

Stories Of Improvement Of Quality Of City Life: Architectural Aspects

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Abstract

In this article on the example of the megalopolis of Kazakhstan - Almaty investigates architectural aspects of improvement of quality of city life.

Means and the receptions of architectural composition used in the solution of the tasks directed to improvement of quality of life of people in the urban environment make a main objective of this research. Special attention is paid to questions, compliances and devices of architectural space to existing and whenever possible to future, to living conditions of citizens. And also, the flexibility of the layout of the architectural space to unforeseen changes and a lively and mutual connection with the real reality. The authors of the article make a conceptual proposal to improve the quality of the spatial environment of social housing. These are spatial modules, with the possibility of various compositional arrangements.

The importance of the role of architects and designers in improving the quality of life of urban residents in various urban settings is confirmed./The article analyzes public buildings that serve as city attractions, public and residential spaces, urban infrastructure, landscape and their role in improving the quality of life of citizens.

Key conclusion of a research is confirmation of a role of architects as moderators of people behavior in space. The worldview and professional training of an architect is a driving force in solving the problem of improving the quality of life in an urban environment.

Keywords: Public space, comfortable environment, safe urban environment, infrastructure, architectural heritage, city sights.

Introduction. Within the Strategy of Kazakhstan-2050 and the Strategic development plan for the Republic of Kazakhstan till 2025 a priority of regional policy is providing the operated urbanization. In the new Program important institutional conditions for development of the country are defined. It is formation of "centers" of economic growth, increase in competitiveness of regions, ensuring basic level of life in all regions. The urbanization is essential for increase in income and quality of life of the population. For the last five years the population of the large cities of Kazakhstan grew by 15%, and the population of four large agglomerations of the country (Nur-Sultan, Almaty, Aktobe and Shymkent with nearby settlements) increased on increased by 1 million people.

In the new program, priorities are focused on the development of urban growth centers-four large agglomerations and regional urbanized zones, as well as reference and satellite villages. It will allow to develop all regions of the country and to raise quality of life in regions. Within state programs the centers of growth are defined: 4 agglomerations, 14 large urbanized zones, 18 remote and border mono - and the small cities. They will get access to qualitative infrastructure. These are networks water - electro-, heat supplies, roads, schools, hospitals and others. Life in the village will become better and more attractive that it will affect improvement of quality of life of villagers. Within the program criteria of priority were defined, financing will be directed to basic engineering infrastructure and social objects. Financing of the state and local programs will be aimed at the maximum creation of comfortable conditions for life of people.

The relevance of the issue of improving the quality of life of people in an urban environment is very important in addressing the issues of meeting human requirements. Therefore, it is consonant with the tasks of organizing a comfortable, safe, aesthetically significant architectural space for people. An important role is played by the issues of integration with the surrounding urban structure.

Studying of the matter is relevant in connection with the happening changes in the large cities of Kazakhstan. It is construction of new housing estates, public buildings of different type, education of new areas, transformation of transport and road structure of the city of Almaty founded on the concept: "City for people". In 2015, the city authorities invited the Danish architect and urban design consultant Jan Gehl to

Kazakhstan to transform the spatial environment of the city of Almaty. Jan Gehl's career focuses on improving the quality of life in cities by refocusing urban design on pedestrians and cyclists.

Along with the above-mentioned activities, the concept of a barrier-free environment, which has an inclusive nature, is also being actively implemented. But, nevertheless, improving the quality of urban life from the aspect of a safe urban environment is urgently needed. As you know, the concept of "safe environment" includes a wide range of tasks. These are environmental, climatic, seismic, criminal security and other areas that can be solved with the help of architectural and compositional techniques. Therefore, the organization of safe residential and public spaces is one of the priority criteria for creating comfortable conditions for human life. Taking into account architectural and compositional techniques for creating a safe environment is very relevant when increasing the population density, increasing the traffic flow, when building new residential complexes and public buildings of various types. The relevance of this topic has become particularly acute during the pandemic, which dictated the norms of behavior of people in public spaces.

Another important factor for improving the quality of urban life is the need to ensure people's contact with nature. The city - cannot be condemned to extinction just because the era of industrialization began to neglect the interests of the urban organism, or because the structure of the city could not withstand the invasion of the car.

To modern architecture, old requirement is again imposed to new planning of the city: people should not be torn off by nature, big groups of buildings should be had among green plantings. Considering the town-planner's tasks, it should be noted that it is impossible to transform the city, disregarding modern concepts of the organization of life and its expression by means of modern art means.

