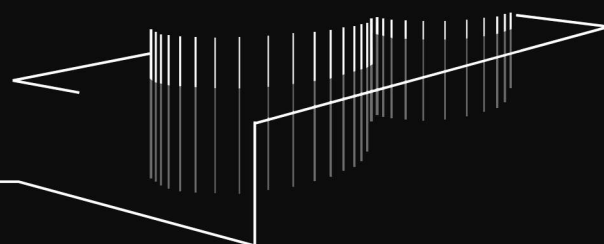


SCIENCE CENTER / HOLEŠOVICE

Diana Kovačević



## **MASTER THESIS PORTFOLIO**

SCIENCE CENTER / HOLEŠOVICE

Author: Diana Kovačević

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Faculty of Architecture, Czech Technical  
University

15128 Atelier Kordovský – Vrbata

2016-2017 / summer semester

## **ACKNOWLEDGMENT AND DEDICATION**

I would like to thank my supervisor Petr Kordovský for his guidance throughout the diploma project and many valuable and inspiring talks we had opportunity to have during my studies. I hope to have many more of them in the future.

I dedicate this thesis project to my parents who encouraged me in getting education abroad and have been the biggest support throughout my entire life.

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Czech Technical University in Prague, Faculty of Architecture

## 2/ASSIGNMENT of the diploma project

Mgr. program navazující

Name and Surname: Diana Kovačević

Date of birth: January 13, 1993

Academic Year / Semester: 2016-2017 / summer semester

Department Number/Name: 15128 Atelier Kordovský – Vrbata

Diploma Project Tutor: Ing. arch. Petr Kordovský

Diploma Project Theme: Science Center, Holešovice

### Assignment of the Diploma Project:

#### 1/Description of the project assignment and the expected solution objective

The aim of the project is to design a science center inspired by the industrial and aircraft history of the Holešovice quarter.

The combination of geographical isolation and industrial concentration gave Holešovice a unique character that survives even today. The industrial spirit is present nowadays as many buildings have been preserved and region has been regenerated with a change of functions from cultural, residential up to mixed use. Inspired by the examples of Techmania in Plzen and IQLANDIA in Liberec, the intention was to make a center with similar use, which does not exist in Prague.

Expectation of the proposed design of the Science Center is to enrich the new cultural heart of Prague-Holešovice, which is with good reasons called "little Berlin".

#### 2/ Description of the final result, outputs and elaboration scales

The design proposal shall describe:

1. how the space and functional requirements are met
2. how the building meets access, parking, security, life safety
3. illustrate how the functions of the building can be modified over time
4. the design proposal shall be described with graphic diagrams and design documents defining specific functions, technical systems, user experience and environmental impact.

#### 3/List of further agreed-upon parts of the project(model)

Graphical explanation of the concept

Site plan 1:2000

Floor plans of each floor 1:200

Minimum of three building sections and four building elevations 1:200

Minimum of three exterior and two interior, eye level visualization

Physical model of the entire building and immediate context 1:200


A4 portfolio of all work throughout the development of the proposal describing the process

Posters as required by the FA for exhibition

PowerPoint presentation of the proposal organized to explain the project rational and final proposal

Date and Signature of the Student: 

Date and Signature of the Diploma Project Tutor: 

Date and Signature of the Dean of FA CTU: 

## CZECH TECHNICAL UNIVERSITY IN PRAGUE

### FACULTY OF ARCHITECTURE

AUTHOR OF THE DIPLOMA WORK / DIPLOMA PROJECT: DIANA KOVAČEVIĆ

Academic Year 2016/2017, Spring Semester

TITLE OF THE DIPLOMA WORK / DIPLOMA PROJECT: SCIENCE CENTER

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Diploma Work /  
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Ing. arch. Petr Kordovský

Diploma Work /  
Diploma Project  
Opponent

Ing. arch. Jan Sabart

Key Words  
(Czech)

Průmysl, strojní technika a letadla, expozice, interakce, vzdělání, kultura

Annotation  
(Czech)

Vědecké centrum inspirované průmyslovou a leteckou historií v Holešovicích představuje místo pro interaktivní učení pro všechny věkové kategorie.

Umístěno blízko řeky Vltavy, vedle Pražské tržnice. Forma objektu vychází z genia loci. V dnešních dnech je zájem o zachování industriálních staveb a oblastí a změnu jejich funkcí. V této konkrétní oblasti byly založeny první letecké výroby, takže námětem pro vnitřní konstrukce byly samotné konstrukce letadel.

Skleněný box podél vnitřní konstrukce vytváří celou stavbu atraktivnější pro kolemjdoucí. Sklo kolem objektu navíc odráží okolní krajinu s řekou i okolní industriální stavby a zároveň je transparentní.

Annotation  
(English)

Science center inspired by the industrial and aircraft history of the Holešovice quarter is designed to represent a place for interactive study and lifelong learning for all generations.


Located near the river Vltava, next to Pražské tržnice, architecture of the object follows genious loci of the place. The industrial spirit is present nowadays as many buildings have been preserved and region has been regenerated with a change of functions. Furthermore, as the first aircraft manufactures were found in this region, the motive of inner structure of airplanes was interpolated on the facades and airplanes are enriching the interior.

The concept of the glass box was introduced with attention to make the inner structure of the center more visible and attractive to the passengers. Except transparency, reflection of the river and surrounding nature as well as the industrial buildings, were the reasons for bringing on this glass envelope around the object.

#### The Author's Declaration

I declare that I have elaborated the submitted diploma work / diploma project independently and that I have stated all the used information sources in coherence with the "Methodological Instruction for Ethical Preparation of University Final Works".

(The complete text of the methodological instruction is available for download on <http://www.fa.cvut.cz/En>)

In Prague on ..........Signature of the Diploma Project Author  
This document is an essential and obligatory part of the diploma project / portfolio / CD.

## **Abstract**

Each landscape, city or building has its own spirit, its own Genius Loci. Spirit of place refers to the unique and distinctive aspects of a place; often those celebrated by artists and writers, but also those described in folk tales, festivals and celebrations. It is therefore as much in the invisible weave of culture as it is the tangible physical aspects of a place or its interpersonal aspects.

This master thesis suggests the intention to follow this gestalt theory. Architecture means to visualize the genius loci, and the task of the architect is to create meaningful places. Our obligation is to explore the character of the surrounding and its linkage to the buildings which we are creating.

## **Ambitions**

A place of inquiry and discovery, experimentation and exploration, a place that has taken the world of tomorrow as its stage- represents designed Science Center in Holešovice.

The urban concept is based on the principle of dialogue between architecture and environment with due consideration to important factors, such as preserving the view across the River Vltava and protecting the surrounding historical buildings in order to create an attractive ambience. Reflection of the river and surrounding nature as well as the industrial buildings, were the reasons for bringing on this glass envelope around the object which will in the same time provide transparency of the inner structure of the object.

The architecture of the object follows genius loci of the place- the industrial spirit which is present as many buildings have been preserved and region has been regenerated with a change of functions from cultural, residential up to mixed use. Furthermore, as the first aircraft manufactures were found in this region, the motive of inner structure of airplanes was interpolated on the facades and airplanes in the interior are inviting passangers to visit center.

Science center is designed to represent a place for interactive study and lifelong learning for all generations. Visitors can encounter the ground floor on their own as i its planned to be a free place for non permanent exhibitions. If interested into more exploration, they can seek guidance from the experts to guide them throughout the exhibits or enjoy performances in the multifunctional auditorium.

## Holešovice – the New Cultural Heart of the City

Holešovice is a district with an intriguingly mix of old Prague tenements, factories and bold new-build projects. It is also morphing into a vibrant new quarter. It is easy to find on the map- it occupies the stubby peninsula formed by the expansive meander of the Vltava in the north of Prague. The neighborhood starts immediately east of the Letná district and follows the curve of the river Vltava as far as the Exhibition Grounds (Výstaviště). The western boundary roughly follows the Dukelských hrdinů thoroughfare.

This region experienced the dramatic change from pastoral peace to powerhouse. Today, it's a dense, built-up neighborhood, but for centuries it was an area of fields and meadows. Rapid change in the second half of the 19th century through industrialization transformed it into one of the most important industrial quarters of Prague, which officially swallowed the district in 1884. The combination of geographical isolation and industrial concentration gave Holešovice a unique character that survives even today. Relatively little changed in the neighborhood in the first half of the 20th century and the communist years preserved Holešovice through passive neglect, although construction of the northern section of the Magistrála highway had a considerable impact in the 1980s. The traffic may have been eased, but it made Holešovice noisier and dirtier.

Further and more profound changes swept through the neighborhood in the last two decades, as the role of Holešovice has been transformed. As part of a regeneration strategy and to ease pressure on the city center, urban planners chose a number of inner neighborhood districts for redevelopment, including Holešovice. Companies have been encouraged to locate there, and a cluster of new multi-store landmarks such as the Light House office block have been built, dramatically changing the city skyline. Over the last few years, the harbor has been redeveloped as a prestigious residential waterfront project, and the new apartments contrast strikingly with the austere and brilliant monochrome photographs of the harbor taken by Jan Reich.

But, let's start with a short historical journey to understand the region closer!



## FROM AN AREA OF MEADOWS TO INDUSTRIALIZED NEIGHBORHOOD

In Czech, the name "Holešovice" suggests a barren, poor area. This is what the Holešovice meander by the Vltava River looked like until the 1st half of the 19th century. There were two predominantly fishermen's villages: Bubny on the south by the strategic ford across the Vltava (the first verifiable mention dates from 1105) and Holešovice on the north (recorded in 1228).

Bubny was formerly a royal manor built by King John the Blind. The future prominent owners of the village were Albrecht of Waldstein who bought the village in 1623 and Maximilian Valentin of Martinice who revived the village after the Thirty Years' War. He rebuilt the local brewery and a Baroque summer palace – a grotto in the adjacent garden.

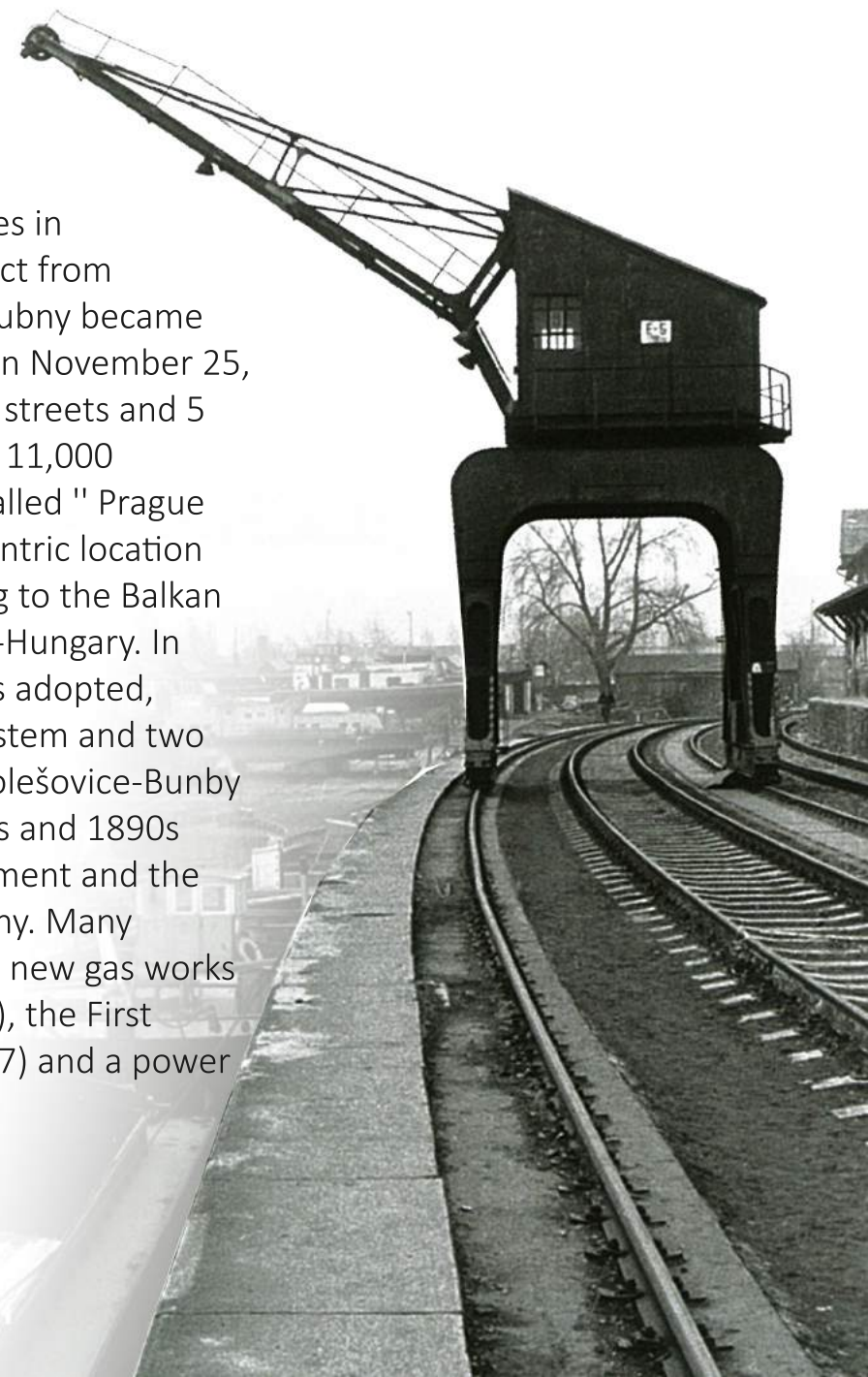
The village of Holešovice north of the meander contained many homesteads along the route parallel to the Vltava. Holešovice Island on the north was also part of Holešovice. In the 16th century, Holešovičky or the Little Holešovice area was joined to the Liben domain. The pastures and fields between Holešovice and Bubny were intersected by several routes, including the foundations of the current streets called Dukelných hrdinů and Bubenská. A road flanked with alleys led to Bubny from the west, across Letná. Today, it is Milady Horákové Street.

The strategic area of Letná has always attracted enemies, therefore, a better fortification and a firing range were established. There was also a firing range in the eastern part of the Holešovice meander. The two villages remained rural, until the mid-19th century. In the 1837, there were 96 houses and 830 inhabitants in Holešovice, and 36 houses and 291 inhabitants in Bubny.



