

# Campus STU

Center of Innovation in Bratislava  
Transformation of the courtyard

## PROJECT IDEA

The aim of our project was to elaborate architectural study of inovative center in STU area in Bratislava. Study dealt with solution of problematic in courtyard STU and reconstruction of laboratories of faculty of engineering, in way that object would fulfill the needs of university development, at the same time with creating of unified whole with surrounding construction architecturally and urbanistically.

In our final design we want to create a space, which will support the university operation. We also want to bring life into a lifeless space. A space where students and employees will be able to fully spend their professional and free time. By building a university campus, we would like to support the students creativity, create good conditions for them to share or use the earned knowledge.

## PROJECT DESTRIPTION

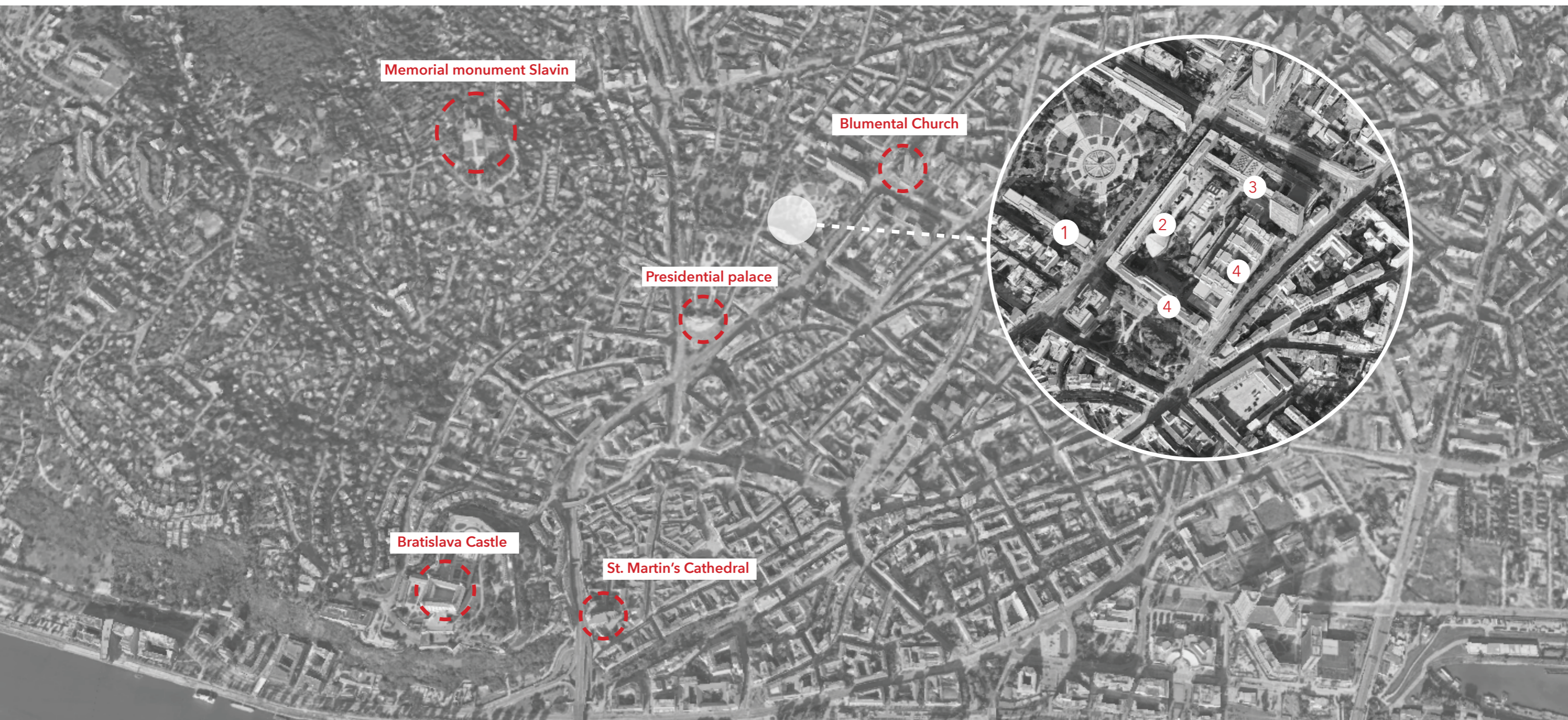
Object and solved area is located in cadastral of city Bratislava. Many significant points such as Slovak Radio, National bank, Main railway station, can be located in the surrounding area. The design consists of two parts. The first part solves the urbanistic problematic of the whole area.

One of the first problems was the solvation of unconceptual and chaotic parking of vehicles in courtyard. Concurrent parking on the field was moved to two storey underground parking garage, which offers together 288 parking spaces. We made also alternative of underground garage which has only one storey and offers 173 parking spaces. We managed to fully eliminate the parking of the vehicles on the ground by creating the parking garage. We suggest to allow usage of the entrance to the yard only to supply and rescue services. To support the ecological transport we design to build covered bicycle stand. Significant problems were also made by high terrain differences. We aligned the superelevations, and design there not only functional stairs, but we also created space for people to relax and spend their time outside. Barrier-free acces to the area is solved by the ramp. Walking path entrances to yard are located from two sides. Two entrances are located from Freedom square throught mechanical engineering faculty, the rest two are from Radlinského street near by chemical and food technology and civil engineering faculty. The aim of the design was to create „living“ area. To create inside zones not only for students to spend their time, but also to variabile use the full potencial of the yard. In our design we place impact on green areas and freetime spaces. We also designed outdoor study rooms and an exhibition pavilion. As the center of the campus, we have created a multifunctional square space.

## TECHNICAL INFORMATION

The second part of the study deals with the reconstruction and change of the functional use of the building of the laboratories of the faculty of mechanical engineering. After studying the materials, we respect the shape of the original design by architect Martin Kusý. We also take into account the original materials and replace them with similar ones. We are replacing the original facade ceramic cladding with a facade cladding with a brick texture and the original glass concrete with glazed surfaces. During the reconstruction, we retained the floor count of the building and the load-bearing system. It forms a reinforced concrete skeleton, which consists of columns with a cross-section of 300x500mm, in the longitudinal direction of the building axially spaced 3000m. A significant change, however, is the creation of an inner atrium, which pleasantly illuminates and opens the building. We design three main entrances to the building. The most distinctive main entrance is located on the side of the Faculty of chemical and food technology and the two smaller entrances are located on the side of the Faculty of mechanical engineering. On the first above-ground floor, which is partly below ground level, we design a info services and entrance area, technical background, workshops space, Presentation (experiential) center of science and research. On this floor, we also design large Social, exhibition and multipurpose spaces . Upon entering through the main entrance, the visitor finds himself in a generous area of the entrance hall, which is partly formed by a gallery passing through two floors. In the illuminated part of the building there is a cafe with outdoor seating and a print shop, which is available to all students. The second floor consists of Administrative offices of the Rectorate in connection to research, media library and study rooms, presentation center of science and research. One of the main part of the floor is canteen with kitchen and technical background, which we designed as a two floors loft with different type of sitting. The third floor is designed for the Innovative interdisciplinary research center STU, startup center and cooperation with practice. Area is designed in variable way according to the current needs. On each floor there are vertical communications such as stairs and elevators and sanitary facilities. The roof of the reconstructural building is designed like a green roof with possibility of utilization in the next building phase. On the top of the roof, we designed two separated spaces, which can be used as a design studios in future.