However, the city should not become an object of the architect's imagination, a subject of speculation or one of the "tools of production". Architects should first of all seek to know the conditions of the current state of the city, the features of its territory, the relationship with the surrounding areas and the specifics in general. To study mainly the composition of various social strata of the city's population, their age groups, and the structure of families. The architect must have information about the place of work of the main contingent of residents, directions of daily traffic routes, imagine the distance from the place of residence to the place of employment. It should also take into account that the distance between the city's transport network and its residential areas should not exceed certain limits. Thinking in terms of population density is becoming an important factor¹.

The research methodology is based on the study of literary sources, scientific research, architectural projects dedicated to improving the quality of urban life. Studied materials of open online courses of the Future learn platform on the topic: "Improving the quality of urban life: Fifteen projects that have received the Aga Khan Award in Architecture" is the basis for a comparative analysis. The winning projects of the Aga Khan Award in the field of architecture aimed at improving the quality of urban life are implemented by original methods of architectural solutions, urban planning, preservation of historical heritage and landscape architecture. *According to the researchers, the principles underlying the winning projects are universal in nature.* The paper examines various categories that affect the quality of urban life. Improving the quality of urban life is carried out by restoring historical sites that form aesthetically significant urban planning nodes with developed infrastructure and are symbols of the country for the outside world. As well as the improvement of the environment as an important geographical component of the city, the creation of artificial forest ecosystems, the construction of urban infrastructure.

The authors of the course present such objects as: the Great Mosque of Riyadh in Saudi Arabia, the Library of Alexandria in Egypt, Kuwait Towers, the Hassan II Bridge, the artificially created forest ecosystem of the Middle East Technical University, the Wadi Hanifa wetlands, the Superkilen Park.

From a functional point of view, all objects are aimed at providing urban residents with high-quality public and residential spaces. The structural components of public spaces are: pedestrian zones, squares, parks, bridges, cafes and restaurants, educational institutions, etc.

In residential facilities-provision of infrastructure services related to water supply and electricity. As well as the expansion and asphaltting of streets, the asphaltting of pedestrian paths, the construction of bridges for

¹ Siegfried Gidion, *Space, time, architecture*. Stroyizdat, Moscow. 1984.

pedestrians across canals. Improving sanitation through the creation of drainage channels, clean water and sewer networks, the provision of public services related to health and education, and, accordingly, the construction of both clinics and schools. This category examines the ideas of various architects and designers who have tried to solve these problems. For example, the Aranya Public housing in the Indian city of Indore, designed by the famous Indian architect Balkrishna Doshi. Kampung Improvement Program in Jakarta, Indonesia, which was awarded the First Cycle Award in 1980. All ideas to improve the quality of life were aimed at building a reliable housing model.

Projects-winners of the Aga Khan Award in the field of architecture aimed at improving the quality of life in the urban environment are implemented by original methods of architectural solutions. Let's look at some of them.

Kuwait Towers is one of the winners of the first cycle of the Aga Khan Award in Architecture in 1980, which *symbolizes the modernization of Kuwait*. 31 of these 33 water towers are known as "Mushroom Towers" because of their shape. Each of these reinforced concrete towers has a capacity of 3,000 cubic meters of water. The towers are arranged in five groups and each group serves one of the districts of Kuwait City. The structure of the towers includes a restaurant, cafe, banquet hall and inner garden in its upper half, as well as a rotating observatory. The area under all these towers was designed as open public spaces. Overall, this project is an example of an urban infrastructure project.

The urban infrastructure project-Hassan II Bridge is known for *an inclusive approach to mobility*, as it includes not only lanes for automobile traffic, but also includes lanes for trams, public transport, paths for cyclists, sidewalks for pedestrians. In the center, the bridge rises to a height of about eleven meters, which provides enough space for boats to pass under it. This bridge connects the twin cities of Rabat and Sale and crosses the Bouregreg River. Approximately half of the passengers between the two cities, estimated to reach about 400,000 people each day, use this bridge to travel between the two cities. Near this bridge there are a number of attractions of historical and political significance. These include the Hassan Tower or minaret of the late 12th century, the mausoleum of Muhammad V in 1971. In addition, the area under the bridge is intended for use as an open public market².

