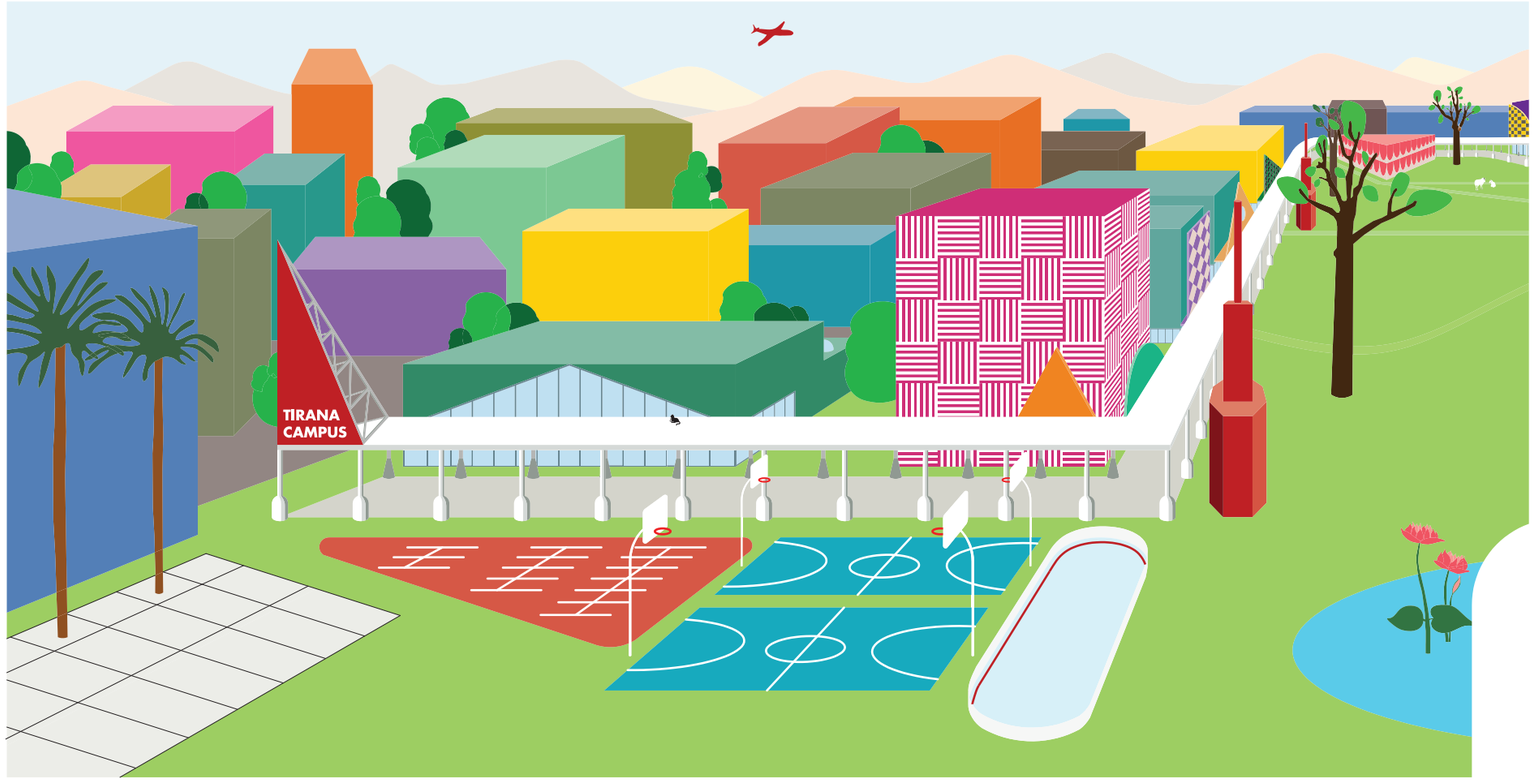


MASTER PLAN "CAMPUS"
CONSTRUCTING NEW STUDENT RESIDENCES
AND REHABILITATING THE EXHISTING ONES

international urban and architectural design competition

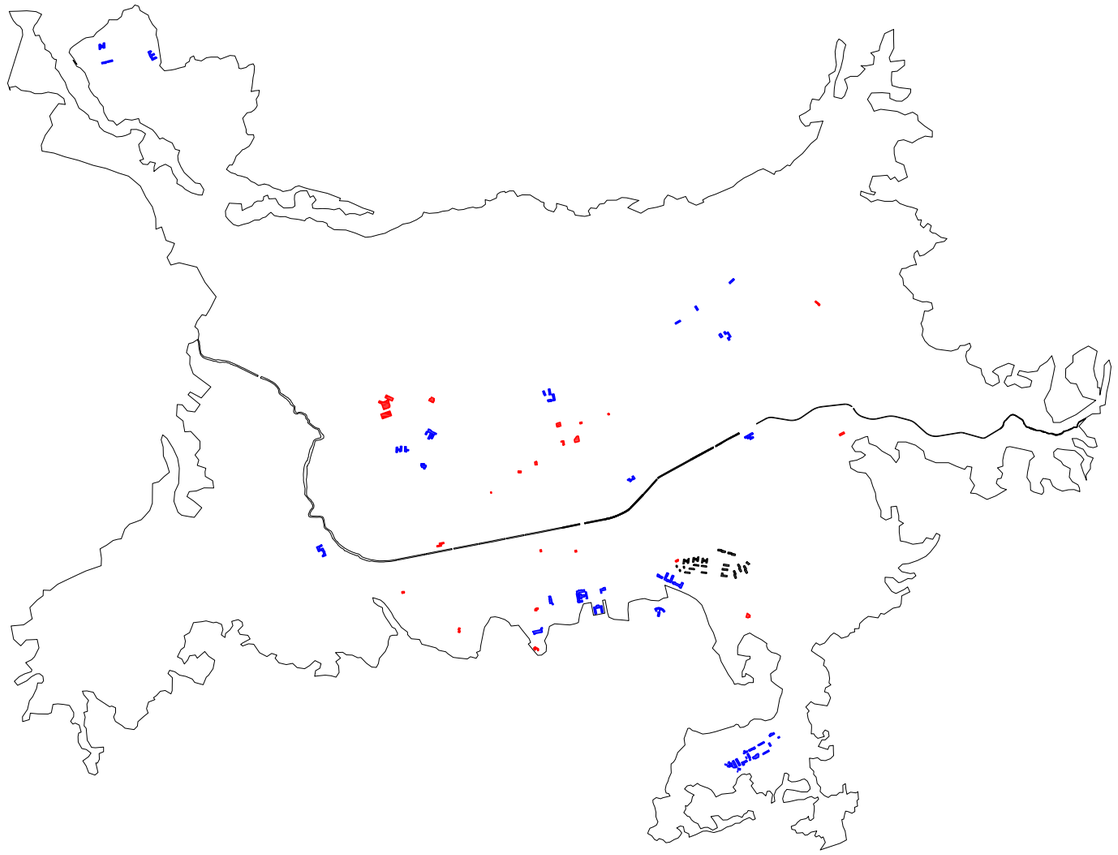
BAUKUH
LIST
ABKONS
F&M INGEGNERIA
SPACE CAVIAR
BODÀ

The Rockefeller centre design team

Description, Design, Process

The Student City is a complex built over more than 50 years, including almost 30 major buildings, with a surface of around 250,000 sqm. Transforming the Student City does not just imply the development of a design, but requires the definition of a method to look at this ensemble (an *attitude towards description*) and a strategy to organize the ensuing process. This means that the crucial operation is *to observe*: to constantly check the balance in between the Student City and the city around it, to recognize their mutual adjustments, to detect changes in the urban processes as soon as they appear.

For this reason, more than a simple design, we propose a *commitment to observation*, a *style of description* and a *strategy of action*. We believe it is crucial to recognize all available assets, to define all possible protagonists of the transformation, to activate all energies and to imagine a possible discourse that could bring all these different subjects together. The urban challenge is also a geographical, economical and rhetorical one.



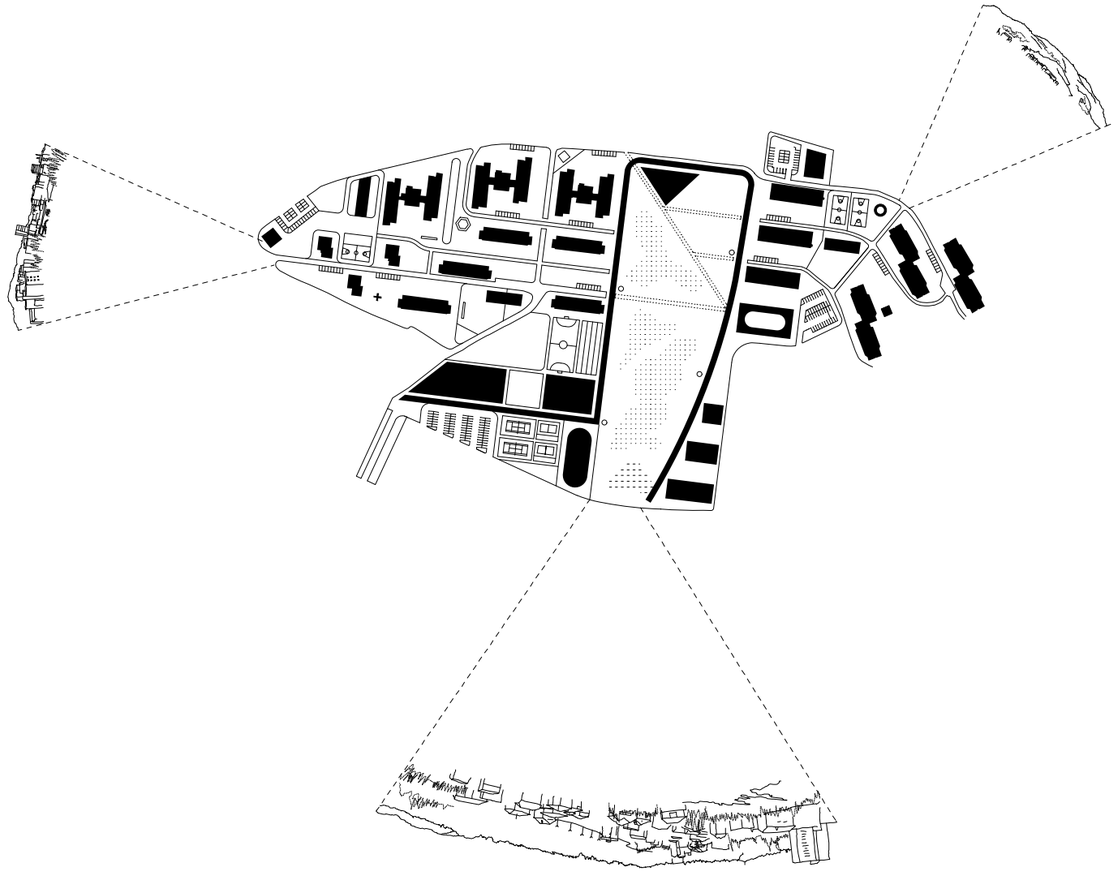
Public universities
Private universities
The campus

Universities in Tirana

The Student City needs to be considered in relation to the overall educational offer of Tirana.

Si nce the 90s, a number of private universities started to be active in the city, entirely changing the dynamics of the higher education in Albania. The Student City is no more the only place where university students live; the public university is no more the only place where students can receive higher education. This means that the Student City must relate to a plurality of universities and to a plurality of privately owned residential clusters scattered through the city. While it is difficult to imagine that the Student City could host students enrolled in private universities, it is important to adapt the new configuration of the complex to a plurality of possible users (students, Erasmus students, fellows, visiting professors, lecturers from other universities) and to a multitude of paces in the use of the different facilities. Also he Student City should become more attractive and more open to populations different from university students. In order to do this, the Student City should diversify its program, become more complex and host a larger range of possible activities.

The problem of the Student City cannot be understood just thinking of the Student City, but needs to be developed thinking of what the Student City can do for the entire City of Tirana. In fact, with a potential population of around 10,000 students, the Student City will have a mass of students roughly similar to the entire student population of Yale (or half of the student population of Cambridge or Oxford). This impressive concentration of innovative energy located right next to the centre of the city needs to become an explicit engine of the urban life of Tirana.



Tirana

Geography

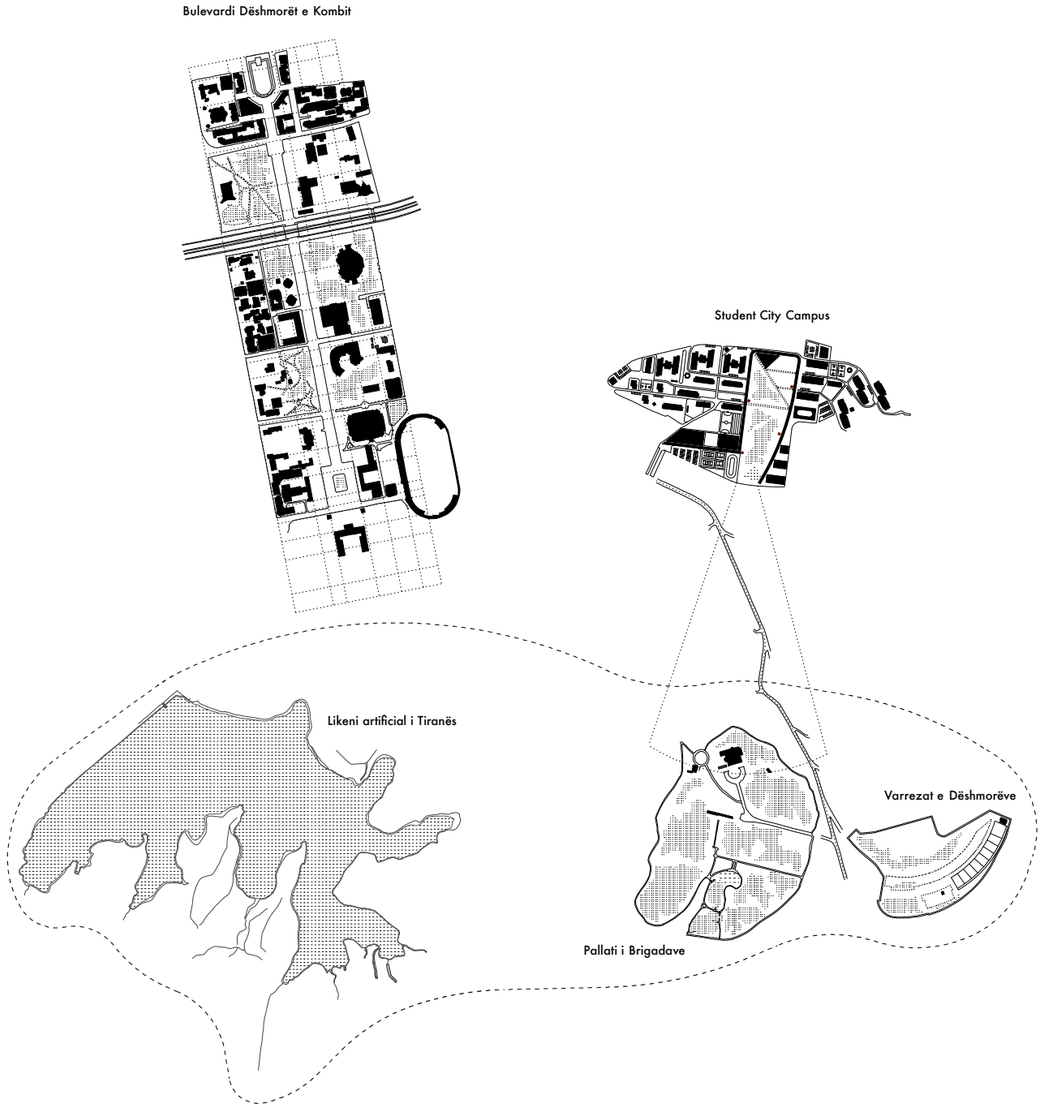
The Student City lies on the mild hills forming the background of the Tirana metropolitan region. By observing the Student City from a geographical point of view it is possible to rediscover the forgotten assets and to activate the hidden potentials of the context. In fact, the Student City is part of the larger system of hills, rivers, small valleys and lakes that characterizes the entire Durana metropolitan region. This mild landscape dotted with parks and lakes has a recursive organization, with minor elements repeating the configuration of larger figures. The Student City sits just next to the Parku i Madh and to the Tirana artificial lake. The Student City includes a large sloping ground, open towards the Parku i Madh. This part of the complex is its main resource. The potential openness of this sloping ground oriented towards the south needs to be protected and turned into the centre of the new Student City. This ample field in fact provides the Student City with the much-needed openness, it offers to the entire complex the crucial *scale* to appear as an explicitly public space and to establish an evident relation to the Parku i Madh and, through that, with the entire geography of the region. The Student City finds its position inside Tirana by clarifying its position in its geography: by choosing to become a green satellite of the Parku i Madh and so exposing a possible green constellation of open spaces immediately south of the rigid monumental system developing around the boulevard Dëshmorët e Kombit.

Panorama

The large, empty, sloping ground opens towards the south and establishes a direct visual connection to the Parku i Madh. The openness of this area means that a larger panorama appears in the middle of the city. The pressure of the city is suspended for a while and the geography of the region becomes once again evident.

This asset related to the scale of this urban void needs to be protected: new buildings should not compromise this quality of the area. The central part of the Student City should stay a void – a green core open towards the south in order to establish a relation with the park and with the hills behind it.

Panoramas from the campus

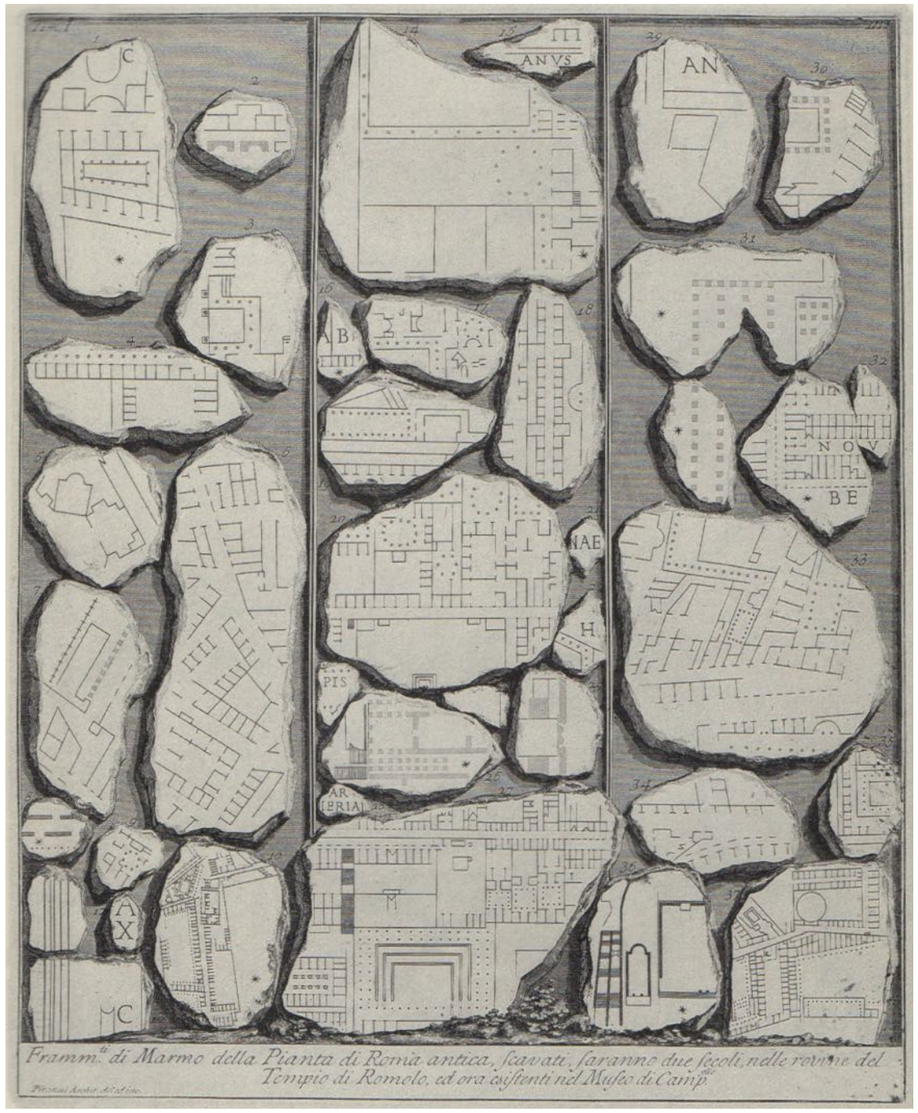


Tirana urban constellation

City

The Student City is a very recognizable fragment inside Tirana.