The establishment of the Dormitzer Textile Factory in 1823 near the Vltava to the west of Holešovice was the first indication of the new industrial era. After 1846, a monumental viaduct of the Prague-Dresden Railway traversed the area of Bubny and Holešovice, but trains did not stop there right away. In 1850, the two villages were joined in one cadastre called Holešovice-Bubny. The opening of the Emperor Franz Joseph I chain bridge at the bottom of Letná Hill in 1868 was crucial for the development of Holešovice-Bubny as well as the Bušehrad Railway track which crossed Stromovka Park and connected with the existing railway to Dresden in the same year. Another significant development was the construction of a large freight station between 1869 and 1873. The fundamental conditions for the development of industry were met: the transport service (enabling the transport of coal), proximity of water supply and vacant building areas.

In 1882, there were 32 factories in Holešovice-Bubny. Based on the act from November 18, 1884 Holešovice-Bubny became part of Prague as its 7th quarter on November 25, 1884. At that time, there were 23 streets and 5 roads, 461 houses and more than 11,000 residents. The new quarter was called "Prague Bosnia" in jest because of its eccentric location and its "wild" conditions, referring to the Balkan area recently occupied by Austria-Hungary. In 1884, a definitive master plan was adopted, setting up a right-angled street system and two squares. In 1888, the streets in Holešovice-Bubny received official names. The 1880s and 1890s began massive industrial development and the modernisation of Holešovice-Bubny. Many important enterprises emerged: a new gas works (1888), the slaughterhouse (1895), the First Burghers' Brewery of Prague (1897) and a power station (1900).

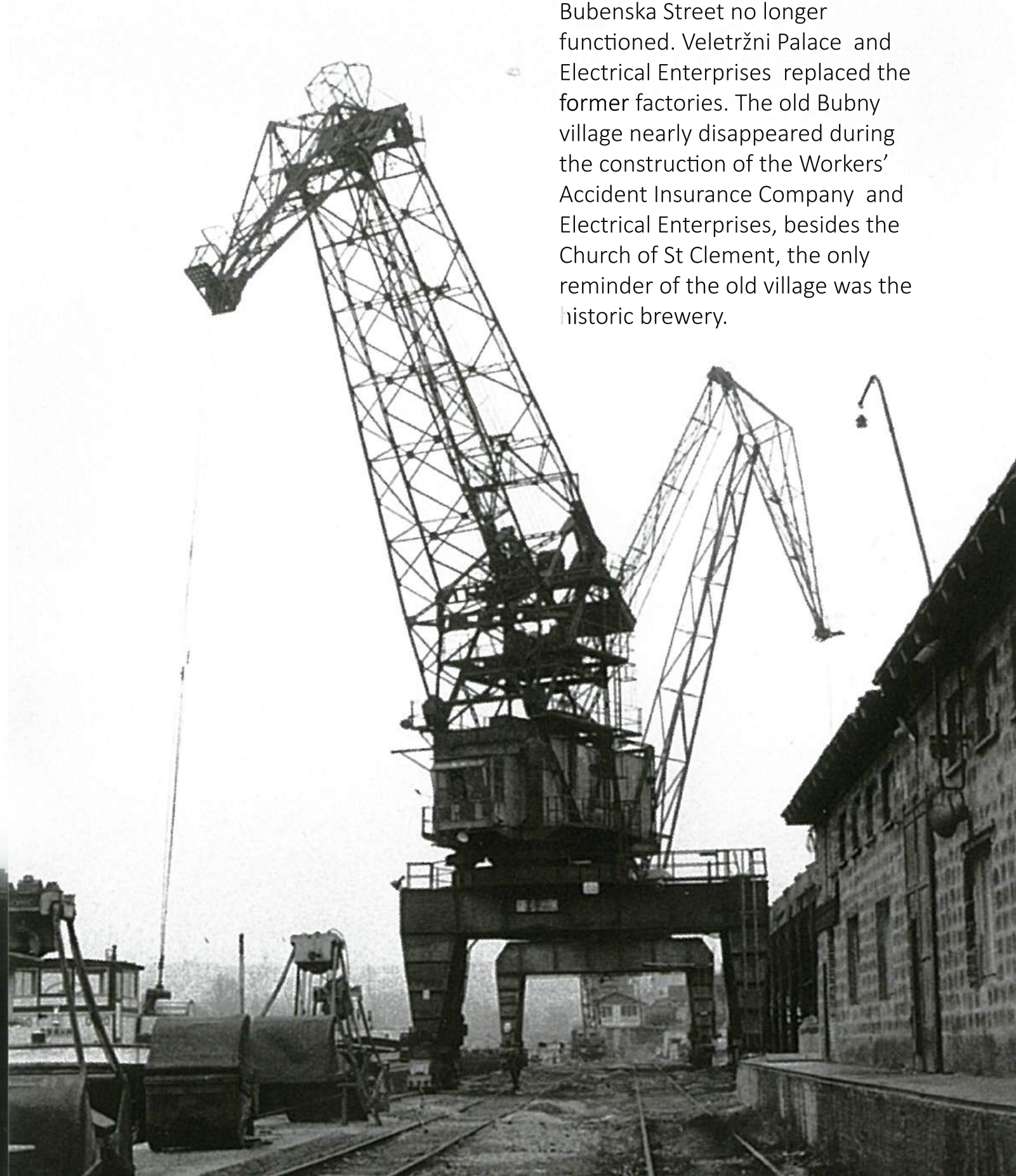




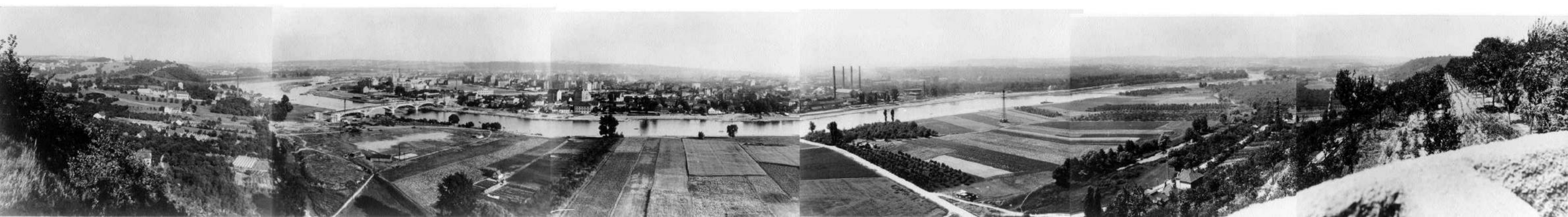
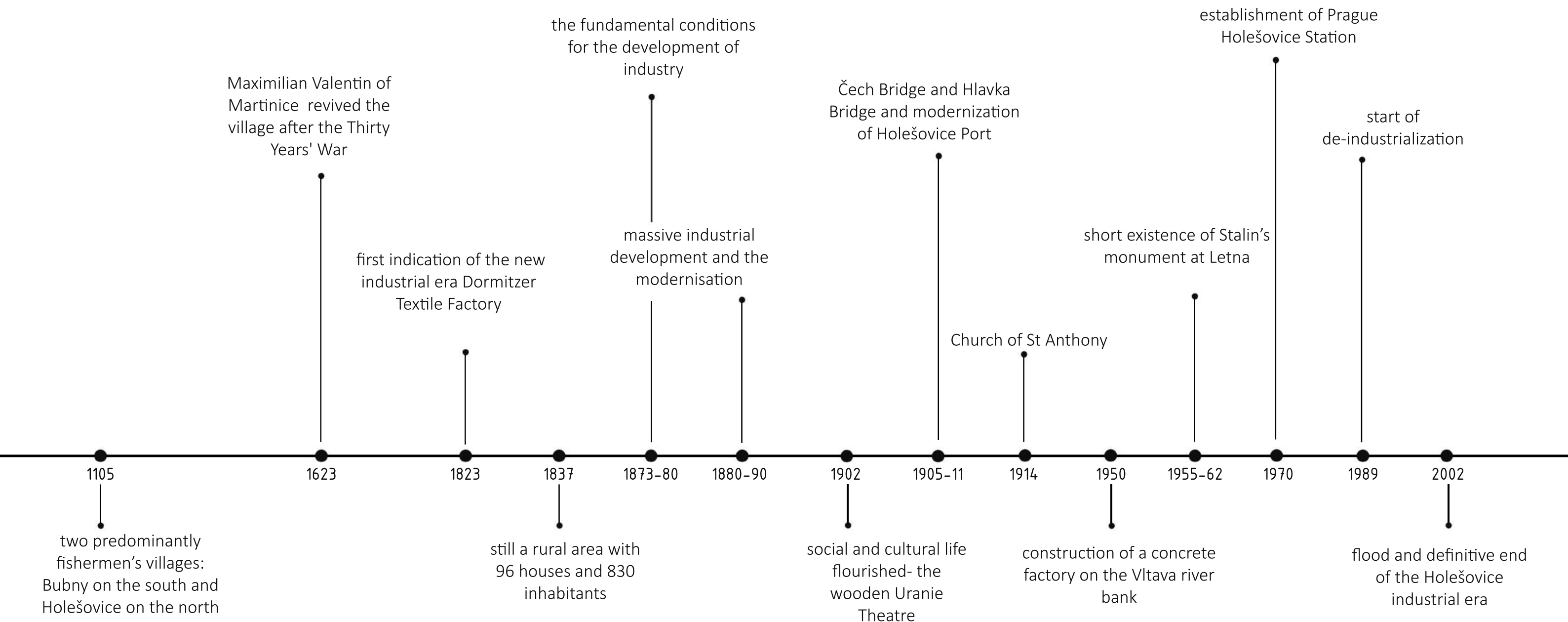
In 1895, a modern sewerage system was completed and in 1900 the public spa was built. The transport also improved: in 1894 the port opened and in 1896, the road below Letná was completed and connected the quarter with the Lesser Town. The horse-drawn tram, which from 1884 led to Holešovice –Bubny, was electrified in 1898. The establishment of Vystaviště in the Kralovská obora in 1891 had enormous importance for the future of the quarter. Social and cultural life flourished. In the 1880s, many societies emerged in Holešovice and in the beginning of 1902 there was a permanent theatre- the wooden Uranie Theatre which moved from the Vystaviště.

The quarter modernisation continued in the early 20th century. The construction of the Embankment of Captain Jaroš and Bubny Embankment began in 1906. New bridges, Čech Bridge (1905-13) and Hlavka Bridge (1908-11) connected Holešovice –Bubny with inner Prague, the surroundings of Štvanice Island were regulated, and locks (1908-13) and the power station (1912-14) were built. The modernization of Holešovice Port (1906-10) enabled Prague to connect with the world. At the same time, schools, the Sokol Gym (1905-06) and other facilities were built. Sports club settled at Letná where Sokol Gymnastic Festivals took place on a regular basis. In 1914, the impressive Church of St Anthony was erected in Holešovice –Bubny. At the beginning of the First World War, the number of houses increased to 1,046 and there were nearly 44,000 residents.

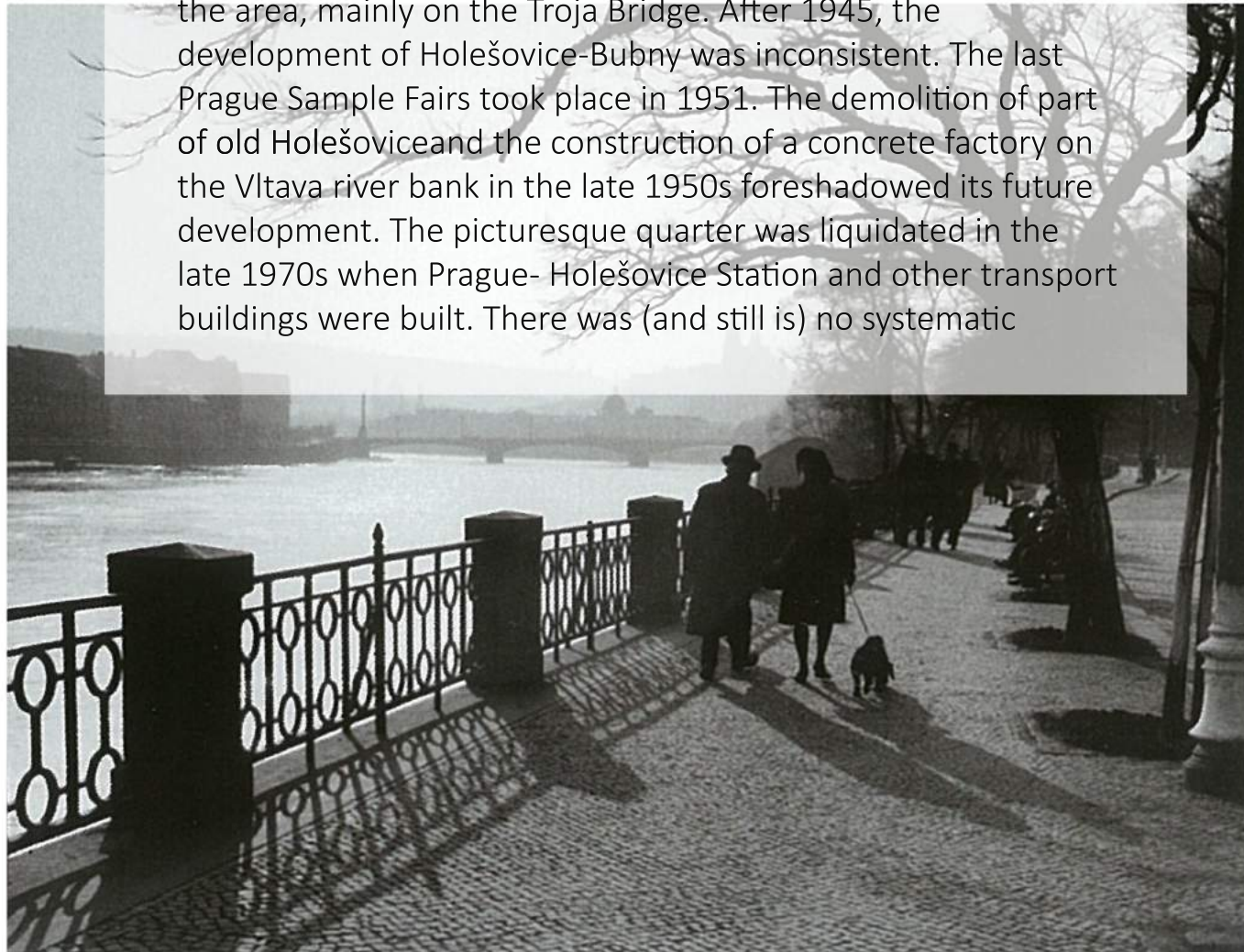
The twenty years of the First Czechoslovak Republic between the two world wars was another happy period in the area. The transfer of the Vltava riverbank which required the construction of two new bridges – Libeň and Troja, was the greatest change of 1923-28 because the unregulated flooding area of Maniny ended.