### Center of Innovation in Bratislava - Transformation of the courtyard

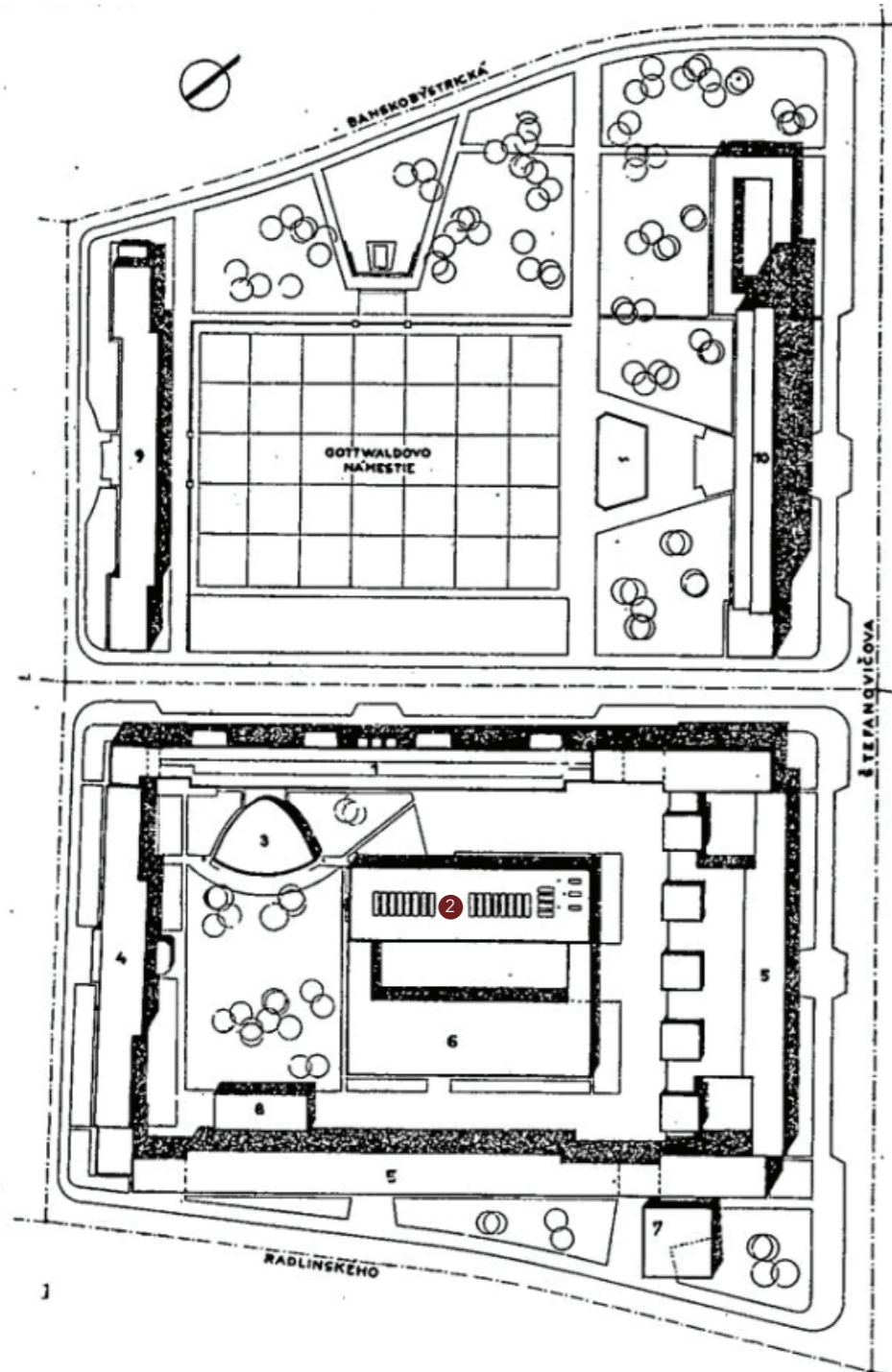


LEGEND

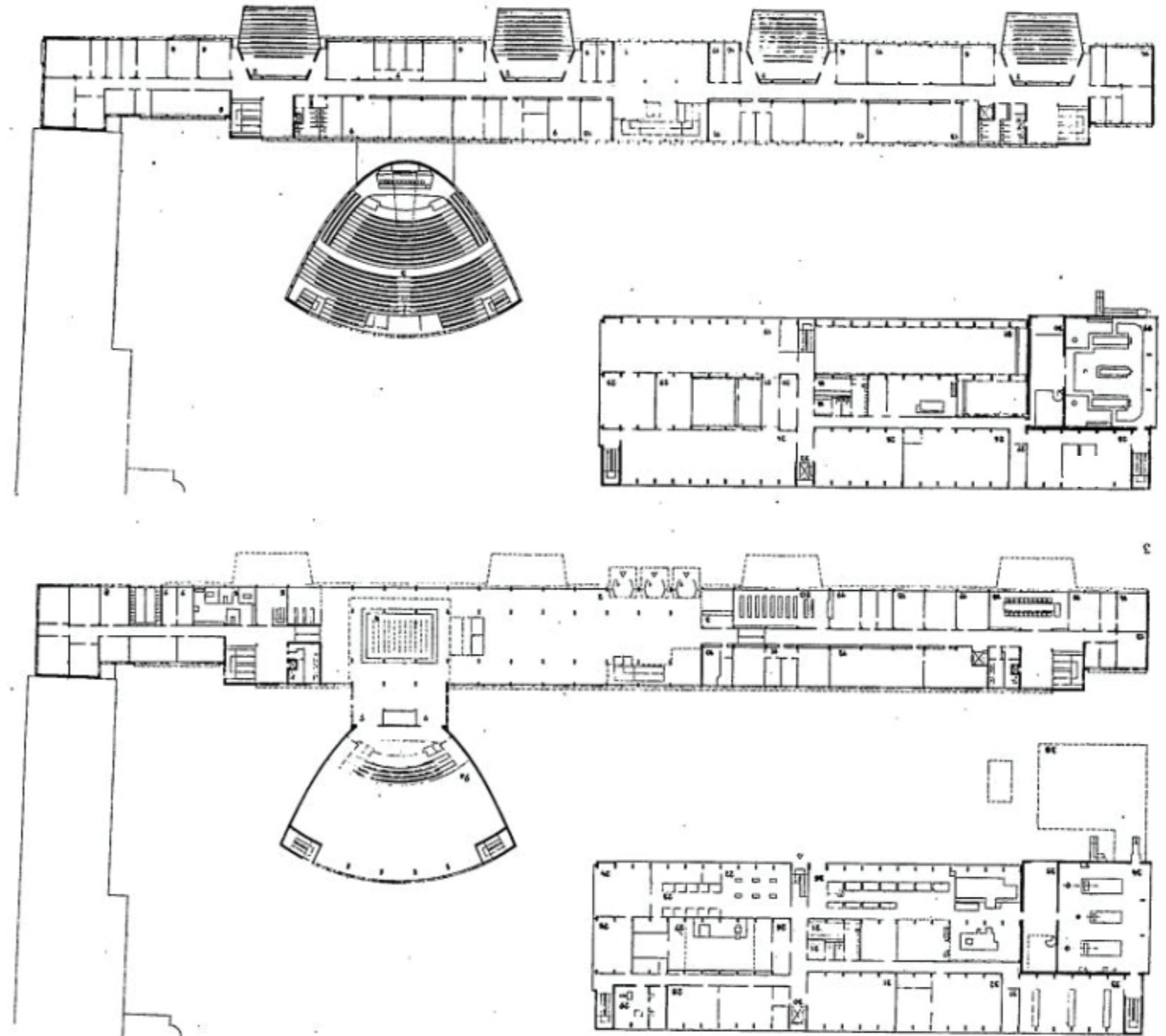
- |                                      |   |
|--------------------------------------|---|
| 1 Faculty of architecture and design | 3 Faculty of civil engineering            |
| 2 Faculty of mechanical engineering  | 4 Faculty of chemical and food technology |

**Center of Innovation in Bratislava - Transformation of the courtyard**

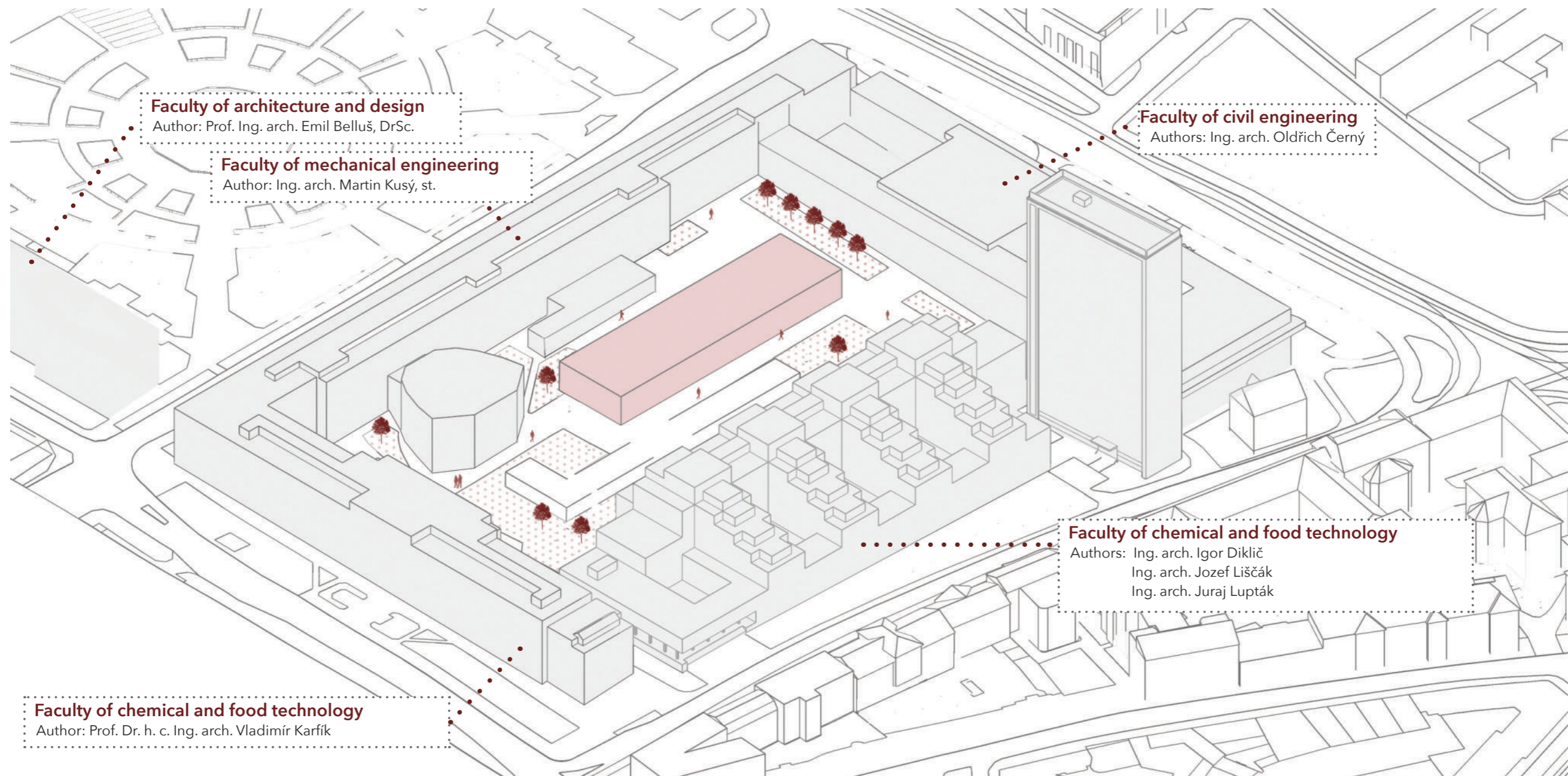
The idea of design of the courtyard by architect Emil Beluš from 1947.



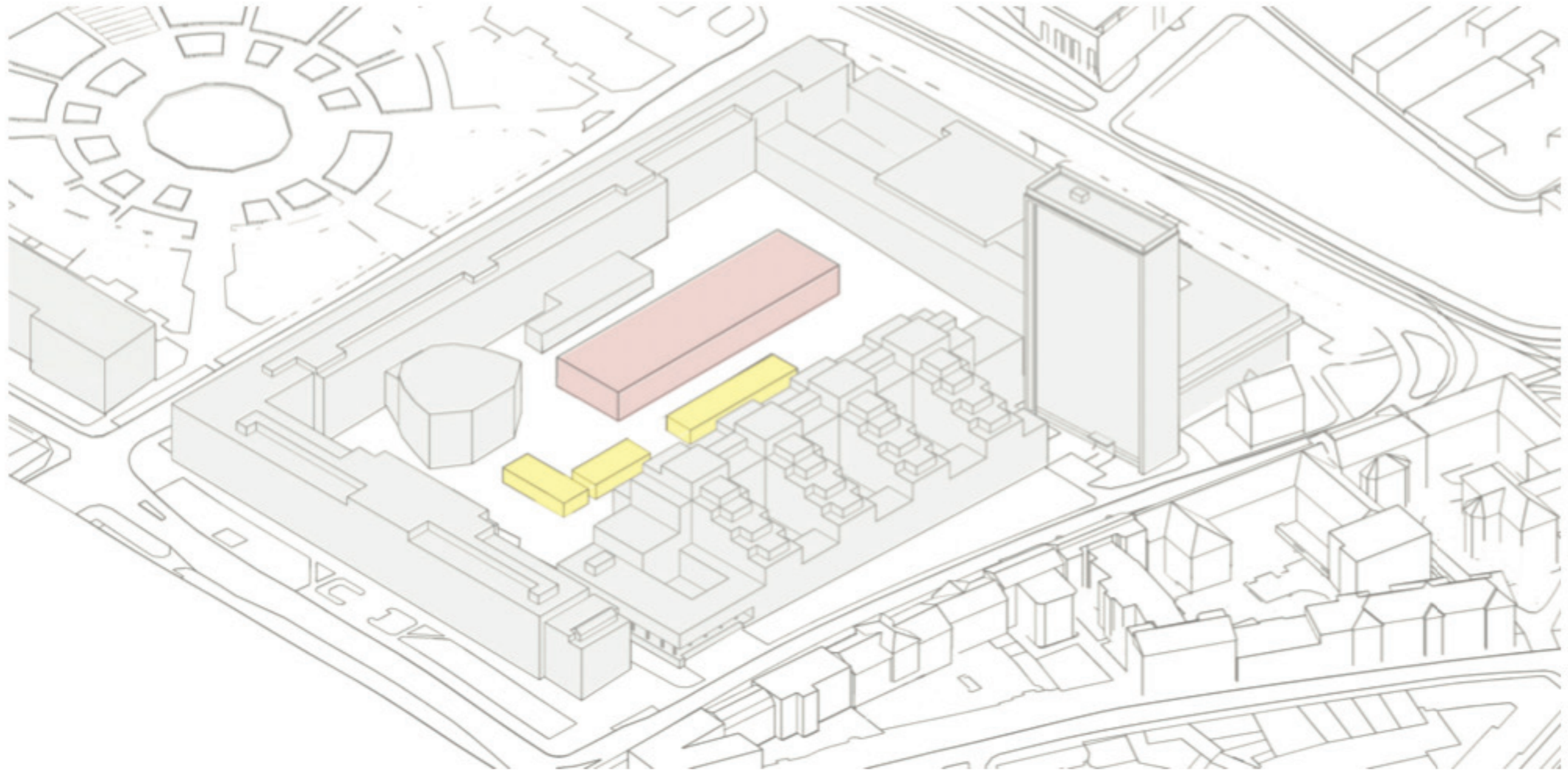
Design of the Faculty of Mechanical Engineering with laboratories by architect Martin Kusý. The proposal has been implemented.



