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HARMONISATION OF THE URBAN ENVIRONMENT BY MEANS OF VISUAL ART, LIGHTING DESIGN, AND ARCHITECTURE

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ABSTRACT

Motives: This study was undertaken to fill in the gap in theoretical knowledge about the challenges associated with transformations in the modern urban environment, the socio-cultural consequences of external changes in the urban landscape, and growing interest in the urban environment as a unique locus of artistic and creative activity.
Aim: The purpose of the study was to analyse modern methods of optimising the urban environment by means of visual art, lighting design, landscape architecture, and small architectural forms.
Results: A harmonious urban environment was created in Kharkiv through the introduction of sophisticated design elements, art objects, and urban furniture in the architectural context. These elements were integrated to create distinct and high-quality urban recreation areas. Basic modelling principles for optimising the urban environment can be used to analyse and combine the existing methods, and search for new opportunities to implement creative design solutions.

Keywords: creativity of the urban environment, Kharkiv, urban space, small architectural forms, lighting design

INTRODUCTION

A city is not just an architectural phenomenon, but also a socio-cultural creation filled with different patterns of living. In its various functions, a city is a subject of interdisciplinary research of many sciences, especially urban planning, social psychology, ecology, and philosophical sciences: aesthetics, cultural anthropology and philosophical anthropology. Apart from that, the images of a city are reflected in literature, the visual arts, cinema and television. Together, these works of art form a figurative panorama of the city, a technological system of its design in which the city is represented

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by the specific language of a particular art form (Song et al., 2022). Since the environment reflects changing cultural stereotypes and consumer demands over time, it requires changes and responses to life processes. To make the urban environment with the already established architectural and planning conditions and the existing development consistent with the changing needs of modern life, new forms of human and social behaviour at a particular point in time, it is both essential and achievable to reorganise the environment to a new level of content. The material and organisational forms of this reality are transformed, and the idea creates a harmonious environment with respect for the norms and values of culture. By determining the activity of the properties of various design tools and the possibilities of their interaction, it is possible to monitor the process of changing life and society, regulate the renewal of space, and find ways and means to preserve the value of the environment and its modernisation (Wang, 2021; Syrmanova et al., 2021).

The studies cover the general characteristics of the city's architecture and the main trends of its development and changes. Many authors attribute the urban environment to various indicators, primarily aesthetic, architectural, landscape, spiritual, cultural and many others. In 2004, the UNESCO (United Nations Educational, Scientific and Cultural Organization) Creative Cities Network was established to strengthen cooperation between cities, recognising culture and creativity as strategic elements for sustainable socio-economic development. This initiative promoted intellectual interaction between the participating cities, allowed the exchange of cultural and artistic experiences, and enabled the implementation of joint international projects. Today, UNESCO's Creative Cities Network brings together 295 cities from more than 80 countries, representing one of seven creative disciplines (Meseneva, 2020): arts and crafts, gastronomy, design, film, literature, media arts (digital art) and music. UNESCO creative cities have a rich cultural heritage and use the potential of the creative environment for the socio-economic development of the region. Such cities play an important role in creating an atmosphere of openness to creative processes, developing creative clusters and facilitating the gradual transition to market globalisation. The urban environment in cities is formed by synergetic solutions based on a combination of different types of design, music, history and literature, modern information technologies and environmental principles (Narboni, 2020; Goussous & Al-Hammadi, 2018). One such city is Kharkiv. Based on this, the object of this study is the urban environment of Kharkiv, namely its object content.

The analysis of urban environmental issues from a design perspective requires an examination of the trends and dynamics of urban planning tools and the degree of influence of social, economic and environmental factors. Modern Ukrainian society is facing profound changes in the basic principles of life, which are actively influenced by the environment. Therefore, specialists are constantly searching for solutions to create a certain image of the environment. The image of the environment is interpreted as a category whose realisation is the most important task of the architect-designer. A detailed analysis of Ukrainian cities shows that their environment is becoming chaotic due to changing socio-economic conditions, especially commercial pavilions, advertising installations and haphazard evening lighting (Rudenchenko, 2013). In addition to the visual ecology often disturbed in cities, there is also the aspect of sound comfort, which in the modern urban environment can be achieved with the help of design solutions and specialized small forms that create an acoustic effect. Thus, to create a harmonious environment in a modern city, a synergistic approach is needed.