Middle East Technical University (also known as METU). It was founded in 1956 and is the first university campus in modern Turkey. Unlike the vast majority of projects that have won the Aga Khan Award for Architecture, this long-term project, which has created one of the largest *artificially created forest ecosystems in the world*, does not involve any construction work. It has had a *restraining effect on the climate of the city of Ankara in terms of reducing temperature and humidity levels, as well as limiting air pollution levels*. Equally important is that as a large-scale urban green area, it has provided an extensive public green area available for the enjoyment of the city's residents, and has also become an obstacle to the rapid sprawl of Ankara's cities.

The second project in the category of coexistence with the surrounding natural context, which is the Wadi Hanifa Wetlands Project. The valley has been restored as a living part of Riyadh and attracts its residents for recreation and leisure. *This is an example of improving the environment of an important geographical component of the city*³.

The previous two projects illustrated the category of co-existence with a natural context, which apply to large natural areas located outside or near the city. The fourth category represented by the researchers is the development of public spaces within the city. The need for them becomes even greater as the density of development increases.

The first project that is presented in the category of public space development in the city is the Superkilen Park. Based on the concept of public participation as the driving force behind its design, no new buildings were introduced in the park, but about 110 objects from 60 countries representing the countries of residence

² Materials of open online courses on the basis of the FutureLearn platform, *Improvement of quality of city life*, Mohammad al-Assad, 2020.

³ In "Architecture outside architecture" under Cynthia K. Davidson and Ismail Serageldin's edition, *The big mosque of Riyadh and reconstruction of the old downtown*, 84-93. London: releases of Academy, 1995.

of local residents were introduced. The use of the method of cultural integration contributed to the renewal of the city and public spaces with its large immigrant community. And also, led to the elimination of the formed negative image associated with crime, gang activity, social problems and physical disconnection from the rest of Copenhagen.

Results of the study. Almaty is the largest financial, economic and cultural center of Kazakhstan. The population of the city increases annually. According to official data, the population of Almaty is 1.714 million inhabitants. Therefore, the study of the issue of improving the quality of life in the Southern capital of Kazakhstan –Almaty is an urgent topic.

The exhibition will feature a symbol building, urban infrastructure, connection with the natural environment, public spaces and their role in improving the quality of life of citizens. *The uniqueness of the presented objects and architectural spaces is that each of them harmoniously combines all the studied aspects.* Aesthetic and functional aspects of the studied architectural objects have a regional peculiarity, which are expressed in an inseparable connection with the natural environment and in their artistic and figurative solution. The main architectural and compositional techniques and methods in creating aesthetically significant and functionally comfortable spaces are the use of terrain, mountain landscape, artificial canal, interpretation of elements of national decorative and applied art. Improving the quality of life of urban residents and guests of the Southern Capital is achieved by creating a significant and actively used daily urban hub..

In the late 70s, a very ambitious project was implemented in Almaty-a 102-meter 25-storey hotel "Kazakhstan". For many years, the hotel "Kazakhstan" was a building-a symbol of our country. Until 2008, for 70 years, the hotel "Kazakhstan" remained the tallest building in Almaty. The architectural style of the hotel "Kazakhstan" can be attributed to the Soviet modernism. The authors of the project were inspired by the works of Le Corbusier. They were influenced by the Japanese international style of the architect Tange Kenzo⁴.



Figure 1. Hotel "Kazakhstan", developed by the architects of "Kazgor"

The figurative solution of the building is made in the form of an ear, which is one of the main agricultural crops of the republic. After the collapse of the Soviet Union, the hotel changed its owners several times. In the mid-2000s, the building was renovated inside and still performs its original function-a hotel.

The hotel is one of the most reliable and high-quality facilities in terms of construction and construction. Due to the earthquake hazard in Almaty, it was impossible to build buildings higher than 12 floors. The seismic stability of the hotel "Kazakhstan" was ensured by using the method of sliding formwork. The high-rise part of the hotel is located on a two-story basement building, which houses the lobby, savings bank, post office, cafe, restaurant in the southern pavilion, cafe and conference hall.

⁴ Бекримжан А. Глаудинов, *Архитектура Советского Казахстана*, Стройиздат, 1987

The hotel "Kazakhstan" is also a *high-rise dominant of the ensemble*, which in combination with the Palace of the Republic, the cinema "Arman" and the building of the cable car "Koktobe" form a single spatial composition. The entrance part of three objects (the Palace of the Republic, the Arman Cinema, the Kazakhstan Hotel) faces the Abay Square, where the statue of the Kazakh poet, composer, thinker, educator Abay Kunanbayev is located.