Inside the city few elements can be compared to the Student City: only the boulevard Dëshmorët e Kombit and the monuments disposed along it, the university hospital and the military academy, the embassies, the large urban voids of the former military airport and of the train station, the custom and the former Kombinati textile industry play a role somehow similar to that of the Student City. And while the majority of these parts are scattered through the city without generating clear figures and with limited potential to establish relations with other urban figures, the Student City can be grouped with the Parku i Madh, with the Place of Brigades and the Cemetery of the Martyrs and with the Tirana and Farka lake to produce a clear figure, with a shared relation to nature and a distinctive urban tone. This ensemble emerges as a possible complementary urban constellation, capable to balance the monumental system aggregated along the boulevard Dëshmorët e Kombit. While the clarity of the urban sequence along the axes designed by Brasini was never lost through all the transformations of the city, the (lighter and more fragile) constellation including the park and the Student City needs to be redefined and re-established. This operation is not only fundamental for the design of the Student City, but for the equilibrium of the Parku i Madh and of the entire city. The development of the southern green core as an urban figure alternative and complimentary to the Brasini axes is one of the greatest urban challenges of Tirana in the next years. The transformation of the Student City is a crucial episode in the production of this new urban figure. The internal organization of the Student City needs to contribute to the emergence of this figure.



G. B. Piranesi
"Frammenti di marmo della pianta di Roma antica"

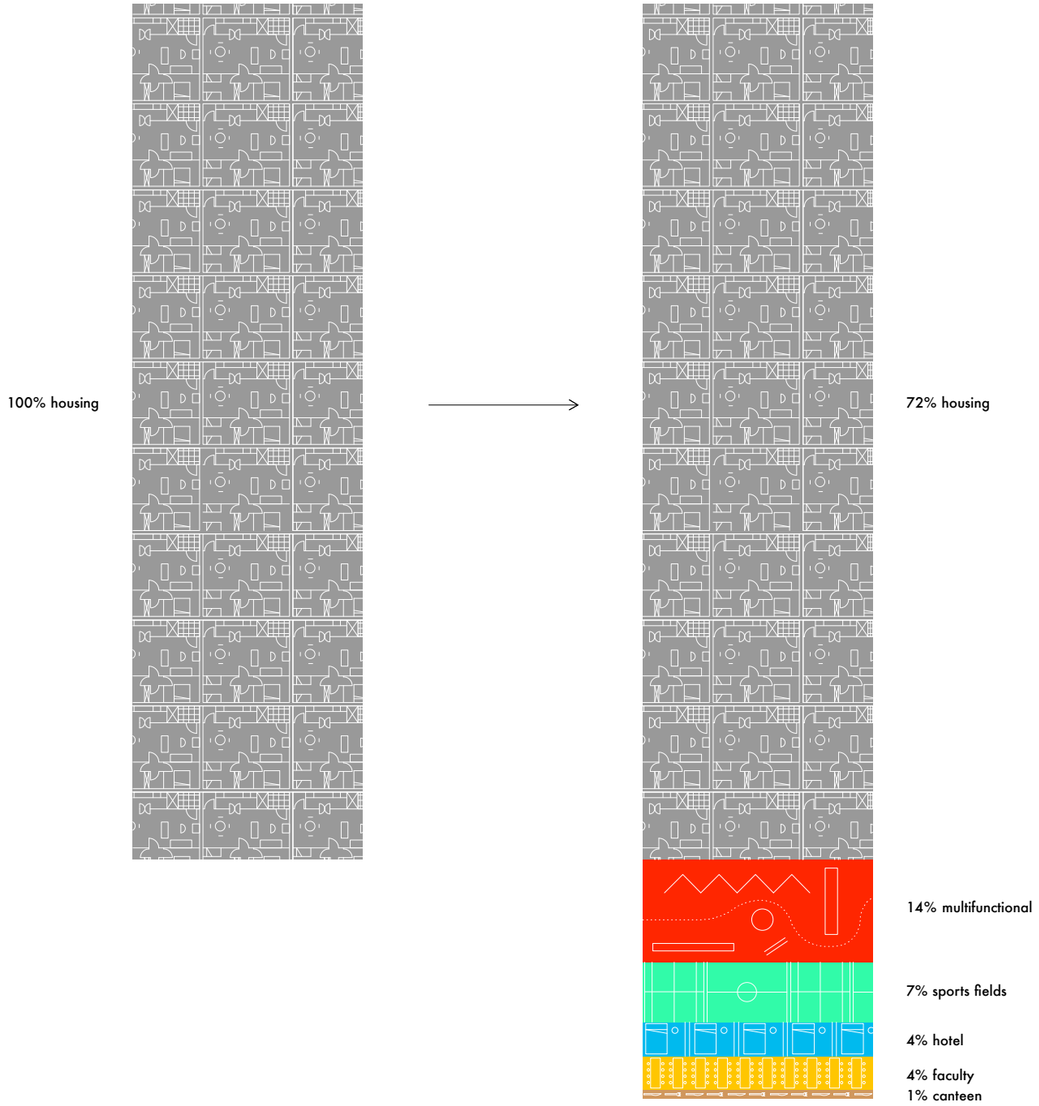
Figure (lack of)

The accumulation of dormitories that produced the Student City did not generate an urban figure, something that could be associated to the life of its own inhabitants and become an element in the construction of the collective memory of the entire city. As of today, the Student City lacks a centre, lacks urbanity, lacks a relation to the city around it. The goal of our proposal is to turn this accumulation of buildings into an urban figure – to turn the Student City into a *campus* – by defining its centre, by imagining its urban life, and by clarifying its relation to the outside. This means recognizing a latent figure, more than imposing a new one: discover an empty field and turn it into the core, into the *lawn* of the *campus*.

Giovanna Silva
Circo Massimo, Roma, 2008

Space

A major asset of the Student City is space. The area to the south is in fact largely empty. This abundance of space is incredibly precious in the contemporary city and should not be underevaluated and wasted. Void is especially precious in a city as dense as Tirana, where all available voids have been frantically colonized in the 90s, leaving the city without major parks (with the exception of the Parku i Madh) and without anything but a very fragmented type of public space (with the exception of the spaces along the boulevard Dëshmorët e Kombit). In the current Student City it is possible to discover a *possibility of space* (a possibility of a plurality of scales, and so a *possibility of landscape*). This possibility, this implicit generosity of space, suggests the possibility of a plural program and a multitude of users.



The new program of the campus

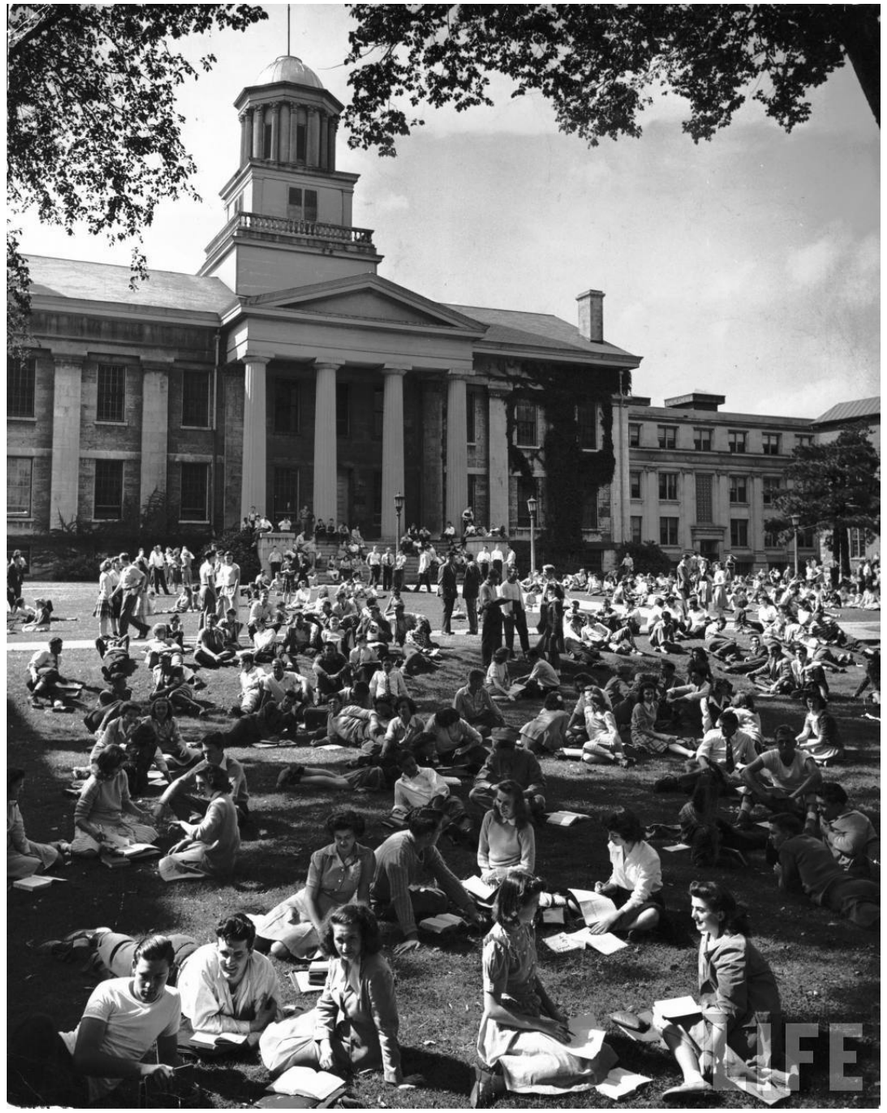
Program

The current program of the Student City is extremely simple: housing for students and a few uninspiring facilities (canteens, laundries) immediately associated to the basic needs of students. In order to transform the Student City it is crucial to introduce a new program into it. Only with the insertion of a new program (of different type and size) it will be possible to turn the Student City into a real urban field.

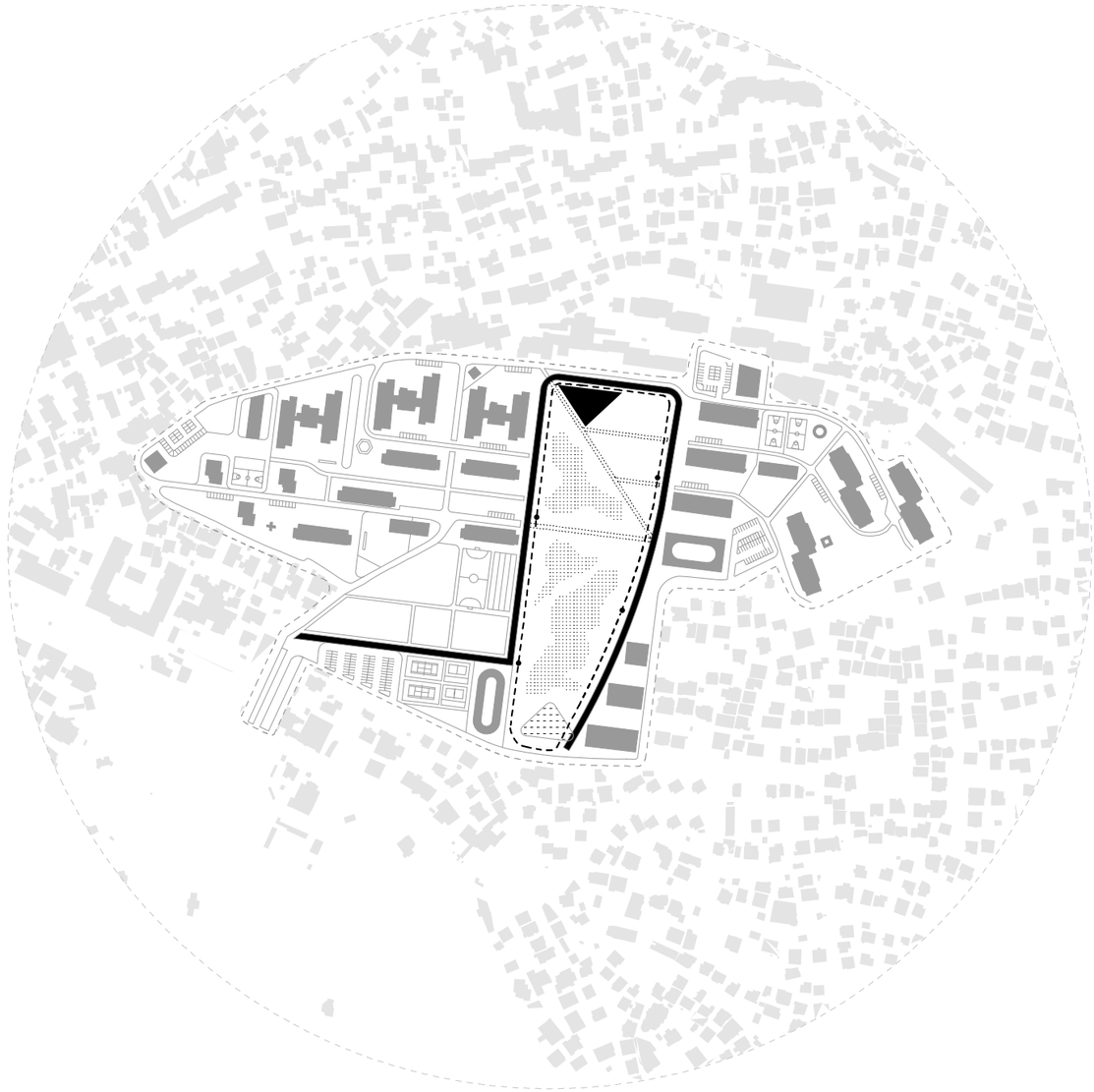
We propose to introduce three types of program:

- learning and researching centres associated to University life such as faculties, libraries, media centres: these facilities will operate during the day, assuring the liveliness of the area during working hours and will help turning the Student City into a *campus*;
- public facilities such as canteens, cinemas and private business such as hotels: beyond contributing to the economical feasibility of the operation, these facilities will operate day and night and will bring visitors from the rest of the city to the Student City;
- small scale private business, such as shops, gyms, cafes, restaurant: these facilities will complement the previous ones, providing the necessary small scale counterpart to the main attractors. These facilities will also contribute to the liveliness of the area and guarantee the safety of the environment.

Beyond this "everyday" injection of new program a new "exceptional" program will take place in the lawn (profiting from its exceptional size inside the city): special events (concerts, shows, parties) will take place in the lawn.



(LIFE photo collection)



The lawn
The campus
The city

Campus

We propose to understand the Student City as a *campus*.

By *campus*, we mean a classic model of aggregation of university facilities with different pavilions grouped around a central lawn. The *campus* implies both a precise identity for the buildings included into it and a balanced relation with the city surrounding it. The *campus* becomes a precisely identified element of Tirana's urban landscape: it precisely corresponds to an image known to all inhabitants of the city. The *campus* becomes a place in the mental map of every Tirana citizen. It becomes a place where to go in occasion of special events.

Three levels

The *campus* is subdivided in three different levels: the core, or *the lawn*, the university dormitories and faculties and the connective tissue bordering the city. These three zones have different degrees of intensity and identity: *the lawn* collects all public life in the campus, the dormitories and faculties provide the critical mass the populates the lawn, the in-between zone mediates with the city and offer a place to a large array of minor activities that are necessary for the *campus* and the city to operate next to each other.

Thomas Jefferson
University of Virginia
Charlottesville, 1817-26

Figure

A classic *lawn* is that at the centre of Thomas Jefferson's University of Virginia. What is particularly striking about this project, beyond the generosity of the open space, the capacity to define a common ground that could immediately visualize the possible life of a *Republic of Farmers*, is the simplicity and the pragmatism of the scheme. The low, wooden, white portico bordering the lawn on its two long sides is not particularly regular; the classic ornament is relatively clumsy and the porches of the different pavilions emerging in front of the lower porch are all different. The orders of the different pavilions do not match with one another and yet this imprecision is here entirely irrelevant. The clarity of the urban scheme here coincides with the complete tolerance for the different episodes inside of it. The perfect understanding of the geographical and urban condition makes architecture relatively irrelevant. The various parts can take whatever form they need – they can even be relatively ugly – and yet (or maybe exactly because of that) the lawn provides an extraordinary idea of freedom.

Because of this tolerant clarity, University of Virginia also emerges inside of Charlottesville as a precisely defined part, and yet not as an isolated part. It is an element in the plural construction of the city: offered to the citizens and combined to the other urban fragments with incredible humbleness and generosity.

Oscar Niemeyer
Ibirapuera park
Sao Paulo, 1954

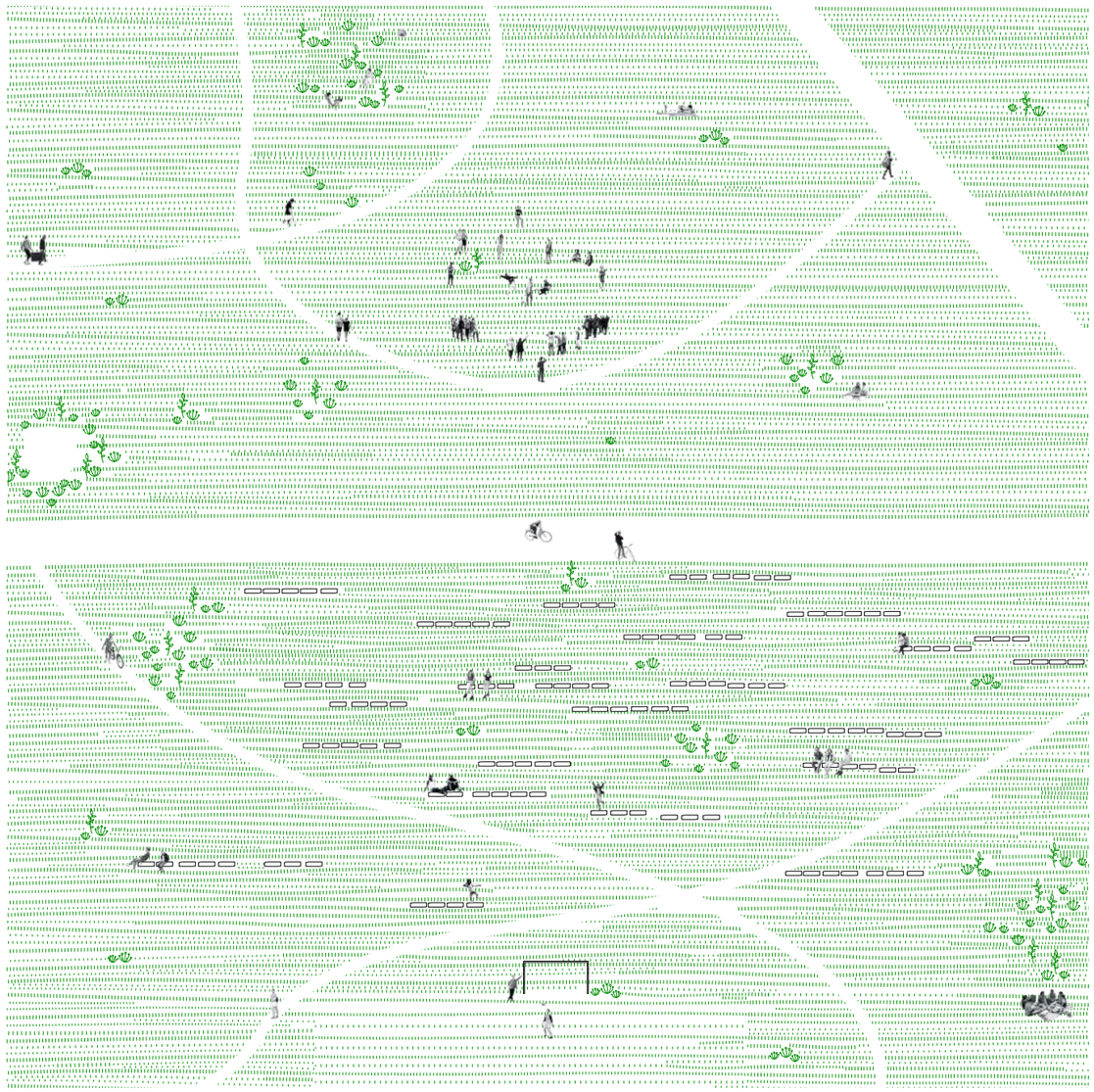
Porch

In order to define the *campus*, we propose to operate by means of a single element, that will define the lawn and provide an immediate, tangible body to the transformation process that will progressively invest all the existing dormitories.