**Center of Innovation in Bratislava - Transformation of the courtyard**



**Center of Innovation in Bratislava - Transformation of the courtyard**



proposed removal of the original small buildings - transformer stations, warehouses and reconstruction of the laboratory building

**Center of Innovation in Bratislava - Transformation of the courtyard**

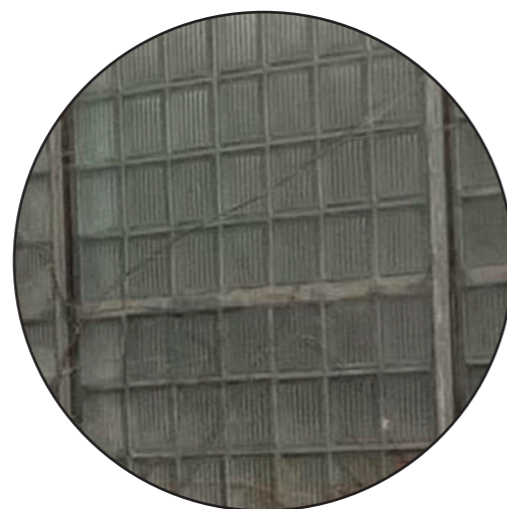


CURRENT\_MATERIALS

NEW\_MATERIALS

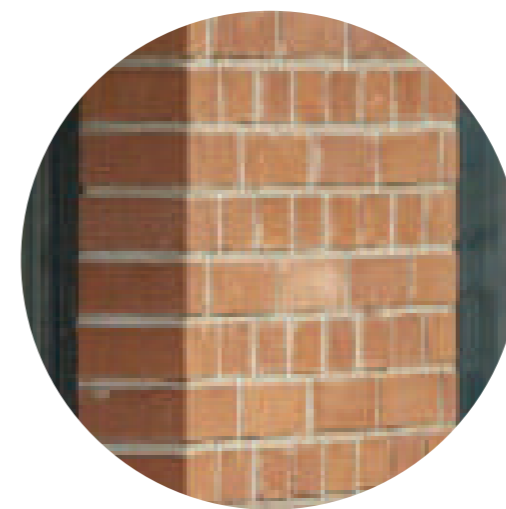


wall facing



windows

TRANSFORMATION



wall facing



windows

Center of Innovation in Bratislava - Transformation of the courtyard



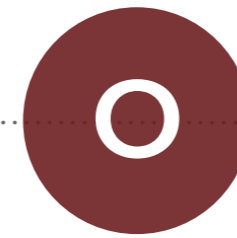
STRENGTHS

Faculties in direct contact with inner block  
 Number of entrances to the courtyard for pedestrians  
 Connection to the city mass transport  
 Significant dominants in the near surroundings



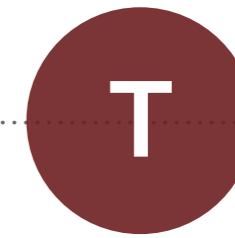
WEAKNESSES

Non-use of common areas in the courtyard  
 Absence of a university building for students  
 Unorganized, chaotic parking  
 Deterioration of facades of faculty buildings  
 Trashes



OPPORTUNITIES

Construction of an underground garage  
 Creating meeting rooms for students  
 Reconstruction of existing laboratories on a university campus for students  
 Interactive use of the exterior spaces of the courtyard



THREATS

Restriction of construction by engineering networks in the courtyard  
 Management disagreement with development plans  
 Lack of funds

## UNUSED UNIVERSITY COURTYARD



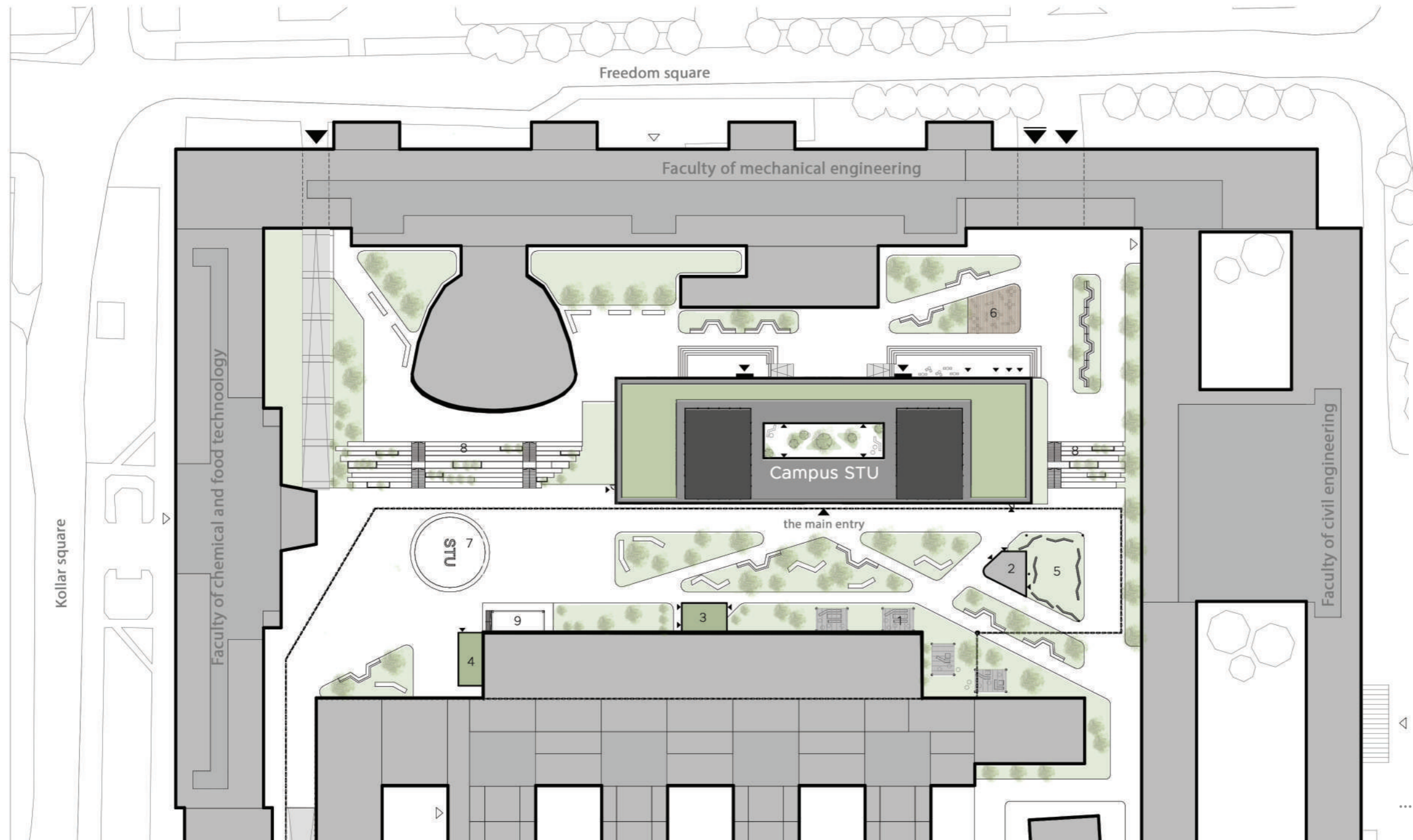
TRASH



CHAOTIC PARKING



DETERIORATION OF  
FACADES OF FACULTY  
BUILDINGS



LEGEND

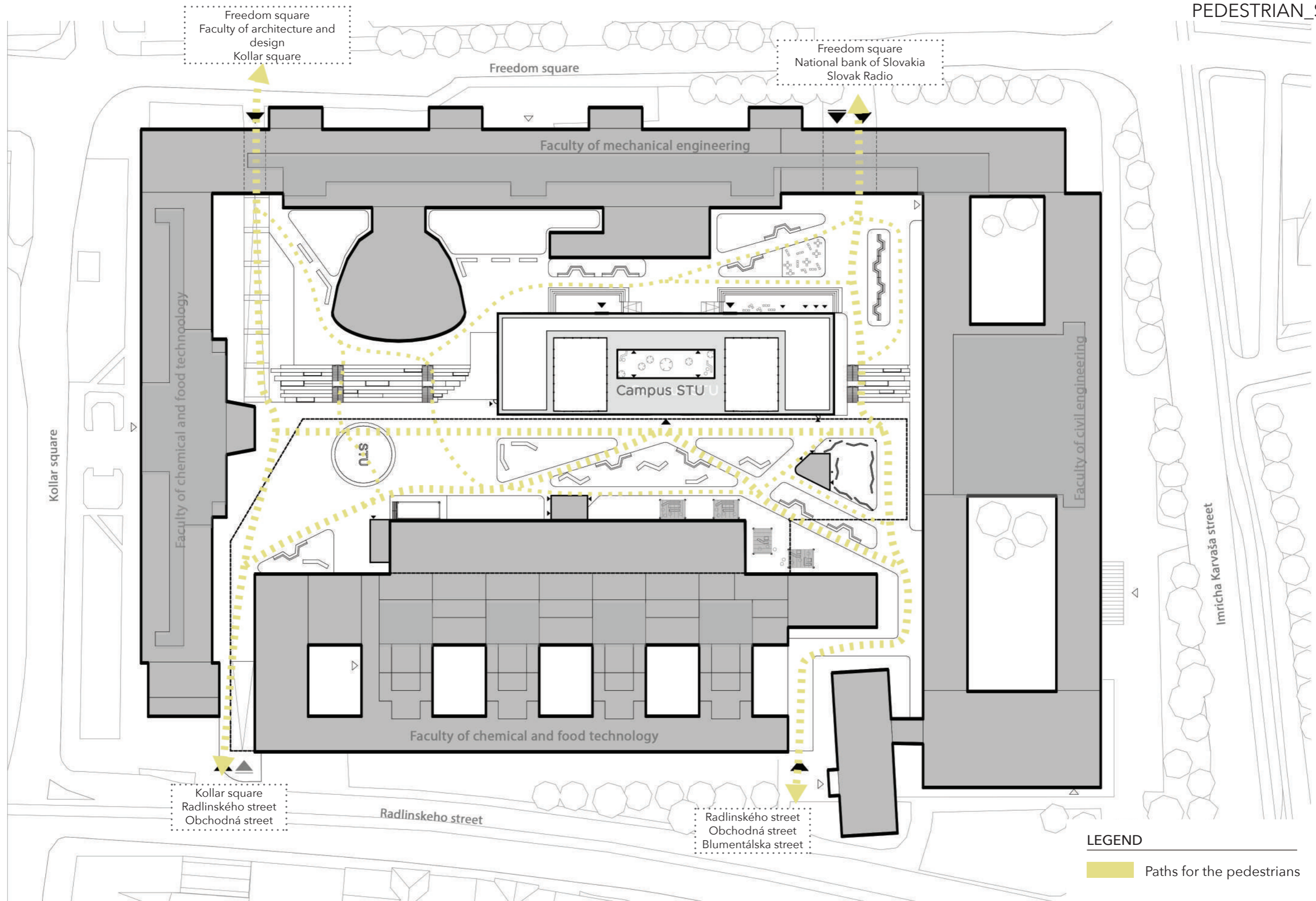
- 1 - external study rooms and classrooms
- 2 - exit from the underground garage
- 3 - exit from the underground garage with toilets
- 4 - exit from the underground garage with bicycle stands
- 5 - exhibition pavilion
- 6 - outdoor seating
- 7 - square - multifunctional space
- 8 - bleachers

