

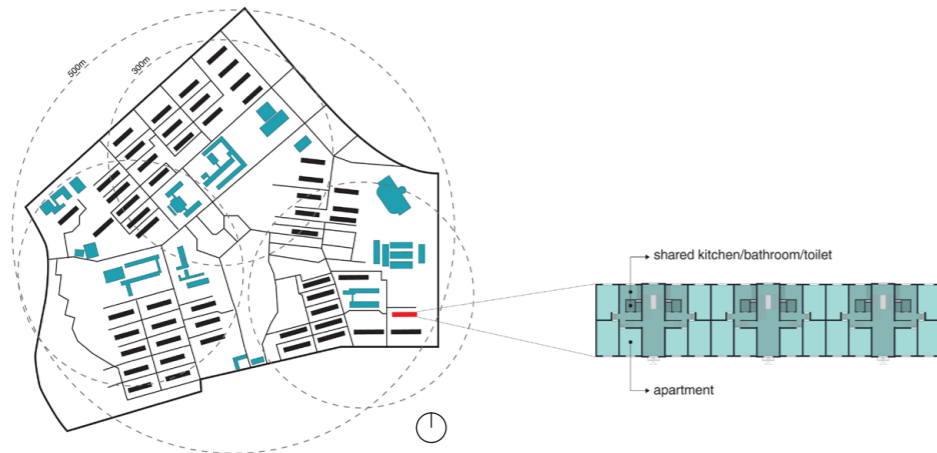
KTT 2.0 (graduation project)

The KTT ('Khu Tap The'; Dormitory Region) district is a housing district based on the Soviet microrayon (microdistrict). In contrast to other former or current communist countries, the microrayons in Hanoi have transformed greatly. This occurred from 1986 when Vietnam entered a free market economy by setting up its Doi-Moi (reformation) policy. Ever since Vietnam finds itself in a paradoxical situation: "a one party communist regime overseeing a Wild-West style of capitalism" (World Crunch News, 2013). Today the public spaces in between the KTT housing blocks have been filled up with slum-like developments due to overcrowding and lack of buildings regulations.

The paradoxical situation of contemporary Vietnam is the starting point for a new type of housing district: the KTT 2.0. This housing district is more flexible and open to the rapid changes in culture, economy and politics that are taking place in Vietnam today. At the same time it partly preserves the ideals with which these microrayons were designed. The new design is worked out from bottom-up in one of the existing KTT districts: The KTT Kim Lien. Based on thorough research and analyses, requirements were set up to create a type of housing block which is able to meet the variable demands of its inhabitants. This housing block replaces the existing ones and is part of three different types of blocks which, together with various street section designs, form the tools to the creation of new types of (smaller) KTT districts.



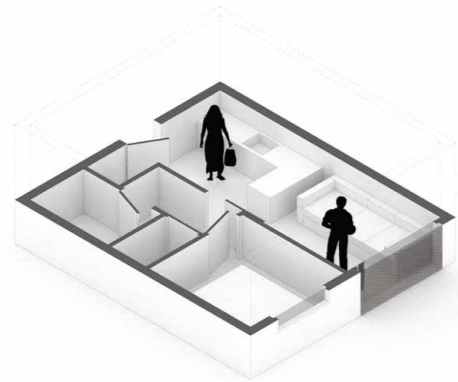
Clarence Perry's Neighborhood Unit, 1920s. This set up forms the basis of the Soviet microrayon; a housing district containing all the basic needs of its inhabitants within close proximities. (KTT Formalization in 'Human Settlements', B. de Meulder)



KTT Kim Lien District. Designed on two scales: district (1:2000) and building (1:500).



Photo of KTT Kim Lien District in its current state. (ddn.com.vn)



