Evolution of Mass Public Buildings and Complexes
Problems of Modern Spatial Organization in Bukhara

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Abstract: The article presents the results of theoretical research - the definition of the main trends and architectural techniques that underlie the construction of the public space of modern shopping complexes in Bukhara and the development of recommendations for their practical implementation.

Keywords: tim, tok, chorsu, dome, zargar, urban planning, landscaping

The independence of our country has created conditions for the restoration and repair of the spiritual heritage of our ancestors, historical monuments, as well as the use of architecture, the transformation of sacred monuments into entertainment places, places of trade in folk arts and crafts. A legal basis is being created in Bukhara for the study and preservation of our historical, cultural and spiritual heritage for future generations. Measures for the study have been determined, more effective work is underway to record, preserve and restore the architectural heritage of Bukhara. A city with hundreds of architectural and historical monuments, including monuments of monumental art, which has played an important role in world civilization for centuries.

As a result of the study of our great ancestors and attention to our historical cities, many monuments that were partially destroyed during the dictatorial regime have been radically restored and preserved for future generations.

The architectural monuments of Labi-Havuz, Sitoraehokhoss, Ark Fortress, Chashmai-Ayub, which store the magnificent and majestic cultural heritage of Bukhara, as well as the shopping arcades Toki Sarrofon, Toki Telpakfurushon, Toki Zargaron and Tim Abdulla-Khan. Bukhara is known all over the world for its extremely rich cultural and historical heritage. By the decision of the World Heritage Committee under the United Nations Educational, Scientific and Cultural Organization (UNESCO) in 1993, the cultural and historical monuments of the historical center of Bukhara were included in the "List of World Cultural Heritage".

The study of the history and prospects for the use of historical shopping complexes of Bukhara based on scientific analysis and generalization of foreign experience in this area. The emergence of a need to develop methods for the construction of promising shopping complexes, which is
associated with the development of a market economy, an increase in the welfare and purchasing power of citizens. Therefore, the study of the problems of the modern spatial organization of shopping malls in Bukhara and their competent functioning in future practical work is one of the most pressing issues today.

The purpose of the work is to develop long-term plans for the use of the architecture of historical shopping malls in Bukhara and recommendations for its implementation.

The objectives of the study are to determine the main trends and architectural techniques that underlie the construction of the public space of modern shopping malls in Bukhara and develop recommendations for their practical implementation.

At the crossroads of the main roads of the city of Bukhara, complex domed buildings - currents were built. Passing Poi Kalyan, the former trade highway leads us to the ancient intersection of the main highways of medieval shahristan, where the traditional “four bazaars” - “chahar souk” converged, flowing into the domed building, to which the name of the intersection passed - Chorsu.

A characteristic feature of the planning of Central Asian cities was the placement of shopping centers at the intersections of the main streets and their decoration with a domed building-passage erected on this site, through which the streets passed, and trading shops were located in the building itself. Such a passage marked a shopping center in Samarkand, in Shakhrisabz; in Bukhara there were five passages, which testifies to the scope of Bukhara trade and the improvement of the markets of this city. To designate such buildings in Bukhara, the term "tok" was used, in Samarkand and Shakhrisabz - "chorsu" (crossroads). During the reign of the Sheibanid dynasty, buildings began to be built in Bukhara, connected with the trading life of the city. Of particular interest are the trading buildings of the 16th century.[1,2].

Trading domes were located at the intersections of busy streets along the main trade highway of the Bukhara Shahristan, which ran from Lyabi-Khauz Square to Registan Square (Fig. 1). The city has four of the largest commercial buildings [4,5,6].

Since ancient times, trade has been the most common business in the East. Heavy caravans passed along the Great Silk Road, selling, exchanging and buying goods. And one of the trade centers on the caravan route was Bukhara.

Fig 1. Layout of commercial buildings of the 16th century
Bukhara trade domes are designed depending on their position in the network of streets: the plan uses square, six and octagon shapes.

**Toki Sarrafon** or the first dome, the smallest, does not have a bypass gallery like the other two. The octagonal room with a span of 11.5 m with cut corners, with four arches in the corners is covered with four powerful intersecting arches. The arches, being complemented by shield-like sails, carry a dome crowned with a lantern, rebuilt at the beginning of the 20th century, keeping the old forms.

Toki Sarrofon is a traditional covered bazaar in the historical center of Bukhara, in Uzbekistan. It was built in the 16th century, more precisely in 1534-1535, during the reign of Ubaidulla Khan from the Uzbek Sheibanid dynasty (Fig. 2).

At the intersection of two streets of Shahristan, on the old Shokhrudaryg, currency exchange points were built. The octagonal plan of the building is 25x24 m, the inner diameter of the dome is 12 m, and the height of the outer dome is 16.5 meters. The building, installed on a hill, blocks the intersection south of the city (Fig. 3).