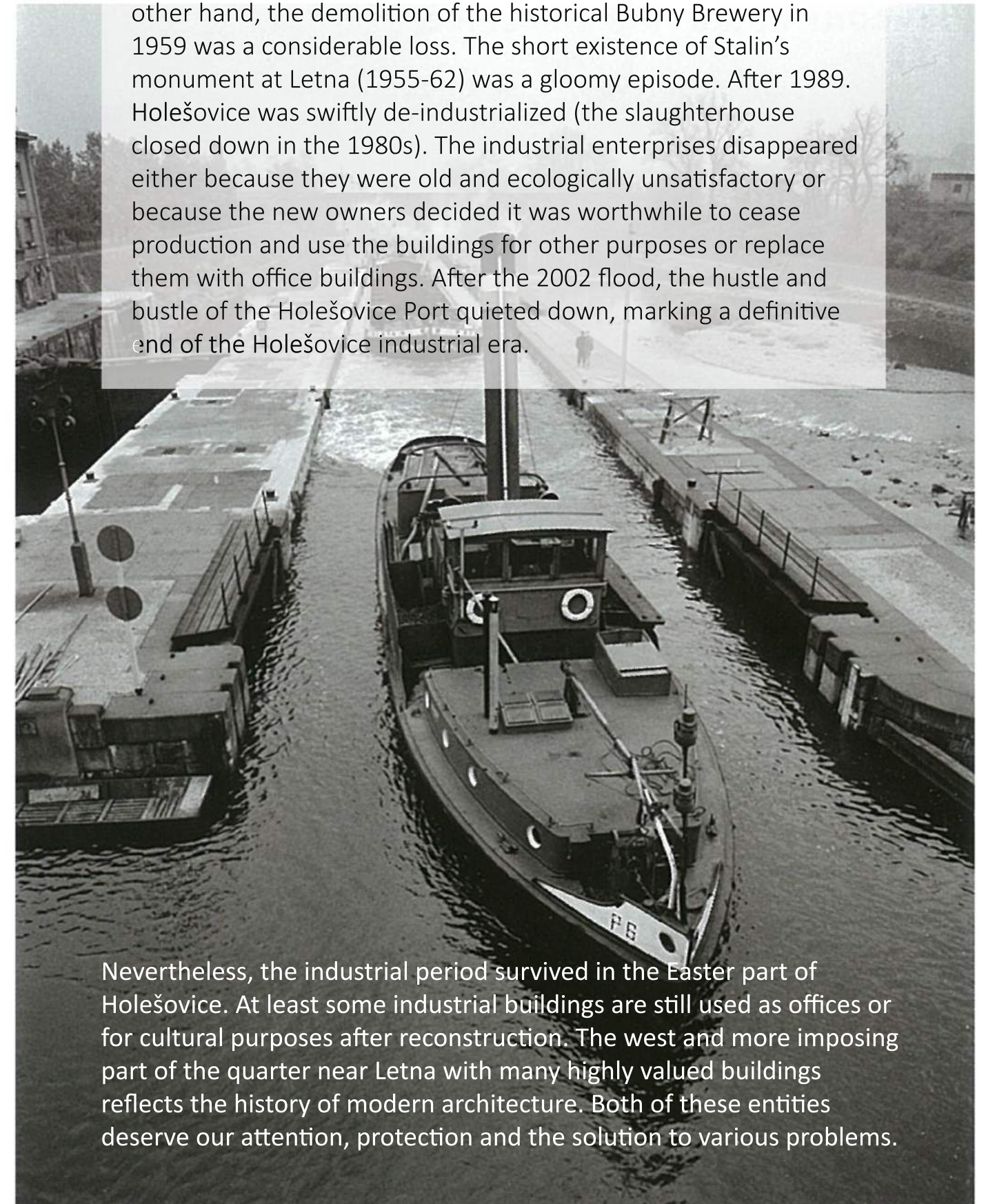
The last vacant plots in the Holešovice meander were developed and 19th century industrial enterprises to the west of Bubenská Street no longer functioned. Veletržní Palace and Electrical Enterprises replaced the former factories. The old Bubny village nearly disappeared during the construction of the Workers' Accident Insurance Company and Electrical Enterprises, besides the Church of St Clement, the only reminder of the old village was the historic brewery.



Tenement houses emerged on the site of the other industrial enterprises at Letna. The most precious functionalist buildings from the 1930s survived on Milady Horakove Street. Beginning in 1920, the Prague Sample Fairs livened up Vystavište (Exhibition Grounds) and the entire quarter twice a year. Moreover, tens of other exhibitions attracting hundreds of thousands of visitors took place at the Exhibition Grounds, Industrial Palace and the adjacent New Exhibition Grounds. The importance of Holešovice Port grew, especially the trade with Hamburg. Letna pulsed with sports life and an ice arena was built on Štvanice Island (1931). The area of old Holešovice remained isolated from the modern world, preserving a provincial and almost village character. The Second World War disrupted the harmony where Czechs, Germans and Jews lived together in peace and cooperation. Over time, the Jewish inhabitants were transported to extermination camps from the Bubny Station and in 1945, local Germans had to leave. During the Prague Uprising, there were severe flight with the Nazis in the area, mainly on the Troja Bridge. After 1945, the development of Holešovice-Bubny was inconsistent. The last Prague Sample Fairs took place in 1951. The demolition of part of old Holešovice and the construction of a concrete factory on the Vltava river bank in the late 1950s foreshadowed its future development. The picturesque quarter was liquidated in the late 1970s when Prague- Holešovice Station and other transport buildings were built. There was (and still is) no systematic



Despite this fact, some positive developments took place in Holešovice-Bubny in the 1950s and 1960s. For instance, the Brussels Pavilion at the Exhibition Grounds, Expo 58 Restaurant at Letna and interesting tenement houses on Orten Square. On the other hand, the demolition of the historical Bubny Brewery in 1959 was a considerable loss. The short existence of Stalin's monument at Letna (1955-62) was a gloomy episode. After 1989, Holešovice was swiftly de-industrialized (the slaughterhouse closed down in the 1980s). The industrial enterprises disappeared either because they were old and ecologically unsatisfactory or because the new owners decided it was worthwhile to cease production and use the buildings for other purposes or replace them with office buildings. After the 2002 flood, the hustle and bustle of the Holešovice Port quieted down, marking a definitive end of the Holešovice industrial era.

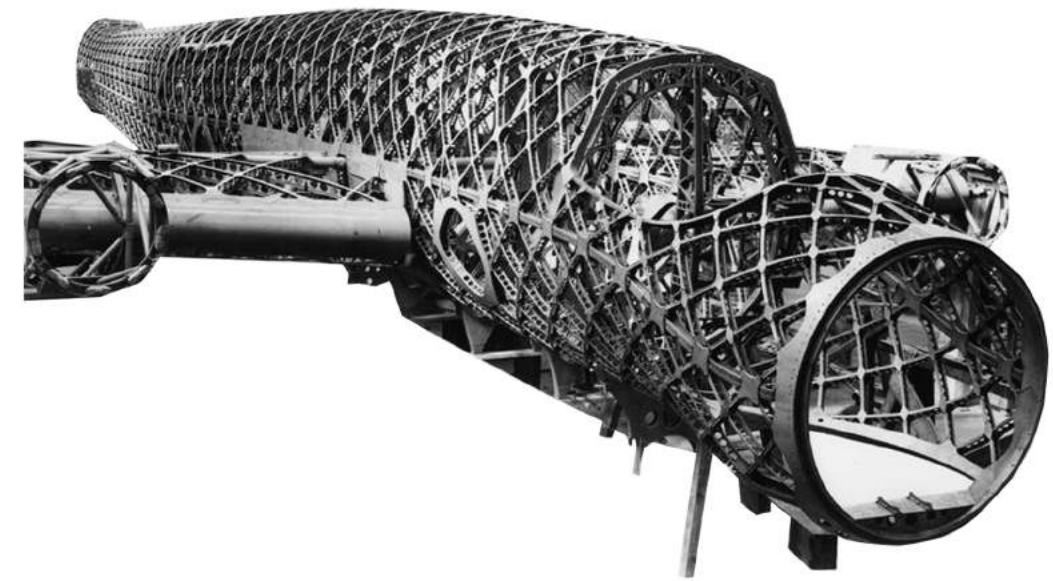


Nevertheless, the industrial period survived in the Easter part of Holešovice. At least some industrial buildings are still used as offices or for cultural purposes after reconstruction. The west and more imposing part of the quarter near Letna with many highly valued buildings reflects the history of modern architecture. Both of these entities deserve our attention, protection and the solution to various problems.

## HISTORY OF STARÁ AEROVKA PREMISES

The history of Stara Aerovka premises is closely connected with the history of Czech and Czechoslovak aviation. The first years after the founding of independent Czechoslovakia in 1918 were also characterized by boom of the aerospace industry. The top place in this area belonged to Prague. In the early 1920s, new aircraft manufacturers were rolling out newer and newer world class prototypes. This period is inseparably connected with the development of Prague airports, where huge complexes of modern hangars were being built.

AERO factory was founded by Vladimír Kabeš on January 10, 1919 (after 1921- AERO, aircraft factory Dr.Kabeš). This second oldest Czech aircraft factory was initially located at the back part of a water cleaning station in Prague-Bubeneč, and they focused on repairs of WWI planes. Soon the company moved from their cramped premises in Prague-Bubeneč to wooden buildings in Prague-Holešovice. Initially, these buildings were rented and later on, the company bought the premises from German aircraft repair company Al-Ma. A very important point in the future development of company AERO was an order for production of a series of licenced training biplanes Brandenburg. The company produced 35 planes under the name A-1. This order allowed the company to start developing and designing their own prototypes. The first own airplane was a fighter biplane, type A-2. In the middle of the boom, there was a fire in the factory on November 5, 1921, which destroyed their joinery workshop, car repairs workshop, and their prototype assembly workshop. Subsequently, some workshops had to be relocated to different parts of Prague due to lack of space.



inner steel structure of the airplanes as a inspiration



# HOLEŠOVICE DISTRICT

analyses of cultural, sport and recreational facilities

## 1. Pražské tržnice

The sprawling River Town, is a Prague institution, evidenced by the constant throng of shoppers at the adjacent tram stop.

## 2. Jatka 78

A multifunctional theatre hall as well as a small-scale theatre space, a training hall and a rehearsal space, a gallery and a bar.



## 3. Squash Holešovice

except squash place for table tennis

## 4. Prague Dance Center

Dance centre that offers many sorts of dance from funky styles to classical dance.

## 5. La Fabrika

this resort is a multi-purpose space, which hosts theater concerts, exhibitions, film screenings, multimedia exhibition, performances..



## 6. THE DOX

Centre for Contemporary Art is a multi-functional space created thanks to a private initiative through the reconstruction of a former factory in Holešovice district.



## 7. Cross Club

a uniquely designed multicultural centre which houses a real crossroads of cultures and a variety of styles and genre

## 8. The Chemistry Gallery

space dedicated to the presentation of the works of contemporary young artists from the Czechia and abroad.

## 9. KC Vltavska

is another key player in the local cultural scene and a center for concerts, exhibitions, film and theatre among others. It was also a Designblok festival venue in 2010

## 10. Veletržní Palac

part of national gallery



## 11. National Gallery

The gallery is home to a collection of 19th and 20th-century Czech art, and the building's architecture and interiors are equally noteworthy

## 12. Alfred ve dvore

is noted for its contemporary focus and project-based rather than repertory program; many of their projects are of the English-friendly "performance art" variety



## 13. Bio OKO

renovated art house Bio Oko cinema, which has survived the multiplex invasion, and retains its refreshingly retro character. The cinema regularly screens films in English.

## 14. Lezecké centrum Mammut

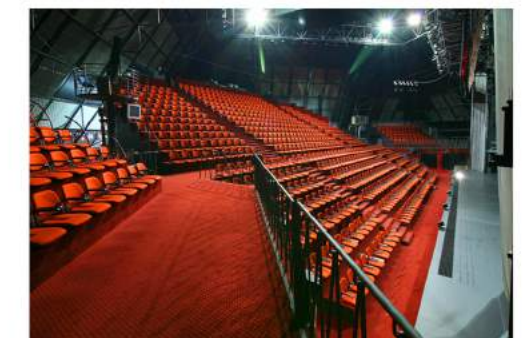
indoor climbing wall

## 15. Výstaviště Praha

one Prague's major exhibition venues



## 17. Goja Music Hall



## 16. Tipsport Arena

In addition to hockey games, the arena is also the venue for concerts by local and international stars.

## 18. Sea World

largest aquarium of this kind in Czech Republic



new cultural district WHAT HOLEŠOVICE NEED?

## From an industrialized area to an art district

Since the end of the Second World War, and for several decades, Holešovice was listed among the most degraded places in Prague, especially its industrial river area. A radical change, which is gradually giving a new face to the neighborhood, took place after the flooding of the Vltava river in 2002, when part of the area was submerged in water. With the funds allocated for reconstruction, new buildings were built which now house offices and luxury apartments lining the banks of the river. The desire to modernize the district is becoming more and more apparent, as demonstrated by the presence of numerous trendy nightclubs and pubs that attract young people from other parts of the city.