Compact 1-bedroom apartment
1 Unit
30m²



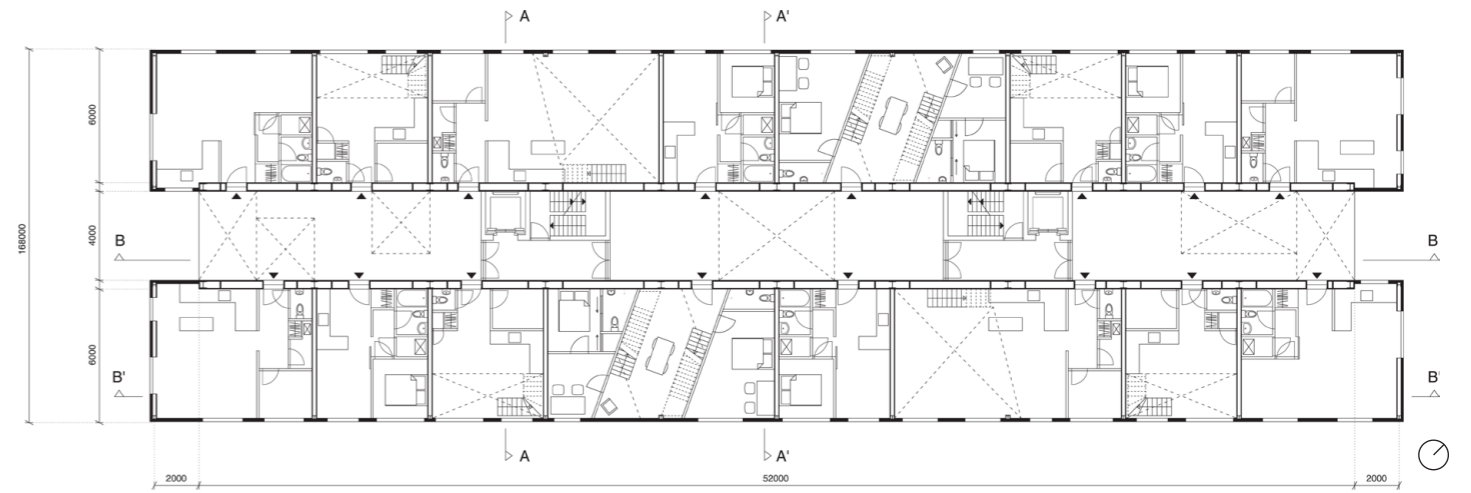
Spacious 1-bedroom apartment
2 Units
48m²



