

SCENARIOS OF STUDENT COHABITATION IN THE MINION

diploma thesis project

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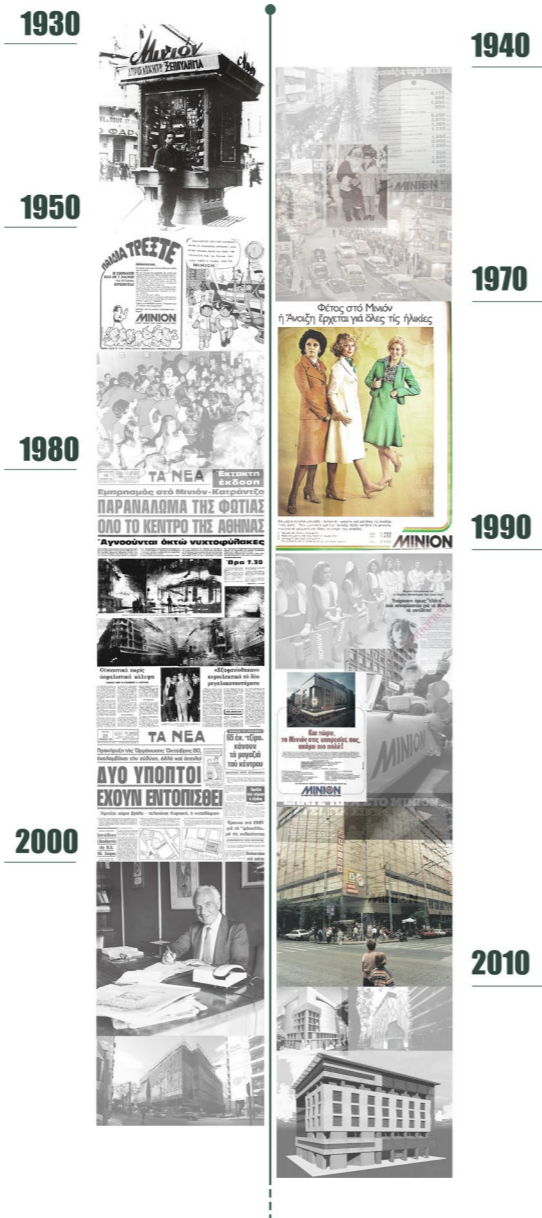
problem

A big challenge we face today is the management of dysfunctional building stock of our country. For more than 60% of the buildings, the cost of their restoration and modernization exceed their current market value. The rate of abandonment in some buildings of the city center reach 40% of the total built area. 18% of the buildings are entirely empty, many of which are listed for preservation.



Amidst the devaluated buildings in Athens, there are several structures of special importance, either due to their size and construction quality, or because of the collective memory that is related to them. One of these is the empty shell that used to host the "MINION" department store in the 70s (the 11th largest in size across Europe) – a building which has imprinted strong memories in the conscience of the citizens of Athens and nowadays stands deserted in the heart of the city center.

On Christmas Eve of 1980, the building complex suffered irreversible damage by an arson attack and the only thing left was its bearing structure, most of which was reinforced. In 1983, the company operated again, until it went bankrupt and closed permanently after 15 years. Since then many proposals have been made for Minion, such as its reconstruction as a department store, its modification to a hotel, or even its conversion to a ministry, but all were cancelled in the end, due to disagreements among the co-owners.

