

in the existing natural form (hill or hollow) instead of leveling the ground with excavators or filling the lowlands with imported soil (Pic. 3).

This approach provides users with the opportunity to feel inside the ecosystem, moreover, a more comfortable air temperature will remain inside such a building, which will lead to lower energy costs.

The least costly way to improve the environmental situation is to expand the bicycle infrastructure, which has a lot of positive aspects: environmental friendliness and promotion of sports; reduction in the number of car parks; take up little space; attractive appearance [2].

Conclusion. World practice has shown that architects and designers in their projects are increasingly using green technologies that can improve the environmental situation in residential premises and in the cities themselves.

1. Yatsenko V.V., Vishnevskaya E.V. RESEARCH OF APPLICATION OF “GREEN TECHNOLOGIES” IN THE ARCHITECTURAL-LANDSCAPE ORGANIZATION OF THE ENVIRONMENT // International Student Scientific Herald. –2018 No. 2; URL: <http://www.eduherald.ru/ru/article/view?id=18437> (accessed: 11/05/2019).
2. https://rodovid.me/green_city/zelenye-tehnologii-v-stroitelstve.html”.

DESIGN FEATURES OF CULTURAL CREATIVE ENVIRONMENT

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New trends in the organization of environment of cultural and entertainment institutions are associated with current socio-economic, information and technological conditions. The urgent task is the organization of space, which will allow to make interaction between people and the environment, to change the space depending on new tasks. Mobile constructions for the exposition, complex lighting systems and audiovisual equipment, stylistically neutral space are the basis of modern cultural environment.

The result of thinking about the problem of developing the creative potential of the city is the formation of creative clusters, which are spaces of concentration of creative people and organizations that develop and demonstrate their ideas actively, are able to ensure the production process, promotion and delivery of products of creative work.

The aim of this work is to analyze the environment of creative clusters of the world and Belarussian clusters in particular.

Material and methods. Theoretical science sources and graphic images and foto were used as a material for the study. The following methods were used in the work: general scientific methods, such as theoretical comparative analysis, classification, synthesis; a retrospective analysis; grapho-analytical methods.

Findings and their discussion. The practice of transforming non-functioning industrial zones into spaces for creative activity originates in the 1940s in the USA (New York, Manhattan), when the low rental cost of vacant production facilities located in the city center has made it possible for artists to equip them to their needs.

The DUMBO district in northwestern Brooklyn, New York, USA was one of the first places where the trend was set to change the look of old industrial zones around the world. In the 1970s, young artists began to move in the district and rent large-sized and affordable lofts and basements for their studios. Soon, the district turned into a creative cluster with many galleries, studios, exhibition halls, start-up offices, coworking spaces [1].

The style of these spaces was called “loft”, it consists of industrial features which are reflected in rough decoration, open communications, an open space deprived of capital partitions. In such interior, industrial details become vivid accents, and also can adapt to new functions. Of course, fashion and technology make their additions to the industrial look of the environment. The spaces are filled with original art objects, elements of furniture and equipment, made with the newest design. The contrast of the old industrial environment is a great background for modern design and art objects.

Artzone 798 in Beijing originates in 1995, when the Beijing Academy of Fine Arts settled in the largest part of the United Factory complex number 718, designed by German architects in 1957. As in New York, the factory building attracted with large areas and low rental costs. The plant was designed in the style of functionalism, the Bauhaus style is read in appearance. Toothed roofs of buildings became the result of the idea to maximize the use of natural light. Roof windows face north, which provides stable lighting throughout the day. The interior spaces are minimalistic, filled with light. The rhythm of open structural bearing elements sets the space depth, fundamentality and infinity. The exposed surface of the walls, floor, ceiling, devoid of decorativeness, emphasizes the expressiveness of the exhibits. Many halls are completely white, the geometry of the room is emphasized by the placement of lighting equipment, or floor graphics, or a light shade spreading from window openings into the entire wall fills the space. But in some rooms the borders are erased and it seems that art objects are in unlimited space using the effect of weightlessness.

Since 2007, in the center of the city on five floors of the industrial building of the former Smolninsky bakery, a multifunctional art space Loft project FLOORS has been located in St. Petersburg. It combines galleries of modern art, exhibition halls, a hostel, a coffee shop, shops, a view roof and a bar. One of the distinctive features of this environment is that it was not formed under the influence of socio-economic reasons, but purposefully, with orientation on world experience in revitalizing industrial zones and forming cultural hubs. The design project was developed by architects Br. Arkhipenko. Elements of the original space have been saved and preserved in the interiors of FLOORS:

concrete columns edged with metal, equipment for baking bread, drains for flour, boiler pipes, a cast-iron floor. Additionally, antique and designer furniture is installed, glass windows are mounted in the floor, on some floors the space is divided by podiums. The bold use of bright colors in the environment gives a modern look to industrial elements.

