

ACTUAL STUDIES OF THE CITY

Zapotochnyi Y.M., *lecturer*

(Odessa State Academy of Civil Engineering and Architecture)

Knowledge is the product of research. The relevance of this knowledge - their content and methods of systematization – are determined by the success of their application in practice.

We will call actual city research studies that are successfully applied in the practice of urban planning.

The basis for the types of the tasks of modern urban planning will be the idea of the city as a specially differentiated space, as a result of which the territorial system of the city is formed.

The task of urban planning, within the framework of such a view, is the creation of tools for the spatial differentiation of the city and the territorial registration of the results of such differentiation.

City planning activity determines how space of city is allocated and, therefore, how harmoniously the city exists and develops.

The city, in the most general sense, is characterized by three parameters.

1. **COMPLEXITY.** It is necessary to provide a sufficient number of "options" for the needs of the lifestyles of the urban community and activities that support the existence and development of the city. The urban fabric reacts to the process of space differentiation (dividing it into structural elements) by dividing and surveying it into separate locations and functional and other sites. This, usually, come systemic complication of the city, and an increase in the degree of variability of the modes for the existence of the urban structure.

2. **BALANCE** both in the stable state of its structure and in the dynamic of adaptation to evolutionary and qualitative changes. The city combines many different elements. Each of them can exist both on its own and have its own development paths, and within the framework of the urban structure. This can cause a mismatch in the city system as a whole.

3. **INTERNAL COMMUNICATIVITY.** Territorial systems provide interaction and free circulation of moving elements “inside” the fabric of the city. For this, territorial systems of supply, transport, networks, etc. are being created. For example, for a city, such a parameter as the speed of movement from any point to any other is important. The faster and easier it is to move, the higher the quality of the city.

Let us concretize the issues of urban planning, for which specific knowledge, and, therefore, research is needed.

1. On the basis of what principles and with what tools to divide and

distribute urban space? The process of city space differentiation is permanent. The grounds and reasons for the division and differentiation of the city space can be very different – legal, the need for the development and expansion of infrastructures, which may require additional land plots, the emergence of new technical means, the territorial growth of the city, population growth ... etc.

2. How to deal with conflicts and contradictions that cause imbalances in the urban structure? Imbalances in the urban structure arise at different levels – these can be territorial problems of a chronic shortage of parking spaces or dysfunction of the transport network due to an increasing traffic flow of vehicles.

3. How to organize the fabric of the city to form territorial systems and infrastructures sufficient to support the city. To create full-fledged territorial systems of the city, a whole complex of engineering systems and methods of dispatching and monitoring of conditions are required. Research is also needed for successful or most effective solutions for planning new and renovating existing systems.

So, the topical areas of research in a modern city are:

- research of the principles and tools of structuring the city as a large system;

- research of the principles of sustainable development and the application of knowledge in combination with policy tools of various communication practices, identification and development of space-planning patterns of urban morphology;

- technical research and research within the framework of engineering and design practices, city topography, research and development of types of territorial organization of space.

A note on the current situation.

Remote operation under quarantine conditions, together with the development of the Internet and digital technologies sets new tasks, requires a change in the approaches and concepts of the city itself in connection with new situations and opportunities.

This opens up another direction – the use of “digital twins” technologies, and network tools for communication, monitoring and cooperation in urban planning.

In this regard, many types of activities will change their territorial form to virtual, for example, various Internet and cloud services – delivery services, taxis, various information services will lead to the transformation of the physical urban fabric. It is not known exactly what this transformation is, in order to get answers to this question, research is also needed.