The purpose of this investigation is to analyse modern methods of optimising the urban environment by means of visual art, lighting design, landscape architecture and small architectural forms.

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MATERIALS AND METHODS

The study examines the design technologies that shape contemporary urban space and its environment. As a methodological basis for the study, the following general scientific and special methods have been applied: method of analysis and synthesis, design, scientific objectivity, and systematic approach to the study of urban environment optimisation. This study applies a number of techniques and methodological approaches, in particular systemic, dialectical and comparative approaches. The methodology of this study is determined by the topic evolving at the intersection of several branches of knowledge, such as design, urban ecology, urban planning theory, architecture, architectural design of the urban environment and many others. At the same time, the design of a comprehensive urban design and the spatial environment of a city is characterised by a considerable methodological effort through the design of the surrounding elements, using design techniques and tools developed in the design of architectural environment objects.

The primary method in the study was analysis adopted as the central method of scientific cognition. This method of scientific cognition involves the process of parsing an object into its component parts in order to fully comprehend them according to different parameters. The analysis characterised key judgements related to the study, including "small architectural forms", "harmonisation of the urban environment", "lighting design" and "landscape architecture" and many others. The method of analysis has made it possible to pursue the stated objective of this study, namely to examine the interaction between the available methods for optimising the urban environment by means of the visual arts, lighting design, landscape architecture and small architectural forms. Photographs and sketches of parts of Kharkiv's urban environment were collected for this study. Historical data on some of Kharkiv's architectural sites and future plans for the city's development are also explored. It was brought to light how elements of modern design, street sculptures and small architectural forms contribute to the optimisation of Kharkiv's urban environment.

The design method has made it possible to evaluate the application of methods for optimising the urban environment by means of the visual arts, lighting design, landscape architecture and small architectural forms. It has determined the influence of the entire study on the questions generated by this subject. The design method is divided into several sub-items, as the resolution of the chosen tasks must be consistent and complementary. Emphasis was placed on the explicit use of tools to summarise the findings of the entire research work and to harmonise the results in order to define the novelty and practicality of the work undertaken. The implementation phase of the study on "Harmonisation (optimisation) of the urban environment by means of visual art, lighting design, architecture" allowed for an assessment of the accuracy of the entire study, or to be more precise, the effectiveness of the chosen research methods to be determined. The purpose of this study has been achieved, as well as all theoretical and practical provisions concerning the study of the topic have been clarified. The method of scientific objectivity and classification of the findings was used.

RESULTS

Nowadays, small architectural forms are an important functional, artistic and decorative element filling the modern urban environment, and creating comfortable conditions for residents to live in the city and spend time on the city streets. Creative objects with which the city dweller interacts include landscape architecture, small architectural forms, design installations, sculptural compositions, and urban gardening. Small architectural forms are objects and devices with simple but independent functions that complement the architecture of urban buildings, structures, parks, squares and streets and are elements of their improvement (Rami, 2017). Small architectural forms of modern urban planning are:

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1. Decorative purpose: decorative walls, decorative sculpture, fountains, pavilions, bridges, facade decoration with bas-reliefs and mosaic panels.
2. Mass utilitarian uses: benches, litter bins, fences, signs, stairs, retaining walls, number plates, flower vases and decorations; Light fittings, kiosks, information kiosks, telephone boxes, post boxes, bus stops, network support services, traffic lights, road signs.
3. For recreation, games and sports facilities: tables and benches, swings, carousels, slides, rollers, tents, fencing, lighting systems, etc.

Modern urban planning also includes the following (Florida, 2007; Matrouk & Goussous, 2011):

a. street furniture;
b. furnishing of different places of urban space, squares, parks;
c. devices for defining a particular area (fences, partitions between pavements and driveways, etc.);
d. ground floor structures (dance floors and theatre arenas, graphic elements, art objects).

