

Arseniy Khechinashvili

Architectural portfolio

Content list

- Introduction _____ 5
- Tbilisi Hills Complex _____ 7
- Kuntsevskaya metro station _____ 11
- Millennium _____ 15
- Sveta Nedelya square _____ 21
- Houses of Culture. Renovation _____ 29
- The Renovation _____ 35
- Sokolnaya gora _____ 41
- Cannabis bank _____ 45
- Virtual Reality _____ 49
- Unknown Porto _____ 53
- Concursus _____ 55
- Paintings _____ 57

a web version of the projects at every page



Introduction

About Me



All my childhood I lived in the science city of Pushchino near Moscow, where my grandfather still runs a laboratory at the Institute of Biophysics. The influence of the modernist architecture of the city in my early childhood nurtured in me a love of architecture. A love of natural sciences and a desire for creativity find a place in me.

In my architectural practice, I adhere to strict and exclusively functional layouts, with small bright accents where it may be appropriate. I can't say that I have a well-formed language of architecture, it seems to me that in today's rapidly changing world, this is simply impossible. You need to remain flexible and be able to accept the changes that are taking place in order to be a useful creator. Otherwise, architectural practice sooner or later slides into a kind of conveyor and loses its quality

I am constantly looking for applications of modern technologies in architectural practice. I am fascinated by modern technologies such as XR, neural networks, programming.

arsekh@gmail.com

+995557142082

Tbilisi, Georgia



Tbilisi Hills

Residential complex

The project is designed for the prestigious Tbilisi Hills community. The architectural ensemble consists of three residential buildings and a commercial structure. The architecture presented here represents an innovative approach to building design, combining modern technologies with unique aesthetics. The core principles of this architecture are functionality, aesthetics, and sustainability. Each element of the buildings is developed considering its interaction with the environment and the needs of the users.

The volume of the residential buildings is divided into two blocks, positioned at different heights due to the terrain relief. These blocks are connected by a glass atrium, serving as a communal space for the building residents. The atrium bridges are made of the same material as the facades, emphasizing the seamless transition between the volumes.

Two large walls on either side of the atrium add dynamism, accentuating the angle between the two blocks and concealing necessary engineering communications. The pattern of moving shadow blinds on the facades pays homage to traditional Georgian ornaments, adding cultural context to the project.



Team:

Artstudio project

Role:

Lead architect

Location:

Tbilisi, Georgia

23-24

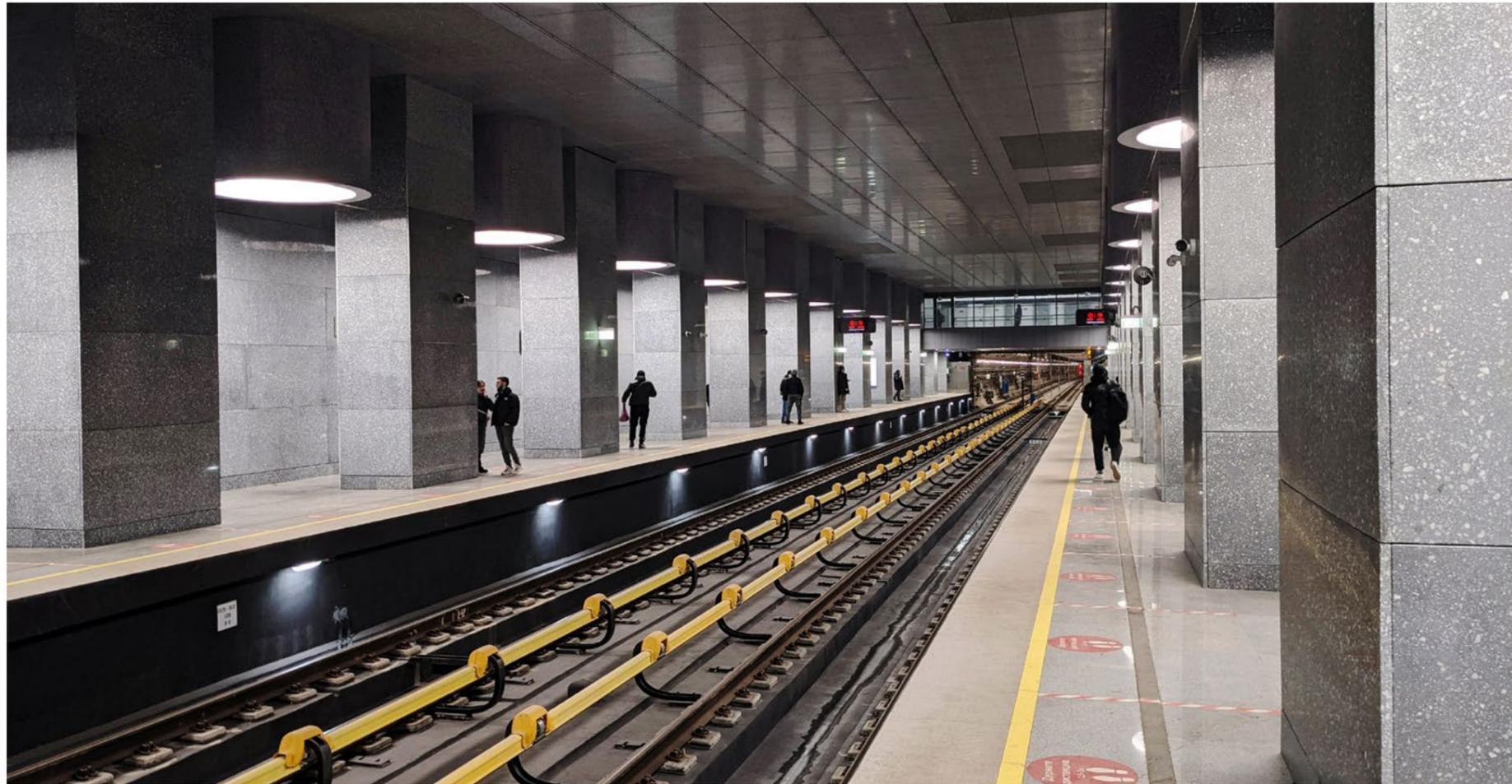




Commercial building

The ensemble is completed by a commercial building, meticulously integrated into the natural topography. The building's volume is divided into three terraces. The first terrace serves as access to the main structure for visitors and service vehicles, accommodating commercial spaces and a restaurant at this level. On the second level, there is a fully glazed café surrounded by panoramic views and an outdoor terrace. The glazing of the second level is designed to allow natural light to seamlessly penetrate into the main volume of the first level. The third inclined terrace functions as an accessible roof deck, providing space for park furniture, relaxation, and sunbathing.





Kuntsevskaya metro station

Architectural design

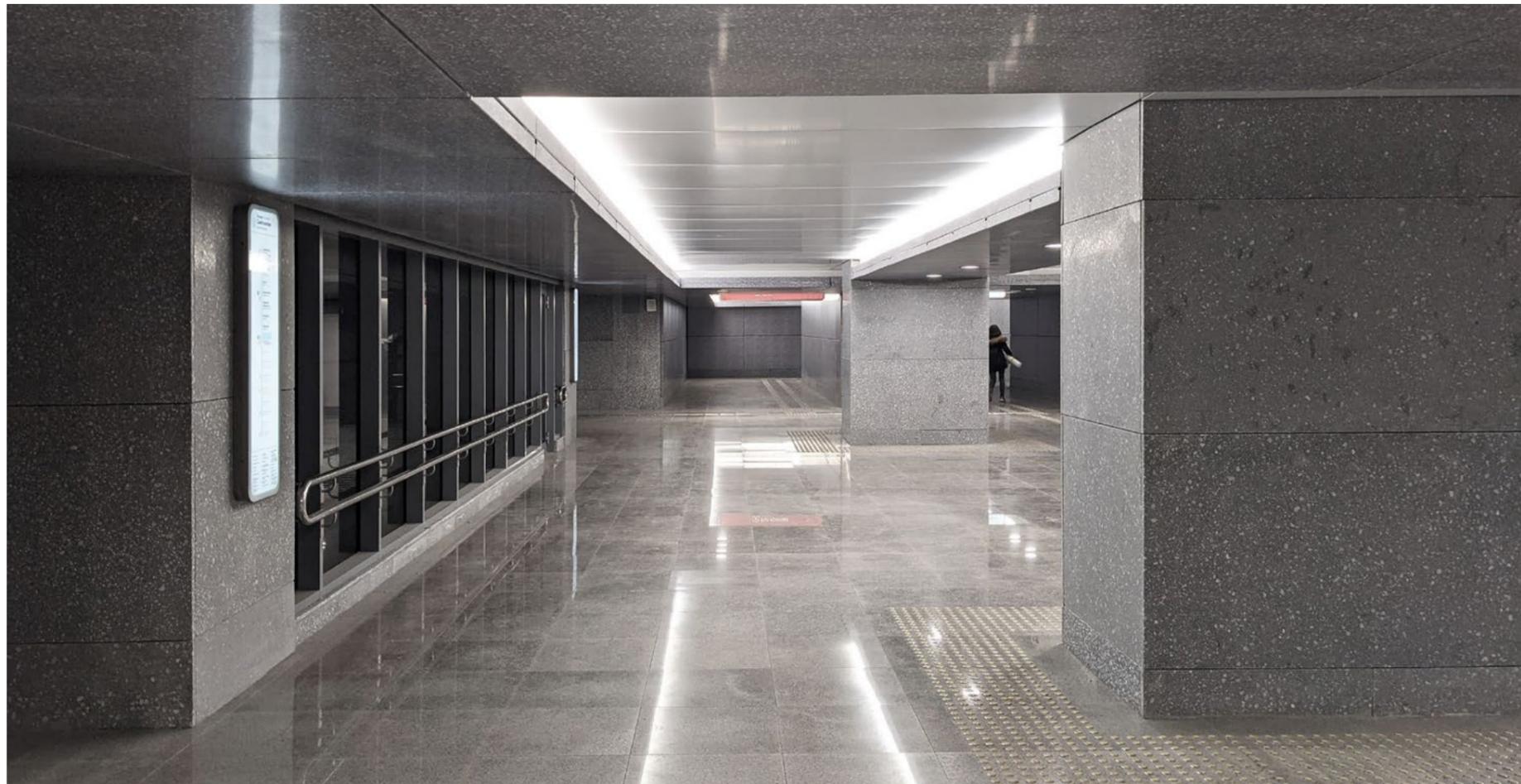
Design of the architectural appearance of the Kuntsevskaya station of the Bolshaya ring line of the Moscow metro. Station opening scheduled for late 2021

The main idea of the architectural and artistic solution is monumentality, unity and integrity of the volumetric interior of the station and pavilions as if carved out of solid stone.

All surfaces - floors, walls and ceilings - imitate the antique terrazzo mosaic technology in a light grey shade. Glossy white panels are also used on the ceiling, similar to rock openings. The geometry and right angles of the station are levelled by large cylindrical lamps that add grandeur temperament to the interior of the station.

The main illumination of the platform and pavilions is made using surface-mounted cylindrical lamps with diffused light, finished with brushed aluminium panels with a terrazzo photo pattern similar to that on the ceiling. The transition zones are marked with an increase in the ceiling with linear lighting behind the cornice along the perimeter.

This is my first implementation of this scale. The station has been open to visitors since December 7. 7 thousand people visit the station every day.