Shared apartment
4 Units
100m²



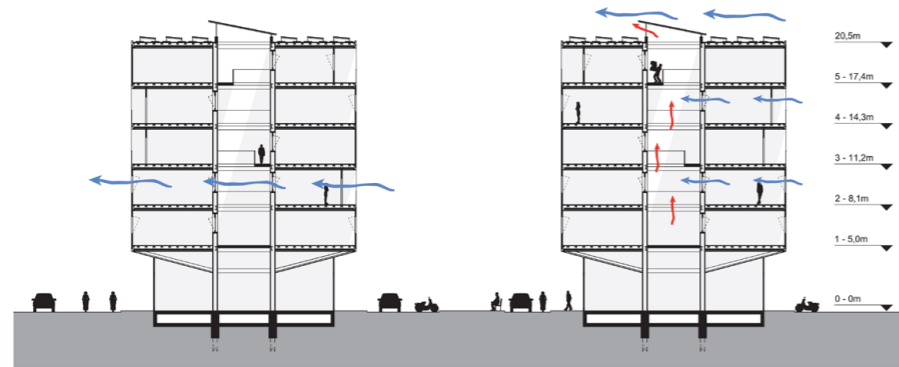
Student dormitory
6 Units
170m²



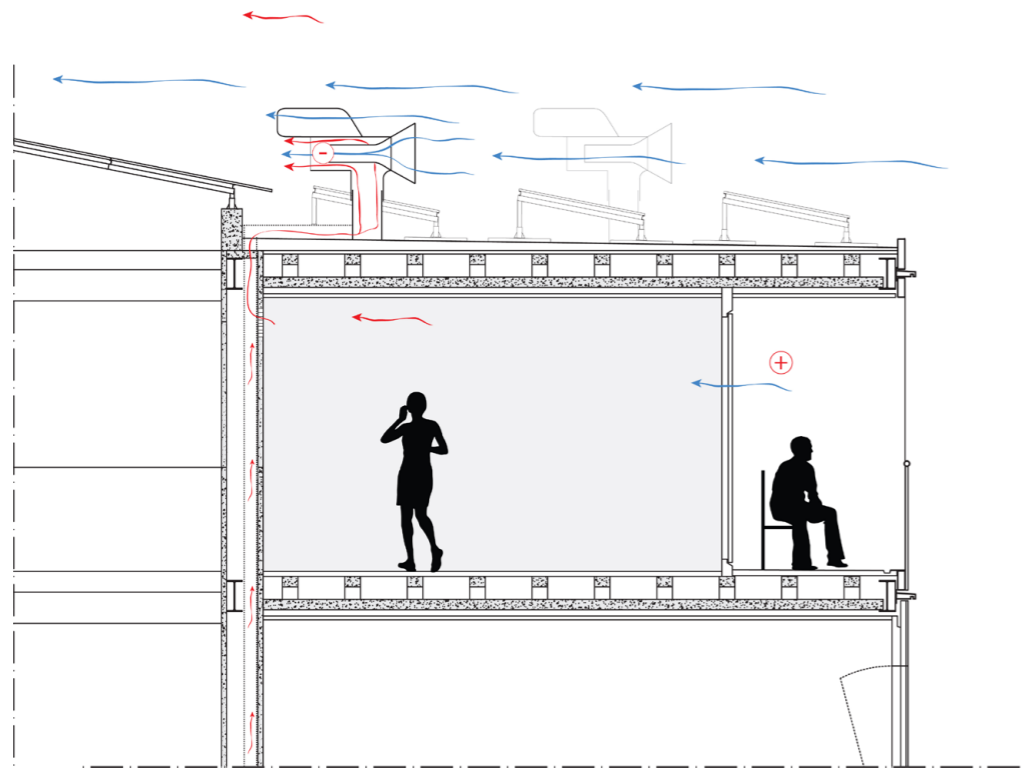
Floorplan of KTT 2.0 housing block.



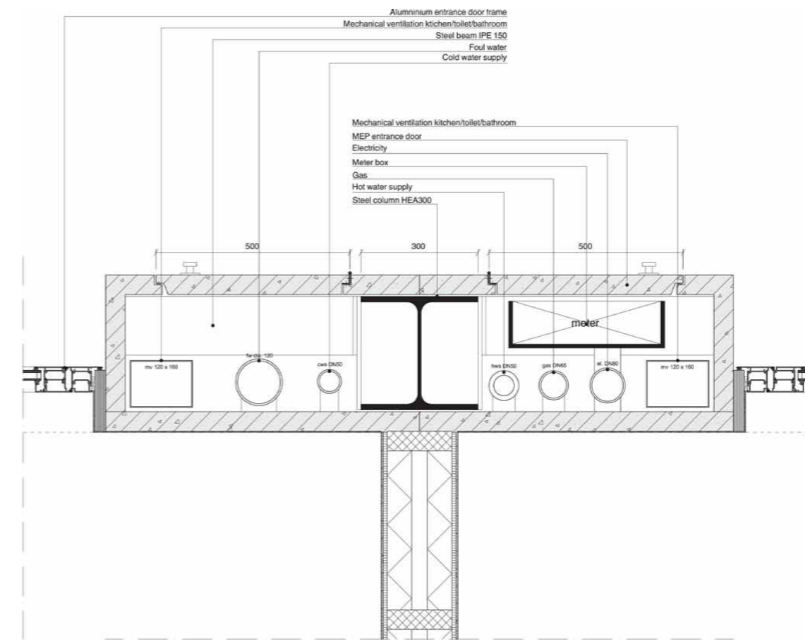
Model 1:100 of KTT 2.0 housing block facade . To be seen are the different applications and treatment of facade materials: acacia wood, bamboo, thatch and corrugated iron.



