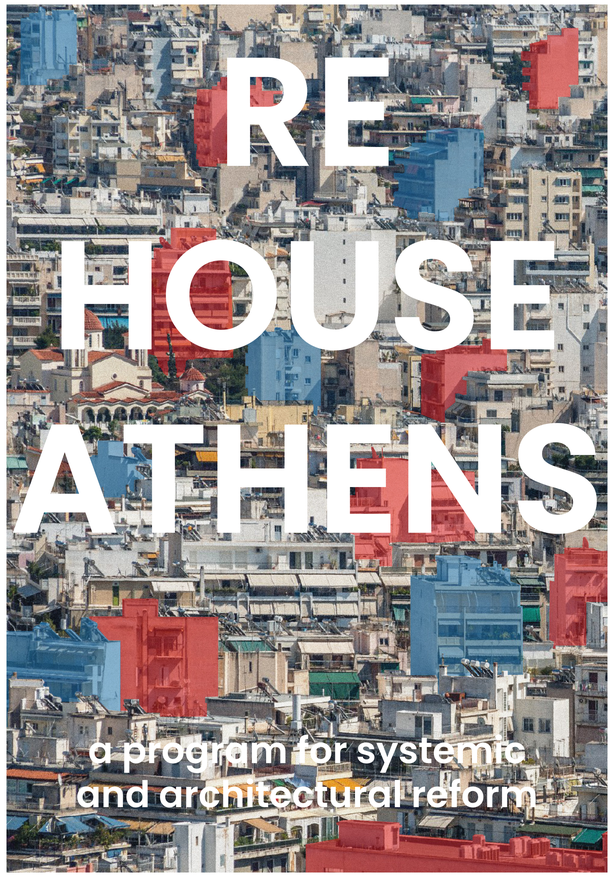


1.
Small scale private property, widespread in the modern Greek context, had long been regarded as a social safety net. Today, however, its ongoing errosion is increasingly visible. Resident homeownership has been shrinking in the wake of the financial crisis, under combined pressure from austerity and speculative practices. *Cohab Athens,* an applied research project on cohousing and collective ownership, demonstrates a growing consciousness among citizens that claiming affordable housing quality can no longer be an individual endeavor.

2.
Our hypothesis: the prevailing model of individual apartment ownership is not only socially and politically obsolete, but also incompatible with the spatial and material realities of the building stock. The housing crisis in Athens is characterized by a high number of vacant apartments and an aging building stock, with residents vulnerable to spatial and material deprivation. To preserve this stock—both as cultural heritage and embodied carbon—while adapting it for the greatest benefit of its inhabitants, we must approach each building as a unified material entity rather than a sum of immaterial constituents.

3.
The *polykatoikia*, the ubiquitous Athenian apartment block, is a product of post-war mass urbanization—an urgent response to the sociopolitical challenges of turbulent times. The extensive use of reinforced concrete enabled the multiplication of floor space and thereby access to small-scale private property in the form of individual apartments.

4.
Mistaken for an eternal and immutable material, reinforced concrete naturalized the concept of the "apartment" as something independent of its material infrastructure. Half a century later, reinforced concrete structures are beginning to age, raising cocnerns on public safety. Repair and maintenance of concrete is a highly technical procedure that requires a holistic approach.

5.
An equally holistic aproach is required for effective climate adaptation. Much of the building stock remains entirely uninsulated, while the standard façade-long cantilevering balconies undermine the effect of insulation by acting as a significant thermal bridge. A seamless envelope that combines thermal insulation and thermal mass is necessary to mitigate the emerging conditions of climate change and energy poverty. Such holistic interventions require collective action among the residents but are hindered by conflicts of interest, inherrent in apartment ownership.

6.
Vertical social segregation is common, with poorer inhabitants often occupying lower apartments, less endowed with air, light, and quiet. These residents are naturally less able to contribute financially to the building's maintenance. As their expected contribution is proportional to their share of square meters rather than share of asset value, the legal framework for apartment ownership forces a choice between injustice and inefficacy. Moreover, to minimize expense and responsibility, nominally shared spaces such as the rooftop, remain locked, barren, and scorched by the burning sun.