The Student City certainly needs infrastructural improvements on many levels. Just to mention the main needs: water, electricity and energy supply should be improved in the next years. And yet, while recognizing the fundamental relevance of this infrastructure, we believe that the first interventions – the ones that could trigger the entire transformation process by showing a tangible example of transformation – should also be visible: they should take the form of architecture. For this reason the necessary infrastructure is contained into the porch, that operates as a duct conveying all necessary services to the different dormitories.

The simplicity and the evidence of the porch will immediately expose the transformation of the Student City into a *campus*. In this respect, the Student City will *learn from Tirana*, from the positive relation that was established in the early 2000s among artistic interventions, urban transformations and overall infrastructural upgrade.

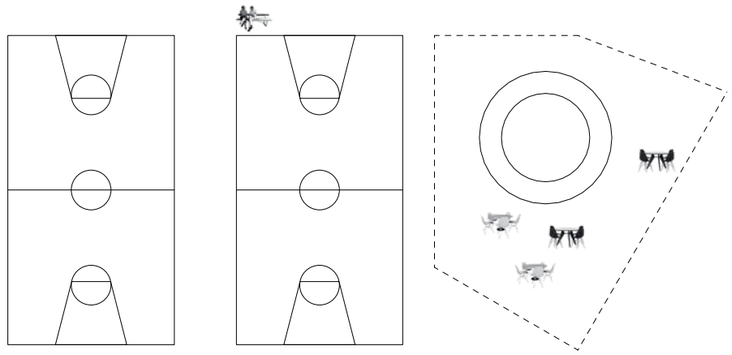
We suggest to build a very simple white concrete porch, with a span of 6 m and a height of 3,5 m. the porch encircles the lawn and carries inside of its roof all infrastructure (electricity, heating, internet) necessary to the dormitories and to the new facilities. The porch defines the space of the lawn and at the same time, like a Roman aqueduct, brings infrastructure to all buildings. The porch provides a visible border to the main public space and defines the frame for all following transformations of the *campus*. The porch is the first element of the transformation of the Student City into a *campus*.

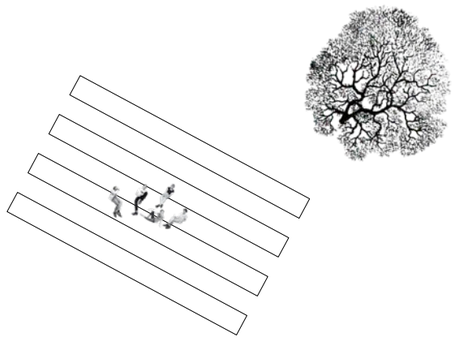


The lawn
(big scale landscape)

Grey + Green

The new series of public spaces of the *campus* needs to find a precise collocation inside of the articulated collection of urban assets of Tirana. The public spaces we propose have different roles (urban, commercial, busy, quiet) and different tones (formal, informal, relaxed) corresponding to the different needs of a contemporary city. These features are summarized into the lawn, where different natures will coexist, manifesting in different moments of the day or in different seasons of the year. The lawn is multiple but not hyper-specified; it maintains a certain generous indeterminacy that allows for multiple (also unexpected) appropriation. In the lawn it is possible to relax and to study, to create small groups and to be alone and study under a tree. In the lawn it is possible play informally and to organize big concerts. The immediately recognizable figure of the lawn puts, and from the beginning, the *campus* inside the collection of public spaces of the city. Somehow the figure *has always been there*.



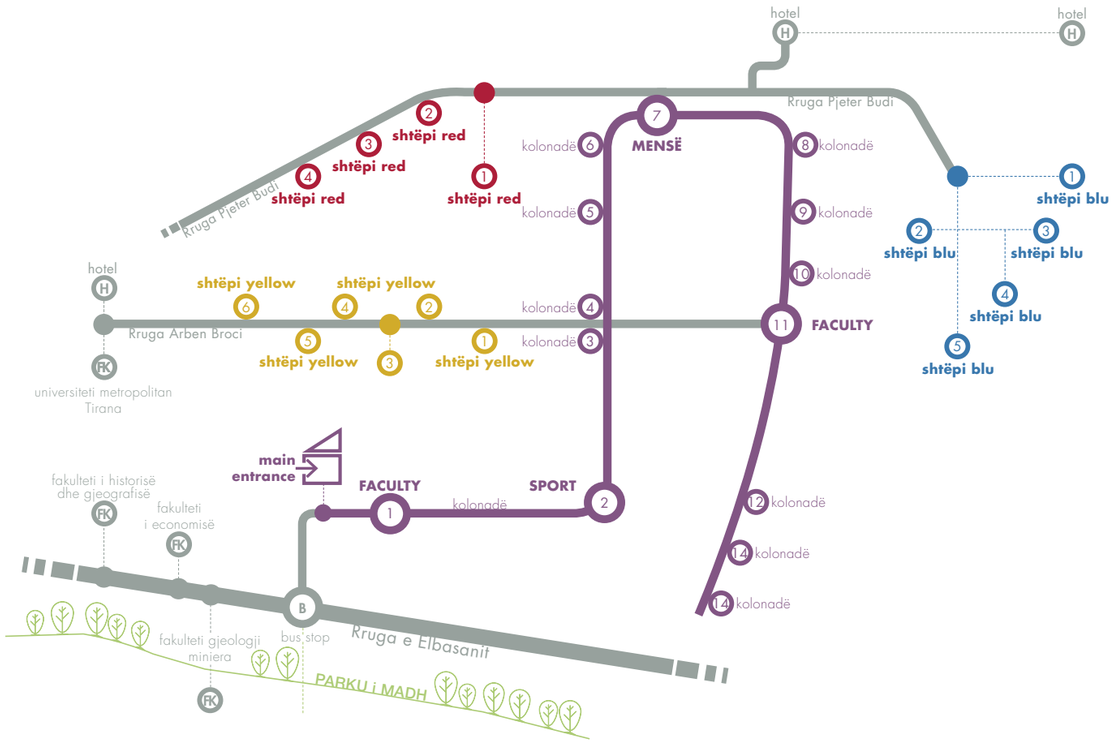


Playgrounds
(small scala landscape)

Landscape

The attention to the present condition of the Student City, the commitment to keep as much as possible of the existing buildings implies an attention to the different episodes of micro-urbanity that we can detect through the Student City. Parallel to the large gesture opening up the lawn, a series of careful modifications take care of the smaller open spaces.

The terrain among the existing dormitories moves gently, producing a nuanced topography that can be used as the starting point for a multitude of urban conditions. Indeed the repetitive organization of the dormitories has to deal with the articulation of the original geography, so producing a variety of different conditions that generate various small-scale public spaces. These spaces – now mainly forgotten – can be re-activated and contribute to the production of a multi-layered landscape, including different places and open to multiple uses. Each little public space is re-activated. All dormitories next to the porch are connected to it by a new loggia directly linked to the restored ground floor. Each dormitory is announced onto the lawn by a pediment directly connected to the porch. Trees and benches and distributed in the open space to produce small, intimate clusters that complement the scale of the lawn.



The campus as a net

User-friendly *campus*

Physical and immaterial, graphic design and digital technologies are combined to provide a global experience of the *campus*. Here the perception involves urban and local scales. At urban level the definition of a consistent setting allows the recognition of a uniform episode, at local level signage and colours helps the orientation within the complex.

The dormitories have a latent value: they are simple volumes that can be easily be re-signified by painting them in new colours. Once eliminated the uneven decorations, the dormitories can be transformed into a colourful composition of abstract shapes. The colour code will follow an extremely simple fashion: all public, ground level parts will be white, all upper levels will be in bright colours. Whiteness will uniform all public elements, colours will uniformly cover all upper levels. The local orientation system will clarify the second perception level: all the buildings concentrated around the porch will be decorated with the *campus* distinctive colour (purple), while the other buildings will produce coloured clusters along their respective internal distribution axes. So Rruga A. Broci's yellow houses and Rruga P. Budi's red and blue houses will be easily identified. The dormitories will also be identified by the large painted word *shtëpi* (home).

The re-painting of the buildings will be inexpensive and easy to implement. Moreover, the re-painting will relate back to a tradition of re-painting rooted in Tirana's recent history. Our proposal actively learns from Tirana.

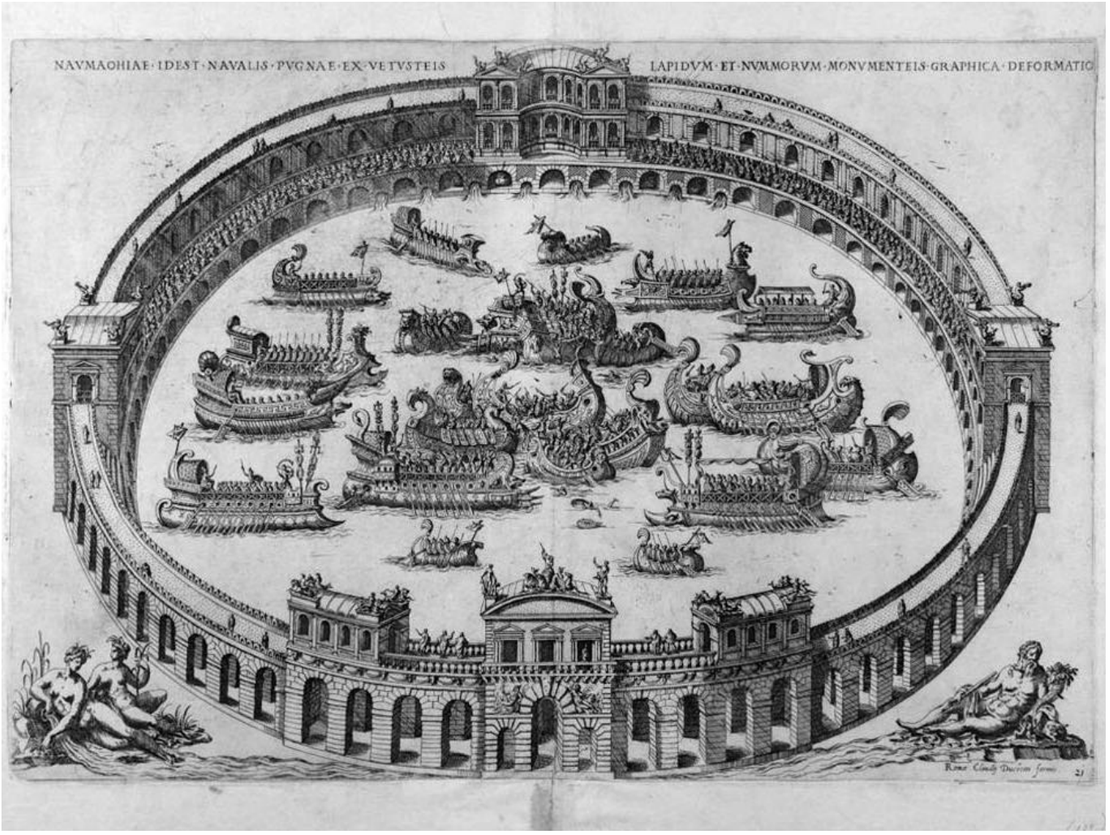
The signage system helps orientation: at the urban scale a large billboard over of the main entrance announces the *campus* to the visitors coming from Rruga e Elbasanit; at local scale a signage system marks the student zone and allows orientation with the support of digital technologies (the Tirana-campus-app).

Activities

We propose the reorganization of the forces already at play in the Student City in order to generate the *campus*. The *campus* will become a space of intense, spontaneous and planned cultural activities, stimulating the connection with the city and the dialogue with the educational system. The students will play the principal role as the initiators of a cultural process that in the future will involve all the city and then, crossing the boundaries of Tirana, will be a call for international artistic and cultural institutions. Events will play a crucial role to bring into the campus a type of users who normally would not enter in contact with this part of the city. As such the program of events is also instrumental to attract new possible users (and clients) for the *campus*.

The new urban organization re-thinks the hierarchy between the city and the campus introducing the presence of new actors. The *campus* will end up with an incredibly varied population: resident students, students living in the city and studying in the *campus*, Erasmus students, professors, visiting professors, researchers, lecturers, artists in residence, citizens coming for the everyday events, citizens coming for the particular events hold in the lawn(concert, festivals...), campus workers, athletes and more.

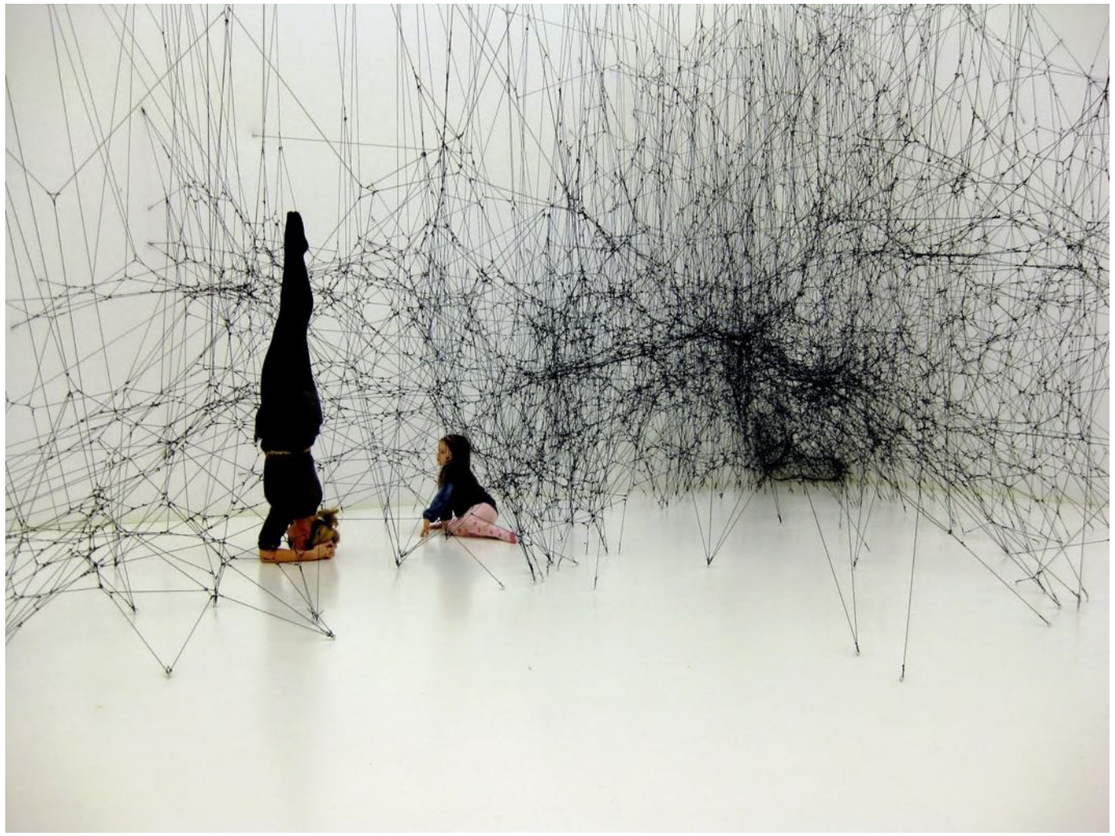
The campus as a field for activities



Claudio Duchet
Naumachia

Curating the lawn

There are several reasons for building an artistic program as an integral part of the urban strategy: it builds on the Albanian tradition of considering the spaces of art and the spaces of everyday life as one; it is a low-cost strategy that does not require any major infrastructural work, relying instead on a new attitude towards the existent fabric; it can be deployed quickly and incrementally. For these reasons we propose to consider the lawn – the large empty field bordered by the porch – as a metropolitan platform to be activated all around the year. A curatorial project for the lawn, guided by the students and coordinated by an external senior curator, will define the program of events to be hosted each year in the lawn. Similarly to the overall urban strategy, the program evolves in time reacting to possible changes of events but maintaining a global consistency. The program will include both large collective events at the scale of the entire city (concerts, parties, political rallies) as well as minor initiatives associated with the everyday student life.



Tomas Saraceno
"Galaxies Forming along Filaments"

Digital infrastructure

Media and interaction design strategies for the Tirana campus will be coordinated with physical transformation in order to produce an intense, multi-dimensional experience. These strategies will open up a new space for collective life, allowing new types of sharing, meeting, organising, and linking up whit the campus and with the city around it.

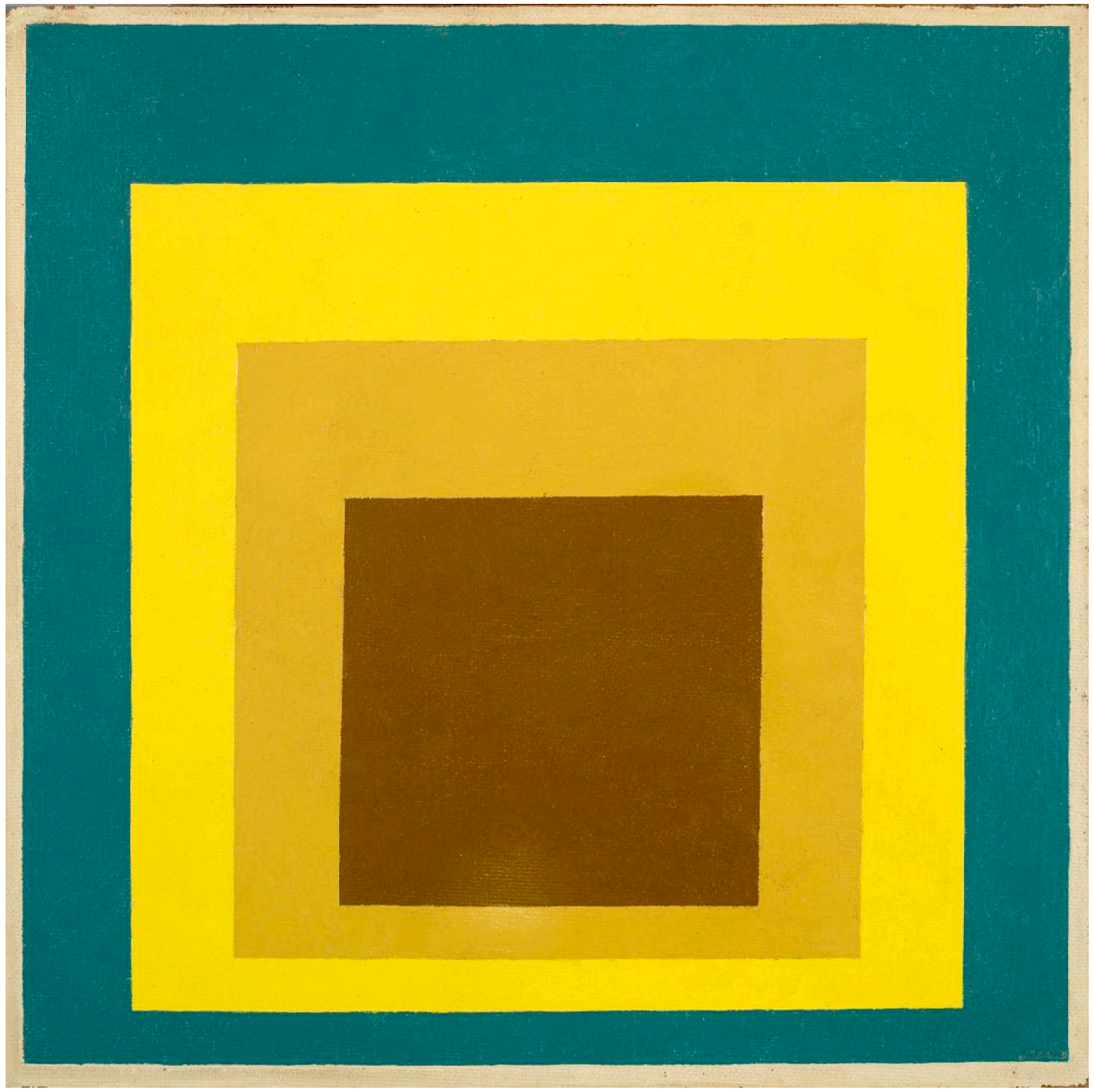
The *campus*, with its potential capacity of 10.000 students, is an extraordinary reservoir of knowledge, creativity and expertise. It is crucial to connect these energies to the international scientific community in the most efficient and reliable manner. We propose that the *campus* has free broadband connections providing free Wi-Fi to all students. The infrastructure necessary to realize this condition is relatively limited (interiors and exteriors Wi-Fi antennas, "iBeacon" environmental detectors).