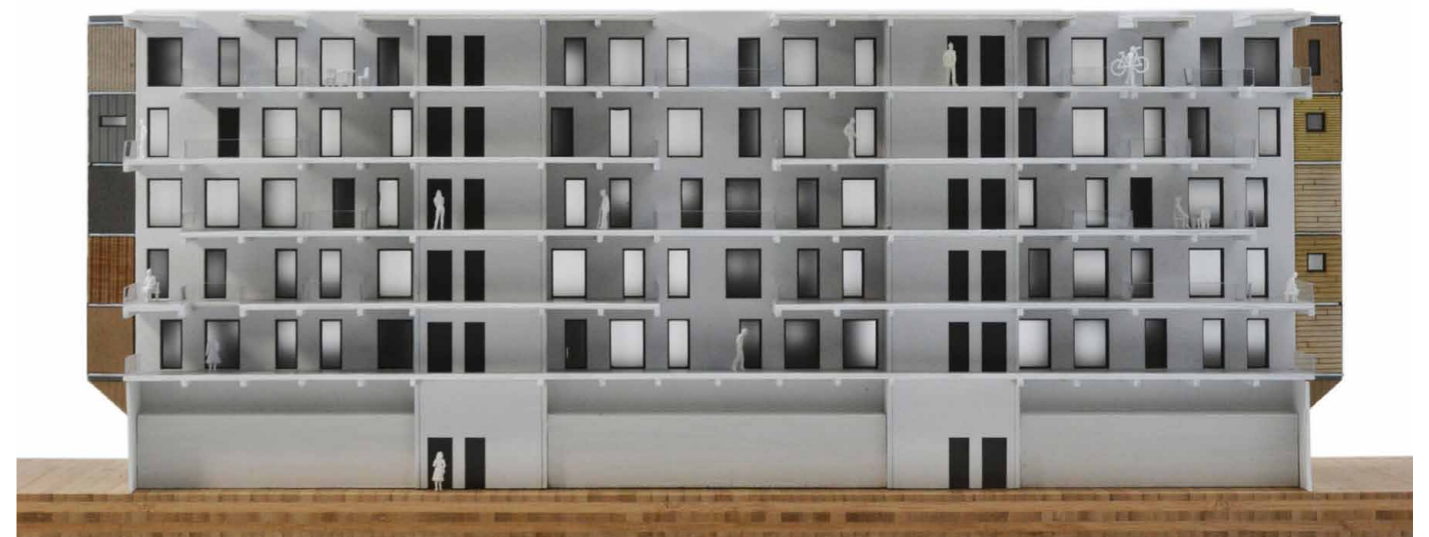
Cross-section through two blocks. Cross ventilation can take place through building or via the airshaft of the core.



Wind cowls on the roof make sure there is a constant possibility for natural ventilation.



Detail of core facade. MEP is integrated in the walls.



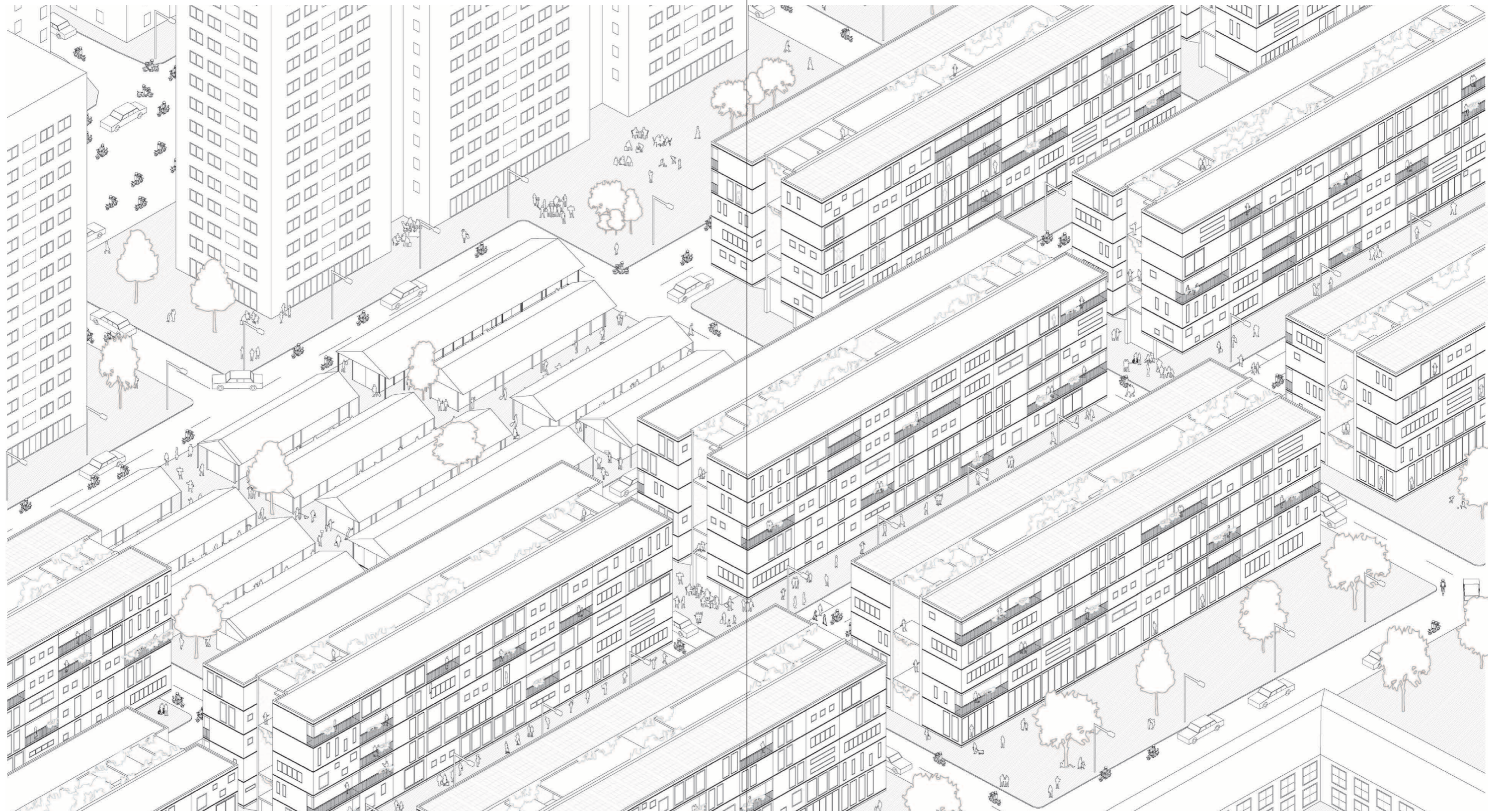
Model 1:100 of KTT 2.0 housing block core. The center benefits of large openings in the floors for as much daylight as possible. The sides consist of alternating openings.