Structures with small architectural forms, design installations, and sculptural compositions are an important part of any urban environment, making the city more humane and interesting for residents and visitors. Small architectural forms, in their essence and style, represent the most mutable layer of the subjective spatial environment of a modern city. Today, the basic principles of designing small architectural forms in the design of modern urban environment, including those of the city of Kharkiv, are (Shu & Zhong, 2020):

– complexity, which consists in designing not just individual forms of small architecture, but their functional and compositional complexes and interrelated elements of the object-spatial environment (it is worth noting that today, small architectural forms are not considered to be separate, self-sufficient elements, but are included in the planning and organisation of the functional zoning of the surrounding urban space);
– a unique design idea, the design of a group of small architectural forms in a single style based on the stylistic features of the existing image of the urban environment;
– the project incorporates the unique natural conditions and landscape of the urban environment; preserving national identity, succession and respect for cultural traditions;
– creation of an interesting, unforgettable artistic image, adaptation of the artistic originality of small forms to their intended purpose;
– functional zoning, small architectural forms allow the area to be divided into certain zones of different purposes and emphasise them in appropriate places;
– the use of natural materials in urban environments embodies nature and creates a comfortable environment, psychologically close to the person;
– consideration of ergonomic requirements in the design of small forms in urban environments;
– scale and proportion, harmonious combination of part and whole;
– proportion of small architectural forms to the human scale and the surrounding space;
– rational, efficient use of materials and structures.

The struggle against noise in the central areas of cities is made difficult by the existing density of buildings. In this case, the most promising solutions to this problem are the reduction of the own noise of vehicles and the use of new effective noise-absorbing materials in buildings facing the busiest thoroughfares, the use of vertical greening of buildings and increasing the row of window glazing. If we consider highways in new residential areas of cities or expressways between areas of large metropolises, then in these conditions it is possible to build noise barriers, widen highways, and plant trees that reduce noise levels on roads. In order to prevent noise from such highways, there is a need to apply such measures, which would provide a high probability of protection from the entire spectrum of the noise impact of such transport facilities. One of these measures is the construction of acoustic protective walls, which also have an aesthetic function, that is, they are decided on the basis of artistic and design means of design. Such walls are not uncommon in Europe, but they are only beginning to regain their rightful place in the urban environment of Kharkiv (Long-term strategy…, 2015).

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A number of successfully implemented projects can be examples of the successful and effective use of the considered method of sound-insulating screens and barriers. A sound pipe in Melbourne (Australia) is designed to reduce roadway noise without compromising the aesthetics of the built-up area. The noise reduction wall in the Netherlands has a transparent part at the driver's eye level to reduce the visual impact on road users. The proposal "Forest Corridor" took one of the 2 places (professional category) at the open international competition of noise protection screens/fences organized in Hong Kong (Klishch, 2016). The project provides an alternative image of construction for noise reduction in the dense urban environment of the city. Considering the existing buildings and transport network of Kharkiv, it can be suggested to continue to use the redistribution of traffic flows and increase the sound insulation of buildings along transport arteries. For some operated and, especially, for promising highways being built in the modern world, an effective second method is used – the device of sound screens and barriers. Considering the existing municipal projects in Kharkiv for the creation of new large highways connecting the city centre and sleeping areas (in particular, the Saltivsky residential massif and the "Kyivska" metro station, etc.), the most rational is the use of soundproofing structures. The implementation of European and world experience in the arrangement of similar structures in Kharkiv, taking into account their effectiveness and the possibility of application in the conditions of modern Ukraine, will be another step towards creating the most comfortable environment for the city's residents. It should be understood that in Kharkiv, for the existing buildings, the use of screens is possible on the main multi-lane highways only if the design code of the city is taken into account.

Another feature of creative urban spaces is their flow from the external environment to public places where citizens stay, such as various cafes, bars, and fast food places. Their interiors are directly connected with the environment, are a part of it. Therefore, for such objects, the main means of solution will be elements of fine art, wall paintings, which are continued by monumental paintings on the external walls of buildings, elements of landscape design and art objects.