The new infrastructure will provide following services:

- environmental and comfort surveys essential for the correct management of energy resources;
- real-time surveys on availability of services (number of places available in libraries, canteens, parking lots)

A new *campus website* will contribute to the life of the campus by providing:

- *campus* institutional communication
- information and about services available for students and teachers
- *campus calendar*
- promotion and coordination activities and sociability among students
- promotion of spontaneous solidarity activities (money management, communal shopping)
- promotion of micro economical activities through citizen services (babysitting, elderly support, reps, shopping service, dog sitting, car sharing) through which students can contribute to campus life and generate small profits.



Josef Albers
"Homage to the square"

Communication Strategy

The series of transformations and the introduction of new program will turn the current Student City into a recognizable urban episode with a precise figure. Our proposal to turn the Student City into a *campus* also involves a specific strategy for a new visual identity. The new visual identity will indeed contribute to a clear definition of the figure of the *campus* in the collective mental map.

The visual strategy is not just an aesthetic or stylistic exercise, rather it is the construction of a pragmatic and coordinated system of actions operating both inside and outside the *campus*. Inside the *campus*, the visual strategy leads to a unified image and to an enhanced experience. Outside the *campus*, the visual strategy aims at disseminating the image of the campus in Tirana everyday life by means of a variety of simple tools such as gifts, gadgets, pins, and bags that can spread in a subliminal and viral way.

The *campus* will appear as an original and recognizable system of visual experiences, a knot of multiple metropolitan signs. The *campus* is a combination of many different elements of different scale and the communication will operate by means of a combination of physical and immaterial elements: architecture, graphic design and technologies. The communication strategy involves several levels of perception, each one addressed through different supports operating at different scales: international, urban, and local.

At a global scale, the first element of the communication strategy of the new *Tirana campus* is its own name. "Tirana campus" indeed immediately identifies a centre of learning with an international vocation. This clear, iconic individuation of the *campus* helps also locating it – as an urban fragment – inside the city. At the local scale, the communication strategy proceeds by clearly naming each element of the *campus*, improving accessibility and functionality. Inside each building a coordinated system of signs helps orientation, showing the vertical connections, from the ground level until the single room.

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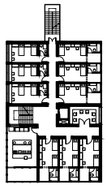
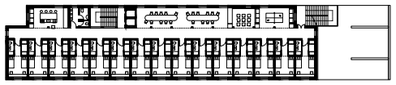


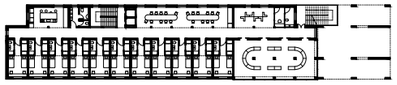
1st floor plan

ground floor plan

BUILDING TYPE 2

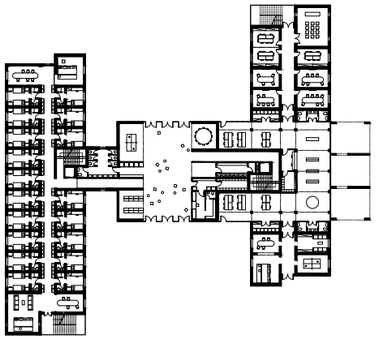


1st floor plan



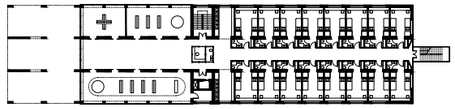
ground floor plan

BUILDING TYPE 3

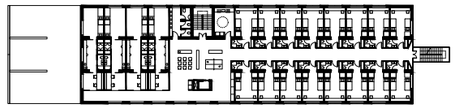


ground floor plan

BUILDING TYPE 4

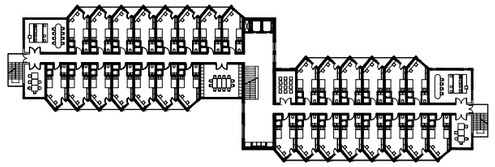


1st floor plan

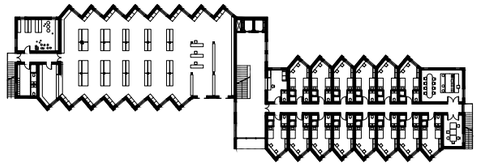


ground floor plan

BUILDING TYPE 5



1st floor plan



ground floor plan

TRANSFORMATION OF EXISTING BUILDINGS
Typologies

We propose to demolish only an extremely limited amount of existing buildings: only the power plant, a canteen, the Building 15 and the Building 19. Also we believe it is not necessary to demolish the illegal buildings which do not interfere with the life of the campus.

We believe it is possible to restore all remaining dormitories and obtain various combinations of rooms for two or three students all with toilets inside the room. Kitchens will be either included into rooms or organized as collective spaces depending on the configuration of the different buildings. New collective facilities (such as laundries, TV rooms) will be introduced in all dormitories. We propose to add elevators (inside the buildings) and stairs (new structures, attached to the buildings) in order to fulfil the requirements of safety legislation. Insulation will be realized by wrapping the exterior of the buildings with industrial insulating panels finished with plaster. All new parts added to the existing buildings are placed in order to limit as much as possible the production of new façade surface, so that the envelope of the building remains limited in relation to its volume, keeping insulation costs as low as possible.

Transformations of the partitions among the rooms will be kept as limited as possible, simply coupling some units, or changing the distribution of the buildings. At the ground floor new public and commercial activities will be located. The half of the ground floor towards the porch of all dormitories directly connected to it will be opened by cutting large windows assuring visual continuity with the loggias connecting the building with the porch. Collective spaces in the upper levels (now showers or kitchens) will be turned into a more complex range of facilities (kitchens, TV rooms, party rooms, recreational rooms). Private sphere and public sphere will consequently be better defined, allowing both more privacy and more collective life.

TRANSFORMATION OF EXISTING BUILDINGS
Structural Design Methodology

The structural design will follow guidelines inspired by innovative solutions, enhancing space availability, environmental sustainability and safety. Concerning the existing buildings, the proposed interventions include:

· adding new volumes
· inserting new stairs
· inserting new lift cores

Every new volume will be realized as an independent one, with seismic joints that will grant free movements between the old and the new structure, whilst assuring the architectural continuity. All existing structures will be analysed regarding the structural aspect and in case of necessity it will be developed a renovation plan that could encompass:

· use of reinforced concrete
· use of steel
· use of armed masonries

The existing structures will be supplied with concrete cores as elevator and stair shafts, thus to increase the required lateral stability and efficiently transfer the lateral load to the foundations.

The typical renovation will develop as follows:

Phase 1: Structural survey and assessment/resolution of eventual structural issues

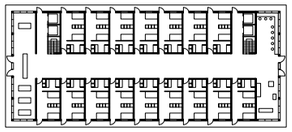
Phase 2: New columns and new slabs construction along with seismic/expansion joints

Phase 3: Architectural set-up in order to restore the continuity.

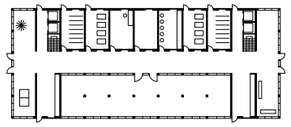
After a careful survey, the static condition of the existing buildings will be assessed. The structural system proposed, in order to solve eventual structural issues is a three-dimensional mesh of inox-steel. This mesh consists of bars, slotted plates, ribbons, eventually integrated with an extruded high-strength mesh. In case of RC application, "L" elements are used at the corners of the structural members, connected by steel strips and enticed with a special mortar.

In severe environmental conditions, the choice of cement has an influence on the durability of concrete, mortar and grouts, e.g. frost resistance, chemical resistance and protection of reinforcement. It is necessary that the choice of cement, especially the type and/or strength class in relation to the requirements for durability depending on exposure class in which it is incorporated, follows the appropriate standards and/or regulations for concrete or mortar valid in the place of use and anyway not less than the Eurocodes requirements.

DORMITORY



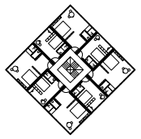
1st floor plan



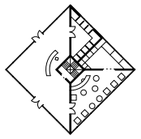
ground floor plan

HOTELS

2nd floor plan

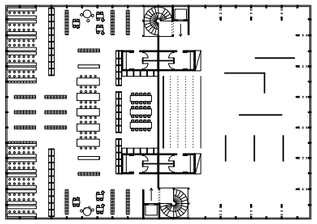


1st floor plan

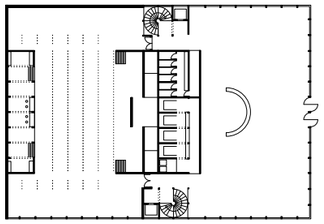


ground floor plan

MULTI-FUNCTIONAL BUILDING

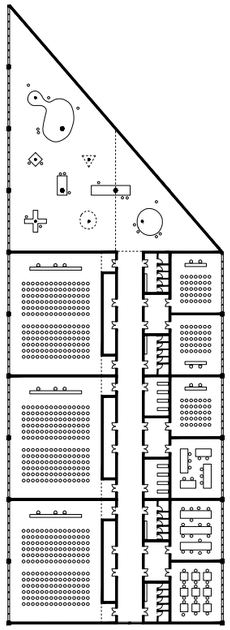


1st floor plan



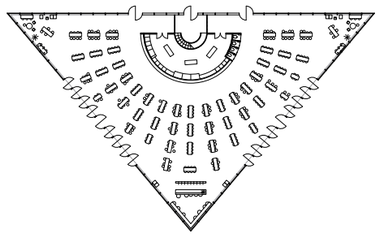
ground floor plan

FACULTY

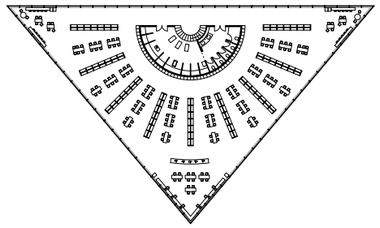


ground floor plan

CANTEEN



1st floor plan



ground floor plan

NEW BUILDINGS
Description

The new buildings are all extremely efficient and inspired by very simple, functional considerations. In fact, given that the complexity and the richness of the urban experience is provided by the public space and by the landscape, buildings can be relatively simple and inexpensive.

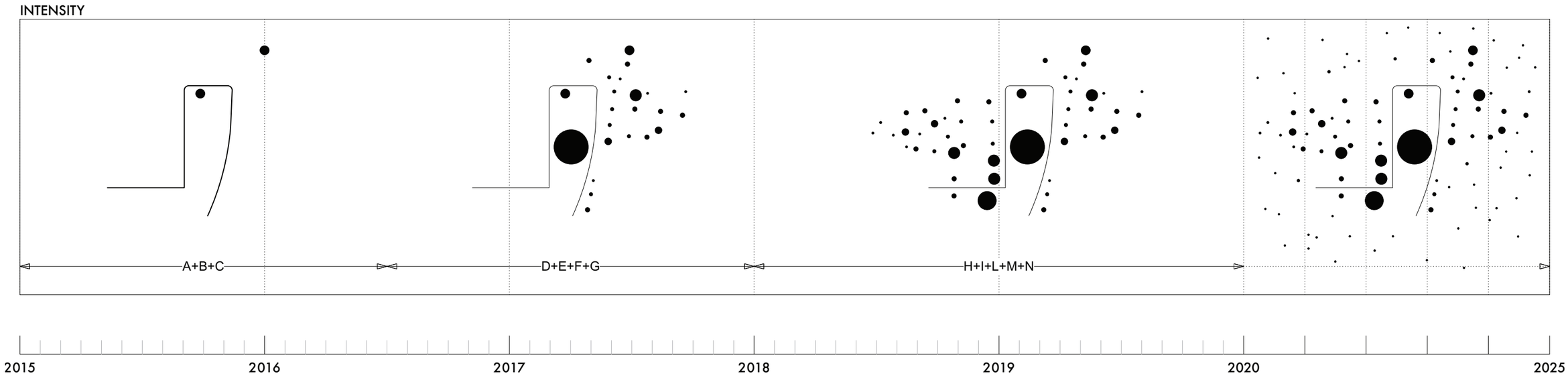
The canteen is a large, flat triangular building open onto the lawn, allowing to eat in contact with the landscape. The hotels are simple squared five floors towers with different typologies of rooms. The faculty A is a 3 levels courtyard building. The faculty B is low building with a central corridor and classrooms of different size distribute on its two sides. The multi-functional building is a simple three floors box where two functions are coupled each floor.

NEW BUILDINGS
Structural Design Methodology

The new structures will be realized in reinforced concrete. Reinforced concrete indeed is well-know and easily available technology in the Albanian context.

The intended structures will consist of two to five floors above ground. Therefore, the proposed structures will be realized with reinforced concrete which grants higher performances in terms of durability and cost saving. Regarding the superstructure envelope, it will be made of reinforced concrete too, in order to better fit the architectural aesthetic requirements.

The framing system of the new buildings will be represented by columns and flat slabs, whilst concrete cores will be strategically located. The above mentioned solution will provide wide spans in order to grant efficiently wide residential space along with a high design flexibility.



Phases

The project addresses a relatively long time-span and faces relatively uncertain conditions for its development. For this reason, we understand our phasing scheme more as a logical than as a chronological sequence (more as a list of what to do before and what to do after, than as a precise program with deadlines to match at all costs).

The simplicity of the proposed scheme allows to adapt to possible changes. The project defines a robust logic in which different actions follow one another without asking the city to commit now to a rigid multi-years plan. Also the mathematics of the project are adaptable. Indeed the campus can work (both from an economical, a social and an urban point of view) either with 4,000 or 8,000, or 10,000 students living there. Our scheme is adaptable to this variety of possible scenarios. Also, our proposal precisely identifies a series of simple, evident and relatively inexpensive interventions that could immediately be red by the population of both the Student City and Tirana and so operate as an activator for the entire transformation process. We indeed propose a series of interventions that will turn the Student City into a completely new environment in two years, although the schedule for the restoration of dormitories will probably develop in a longer time-frame.

Zones

We propose to subdivide the Student City in two main zones: the eastern and the western one. The eastern zone consists of the lawn, the new main canteen, the two new hotels and the old and new dormitories and the eastern new faculty (subzones: A, B, C, D, E, F, G). The western zone consists of the western new faculty, of the media centre, of the sport facilities and the relatively older dormitories (subzones: H, I, L, M, N). This pragmatic subdivision in zones will allow conducting operations on an optimal scale, without compromising the functioning of the remaining parts of the Student City.

Construction in both eastern and western zones will start with the realization of the relative portion of the porch and will proceed independently from the other region. The operation will start from the eastern zone: the eastern porch, the new power plant, the new canteen and the lawn being the first things to be realized.

BUSINESS PLAN

COD.	DESCRIPTION	UM.	QUANTITIES	UNIT PRICE	TOTAL	TOTAL LEK (ALL)	
1	DEMOLITION						
1.01	A ZONE	m³	227,50	4,00	910,00	ALL	127 036,00
1.02	C ZONE	m³	12 615,00	4,00	50 460,00	ALL	7 044 216,00
1.03	D ZONE	m³	6 492,50	4,00	25 970,00	ALL	3 625 412,00
1.04	E ZONE	m³	9 162,50	4,00	36 650,00	ALL	5 116 340,00
1.05	F ZONE	m³	7 518,00	4,00	30 072,00	ALL	4 198 051,20
1.06	G ZONE	m³	357,00	4,00	1 428,00	ALL	199 348,80
1.07	H ZONE	m³	12 005,00	4,00	48 020,00	ALL	6 703 592,00
1.08	L ZONE	m³	52,50	4,00	210,00	ALL	29 316,00
1.09	N ZONE	m³	822,50	4,00	3 290,00	ALL	459 284,00
1	TOTAL DEMOLITION				197 010,00	ALL	27 502 596,00
2	BUILDING RENOVATION						
2.01	POWER PLAN	m²	1 800,00	350,00	630 000,00	ALL	87 948 000,00
2.02	APARTMENTS 28/29 A ZONE	m²	6 400,00	430,00	2 752 000,00	ALL	384 179 200,00
2.03	APARTMENTS 26/27 A ZONE	m²	6 555,00	430,00	2 818 650,00	ALL	393 483 540,00
2.04	APARTMENTS 16 E ZONE	m²	4 445,00	430,00	1 911 350,00	ALL	266 824 460,00
2.05	APARTMENTS 17 E ZONE	m²	4 445,00	430,00	1 911 350,00	ALL	266 824 460,00
2.06	APARTMENTS 18 E ZONE	m²	4 430,00	430,00	1 904 900,00	ALL	265 924 040,00
2.07	APARTMENTS 20/21 F ZONE	m²	6 375,00	430,00	2 741 250,00	ALL	382 678 500,00
2.08	APARTMENTS 22/23 F ZONE	m²	6 455,00	430,00	2 775 650,00	ALL	387 480 740,00
2.09	APARTMENTS 24/25 F ZONE	m²	6 575,00	430,00	2 827 250,00	ALL	394 684 100,00
2.10	APARTMENTS 1 H ZONE	m²	1 683,00	430,00	723 690,00	ALL	101 027 124,00
2.11	APARTMENTS 3 H ZONE	m²	1 400,00	430,00	602 000,00	ALL	84 039 200,00
2.12	APARTMENTS 7/8 H ZONE	m²	8 115,00	430,00	3 489 450,00	ALL	487 127 220,00
2.13	APARTMENTS 13 H ZONE	m²	2 640,00	430,00	1 135 200,00	ALL	158 473 920,00
2.14	APARTMENTS 4 L ZONE	m²	2 772,00	430,00	1 191 960,00	ALL	166 397 616,00
2.15	APARTMENTS 5 L ZONE	m²	2 768,00	430,00	1 190 240,00	ALL	166 157 504,00
2.16	APARTMENTS 9/10 L ZONE	m²	8 320,00	430,00	3 577 600,00	ALL	499 432 960,00
2.17	APARTMENTS 11/12 L ZONE	m²	8 060,00	430,00	3 465 800,00	ALL	483 825 680,00
2.18	APARTMENTS 2 M ZONE	m²	1 072,00	430,00	460 960,00	ALL	64 350 016,00
2.19	APARTMENTS 6 M ZONE	m²	2 768,00	430,00	1 190 240,00	ALL	166 157 504,00
2.20	APARTMENTS 14 M ZONE	m²	2 796,00	430,00	1 202 280,00	ALL	167 838 288,00
2	TOTAL BUILDING RENOVATION				38 501 820,00	ALL	5 374 854 072,00
3	NEW BUILDINGS						
3.01	CANTEEN LIBRARY C ZONE	m²	2 152,00	550,00	1 183 600,00	ALL	165 230 560,00
3.02	DORMITORY D ZONE	m²	9 880,00	500,00	4 940 000,00	ALL	689 624 000,00
3.03	FACULTY D ZONE	m²	3 150,00	550,00	1 732 500,00	ALL	241 857 000,00
3.04	HOTEL E ZONE	m²	2 725,00	600,00	1 635 000,00	ALL	228 246 000,00
3.05	DORMITORY E ZONE	m²	2 725,00	500,00	1 362 500,00	ALL	190 205 000,00
3.06	CANTEEN E ZONE	m²	115,00	350,00	40 250,00	ALL	5 618 900,00
3.07	HOTEL F ZONE	m²	3 000,00	600,00	1 800 000,00	ALL	251 280 000,00
3.08	HOTEL H ZONE	m²	1 125,00	600,00	675 000,00	ALL	94 230 000,00
3.09	DORMITORY H ZONE	m²	2 360,00	500,00	1 180 000,00	ALL	164 728 000,00
3.10	CANTEEN H ZONE	m²	145,00	350,00	50 750,00	ALL	7 084 700,00
3.11	MULTIFUNCTIONAL+C I ZONE	m²	20 000,00	600,00	12 000 000,00	ALL	1 675 200 000,00
3.12	FACULTY I ZONE	m²	3 840,00	550,00	2 112 000,00	ALL	294 835 200,00
3.13	DORMITORY M ZONE	m²	2 175,00	500,00	1 087 500,00	ALL	151 815 000,00
3	TOTAL NEW BUILDINGS				29 799 100,00	ALL	4 159 954 360,00
4	EXTERNAL WORKS						
4.01	PORTICO B ZONE	m²	4 375,00	250,00	1 093 750,00	ALL	152 687 500,00
4.02	SPORT FIELDS E ZONE	m²	2 000,00	60,00	120 000,00	ALL	16 752 000,00
4.03	SPORT FIELDS H ZONE	m²	800,00	60,00	48 000,00	ALL	6 700 800,00
4.04	SPORT FIELDS I ZONE	m²	3 000,00	60,00	180 000,00	ALL	25 128 000,00
4.05	SPORT FIELDS N ZONE	m²	5 500,00	60,00	330 000,00	ALL	46 068 000,00
4.06	PORTICO I ZONE	m²	1 200,00	250,00	300 000,00	ALL	41 880 000,00
4.07	PARKING A ZONE	m²	750,00	30,00	22 500,00	ALL	3 141 000,00
4.08	PARKING D ZONE	m²	1 250,00	30,00	37 500,00	ALL	5 235 000,00
4.09	PARKING E ZONE	m²	1 250,00	30,00	37 500,00	ALL	5 235 000,00
4.10	PARKING F ZONE	m²	1 875,00	30,00	56 250,00	ALL	7 852 500,00
4.11	PARKING H ZONE	m²	1 500,00	30,00	45 000,00	ALL	6 282 000,00
4.12	PARKING L ZONE	m²	2 250,00	30,00	67 500,00	ALL	9 423 000,00
4.13	PARKING M ZONE	m²	1 375,00	30,00	41 250,00	ALL	5 758 500,00
4.14	PARKING N ZONE	m²	4 500,00	30,00	135 000,00	ALL	18 846 000,00
4.15	PARK G ZONE	m²	30 000,00	10,00	300 000,00	ALL	41 880 000,00
4.16	EXTERNAL WORKS (green, roads..)	ithem	1,00	500 000,00	500 000,00	ALL	69 800 000,00
4	EXTERNAL WORKS				3 314 250,00	ALL	462 669 300,00
	TOTAL CONSTRUCTION				71 812 180,00	ALL	10 024 980 328,00