Team:

AI Architects

Role:

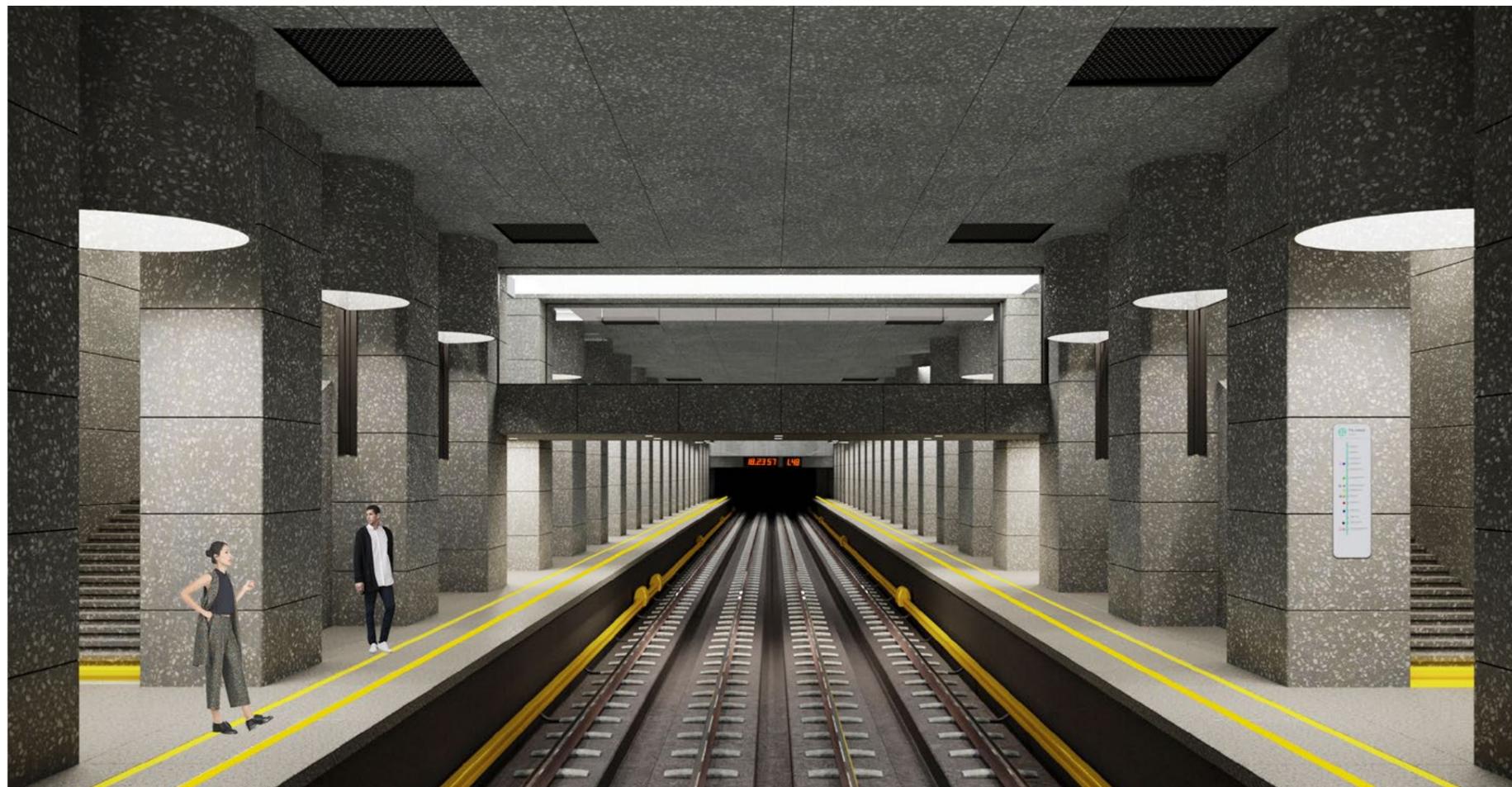
Lead architect

Location:

Moscow, Russia

20-21







Millennium

Privat house

Two-storey private residential building with a swimming pool, garage and guest house. The total area of the house is 2000 m². Now in the process of implementation. On this project, I studied all the nuances of designing from reinforced concrete.

The second floor, as a separate strict form, is offset from the first and visually separated by a brass belt. The floors are lined with different materials but in the same colour - slate and dark brick.

The height of the two-light space in the living room reaches 9 meters. And from the solid glazing, a view opens into a cozy courtyard.

The master bedroom block is separated from the children's bedrooms by a recreational area adjacent to the two-light space.

On this project, I used VR for the first time to visualize the project to the customer.



Team:

AI Architects

Role:

Architect

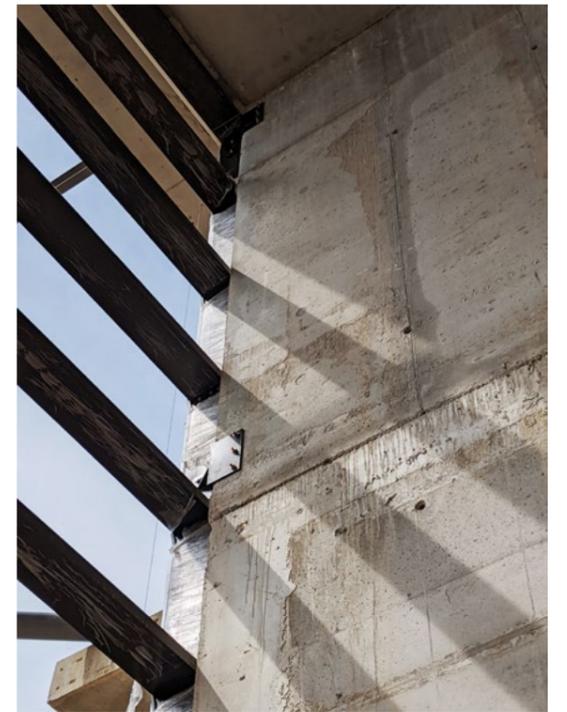
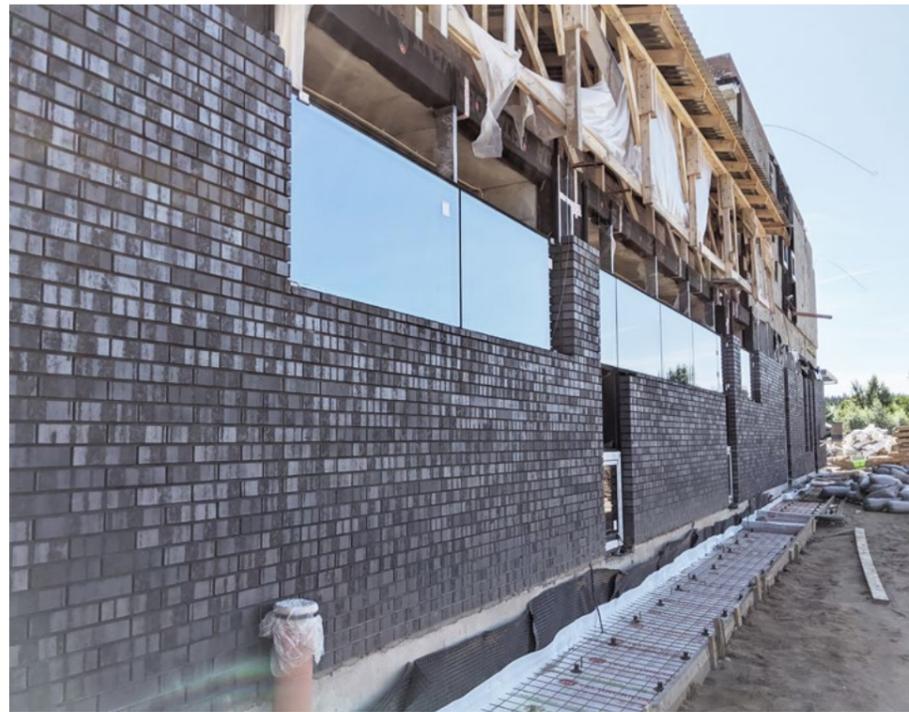
Location:

Moscow area, Russia

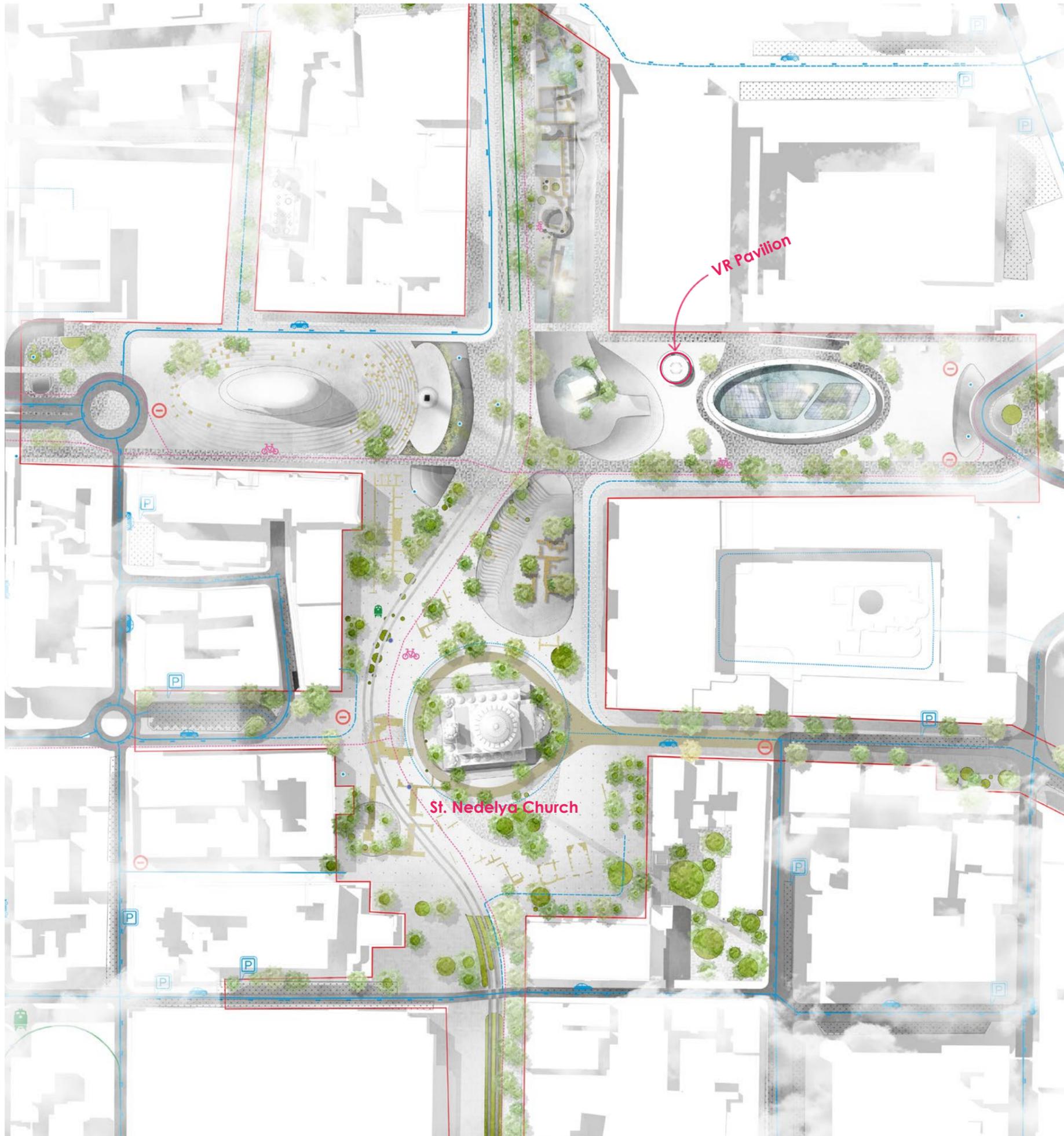
2020







Millennium. Realization process



Sveta Nedelya square

International competition

The competition aimed at creating an urban planning concept to develop an area around St. Nedelya Church. The goal of my team was to design a multifunctional, comfortable environment, and emphasise the sight's identity.