Table 1 presents photos of several art cafés and student projects of future creative facilities. It is possible to identify some common features and the necessary design tools to create such a creative environment. Designed for underground hangouts and cosy gatherings, Kharkiv's art cafés, pubs and clubs are styled according to their name and the preferable theme of the meeting (literature, music, internet, etc.). The authentic designer lamps, which match the overall theme, and the muted, semi-darkened light, which creates an intimate atmosphere and illuminates the performance space, are an absolute must. A characteristic feature of such establishments is the artwork on the walls (paintings, batiks, graphics, art photos) or accessories typical of the establishment's style (musical instruments, books, autographs of famous actors and musicians, etc.). Lighting design techniques are often used to create dynamic stage illumination. The overall colour scheme is most often contrasting, which corresponds to the active trends of rock music and contemporary rap poetry. By studying existing equivalents and relying on personal creative needs, design students try to use the above techniques in a coursework project for food service places to create not just a comfortable and cosy, but also a branded, imaginative, creative, developmental environment. The implementation of such proposals should increase the creativity of the urban environment, facilitate the communication of modern creative youth and accelerate the formation of a new creative class of creative intelligentsia, which is an essential requirement for any city.

Nodal positions of harmonisation of urban environment design by means of small architectural forms in Kharkiv are formed at a proper level, but it is necessary to consider substantially the emerging trends. These trends include complexity of urban environment design, functional and compositional interrelation of all elements of the subject-spatial environment with the environment of the whole

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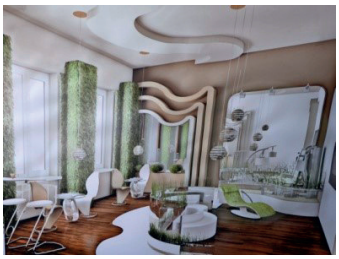
city, the unity of style in the urban environment, originality of natural conditions and landscapes. Today, the emphasis on harmonising Kharkiv's urban environment through visual art, lighting design, landscape architecture and small architectural forms, in line with current trends, is placed on designing (Bankovska, 2015):

- ecological qualities of urban spaces according to an appropriate standard; diverse utilitarian urban environment; friendly and humane urban environment;
- objects that are connected with historical or significant events of the city; urban exhibitions of small forms, art objects;

Table 1. Interior design features of multi-functional establishments

Existing food service facility	Functional purpose	Design tools and techniques	Creative environment student project
Korova Art Club	Café by day, with live performances by musicians, and poets in the evening	Designer lamps; poster; artwork; privacy and event seating arrangement, colour harmonies	 Music Café
Pintagon Art Pub	Beer pub, Beer Club; occasionally hosts shows (bards, rock music)	Poster, artwork; event seating arrangement, trendy murals, artificially darkened interiors	Art Café
Agata Art Café	Evening café, hosts live performances by musicians, poets, possible discussions and dialogue	Poster, artwork; event seating arrangement, trendy murals, artificially darkened interiors	Theatre Café
CUB Literary Café	Operates as a regular café during the day. In the evenings it hosts poetry, music performances, and lectures.	designer lamps; artwork; event seating arrangement, uniformity of shapes	Literary Café

Source: own preparation.

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– genre sculptural fragments attractive for tourists and city residents;
– design of sports objects of the urban environment, given the massive enthusiasm of city residents for sports.

As for public lighting, it is intended to artificially increase visibility on the streets at night. The most commonly used lamps for this purpose are cantilever lamps with gas or sodium halide lamps or LED (light emitting diode) lamps. At night, the lights are turned on automatically or as directed by the dispatcher. However, whereas in the past street lamps were only used to improve visibility, in recent years a great deal of attention has been paid to their design. Over the years, urban public lighting has become an important element of the appearance of any space, revealing its essence and allowing a better appreciation of its architectural style. Decorative public lighting, the function of which, apart from being functional, is a decorative element that provides street aesthetics (modernity, restyling and unique design) (Inglis et al., 2022). Lighting design is a relatively new industry in the history of art, constantly evolving and covering more and more areas of application. Lighting design is associated with technological advances, this design trend has a long history and plays an important role in the creation of urban environments. One might assume that street lighting with torches, then gas lanterns and street electricity are all signs of lighting design. An important step towards optimising the urban environment was the introduction of fluorescent lamps: neon lights have changed the appearance of the main streets of large cities. Another significant technical advance has been the emergence of LED light sources, which have become the most effective means of designing the urban night scene (Fil, 2020).