CONSTRUCTION COSTS

	A ZONE	
1.01	Demolition	910,00
2.01	POWER PLAN	630 000,00
2.02	APARTMENTS 28/29 A ZONE	2 752 000,00
2.03	APARTMENTS 26/27 A ZONE	2 818 650,00
4.07	PARKING A ZONE	22 500,00
	B ZONE	
4.01	PORTICO B ZONE	1 093 750,00
	C ZONE	
1.02	Demolition	50 460,00
3.01	CANTEEN LIBRARY C ZONE	1 183 600,00
	D ZONE	
1.03	Demolition	25 970,00
3.02	DORMITORY D ZONE	4 940 000,00
3.03	FACULTY D ZONE	1 732 500,00
4.08	PARKING D ZONE	37 500,00
	E ZONE	
1.04	Demolition	36 650,00
2.04	APARTMENTS 16 E ZONE	1 911 350,00
2.05	APARTMENTS 17 E ZONE	1 911 350,00
2.06	APARTMENTS 18 E ZONE	1 904 900,00
3.04	HOTEL E ZONE	1 635 000,00
3.05	DORMITORY E ZONE	1 362 500,00
3.06	CANTEEN E ZONE	40 250,00
4.02	SPORT FIELDS E ZONE	120 000,00
4.09	PARKING E ZONE	37 500,00
	F ZONE	
1.05	Demolition	30 072,00
2.07	APARTMENTS 20/21 F ZONE	2 741 250,00
2.08	APARTMENTS 22/23 F ZONE	2 775 650,00
2.09	APARTMENTS 24/25 F ZONE	2 827 250,00
3.07	HOTEL F ZONE	1 800 000,00
4.10	PARKING F ZONE	56 250,00
	G ZONE	
1.06	Demolition	1 428,00
4.15	PARK G ZONE	300 000,00
	H ZONE	
1.07	Demolition	48 020,00
2.10	APARTMENTS 1 H ZONE	723 690,00
2.11	APARTMENTS 3 H ZONE	602 000,00
2.12	APARTMENTS 7/8 H ZONE	3 489 450,00
2.13	APARTMENTS 13 H ZONE	1 135 200,00
3.08	HOTEL H ZONE	675 000,00
3.09	DORMITORY H ZONE	1 180 000,00
3.10	CANTEEN H ZONE	50 750,00
4.03	SPORT FIELDS H ZONE	48 000,00
4.11	PARKING H ZONE	45 000,00
	I ZONE	
3.11	MULTIFUNCTIONAL+C I ZONE	12 000 000,00
3.12	FACULTY I ZONE	2 112 000,00
4.04	SPORT FIELDS I ZONE	180 000,00
	L ZONE	
1.08	Demolition	210,00
2.14	APARTMENTS 4 L ZONE	1 191 960,00
2.15	APARTMENTS 5 L ZONE	1 190 240,00
2.16	APARTMENTS 9/10 L ZONE	3 577 600,00
2.17	APARTMENTS 11/12 L ZONE	3 465 800,00
4.12	PARKING L ZONE	67 500,00
	M ZONE	
2.18	APARTMENTS 2 M ZONE	460 960,00
2.19	APARTMENTS 6 M ZONE	1 190 240,00
2.20	APARTMENTS 14 M ZONE	1 202 280,00
3.13	DORMITORY M ZONE	1 087 500,00
4.13	PARKING M ZONE	41 250,00
	N ZONE	
1.09	Demolition	3 290,00
4.05	SPORT FIELDS N ZONE	330 000,00
4.14	PARKING N ZONE	135 000,00
	EXTERNAL	
4.16	EXTERNAL WORKS (green, roads..)	500 000,00

REVENUE

				Year 1	Year 2	Year 3	Year 4	Year 5	Y. 6
			Month:	1 2 3 4 5 6 7 8 9 10 11 12	13 14 15 16 17 18 19 20 21 22 23 24	25 26 27 28 29 30 31 32 33 34 35 36	37 38 39 40 41 42 43 44 45 46 47 48	49 50 51 52 53 54 55 56 57 58 59 60	61
	HOTEL	/day/room	room			HOTEL			
3.04	HOTEL E ZONE For students	60,00	80						
3.04	HOTEL E ZONE For external	90,00	15						
3.07	HOTEL F ZONE For students	60,00	89						
3.07	HOTEL F ZONE For external	90,00	15						
3.08	HOTEL H ZONE For students	60,00	34						
3.08	HOTEL H ZONE For external	90,00	5						
	APARTMENTS FOR STUDENTS	/month/student	student		APARTMENTS FOR STUDENTS				
2.02	APARTMENTS 28/29 A ZONE	100,00	608						
2.03	APARTMENTS 26/27 A ZONE	100,00	623						
3.02	DORMITORY D ZONE	100,00	939						
2.04	APARTMENTS 16 E ZONE	100,00	422						
2.05	APARTMENTS 17 E ZONE	100,00	422						
2.06	APARTMENTS 18 E ZONE	100,00	421						
3.05	DORMITORY E ZONE	100,00	259						
2.07	APARTMENTS 20/21 F ZONE	100,00	606						
2.08	APARTMENTS 22/23 F ZONE	100,00	614						
2.09	APARTMENTS 24/25 F ZONE	100,00	625						
2.10	APARTMENTS 1 H ZONE	100,00	160						
2.11	APARTMENTS 3 H ZONE	100,00	133						
2.12	APARTMENTS 7/8 H ZONE	100,00	771						
2.13	APARTMENTS 13 H ZONE	100,00	251						
3.09	DORMITORY H ZONE	100,00	224						
2.14	APARTMENTS 4 L ZONE	100,00	263						
2.15	APARTMENTS 5 L ZONE	100,00	263						
2.16	APARTMENTS 9/10 L ZONE	100,00	791						
2.17	APARTMENTS 11/12 L ZONE	100,00	766						
2.18	APARTMENTS 2 M ZONE	100,00	102						
2.19	APARTMENTS 6 M ZONE	100,00	263						
2.20	APARTMENTS 14 M ZONE	100,00	266						
3.13	DORMITORY M ZONE	100,00	207						
	SPORTFIELDS	/da y	n. fields			SPORTFIELDS			
4.02	SPORT FIELDS E ZONE	50,00	2						
4.03	SPORT FIELDS H ZONE	50,00	1						
4.04	SPORT FIELDS I ZONE	50,00	2						
4.05	SPORT FIELDS N ZONE	50,00	4						
	MULTIFUNCTIONAL I ZONE	Monthly fee	n. subs.					MULTIFUNCTIONAL I ZONE	
3.11	GYM FOR STUDEINTS	30,00	1000						
3.11	GYM FOR EXTERNAL	50,00	100						
		/tickets	n./day						
3.11	CINEMA	3,00	300						
	CANTEEN	/meal	meals		CANTEEN				
2.01	CANTEEN LIBRARY C ZONE FOR STUDENTS	2,50	11900						
2.01	CANTEEN LIBRARY C ZONE FOR EXTERNAL	7,00	800						
3.06	CANTEEN LIBRARY E ZONE FOR STUDENTS	2,50	50						
3.06	CANTEEN LIBRARY E ZONE FOR EXTERNAL	7,00	30						
3.10	CANTEEN LIBRARY H ZONE FOR STUDENTS	2,50	50						
3.10	CANTEEN LIBRARY H ZONE FOR EXTERNAL	7,00	30						
3.11	CANTEEN LIBRARY I ZONE FOR STUDENTS	2,50	3000						
3.11	CANTEEN LIBRARY I ZONE FOR EXTERNAL	7,00	800						

MAINTENANCE AND MANAGEMENT

Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Y. 6

Month: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61

	MAINTENANCE	
2.01	POWER PLAN	
2.02	APARTMENTS 28/29 A ZONE	
2.03	APARTMENTS 26/27 A ZONE	
2.04	APARTMENTS 16 E ZONE	
2.05	APARTMENTS 17 E ZONE	
2.06	APARTMENTS 18 E ZONE	
2.07	APARTMENTS 20/21 F ZONE	
2.08	APARTMENTS 22/23 F ZONE	
2.09	APARTMENTS 24/25 F ZONE	
2.10	APARTMENTS 1 H ZONE	
2.11	APARTMENTS 3 H ZONE	
2.12	APARTMENTS 7/8 H ZONE	
2.13	APARTMENTS 13 H ZONE	
2.14	APARTMENTS 4 L ZONE	
2.15	APARTMENTS 5 L ZONE	
2.16	APARTMENTS 9/10 L ZONE	
2.17	APARTMENTS 11/12 L ZONE	
2.18	APARTMENTS 2 M ZONE	
2.19	APARTMENTS 6 M ZONE	
2.20	APARTMENTS 14 M ZONE	
3.01	CANTEEN LIBRARY C ZONE	
3.02	DORMITORY D ZONE	
3.03	FACULTY D ZONE	
3.04	HOTEL E ZONE	
3.05	DORMITORY E ZONE	
3.06	CANTEEN E ZONE	
3.07	HOTEL F ZONE	
3.08	HOTEL H ZONE	
3.09	DORMITORY H ZONE	
3.10	CANTEEN H ZONE	
3.11	MULTIFUNCTIONAL+C I ZONE	
3.12	FACULTY I ZONE	
3.13	DORMITORY M ZONE	
	FACILITY MANAGEMENT	
2.01	POWER PLAN	
2.02	APARTMENTS 28/29 A ZONE	
2.03	APARTMENTS 26/27 A ZONE	
2.04	APARTMENTS 16 E ZONE	
2.05	APARTMENTS 17 E ZONE	
2.06	APARTMENTS 18 E ZONE	
2.07	APARTMENTS 20/21 F ZONE	
2.08	APARTMENTS 22/23 F ZONE	
2.09	APARTMENTS 24/25 F ZONE	
2.10	APARTMENTS 1 H ZONE	
2.11	APARTMENTS 3 H ZONE	
2.12	APARTMENTS 7/8 H ZONE	
2.13	APARTMENTS 13 H ZONE	
2.14	APARTMENTS 4 L ZONE	
2.15	APARTMENTS 5 L ZONE	
2.16	APARTMENTS 9/10 L ZONE	
2.17	APARTMENTS 11/12 L ZONE	
2.18	APARTMENTS 2 M ZONE	
2.19	APARTMENTS 6 M ZONE	
2.20	APARTMENTS 14 M ZONE	
3.01	CANTEEN LIBRARY C ZONE	
3.02	DORMITORY D ZONE	
3.03	FACULTY D ZONE	
3.04	HOTEL E ZONE	
3.05	DORMITORY E ZONE	
3.06	CANTEEN E ZONE	
3.07	HOTEL F ZONE	
3.08	HOTEL H ZONE	
3.09	DORMITORY H ZONE	
3.10	CANTEEN H ZONE	
3.11	MULTIFUNCTIONAL+C I ZONE	
3.12	FACULTY I ZONE	
3.13	DORMITORY M ZONE	
	PARK AND EXTERNAL WORKS	

	Year 1											
	1	2	3	4	5	6	7	8	9	10	11	12
CONSTRUCTION COSTS												910 000,00
FINANCIAL CHARGES	129 843,06	129 843,06	129 843,06	4 562,40	4 562,40	4 562,40	7 318,20	7 318,20	7 318,20	13 682,99	13 682,99	13 682,99
MAINTENANCE												
FACILITY MANAGEMENT								682,50	682,50	682,50	682,50	682,50
TOTAL COST PROGRESSIVE	130 753,06	365 596,11	760 274,17	1 110 722,68	1 859 074,76	2 607 426,84	3 358 534,73	4 031 295,11	4 902 630,95	5 780 331,58	6 658 032,21	7 535 732,84
REVENUE												
TOTAL REVENUE PROGRESSIVE												

	Year 2											
	13	14	15	16	17	18	19	20	21	22	23	24
CONSTRUCTION COSTS												
FINANCIAL CHARGES	18 233,95	18 233,95	18 233,95	24 940,99	24 940,99	24 940,99	32 126,03	32 126,03	32 126,03	41 122,05	41 122,05	41 122,05
MAINTENANCE						1 575,00	1 575,00	1 575,00	1 575,00	1 575,00	1 575,00	4 534,00
FACILITY MANAGEMENT	1 964,73	1 964,73	1 964,73	1 964,73	1 964,73	7 999,60	7 999,60	7 999,60	7 999,60	7 999,60	7 999,60	7 999,60
TOTAL COST PROGRESSIVE	8 215 030,55	9 118 869,19	10 022 707,83	11 092 532,68	12 203 679,53	13 654 361,43	14 724 573,55	16 134 066,44	17 657 101,00	19 406 612,35	21 156 123,70	23 047 055,59
REVENUE	30 047,50	30 047,50	30 047,50	30 047,50	30 047,50	30 047,50	134 708,00	134 708,00	134 708,00	134 708,00	134 708,00	134 708,00
TOTAL REVENUE PROGRESSIVE	30 047,50	60 095,00	90 142,50	120 190,00	150 237,50	180 285,00	314 993,00	449 701,00	584 409,00	719 117,01	853 825,01	988 533,01

	Year 3											
	25	26	27	28	29	30	31	32	33	34	35	36
CONSTRUCTION COSTS												
FINANCIAL CHARGES	54 128,63	54 128,63	54 128,63	65 746,86	65 746,86	65 746,86	72 876,46	72 876,46	72 876,46	75 661,24	75 661,24	75 661,24
MAINTENANCE	4 534,00	4 534,00	4 534,00	4 534,00	4 534,00	18 460,63	18 460,63	18 460,63	18 460,63	18 460,63	18 460,63	18 460,63
FACILITY MANAGEMENT	7 999,60	10 070,23	10 070,23	12 140,86	12 140,86	14 204,50	24 446,34	24 446,34	24 446,34	30 700,58	30 700,58	33 763,44
TOTAL COST PROGRESSIVE	24 950 994,06	26 697 724,00	28 444 453,93	30 045 593,56	31 715 608,18	33 242 871,40	34 230 058,46	35 217 245,52	35 753 399,54	36 290 910,33	36 642 128,20	36 993 346,07
REVENUE	134 708,00	170 618,15	170 618,15	206 528,29	206 528,29	242 317,25	373 922,46	373 922,46	607 127,98	607 127,98	660 245,91	660 245,91
TOTAL REVENUE PROGRESSIVE	1 123 241,01	1 293 859,16	1 464 477,30	1 671 005,59	1 877 533,89	2 119 851,14	2 493 773,60	2 867 696,05	3 474 824,04	4 081 952,02	4 742 197,93	5 402 443,85

	Year 4											
	37	38	39	40	41	42	43	44	45	46	47	48
CONSTRUCTION COSTS												
FINANCIAL CHARGES	74 228,70	74 228,70	74 228,70	67 968,80	67 968,80	67 968,80	60 783,77	60 783,77	60 783,77	51 787,75	51 787,75	51 787,75
MAINTENANCE	23 239,00	23 239,00	28 017,38	28 017,38	32 779,63	56 314,00	56 314,63	63 353,75	63 353,75	77 915,63	77 915,63	82 415,63
FACILITY MANAGEMENT	39 517,30	39 517,30	39 517,30	39 517,30	39 517,30	40 808,59	40 808,59	42 882,02	42 882,02	43 589,16	43 589,16	82 415,63
TOTAL COST PROGRESSIVE	38 353 522,38	39 713 488,69	42 077 551,71	44 392 497,69	47 101 939,25	49 931 343,76	52 570 184,04	55 215 963,45	57 570 202,94	60 180 674,96	62 688 645,79	65 201 116,62
REVENUE	831 373,09	831 373,09	831 373,09	831 373,09	831 373,09	831 373,09	853 767,45	853 767,45	889 726,06	889 726,06	901 321,09	901 321,09
TOTAL REVENUE PROGRESSIVE	6 233 816,93	7 065 190,02	7 896 563,11	8 727 936,19	9 559 309,28	10 390 682,37	11 244 449,81	12 098 217,26	12 987 943,32	13 877 669,38	14 778 990,48	15 680 311,57

	Year 5											
	49	50	51	52	53	54	55	56	57	58	59	60
CONSTRUCTION COSTS												
FINANCIAL CHARGES	37 482,89	37 482,89	37 482,89	22 600,54	22 600,54	22 600,54	12 715,13	12 715,13	12 715,13	3 565,56	3 565,56	3 565,56
MAINTENANCE	82 415,63	82 415,63	82 415,63	82 415,63	82 415,63	85 395,53	85 395,53	90 180,35	90 180,35	91 812,23	91 812,23	91 812,23
FACILITY MANAGEMENT	82 415,63	82 415,63	82 415,63	82 415,63	82 415,63	82 415,63	73 527,13	73 527,13	74 026,51	74 026,51	74 026,51	74 026,51
TOTAL COST PROGRESSIVE	65 201 116,62	68 150 579,70	69 591 561,24	71 017 660,42	72 533 735,61	74 052 838,69	74 666 777,04	75 282 210,20	75 840 522,75	76 391 317,59	76 962 737,44	77 567 964,91
REVENUE	901 321,09	1 204 574,06	1 204 574,06	1 204 574,06	1 204 574,06	1 204 574,06	1 246 224,06	1 248 774,06	1 248 774,06	1 257 434,51	1 257 434,51	1 257 434,51
TOTAL REVENUE PROGRESSIVE	16 582 632,67	18 089 459,70	19 294 033,76	20 498 607,83	21 703 181,89	22 907 755,95	24 153 980,02	25 402 754,08	26 651 528,14	27 908 962,65	29 166 397,16	30 423 831,67