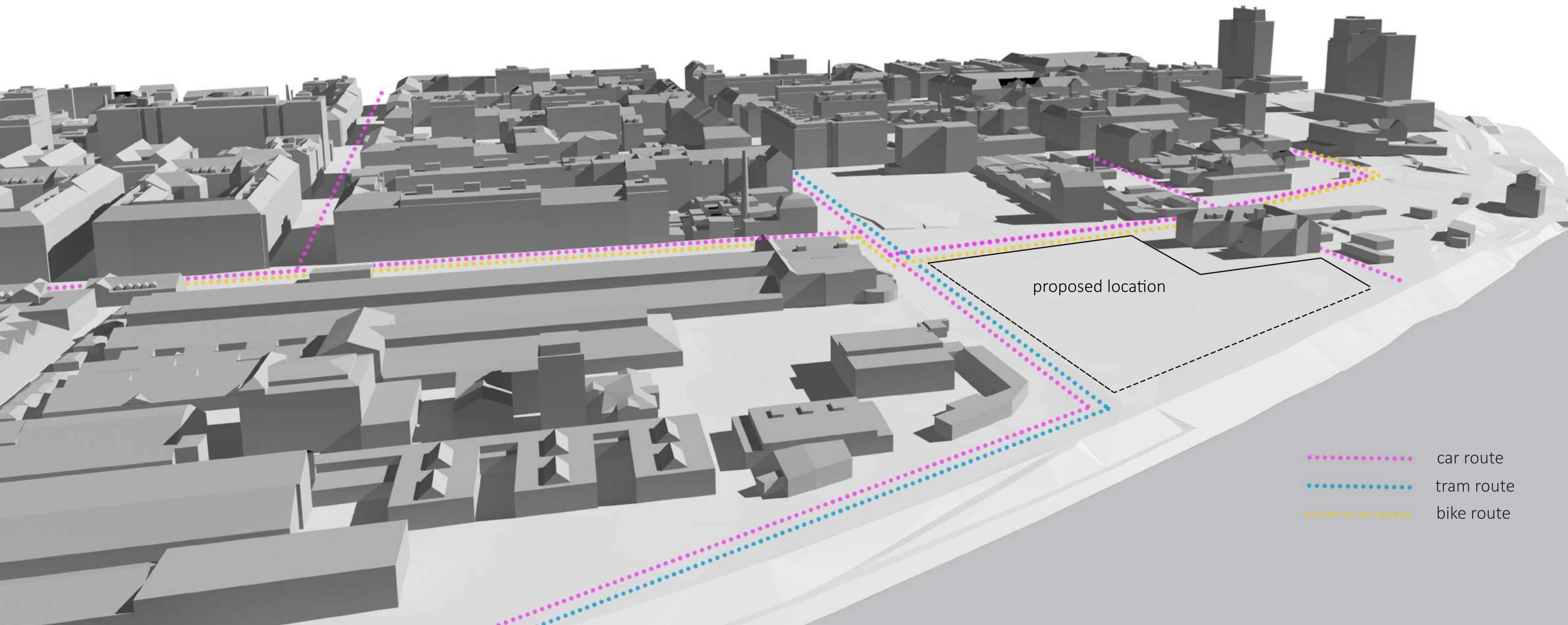
Prague 7, together with the Prague Institute of Planning and Development, signed a memorandum of cooperation with the aim of establishing a cultural and creative district. The Art District 7 project will improve cooperation between the town hall and cultural institutions, attract new visitors, and support local focal points of creativity.

**Art District (Kulturní čtvrť)** – cultural and artistic entities, firms, schools and other stakeholders all concentrated together in a single complex. The institutions and projects involved all share a common brand, pooling their experience and making the most of the synergy this cooperation

Previous analyses are showing that Holešovice is with a good reason taking the attribute of a “New Berlin”. With all mentioned important cultural institutions and projects in the area, it clearly stands out as the hotbed of contemporary live culture in Prague, with a wealth of galleries, theatres, creative studios, music clubs and active residents. Most major cities around the world have a part that is known for its culture and creativity – from Williamsburg in New York to Kreuzberg in Berlin. Besides Berlin, the potential offered by Prague is also similar to that of the MuseumsQuartier in Vienna, for example, an extensive arts and museums complex housed in the former imperial stables.

Holešovice is not a particularly child-friendly environment due to a complete absence of houses with gardens, as well as very busy main thoroughfares, traffic noise, and dusty streets. There are big park areas as Stromovko and Letna, but there is not a big center for children which would in the same time enrich cultural background of the region.

Prague 7 has the potential to attract foreign tourists, take some of the burden off the overcrowded centre and focus should be on designing cultural centers which are currently not present. All previous mentioned facts are leading to the idea of designing a Science Center which Prague as a city does not have.

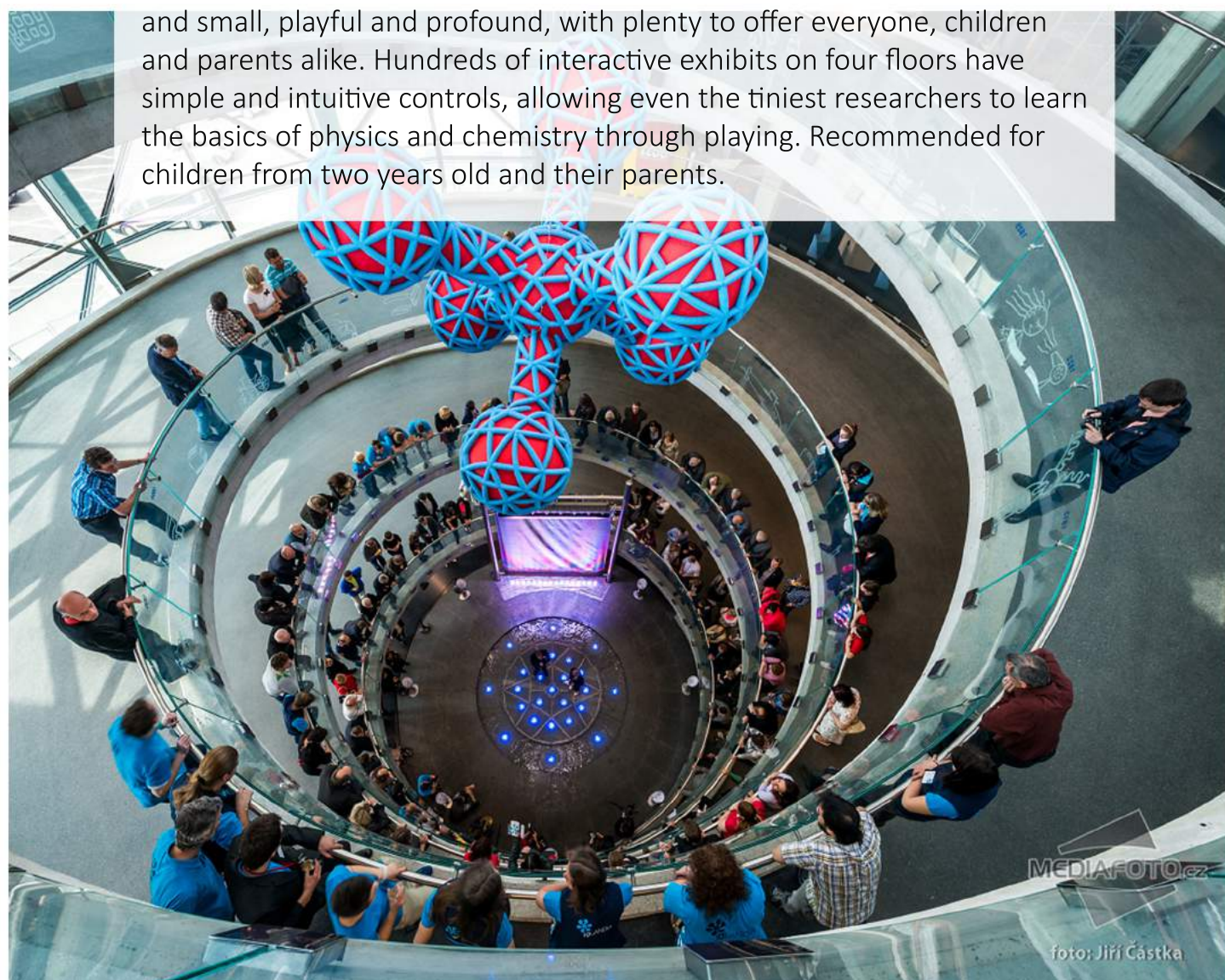


## CASE STUDIES

### IQ Landia - Liberec

IQ Landia a modern science center entertaining both kids and adults. In the same time it is the first center this kind built in Czech Republic. It has a planetarium and hundreds of original interactive exhibits. It represents a world of science and technology that grabs you and doesn't let go. Here you will meet the first humanoid robot in the Czech Republic, go through genuine astronaut training, experience a firestorm and a dance of lightning, and find out how the human body and world around us work- in short, you'll find the answers to all your questions here.

The iQLANDIA Planetarium offers a very popular combination of film and live commentary on current events in the night sky. The projection software containing an extensive range of thousands of astronomical objects will take you anywhere you can think of. Films on both cosmic and terrestrial themes in the latest 4K resolution are offered, so make yourself comfy in one of our reclining armchairs and drift through time and space. What makes it unique is a newly opened IQ PARK. Intelligent fun for large and small, playful and profound, with plenty to offer everyone, children and parents alike. Hundreds of interactive exhibits on four floors have simple and intuitive controls, allowing even the tiniest researchers to learn the basics of physics and chemistry through playing. Recommended for children from two years old and their parents.

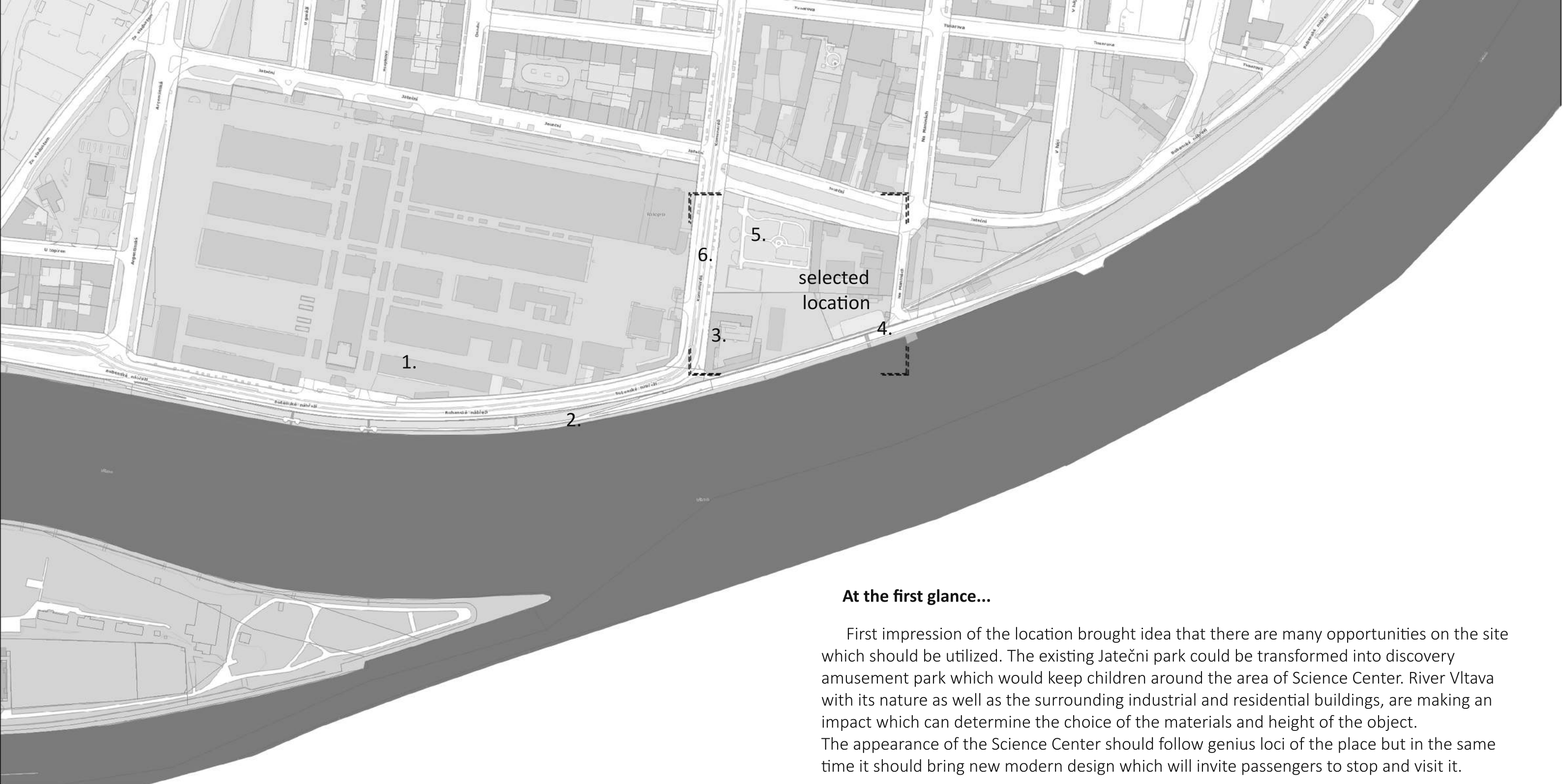


### Techmania - Plzeň

Techmania Science Center was founded in 2005 by Škoda Investment. The long term intention of the founders and the Public administration donors has been to provide a platform for informal education. The goal of Techmania is to help the public, especially young people, to get more familiar with science, technology and with the development of human knowledge in general. In this building the first 3D planetarium in the Czech Republic was created in 2013.



There are three main features in the 3D Planetarium. First, the 2D and 3D full dome projections offer great variety of educational movies. The Science On a Sphere technology which is the second feature of the planetarium, enables original ways of presentation of (not only) scientific issues. The Space exhibition, containing 27 interactive exhibits made by the team of Techmania, guides the visitors all around the space and its exploration. In all the features interactivity, fun and great educational value was our aim and target. The whole area which belongs to the Techmania Science Center consists of approximately 30 000m<sup>2</sup>. There is the main hall, the Science Center, the 3D Planetarium the parking house and other objects and communications. Its development has been gradual: the task of expanding the exhibition space from 3000 m<sup>2</sup> in late 2008 to 10 000m<sup>2</sup> in June 2014 has been a great challenge for all of people from Techmania team. The future is clear: Techmania wants to become an integral part of informal education for schools and public in the Czech Republic. Their goal is to maintain the variety of interactive exhibitions, produce quality of scientific shows, workshops, lectures etc.