Figure 2. Square of Abay Kunanbayeva, Palace of the Republic

Space space organized with the South fortress, the volume of the cinema "Arman", with the East after the building of the Republic and Northern-high-rise building of hotel "Kazakhstan". A 72 m wide staircase leads from Abay Square, which separates traffic and pedestrian flows" " So the chairs of the hotel "Kazakhstan" are organized in a multi-level space, with extensive landscaping-a square, swimming pools and fountains, with small architectural forms and sculptures.

Seven years ago, Abay Square was reconstructed. Dry fountains and small architectural forms appeared here. The laying of granite paving stones was replaced, new floor lamps were installed, new fountains were installed⁵.

Another striking creation of Soviet modernism is the Palace of the Republic, which has the status of an architectural monument of republican significance. It was built in 1970, and several talented architects worked on its project at once. The authors were awarded state prizes of the USSR. The Palace of the Republic (formerly the Lenin Palace of Culture) was built according to the most modern standards of those times. The roof tent does not rest on the walls, but on 8 reinforced concrete supports, despite the area of -10 thousand square meters, it seems weightless, floating roof. In this building, the ventilation system was integrated with the small Almatinka River, flowing naturally through the tunnels under the Palace of the Republic, creating a cooler climate inside the building itself. After 40 years, the town planning council insisted on the renovation of the building. The palace is completely reconstructed and *seismically enhanced*. The acoustics were updated, the seats increased from 3008 to 2567 people. The color scheme and dimensions of the seats have also changed. The task was to update the historically valuable building and preserve its original appearance as much as possible⁶.

From the point of view of the use of natural conditions in the architectural and planning solution of the architectural object, the building of the Arman cinema is interesting. *Natural slope of the terrain, used in the slope of the auditorium.*

⁵ Tolegen Z., Moldabekov, M. Koshenov, K., Mugzhanova, G., *Roles of public ethnocultural spaces in Kazakhstan*, 2018 Astra Salvensis, 6(1), with. 761-774

⁶ Nabiev, A.S., Nurkusheva, L.T., Suleimenova, K.K., Sadvokasova, G.K., Imanbaeva, Z.A., *Virtual reconstruction of historical architectural monuments*, Methods and technologies International Journal of Innovative Technology and Exploring Engineering, 2019, 8(10), p. 3880-3887



Figure 3. The “Arman” cinema theater

The “Arman” cinema opened in 1968. Initially, there were two halls: a blue one with 450 seats and a red one with 550 seats. In the building, an internal courtyard was built open from above, it was landscaped and fountains were installed. On the side facades were placed bas-reliefs that told about the history of Kazakhstan of the Soviet period. There were also pictures of the future: soldiers, a group of astronauts, women harvesting crops.

In 2000, the cinema "Arman" was reconstructed, equipped with modern cinema and sound equipment, the interior-upholstered chairs, 36 VIP seats (sofas with tables), 2 halls with 344 seats, the area expanded (the courtyard was removed), there was an opportunity to hold large-scale events, discos, presentations, a new status-the entertainment center "Arman". In 2009, two additional compact cinema halls were opened, the green and orange halls with 104 seats each.

The concentration of several city attractions organizes an aesthetically significant node that contributes to improving the quality of urban life. The mountain landscape is a unique backdrop for all the buildings in question.

The fourth architectural object of this urban hub is the building of the Kok Tobe cable car station. Kok tobe is one of the most magical places in the city, towering one thousand hundred meters above the sea. The construction of the cable car began in 1965 with the laying of the lower station next to the Palace of the Republic. The project has provided for the main priorities-high reliability, all-season and comfort of visitors. In March 2016, the construction of the cable car was completed and the renovated park opened its doors to visitors. Now, instead of the old 2 cars, 17 new gondola cabins run. A wide angle of the cabin windows will show the mountain landscape of Kok Tobe Mountain and all the beauty of the city of Almaty. The cabins are safe and very comfortable. In the booths, vents open, comfortable soft seats with backs are located.

The length of the new cable car is 1,620 meters

Differences between stations of 250 meters

Movement speed can be adjusted from 0.5 to 6 m / sec

17 new cableways run on the new cable car

Capacity of each 8 people

Capacity of 750 people per hour



Figure 4. The “Kok-tobe” station

It is possible to reach on the mountain not only by special bus or on foot, but also on the ropeway. At top of the mountain the cozy small restaurant under the name "Yurta" and also teahouse, an attraction for fans of extreme sports — "Fast Coaster", rock climbing wall and children's town, and the surprising fountain executed in the form of apple which, on beliefs, grants desires is located.