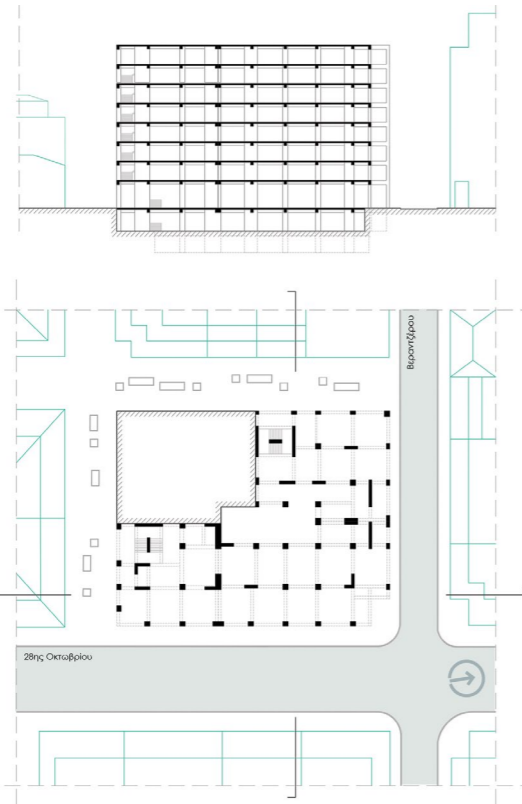


Location / Current Situation

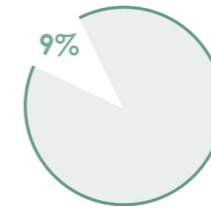
The building complex is situated very close to the Omonia station. Scaffolding and cloths, thirty meters in height, indicate the presence of an obsolete built volume in the city center and point out the absence of human activity that prevails in the surrounding area. The once evident commercial colour that dominated the pedestrian roads and the building of study itself, is now limited to neighboring areas. Nevertheless, there is heavy traffic in the district, both pedestrians and cars, during the day, especially in front of Patission avenue.



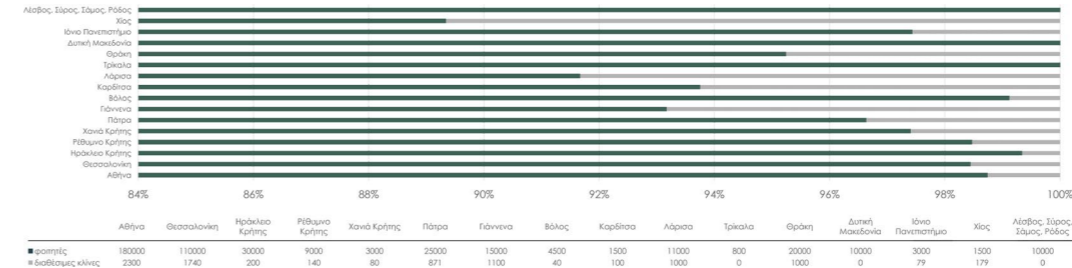
1376
m²/ floor
3254
m²/ outdoor space
10
levels
17014
m² total



necessity



With the current economic situation, it is becoming increasingly difficult for students to rent an apartment in the city, bringing the number of requests in students' housing complexes to grow exponentially. Students studying away from their family home are close to 150,000, while the available places in dormitories are just 14,000, to wit the percentage covered does not exceed 9%.

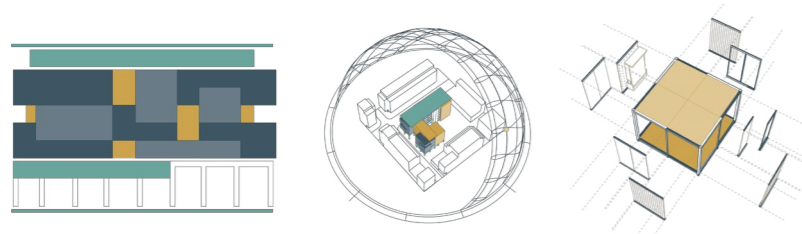


We therefore recommend Minion should welcome the use of students' residence. This choice is adequate since it is situated close enough to most institutions of the city center and right next to the transportation junction of Omonia. Still, the large size of the building is suitable to accommodate all the functions related to student housing.