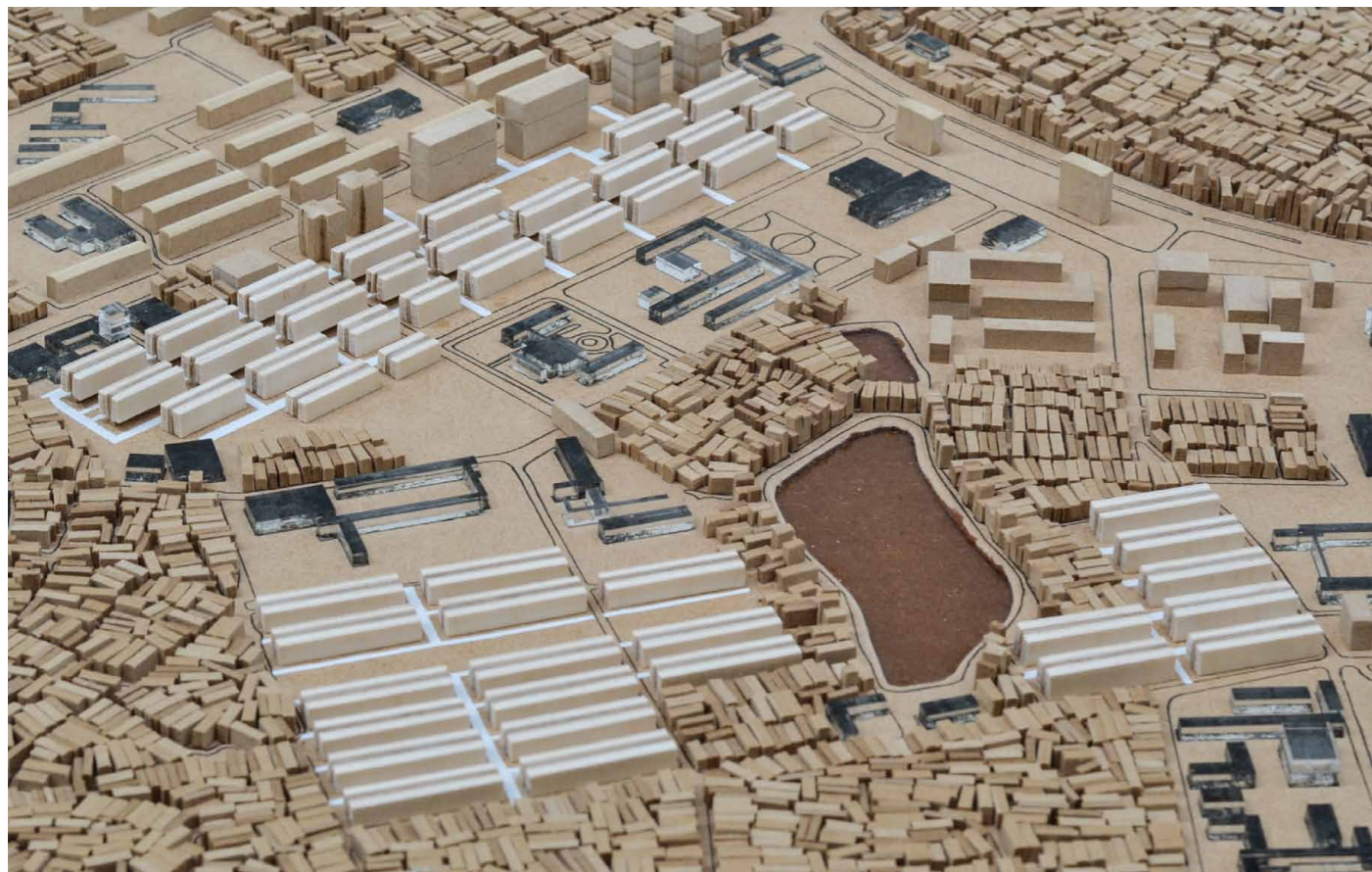
Interior impression of the core.