During the Shaibanid period, Bukhara became a center of private enterprise, lending and money exchange. In Bukhara there were houses, trading domes, caravanserais, mosques, baths and other buildings associated with the names of money changers.
Today, Toki Sarrofon is a popular attraction, inside which there are mainly souvenir shops and shops selling antiques, souvenirs, handicrafts, such as dishes, clothes, coins, jewelry, figurines, carpets, books, musical instruments, paintings, etc. The building of the bazaar is located in the historical center of Bukhara, on the streets of BahauddinNakshbandi and Arabon, next to the Shakhrud canal (most of this canal is now underground), a hundred meters southwest of the Lyabi-Khauz complex. In one part of the bazaar building there is a small mosque of the same name, as well as a hammam (bath) Sarrofon (Fig. 4).

**Figure 3. Plan of Toki Sarrofon**

Рис4. Фасады Токи Саррофон

**Currents TelpakFurushon**— This building has a hexagonal plan with a main dome on six abutments and a series of side domes on arches that cut off square and triangular chambers. The architect deftly solved the problem by linking four streets into one knot, from which came the
fifth - the trade highway (its beginning is marked by a domed gallery).

Toki Telpak Furushon is a traditional covered bazaar in the historical center of Bukhara, in Uzbekistan. It was built in the 16th century, more precisely in 1570-1571, during the formal reign of Iskander Khan from the Uzbek Sheibanid dynasty (Fig. 5).

Fig. 5. Toki Telpak Furushon

Figure 6. Plan of Toki Telpak Furushon
The Trade Crossroads, built in 1570–1571, is a domed building for the manufacture and sale of headdresses. According to the founding documents, the building was built at the intersection of five streets connected from different sides.

The diameter of the dome is 38 m, the ceiling of the hall is 10 m, the protected area of the shopping street is 28 m, the width of the street is 14 m. The building is covered with a low dome with windows on a dodecahedral light background. Skilled craftsmen made their way between the six connecting poles of the device (Fig. 6).

The name Toki Telpakfurushon comes from the Persian and Tajik languages, and is translated as the Dome of Headwear Merchants (Telpak is a traditional massive headdress made of sheep wool), since in some periods there were a large number of shops and headwear shops selling various types of male and female skullcaps, massive woolen hats, hats and papakhas, and the like. Warehouses, caravanserais, hotels, merchants’ shops were built around the building of the covered bazaar.

The building has a large dome, as well as several smaller domes. Built from ceramic bricks. Nowadays, Toki Telpakfurushon is a popular attraction, inside which there are mainly souvenir shops and shops selling antiques, souvenirs, handicrafts, such as dishes, clothes, coins, jewelry, figurines, carpets, books, musical instruments, paintings, etc, as well as workshops (Fig. 7).

Along with the complexity of service and saving time for visitors, shopping centers also make it possible to improve the quality of service through the use of modern means of mechanization, rational equipment and the widespread use of progressive forms of service. Thanks to the enlargement, cooperation of enterprises and the multi-purpose use of the premises of the shopping center, the cost of construction and their operation is reduced. They open up great opportunities for solving urban planning, architectural and artistic tasks, and are architectural and compositional accents in urban development.

**Toki Zargaron** - This third dome of a square plan with a center and a bypass gallery is larger and more complex than the first two in terms of composition. In the niches of its main part, porticos and outbuildings, there were more than thirty workshops of jewelers. The central dome on eight intersecting arches and a system of sails is preceded by a low drum with lancet arches cut into its...
faces.

"Toki" is the name of the domed covered bazaars built at the intersection of several of the busiest streets. "Zargar" is translated as "jeweler", so the dome of Toki-Zargaron was also called the "trade dome of jewelers".

Mount of Jewels, built in the 16th century in a crowded area of the city at a crossroads, is a shopping center for the sale of jewelry. Although it is believed that the dome of the building was built before the Arab invasion, in the works of Vosifius at the beginning of the 16th century it is referred to as the Bukhara Chorsu.

Toki Jewelry Store, located to the east of the Kalon poi complex, is known for being a pick-up point and entry point for indoor markets. Toki Zargaron is located near the Ulugbek Madrasah, the center of ancient Shahristan, at the intersection of two main streets. Although the building was mainly built in the 15th century, it was completely restored in the 16th century (Fig. 8).

The huge dome of the mountain differs from the surrounding tim and markets in that it is installed on eight barrows. The square base of the main dome rests on eight pillars, the lower part of which resembles a polygonal drum. Its plan is 45.4 x 43.5 m, height - 16.7 m, the diameter of the central dome of Toki Zargaron is 14 meters (Fig. 9).

The basement floor is multifaceted; light enters the building through 16 windows. The huge dome with meridional shells that covers Toki Zargaron gives it glory. Around the dome are shops and workshops, which form a square shape, the height of the dome of these shops is 5-7 meters.
Large shops and workshops built in this way can provide a relaxing coolness in the summer heat. Previously, there were 36 jewelry workshops and shops in its corridors (Fig. 10). The jewelers worked in special deep rooms with their less sophisticated production equipment.