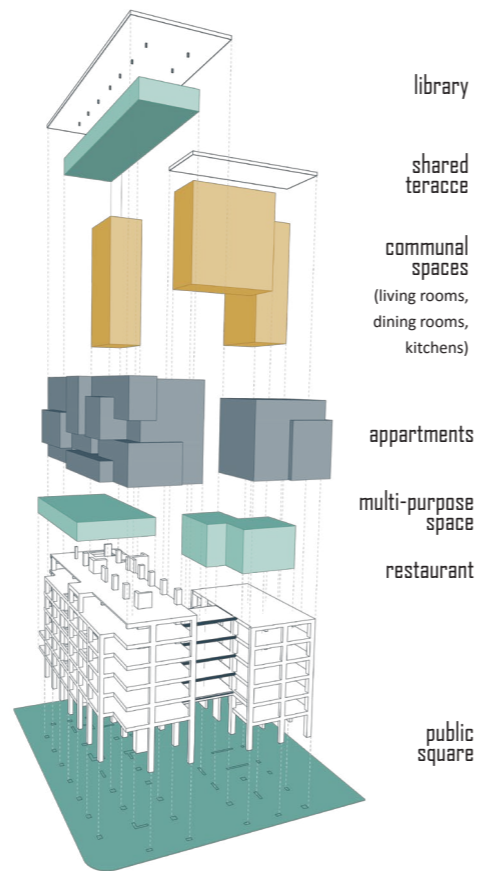




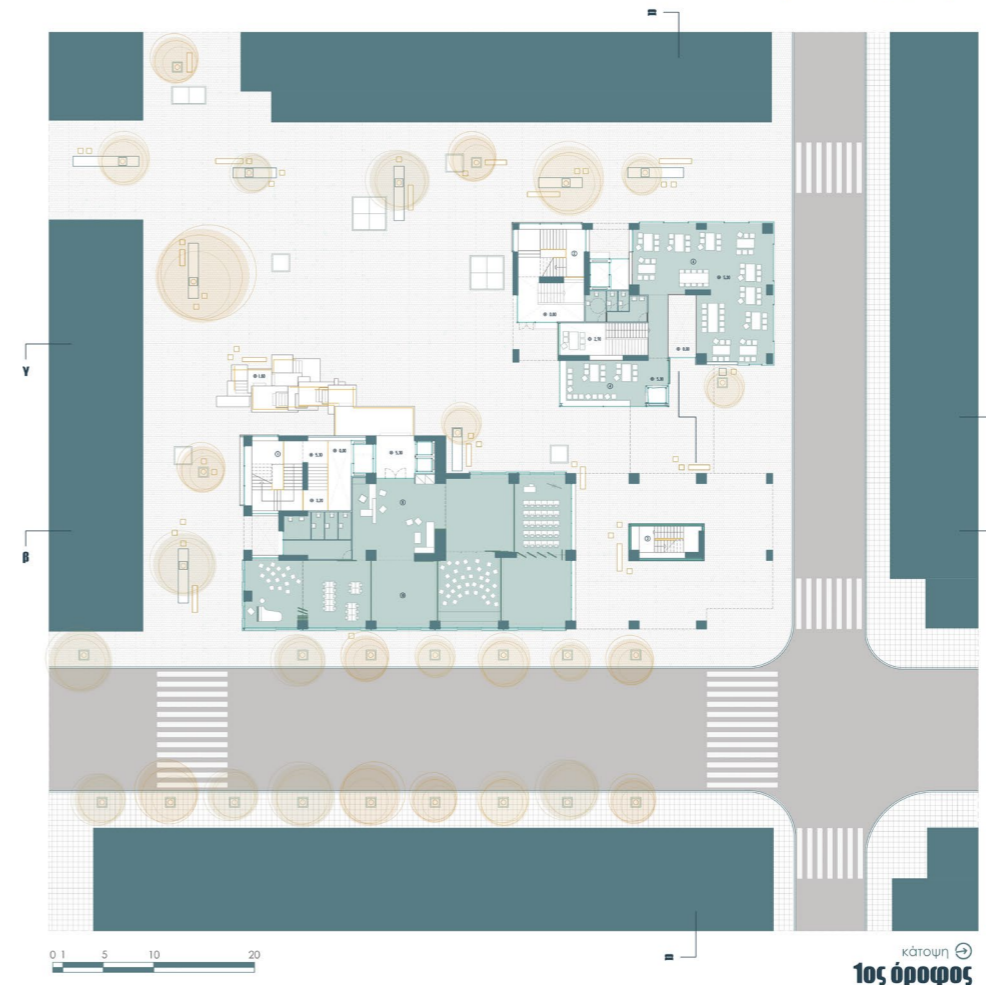
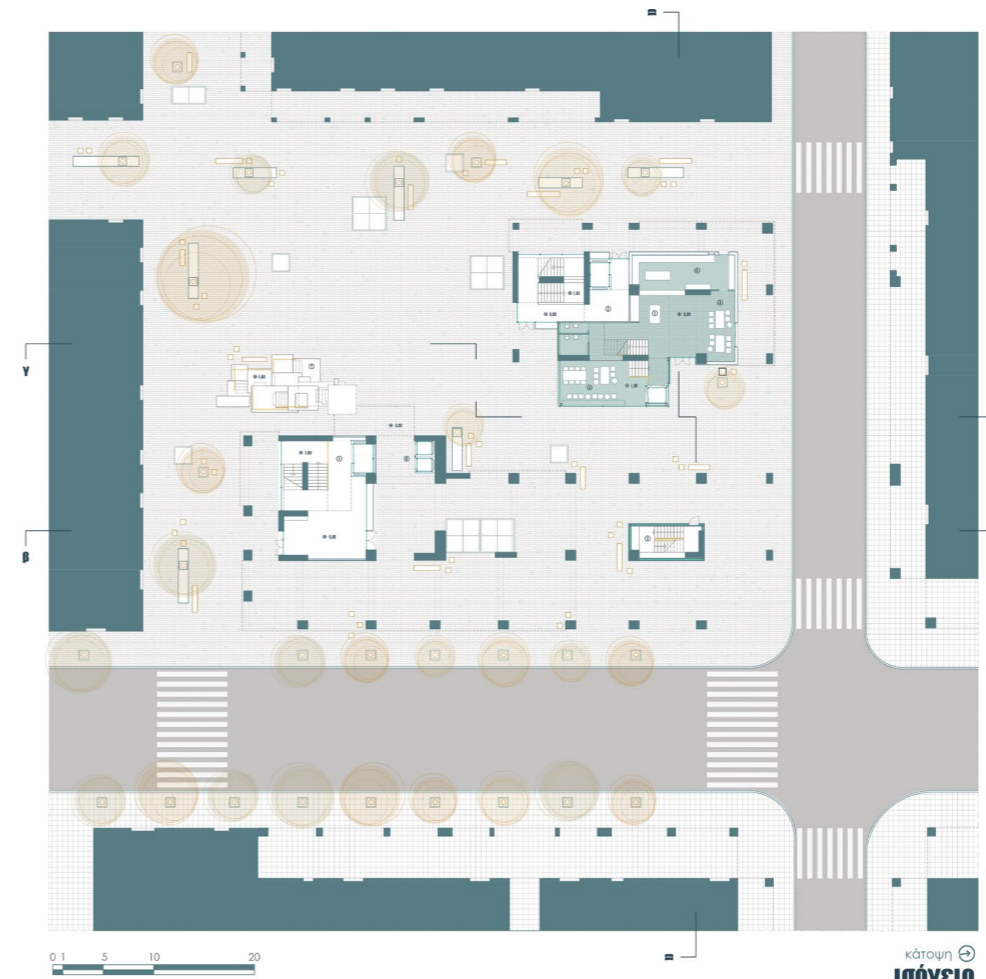
the building & the public space