Technological and scientific advances have made it possible to create magnificent nighttime laser structures and unique holographic images. The initial goal of modern lighting design is to create a pleasant and communicative urban atmosphere at night. Therefore, it can be argued that lighting design is a way to harmonise (optimise) the urban environment. In Table 2, the best design works of students of the Faculty of Architecture of O.M. Beketov National University of Urban Economy in Kharkiv and students of the Department of Interior Design of the Kharkiv State Academy of Design and Arts were compiled to illustrate the results. These designs have also considered the lighting of the building and its surroundings, as well as the nearby streets, to optimise this aspect of Kharkiv's overall design. Besides improving the usability of the environment at night-time, the solutions presented have important artistic and compositional value. Above all, the artistic image of the building is embraced, and each project has a specific idea.

Visual perception of objects and communicative elements influence citizens through many historical associations, tactile sensations, colours and compositional means. The exterior elements (gardens, parks, squares and recreation areas) provide conditions for recreation, socialising and entertainment through green spaces, ponds, sculptures and industrial design elements: streetlights, letterboxes, and telephones. In recent years, a number of street and park sculptures have appeared, celebrating both real figures and fictional characters. All these elements are systematised according to their location in the urban environment and their influence on its aesthetic perception. Modern urban sculpture is based on historical architectural and decorative traditions, the presence of sculptures on the facades of buildings that are architectural monuments. There are especially many such buildings in the centre of Kharkiv. Along with modern, realistic sculptures, the streets are filled with abstract, sometimes incomprehensible but attractive installations, elements of outdoor advertising for shops, cafés and businesses (Kuptsova, 2020).

The analysis of the literature on the studied topic reveals a lack of studies dedicated to the urban environment of Kharkiv through design. However, it is worth noting that the complex functional-spatial system of the modern urban environment is the subject of many contemporary studies for architects and designers. Today, the issue of organising the spatial social infrastructure of the modern urban environment is crucial for Ukrainian cities.

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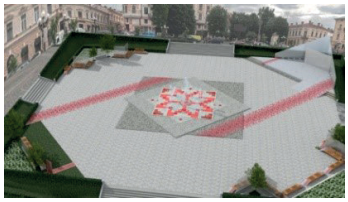
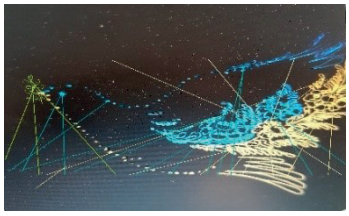
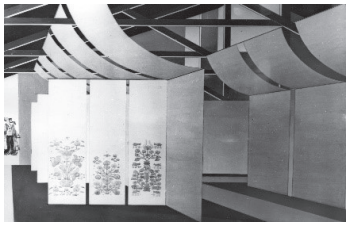
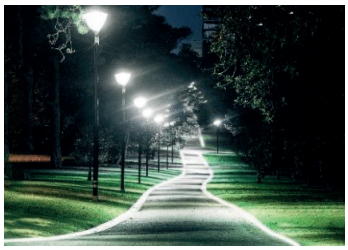
Table 2. Projects of students of the Faculty of Architecture of the O.M. Beketov National University of Urban Economy in Kharkiv and students of the Department of Interior Design of the Kharkiv State Academy of Design and Arts on optimisation of the urban environment

No.	Project layout	No.	Project layout
1		5	
2		6	
3		7	
4		8	

Source: own preparation.

It is important to create more humane recreational and landscape spaces in an urban environment. Commitment to overall renewal, orientation towards the most modern forms of activity and communication are characteristic features of citizens' socio-cultural activities that influence their development in the daily life of the urban environment, significantly changing and emphasising the design of the urban environment. The promotion of similar competencies in these areas will enhance creativity, promote creative lifestyles, increase self-esteem and the competitiveness of young designers and architects in Ukraine.

As an example, many academic sources touch on issues of ethnic self-identification in the urban environment. Ethnodesign of the modern urban environment and its issues have been studied in great detail in the works of many contemporary scholars. Recent studies in this area include those by Grigorieva (2014), who examines the application of ethnic traditional design techniques in the design of modern interiors. According to Grigorieva (2014), today various exhibitions representing folk crafts, traditional art, achievements in the production of folk clothing, decorative items and much more play a significant role

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in the promotion and dissemination of ethnomotives in the design of the urban environment. Apart from tradition, visitors to these exhibitions are also attracted by innovations based on the achievements of the national ethno-culture. The historical values behind contemporary design include traditional crafts such as decorative painting, embroidery, egg painting, ceramics, carpentry and more, incorporating distinctive national ornaments, and ancient tribes.

