SMART TECHNOLOGIES IN ARCHITECTURE

Viktoria Levchenko

Educational and Scientific Institute of Architecture, Design and Fine Arts,

O.M. Beketov National University of Urban Economy in Kharkiv

In the modern world, smart technologies come to the fore in many areas of human life, architecture is no exception. Instead of typical high-rise buildings, we get free space, smart technologies, comfortable living conditions, both within one building or district and within the entire city. Smart architecture solves the following issues: economy, environmental friendliness, safety, comfort, convenience, ease of use of space for work, living and recreation.

Today, many people are researching this question. Such scientists as Y. Khlaponin and O. Selyukov are studying the possibility of using smart technologies in construction, their goal is to determine what features a house should have in order to be considered "smart" and to show the main trends in this direction. In her articles, N. Zamyatina highlights this problem in the broadest scope, within the city limits, which leads to the unification of various technologies to create a comfortable life through the implementation of innovative solutions in the field of municipal management (Zamyatina, 2018, p. 207). L. Oliinyk and R. Berezhok consider the mechanism of implementation of these technologies in the realities of a particular region, city and the conditions under which it is possible to implement these technologies successfully.

The word "smart" by definition is intelligent. This technology originated in the IT industry with the advent of digital devices. Until now, this technology was included in the concept of "smart house" with digital technologies of its control. Today, the concept of ecological and energy-saving construction has been added to this technology. Thus, smart - technology in any sense means the organization of a "smart", i.e., healthy, economical and convenient human dwelling at all stages of its life cycle (Khlaponin, 2020, p. 121).

The implementation of the concept of "smart-city" as a complex system of information, communication and social technologies is caused by the need to solve in the near future the pressing problems associated with global processes and ensure the effective functioning of modern megacities in accordance with the needs of their residents. In practice, the concept of a smart city is the application of new technologies in the construction of buildings and structures, the use of new materials, the transformation of new methodologies and processes of city management, the use of modern information technologies (Zamyatina, 2018, p. 206).

Now the speed of the technological process is very rapid and the appearance of such tools to facilitate human work is something common. However, an extremely important element for the emergence and existence of such a system of technologies as "smart city" in any country is the level of the citizens' education. That is, in order

to be able to use such technologies correctly, you need to have a certain level of knowledge and skills. This aspect is fundamental for building a successful and efficient "smart-city" system in a certain country. This trend is connected with the fact that humanity is now at the crossroads of the transition to the "information society". That is why the technology of the "smart city" has a close connection with the educational process (Oliynyk, 2020, p. 60).

Therefore, the implementation of smart technologies in architecture combines many aspects and connects a large number of objects. A "smart house" is an economical, ecological, safe, comfortable space combined with a coordinated system of innovations. Such buildings are an integral and primary component of a "smart city" in combination with digitalization of administrative and transport services, innovations in transport networks, energy, water supply and other areas.

References:

Khlaponin Yu., Selyukov O. (2020) Application of smart technologies in construction. Transfer of Innovative Technologies Vol. 3. No. 1, 121-123.

Oliinyk L.V., Berezhok. R.A. (2020) Economic effectiveness of "SMART CITY" technologies Economics of management organization. No. 2. 55-65.

Zamyatina N.V. (2018) Modern technologies in the smart city system as a mechanism for improving the standard of living in the context of globalization. Materials of the international scientific and practical internet conference, 206-208.