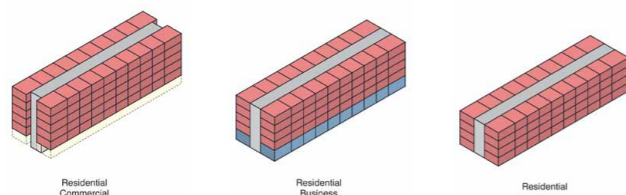
Interior impression of apartment.



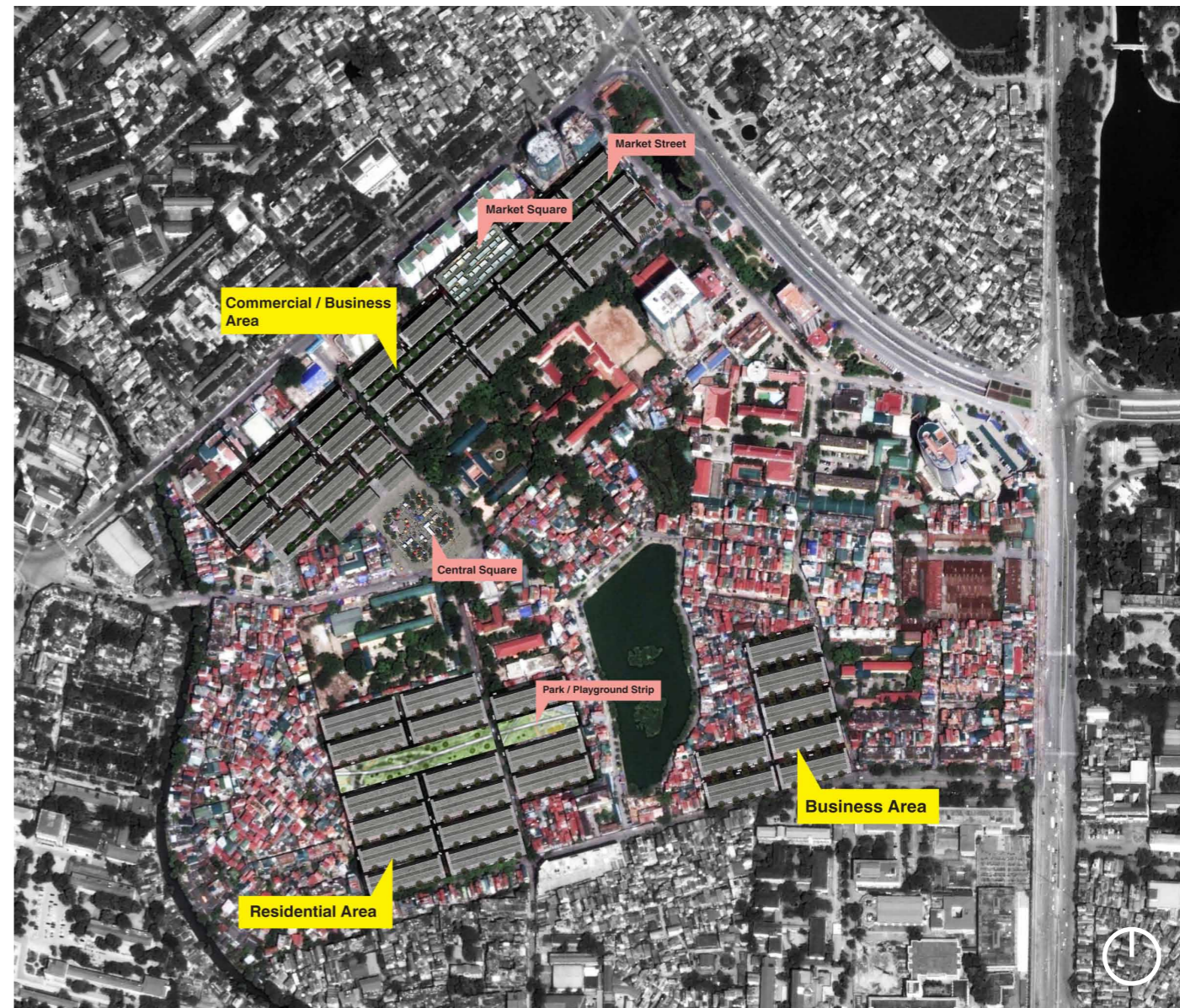
Isometric view of part of the new KTT Kim Lien district. Housing blocks are placed close to each other with lively streets in between, resembling the dynamic street life of Hanoi.