7.
Other pathologies of the polykatoikia can also be attributed to the model of apartment ownership. For example, the rigid separation of apartments results in overpopulated or underpopulated units, unable to respond to shifting occupational patterns.

8.
The floorplan of the polykatoikia is characteristic of speculative self-promoted urban development. Built on rather small parcels, where they replaced traditional one-story patio houses, these buildings are separated with blind walls. Sleeping areas are in the back, living spaces in the front, and fragmented service rooms congest the long stretch in-between, clustered around vertical circulation and light shafts.

9.
By studying those typological features, we developed a scheme of programmatic reorganization, corresponding to a systemic transformation from ownership by apartment to unified collective ownership. It consists in reallocating the top floor and the first floor, the most and least desirable floors for residential use, to spaces for collectivity. The apartment is transformed into a cluster of private rooms, around a system of interconnected shared spaces. Following this scheme, we identified three independent architectural interventions we believe are broadly applicable to ensure the resilience and livability of the existing building stock.

10, 13.
The cantilevering concrete balconies are removed. Their width is replaced halfway by thick hempcrete insulation backed by compressed earth blocks, and halfway by a light, independent steel structure. This structure supports the heavy insulation while restoring the balcony's essential functions: shading and a handy exterior space that defines the Athenian streetscape. However, where the horizontal appearance of cantilevering balconies exalted the individuality of the apartment, the grid-like structure introduces a new semantic that emphasizes the fundamentally collective nature of urban dwelling.

11, 14.
The lightshaft in the central area is enlarged and whitewashed to maximize the influx of light, while the cramped service rooms are replaced by spacious wet areas. The enclosed staircase opens up to the floor, reinforcing the sense of vertical relation between floors and their inhabitants.

12, 15.
The indentation of the top apartment is expanded to create a generously sized terrace, in direct relation with the communal cooking area. The rooftop above is shaded by a solar pergola that supports the energy needs of the building and renders the space friendly to leisure.

16.
To examine our intentions in totality, and confront them with reality, we decided to test them on a specific building, which we came to call *Polykatoikia 0*. Like every polykatoikia, its architecture is at once generic and idiosyncratic.

17, 18.
In our intervention, the ground and first floors house broader-scope programs, anchoring the housing cooperative within a municipal support network. Adjacent to the street entrance are a workshop, office, and event/exhibition space; the entire first floor functions as a municipal library and reading room.

19.
In the intermediate floors, where the private units are located, transversally connected living spaces and filleted wall corners allow light and air to reach more fluidly into the center. Here, shared amenities are accommodated: a generous bathing area on one side, and on the other, a kitchenette-laundry that functions as an entrance. Each private unit has two openings: a small one for quick access from the central area and a larger one opening onto the shared living space along the façade.

20, 21.
On the top floor, shaped by the building's indentation, we created a space for collective living. The entrance from the staircase opens into a large and well-equipped cooking area, while a salon in the back and a terrasse in the front can accommodate communal gatherings as well as solitary leisure. The rooftop is simply defined by water amenities, and an ample view of the Athenian cityscape, under the shade of solar panels.

22–26.
We approached our design as a simulation of a pilot project, providing a comprehensive vision of how systemic change could translate into architectural and programmatic quality. The choice of the existing building was made based on availability of documentation, degree of generalizability but also on location within a strategic area.

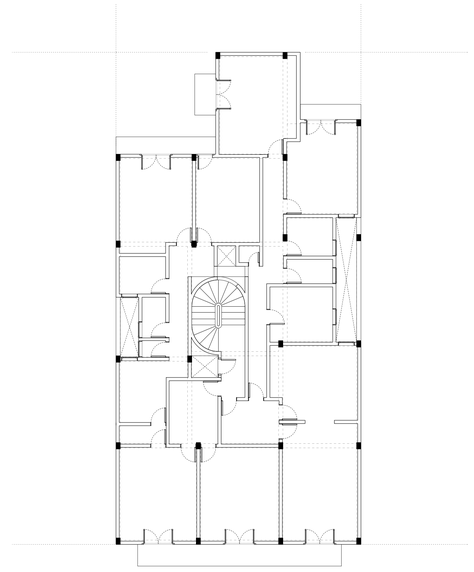
27–28.
The location of Polykatoikia 0 offers high visibility, connection with public transport and mediates two different realities of the city. High vacancy is a city-wide phenomenon and results from a complex combination of sociological conditions. By looking at demographic data certain underlying patterns become more clear. On top of high vacancy, the marked areas are characterized by high rate of rental tenure and a high rate of overcrowding within non-vacant apartments. These conditions imply a propensity to disrepair as the owners have little incentive to invest and the tenants have little capacity to negotiate.