We propose a scenario of student cohabitation on an experimental basis, in which the people involved would not only reside in the same building, but would co-exist and co-manage their living space. The project's goal is to create a small community. The distribution of activities in space is done through a series of gradual transitions from the public, to the communal spaces, and finally to the private.



Strict limits and solid surfaces are avoided as much as possible, in order to enhance communication. Moreover, the student residences are complemented by spaces which are directed to a broader target group, contributing to an organic correlation of residences and urban functions. Issues such as public passages, connections and open spaces are important design parameters. Additionally, we seek openness of the complex, revealing fearlessly its functions to the passengers, inviting them to join and discover it. For this reason, we chose not to dress the facade with a single, closed skin, but to create a composition between gaps and solids, which allow the reading of the functions taking place inside.



We demolish one building of the complex, since it was not restored after the fire and the present cost of reconstruction exceeds a lot its current market value. In this way, a large part of the block is released and our complex is developed around an open space, a square. The building is divided into three zones. The bottom and upper zone involve public functions, while the middle one includes student residences.

In the northwest corner we create a restaurant, which is developed on four levels, up to the first floor. On the first floor of the east wing we place a multi-purpose space that can house projects either by students or by other groups. This is an open space, which can be divided into rooms with simple movements of panels in order to host diverse activities such as language learning, temporary exhibitions, workshops, and other cultural or educational activities. Access is directly from the square, through an external staircase. Its strong and sculpturing presence aims at strengthening the connection of the public space with the functions located on the first floor. On the seventh floor a public library is situated. The top floor offers the necessary acoustic and visual conditions for concentration and study.

The students' residence is developed on five levels, from the second to the sixth floor. Access from the ground floor is made through two staircases which are addressed only to residents.



At each level there are communal spaces, which include a kitchen, a dining room, a living room and toilets. They are placed around the square, keeping visual contact with the public space. Additionally, they act as corridors, joining together a set of apartments. The apartments can accommodate from four to twelve people, depending on the current needs for housing. The final stage of privacy, the individual room, is a self-supporting structure, which can be customized according to the user's needs.