- ..... underground garage
- △ entrance to the faculty
- ▲ entrance to the Campus STU
- ▲ entry to the underground garage
- ▲ entry to the courtyard
- ▲ entrance to the courtyard



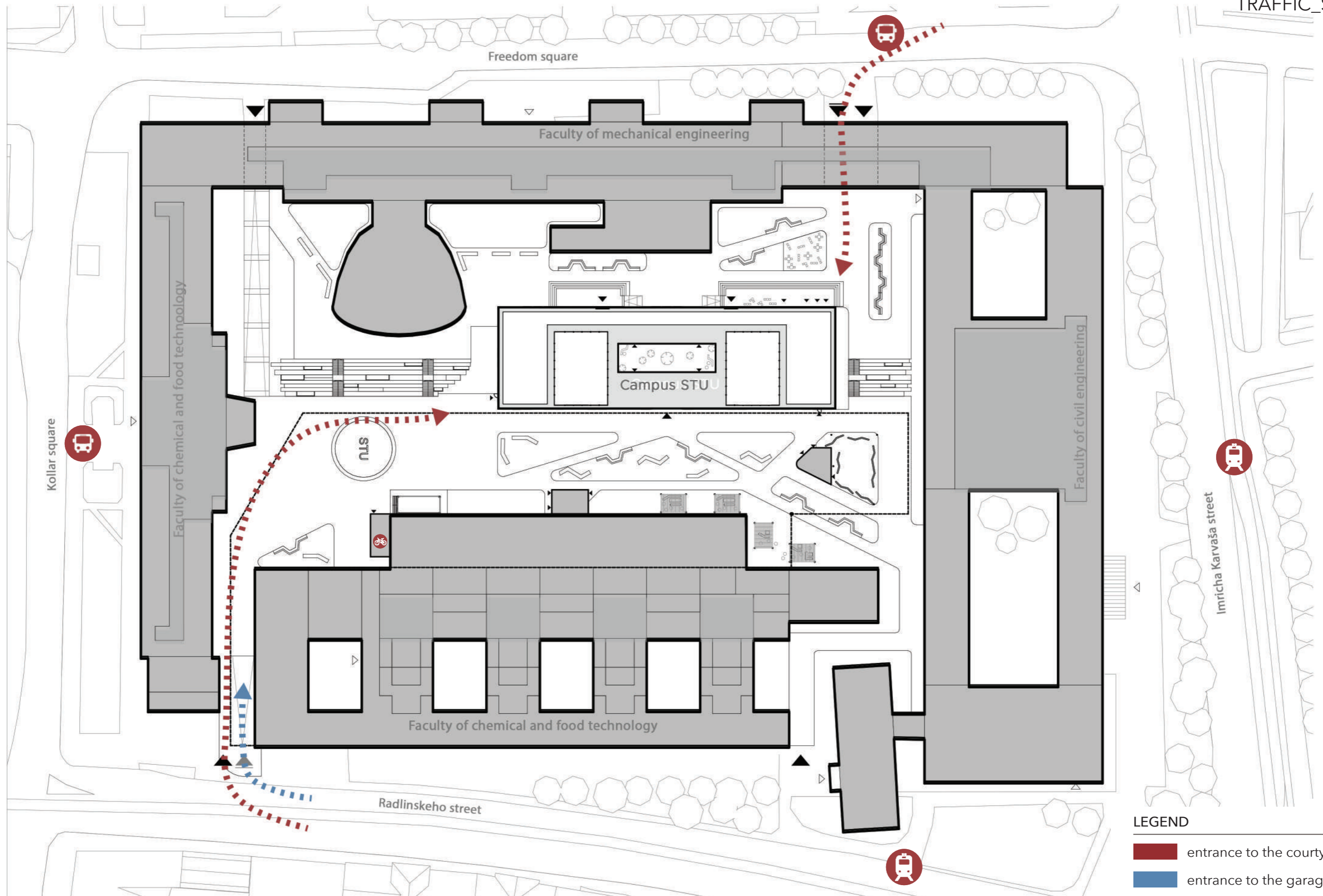
M 1:1 000

**Center of Innovation in Bratislava - Transformation of the courtyard**



**LEGEND**  
Paths for the pedestrians

**Center of Innovation in Bratislava - Transformation of the courtyard**

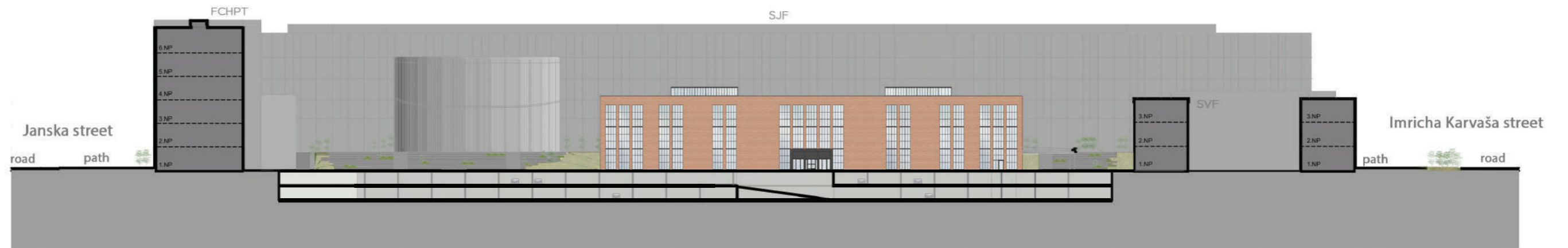


- LEGEND
- Red dashed line: entrance to the courtyard
  - Blue dashed line: entrance to the garage

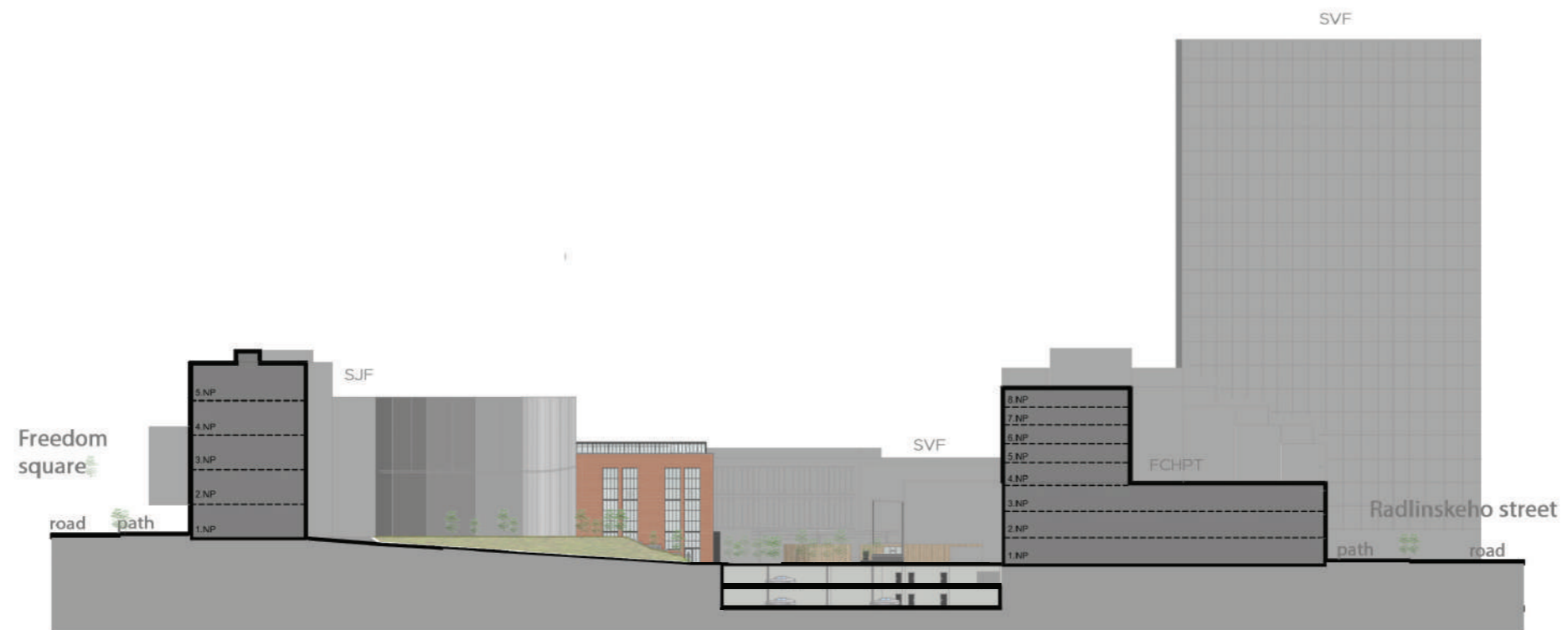
**Center of Innovation in Bratislava - Transformation of the courtyard**