A significant portion of vacant apartments are those that became State property in the wake of the financial crisis through eviction or rejection of inheritance. Recent efforts aim to legally prepare these idle properties for reentry into the market. The State can use this stock to facilitate cooperative formation through securing full ownership of a certain building – this can be achieved by offering owners an exchange for apartments of higher value. Once unified ownership is secured, the building could be leased to housing cooperatives, responsible for its rehabilitation. Current government policy, such as the MY HOUSE program, offers subsidies for apartment purchases. Such demand-side subsidies in a profit-driven market result in an overall increase of prices, negating their isolated benefits. If subsidies were redirected to help individuals buy into cooperatives, this inflationary effect would be avoided.

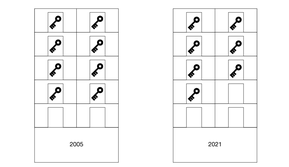
The pooled capital would serve as collateral for loans financing renovation. Monthly contributions would service the debt over time. Construction work could be reserved for construction cooperatives, and upon completion, service cooperatives could manage the municipal programs as wells as domestic services like cleaning, cooking, child and elderly care. Embedding housing cooperatives within a broader ecosystem not only guards against creeping inequalities but also reinforces local capital through job creation and the provision of services.

29–30.
Material choices were central to our project, shaped by two imperatives: climate responsibility and climate resilience. Given the project's potential citywide scale, it both necessitates and enables a rethinking of material supply chains at the territorial level. We mapped existing industries and identified gaps where new ones would be valuable. For example, we propose developing a hempcrete industry—vital for the climatic adaptation of the building envelope, providing thermal insulation combined with thermal mass and regulation of humidity. Industrial hemp could be grown as a rotational crop on the Dervenochoria Plateau, in partnership with existing lime production just outside the city. Similarly, we propose a large-scale production of compressed earth blocks, using excavated earth from the ongoing metro construction. We have used those for the interior partitions, contributing hygrothermal properties but also a pleasant indoor air quality and smell.

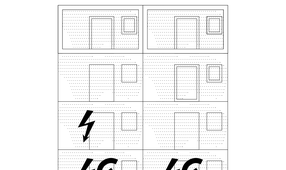
31–34.
We chose to leave these materials exposed in our renderings—for their educational value and the dignity we believe they confer. The floors in shared living areas are paved with native white marble to create a cooling atmosphere and reflect light deep into the interior. In contrast, private rooms feature earthen floors, harmonizing with the partitions to harbor a sense of intimacy. A red-and-white terrazzo—made from lime, marble-dust and crushed brick that we salvage from former partitions—covers most common areas, invoking collective memory and the spirit of communality. The reinforced concrete structure, bearing the marks of wear and repair, has been left exposed in juxtaposion to the other materials.



