Myronenko V.P., Dr. architecture, Demydyuk U.

Kharkov National University of Construction and Architecture, Kharkov, Ukraine

## DEVELOPMENT IN ADAPTABILITY OF IDEAS MODERN AMONG HORODSKO

Abstract. The article discusses the benefits of implementing examples and ideas of adaptability in today's urban environment, which contributes to the humanization and rehabilitation of the urban environment, harmonization of communication "people - the urban environment" and the formation of a flexible space of the city.

<u>Keywords</u>: adaptability, modern city environment, to humanize the urban environment, the innovative environment of the city, interactivity, flexibility of space.

Statement of the problem. Currently, the city is on a complex, contradictory enough stage in their evolution. Modern urban environment appears to us in constant motion, development and transformation. In recent decades, is rapidly changing the appearance of cities in the world, opening itself influence of new technologies, new stylistic searches, urban planning concepts. N. Saprykina emphasizes that the hallmark of our time is the increasing dynamism of society associated with the rapid development of scientific and technical progress, the geographical expansion of human activity, increasing migration and population mobility, etc., which entails changes in all spheres of human activity, including in the architecture [6].

In such conditions, the development of modern society adaptability has become one of the most important and essential qualities of a modern urban environment. Many researchers have noted that the paradox of the modern urban environment is that the physical city planning scheme and the organization of urban space, outdated, and its contents, the perception and experience of its use by man updated. Diversity and rapid change of the population's needs in the organization of the material and spatial environment are fundamental factors in the

modern urban environment. Prediction lifestyle changes society and the creation of architectural environment, capable of being readily adapt to them, becomes one of the main components of the design process.

The wording of the purposes of article. The purpose of this paper is to analyze the ideas and possibilities for adaptability in a modern urban environment for the future development of special design techniques by which architectural environment and the objects will remain relevant.

Analysis of recent research. The basis of the study were the works of L. Anisimova, Volkova, A. Panfilov, N. Saprykina, which address various aspects of the formation of flexible spaces and adaptive objects. Questions humanization environment architectural design tools are considered in Mashtakova E. and K. Tselousovoy. Problems of formation of an innovative environment described in the study of E. Ustinchenko.

The main part . Application of the ideas of adaptability in architecture contributes to the harmonization of communication "people - the urban environment ," humanization spatial environment and its transformation to improve , fixtures meet the changing needs of society and usage scenarios . Under the process of humanization of architectural environments refers to its improvement in order to achieve physical, mental and spiritual comfort in artificial human environment. From a philosophical perspective , the humanization of the medium can be considered as one of the stages of restoring harmony between the individual , civilization and nature .

Since the development of the urban environment is often not measured, then there are areas with undeveloped quality environment without its unique shape or lost for some reason its relevance. In many European countries to address these problems successfully implement the principles of adaptive spaces in practice. Event architecture, Architecture and urban design various objects designed with the introduction of the principles of mobility, transformation, the possibility of easy assembly / disassembly. A particular advantage of such adaptive architectural sites is the ability to activate a specific portion of the urban environment with

minimal material costs , to rehabilitate him . These objects give the diversity and dynamics of the environment of the city, can create a vibrant public space and be an integral part of the aesthetic image of the city , the carrier of information about the cycles of social life. This approach to the solution to improve the quality of the medium is convenient because it does not bind to the stylistic conformity and any other restrictions - a kind of a living experiment to modify the content of the urban environment .

Consequently , the introduction of the ideas of adaptability in a modern urban environment can contribute to the solution of such problems as the rehabilitation of the environment , improving the effectiveness of advertising and public relations , emotional, psychological , aesthetic harmonization environment. Mobile and transformable objects can serve as an instrument of temporary compensation for the missing functions congested urban environment during public events in the city . A good example of the saturation of the urban environment are mobile pavilions cafe (Fig. 1).

Special role in the formation of the modern urban environment play a variety of mobile art objects. According to A. Panfilov, such objects can be admired only by a narrow group of people. [5] However, in our opinion, art objects can be an integral part of the city, and later even his character. Moreover, these adaptive objects allow more appropriate use of natural resources and by enabling easy removal of potentially reduce various adverse effects on the environment (Fig. 2).

In modern conditions, more and more valued versatility and ability to timely respond to rapidly changing conditions. In the context of information technology organizations of the urban environment special attention should be given to the introduction of interactive objects and the formation of an innovative environment of the city. Interactivity is humane in its interactive nature. Interactive projects to create sustainable and positive communication with observers.



Fig. 1. Mobile pavilions café



Fig. 2. (left to right) 1. Dismantling of the monument on the Constitution Square in Kharkiv lasted more than 50 days.