Under the St. Nedelya square, there are ruins of the ancient town of Serdica. Given today's urban planning situation, there was no opportunity for archaeological excavations to happen and let the general public explore the ruins.

After some research, I suggested we base our project on virtual reality. I developed a concept of using augmented reality on smartphones, which would be available for all visitors as well as make it possible to scan the environment and discover the layered cultural heritage. I also included in the project a virtual reality pavilion, which was supposed to become a platform for training courses devoted to the history of Bulgaria and be open to everyone interested.

The project won second place among participants from all over the world. The Jury appreciated our decision to connect physical and augmented reality.

Team:

AI Architects

Role:

Lead architect

Location:

Sofia, Bulgaria

2021





Augmented reality

Users download the application to their smartphone or tablet. In augmented reality mode using a gyroscope and tracking geolocation in the device, **the application will show the ancient Serdica** in those places where the camera is directed. For the most accurate and error-free determination of the user's position, our project provides for special marks embedded in the coverage of areas.

A link to download the application will be presented to tourists and local residents in the form of a QR code on information tablets placed in the centre of Sofia.

By "scanning" the environment, the user will see in scale and real-time **the ancient architecture, in the place where it really existed before.**

The application will allow you to enter additional information on each of the ancient buildings, with historical information and links to interesting articles on the topic.

Thus, the virtual recreation of the ancient city can become a convenient and **visual tool for educational programs and city tours.**

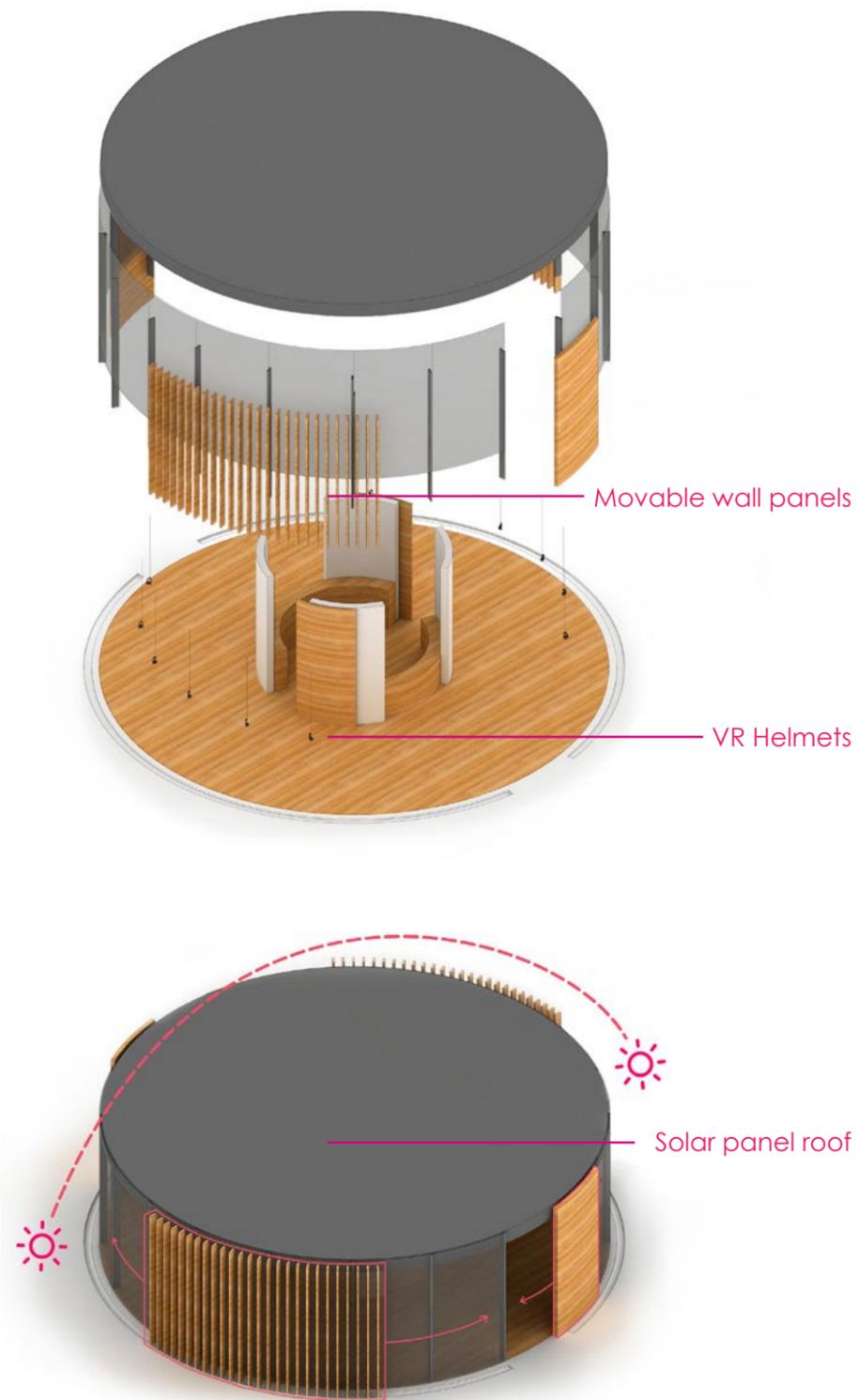
VR Pavilion

The pavilion can become a **platform for educational programs on the history of Bulgaria.** And the presentation may not be limited to the city centre, but allow users to travel throughW all the iconic locations of ancient Bulgaria and follow the history of the city's formation. From antiquity to the present and into the future.

In the middle of the pavilion, there is a reception where you can find out any necessary information, as well as buy souvenirs.

On the edge of the pavilion along with the glazing, **there will be VR helmets, which can be used by everyone.**

The pavilion is a minimalistic transparent cylinder with movable sun shades. Shields move around the pavilion depending on the direction of the sun and give shade inside. Solar panels are provided on the roof. **The accumulated energy from which can be used for the operation of the pavilion.**







Houses of Culture. Renovation

State competition

The houses of culture created in the Soviet Union were the main place of cultural and social interaction of citizens. Nowadays, the significance of the houses of culture is not significant. This project, within the framework of state competition, proposes the return of houses of culture to the life of a modern person.

Bright entrance lobbies and polishing of concrete interiors to the state of «terrazzo» are spectacular and inexpensive solutions to draw attention to outdated cultural centres. From the point of view of social study, in the section «cultural trail» which will lead the interested person to the nearest House of Culture in each city.

The competition task was proposed to demonstrate design solutions on the example of 3 cultural Houses near Moscow.

Team:
AI Architects

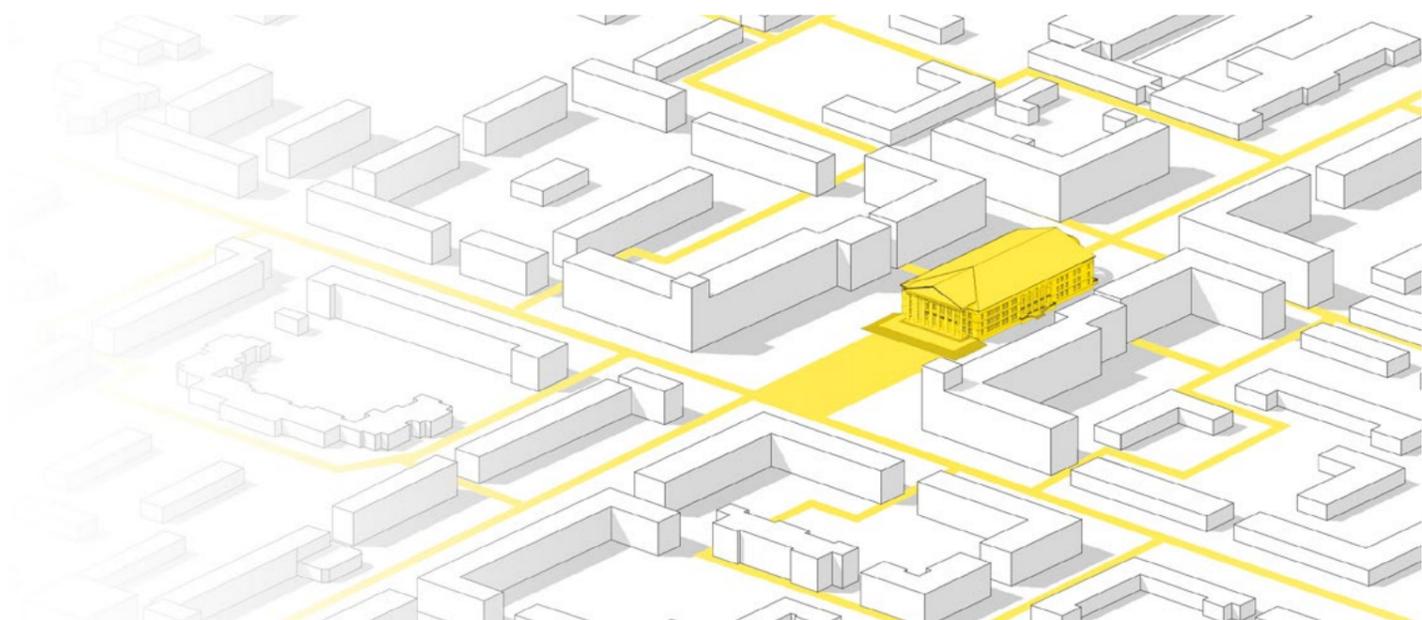
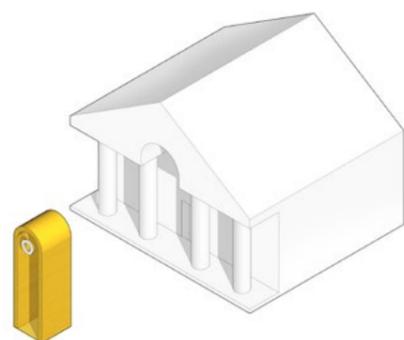
Role:
Architect

Location:
Moscow area, Russia

2019



Культурный центр



The main logo of the cultural centre. Simple, concise and recognizable form. «Kruzhok» is the colloquial name for creative workshops. «Circle of Interest» - a place where people gather, united by common activities and hobbies.