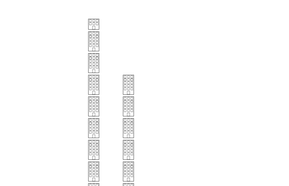
16.
POLYKATOIKIA 0, FLOORPLAN G+N (1:100) - CURRENT SITUATION



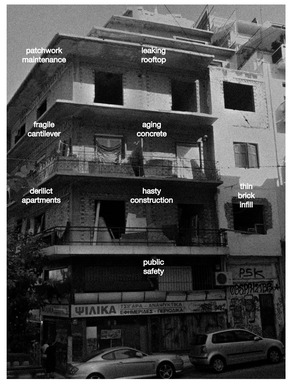
1.
HOUSING CRISIS



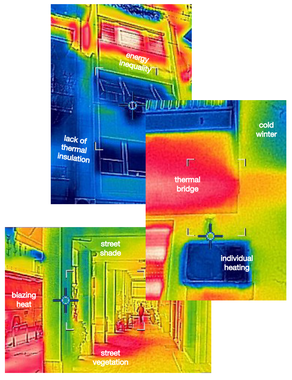
2.
STANDARD OF LIVING



3.
BUILDING STOCK



4.
MATERIAL



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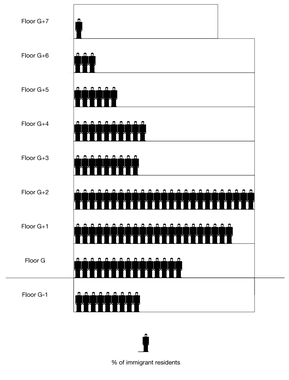
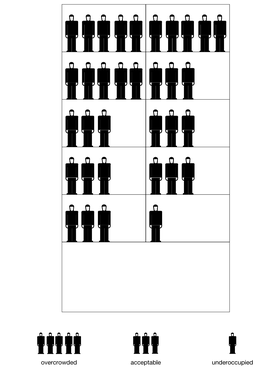
CLIMATE



6.
INEQUALITY



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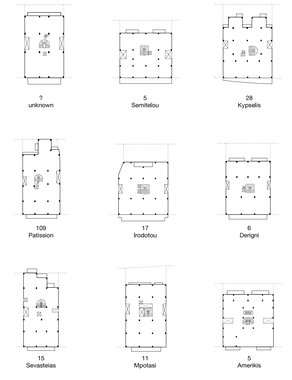
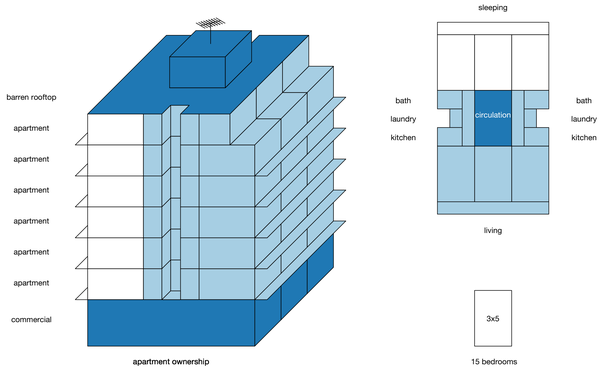
INEFFICIENCY



8.
TYPOLOGY



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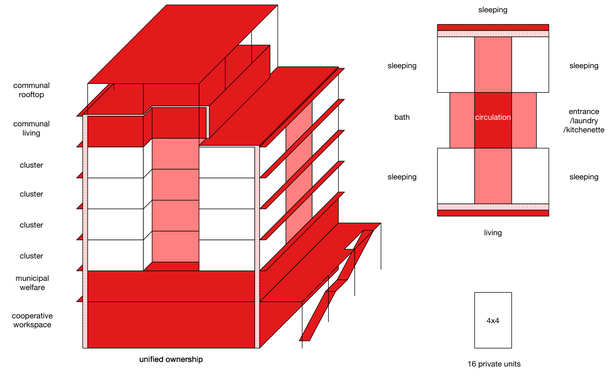
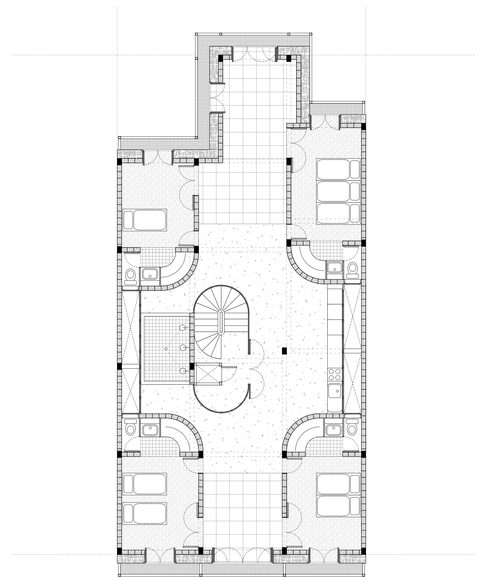


9
TYPOLOGICAL TRANSFORMATION



19.
POLYKATOIKIA 0, FLOORPLAN G+N (1:100)