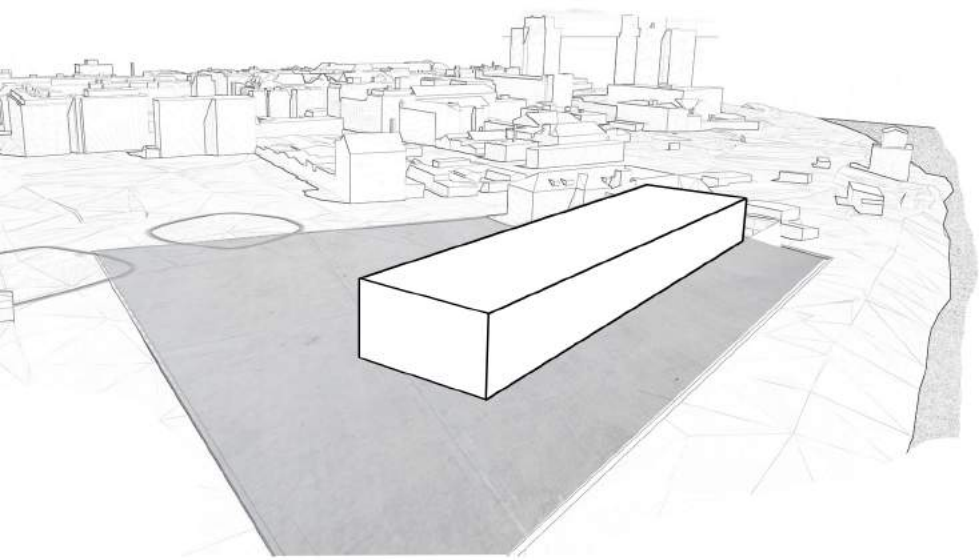


**At the first glance...**

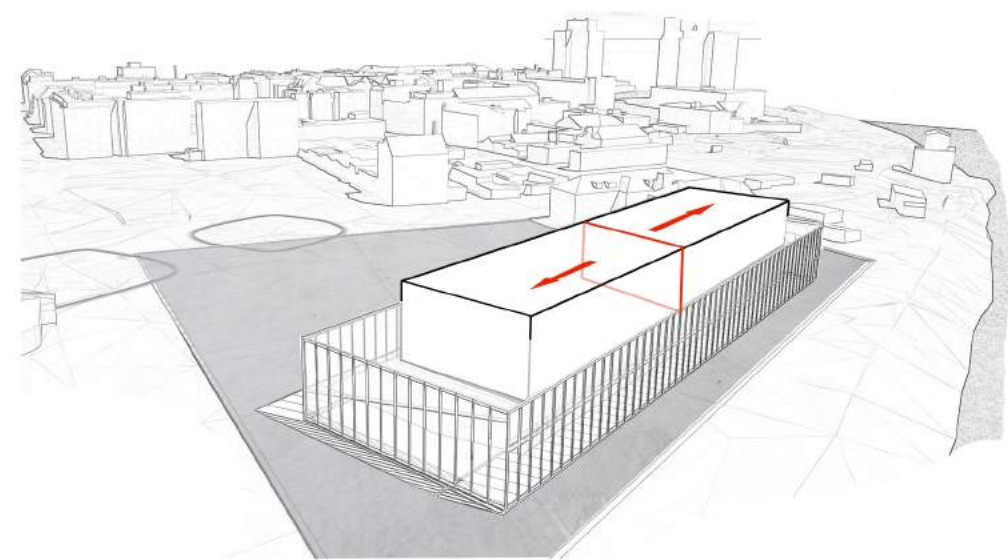
First impression of the location brought idea that there are many opportunities on the site which should be utilized. The existing Jateční park could be transformed into discovery amusement park which would keep children around the area of Science Center. River Vltava with its nature as well as the surrounding industrial and residential buildings, are making an impact which can determine the choice of the materials and height of the object. The appearance of the Science Center should follow genius loci of the place but in the same time it should bring new modern design which will invite passengers to stop and visit it.



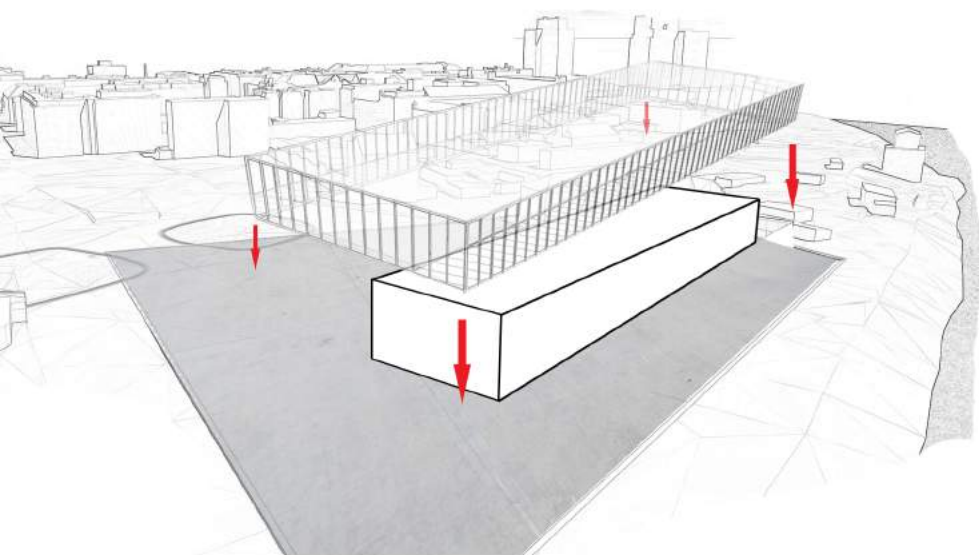




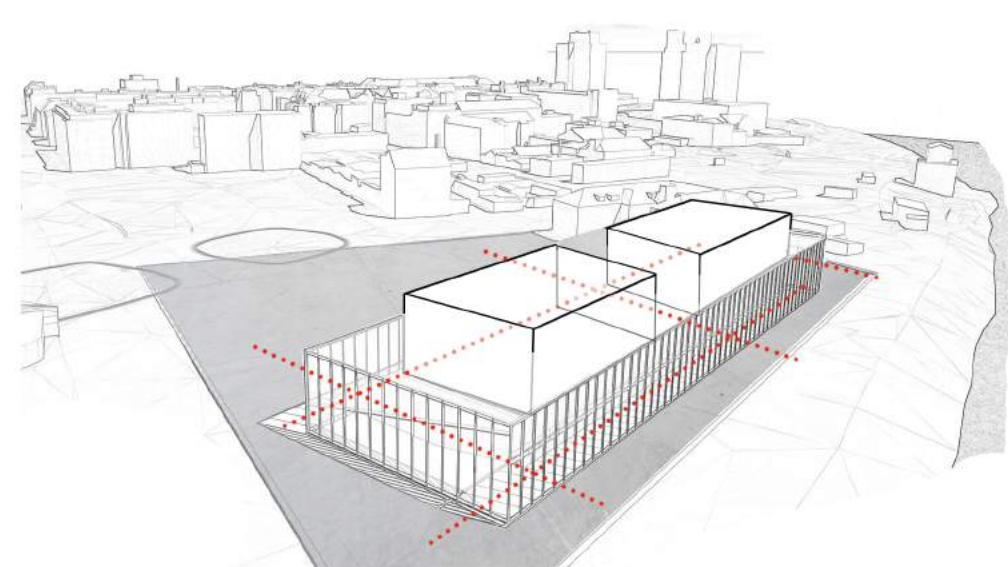
compact form for better placement  
of the functions and easier  
orientation for children



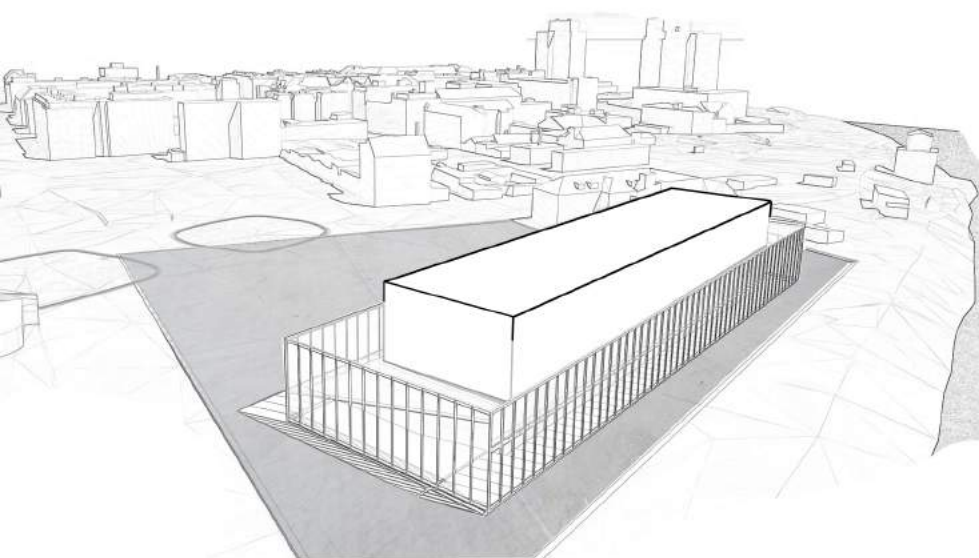
-splitting building mass to get more  
lively and attractive form



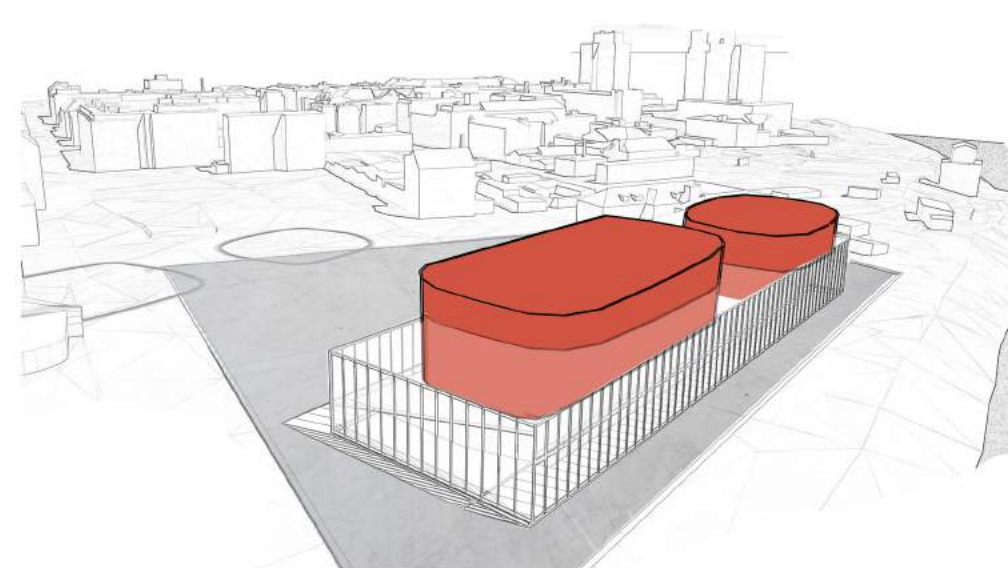
-main functions of the science center  
do not require natural light and that will  
make impact on facades  
-not many windows and openings  
-concept of the GLASS BOX