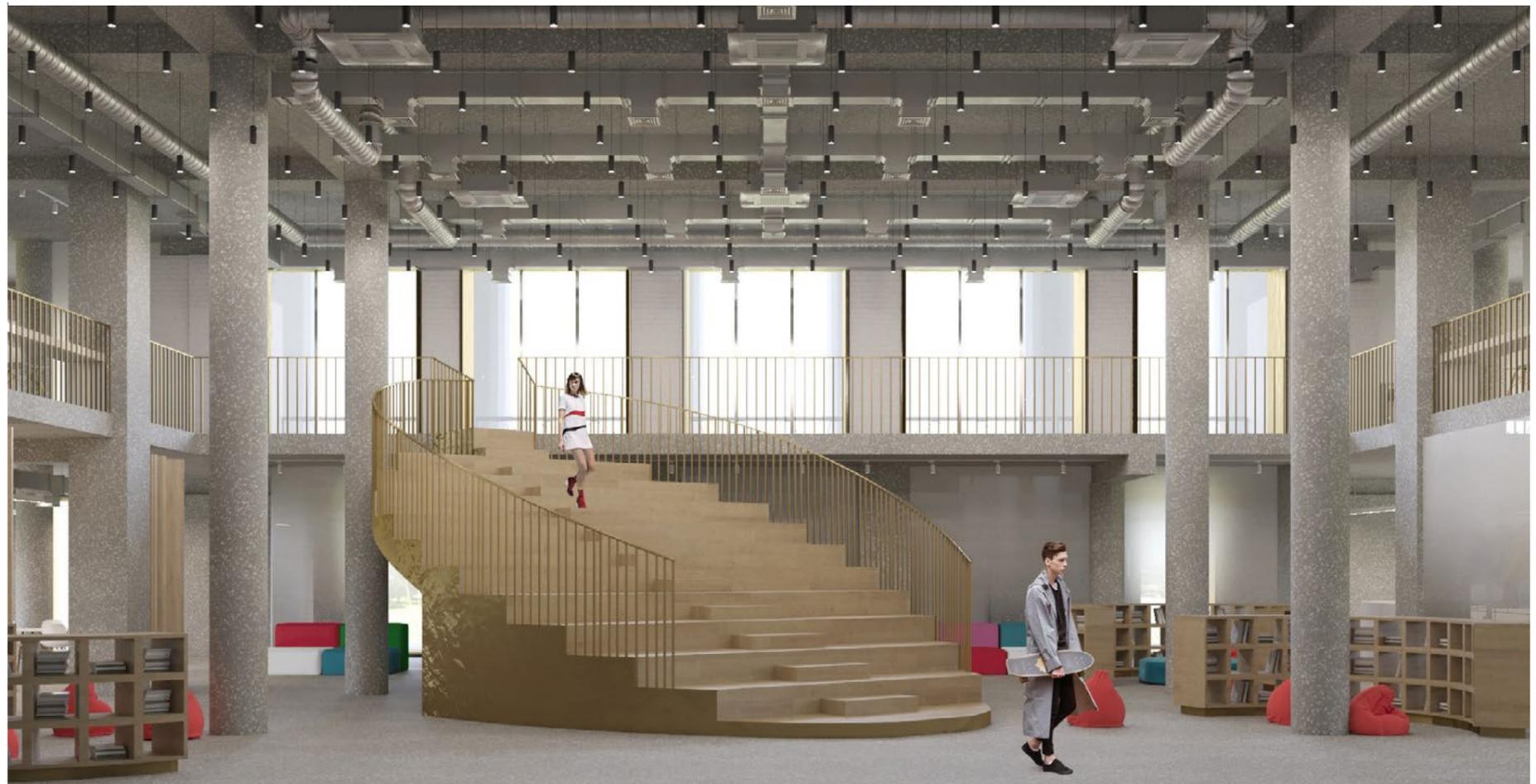
Creating a «dialogue» between houses of culture and the city with the help of the city tourist navigation system will enable them to be included in modern life, reveal them from an unexpected side and offer the townspeople a new form of communication.

The city portal is a bright dominant, which is designed to become a beacon inviting to visit the renovated houses of culture. The portal is faced with brass panels. The «Circle» logo is glued to the top of the portal.



The city portals

Typical interiors of houses of culture. Interior finishing materials are chosen to emphasize the existing structures and technologies of the era in which these buildings were created. New contrasting elements should bring additional features to the functionality of the building.





The Renovation

International competition

Design for the Renovation of the housing stock of Russia competition. At the Khoroshevo-Mnevniki experimental site as part of the work on the project, the I-Renovation consortium was created. In addition to architects, the consortium included specialists in sociology, transport infrastructure, economics, landscape and ecology.

Our project proposed the most careful approach to renovation, taking into account the habits and lifestyle of the residents of the renovated area. Minimum number of storeys, landscaped courtyards without cars, convenient infrastructure, primarily for pedestrians and users of non-mechanical transport.

In this project, we are actively using socio-cultural design. The main focus of thinking on the appearance of the buildings was the local inhabitants. We showed them our work at public hearings.

During the development of the project, I used virtual reality to explore the resulting neighbourhoods. This approach allows you to quickly select the most successful layout options for neighbourhoods. Walking walks across the territory allowed us to analyze our developments.

Team:

AI Architects, I-Renovation

Role:

Architect, Team leader

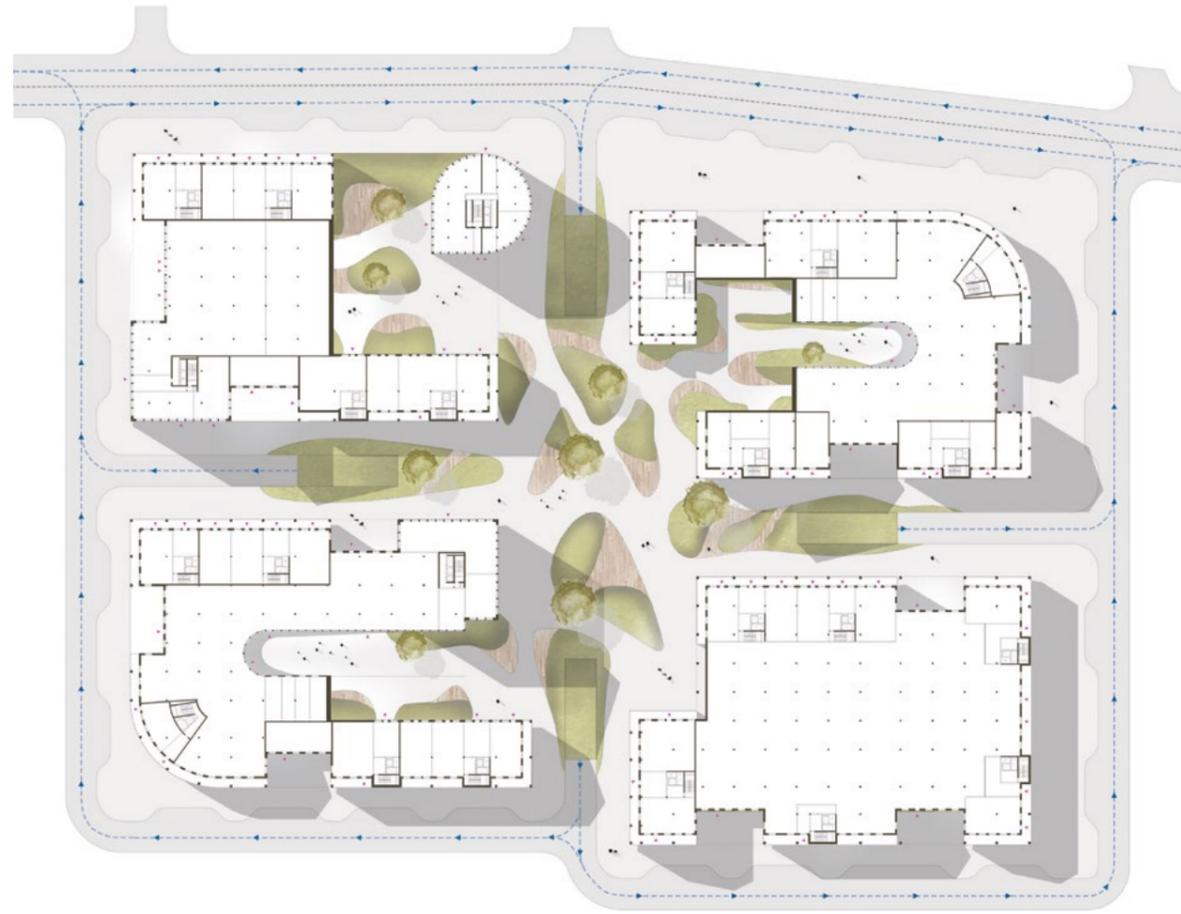
Location:

Moscow, Russia

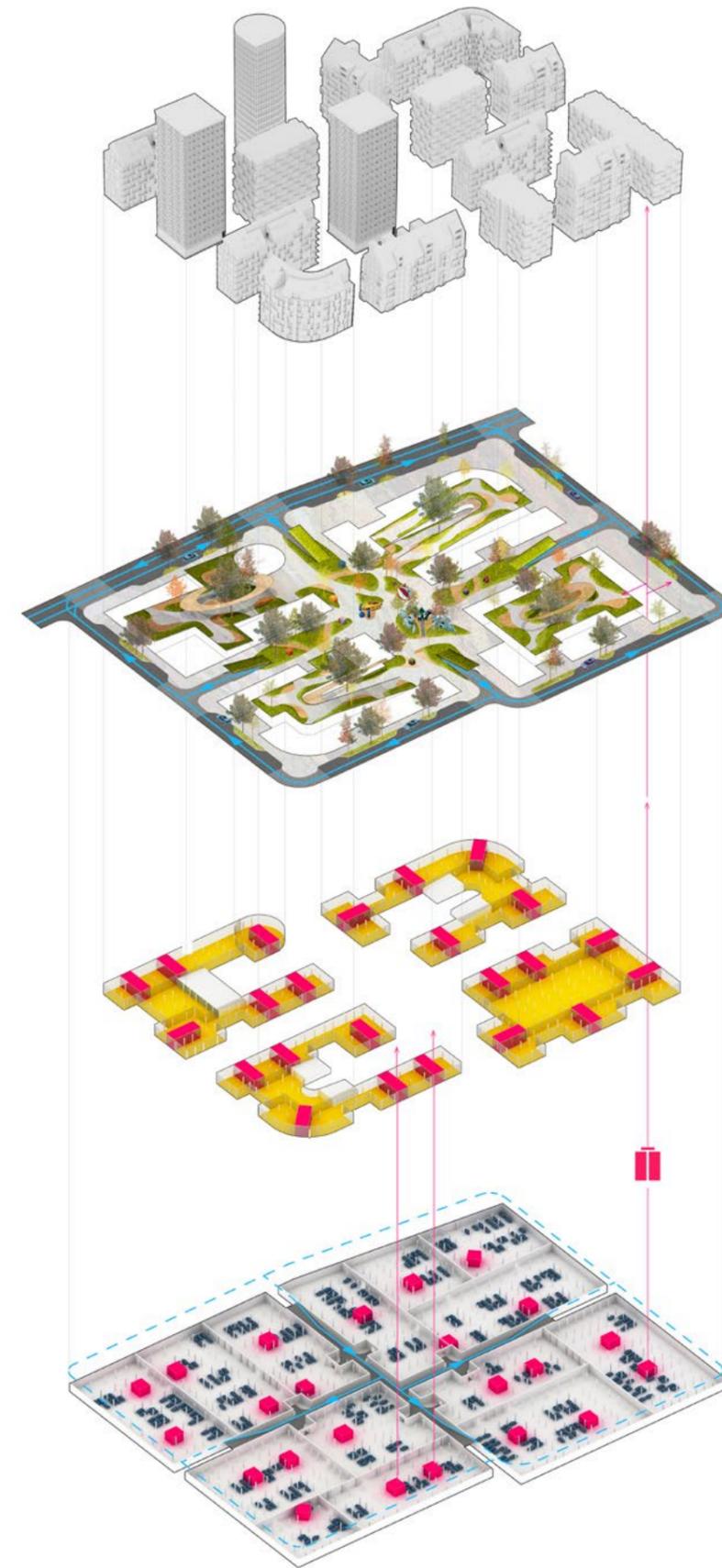
2019



Superblock



Plan



Living blocks

Ground level:
parking and lifts

Ground level inside:
public spaces and
lifts

Underground level:
parking and lifts

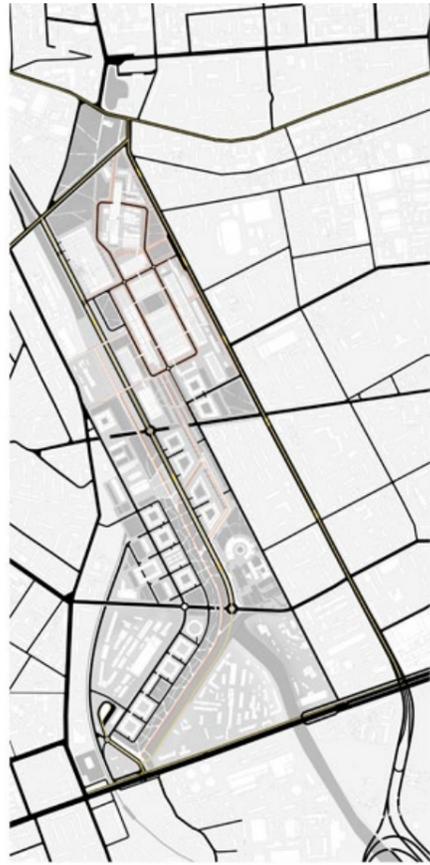


Section

Inner courtyard of the superblock. The yard is raised on a stylobate creating a safe space for the residents of the houses. Landscaping provides for the possibility of using for your own needs. Cars will never get into such a yard, and such yards are interconnected by bridges.



Proposal



Infrastructure



Green areas

Initial



Schools



Medicine



Infrastructure



Green areas



Markets



Metro



Sokolnaya gora

MArchI graduation design

Sokolnaya Gora is an uncomfortable, but very perspective area due to its developing transport infrastructure for residents of the capital.

Most of the territory under consideration is occupied by the Perovo-4 train yard, which breaks the connection between the Sokolinaya Gora and Lefortovo districts. These areas are connected only by two roads and one pedestrian bridge.

The approach is based on the maximum preservation of buildings and structures in the territories of existing factories and research institutes of Sokolinaya Gora. Manufacturing industries that pollute the environment must leave the capital. The remaining buildings are subject to reconstruction for places of employment that meet the needs of modern post-industrial society.

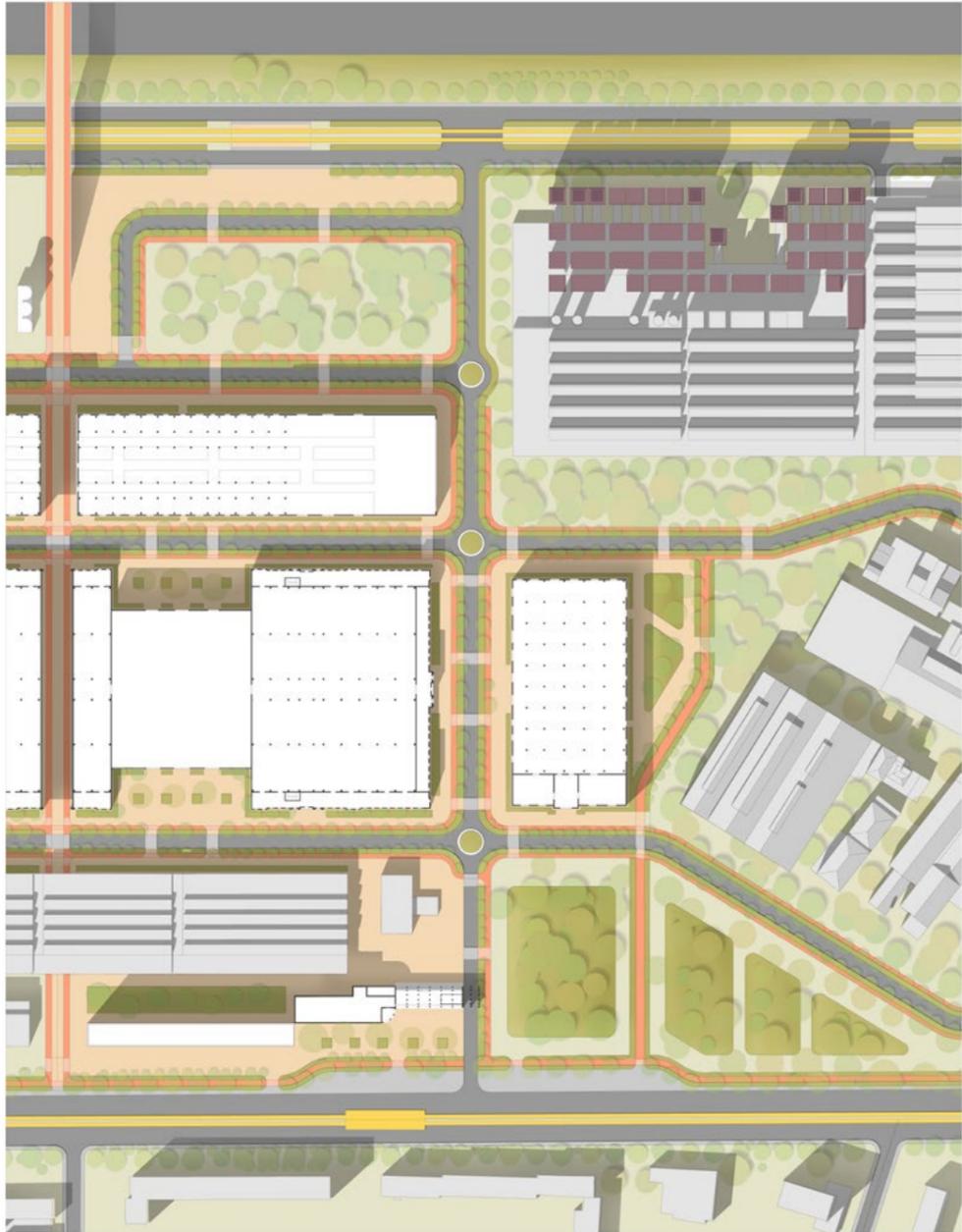
Above the train yard, place a green platform equipped with ramps for the comfortable and safe movement of people and cars. The platform is designed to provide communication both within the projected territory and for communication between the surrounding residential areas torn apart from each other.

The platform should accommodate modern scientific and technological innovation complexes, business hotels, residential areas, apartments, as well as public and administrative buildings.

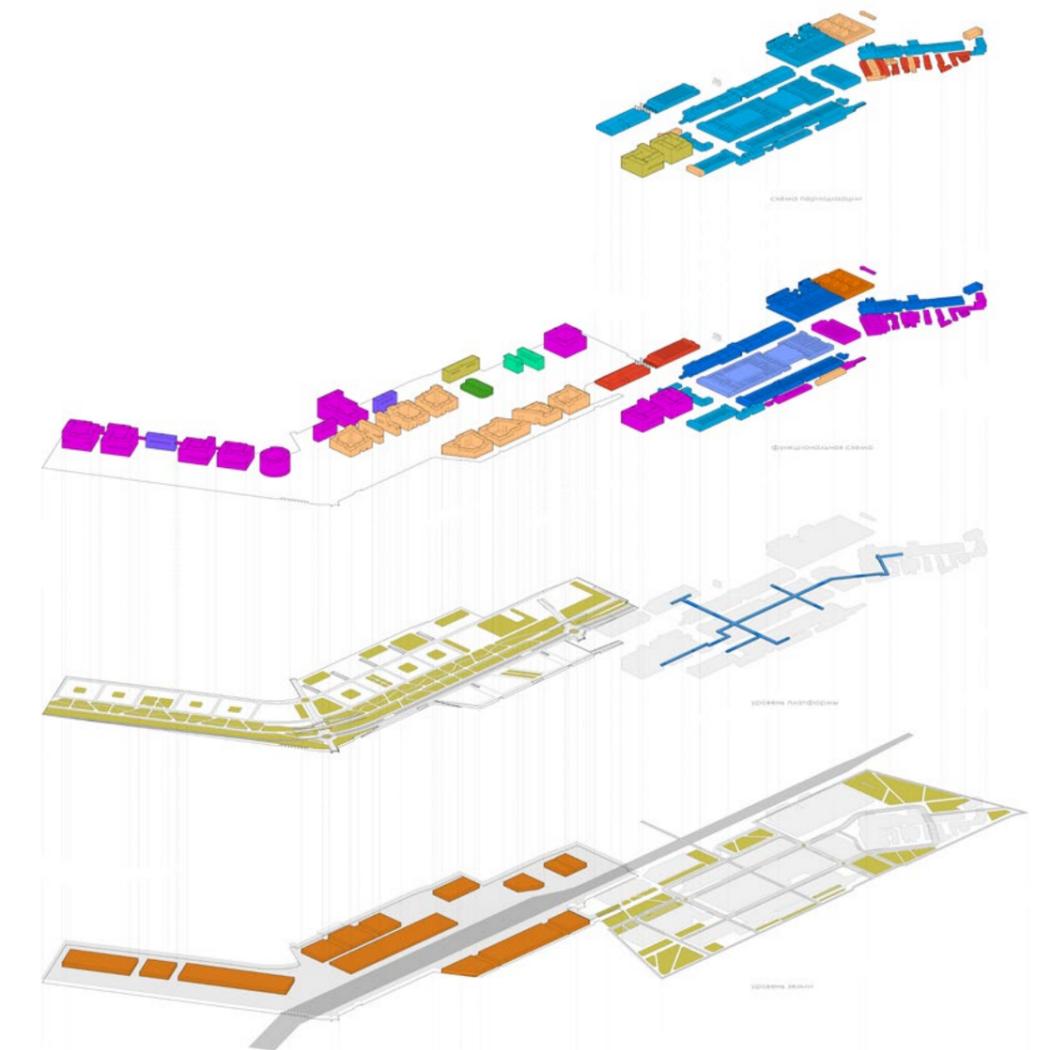
Location:
Moscow, Russia

2016





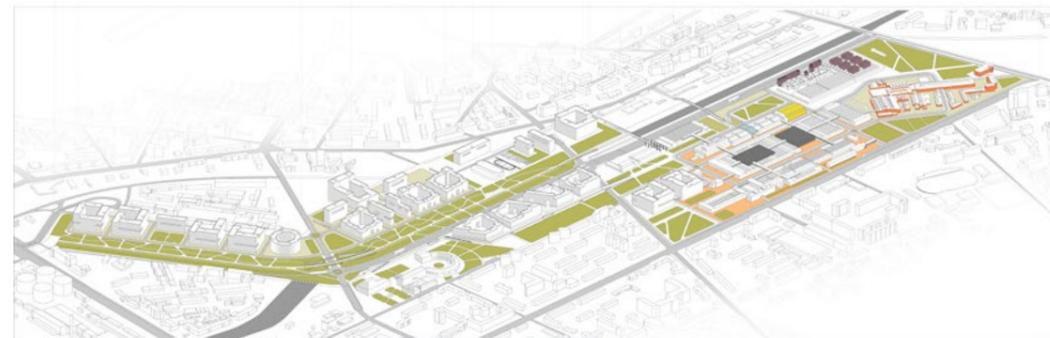
Plan fragment



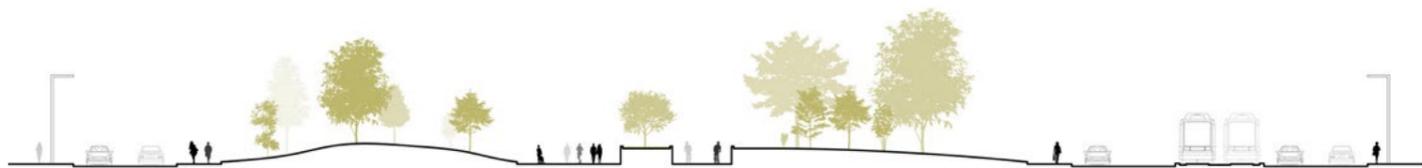
Third level:
residential and
public buildings