2. Robert Indiana LOVE sculpture installed in many cities around the world.

According to E. Ustinchenko, interactive interfaces, and dynamic processes of urban scenarios can become the main form of urban organization. "Filling the urban environment with interactive objects and systems, we free we need is space, optimize the management of urban organism and its complexes raise the

communication features of the environment and social activity, not forgetting the convenience of the use of urban environment due to its adaptive capacity and appropriate modern space- temporary feeling of man ". [7]

Intelligent design forms that focus on groups of consumers who share common social, demographic, functional or other features contribute to the humanization of modern environment. In an urban environment are individualized items within specific environments (eg environment for children, tourists, people with disabilities, etc.) What urban design must adapt to the existing consumer groups [7]. Based on the relation of "man - environment", it can be argued that the main areas and spheres of use interactive objects / systems (Fig. 3) are:

- 1. improving communication characteristics of the environment and the adaptation to different groups of consumers for example , the introduction of GPS-navigators and QR-codes for easy orientation of tourists in the city;
- 2. Information Organization of the urban environment the use of interactive screens, for example, can help solve the problem of advertising dominance;
- 3 . training and development, both children and adults interactive objects can enter into a dialogue with the person. Feedback starts to work through mechanisms that , given human behavior , allow him to carry out the process of "conversation" with the environment change , such as color, light , texture , transparent surface ;
- 4 . entertainment and attractions interactive technologies allow to create a paradise for thrill-seekers with the ability to realize their dreams;
- 5 . various shows and stage effects for example , laser shows on the facades of buildings are highlights from city holidays ;
- 6. protection, observation, analysis and prevention of emergency situations, as in the local scale of the interior, and across the urban structure;
- 7. research and development through interactive technology can simulate a variety of environmental conditions;
  - 8. rehabilitation in medical applications [2].



Fig. 3. Interactive technologies

Modern digital technologies in urban environments promote clean solutions make it possible not to use decorative techniques or excesses, as well as create a special perception of the nature of the medium of human presence. But it is important to realize that they can be used to enrich and destroy the architectural environment, thus exerting a negative influence on the person. [4]

# Conclusions and research perspectives.

Adaptability , flexibility, urban space - an important condition for the development of the modern city. Stationary and static form of urban design are inferior dynamic and mobile. Transformative , mobility , interactivity architectural objects contribute to creating a more comfortable environment for human life and stay . Ideas adaptability help create expressive architectural solutions , which do not lose relevance and meet the needs of society.

Implementation of the principles of adaptation of architectural objects holds great promise for use in architecture, science and technology development, generating new ideas.

#### Literature

Витнок Е.Ю. Городская среда как арт-объект / Е.Ю. Витнок // Вестник Томского государственного университета. — Томск, 2012. — №364. —С. 43—48.

- 2. *Керешун А.И.* Возможности интерактивной архитектуры [Электронный ресурс] / Керешун А.И. Урал: УралГАХА. Режим доступа:
- http://book.uraic.ru/project/conf/txt/005/ archvuz14\_pril/22/template\_article-ar=K21-40-k28.htm- заголовок з екрану.
- 3. *Маштакова Е.К., Целоусова К. К.* Гуманизация городской среды архитектурно-дизайнерскими средствами [Электронный ресурс] / Маштакова Е.К., Целоусова К..К. Караганда: КарГТУ. Режим доступа: <a href="http://repo.kstu.kz:8080/xmlui/bitstream/handle/123456789/1502/Maштакова%20">http://repo.kstu.kz:8080/xmlui/bitstream/handle/123456789/1502/Maштакова%20</a> 

  Е.К.%20КарГТУ%20тезисы.pdf?sequence=1— заголовок з екрану.
- 4. *Мироненко В.П.*, Демидюк Ю.В. Интерактивность как свойство адаптации среды / Viktor Myronenko, Julia Demydiuk // Дизайн, архітектура, образотворче мистецтво: Міжвідомчий науково-технічний збірник (із матеріалів Всеукраїнської науково-практичної конференції «Економічні, правові та соціально-гуманітарні процеси в Україні: теорія, методологія і практика»; Полтава, 25-26 квітня 2013 року). Випуск 10. Полтава : вид-во ПІЕП, 2013. С. 12—16.
- 5. *Панфилов А.В.* Внедрение принципов мобильности в статическую архітектуру [Электронный ресурс] / А.В. Панфилов. Режим доступа: <a href="http://jurnal.org/articles/2008/arhi1.htm">http://jurnal.org/articles/2008/arhi1.htm</a>
- 6. *Сапрыкина Н.А.* Динамическая адаптация архитектурных объектов: автореф. дис. ... доктора архитектуры: 18.00.02 / Сапрыкина Наталия Алексеевна; Московский архитектурный институт (государственная академия). М., 2000. 77 с.
- 7. Устинченко Е.В. Роль дизайна в формировании инновационной среды города [Электронный ресурс] / Устинченко Е.В. Режим доступа : <a href="http://book.uraic.ru/project/conf/txt/005/archvuz26">http://book.uraic.ru/project/conf/txt/005/archvuz26</a> pril/48/template article-ar=K21-40-k40.htm заголовок з екрану.

## Анотація.

Мироненко В.П., Демидюк Ю. Розвиток ідей адаптивності в сучасному міському просторі. У статті розглянуто приклади і переваги впровадження ідей адаптивності у сучасне міське середовище, це сприяє гуманізації та реабілітації міського середовища, гармонізації зв'язку «людина - міське середовище» і формуванню гнучкого простору міста.

<u>Ключові слова</u>: адаптивність, сучасне міське середовище, гуманізація міського середовища, інноваційне середовище міста, інтерактивність, гнучкість простору.

## Аннотация.

Мироненко В.П., Демидюк Ю. Развитие идей адаптивности в современном городском пространстве. В статье рассмотрены примеры и преимущества внедрения идей адаптивности в современное городскую среду, это способствует гуманизации и реабилитации городской среды, гармонизации связи «человек - городская среда» и формированию гибкого пространства города.

<u>Ключевые слова</u>: адаптивность, современное городскую среду, гуманизация городской среды, инновационная среда города, интерактивность, гибкость пространства.