SECTIONAL VIEWS

SOUTHEAST VIEW

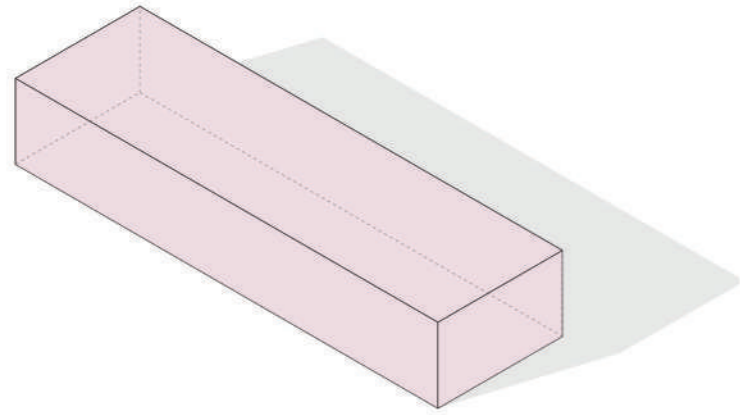


NORTHEAST VIEW

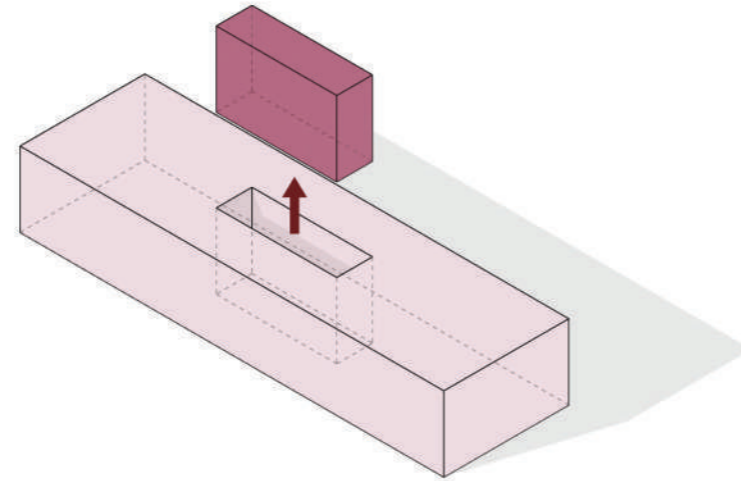


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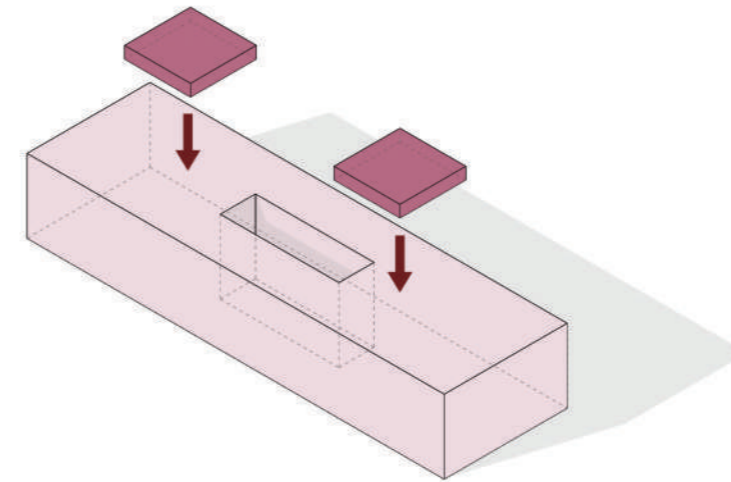
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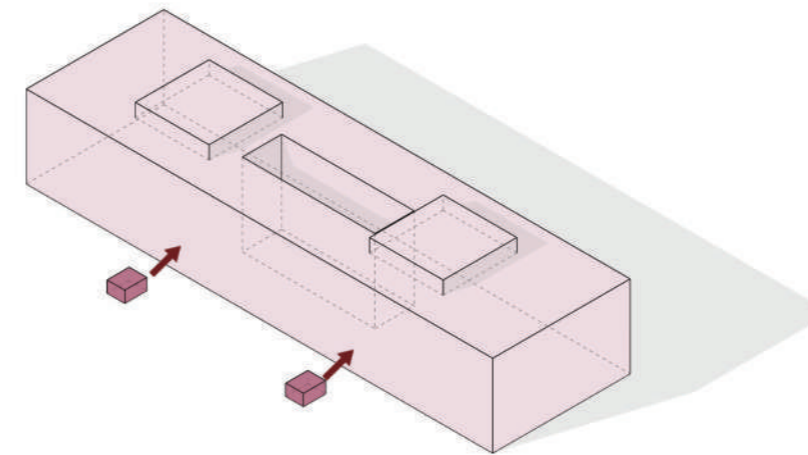
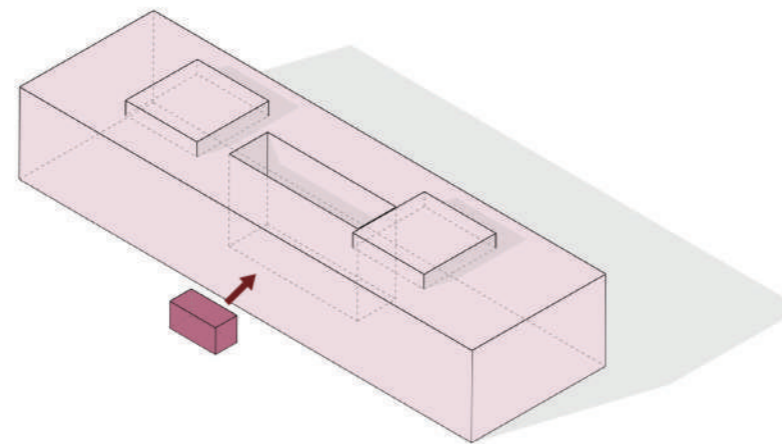
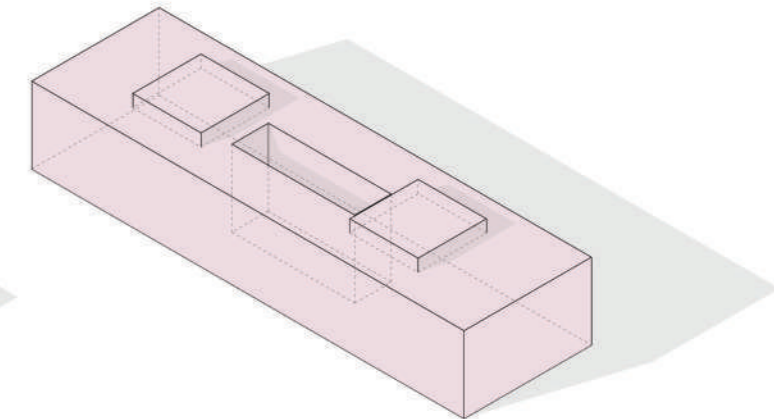
basic object



completion of the internal atrium



completion of vertical communications to the roof

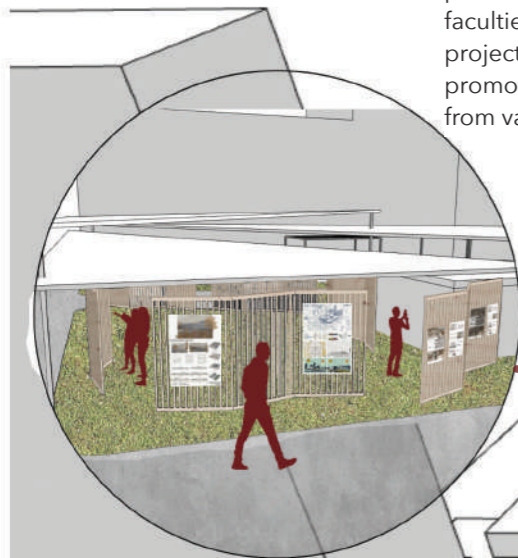


accentuating the entrances to the building by pulling in the mass

**Center of Innovation in Bratislava - Transformation of the courtyard**

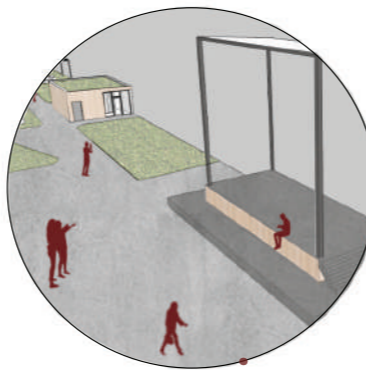
**The exhibition pavilion**

The outdoor exhibition pavilion is used primarily for the presentation of STU faculties, for the exhibition of student projects, year works, but also for the promotion of works of art by students from various subjects and faculties.



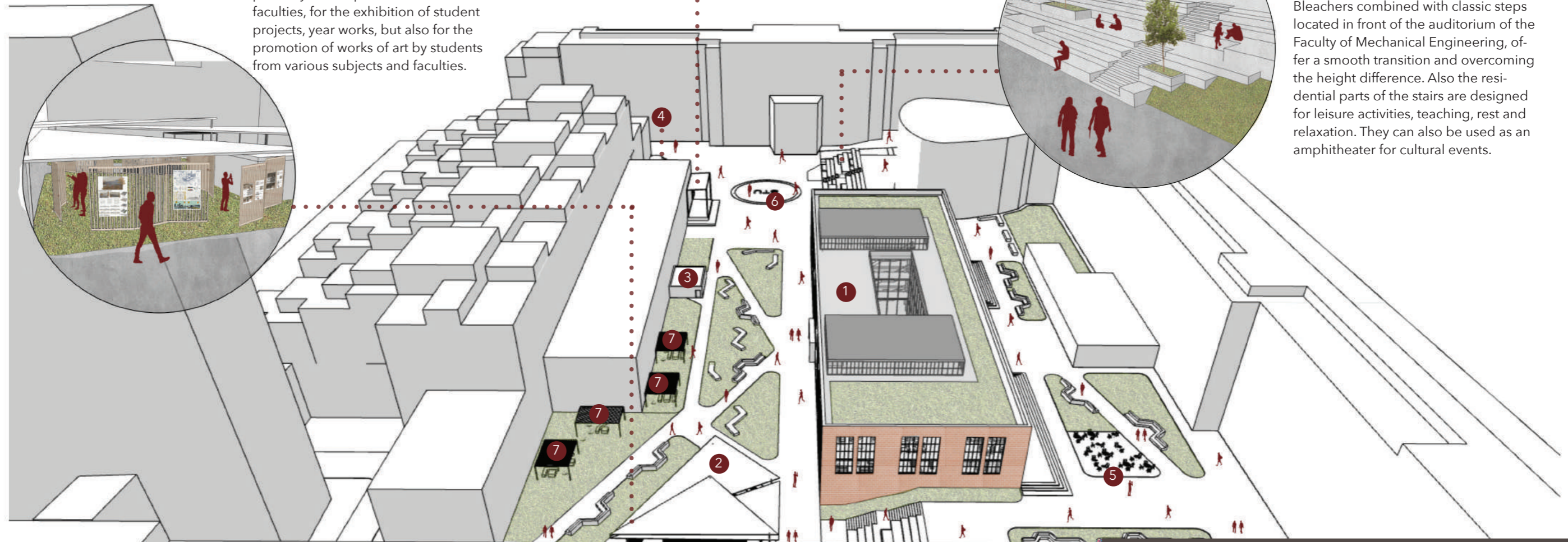
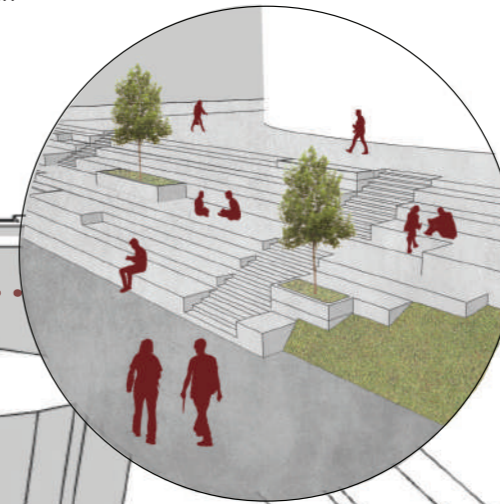
**Square with a podium**

The main meeting point for students and the public is the square. There is a symbolic circle with the STU logo on the square. There is also an elevated ground for various social events, but there is also the possibility of stretching the screen and showing films in the evening.