Model 1:2000 of KTT Kim Lien district 2.0.



The housing block explained in the previous pages is part of three types of housing blocks spread around the district.



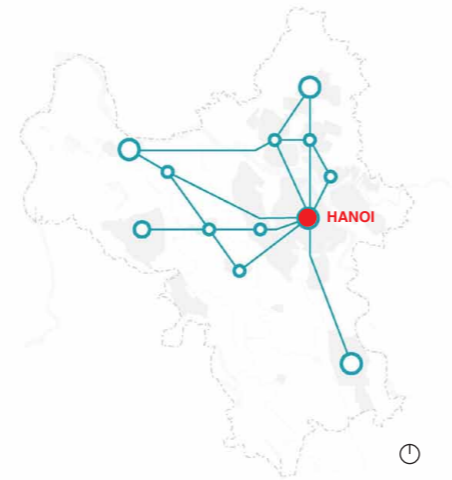
Google Earth view of new masterplan for the Kim Lien district. Smaller microrayons are formed each consisting of their own character based on the different types of housing blocks and street sections.

VERTICAL CITIES ASIA 2013

The Vertical Cities Asia International Design Competition is organised by the National University of Singapore's School of Design and Environment (www.verticalcitiesasia.com). This year's task was to design a masterplan for 100,000 inhabitants in an unurbanized area near Hanoi, the capital of Vietnam, of which's population is estimated to increase from six to eleven million people by 2050.

Our team of 14 students from the Technical University of Delft decided, after thorough research, that this design area alone is not able to contribute to a better urban situation in Vietnam's capital. The theme of the competition was 'Everyone Harvests'. Hanoi is surrounded by agricultural land, but the concept of 'harvesting' needs to be extended beyond the production of food. For Hanoi, 'Harvesting' applies to essentially every resource – from food to energy to education to transportation – that is required, consumed, and produced by the city. This idea requires a masterplan for the entire region that not just refers to the idea that 'Everyone Harvests' but to the harvesting of everything. Therefore we based our project on the existing masterplan set up by Perkins Eastman Architects and developed the design within this framework.

Perkins Eastman Architects proposed the construction of various 'Satellite Cities' linked by transport and clean energy infrastructure. These cities are able to reduce problems typically associated with population growth: pollution, congestion, sprawl, food and housing shortages. Our masterplan complements their plan with an economic strategy, the detailing of several satellite cities (two of them in new locations), and a regional concept of agricultural diversity and elements specific to the Vietnamese urban quality of life.



Masterplan: linking several cities to the main capital, hereby relieving Hanoi of its enormous density.