It is also interesting that a monument to the legendary band "The Beatles" was erected here in 2007. This is a bronze bench with representatives of the famous "Liverpool four" sitting on it. The statues fully correspond in proportions to their prototypes, as well as to the spirit of the group and its style. *The “Kok-Tobe” currently meets international safety standards.*

The eastern side of all the above buildings is framed by the small Almatinka River, which is also the source of supply for all the city's fountains. In 1971, according to the project of Soviet engineers, a water cascade was created along the bed of the small Almatinka River consisting of 28 reinforced concrete water basins measuring 8x12, with a total length of 600 m. The riverbed was reinforced and concreted, along the entire riverbed through a certain distance, special walls were installed-barriers spillways, which are important dampers of the water flow rate, protecting the city from flooding and floods. The task and purpose of the water cascade basins of the river is not only to protect the city from floods, but also to improve the microclimate by cooling the air of the city in the summer heat.

By order of the Department of comfortable urban environment, the reconstruction of the "Druzhba" square behind the "Kazakhstan" hotel and the small Almatinka river embankment was carried out. In the square, two irrigation tanks were installed for 120 cubic meters each. The equipment of playgrounds is being updated, lighting, small architectural forms, in which energy-saving lamps are installed, are completely modernized. The composition of the decorative relief panel "Camels" made of hammered copper has been restored.



Figure 5. The small Almatinka River

The small Almatinka river embankment is also part of the "City for People" concept. This concept was actively developed in the southern capital of Kazakhstan, Almaty. The main concept of this idea was to increase the space for pedestrians, *allocate bicycle paths, create recreation areas, sports and children's playgrounds. Introduction of the "complete streets" movement organization of safe intersections with the allocation of the necessary space on the sidewalk for all categories of citizens.* The author of the concept, Ian Gehl, recommended adding useful objects for the comfort of citizens in residential areas, actively eliminating advertising banners that spoil the appearance of streets. Also, the issues of preserving the historical appearance and cultural objects, the landscape and the connection of the city with the surrounding area were raised⁷. All aspects of this concept have a huge impact on improving the quality of the urban environment. In Almaty, these are: natural potential, wide streets, unique historical and cultural appearance of the city, a large number of young people who bring life and energy to the city. The city also has its weaknesses: numerous automobile traffic, air pollution, unorganized space for people, visual "garbage" – a lot of advertising, banners. After reviewing the structure and organization of the city and the history of development, the architect shared another observation: the size of the old quarters is much smaller, the city was more cramped and dense. It is such a building, according to researchers, is more preferable for humans⁸. Gehl Architects experts give the following recommendations based on the emphasis on the unique aspects of the city. This is the need to develop the function of the river and ditch system, improve the transport system, increase the attractiveness of historical sites and parks⁹.

As a result of this study, the city of Almaty has improved the balance of the transport system in the direction of creating conditions for pedestrian and bicycle traffic and dedicated lanes for public transport. Reducing the role of personal transport. To implement the announced program, you will need not only relevant regulatory documents, but also the creation of a single organization responsible for the comfortable stay of people on the street. The book "Cities for People" was translated into Kazakh in 2014.

⁷ Amandykova, D.A., Imanbayeva, Z.A., Assylbekova, A.M., Nurkusheva, L.T., Ostapenko, I.I., *On the history of studying museum complexes*, Astra Salvensis 2018

⁸ Amandykova, D.A., Kabylov, D.B., Moldabekov, M., Koshenov, K., (...), Gvozdikova, T.A., Bryantsev, A.A., *Compositional aspects of urban environment organization*, Man in India, 2017

At the present stage in Kazakhstan, there is a process of active development of a large number of residential buildings and entire new areas. The study of the development of housing issues also actualizes the migration situation in Kazakhstan. The migration process makes its own adjustments to the ethnic culture, socio-economic aspects and state policy. Provision of the increasing population of the city of Almaty is supported at the state level. These are the introduction of the State programs "Affordable Housing-2020", "Housing Program 7-20-25", "Nurly Zher", "Almaty Zhastary", rental housing for a period of 20 years, etc¹⁰.

According to the results of many studies, it is revealed that in solving this issue, a very important factor is the sense of ownership of the purchased housing. In this case, it should be noted that all social housing facilities in Kazakhstan are focused on acquiring their own housing.

The above-mentioned state programs offer citizens safe and not expensive housing. There are various types of lending that take into account the income, family composition of consumers. Large families can get preferential loans from banks with the lowest annual interest rate¹¹.