Examples of creating art spaces in Belarus are cultural hub named OK16, which occupies the three buildings of the MZOR plant on Oktyabrskaya Street; “Art-syadziba”, “KORPUS 6”, “KORPUS”, “TOP”, located on the territory of the factory “Horizon” in Minsk, the premises of which are rented for the purpose of conducting creative activities. A common technique for entering buildings of this type into an urban environment is contrast. It is achieved with the help of bright dynamic murals on old facades that distinguish buildings and fill the urban environment with modern sound. It seems organic is using of industrial style in the interiors of cultural centers located in industrial buildings. However, the image of the environment is rarely based on one style, including stylistically diverse elements combined on the principle of polyphony, contrast, organizing the game of cultural and historical codes, quotes, parodies.

The environment of cultural centers of this kind is multifunctional and mobile. Flexible or free planning structure, transformable elements allow changing the functional purpose of individual zones depending on the situation. The subject content of the environment is connected with the theme and tasks of the organizers of cultural events. Aesthetic understanding of the interior space is filled with psychologism, involving a person in experiencing an atmosphere corresponding to the concept of a place or cultural event.

Also, the historical environment of the city and architectural monuments serve as the location of modern cultural centers. So Vitebsk creative center “Art Space” is located in the historical center of the city in a building originates in the late 18th century in the style of classicism. Its appearance corresponds to the general historical image of the street and stands out from a number of other buildings with a red square sign and a composition on the side facade in the spirit of Suprematism. An internal environment of the art center is contrast with the overall appearance. The ascetic and even decrepit atmosphere, combined with exhibits made of old household utensils, outdated non-functioning equipment, musical instruments, is perceived as a challenge to the “gloss culture”. In the design of the environment, you can see the proximity to the direction of arte povera. The search for beauty and harmony in simple modest objects reflects respect for nature, attention to the problems of overconsumption.

Conclusion. Thus, in the organization of the environment of creative clusters around the world, we can notice such similar features as:

- placement in industrial premises and preservation of their architectural industrial features in the environment;
- ascetic brutal decoration, if possible preserving its original appearance (at least fragmentary);

- the use of large open spaces filled with natural light;
- efficient use of lighting equipment;
- entry into the environment according to the principle of contrast, which is achieved by using murals on the facades and elements of street art.

The design of the environment of art spaces is distinguished by the degree of loading with objects of modern design: from complete minimalism, when the environment likes clean canvas on which exhibits and cultural events are held, to an eclectic one, filled with various stylistic elements, modern characteristic design details.

1. Barnard A. District trying to forge a New Identity / A. Barnard // The New York Times [Electronic resource]. – Dec 25, 2007. – Mode of access: <https://www.nytimes.com/2007/12/25/nyregion/25journal.html> Date of access: 05.11.2019

LEONARDO DA VINCI: THE MYSTERY OF GOLDEN RATIO

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To my mind, every person connected with art, architecture, design, science or even teaching should know about this mysterious rule. As for teaching, you can use this rule for the school board, the handouts etc. Moreover, Golden Ratio has been used to design and build many architectural structures, to create music.

The hypothesis of our work is: We can use the Golden Ratio in our present-day life [4].

The aim of the research is to determine the nature of Golden Ratio and identify the influence on the Leonardo da Vinci's creative work.

Material and methods. Our research is based on Polotsk college VSU named after P.M. Masherov and Vitebsk State Technological University. In the research we used such methods as theoretical, historical, empirical and descriptive.

Findings and their discussion. For the purpose of this work, the term Golden Ratio will be taken to mean a special number found by dividing a line into two parts so that the longer part divided by the smaller part is also equal to the whole length divided by the longer part. It is often symbolized using phi, after the 21st letter of the Greek alphabet. In an equation form, it looks like this:

$$a/b = (a+b)/a = 1.6180339887498948420 \dots [2]$$

During this research we became interested in forms of using the Golden Ratio. Especially about using the Golden Ratio in interior design. We made a research about interior design rules based on Golden Ratio and told about it to students with the help of presentation. To prove practical prominence of the Golden Ratio in interior design students were given empty paper rooms and different paper furniture. They were to create harmonious design according to the Golden Ratio. That event helped me and students to realize that the Golden