Second level:
connection platform

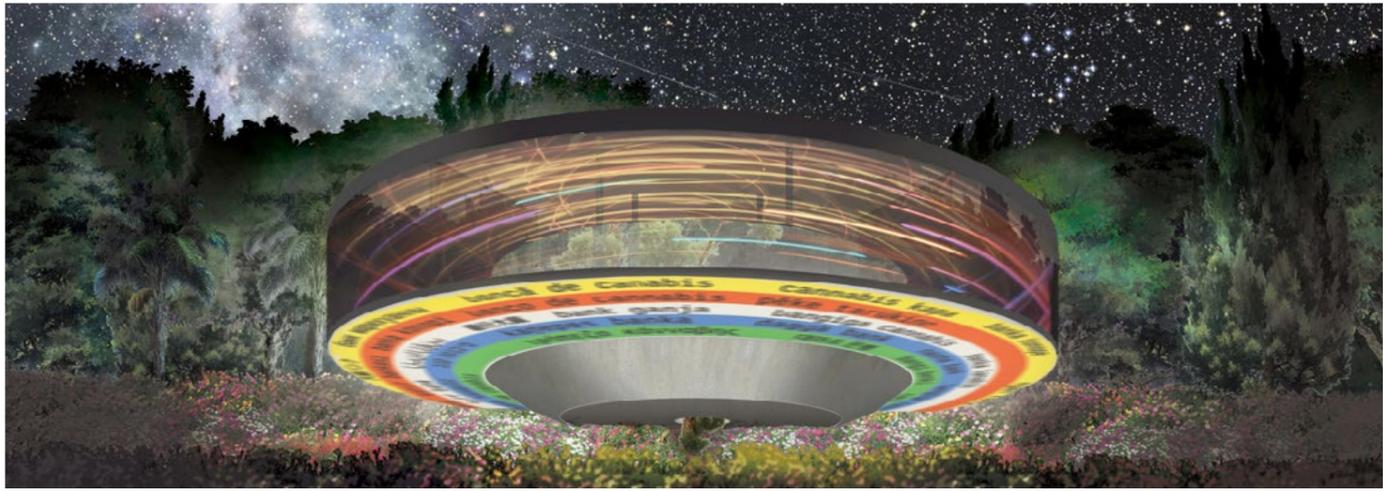
Ground level:
parking and
railways



All levels together



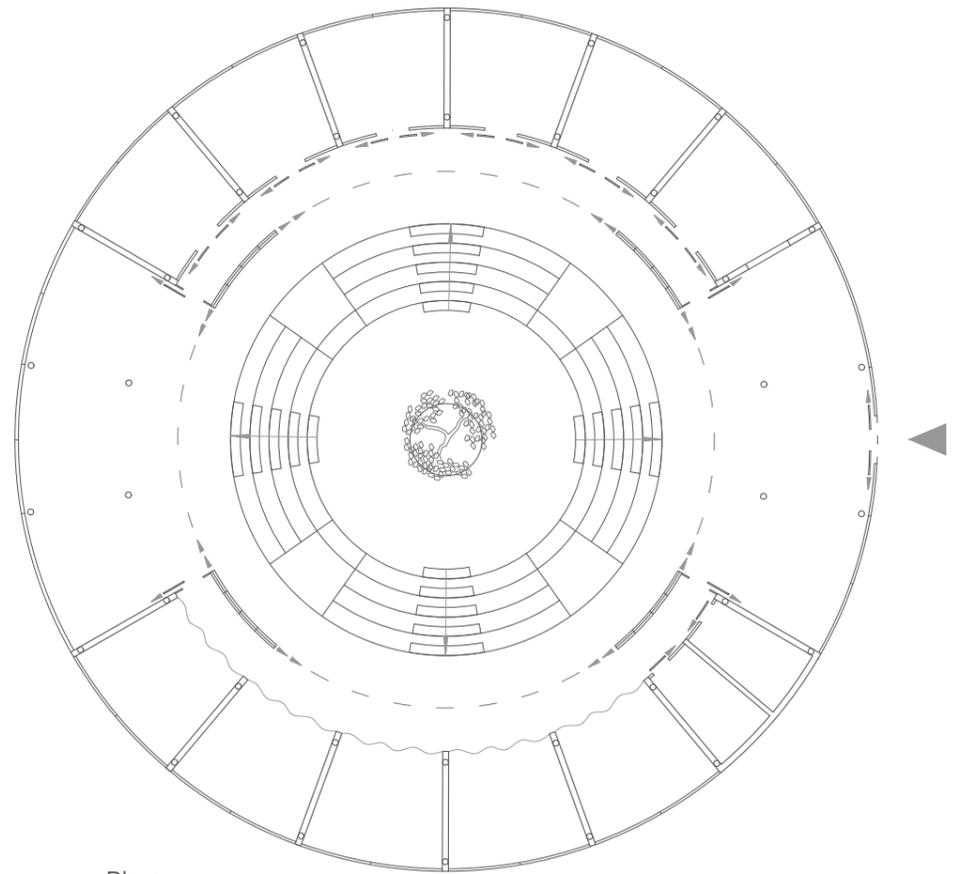
Section



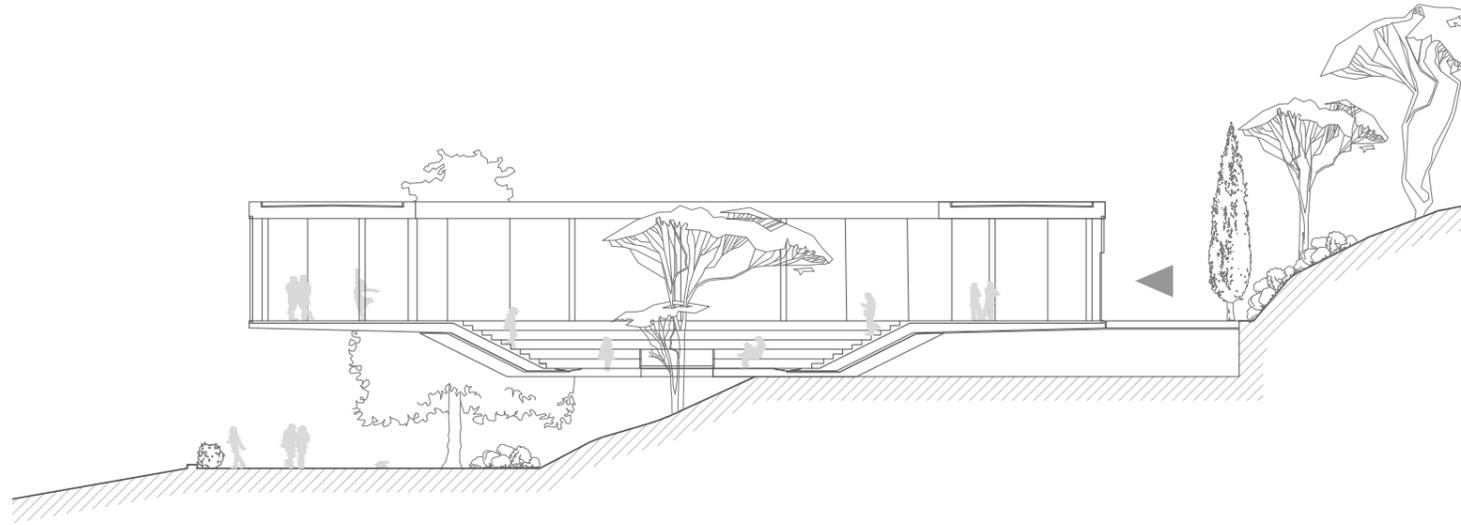
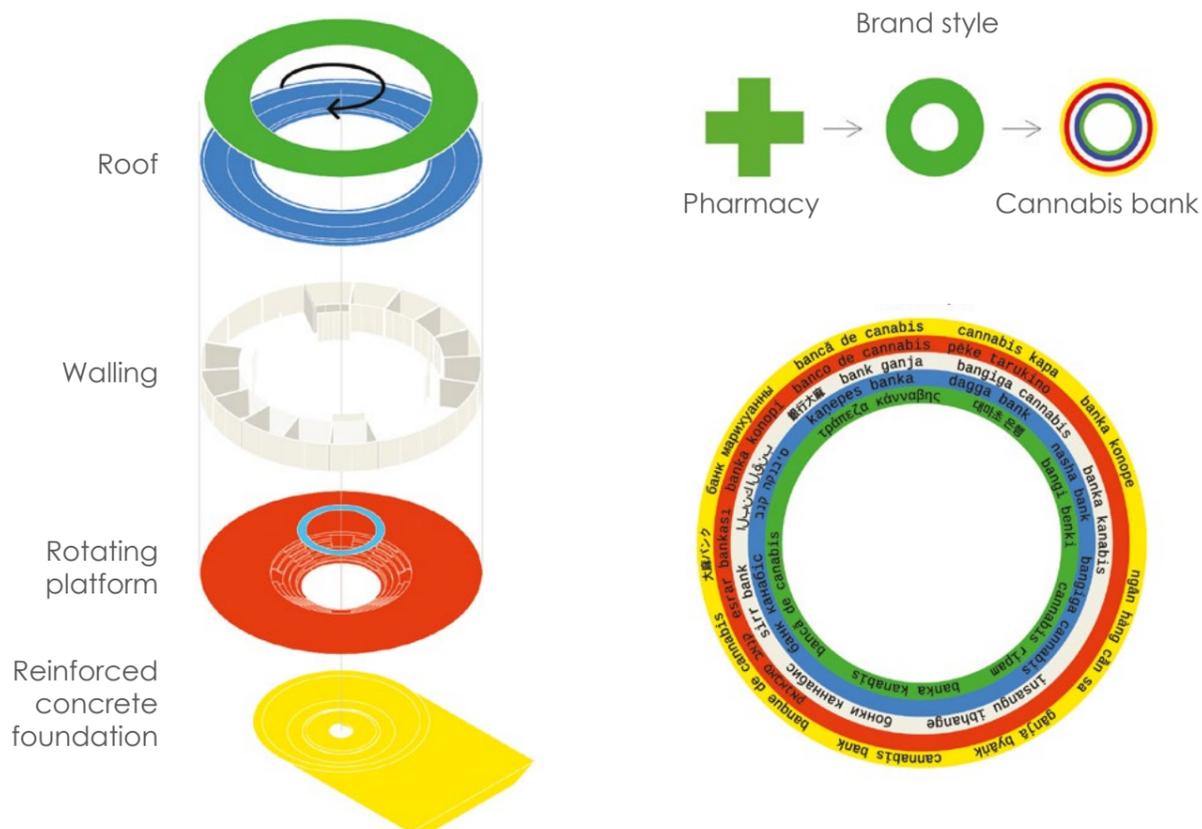
View from the sea