The experience of designing social housing in Kazakhstan is developing in two types – the construction of residential areas and residential complexes. The territories of all residential areas provide for the construction of schools, kindergartens, retail and consumer services. Schools and kindergartens are built at the expense of budget funds, and shopping centers, administrative buildings, and medical centers are built at the expense of investments¹².

Despite all the above-mentioned positive characteristics of architectural solutions that contribute to improving the quality of life of residents of social housing, there are a number of recommendations for introducing new areas into the spatial and environmental structures.

Despite the novelty of the construction period, social housing buildings have similar principles of spatial and urban planning organization with panel housing of the post-Soviet period. For example:

- blind ends of residential buildings, creating large unused areas of land;
- blind doors that are not visible in the entrances of residential buildings;
- there are no distinctions by zones that take into account the age and interests of residents;
- use of blind-long corridors with apartments on both sides.

According to the researchers, the application of the principles of ecological design in the structure of social housing in Almaty will improve the quality of the living environment. Such principles as natural supervision, access control and territoriality can provide not only comfortable living conditions, but also become examples of the organization of spaces for commercial functions. For example, for the development of urban farming, various greenhouses.

¹⁰ Andmandykova, D., Nauryzbayeva, A., Shalbayev, A., Kozbagarova, N., Nigmatova, A., *Trends in research on the organization of an inclusive education environment*, Prensa Medica Argentina, 2019 .

¹¹ Amandykova, D.A., Imanbayeva, Z.A., Assylbekova, A.M., Nurkusheva, L.T., Ostapenko, I.I., *On the history of studying museum complexes*, Astra Salvensis 2018.

¹² Shilderkhanov, B.K., Issakhov, N.Z., Popov, Y.G., Trofimov, V.P., *Compositional Features of Ethnic Interior Design*, Astra Salvensis - review of history and culture, year VI, No. 12, 2018. - P.569-580 ISSN: 2393-4727

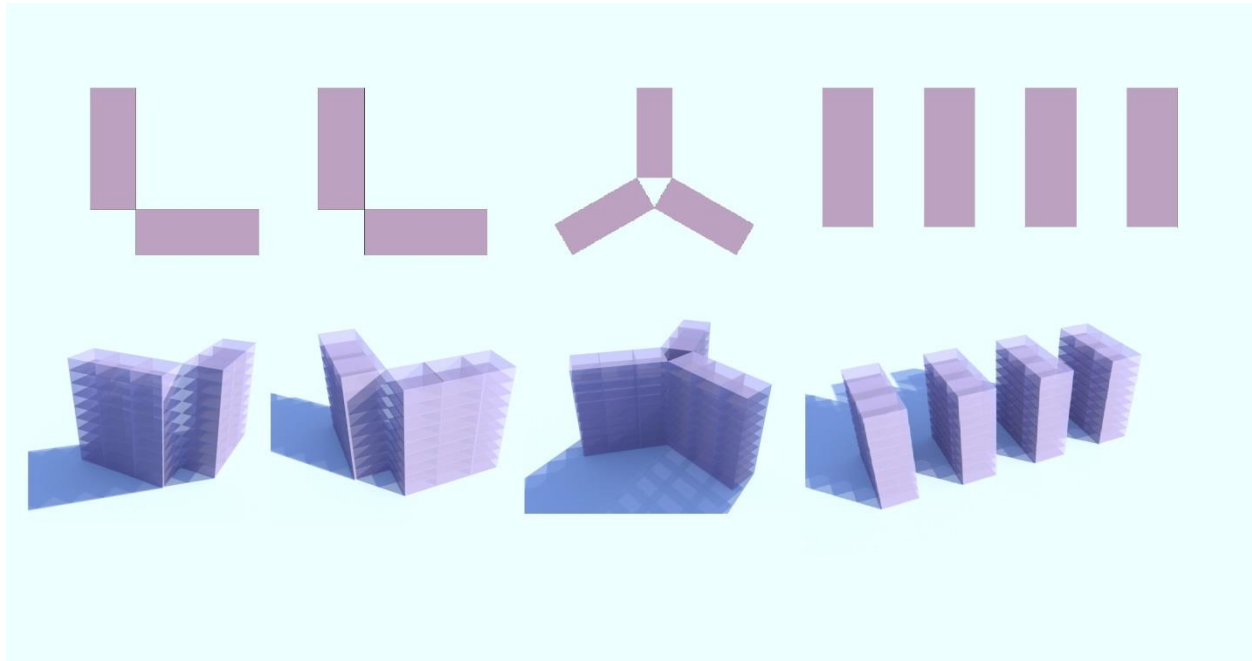


Figure 6 . Types of volumetric-spatial composition composition of residential buildings