apartment



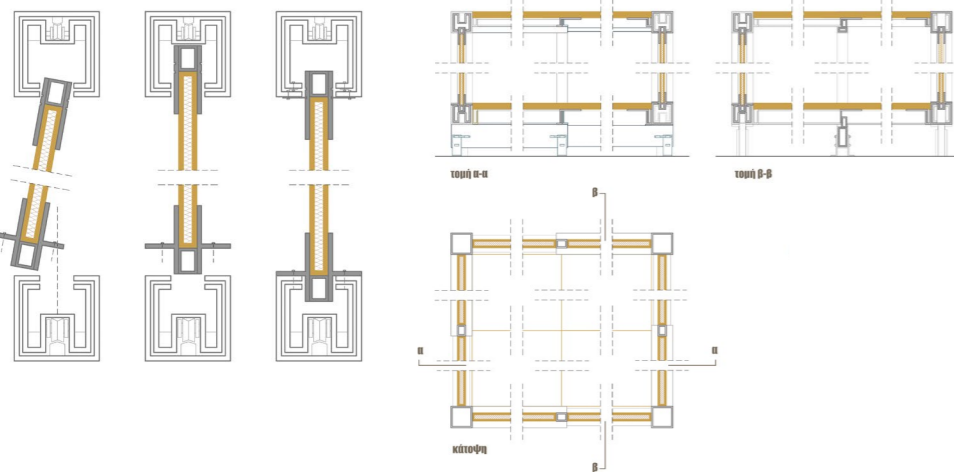
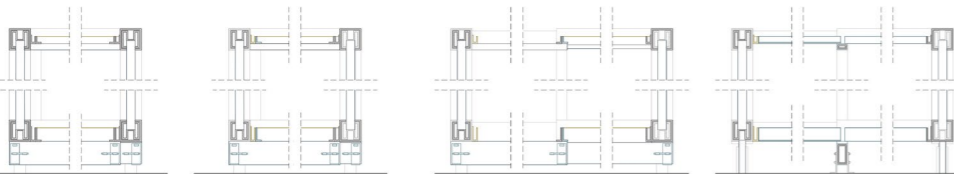
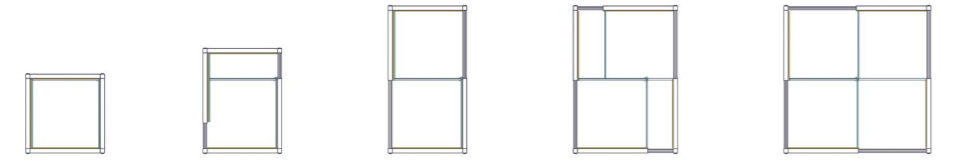
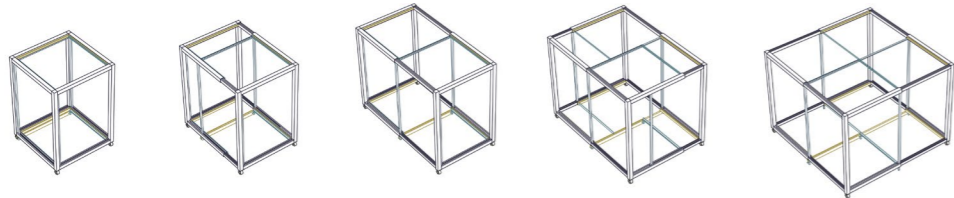
One of the basic principles that we set was the possibility of spatial transformations, so a range of needs can be covered according to each circumstances. The scenario we propose requires periodic changing of the residents, as the academic studies last for a finite number of years. To meet these requirements, we came to a conclusion that an immutable system of rooms is not enough for our purpose. Consequently, we came to the design of a unit with the ability to move, expand and adapt to the students' requirements.



In this way, each apartment may acquire different arrangement according to the way the units are mounted, and each unit can acquire different qualities, depending on the panels installed. Each apartment consists of a large open space and, depending on its capacity, it has one to three bathrooms. The shared areas of the apartment can be changed according to the dynamics of the group that resides, moving units in a corresponding manner.