Toki Zargaron is a traditional covered bazaar in the historical center of Bukhara, in Uzbekistan. It was built in the 16th century, more precisely in 1586-1587, during the reign of Abdullah Khan II from the Uzbek Sheibanid dynasty.

The largest among several ancient covered bazaars of Bukhara, and the most complex in construction and arrangement in the city. Until the middle of the 20th century, it was used as an ordinary bazaar, where mainly jewelry was sold, but part of the bazaar was used as an ordinary bazaar, where various accessories were sold. The building of the covered bazaar was built in the traditional Persian style, and is no different from similar covered traditional bazaars in the ancient cities of Iran.

The building is made in the style typical of Persian architecture. The dome is quite strongly elongated, and the vertical ribs of the building strongly protrude forward, outward. Around the central space under the dome were shops of merchants and workshops of local craftsmen. Over the galleries with shops and workshops, small overlapping domes were also built, creating a multi-domed roof over the shopping malls. The galleries connected under the vault can be called medieval passages (Fig. 10).

The material used to build the trading dome is ceramic brick. Toki-Zargaron is the most complex in terms of construction and arrangement among other surviving covered bazaars in Bukhara. The space inside is organized in such a way that it remains cool even on hot summer days. No decorative elements were used in the construction, as the most important thing was a constructive and efficient arrangement.

**Tim Abdullah Khan** - for the silk trade. The building, almost square in plan, with three portals towards the street, consisted of the main dome on the octagon and the surrounding gallery with a
series of small domes. Light enters through windows in the drum and holes in the domes. Tim's plan is drawn with surprising finesse. All its elements are subordinated to the central spot, where a large dome rises elastically on eight abutments connected in four knots. The domes and semi-domes of the galleries, which extinguish the thrust, are arranged around in a picturesque crown.

The city is famous not only for its masterpieces of architectural art, but also for its craftsmen, bazaars and trading shops. One of these bazaars is Tim Abdullah Khan, built in the 16th century, more precisely in 1577 (Fig. 11).

![Figure 11. The building of Tim-Abdullah Khan](image)

The monument, which is the largest indoor trading rasta, has a square history and measures 39x42 meters. The walls of the building made of solid brick (22x27x3.5 cm) are plastered with plaster, the ornaments are almost not preserved (Fig. 12).

The market is also known as the Trade Dome, built during the time of the Bukhara ruler Iskander Khan, but named after his son Abdullah Khan. The very word Tim means an enclosed space for public use, from which the market takes its name.

![Figure 12. Plan of Tim Abdullah Khan](image)
The main difference between the Trade Dome and other bazaars is that it is completely closed and has a gate on the western side.

The bazaar was built in the Persian style, which is why it resembles the traditional market of ancient Iranian cities. It is attractive because it is cool here in any weather, and the rays of the sun reach the shops only through the holes in the dome (Fig. 13).

People met in the central bazaar to satisfy a range of their needs, such as:

- purchase of goods and services in one place and at a convenient time;
- receiving entertainment services for all ages and interests, as well as the services of catering enterprises;
- satisfaction of aesthetic and social and communication needs;
- Information saturation, as markets and fairs has always served as a source of news.

Speaking about the prospects for the further development of this format of trade, it should be noted that the shopping center is becoming the center of social and cultural activity of the population.

**The promising format of shopping centers** is unique projects that provide the consumer with both the satisfaction of standard expected needs included in the complex of opportunities in the sphere of trade and services, as well as the presence of an adaptive mechanism for influencing the consumer through satisfying his information and emotional needs using innovative products of various directions.

Thus, the results of theoretical studies allow us to draw the following conclusions on determining the main trends and architectural techniques that underlie the construction of the public space of modern shopping complexes in Bukhara.

1. The considered features of the development of shopping centers in the Uzbek market led to the emergence of a new format of shopping centers, which can be defined as promising.
According to the authors, this phenomenon is caused by the peculiarities of the historical development of trade in Uzbekistan, as well as the specifics of the national mentality.

2. Speaking about the prospects for the further development of this format of trade, it should be noted that the shopping center is becoming the center of social and cultural activity of the population.

3. Passing Poi Kalyan, the former trade highway leads us to the ancient intersection of the main highways of medieval shahristan, where the traditional “four bazaars” - “chahar souks” converged, flowing into the domed building, to which the name of the intersection passed - Chorsu.

4. Around the central space under the dome are shops of merchants and workshops of local craftsmen. Over the galleries with shops and workshops, small overlapping domes were also built, creating a multi-domed roof over the shopping malls. The galleries connected under the vault can be called medieval passages.

5. The medieval trade route from the Lyabi-Khauz ensemble along the Poi-Kalon road to the Shakhristan bazaar is a tourist route consisting of an architectural ensemble that includes the national craft centers of modern Bukhara.

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