**Bleachers**

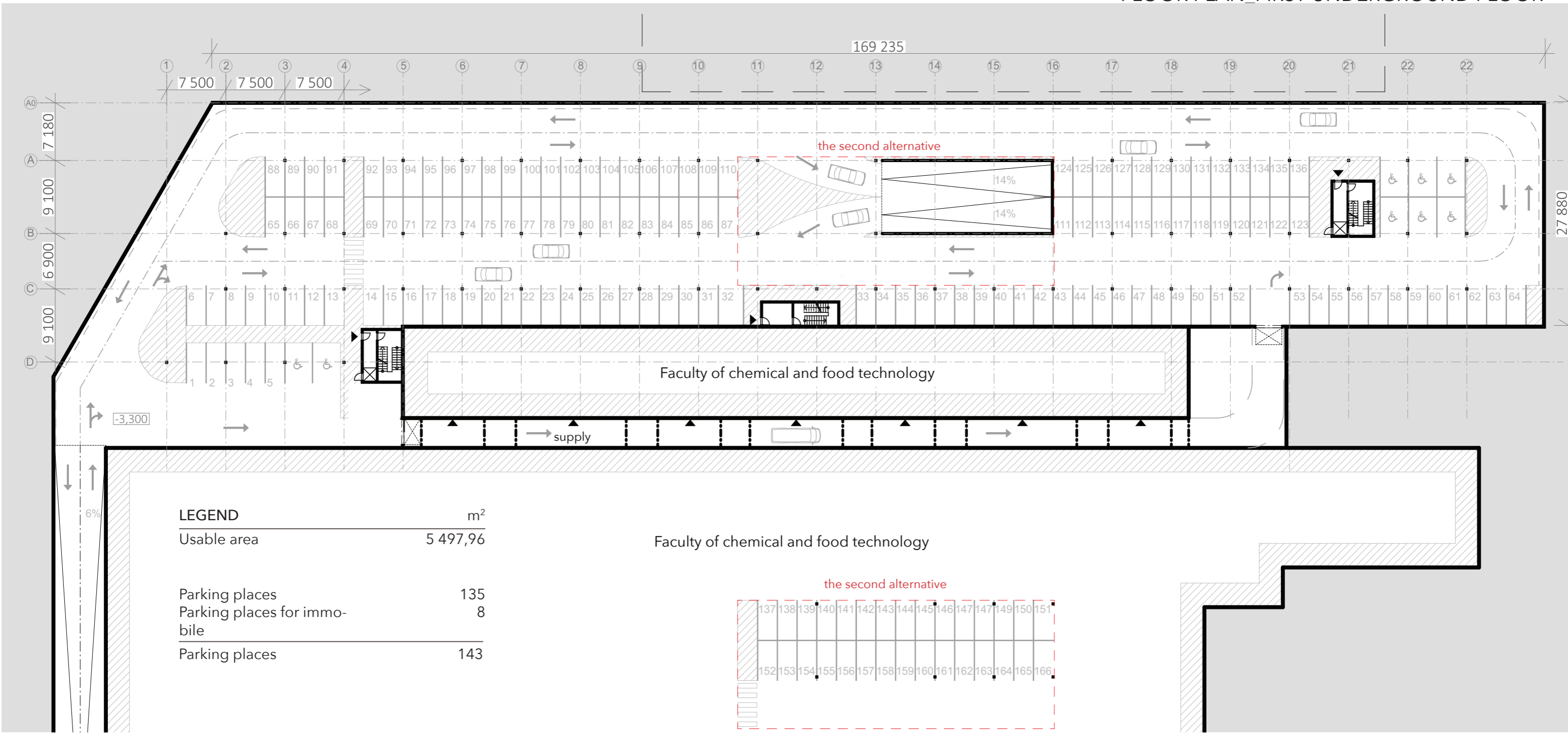
Bleachers combined with classic steps located in front of the auditorium of the Faculty of Mechanical Engineering, offer a smooth transition and overcoming the height difference. Also the residential parts of the stairs are designed for leisure activities, teaching, rest and relaxation. They can also be used as an amphitheater for cultural events.



**LEGEND**

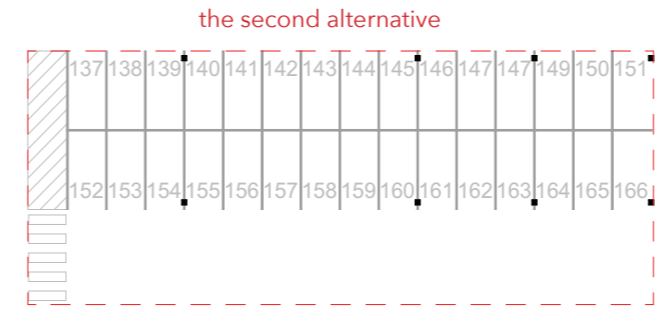
- 1 Campus STU
- 2 exit from the underground garage
- 3 exit from the underground garage with toilets
- 4 exit from the underground garage with bicycle stands
- 5 outdoor seating
- 6 square - multifunctional space
- 7 external study rooms and classrooms

**Center of Innovation in Bratislava - Transformation of the courtyard**



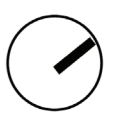
LEGEND	m <sup>2</sup>
Usable area	5 497,96
Parking places	135
Parking places for im- mobile	8
Parking places	143

Faculty of chemical and food technology



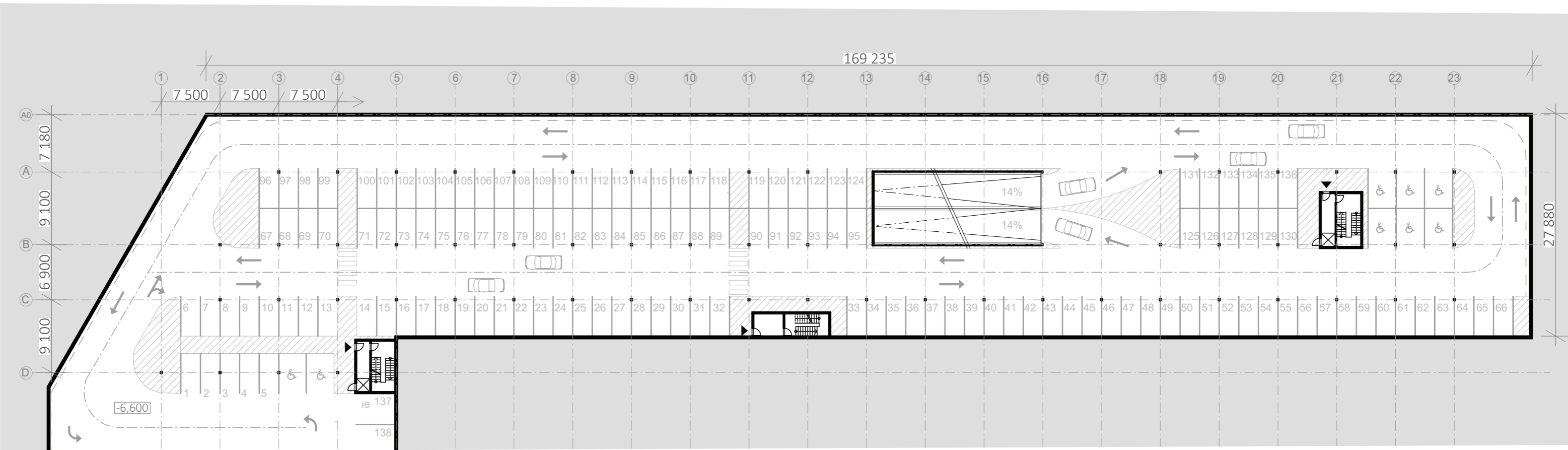
Due to respecting the utilities running along the courtyard, the proposed garage does not have a rectangular ground plan, but one side is bevelled and adapted so as not to encroach on the protection zone of existing utilities.

The primarily designed underground garage is designed as a two-storey underground garage, which provides 288 parking spaces on an area of 10,993.93 m<sup>2</sup>. However, this solution does not meet the conditions of competition due to its size. Therefore, as a variant solution, we created a design of an underground garage, which is designed as a single-storey underground garage with 173 parking spaces on an area of 5,497.96 m<sup>2</sup>, thus meeting the criteria of area and number of parking spaces per underground garage.



M 1:500

# FLOOR PLAN\_SECOND UNDERGROUND FLOOR

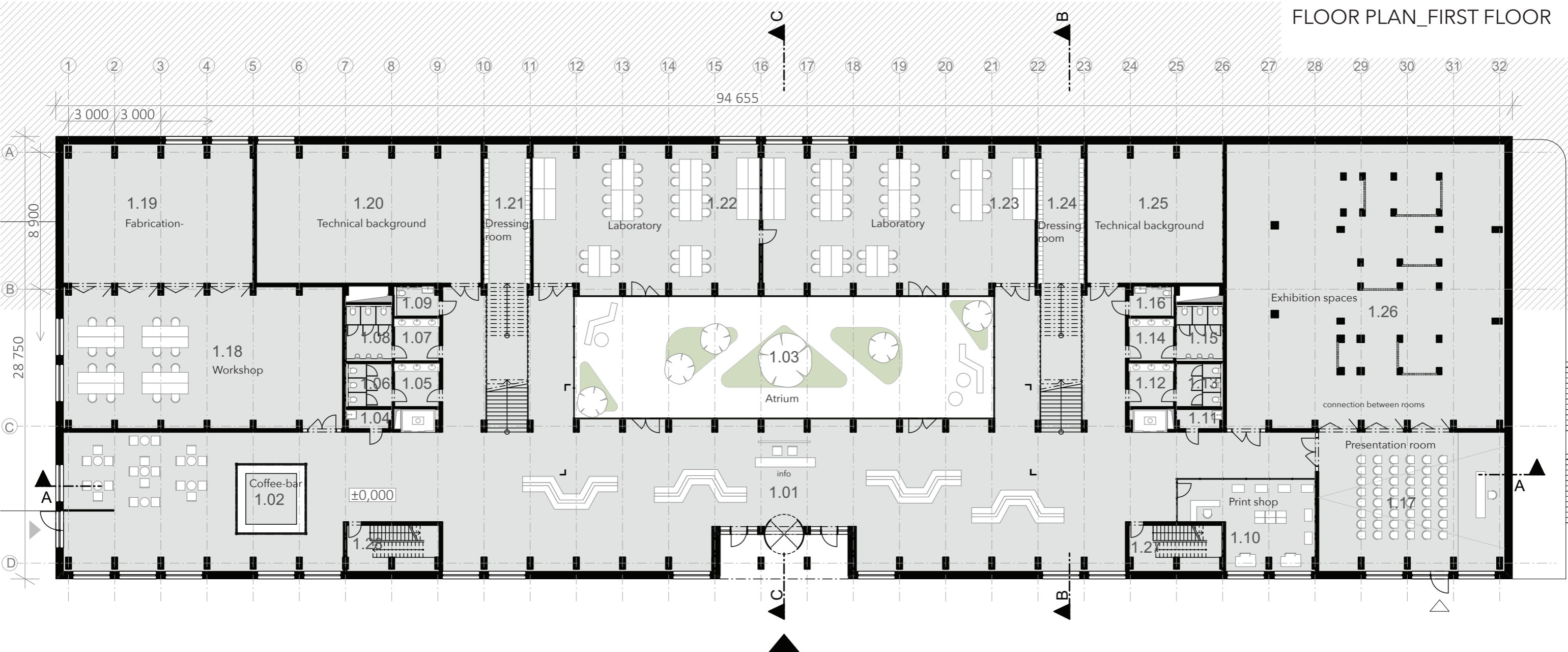


LEGEND	m <sup>2</sup>
Usable area	5 495,97
Parking places	137
Parking places for immobile	8
Parking places	145