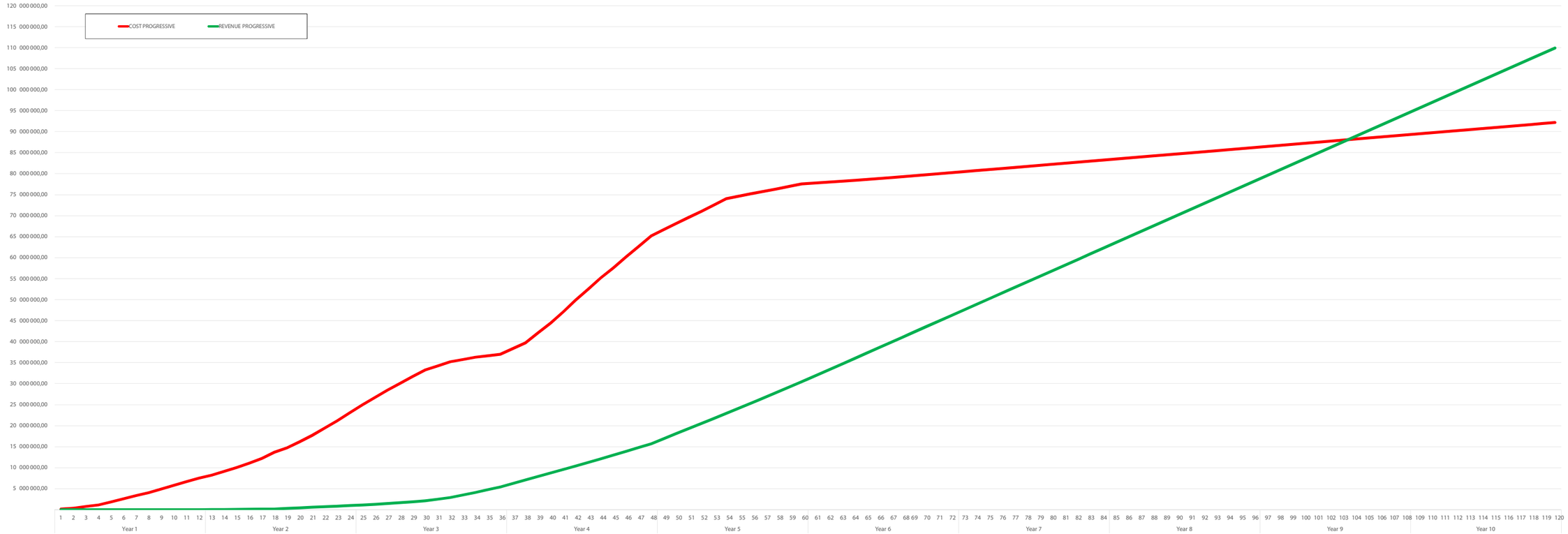
	Year 6											
	61	62	63	64	65	66	67	68	69	70	71	72
CONSTRUCTION COSTS												
FINANCIAL CHARGES	447,15	447,15	447,15									
MAINTENANCE	125 619,85	125 619,85	125 619,85	125 619,85	125 619,85	160 899,85	160 899,85	162 052,25	162 052,25	162 052,25	170 752,30	170 752,30
FACILITY MANAGEMENT	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53
TOTAL COST PROGRESSIVE	77 771 828,44	77 975 691,97	78 179 555,49	78 382 971,87	78 586 388,25	78 825 084,63	79 063 781,01	79 303 629,79	79 543 478,56	79 783 327,34	80 023 176,12	80 271 724,95
REVENUE	1 257 434,51	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13
TOTAL REVENUE PROGRESSIVE	31 687 867,80	33 073 943,93	34 399 000,06	35 724 056,19	37 049 112,32	38 374 168,45	39 699 224,58	41 024 280,71	42 349 336,84	43 674 392,97	44 999 449,10	46 324 505,23

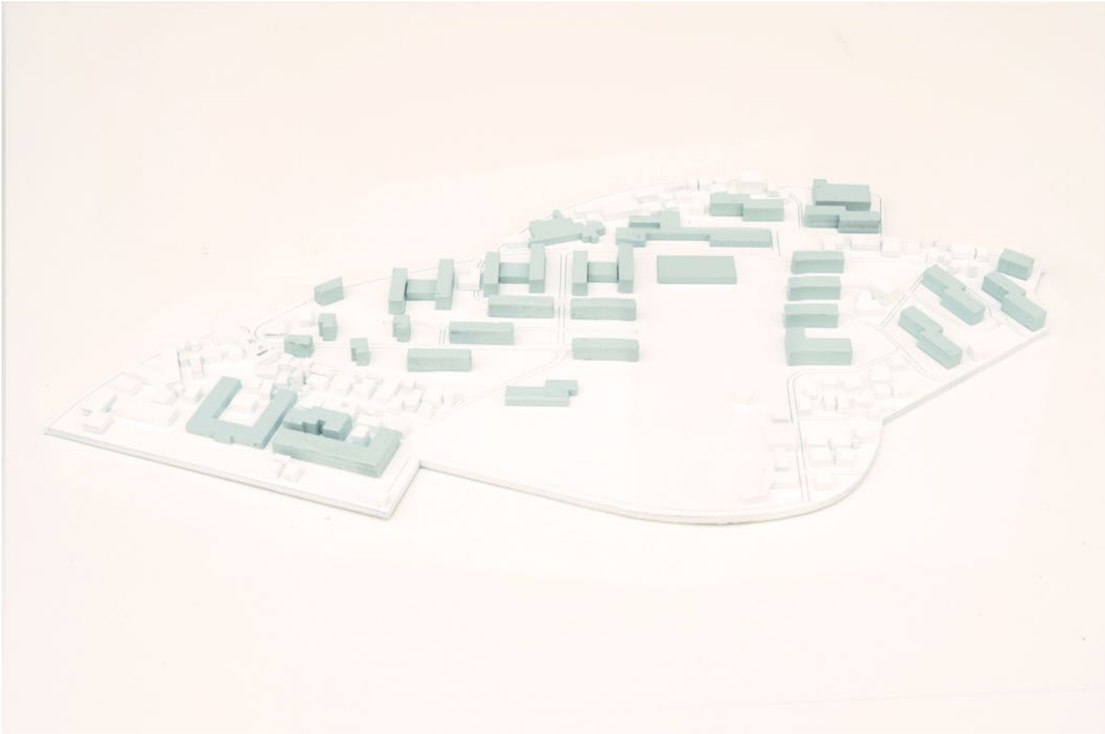
	Year 7											
	73	74	75	76	77	78	79	80	81	82	83	84
CONSTRUCTION COSTS												
FINANCIAL CHARGES												
MAINTENANCE	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30
FACILITY MANAGEMENT	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53
TOTAL COST PROGRESSIVE	80 520 273,78	80 768 822,61	81 017 371,43	81 265 920,26	81 514 469,09	81 763 017,92	82 011 566,75	82 260 115,58	82 508 664,40	82 757 213,23	83 005 762,06	83 254 310,89
REVENUE	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13
TOTAL REVENUE PROGRESSIVE	47 649 561,36	48 974 617,49	50 299 673,62	51 624 729,75	52 949 785,89	54 274 842,02	55 599 898,15	56 924 954,28	58 250 010,41	59 575 066,54	60 900 122,67	62 225 178,80

	Year 8											
	85	86	87	88	89	90	91	92	93	94	95	96
CONSTRUCTION COSTS												
FINANCIAL CHARGES												
MAINTENANCE	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30
FACILITY MANAGEMENT	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53
TOTAL COST PROGRESSIVE	83 502 859,72	83 751 408,55	83 999 957,37	84 248 506,20	84 497 055,03	84 745 603,86	84 994 152,69	85 242 701,52	85 491 250,34	85 739 799,17	85 988 348,00	86 236 896,83
REVENUE	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13
TOTAL REVENUE PROGRESSIVE	63 550 234,93	64 875 291,06	66 200 347,19	67 525 403,32	68 850 459,45	70 175 515,58	71 500 571,71	72 825 627,84	74 150 683,97	75 475 740,10	76 800 796,23	78 125 852,36

	Year 9											
	97	98	99	100	101	102	103	104	105	106	107	108
CONSTRUCTION COSTS												
FINANCIAL CHARGES												
MAINTENANCE	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30
FACILITY MANAGEMENT	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53
TOTAL COST PROGRESSIVE	86 485 445,66	86 733 994,49	86 982 543,31	87 231 092,14	87 479 640,97	87 728 189,80	87 976 738,63	88 225 287,46	88 473 836,28	88 722 385,11	88 970 933,94	89 219 482,77
REVENUE	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13
TOTAL REVENUE PROGRESSIVE	79 450 908,49	80 775 964,62	82 101 020,75	83 426 076,89	84 751 133,02	86 076 189,15	87 401 245,28	88 726 301,41	90 051 357,54	91 376 413,67	92 701 469,80	94 026 525,93

	Year 10											
	109	110	111	112	113	114	115	116	117	118	119	120
CONSTRUCTION COSTS												
FINANCIAL CHARGES												
MAINTENANCE	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30	170 752,30
FACILITY MANAGEMENT	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53	77 796,53
TOTAL COST PROGRESSIVE	89 468 031,60	89 716 580,43	89 965 129,25	90 213 678,08	90 462 226,91	90 710 775,74	90 959 324,57	91 207 873,40	91 456 422,22	91 704 971,05	91 953 519,88	92 202 068,71
REVENUE	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13	1 325 056,13
TOTAL REVENUE PROGRESSIVE	95 351 582,06	96 676 638,19	98 001 694,32	99 326 750,45	100 651 806,58	101 976 862,71	103 301 918,84	104 626 974,97	105 952 031,10	107 277 087,23	108 602 143,36	109 927 199,49

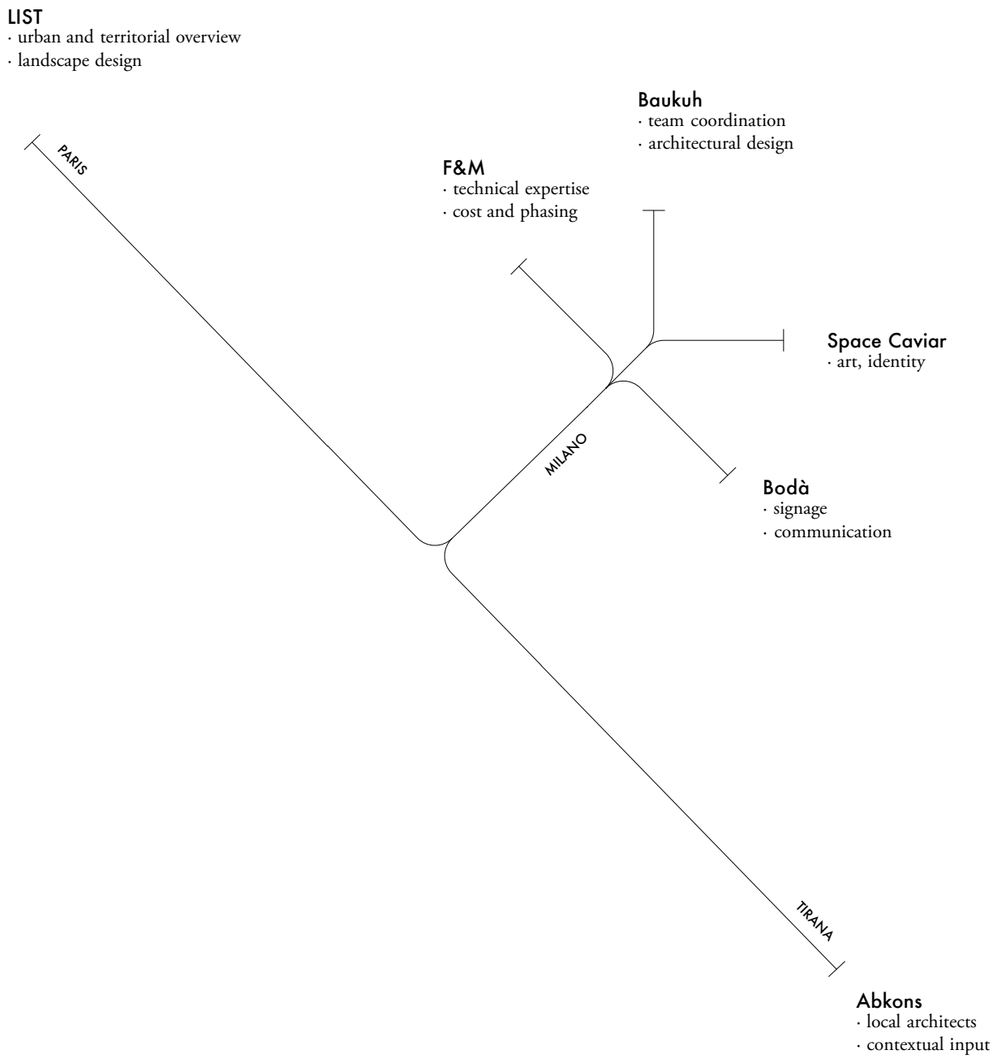


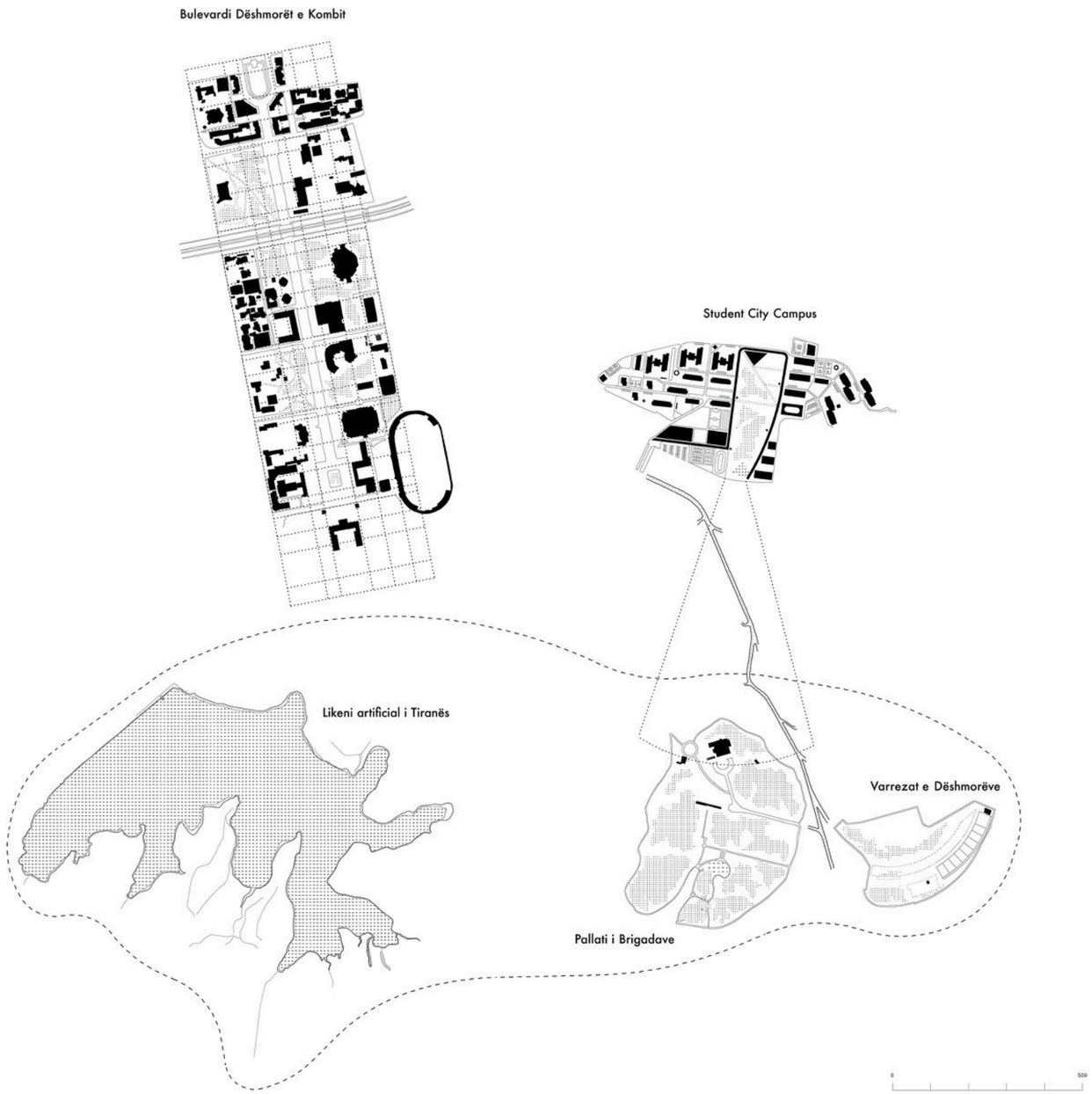


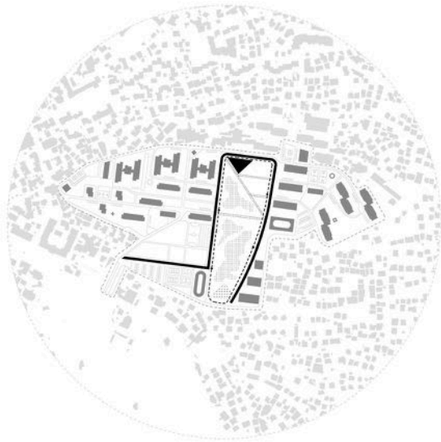
BEFORE

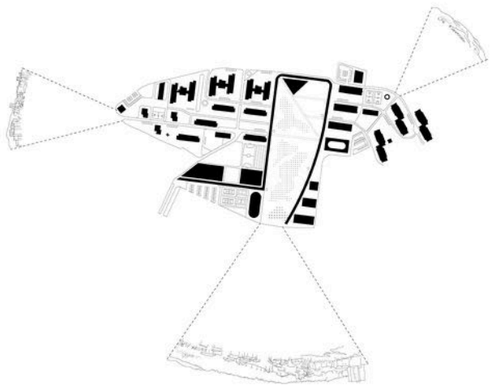
AFTER

GROUP COMPOSITION









TIRANA CAMPUS

The Student City is a complex built over more than 50 years, including almost 30 major buildings, with a surface of around 250,000 sqm. Transforming the Student City does not just imply the development of a design, but requires the definition of a method to look at this ensemble (an attitude towards description) and a strategy to organize the ensuing process. This means that the crucial operation is to observe: to constantly check the balance in between the Student City and the city around it, to recognize their mutual adjustments, to detect changes in the urban processes as soon as they appear.

For this reason, more than a simple design, we propose a commitment to observation, a style of description and a strategy of action. We believe it is crucial to recognize all available assets, to define all possible protagonists of the transformation, to activate all energies and to imagine a possible discourse that could bring all these different subjects together. The urban challenge is also a geographical, economical and rhetorical one.

The problem of the Student City cannot be understood just thinking of the Student City, but needs to be developed thinking of what the Student City can do for the entire City of Tirana. In fact, with a potential population of around 10,000 students, the Student City will have a mass of students roughly similar to the entire student population of Yale (or half of the student population of Cambridge or Oxford). This impressive concentration of innovative energy located right next to the centre of the city needs to become an explicit engine of the urban life of Tirana.

Geography

The Student City lies on the mild hills forming the background of the Tirana metropolitan region. By observing the Student City from a geographical point of view it is possible to rediscover the forgotten assets and to activate the hidden potentials of the context. In fact, the Student City is part of the larger system of hills, rivers, valleys and lakes that characterizes the entire metropolitan region.

City - Figure (central drawing)

The Student City is a very recognizable fragment inside Tirana. Inside the city few elements can be compared to the Student City: only the boulevard Dëshmorët e Kombit and the monuments disposed along it, the university hospital and the military academy, the embassies, the large urban voids of the former military airport and of the train station, the custom and the former Kombinati textile industry play a role somehow similar to that of the Student City. And while the majority of these parts are scattered through the city without generating clear figures and with limited potential to establish relations with other urban figures, the Student City can be grouped with the Parku i Madh, with the Place of Brigades and the Cemetery of the Martyrs and with the Tirana and Farka lake to produce a clear figure, with a shared relation to nature and a distinctive urban tone. This ensemble emerges as a possible complementary urban constellation, capable to balance the monumental system aggregated along the boulevard Dëshmorët e Kombit. While the clarity of the urban sequence along the axes designed by Brasini was never lost through all the transformations of the city, the (lighter and more fragile) constellation including the park and the Student City needs to be redefined and re-established. This operation is not only fundamental for the design of the Student City, but for the equilibrium of the Parku i Madh and of the entire city. The development of the southern green core as an urban figure alternative and complimentary to the Brasini axes is one of the greatest urban challenges of Tirana in the next years. The transformation of the Student City is a crucial episode in the production of this new urban figure. The internal organization of the Student City needs to contribute to the emergence of this figure.