as a consequence of that there is  
more public space inside the  
GLASS BOX

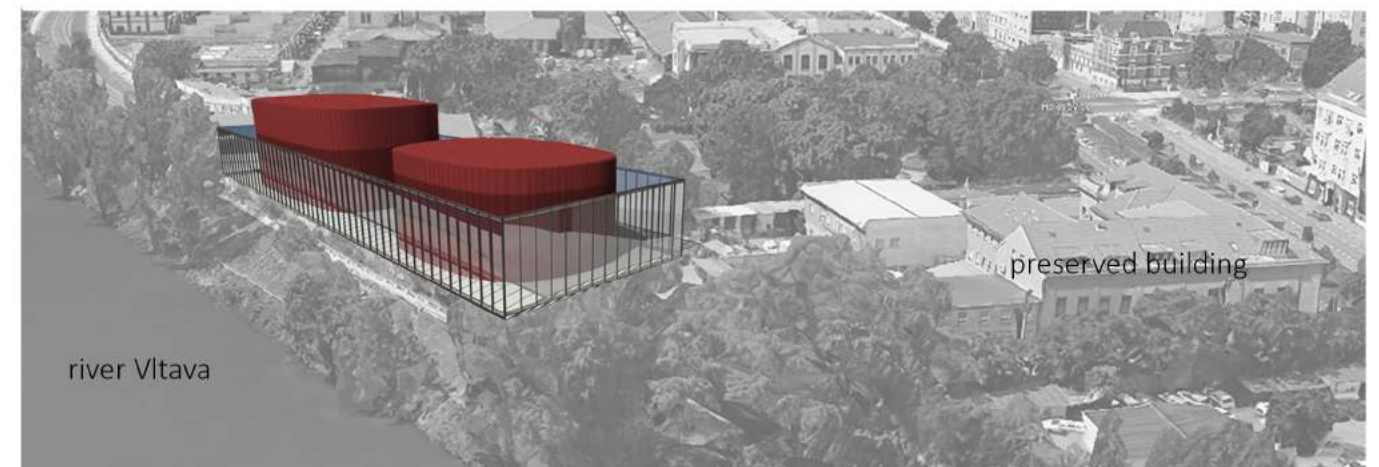
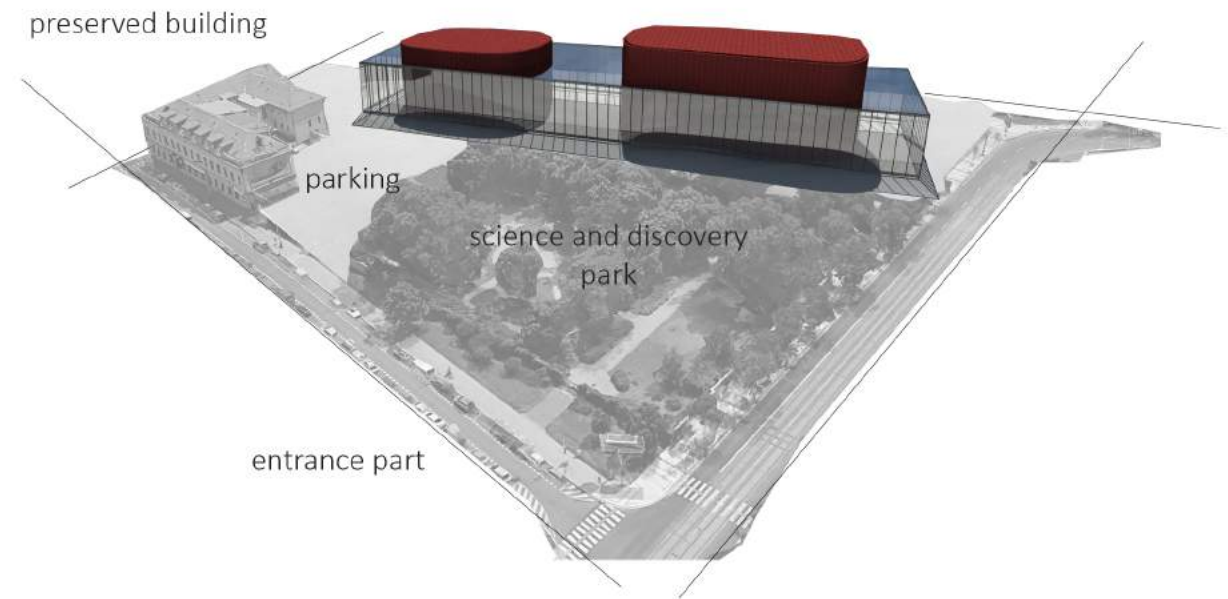
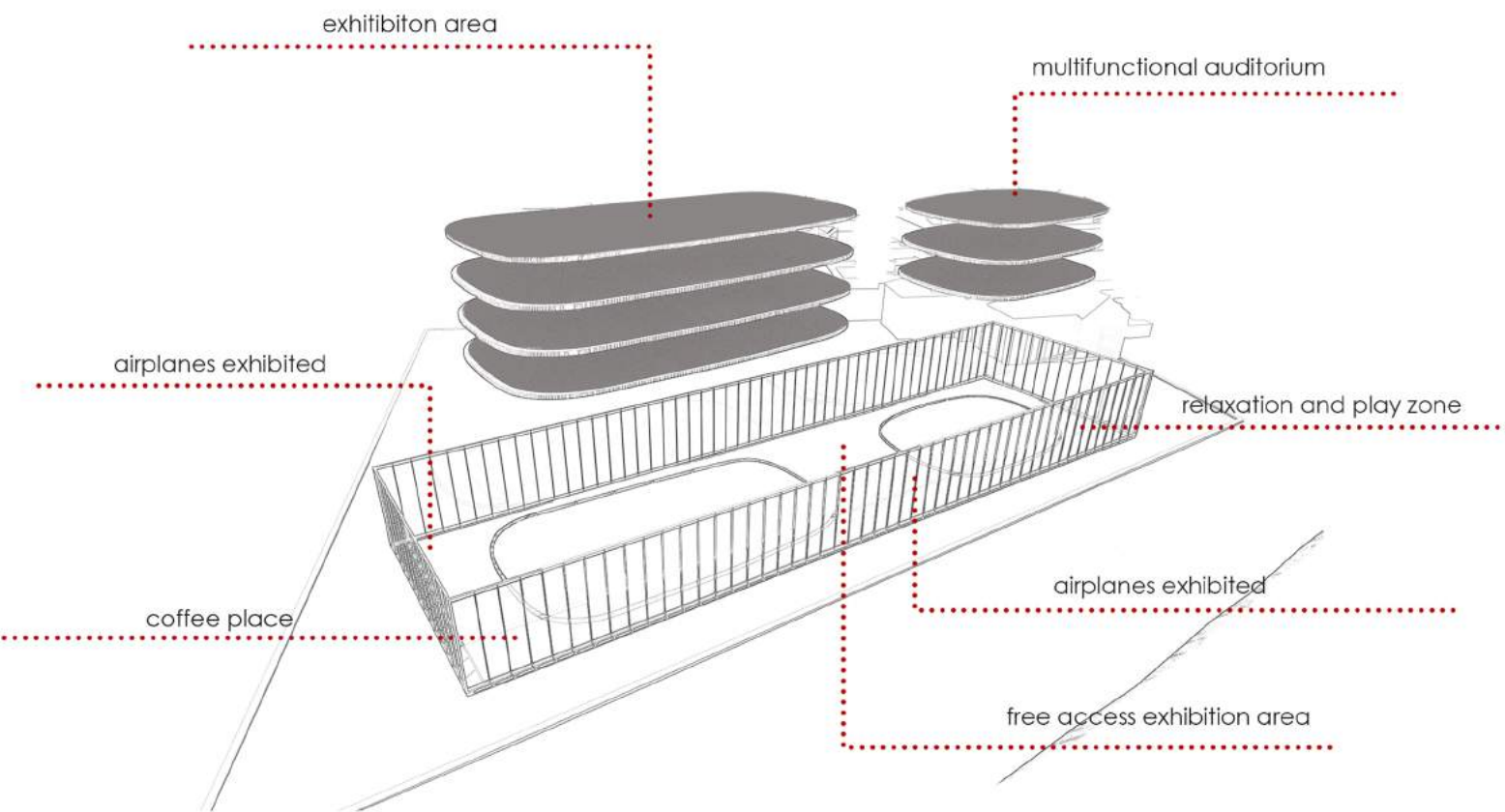
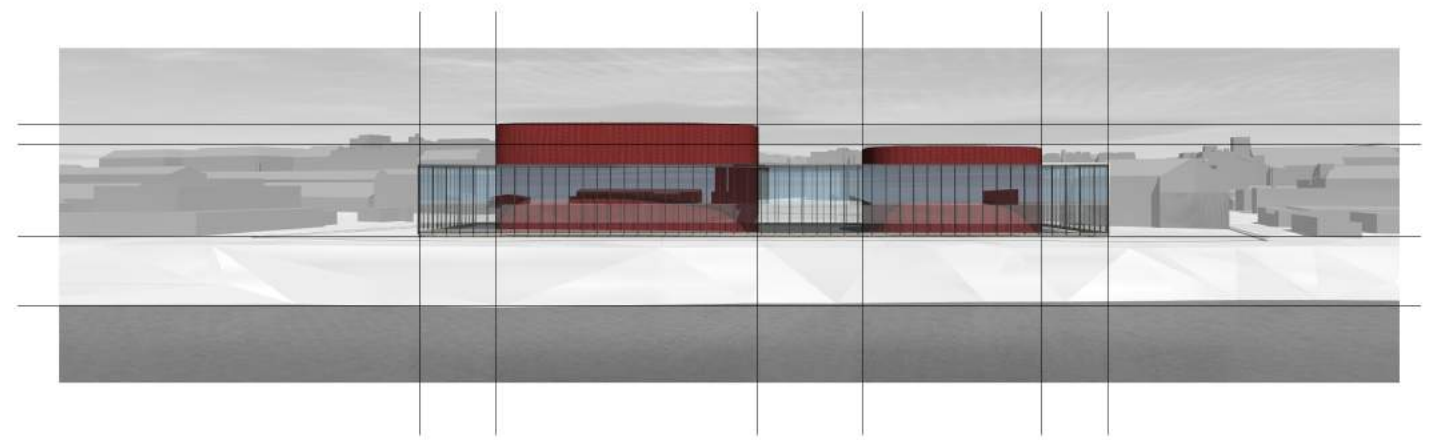


-area around- industrial character  
-need for the modern appearance  
-glass facade to make attractive  
ambiance  
-parallel to the river line



variations of the mass

preserve the view across the river



# SITE PLAN

1. entrance to the site
2. playground with airplanes
3. sculptures inspired by Richard Serra
4. main entrance to the object
5. entrance to the garage
6. other entrances
7. preserved building
8. passageway near the riverbank

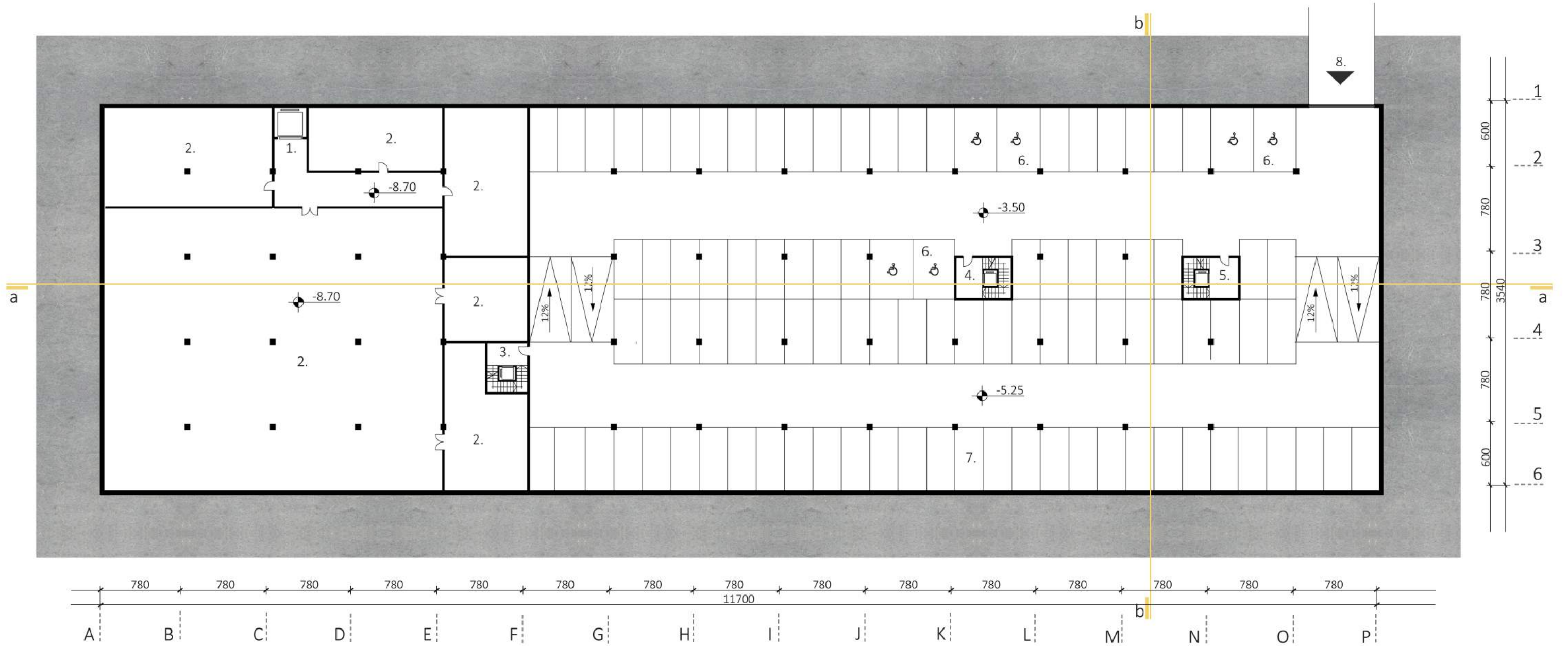
-  vegetation
-  glass
-  grass
-  pavement
-  water
-  corten
-  gravel
-  asphalt

TOTAL AREA OF THE SITE: 19 922 m<sup>2</sup>  
 TOTAL AREA OF THE OBJECT: 3 954 m<sup>2</sup>

0 10m 20m



# BASEMENT

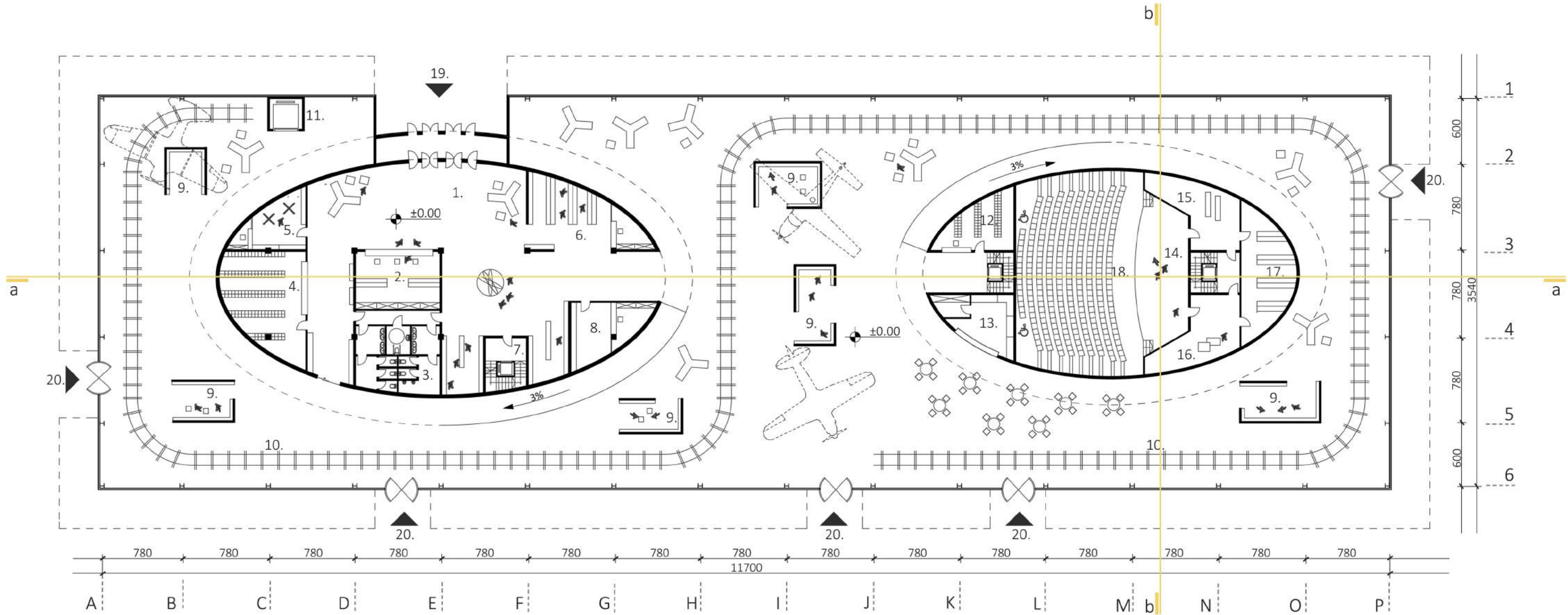


- |                                 |                                     |
|---------------------------------|-------------------------------------|
| 1. platform                     | 5. communication for employers      |
| 2. storage                      | 6. parking lots for disabled people |
| 3. main vertical communications | 7. parking places                   |
| 4. communication for auditorium | 8. entrance for garage              |

TOTAL AREA OF THE FIRST FLOOR: 3 974.44 m<sup>2</sup>



# GROUND FLOOR



- 1. main hall
- 2. reception and information
- 3. sanitary block
- 4. locker room
- 5. souvenir shop

- 6. books and magazines
- 7. main vertical communications
- 8. shop
- 9. non permanent exhibition
- 10. rails for crane