unit



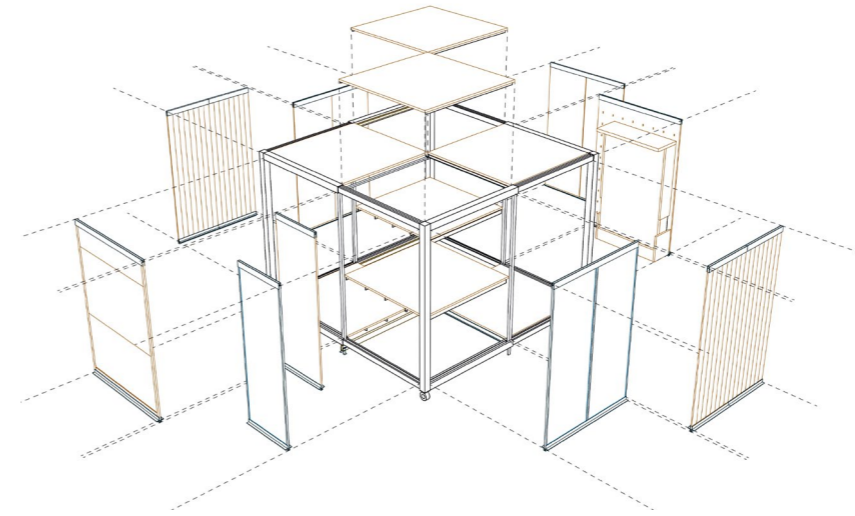
The unit consists of a telescopic frame which rests on four wheels for easy transport. At the four sides, panels with different properties are placed by the users. Thus, personal spaces are formed depending on the requirements and personal taste of each resident. The same structure can be used as urban furniture of public space, with the potential of creating resting spots, or even spaces for exhibition and sale of products.

frame expansion stages

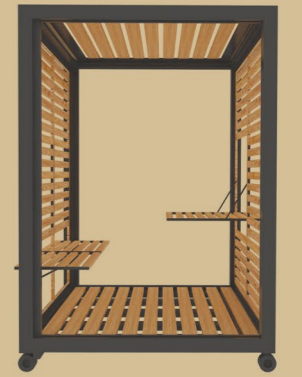
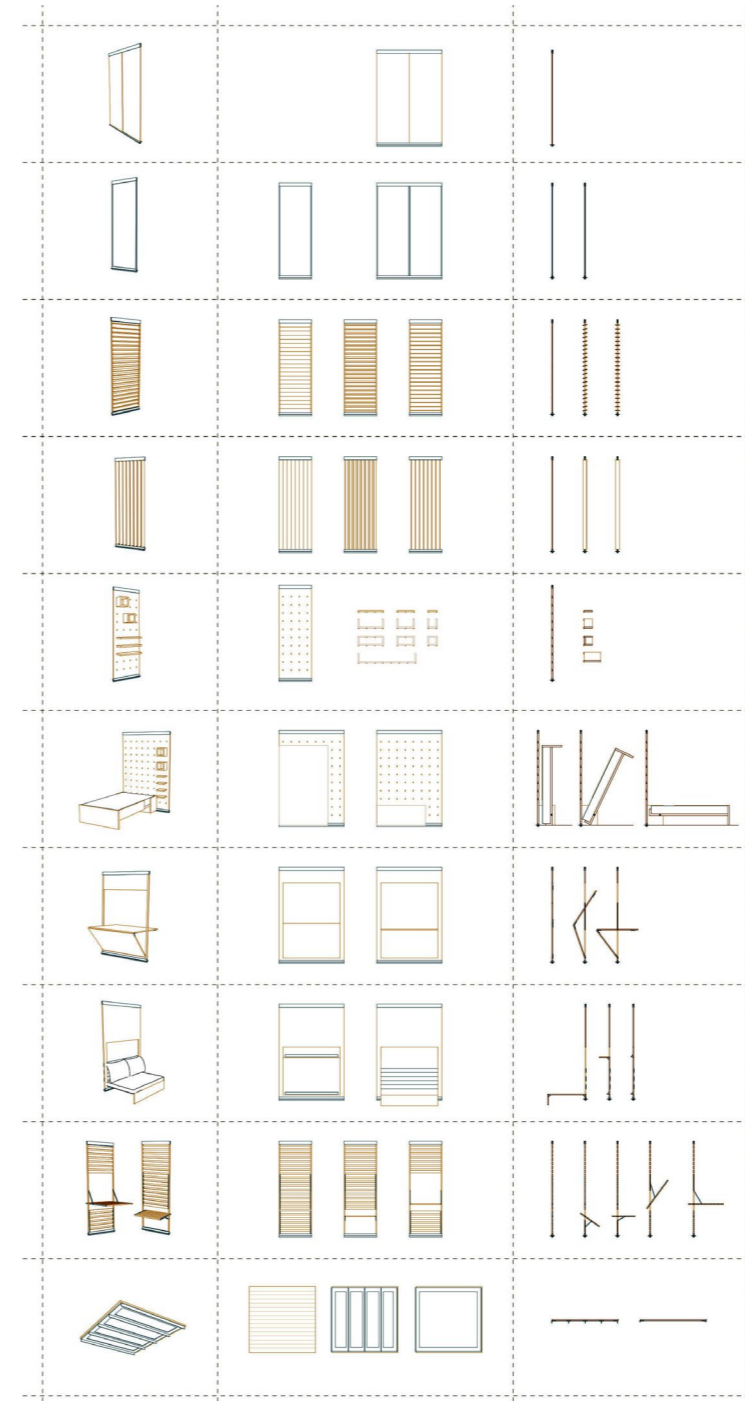
In the initial position the frame is a rectangular parallelepiped body with dimensions 1.85 x 1.85 x 2.65 m and net area 2.55 m². In the second stage the frame extends towards one direction and intermediate supports are revealed. The total net area now is 5.1 m². In the final position the frame extends towards the other direction and the area of the unit becomes 10.2 m².