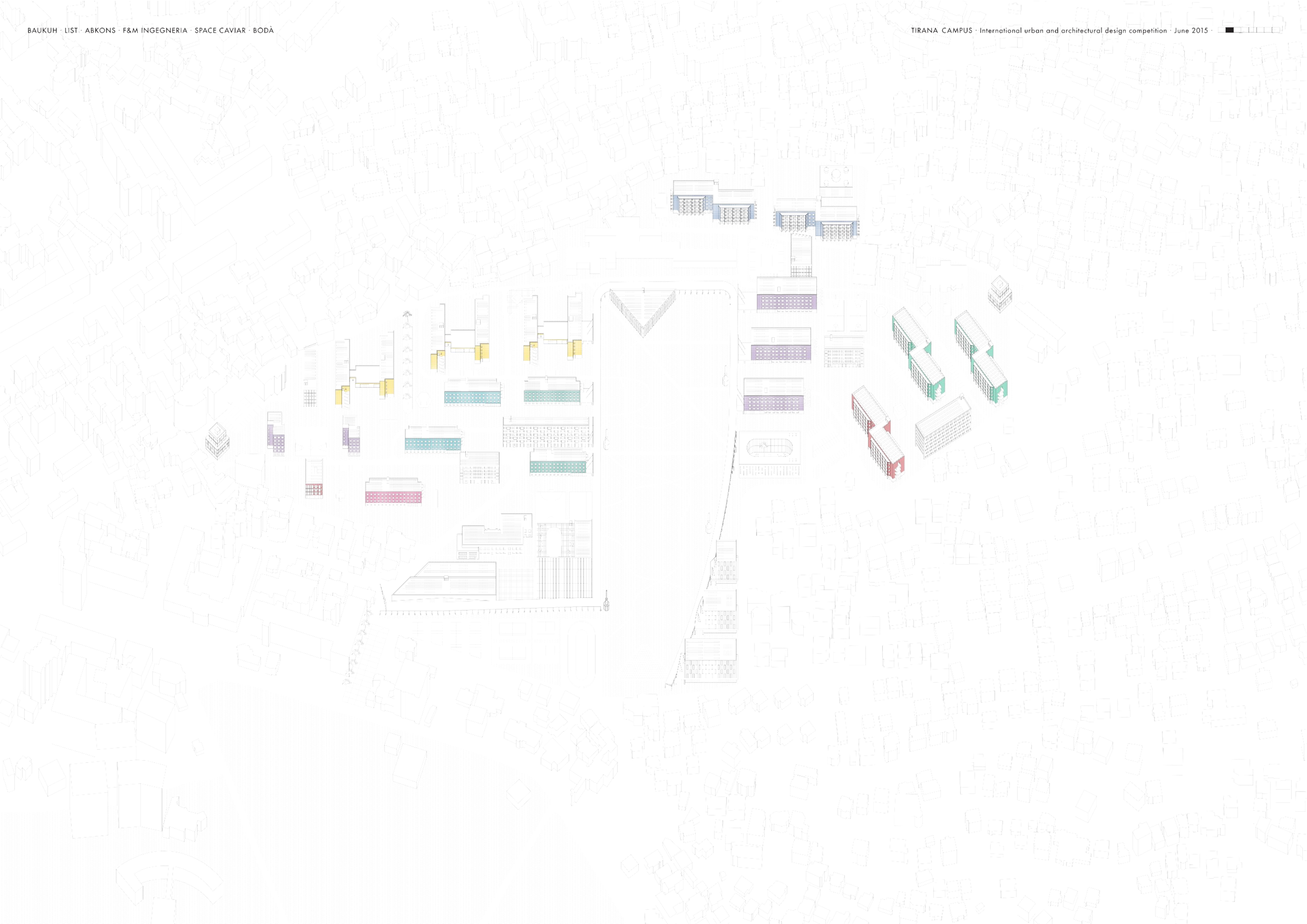
Three Levels (top right drawing)

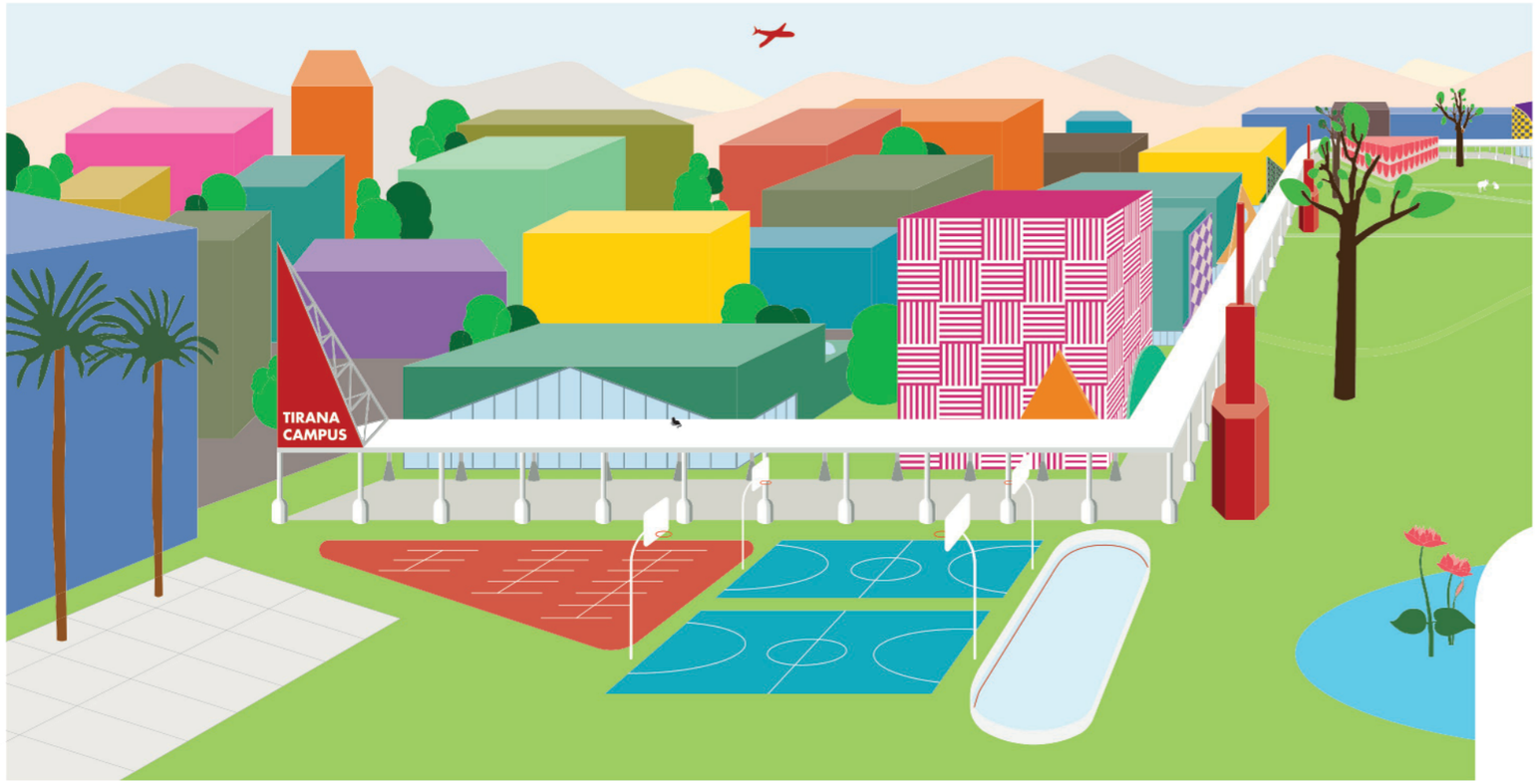
The campus is subdivided in three different levels: the core, or the lawn, the university dormitories and faculties and the connective tissue bordering the city. These three zones have different degrees of intensity and identity: the lawn collects all public life in the campus, the dormitories and faculties provide the critical mass the populates the lawn, the in-between zone mediates with the city and offer a place to a large array of minor activities that are necessary for the campus and the city to operate next to each other.

Panorama (bottom right drawing)

The large, empty, sloping ground opens towards the south and establishes a direct visual connection to the Parku i Madh. The openness of this area means that a larger panorama appears in the middle of the city. The pressure of the city is suspended for a while and the geography of the region becomes once again evident.

The central part of the Student City should stay a void – a green core open towards the south in order to establish a relation with the park and with the hills behind it.



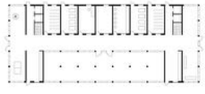

TIRANA
CAMPUS

Central lawn and open-air activities, scale : 1/500

NEW BUILDINGS

DORMITORY

1st floor plan



ground floor plan

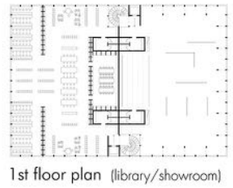
HOTELS

2nd floor plan

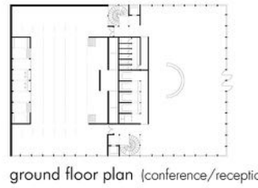
1st floor plan

ground floor plan

MULTI-FUNCTIONAL BUILDING

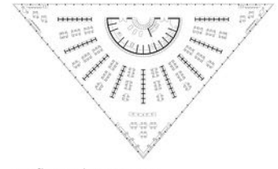


1st floor plan (library/showroom)

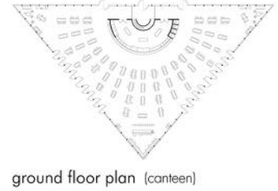


ground floor plan (conference/reception)

CANTEEN

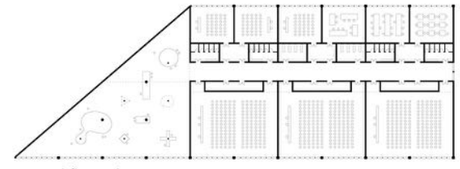


1st floor plan (library)



ground floor plan (canteen)

FACULTY



ground floor plan

EXISTING BUILDINGS RENOVATION

BUILDING TYPE 1

PRESENT SITUATION

ground floor plan

PROJECT

1st floor plan

ground floor plan

COMPARISON	existing	new
beds number	108	102
room surface	15-20 sqm	20 sqm
toilets number	24	51
showers number	12	51
elevator	no	yes
emergency stairs	no	yes

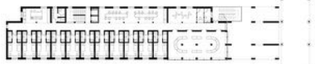
BUILDING TYPE 2

PRESENT SITUATION

ground floor plan

PROJECT

1st floor plan

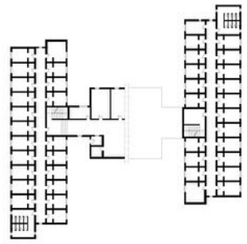


ground floor plan

COMPARISON	existing	new
beds number	154	114
room surface	15-20 sqm	20 sqm
toilets number	24	54
showers number	12	54
elevator	no	yes
emergency stairs	no	yes

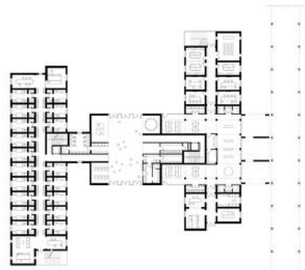
BUILDING TYPE 3

PRESENT SITUATION



ground floor plan

PROJECT

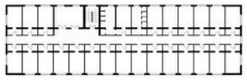


ground floor plan

COMPARISON	existing	new
beds number	206	204
room surface	12-16 sqm	15/30 sqm
toilets number	40	102
showers number	12	102
elevator	no	yes
emergency stairs	no	yes

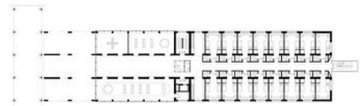
BUILDING TYPE 4

PRESENT SITUATION

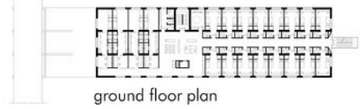


ground floor plan

PROJECT



1st floor plan

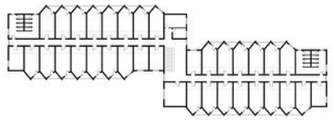


ground floor plan

COMPARISON	existing	new
beds number	204	152
room surface	18 sqm	21/47 sqm
toilets number	32	76
showers number	12	76
elevator	no	yes
emergency stairs	no	yes

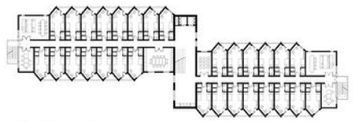
BUILDING TYPE 5

PRESENT SITUATION

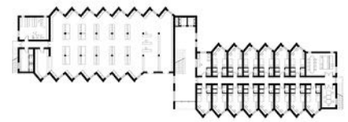


ground floor plan

PROJECT



1st floor plan



ground floor plan

COMPARISON	existing	new
beds number	390	260
room surface	20-22 sqm	22 sqm
toilets number	40	130
showers number	24	130
elevator	no	yes
emergency stairs	no	yes

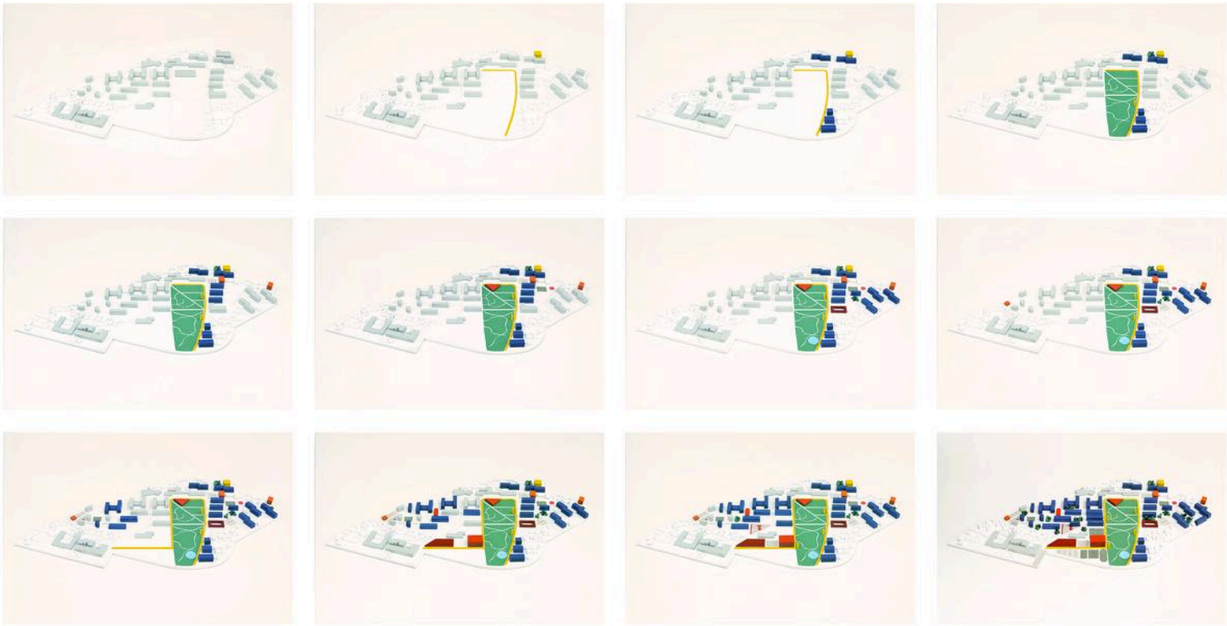
CHRONOTOPE - SPACE, TIME, COST CONTROL

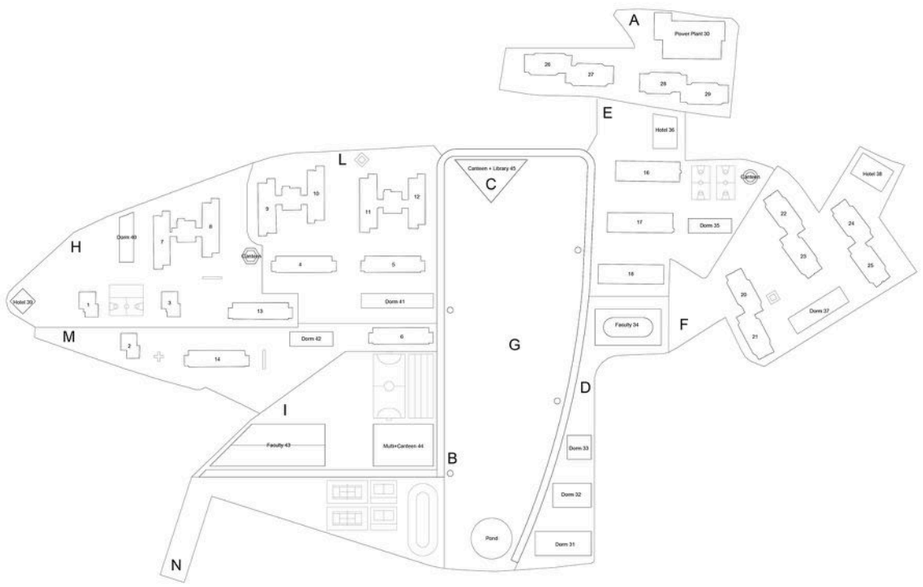
The project addresses a relatively long time-span and faces relatively uncertain conditions for its development. For this reason, we understand our phasing scheme more as a logical than as a chronological sequence (more as a list of what to do before and what to do after, than as a precise program with deadlines to match at all costs).

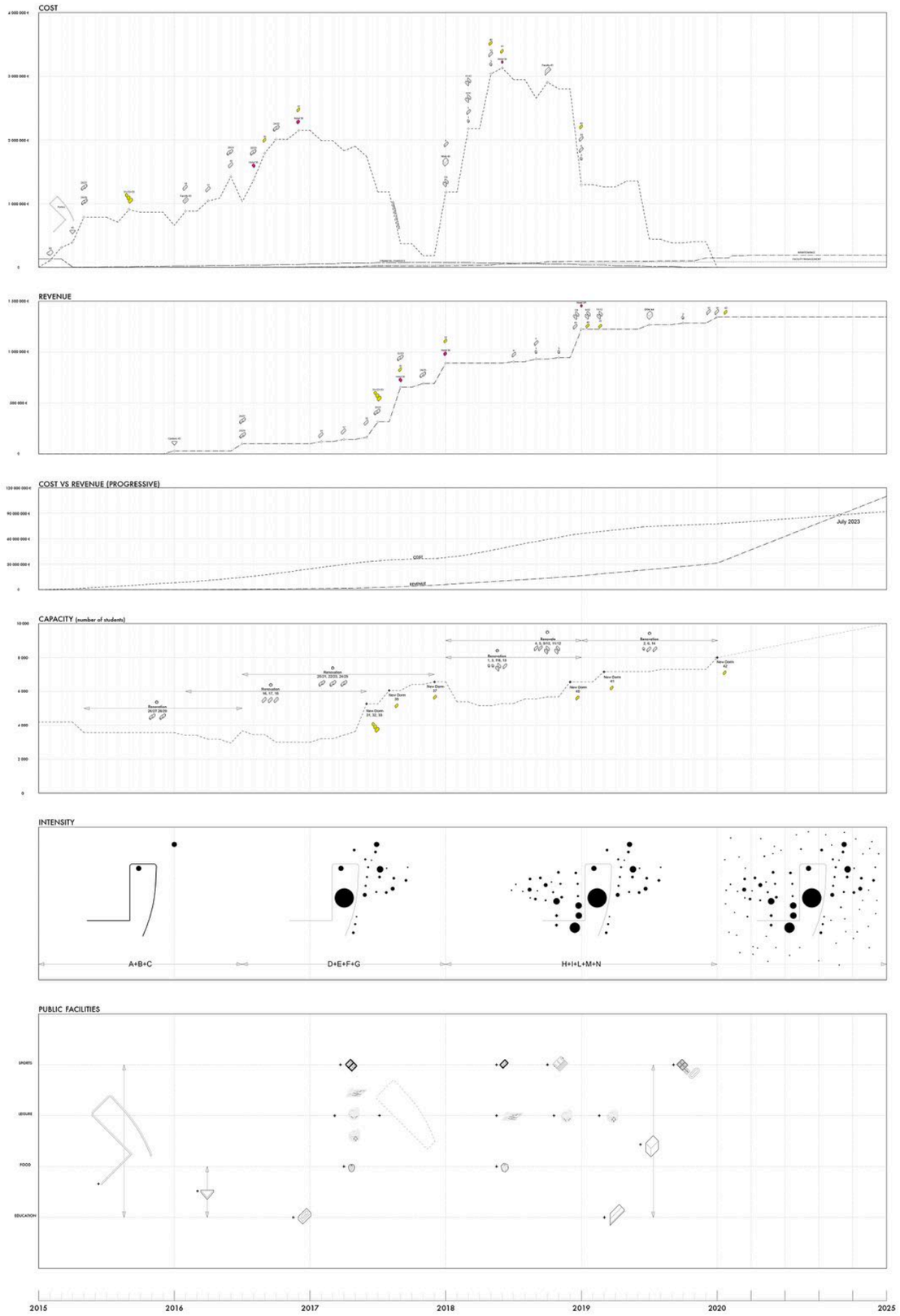
The simplicity of the proposed scheme allows to adapt to possible changes. The project defines a robust logic in which different actions follow one another without asking the city to commit now to a rigid multi-years plan. Also the mathematics of the project are adaptable. Indeed the campus can work (both from an economical, a social and an urban point of view) either with 4,000 or 8,000, or 10,000 students living there. Our scheme is adaptable to this variety of possible scenarios. Also, our proposal precisely identifies a series of simple, evident and relatively inexpensive interventions that could immediately be red by the population of both the Student City and Tirana and so operate as an activator for the entire transformation process. We indeed propose a series of interventions that will turn the Student City into a completely new environment in two years, although the schedule for the restoration of dormitories will probably develop in a longer time-frame.