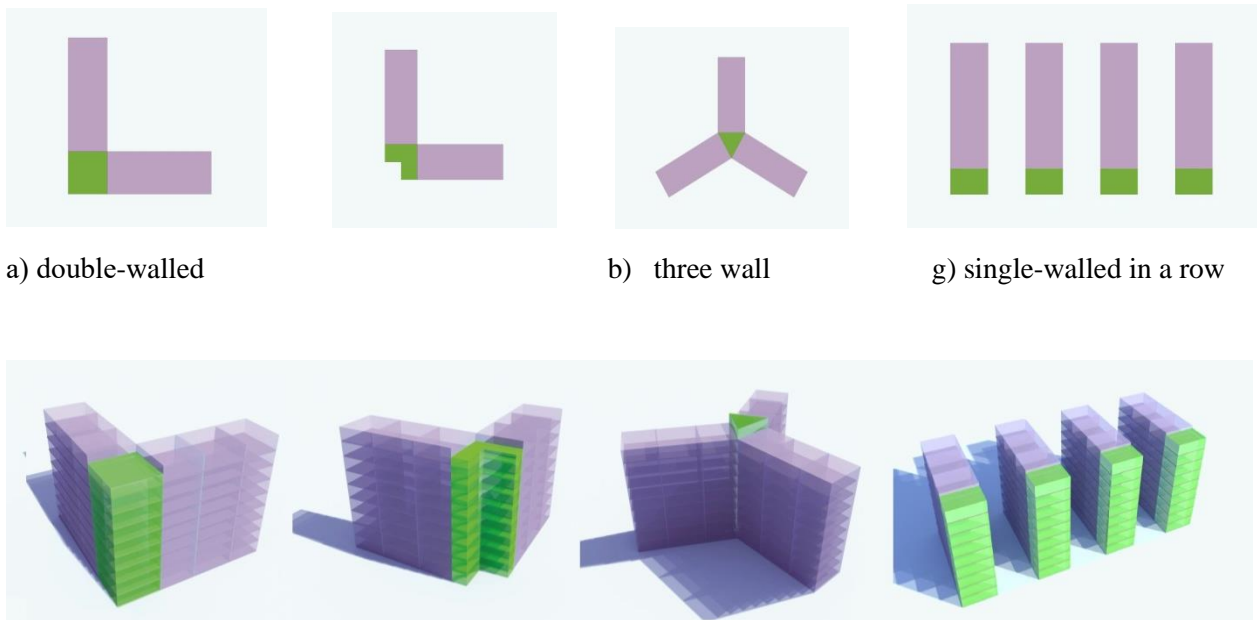


Figure 7 . Types of introduction of vertical trusses into the volumetric-spatial solution of residential buildings

In this study, it is proposed to use vertical farms in an open urban space. In the opinion of the authors of this study, the three-dimensional solution of vertical trusses should be able to have different compositional layouts. The authors lead the work to develop a pilot modular cells, which allows the construction of various three-dimensional solution structures for the development of the idea of urban farming in areas of social

housing. These are various vertical types of trusses-inserts for functioning in the blind ends of residential buildings. The three-dimensional solution of vertical trusses can be two-wall semi-open forms along the perimeter of the external walls of residential buildings, four-wall closed forms and three-wall closed forms. The spatial planning solution of vertical trusses depends on the urban-composite volume of residential buildings. In this case, it should be noted that the proposed schemes for placing vertical trusses can be applied not only in new residential buildings, but also in panel residential buildings built in the post-Soviet period. Currently, panel 5-9-storey residential buildings with blind ends occupy a significant part of the urban space of Almaty. After all, it is known that the area under the blind ends of 5-9-storey residential buildings do not find their high-quality use and very often create unfavorable, to some extent criminally dangerous sections of the city. According to the latest statistics of criminology, most of the crimes committed in the city occur in areas with blind ends of residential buildings. I would especially like to mention the Aksay microdistricts. In this area there are a large number of 9-storey panel houses, urban planning and composition description correspond to the ray-shaped shape in 3 directions. In the center of the ray-shaped shape, dark wells are formed for the width of a 9-storey building and for a height equal to a 9-storey building. It should be noted that between the 3 9-storey buildings there are narrow passages, which are used by residents of this area. These areas of the district are not lit, are not paved and create criminally dangerous areas of the district, especially in the dark. Therefore, the use of vertical farms in the structure of residential buildings and the development of the idea of urban farming to produce organic products is appropriate.