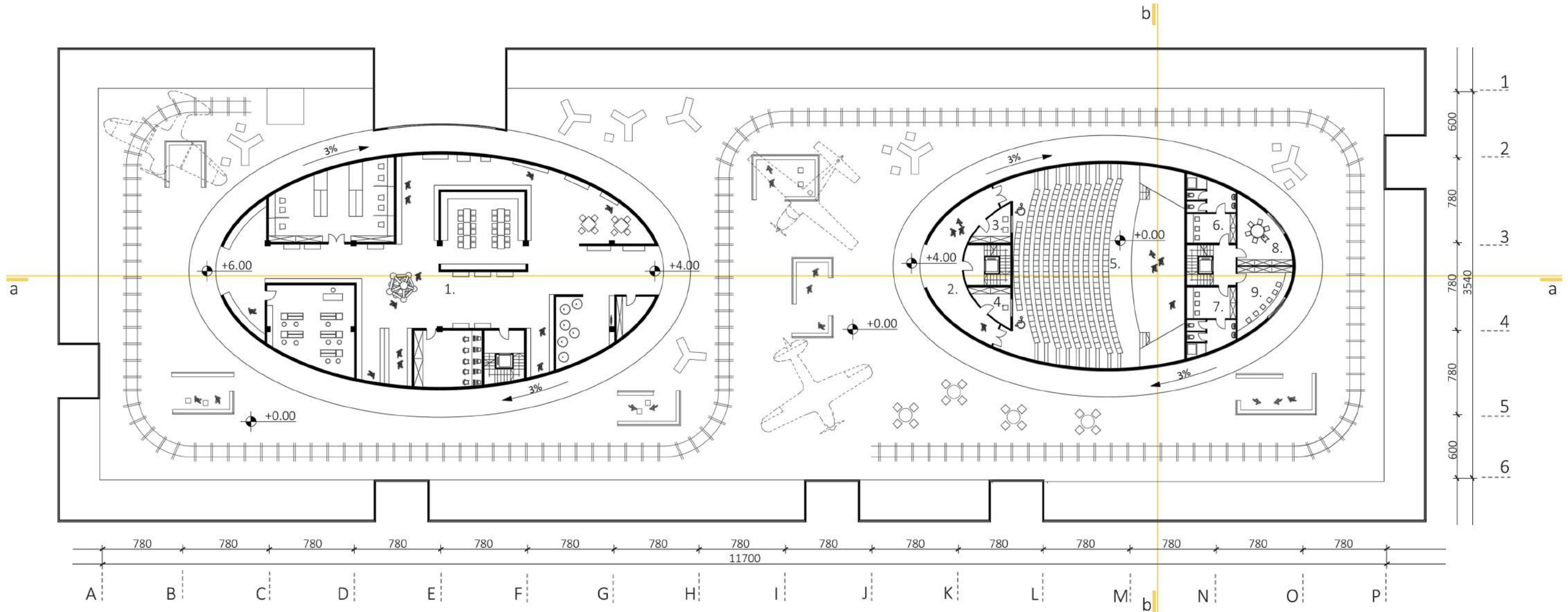
- 11. platform
- 12. reception and locker room
- 13. coffee shop
- 14. main stage
- 15. back stage

- 16. back stage
- 17. storage for equipment and clothes
- 18. auditorium
- 19. main entrance
- 20. other entrances

TOTAL AREA OF THE GROUND FLOOR: 3 954 m<sup>2</sup>



# FIRST FLOOR



## 1. CTU LABORKA

Czech Technical University in Prague, is a university with a positive charge, and perhaps some of the offered exhibitions would inspire children and young people to study in one of nine offered courses. Labs will be organised in the cooperation with students from CTU, who can as well exhibit their latest projects. Visitors can take part in the labs and experiments or to enjoy many different presentations offered on daily basis. Aim is to motivate people to actively participate and develop their interest for technical research.

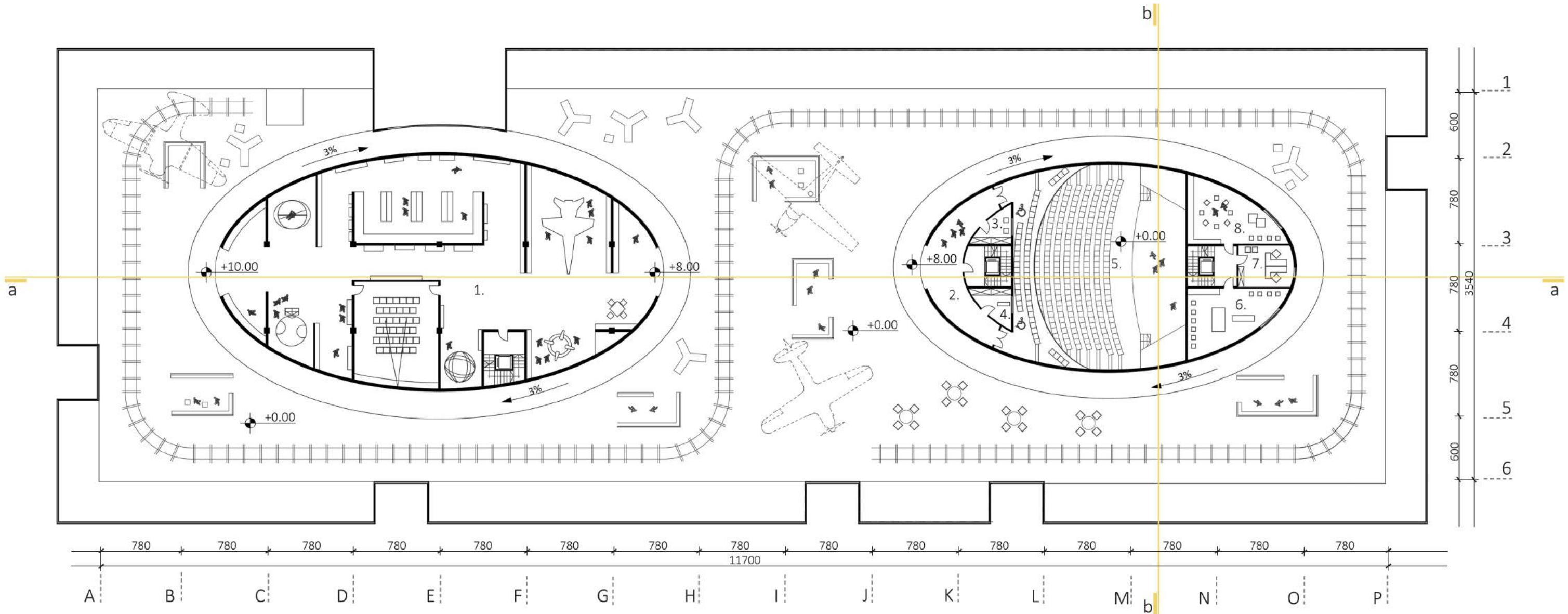
- 2. entrance for auditorium
- 3. office for translators
- 4. room for acoustic control
- 5. auditorium

- 6. sanitary and locker room-women
- 7. sanitary and locker room-men
- 8. costumes
- 9. make up

TOTAL AREA OF THE FIRST FLOOR: 1672.74 m<sup>2</sup>



# SECOND FLOOR



## 1. COSMO LAB

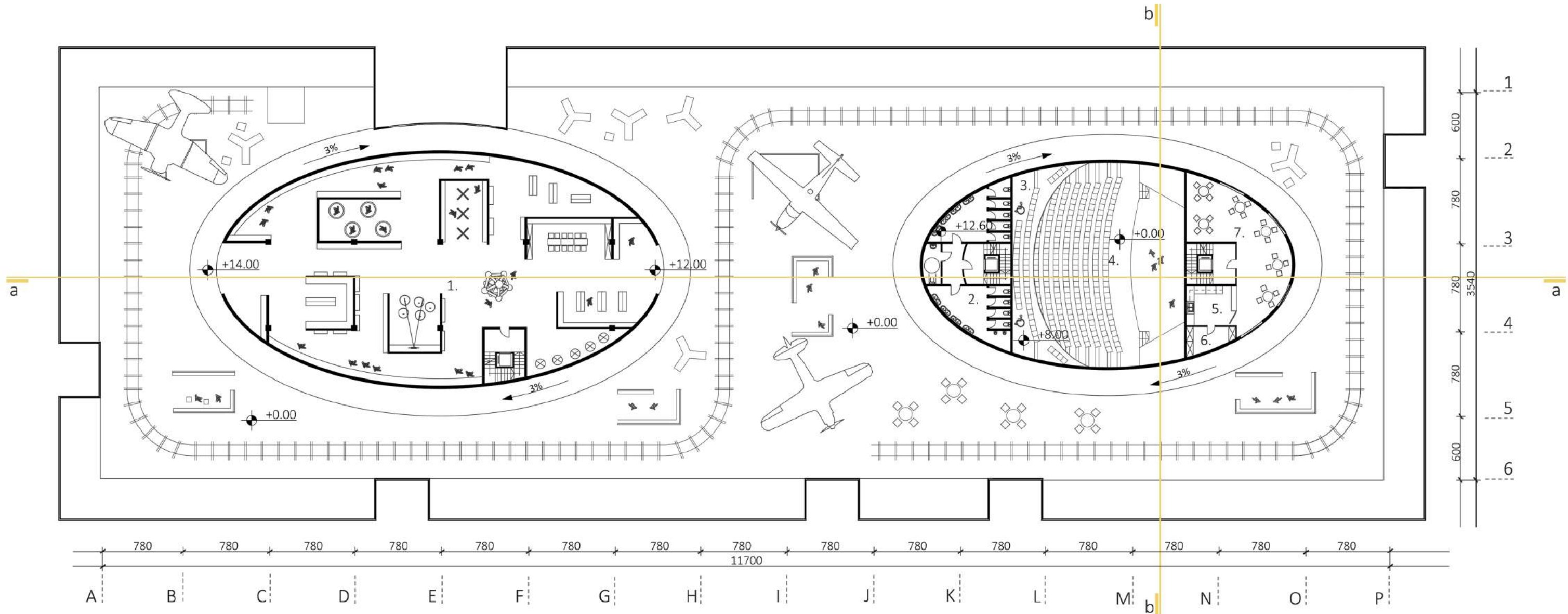
Where exactly did the universe, stars and planets come from? Questions as old as mankind itself. But only a lucky few have had the chance to set off on expeditions into the depths of space. Everybody can become an astronaut here! You just need a bit of courage! The COSMO LAB is one big adventure. You should definitely start with the Moon jump! You will see on the screen how much weaker gravity is on our satellite, experience the gyroscope, as cosmic training simulators, have a close look at space ships and satellites and enjoy many presentations and movies about our universe.

- 2. entrance for upper auditorium
- 3. room for light control
- 4. room for cameras and shooting
- 5. auditorium
- 6. room for practice
- 7. room for practice
- 8. office

TOTAL AREA OF THE SECOND FLOOR: 1496.54 m<sup>2</sup>



# THIRD FLOOR



## 1. HUMAN BODY LAB

Who are we most in contact with throughout our lives? With our own bodies of course! But do we know enough about it? So have a go... Human body lab is dedicated to all those who wish to know more about themselves. Many exhibits were prepared in an area of more than 600m<sup>2</sup>. You will need at least two hours for the tour and experiments on your own body. Take active part and explore and if you had enough of human body you can go and chat with our humanoid robot in a number of world languages.

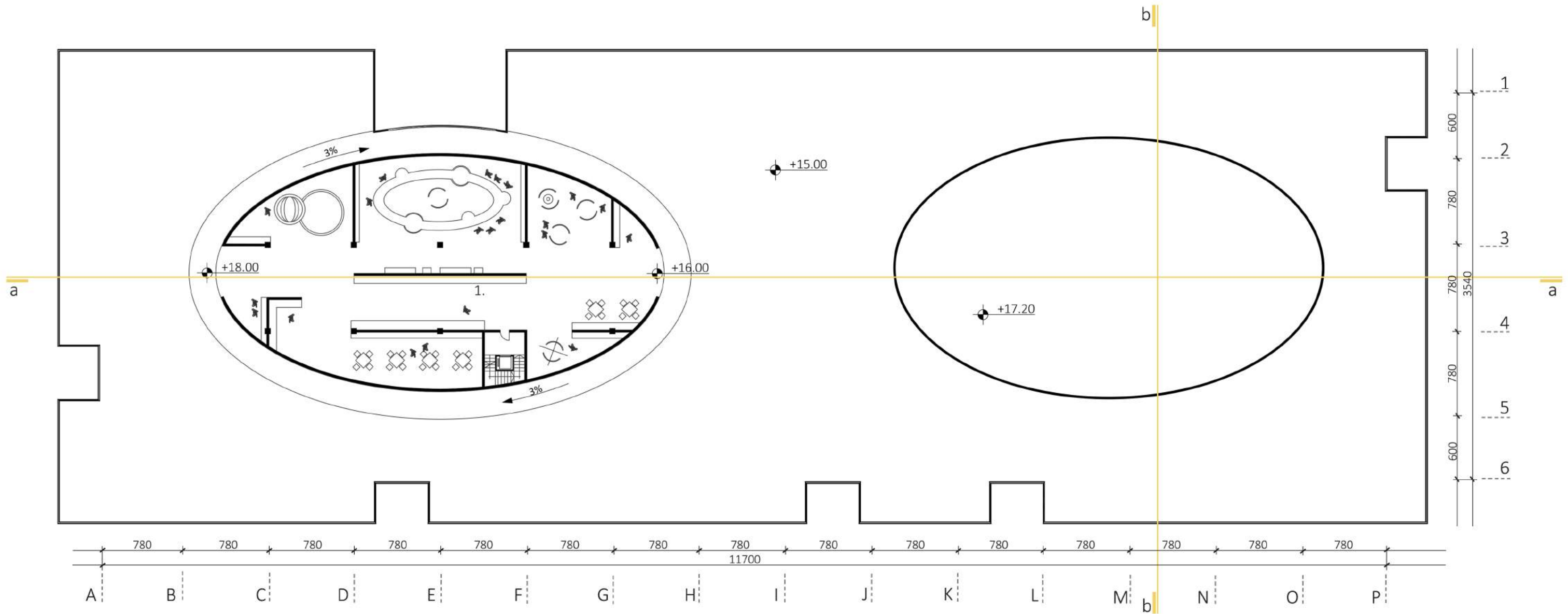
- 2. sanitary block
- 3. upper auditorium
- 4. main auditorium
- 5. kitchen
- 6. storage
- 7. canteen