M 1:500

## Center of Innovation in Bratislava - Transformation of the courtyard



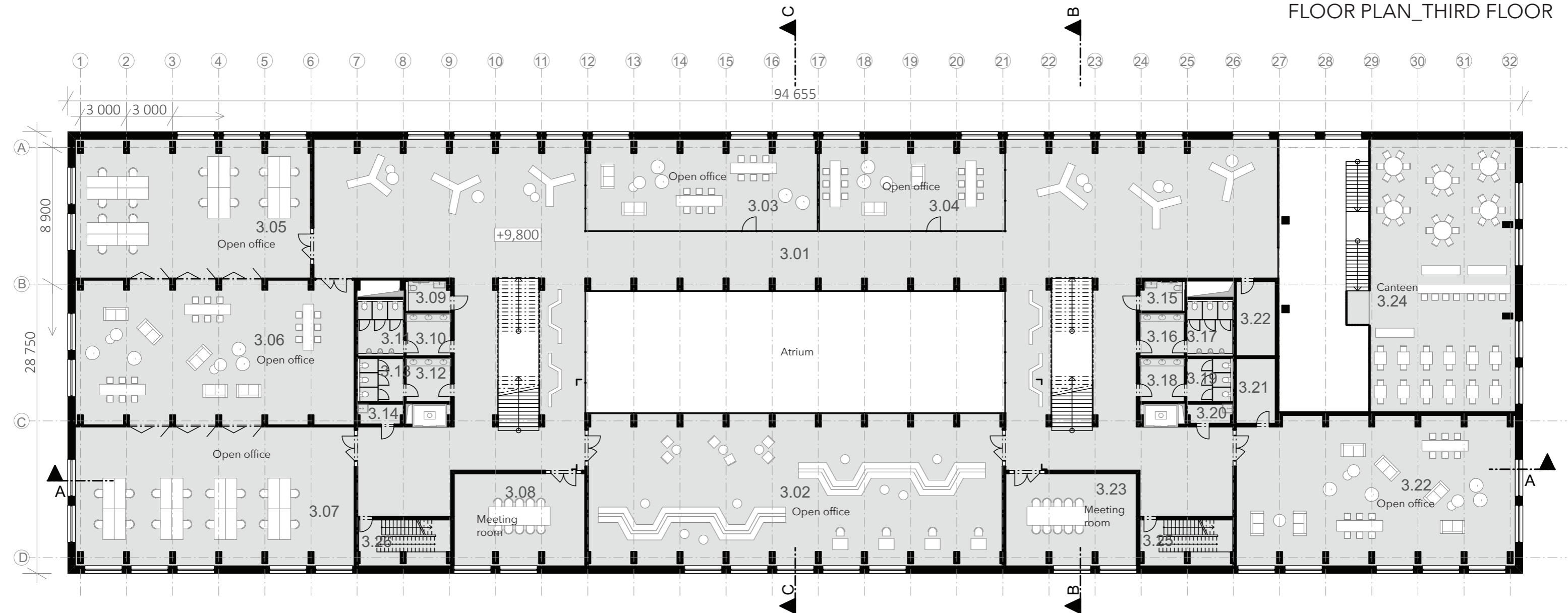
LEGEND		m <sup>2</sup>			m <sup>2</sup>			m <sup>2</sup>
1.01	Hall	802,06	1.11	Cleaning room	3,68	1.21	Dressing room	26,47
1.02	Coffee-bar	19,97	1.12	WC women hall	8,25	1.22	Laboratory	140,71
1.03	Atrium	215,29	1.13	WC women	8,18	1.23	Laboratory	169,73
1.04	Cleaning room	3,65	1.14	WC men hall	8,08	1.24	Dressing room	26,47
1.05	WC women hall	8,25	1.15	WC men	10,37	1.25	Technical background	79,57
1.06	WC women	8,04	1.16	WC for immobile	5,23	1.26	Exhibition spaces	328,70
1.07	WC men hall	8,08	1.17	Presentation room	108,68	1.27	Stairs	17,64
1.08	WC men	10,20	1.18	Workshop	165,58	1.28	Stairs	17,53
1.09	WC for immobile	5,23	1.19	Fabrication	110,37			
1.10	Print shop	43,22	1.20	Technical background	131,31			
						Usable area		2 490,56



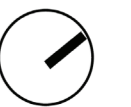
M 1:250

**Center of Innovation in Bratislava - Transformation of the courtyard**



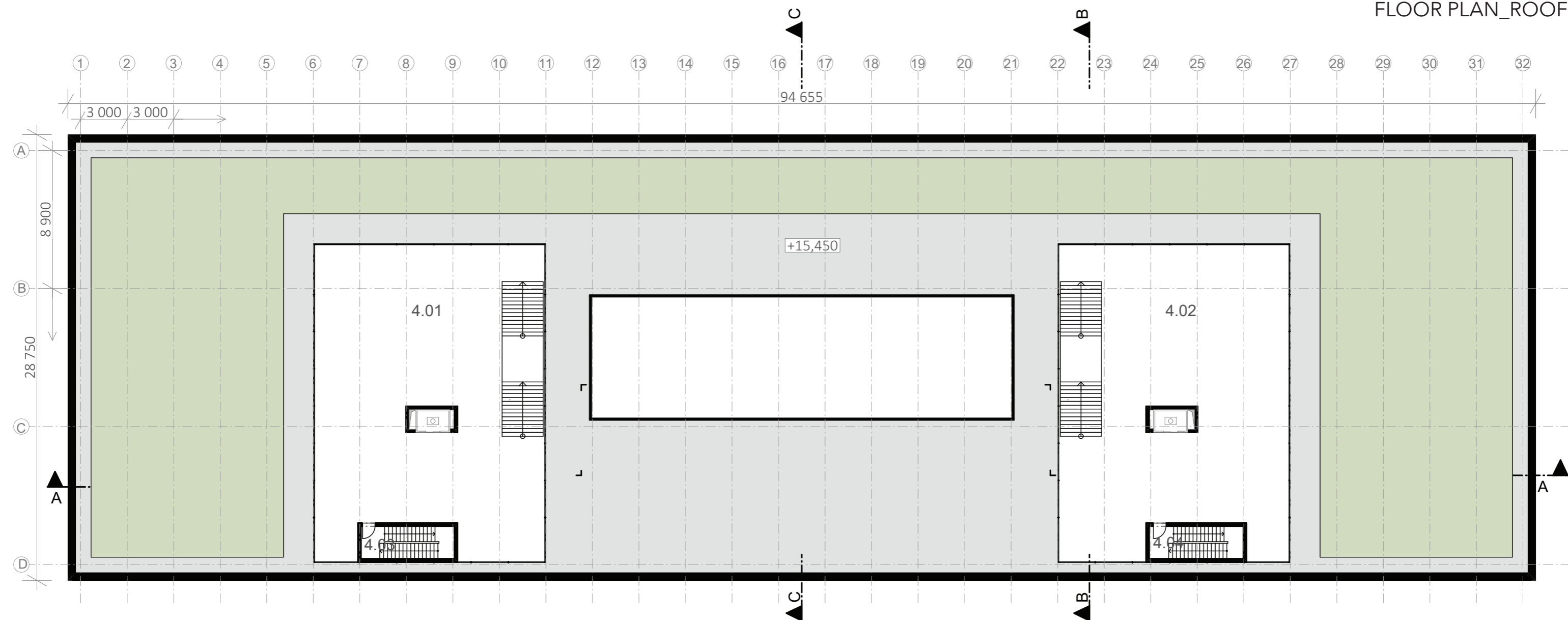


LEGEND	m <sup>2</sup>		m <sup>2</sup>		m <sup>2</sup>
3.01 Common area	708,35	3.11 WC men	10,20	3.21 Store	10,89
3.02 Open office	264,81	3.12 WC women hall	8,25	3.22 Open office	188,87
3.03 Open office	89,92	3.13 WC women	8,04	3.23 Meeting room	51,68
3.04 Open office	71,80	3.14 Cleaning room	3,78	3.24 Canteen	169,92
3.05 Open office	139,69	3.15 WC for immobile	5,23	3.25 Stairs	17,64
3.06 Open office	169,858	3.16 WC men hall	8,08	3.26 Stairs	17,53
3.07 Open office	166,38	3.17 WC men	10,20		
3.08 Meeting room	51,68	3.18 WC women hall	8,25	Usable area	2 206,17
3.09 WC for immobile	5,37	3.19 WC women	8,04		
3.10 WC men hall	8,08	3.20 Cleaning room	3,65		



M 1:250

**Center of Innovation in Bratislava - Transformation of the courtyard**



LEGEND		m <sup>2</sup>
4.01	Free space	220,13
4.02	Free space	220,13
4.03	Stairs	12,65
4.04	Stairs	12,76
Usable area		589,35

Grasses area	1315,37
Paved area	1070,41
Roof area	2385,78

The roof of the building is designed as an extensive green roof, which contributes to the overall climate comfort in the building. In addition to the green part of the roof, there are also paved areas, which are designed as living areas with preparation for rest and two covered areas, which are designed for the next stage of construction as rentable spaces and studios.