Interior



Plan



Side section

Unknown Porto

International competition

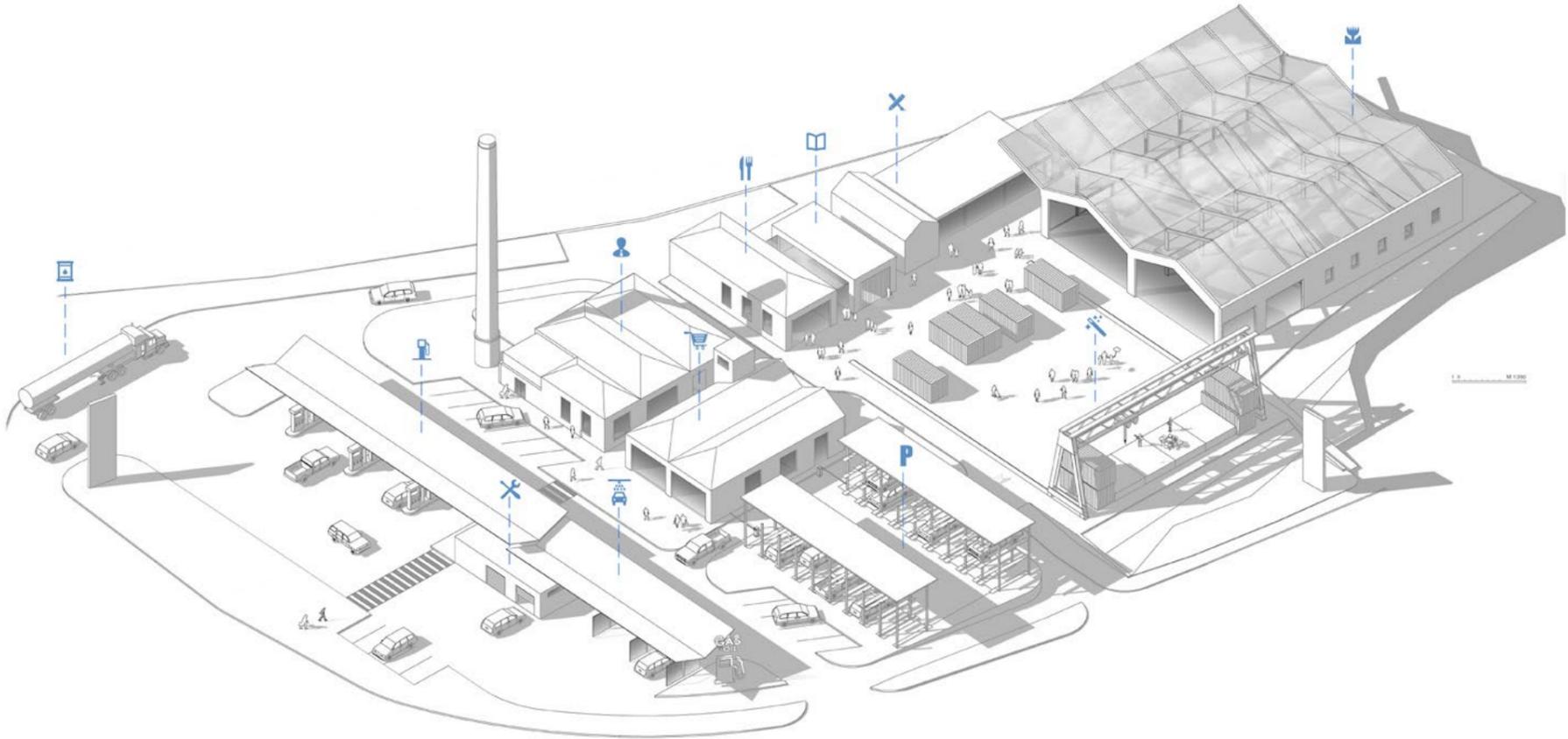
International Portuguese competition for the reconstruction of an abandoned factory in the city of Porto. According to the assignment, a gas station with public functions and a greenhouse should be located on the territory.

The ruins of the factory, according to the assignment, could be demolished, but this completely contradicts my approach to heritage. The project involves the reconstruction of the ruins and the construction of new compact pavilions, emphasizing the scale of development.

To maximize the preservation of free space, a modern automated system was chosen to replace the classic car parking. Thus, a third of the space was saved.

On the vacated space there is an open area along which a large port bridge moves along the rails. The function of the bridge is the movement of port containers and the compilation of various configurations from them.

Porto is a port city, it even comes from the name. The use of containers and a cargo crane is intended to emphasize the character of the city.



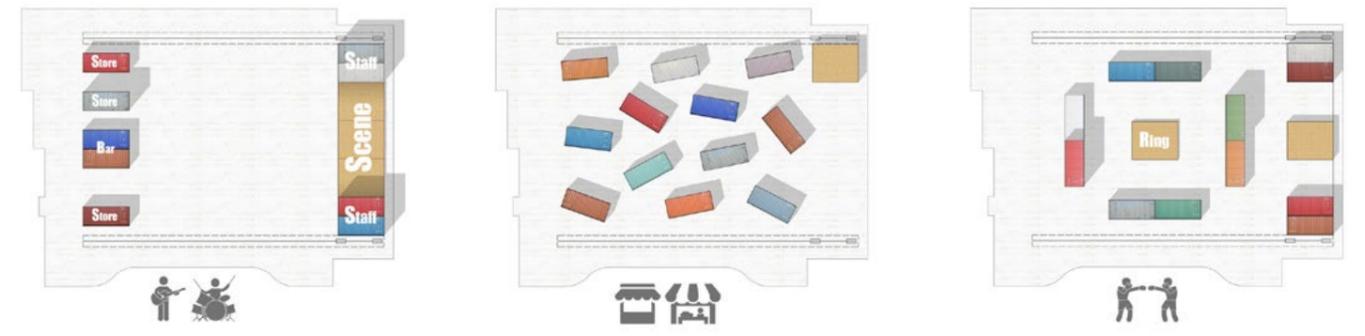
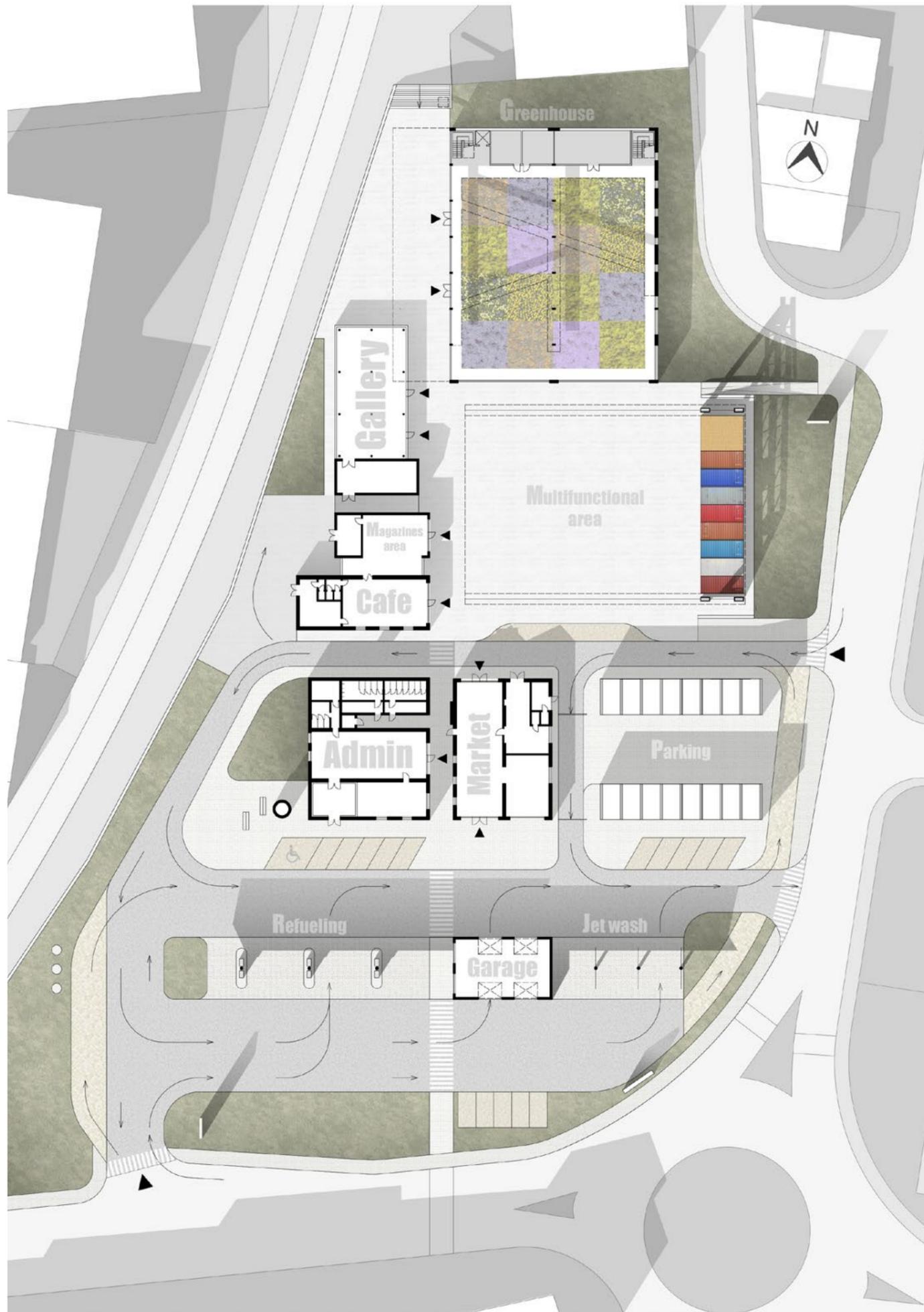
Team:
Depot

