self-sufficiency of development of each of the districts of the historically formed city. This is manifested in the availability of the necessary material and non-material development resources within the established boundaries, both for the minimum possible resource provision and for additional investment attraction [3].

The priority of the goals and processes of urban development over the goals and processes of their simple reproduction and preservation requires a targeted focus of chaotically diverse situations, including those related to adjacent areas. At the same time, the quality of the urban environment is created as a result of the interaction of living and non-living matter at three epistemological levels:

1) statistical level, recording the facts characterizing the state of the urban environment;

2) programme level, which sets the main trajectories for achieving the goals of the development of urban areas of historical development;
3) problematic level, revealing conscious contradictions of development and ensuring the revitalization of the territories of historical development [4, 5].

MAIN PART

Based on the revealed patterns of practical implementation of the holistic approach, we formulate the main immanent properties of urban areas of a historically developed city, bearing in mind that this is, first of all, a community of people living within the specified territorial boundaries and contributing to the revitalization of living spaces. Let us combine the properties into a table and decompose them by study levels (Table).

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So, the author’s interpretation of the revitalization processes is reduced to the implementation of the following functions:

1) urban planning in order to restore the viability of urban spaces of historically developed buildings;
2) urban planning and development for the organization of investment and construction processes of renewal (reconstruction, modernization and overhaul) of existing buildings;
3) urban planning to ensure the balance of the functional structure of real estate;
4) creation of biospheric compatibility of urbanized territories with functional and mobile mobility for various purposes and transport infrastructure facilities;
5) urban regulation to create generally rules of urban land use and renovation of existing buildings, removing the conflict of private

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* THC — the territory of the historically developed city.

and public interests in urban development. Dialog modes of implementation (authorities, business and the population) using platform solutions in order to ensure advanced development and the need for real estate of various types of urban environment.

Often, to characterize the restoration of areas of historically developed cities, the term regeneration is used as a designation of the processes of preserving the historical and urban planning or natural environment. In practice, this term is used in a broader sense, as an integrated approach to the restoration of the historical urban environment on the basis of reconstruction, meaning reconstruction, and sometimes new construction. However, the classical content of the term regeneration means, first of all, the conservation nature of the construction work carried out to restore the historical heritage.

The analysis of historically established criteria for assigning cities to a pronounced type allows them to systematize and substantiate the main features that determine the significant differences in urban living spaces (Fig. 2).

The analysis of the functional content of cities of various types allows us to distinguish five main types of urban spaces: public-business, combining administrative, business, commercial real estate; street-road with the territories of streets, roads, driveways, bridges, overpasses, crossings, parking lots, etc.; social-leisure, covering medical, educational, cultural and leisure, sports facilities; residential territories, including house territories and other territories of a comfortable environment; citywide territories, including parks and squares of green spaces, public squares, etc.

It is suggested that the features of the real estate sector include the currently accepted profile of characteristics:

1) diversity of types and types of real estate segmented not only by location, functional purpose, number of floors, degree of deterioration, etc., but also by the level of capitalization and prospective advantage;

2) plurality of object composition with a characteristic internal interconnectedness and interdependence of the incoming objects. For example, the real estate structure of industrial zones and territories sets the configuration of energy, transport, housing and communal infrastructure, and natural or cultural heritage objects objectively limit, and in some cases expand the specific possibilities of new construction;

3) functional determinism and relative inertia of real estate objects, requiring either giving the properties of multifunctionality or redevelopment taking into account the dynamics of the structure of needs;

4) the possibility of using various economic models of involving real estate in economic turnover. This can be shared-equity

![Fig. 2. Hierarchical structure of concepts reflecting the processes of restoration and renovation of real estate in a historically developed city (developed by the author)](image-url)
construction or project financing of new construction, acquisition of real estate ownership, lease, trust management, co-working, etc.;

5) features of the liquidity of real estate as an investment asset. On the one hand, being a reliable asset, there is always demand, on the other hand, given the capital intensity and duration of payback periods, the period of operation of the facility can be long;

6) diversity of business entities involved in the real estate sector. At the same time, not only legal entities, but also individuals participate in the management cycle of real estate, taking into account the organizational and legal forms of ownership of an economic entity. Their dynamically changing needs give impulses to changes in the structure of real estate.

Participants in the processes of cyclical development of real estate carry out their activities in various spheres.