In our experience, we know the concept of architect Oscar Newman - "protecting space", developed in collaboration with criminologist K. Ray Jeffrey, who coined the term CPTED. The original ideas of the CPTED (Crime prevention through environmental design) theory are based on the prevention of crime through environmental design (CPTED) - an action program for creating an artificial environment with safer areas¹³.

The experience of a modern architectural firm in the French city of "David Baker Architects Workshop" demonstrates very interesting architectural and compositional techniques. In the design of social housing for a certain diaspora, designers, as a sign of respect for the culture of this people, in the architectural and compositional solution of objects, use various decorative motifs, take into account the specific features of the organization of the environment. For example, " designed for the African-American Bayview Hill neighborhood, in a sign of respect for the African-American community, the architects added "afrocentric" motifs. For the screens covering the first floor windows, circular ornaments were used, which remind of the South African fauna. Such ornaments are used in basket weaving in Botswana, and the balcony fences were stylized as a wicker fence, which is typical of kraals-traditional South African settlements of the ring layout. After careful research, a set of colors, symbols and ornaments were developed that created a special spirit of the place. The authors of the project believe that it is the duty of architects to respect the consumer and try to make buildings as beautiful as possible. Signs of respect and a sense of care can be expressed through architecture. If people feel respected, they treat the building better, and the number of cases of vandalism is reduced» [9].

The three-dimensional solution of objects for the development of urban farming and greenhouses can be focused on the implementation of the ideas put forward by the American architect Oscar Newman. This is to implement the concepts of "territoriality", "natural observability" and "social control", which explain architectural strategies that create opportunities for residents to take control of their own neighborhoods to create a safer residential and comfortable environment.

For example, use vertical farms of low height to divide yard plots of different sizes and corresponding to the lifestyle of social groups – young people, families with children and the elderly. An example of the implementation of O. Newman's principles is the reconstruction of the Clason Point social housing area, located in the South Bronx. The area had the stigma of cheap housing for the poor, which meant that outsiders were allowed in it, as in the general public space of the city. Newman set himself the task of increasing the areas of control and concern of residents, addressing each group with clearly defined

¹³ <https://rrbald.la8.ru/kriminalnaja-bezopasnost-zhiloj-sredy-arhitekturnye-aspekty>, *Criminal security of the residential environment: architectural aspects*, (2017)

territories, and limiting the access of strangers. After modifications to public spaces, crime at Clason Point decreased by 54 percent [9]. In the planning of the courtyard itself, priority is given to delineating the entire area according to the degree of privacy, using real and symbolic barriers. The ground floor apartments have private gardens, both back and front. They are marked by a low fence, allowing a sitting person to be visible and observe the activity of the common spaces. The approaches to private properties are marked with symbolic gates. Children's spaces on the inner street, controlled from the windows of the kitchens. The building has no internal stairs, residents of the upper floors use external stairs. Each of them serves two apartments with a common glazed vestibule, thereby stimulating the personalization of the space and the ability to see what is happening at ground level. Bike rides are organized in small groups close to the front door, clearly visible from the glazed balconies. As practice has shown, Sibeliusparken has a low crime rate – 50% less than in the district, in particular, the theft rate is 1/5 of the average of other complexes. The lowest is the rate of car theft, due to the separation of the complex from the highway. People here feel safe and free to walk at night.

Conclusion. Thus, the study of architectural aspects of improving the quality of life in an urban environment confirms the importance of the role of architects and designers. The study of the means and techniques of architectural composition used by architects in the design and renovation of urban spaces is an important aspect in improving the quality of life in urban space. The vast factual material available to the planner cannot be ordered without the appropriate time frame of the urban planner's worldview. The solution of the problem of improving the quality of life in the urban environment should be implemented in a comprehensive way. The architect must take into account the way of life of people, traditions, regional features of natural conditions, which forms a unique image of the city. Technical and industrial aspects of urban planning should not hinder the development of the city, but rather contribute to it.

Residential complexes form the fabric of the city, which makes up most of the urban space. Therefore, architectural and compositional solutions of the designed social objects are of great importance. Occupying large urban areas, social housing objects participate in the formation of the overall appearance of the city. The design and construction of an aesthetically high-quality residential environment are safety factors. In any society, there is an opinion that the territory of social housing is not a safe area. In many studies on social housing, there is an opinion about the increased criminal danger in such areas. Therefore, one of the main tasks of all architects involved in the design of social housing is to reduce the percentage of crime by architectural methods.