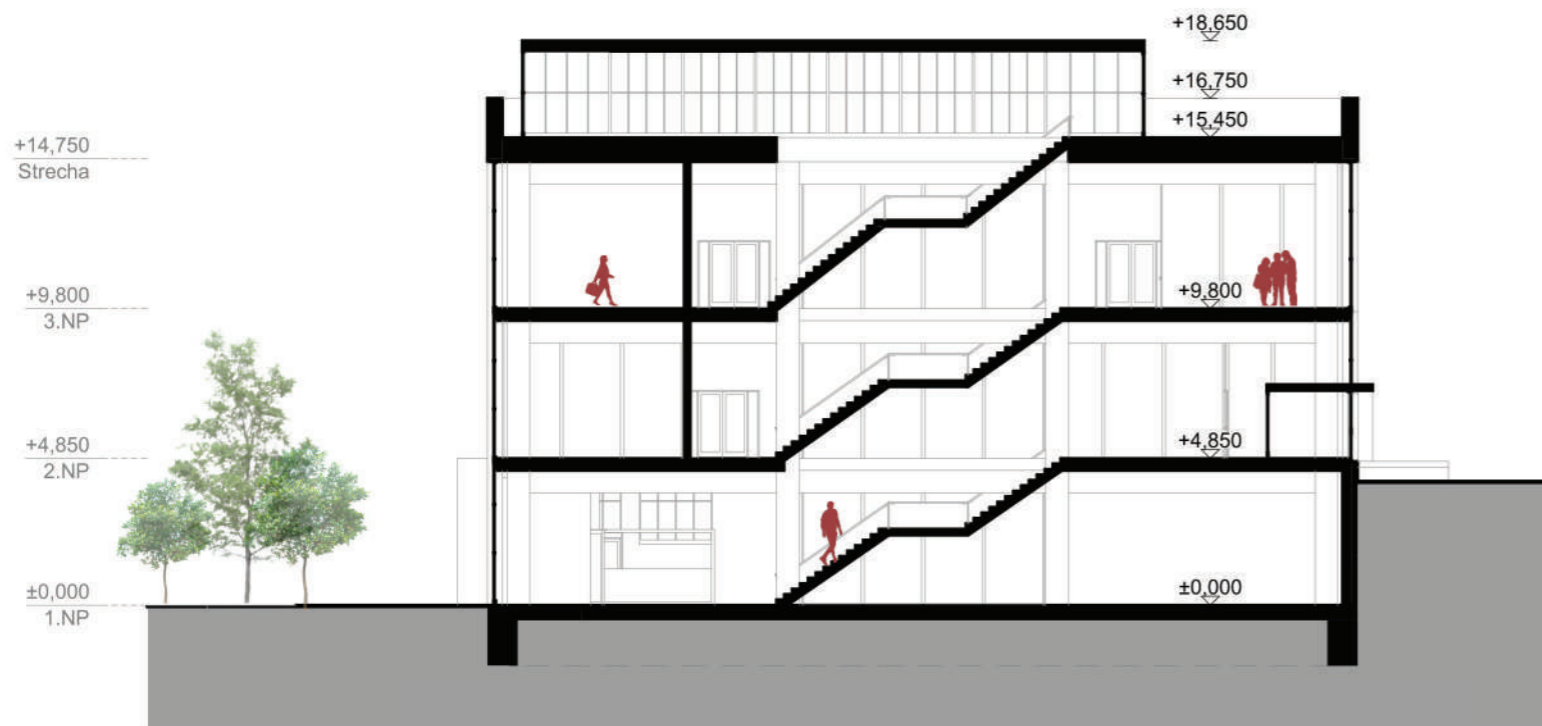
M 1:250

**Center of Innovation in Bratislava - Transformation of the courtyard**

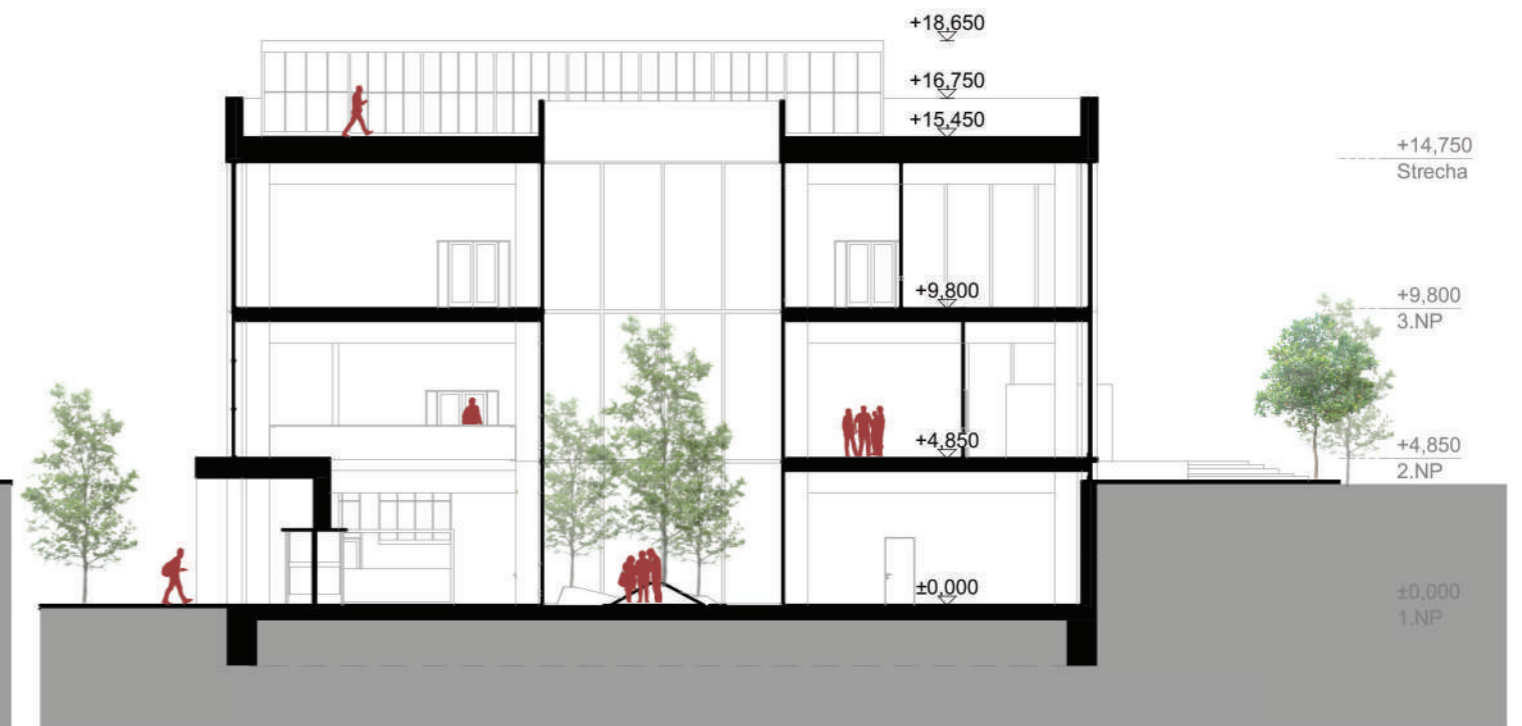
LONGITUDINAL SECTION A-A'



CROSS-SECTION B-B'



CROSS-SECTION C-C'



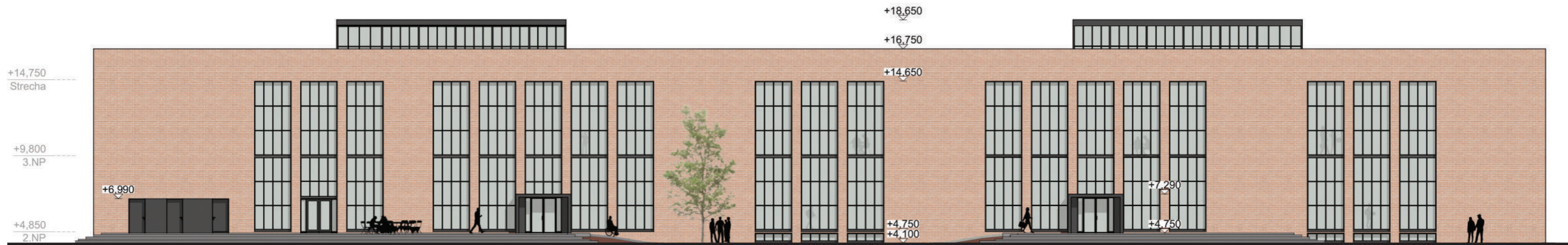
M 1:250

Center of Innovation in Bratislava - Transformation of the courtyard

SOUTHEAST VIEW



NORTHWEST VIEW



M 1:250

Center of Innovation in Bratislava - Transformation of the courtyard

SOUTHWEST VIEW

BOČNÉ\_POHLADY



NORTHEAST VIEW

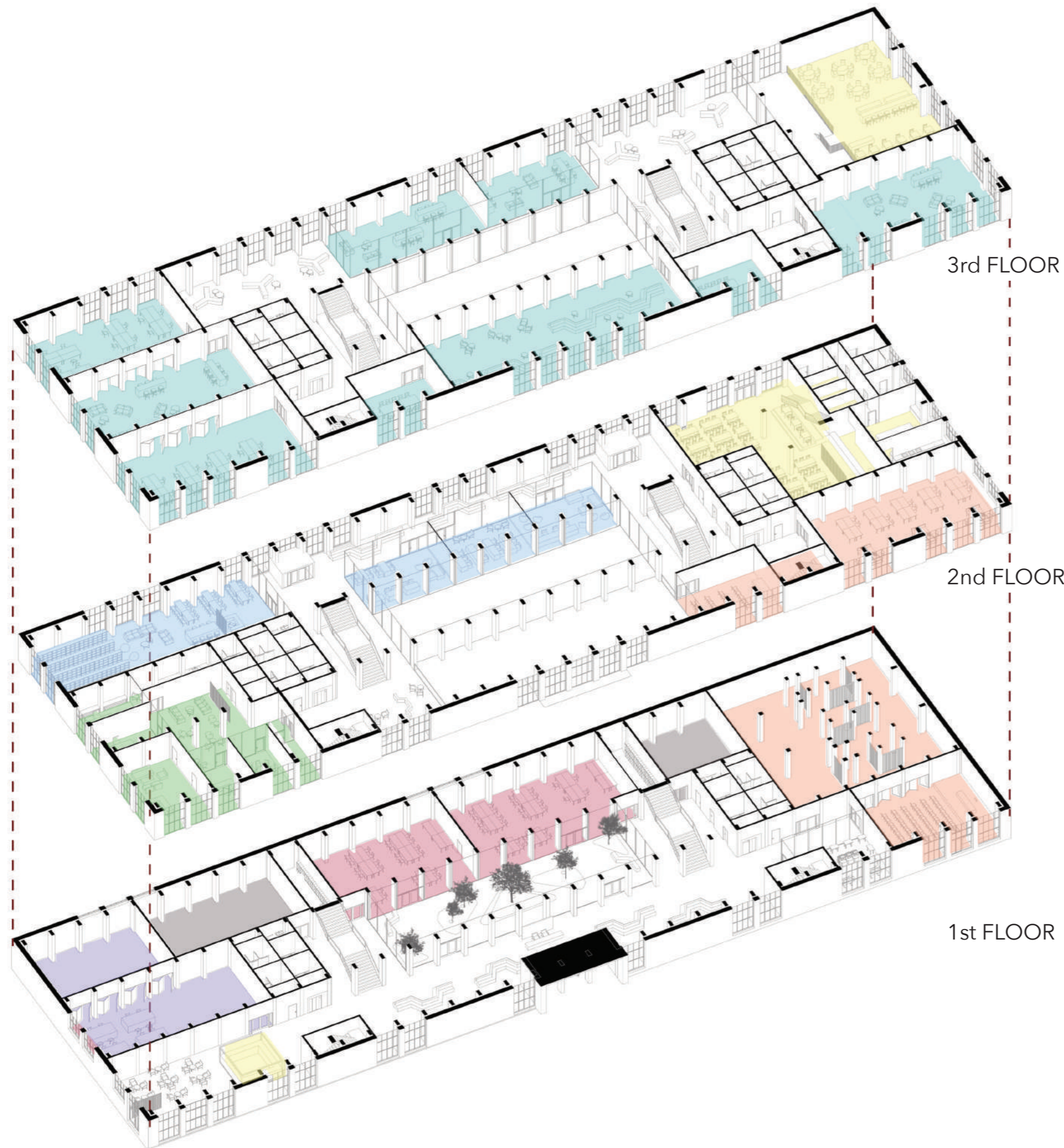
M 1:250

**Center of Innovation in Bratislava - Transformation of the courtyard**

Students: Bc. Veronika Slížová, Bc. Adela Katarína Škorupová

Tutors: Petelen /Vinarčíková /Salcer

Inspireli Competition Campus STU



3rd FLOOR

2nd FLOOR

1st FLOOR

- Workshops
- Technical background
- Presentation (experiential) center of science and research
- Social, exhibition and multipurpose spaces
- Administrative offices of the Rectorate in connection to
- Media library, study rooms
- Catering, restaurants, cafes
- Innovative interdisciplinary research center STU, startup center, cooperation with practice

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