It is also worth mentioning the studies of Pang and Shen (2022), who have addressed the harmonisation of the contemporary urban landscape. They consider the absolute dominance of architecture in the urban landscape to be accompanied by a reduction in green areas, the monotony of the contemporary urban environment, the aesthetic, intellectual and emotional ambiguity of pedestrian communications and the dissonance between the scale of historic centres and the historic built environment. At the turn of the 20th and 21st centuries, a number of original objects of landscape architecture appeared abroad, where these tasks were solved differently for different natural, climatic, urban, historical and cultural conditions. Historic landscape-natural compositions are based on the subordination of architecture to nature, while landscape compositions are based on the subordination of architecture to nature (Goussous & Al-Jaafreh, 2020). Modern objects of landscape architecture, in which nature blends harmoniously into the urban environment, are already being created according to new construction principles based on the compositional interaction of architectural space with nature. This principle reads as follows: imitation involves the use of artificial materials that mimic nature; interpretation consists of designing the architectural and geometric design of natural elements that are subordinate to the urban context.

The studies of Zhan et al. (2022) address the increasing role of landscaping and greening of urban public areas in the context of today's urbanised environment. Flora plays an important role in improving a person's mental well-being. Floral arrangements and a variety of tree and shrub crowns with brightly coloured accents counteract the aggressive linearity of modern urban development. Such landscape architecture techniques can improve a person's mood, energy level and performance. Plants improve an emotional environment, which positively influences a person's mental state while also affecting emotional and mental tension, has a positive effect on well-being, productivity and resilience to performance, and improves a person's "quality of life". When creating a psychologically favourable living environment for a person, it is very important to have an inner balance. The aesthetic, ornamental function of vegetation in the city enhances the artistic expression of urban development. Plants are a special material in creating landscape objects with common-use areas designed with functionality and power to optimise the environment and make it more comfortable for humans.

In articles published by a number of publicists from other countries, Wang et al. (2021), Badura et al. (2021) the urban environment was considered an art object. The pieces present a classification of the options for creating artistic objects based on existing urban space. The possibilities of synthesising different types of art to create a harmonious and interesting atmosphere in the city are explored, and examples of actual projects are presented: painting, graffiti, use of lighting effects, video broadcasts, and advertising and installation productions. Using any combination of these methods, it is possible to change the visual perception of an object and space without physically changing the building itself. By synthesising the techniques of different art forms, it is possible to create a comfortable urban environment by bringing together different subcultures, thus reducing outbreaks of vandalism and aggression. In modern urban environments, it is common to see a large number of patterns on façade surfaces, concrete hedges, asphalt and more.

Not all of them are of a purely ethical nature and fit harmoniously into the city's composition. However, there are techniques for decorating architectural objects to reorganise space, enhance its socio-cultural significance, create a coherent image, and relieve the visual and emotional tension of residents, which is a synthesis of different types of art in the urban environment. This urban project aims, on the one

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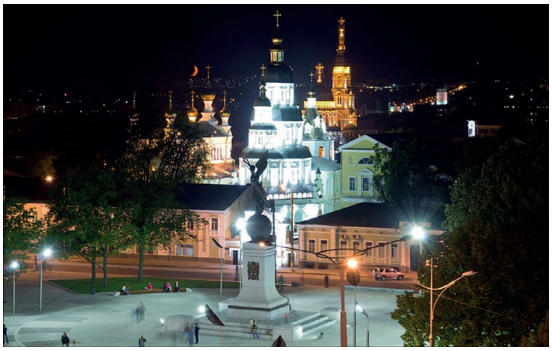
hand, to divide the ownership of space into a dominant social group, and on the other hand, to combine a variety of urban spaces into one. Here are some examples of how art design techniques can be used to transform urban space into an art object (Table 3).