Multifunctionality of real estate was a characteristic feature of the historically developed development of Russian cities. Strategic trajectories of their development, ranging from the creation of defense industry to the formation of scientific and educational clusters, naturally took into account the location, formed production potential, existing specialization, quality of labour resources, business traditions and social characteristics.

The priority of the production sector, the financing of capital investments in real estate serving the consumer sector of the national economy, on a residual basis led to the emergence of the deepest imbalances in the real estate sector, which necessitated the development of a National project “Housing and urban environment”.

As the survey of developers, developers, representatives of government and city self-government showed, the most important structural factor characterizing the influence of the urban population on the composition and structure of real estate objects is the income structure of the urban population. Thus, if the vast majority of citizens are in the zone below the subsistence minimum, it is not necessary to count on the prosperity of commercial real estate for non-industrial purposes. According to the respondents, in the so-called “peripheral” areas of the city, the creation of real estate with a large number of jobs is an absolute priority.

Structural factors reflecting the state of the urban population, as shown by the study:

- firstly, they form the requirements for residential real estate, its price characteristics, location, number of floors, apartment construction, etc.;
- secondly, they are decisive in relation to the profile and functional component of real estate of socio-cultural purpose. The new construction of educational institutions, their type and scale directly depends on the dynamics of the proportion of children and young people in the places of settlement of the family part of the urban population;
- thirdly, they set restrictions in the construction of commercial real estate. Residential areas displace factory areas, and their residents, even though they need jobs, oppose the placement of various industries, voting for the development of public spaces, retail and office real estate. Even the location of hotel real estate according to surveys for 40 % of citizens is undesirable;
- fourthly, it is absolutely obvious that the attitude to the targeted use of land in cities often becomes a zone of social tension. This is especially true of the historical centres of cities;
- fifthly, they determine the economically feasible functionality of multi-profile real estate, determining the demand for retail outlets, entertainment venues, catering places, pharmacies, etc.

The existing resource base of urban development requires restructuring taking into account the cognitive approach. The most important role in its framework is played by the quality of labour resources, assessed not only as the ability to work, but also as the initial cost of labour resource that grows as experience accumulates and education improves. In this capacity, it is human capital, on which business and investment activity, the intensity of development processes, the duration of periods of stagnation and crises depend. In this regard, it is the structure of human capital, which is based on the consideration of the previously considered structural factors, that is decisive in the formation of the resource base (RBd):

\[ RBd = RBc + RBb + RBa, \]

where RBd — resource base of urban development; RBc — the resource base available in the city; RBb — borrowed resources; RBa — attracted resources.

The task of the city authorities is to:

- RBd \rightarrow \text{max}, on condition RBc \rightarrow \text{max}.
- At the same time RBb \rightarrow \text{min}, RBa \rightarrow \text{max}.

The Coronacrisis also changed the existing trends in the real estate sector. In contrast to the global financial crisis of 2008–2009, the management system of the national economy did not collapse, but functioned in a strictly controlled state regime. The controlled contraction of the economy made it possible to prevent defaults and collapse of prices in the real estate sector. Whatever threats, for example, related to the closure of office and shopping centres during lockdowns did not occur, real estate prices have resisted and remained at about the same level as in the conditions of cyclical crises.

The analysis showed that during the outbreak of the pandemic, in the conditions of changing forms of activity (with the transition to remote employment) and the explosive growth of online commerce, which caused not only new construction and reconstruction of existing warehouses, but also the growth of jobs, including highly qualified ones. Thus, the logistics segment has not only expanded, but also attracted highly qualified personnel.

Thus, the revitalization of historical centres cannot be reduced to the addition, completion, extension or reconstruction of existing real estate. It implies a profound rethinking of urban functionality that requires the reconstruction of industrial buildings and an assessment of the possibility of resettlement, both in newly constructed buildings and in existing areas that are being rebuilt and adapted for housing.

With regard to historically developed cities, we note that the pandemic has only intensified the trends that have formed. In particular, the difficulties of living in city centres with heavy traffic, developed office, retail and sports and entertainment real estate. This requires the revitalization of city centres, which in turn actualizes the scientific justification of the requirements for the implementation of the processes of revitalization of urban centres and the organization of a new wave of their settlement.