panels installation

We designed nine different types of panels with different properties, which cover some basic habitation needs such as sleep, storage, study, sitting, and others that offer variant gradations of natural lighting and visibility. Each beam has slots where the panels are placed. The panels are divided into two sizes of 0.80 and 1.60 m width. When the desired size of the unit is decided, initially the supports are secured, then the floor and the ceiling are adjusted and finally the panels are placed on each side.



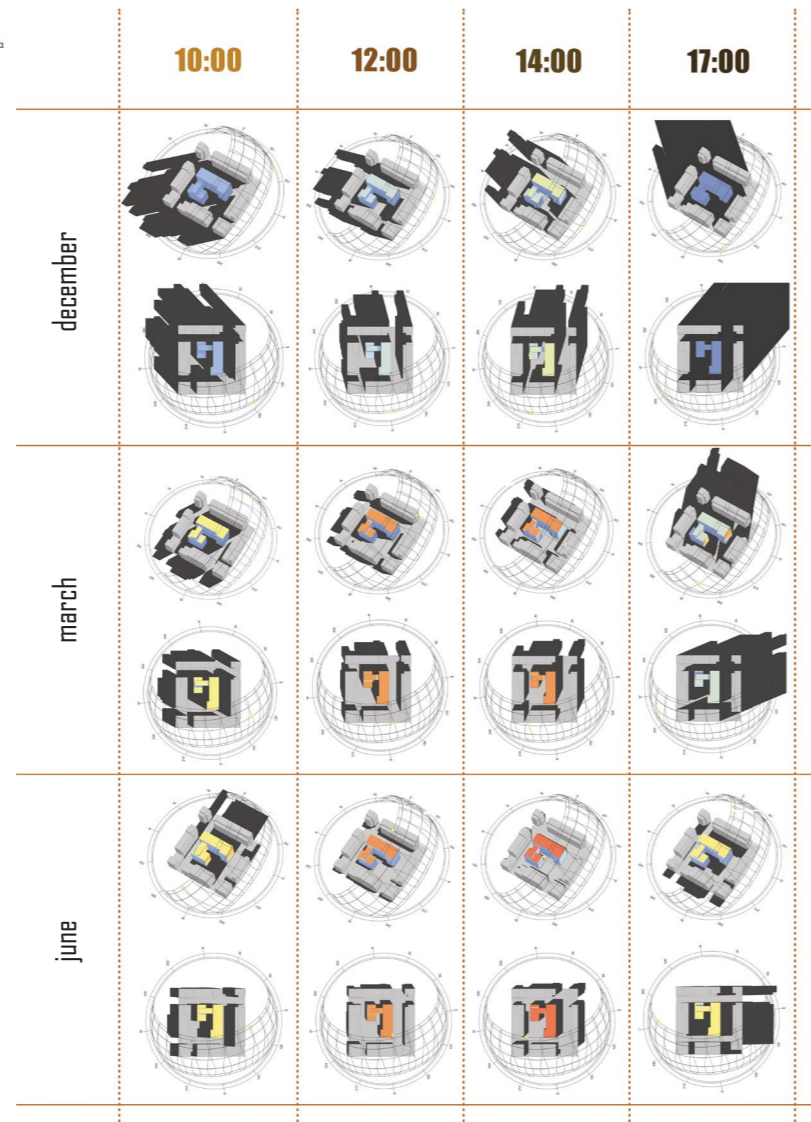
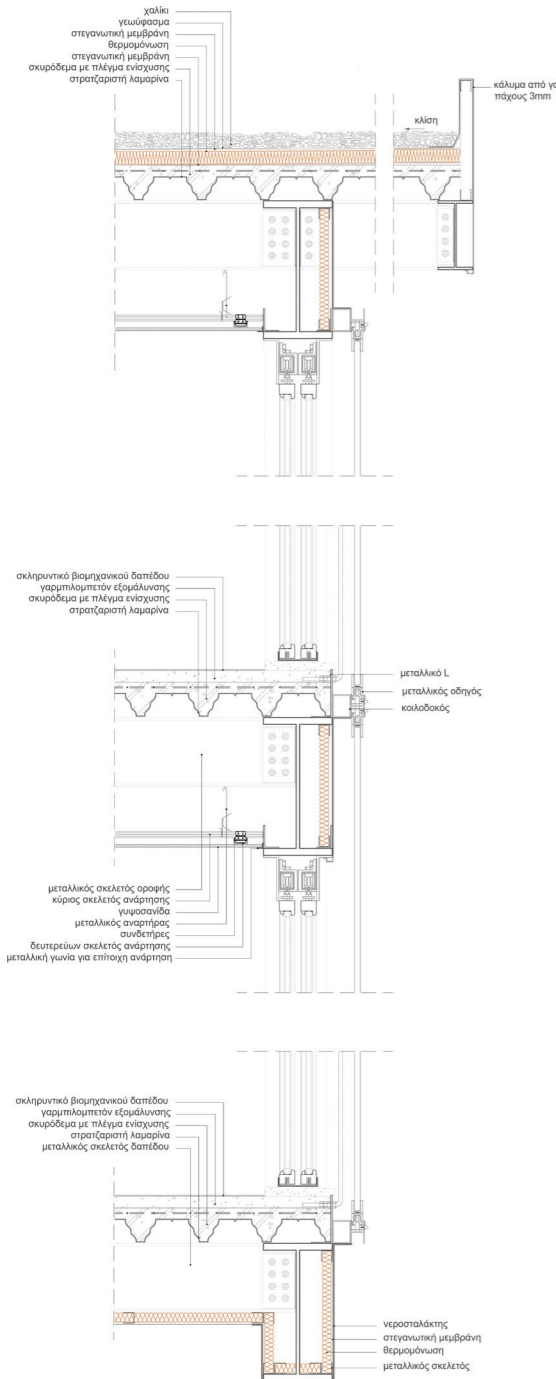
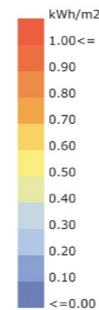
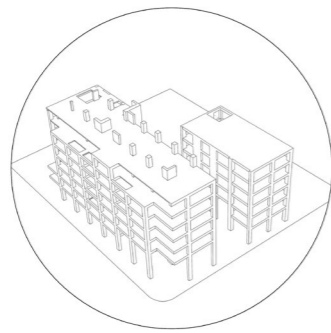
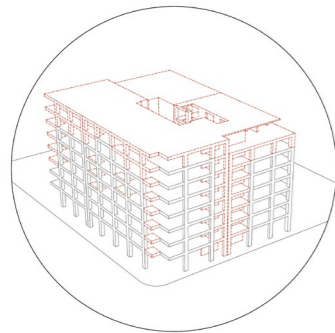
This system provides a wide range of variations concerning the qualities of the residences. Not only it is impossible to predict what the result each time might be, but also there is always the opportunity for someone to take this one step further by adding something new, like designing a panel with another property.