We propose to subdivide the Student City in two main zones: the eastern and the western one. The eastern zone consists of the lawn, the new main canteen, the two new hotels and the old and new dormitories and the eastern new faculty (subzones: A, B, C, D, E, F, G). The western zone consists of the western new faculty, of the media centre, of the sport facilities and the relatively older dormitories (subzones: H, I, L, M, N). This pragmatic subdivision in zones will allow conducting operations on an optimal scale, without compromising the functioning of the remaining parts of the Student City.

Construction in both eastern and western zones will start with the realization of the relative portion of the porch and will proceed independently from the other region. The operation will start from the eastern zone: the eastern porch, the new power plant, the new canteen and the lawn being the first things to be realized.







INFRASTRUCTURE AND SUSTAINABILITY
MEP SYSTEMS

Heating, cooling, hot sanitary water, electricity production

The general approach of the mechanical and electrical plants aims to achieve a technological system characterized by an high reliability and functionality, huge reduction of the environmental pollution impact and qualifying cost-benefit relationship, according to the main International Design and Assessments Methods for Sustainable Buildings such as LEED (Leadership in Environmental and Energy Design), BREEAM (Building Research Establishment Environmental Assessment Method), DGNB (Deutsche Gesellschaft fur Nachhaliges Bauen), etc. In particular, the adopted design strategies aim to achieve a "Green Building" Area that is interconnected to the surrounding environmental conditions in order to meet the objectives of energy saving and reducing CO2 emissions in atmosphere.

The technological MEP main production and distribution, serving the whole Area in Tirana, consists in a district technical area (restoring of the existing power plant) within which all the main facilities are installed such as:

· Heating and Cooling Production System (Main Power Centre)
· Electrical Power Plant (Main Power Centre)
· Sanitary Water treatments (Water Supply System - Main Power Centre)
· Fire Protection System (Main Power Centre)
· Garbage Storage (Main Pneumatic District Storage)

In the district technical area (Main Power Centre), the large use of "renewable energy sources" allows the construction of the Power Plant, supplying both the restored and the new buildings, as shown in the following scheme; this technology combines highly efficient and low-emission equipments, ensuring simultaneous generation of hot water for both heating and sanitary water, cooling.

Moreover, the main Power plant will be associated to a photovoltaic power plant (Electrical Peak Capacity=1400kWp), installed on the roof of the buildings with the same slope of the roof itself.

In the preliminary stage, Cooling Capacity= 9.873kW and Heating Capacity= 6.000kW can be estimated, considering high insulation levels for building envelope components (U-factor) and high efficiency main power plants.

According to the heating and cooling estimation, above mentioned, District Heating and Cooling Plant solution, in the final configuration (after the whole period of intervention, both restoration of existing buildings and new buildings), will consist of:

· n°3 ground-water heat pumps (GWHP), Cooling Capacity=1100 kW (each), Heating Capacity=1000 kW (each)
· n°3 air-condensing heat pumps, Cooling Capacity=1100 kW (each), Heating Capacity=1000 kW (each)
· n°2 air-condensing centrifugal chillers (magnetic levitation technology – high efficiency), Cooling Capacity=1500 kW (each)

This "concept" plant solution presents the following benefits:

· High energy saving
· Low cost of installation
· Ease of implementation
· Ease of CO2 emissions control because of a single point of production (power centre)
· Ease of acoustic emissions control because of a single point of production (power centre)

The high energy efficiency of this plant solution it's increased through the adoption of ground-water heat pumps; ground water is an inexhaustible source of energy, constantly available and renewable. Just a few meters below the ground level, the soil substrate maintains nearly constant temperature throughout the year and this allows to extract heat in winter and to transfer heat during the summer. This plant solution maximizes the ratio energy used/resources used, as the latter comes from renewable sources of energy and therefore completely free. In this preliminary stage, total ground-water amount equal 75 L/s has been estimated.

Main power plant will be equipped with Variable Flow Rate Circulating Pumps; main piping distribution will be realized with grooved pipe joining system. All components also, such as butterfly valves, ball valves, balancing valves, check valves and filters, expansion joints, will be joined by couplings, rigid- flexible, through a cast iron housing in contact with the bottom of the groove arranged in the elements; this technology guarantees, therefore, a perfect union of the parts.

This piping connection system will be the most versatile, convenient and reliable solution available today because it ensures stiffness, reduction of vibration and noise, flexibility, maintenance, absorption of seismic stress, ease of alignment.

The main cooling and heating piping distribution, through the whole area of intervention, will be realized through pre-insulated pipes starting from the main power centre (Technological Area) and supplying each single building block, mainly across the new "portico" facing the central park zone. Each building will be equipped of a sub-metering system in order to divide the real energy consumption.

Heating and cooling distribution

Different solutions for heating and cooling distribution have been taken into account in order to achieve optimum indoor comfort conditions for the occupants and contribute to energy saving requirements, according to the different destination of use of the buildings inside the campus (apartments, dormitory, hotel, faculty, library).

a) Dormitory

Cooling and heating distribution for dormitories will be provided trough the installation of false-ceiling brush-less fan coil units, characterized by rapid achievement of the indoor conditions, quick plant response in lieu of environmental changing conditions, ease of installation, low electrical consumption.

Temperature control will be provided for each room by temperature sensors and fa speed controllersconnected to BMS (Building Management System).

Mechanical ventilation will be also provided, ensuring excellent air indoor quality for occupants and keeping rooms under slight pressure, comparing to the corridors, in order to prevent undesired external air infiltrations or pollution.

Thermodynamic recovery systems, serving each building floor, will be installed instead of traditional air

handling units for primary air; this technology will reduce ventilation operating costs due to the high efficiency of equipment recovery, both in summer and winter period.

b) Apartments

HVAC distribution in apartments will be realized through the installation of ceiling radiant panels associated to primary air system; this technical solution combines the high level of comfort with reduced consumption, allowing the use of water at 11 °C in summer instead of 7°C of traditional distribution system such as fan coils. Moreover, combination of ceiling radiant panels with mechanical ventilation (primay air) will ensure all the benefits such as high energy consumption saving, low thermal inertia and quick plant response, high environmental comfort due to the uniform distribution, maximum flexibility of interior furnishings, no maintenance operations, no movement of dust inside rooms.

HVAC plant will consist of radiant ceiling plasterboard panels with modular pipe already inserted coupled to a panel of polystyrene foam with high thermal performance. Great speed and ease of installation are ensured by the guidelines of layout of the circuit shown on the surface of the plasterboard panel, in order to allow ceiling fixing without risk of damaging the pipe.

The primary air system ventilation performs three fundamental functions:

· Ensuring correct fresh air intake (Indoor Air Quality)
· Controlling relative humidity, which in this case is highly variable depending on occupancy
· Keeping the rooms under slight pressure with respect to the corridors, and these latter with respect to the external conditions, to prevent bothersome and inappropriate infiltrations and undesired drafts of uncontrolled air.
· Primary air will be distributed through pre-insulated ducts with antimicrobic internal layer, moving inside the false ceiling and high induction diffusers (linear diffusers).

c) Hotel

Cooling and heating distribution for hotel guest rooms will be provided trough the installation of false-ceiling brush-less fan coil units, associated to mechanical ventilation.

All the air handling units will be equipped by plug fan instead of traditional fan (belt-drive fan), ensuring lower power consumption, silent in operation, maintenance free, high reliability for mechanical components, energy saving due to high efficiency of engine/fan system.

In order to achieve high standards of indoor air quality for occupied environments, all the supply air ducts and outdoor air intake ducts, internal and external to the building, will be pre-insulated polyisocyanate type with antimicrobial internal treatment due to ions of silver; this technology provides total guarantee of air quality standard, especially referring to high occupancy buildings.

d) Faculty, Library, Canteen

Mechanical ventilation for heating and cooling distribution will occur; high induction diffusers, such as jet nozzle, or micro-hole steel ducts will be installed in order to achieve optimal comfort conditions for occupant. Mechanical Ventilation system will be supplied by Air Handling Units, equipped by programmable ozone healthy treatment, plug fan and heat recovery system.

This design solution, perfectly integrated with the architectural development of space, will allow big flexibility in distribution of the furnishings without restrictions of any kind as well as ensuring optimal comfort conditions for the occupants.

Lighting system

The variable intensity of light is a decisive factor in the conformation of the living and work place and affects the well-being, concentration and efficiency for the occupants. Moreover, the natural light, coming through the windows, can provide all or part of the necessary illumination to the various visual tasks.

According to these principles, the electrical system design will favour natural light, using artificial lighting such as integration.

Each building will be equipped with LED Technology indoor lighting devices lamps and electronic ballast with "intelligent" system (DALI) that can be programmed in order to provide the really needed flow, saving energy. The lighting system inside the buildings will be automated as a function of outdoor lighting level.

Electrical distribution

Medium voltage electric energy will be distributed from the main power plant and reaches transformation cabins, located in the intervention area, serving single buildings or group of buildings; cabins distribution will depend on the total electricity needed amount.

The electrical distribution serving each building will be structured by single area electrical panels, cable trunking and cable pullings, secondary energy distribution and installation of the lighting systems and electromotive force, electrical protection plant against lightning, exterior lighting installation (green areas and pavement areas), electrical service to mechanical equipment (air conditioning and water), lifts power plant.

Electrical safety plants (Emergency Lighting, CCTV)

Emergency lighting will be installed in order to ensure a minimum level of illumination in the absence of line voltage and a system for safety reporting (escape routes) that supports the work of evacuation.

All the indicator lamps of the escape routes will be equipped with LED technologies that compared to conventional compact fluorescent lamps offer the following advantages: power consumption (less than 4W per device), increased efficiency of the lamp and of the system as a whole, lifetime of the lamps significantly greater (50,000 hours), absence of stroboscopic effect and hum, reduced size and weight.

Closed-circuit Television Cameras (CCTV), monitoring the common areas, faculty, library, canteen and hotel, will be installed; each plant will consist of fixed and dome cameras, DVR recording systems and monitors for viewing images.

Water supply system and storm water collection and reuse

Rational use of potable water resources implies two fundamental issues:

· Minimize the production of discharges by installing components at minimal water consumption;
· Maximize reuse by collecting and reusing grey water;

Both in the restored and new buildings, the following design strategies will be adopted:

· flow reducers;
· taps with lever to allow two distinct flush areas, an economy where a slight braking action report wanting to spend about 5 l/min and one for the usual supply of water of about 10 l/min;
· toilet flushing tanks with stop button or double button (3/6 litres, or 4/9 litres, etc).

Moreover, collection and the recycling of storm water can offer immediate results to solve the problems of waste, scarcity and rising cost of water supply. This aspects is very important especially in buildings characterized by high occupancy levels as in Tirana University Campus.

Although rainwater cannot be considered "drinking water", non-potable water can be used for different utilities, both inside and outside buildings, such as WC flushing, cleaning of common building areas, car-washing, garden irrigation, road flushing, etc.

Rainwater will be collected and stored in suitable underground reservoir and used for flushing toilet and for cleaning and irrigation of green areas. The main feature of the system is the availability of free water resources, otherwise "wasted" in the drain, in order to reduce the impact of unexpected storm events on municipal sewage systems. The great benefits of collecting and reusing rainwater, therefore, can be summarized as follows:

· Water cost saving
· Control and management of the site hydraulic capacity
· Available non-potable water for irrigation of green areas during periods of drought and wc flush;
· No impact from the aesthetic point of view: the plant is completely buried

Pneumatic Garbage Storage

Pneumatic garbage storage (collection of waste and storage) has been considered as a plus of whole project in order to create an eco-friendly and sustainable area, providing a system serving the whole area and not only the single building.

The pneumatic waste collection system is essentially consisting of:

· Transport network
· Piping
· Storage station
· Fans
· Waste decanting
· Compact and transport

This technology, largely diffused in Europe, presents several benefits such as:

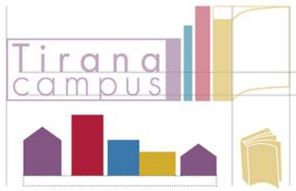
· Availability 24 h/24, 365 days a year;
· Ease of use, security, accessibility;
· Separate collection
· Fast waste removal
· Eliminate smell
· Public health improving
· Substantial reduction of operational costs
· Space recover occupied by bins on public and private land

The operating system is quite similar to that of the old pneumatic tube used in offices to send documents from one floor to another before the advent of e-mail. Users simply place their waste, arranged in several columns along the roads and-or buildings: depending on the maximum load allowed or time schedules, the suction system is activated, putting pressure on the entire pipes network and sucking the waste into the storage centre (variable speed about 70-90 km per hour).

The waste is stored into containers that will be collected by trucks before being transported to the disposal facilities. Special carbon filters are used to remove dust and odours from the air before returning to the environment.

01| NEW NAMING and VISUAL IDENTITY

NEW LOGO DESIGN



elements genesis

Tirana
campus

lettering weights

font: futura book
aA abcdefghilmno
pqrstuvz 1234567890

font: futura light
aA abcdefghilmno
pqrstuvz 1234567890

font

Titles
subtitles

hierarchies

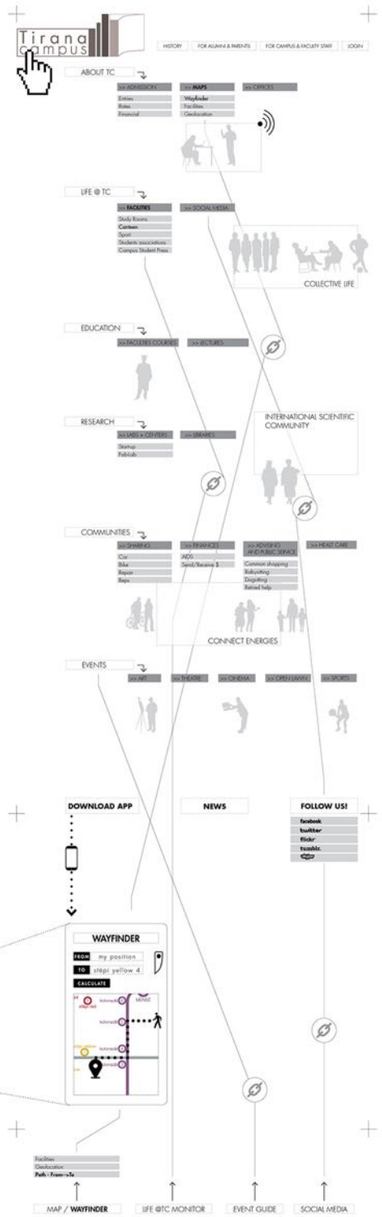
acronym

brand

events communication samples

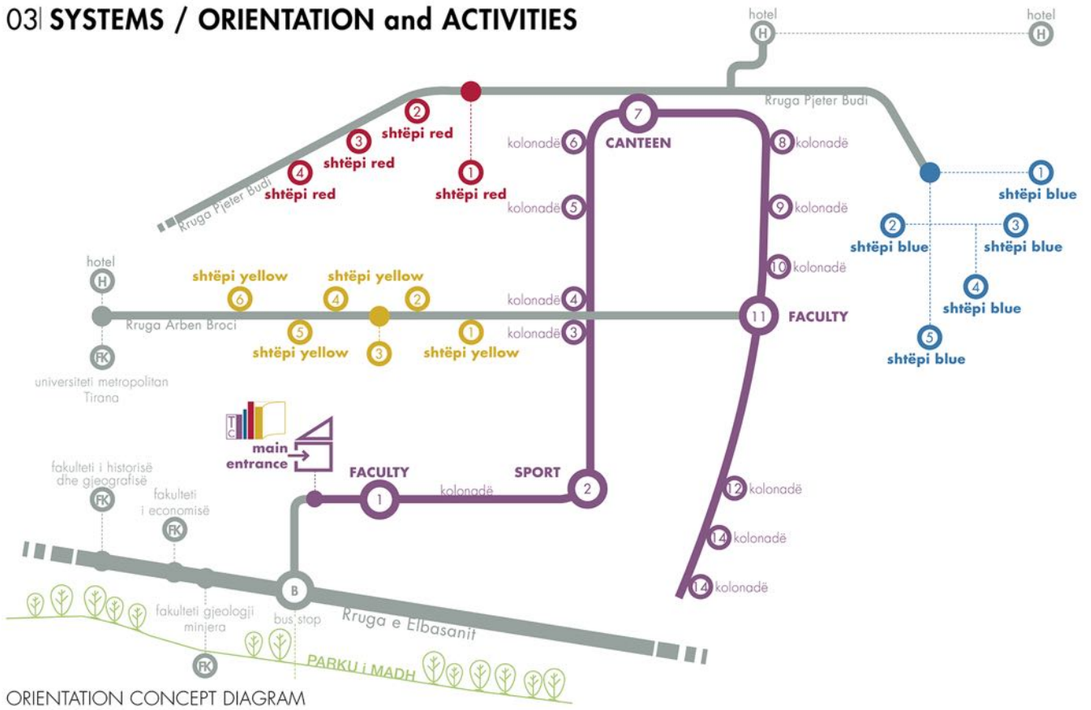
02| DIGITAL STRATEGY

WEB / SOCIAL MEDIA INTERACTION

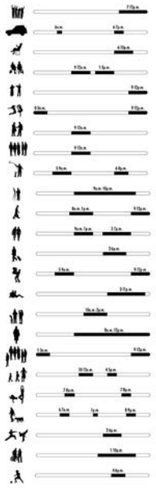


PERSONAL DEVICE APPLICATION

03| SYSTEMS / ORIENTATION and ACTIVITIES



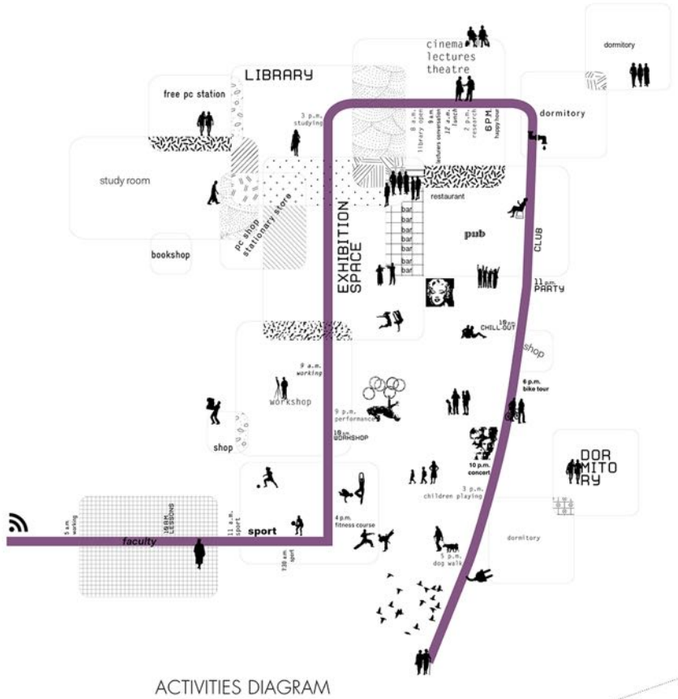
ORIENTATION CONCEPT DIAGRAM



ACTORS

TIME

TIME/ACTORS DIAGRAM



ACTIVITIES DIAGRAM

04| SYSTEMS / COLOURS and SIGNAGE

ENVIRONMENTAL SIGNAGE

interior - directional communication

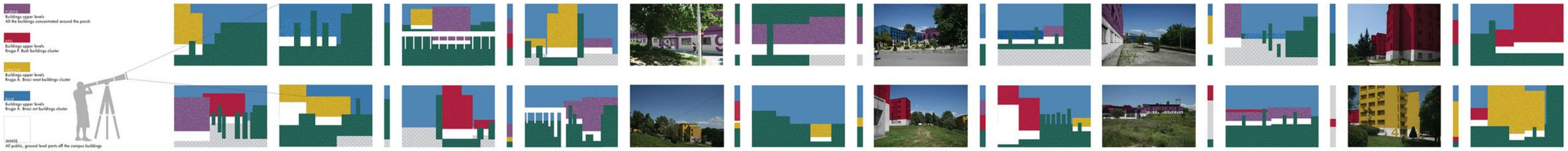
exterior - buildings groung level supergraphics

exterior - wayfinder panel

path markers

marker pole

common areas decoration



COLOUR CODE

colour mix - concept diagrams