Thus, in all cases, it should be taken into that in order to implement structural maneuvers to meet the needs of the population, a system of state support measures is needed that can support demand, switch to an industrial construction basis, lay the infrastructure foundation of a comfortable suburban environment. Otherwise, this type of migration may become an insignificant factor in the implementation of structural maneuvers aimed at revitalizing the centres of historically established cities.
So, based on the study of the response of the urban real estate sphere to changes in structural factors characterizing the influence of the urban population on the dynamics of the development of various types of real estate, we formulate the basic principles of the revitalization of urban spaces of the post-Covid recovery period:

1) preference for socially oriented, creative, people-saving, cost-effective and environmentally safe real estate development supported at all levels of public administration;

2) understandability and clarity, visibility and popularization of the meanings, goals and accents of the revitalization of urban real estate in the areas of existing development;

3) the focus of the declared changes in the structure of urban real estate on ensuring investment attractiveness, allowing to develop and launch a programme of restructuring and new construction in the sphere of urban real estate;

4) equalization of comfort levels and prospective advantages (functional content, infrastructure provision, transport accessibility, etc.) of all districts of the city;

5) deductiveness of conceptual, strategic, scenario, programme and project approaches to the revitalization of urban space and real estate development;

6) consistency of revitalization programmes and projects that ensure the promising nature of creating an investment-attractive image of urban development;

7) openness and dialogue mode of urban real estate revitalization processes implemented using information and communication technologies;

8) resource competitiveness, investment attractiveness and stimulating nature of the launched revitalization processes.

The specified requirements formulated by the author systematized the features of creating an investment-attractive environment of historically developed cities.

Depending on the historical value of the reconstructed area, its preservation and the degree of destructive interference, the regime of protection of the historical environment, it is assumed to preserve the scale of development, compliance with existing building lines, limitation of number of floors, support of architectural and stylistic features of the environment, etc.

Distinctive for a major and large city is its filling density of 40 people/ha (Fig. 3).

This value of the city density indicator gives the following advantages:

- high efficiency of investments in infrastructure, low costs for its operation, renovation and new construction, especially for public utilities and transport system facilities;
- high efficiency of budget funds, including those used for the maintenance and development of infrastructure and the growth of the tax base (due to the renovation of the housing row and the regeneration of the centre);
- lower transport and logistics costs, including as a result of optimization of the urban structure;
- increasing accessibility, connectivity, attendance and pass-ability of the urban environment;
- high manageability of the territory in terms of the need to increase administrative resources, motivation and competence of city authorities;
- creation of biospheric compatibility of urbanized territories by reducing the socio-economic damage caused by natural and economic pollution of the environment by historically industrial enterprises by transferring them to the city and reducing the intensity of use of both cargo and personal vehicles.

This creates a sustainable:

- socio-cultural development of the historically developed territory;
- economic recovery and capitalization of all elements and objects of the urban environment [11–14].

The preliminary author’s research made it possible to conclude about the possibility and prospects of considering the GRS as a revitalization of the historically established territory (hereinafter, RHET) through the prism of conceptual modeling of spatial and territorial development (PTDip) with a functionally reliable separate urban planning system consisting of certain stages and subsystems of interaction with a criterion assessment of their planning by integral indicators of total costs, effects and economic reliability.

CONCLUSION

At the first stage of the study, we will perform a conceptual definition and clarification of the innovative term “spatial-territorial development for urban real estate reproduction management” (PTDip). As the analysis of the theory of development has shown, this terminology is absent in the modern scientific and practical classification. In this regard, the author proposes to introduce the following author’s terminological definition of PTDip.

The spatial and territorial development of real estate revitalization (PTDip) in the GRS of the cluster territory should be understood as the professional activity of the head real estate developer and specialized developers (investors) in the sphere of urban construction and real estate management with the function of forming a corporate target alliance of business partners (business partners: construction and installation organizations, concessionaires, logistics, transport, operational enterprises and management companies), united by the process of reproduction of a single urban land and property complex for the revitalization of cluster-type real estate (investment projects) and the tasks of effective implementation of cluster objects of various types and purposes as part of an urban megaproject (IP) due to its high organizational and economic stability, maximum economic reliability of the construction of cultural and architectural heritage, historically industrial real estate transport, municipal and logistics infrastructure, etc. with the minimum total cost of their ownership.

A detailed review of scientific research methods allowed the author to establish that the functional reliability approach provides for the consideration of the object of research in the form of a set of functions (targets) that allow such research to be conducted with...
a locus and effective obtaining maximum efficiency (commercial, budgetary, social). The functional model of the object under study is primary, and its structural and effective functional-reliability model is secondary (depending on the type of implemented functions).

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