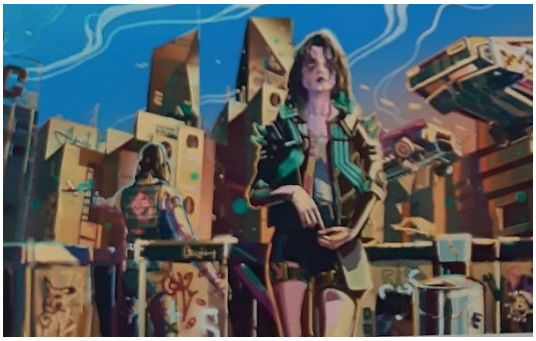
Currently, it is desirable to saturate the urban and suburban environment not only with functionally necessary elements of the architectural and design direction but also with art objects (Fig. 1).

A designer who received an academic art education can also give his projects a bright individuality, bringing them to the level of a work of art. Since the functional component still plays the main role in the design, the design object has a utilitarian purpose. The artist is not limited by the function, he is able to create unique products, giving them a personal life.

The environment actively affects the human subconscious, teaches certain values, adds energy, or, on the contrary, "sucks" it out of a person. The grey identical quarters of the socialist new system level individuals, accustom them to the same thoughts and take away the individuality of thinking. The

Table 3. Techniques for using artistic design to transform urban space into an art object





Source: own preparation.

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Fig. 1. Art objects in the urban environment
Note: *a – bronze sculpture of children; b – green sculpture "Save every tree"; c, d – murals on the walls of high-rise buildings in the city's sleeping areas.*
Source: own preparation.

modern approach to the architectural environment demands a creative individual approach to each environmental object. The active uses of colour in architectural structures, street art – murals and graffiti compositions, elements of land art that differ according to the conditions of the landscape create a variety of environments. Art objects can play an important role in strengthening such individuality: street sculptures, wall paintings, murals and graffiti, flower compositions (Fig. 1). The environment of the centre of Kharkiv can vividly confirm the active influence of this approach on the citizens. The closer to the outskirts of the city, the less suitable elements can be found. Typical playgrounds, of course, satisfy the minimum needs of children's leisure, but the world in which people spend most of their lives should be brighter, more creative, different every time. That's when the creative generation of young people will grow up.

Decorative light design installations, light fountains and interactive laser shows make a strong emotional impression on citizens, have an educational national-patriotic, ethical-aesthetic effect on the perception of urban architecture. All types of lighting enhance the creativity of the urban environment. It is possible to define the role of light design elements in the urban environment as those that have both functional and powerful decorative and aesthetic significance, increase the comfort and creativity of environmental and architectural objects, and have

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an educational and positive emotional impact on city residents. It can also be noted that the urban lighting environment of the city of Kharkiv has wide prospects in the sense of its development possibilities.

The architectural environment of the city is a scene with changing backgrounds, props, where one is both the protagonist and the audience. Buildings and structures are not static; they change, they move. An architectural image can influence a person's emotions, making them experience, think and sense, as the artistic function of space often coincides with its emotional focus, where the utilitarian and practical function dominates. By playing with the above techniques, architects and designers can influence the interaction between people and the city, exacerbating or resolving arising conflicts. By making the urban environment interesting, unusual and comfortable for its inhabitants, it is possible to suppress outbursts of aggression and vandalism, enhance the aesthetic significance of the space and build its plastically correct layout (Badura et al., 2021).

The studies of Xin et al. (2022), Riapolov and Hesin (2020) consider means of visual art as an important means of creating an expressive, modern original architectural image. Although the synthesis of art is very evident today, painting is one of the main elements in the process. Painting has always been a means of completing a constructive architectural image: monumental painting, mosaics, stained glass windows, frescoes of various technologies help to create an expressive image, enrich colour, plasticity and texture. Painting offers a surprising feature of spatial illusions: in Renaissance ceiling paintings the frontal perspective deepens the wall space, while in contemporary 3D ART the architectural solution of the street space allows architects to express their economic and creative status to the full. The understanding and study of architecture as an art form is based on the general laws of art, on the grounds and categories for which artistic painting is necessary. The architectural image for the various schools is supplemented by images that add authenticity and artistic identity to the group. The prospects for a harmonious combination of various architectural and picturesque worlds in modern reality are indisputable. The architect must first have a general vision of the image being created and understand the harmony that the image carries within it. The figurative component of architectural art has always emphasised its uniqueness.