constructive details & bioclimatic features

Studying the existing frame of the building we faced a number of problems while trying to adjust it to our program. The existing structure has a dense and irregular grid, without being structurally necessary everywhere. On the side of Veranzerou street, we eliminate the entire intermediate piece between the two buildings, and we replace it with a lightweight construction which operates as bridge. We remove the two top floors of the northwest wing, so that the building is better adapted to the scale of the neighborhood, but also to create a shared terrace.



The European Union has set a target on the new buildings to be nearly zero emissions of carbon dioxide (nZEB) by 2020, and for the realization of this goal the bioclimatic design of buildings and the implementation of RES systems are absolutely necessary. In Greece, given the very high solar energy potential, the prospect development by the installation of photovoltaic systems is enormous.



physical model photographs



photovoltaic panels (370 m²) & solar panels (100 m²)

wooden louvers which rotate around a vertical axis on the west side of the library

removal of two floors in the north-east corner better natural lighting and ventilation is achieved

double-glass façade on the north side in order to minimize heat loss

sliding sunshade panel system on the south side protecting the interior by the summer sun and during the winter season, the panels can be gathered on one side and let the sun penetrate

open parts to achieve better air circulation

convertible shading system in each apartment through which the users can achieve the desired conditions of thermal comfort and lighting, depending on the season and the orientation