TOTAL AREA OF THE THIRD FLOOR: 1486.04 m<sup>2</sup>





# FOURTH FLOOR



## 1. ELEMENTS- fire, water, earth

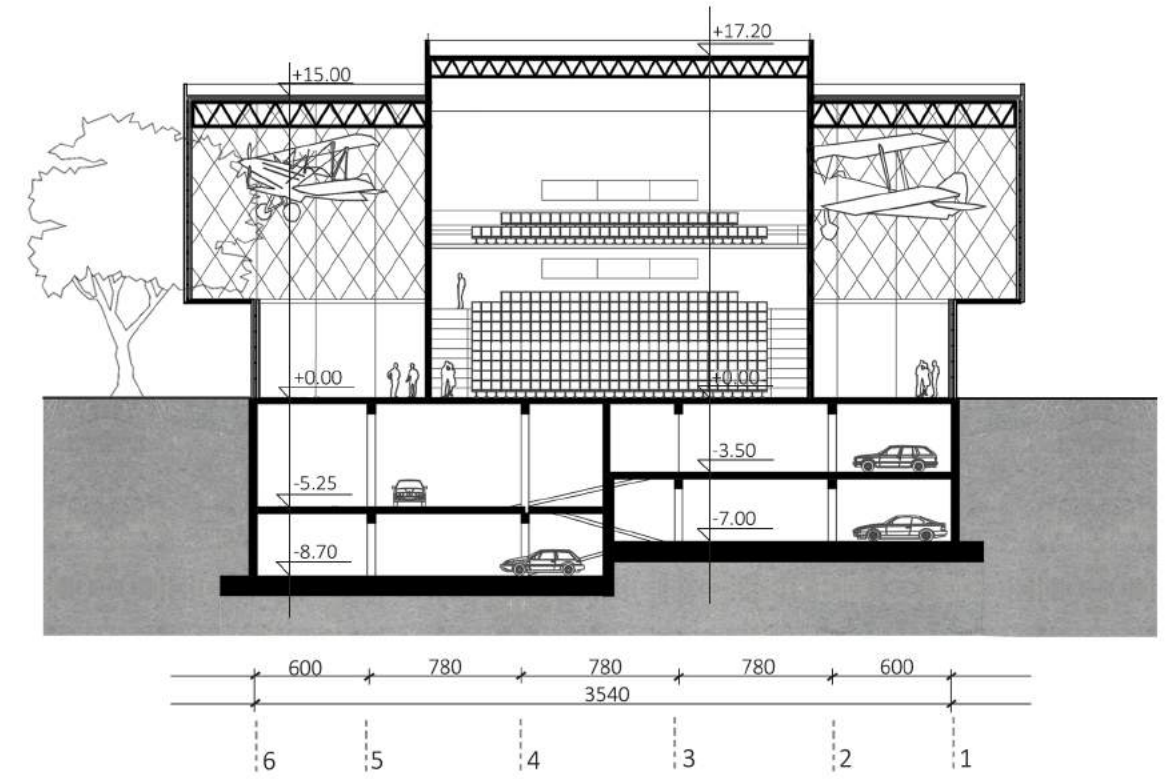
Are you fascinated by the forces of fire, wind or water? Or are you the type who doesn't stick their nose out during a summer storm? You don't need to be afraid here- all the elements and natural disasters can be switched off with the flick of a switch. However, everyone's made it to the end so far. How do water mills, various types of turbine, or even a whole pumped-storage tank water? And what strenght of aftershock can you handle on our earthquake simulator? If you still haven't had enough, you can get you hair comed by a gale-force wind and then warm up by the fire tornado.

TOTAL AREA OF THE FOURTH FLOOR: 886.04 m<sup>2</sup>

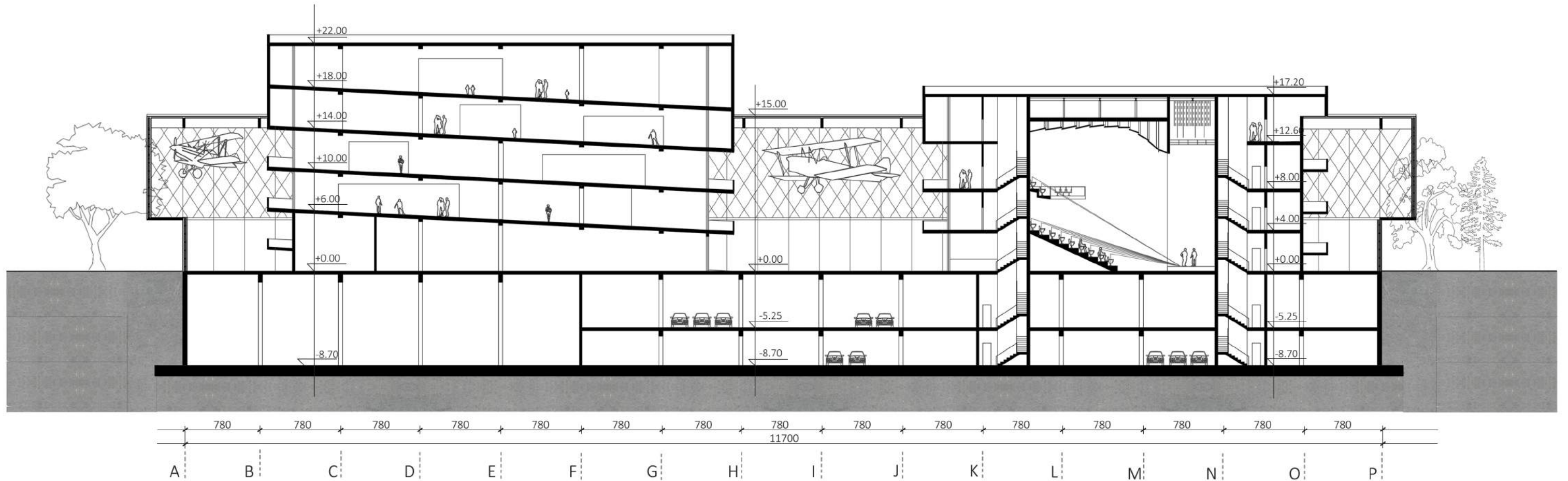


# CHARACTERISTIC SECTIONS

section b-b



section a-a



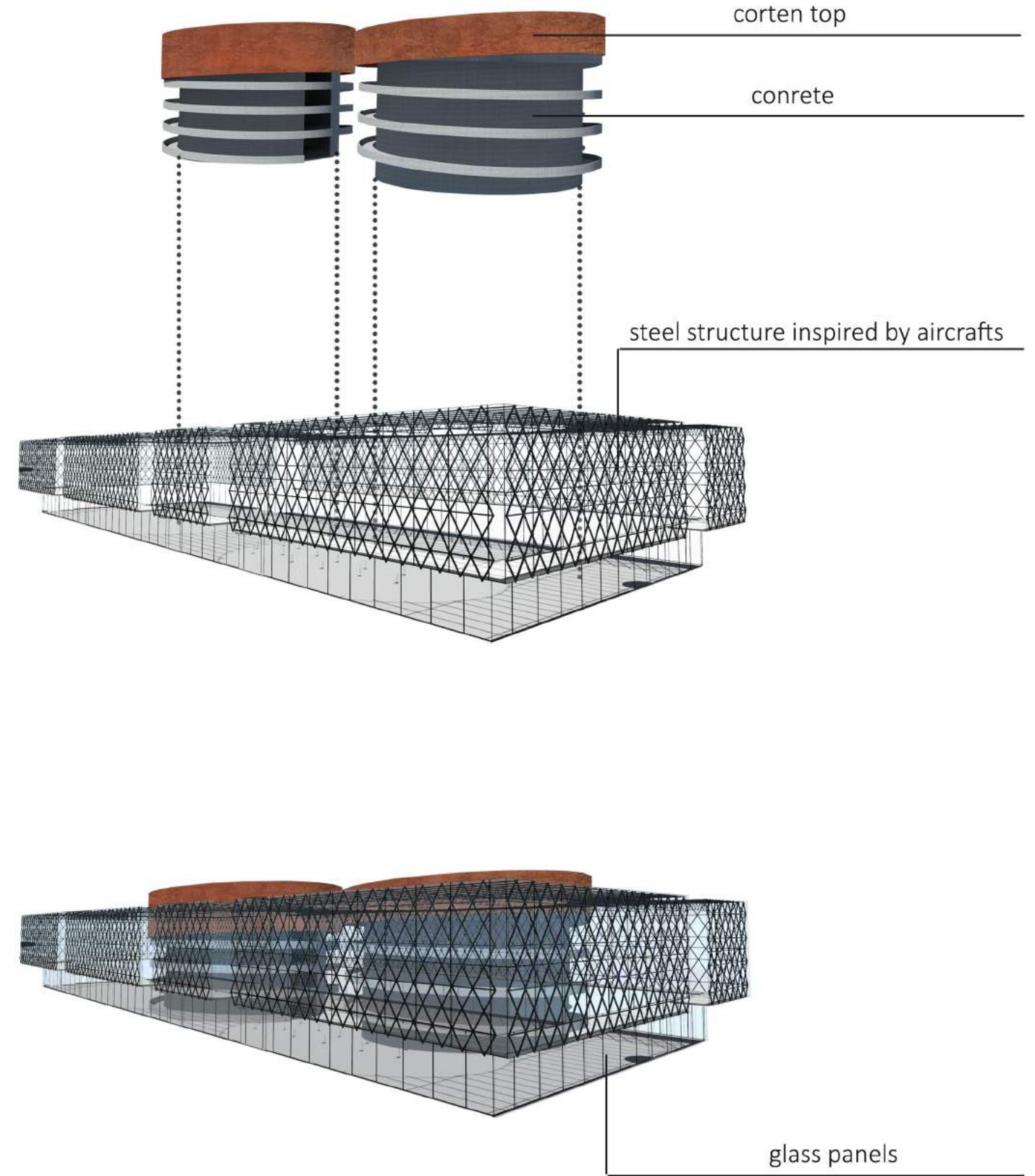
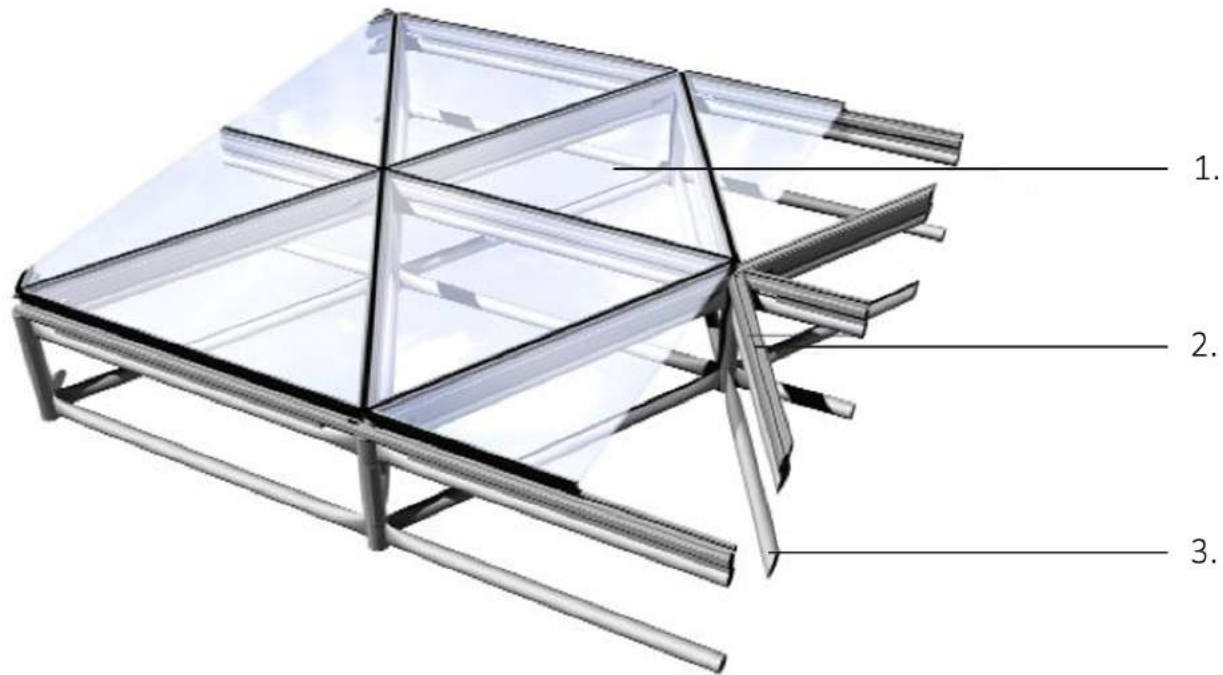






FLUSH GLAZING DETAIL

- 1. insulated glass unit
- 2. aluminum mullion
- 3. Geometrica Freedom











2

BUA CHM LES

COSMO LAB  
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←

ROBOTS  
THE 500-YEAR QUEST TO  
MAKE MACHINES HUMAN

8 February -  
3 September 2017

HUMAN BODY LAB  
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# SYSTEMS of the Human Body

The poster includes the following systems and diagrams:

- Nervous System:** Diagram of the brain and spinal cord.
- Respiratory System:** Diagram of the lungs and trachea.
- Excretory System:** Diagram of the kidneys.
- Digestive System:** Diagram of the stomach, liver, and intestines.
- Integumentary System:** Diagram of the skin.
- Skeletal System:** Diagram of the human skeleton.
- Reproductive System:** Diagram of the reproductive organs.
- Circulatory System:** Diagram of the heart and blood vessels.
- Muscular System:** Diagram of muscles.

SDI logo and text at the bottom: "SDI" and "The Science Department of the University of the Philippines - Diliman".

## HUMAN ANATOMY INTERACTIVE

The screen shows two glowing human figures, one in blue and one in purple, with various internal organs highlighted. To the left is a large brain, and to the right is a heart. The text "HUMAN ANATOMY INTERACTIVE" is displayed at the top.

The wall features several large anatomical illustrations. On the left, there are three human skeletons of varying sizes. On the right, there is a large, detailed cross-section of the human torso, showing internal organs like the heart, lungs, and stomach.



## RESOURCES

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<http://geoportalpraha.cz>

#### Case study sources:

- <http://www.iqlandia.cz/>  
<http://techmania.cz/>

#### Other sources:

- <https://www.expats.cz>  
<http://www.praha7.cz>  
<http://www.radio.cz>  
<http://en.muzeumprahy.cz>

#### Image sources:

- Pages contain images from the following sources:  
Broncová D., *Kniha o Praze 7*, Milpo, Praha 1998  
Jungmann J., *Embraced by the river Vltava*, Muzeum hl. města Prahy 2014  
<http://www.praha7.cz>  
<http://en.muzeumprahy.cz>