Role:
Architect, Team leader

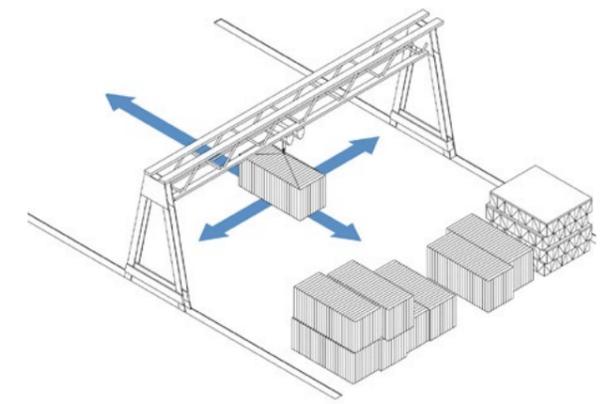
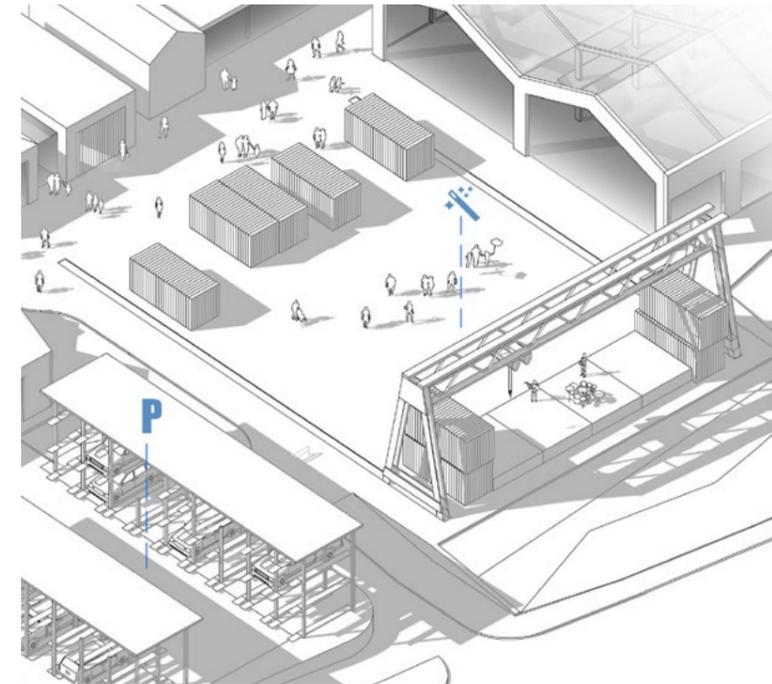
Location:
Porto, Portugal

2015





Options for using the square



Overhead crane operation scheme



Virtual reality

In architectural practice

With the development of new generation virtual helmets, I was greatly interested in their application in architectural practice.

Using modern game engines Unreal Engine and Unity, it became possible to fit inside your projects. Feel them on a realistic scale. And unlike built-in design programs, game engines provide much more possibilities and use cases.

This opportunity, in my opinion, should have a strong impact on architecture. A new look, a new depth of research and study of the projects being developed.

Another promising application is the presentation of projects to the customer. Customers often do not quite understand the real scale of the project. A virtual tour allows you to fully experience the architecture for yourself

With a presentation and a proposal to use VR and AR technologies in architectural practice, I read lectures at the Moscow Architectural Institute. In my lectures, I talked about which software is the most convenient to use. What difficulties you will have to face and how to solve them.

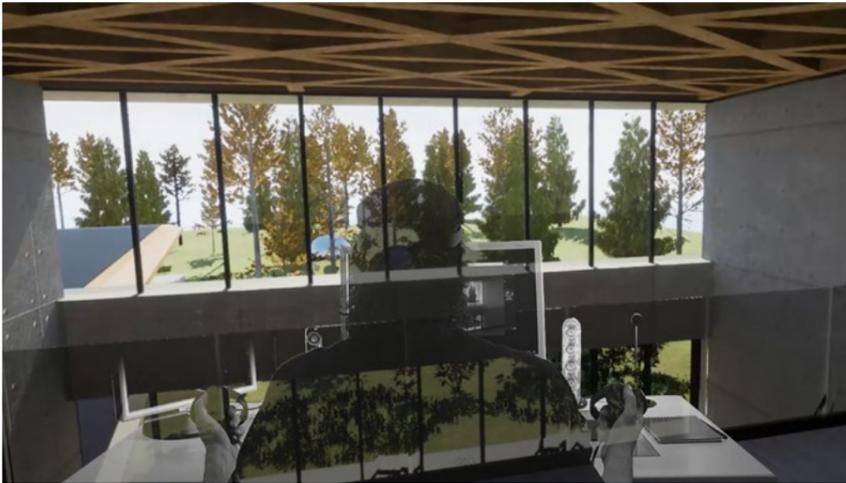


nuances that cannot be observed on your monitor, even less on a piece of paper.

Architecture of Future open call video fragment



Lecture at MArchI



Privat house visualization video fragment



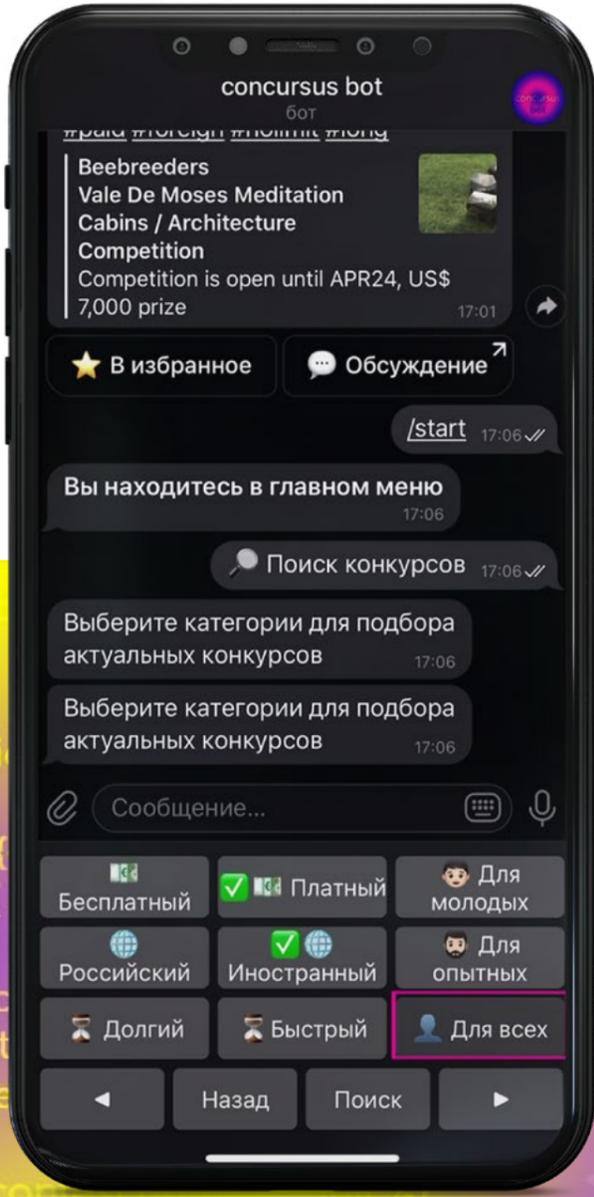
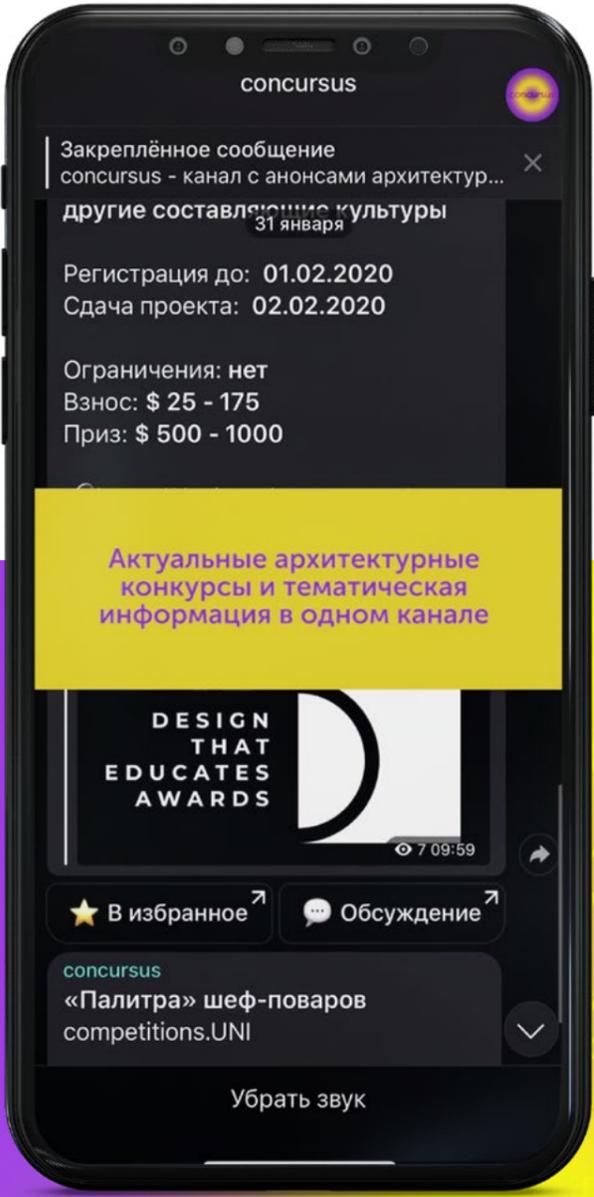
Concursus

Software for architectural networking

In 2020, as our familiar world had changed and the times of isolation had begun, I started the Concursus project. Concursus is a platform that offers automated search for competitions and like-minded people. The system consists of an information channel and a Telegram bot. This system has helped me create a community of like-minded people interested in improving the quality of the architectural environment both in Russia and abroad.

Concursus was made based on telegram. It consists of an information channel and bot. The bot was made on Python. He was made for searching competitions by tags chosen by the users. Also, you could subscribe to different types of competitions and the bot will send you all new competitions on the day they were announced. The bot was used parsing systems for analysing main websites for new competitions.

Within a month after the app had been launched, about 90 people managed to find a team to participate in international competitions. Concursus is currently on hiatus. I changed my focus once the isolation times had ended because the architectural project market soared. I decided to leave the developed Concursus system base for the future. I plan to expand the scope of algorithms and simplify the networking for other types of creative activities that need group effort.





2019 acril, canvas 70*50

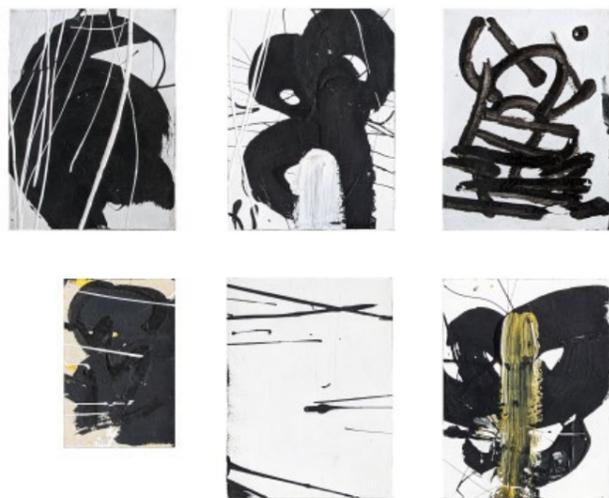
Paintings

Selected works of monochrome period

In my spare time from architecture, I devote myself to painting. Painting has a therapeutic effect on me. In painting, I see an opportunity to express that creative understatement that is impossible in a rational and rigorous architectural practice.

My paintings are about emotions and feelings. There is no place for specifics in them. Unconsciousness prevails over rationality. Each period of work is associated with some period of life and state of mind.





2019 acril, canvas 50*30



2019 acril, canvas 50*30



2021 acril, canvas 100*70



2021 acril, canvas 100*70

Arseniy Khechinashvili

Architectural portfolio

more on khech.com



*my vaccine QR,
just why not*