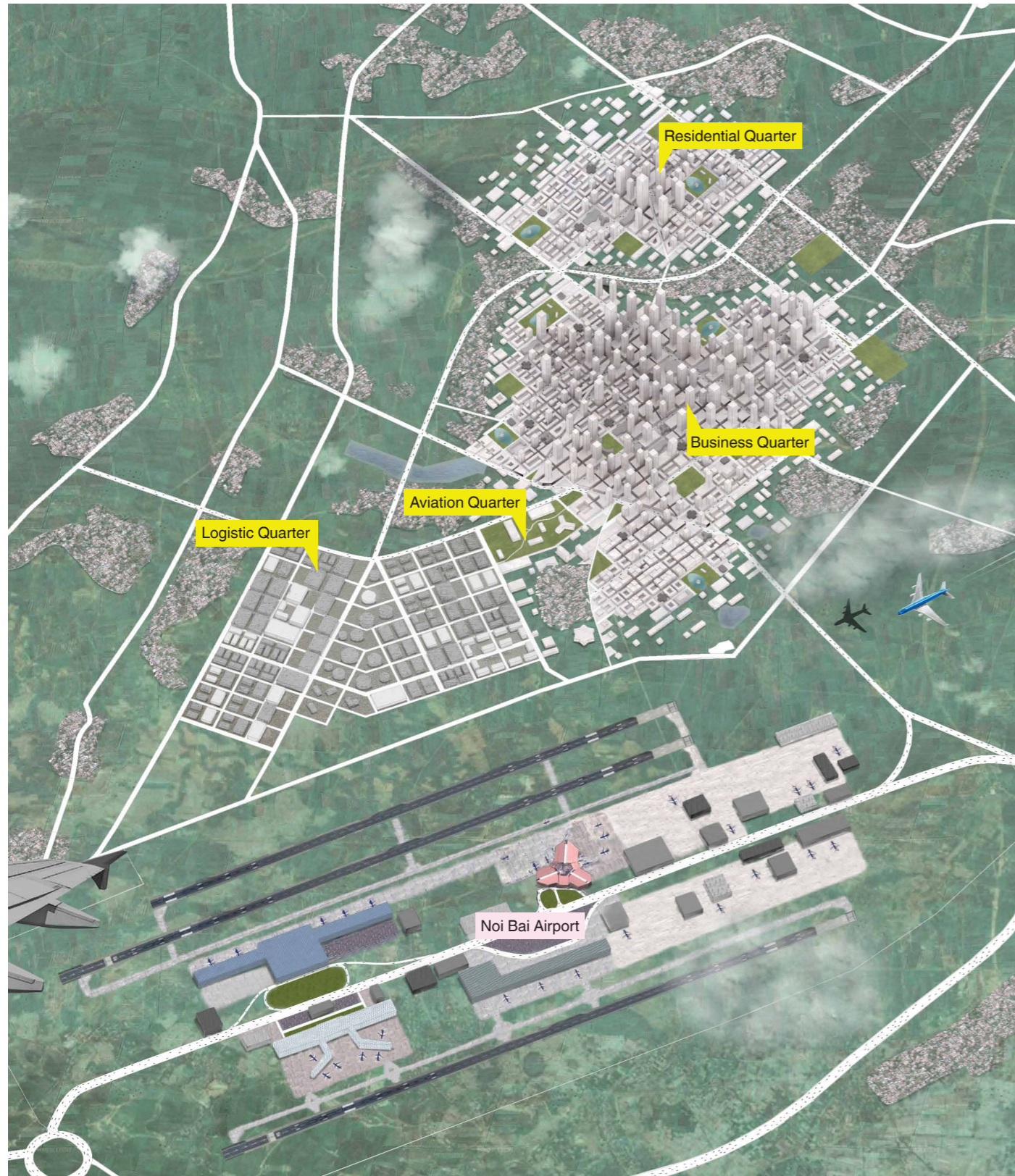
Each 'Satellite City' contains a certain amount of inhabitants adding up to two million inhabitants in total. After establishing this masterplan we divided the group into smaller groups each developing one of the satellite cities. My design (together with one other student) was for the expansion of Noi Bai International airport and the development of it into an Airport City.



Presentation competition entry at National University of Singapore.



Presentation poster and models competition entry.



Final design of Noi Bai International Airport City. A city completely dependent on the airport of Hanoi, comparable to the Zuid-As in Amsterdam, Dubai or the surroundings of Singapore's Changi Airport.



Mostly expats, businessmen and pilots will reside in the Airport City.



View from hotel over the Airport City.