The content-image character corresponds to the distinction between the monumental image, which is a sign of the architectural whole, and the monumental-decorative image, which merely decorates the surfaces of walls, ceilings and facades dissolving into the architecture. Monumental painting is also referred to as monumental-decorative painting, that is, painting that gives the mural a special decorative value. Depending on the function, monumental murals are approached using three-dimensional or two-dimensional decorative compositions. The monumental painting is complete and will only be completed when all elements engage together. For example, a significant phenomenon in the design of the 20th century was supergraphy as a form of active change in the appearance of the urban environment through colour. By supergraphy, experts understand artistic solutions that are superimposed on an independent three-dimensional object (structure, product, surface) based on contrast or coordinated interaction of a structural morphological image, which creates a completely new visual impression. In the visual transformation of three-dimensional form, the main feature of supergraphics is the tectonics of their colour, justifying the use of the prefix "super", which allows them to be interpreted as photography or graphics and colour. Today, the arsenal of artistic paints of the city has expanded significantly. Dynamic artistic lighting of monumental art pieces, architecture, urbanism and landscape, video mapping, laser and LED technology enhance the architectural forms and spatial situations of the city. At this point, supergraphics can only be considered hypothetically. Namely, this would be the 'supergraphic method' or approach in urban architecture and design, which has an active transformation of architectural objects and environments on a visual, transformative and visual level. The origins of this approach go back to the distant past (Riapolov & Hesin, 2020).

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CONCLUSIONS

This study considers the impact of all the above-mentioned forms of optimisation of the urban environment, namely, small architectural forms and elements of landscape and lighting design. In many of its manifestations, contemporary urban sculpture contributes to the comfort and diverse outlook of Kharkiv's urban environment, expands the number of "urban centres" responsible for the ultimate comfort and creative atmosphere, the ground that forms the creative community spirit. Nowadays Kharkiv embodies such a vital and spiritual environment because this space is full of creative street sculpture. Summarising the above, it should be noted that a harmonious urban environment in Kharkiv is based on the inclusion of sophisticated design elements and small architectural forms. A careful combination of these elements creates a distinct and high-quality picture of the city's recreation areas. Based on the basic principles of modelling the optimisation of the urban environment, it is possible to further analyse existing methods, combine them and look for opportunities for new creative design solutions. Design contributes to the expansion of the space of artistic exploration of different aspects of human existence, the introduction of artistic and technical products in many areas of life of modern society serves to meet not only the material but also the spiritual (including aesthetic) needs of people. Thus, it contributes to the formation and development of various aspects of human intellectual culture: orientation towards aesthetic values, aesthetic and artistic taste, humanisation of socio-cultural relations, and life values.

The findings of the study indicate that the contemporary urban environment is seen as a realm of citizens' needs in the areas of residence, work, communication and recreation. Most urban planning is carried out without creative solutions, making it difficult to navigate the city, diluting the positive image of individual historical fragments and creating a negative overall impression of the city. On the other hand, urban planning is currently going through a complex development phase. Modern cities are a unique reflection of the information society, its crises, deadlocks and resurgences. These are the trends of most Ukrainian cities, including Kharkiv. Urban design is essential to a holistic appealing image of the city. Urban planning consists of aesthetic and functional objects. The aesthetics of the urban environment include landscaping, fencing, lighting, sidewalks and much more. Functional objects include small architectural forms (public transport stops, commercial pavilions) etc.

All of this creates a coherent image of any city. On the one hand, its socio-cultural component depends to a large extent on how a particular residential area of a city is designed, while on the other hand, the quality of the urban environment is influenced by society itself. Among other means of urban design, such as lighting design, water design, and landscape design, the following tools can be distinguished: public art and social advertising. The distinctive feature of these design tools lies not only in their aesthetic component but also in their significant impact on the socio-cultural process in the city. Public art in public space is not just art in urban space. It is an ever-changing dialogue between society and the urban environment, not only through static objects but also through the manifold actions generated by that same society. The mission for contemporary designers and architects is to balance the functional-spatial system of a city through the use of small architectural forms, natural and artificial green spaces, which will awaken the interest of citizens in the locations where they live, study or work. The methods and trends analysed in this study represent just a short list of architectural issues that architects and designers tackle when optimising Kharkiv's urban environment.

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