

# **POLYKATOIKIA** tapestry of shared ownership.

The reinterpretation of the Athenian Polykatoikia

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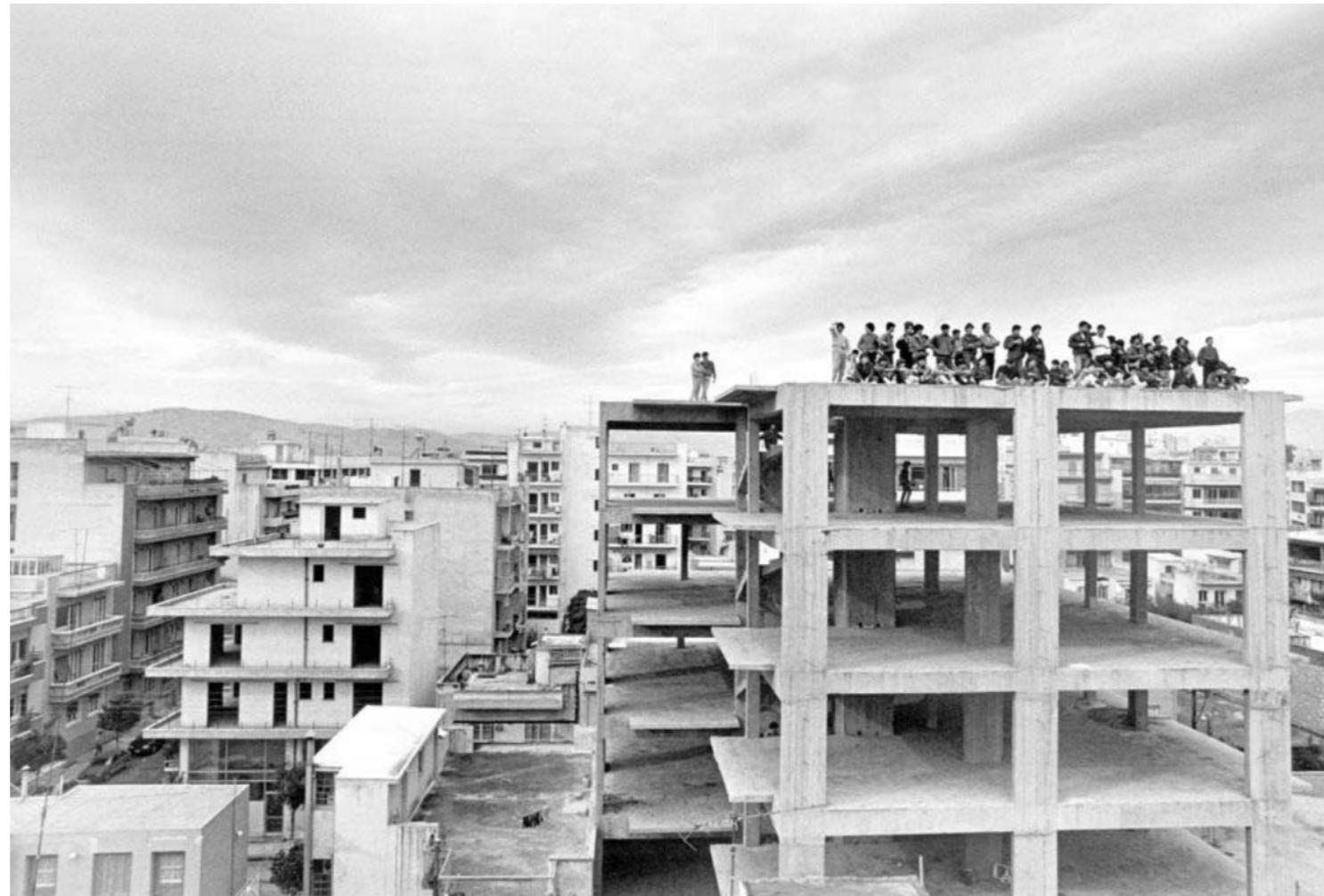
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## New Polykatoikia



"Can the Polykatoikia, a cornerstone of Greek urban identity, be redefined to restore a sense of community in the city?"

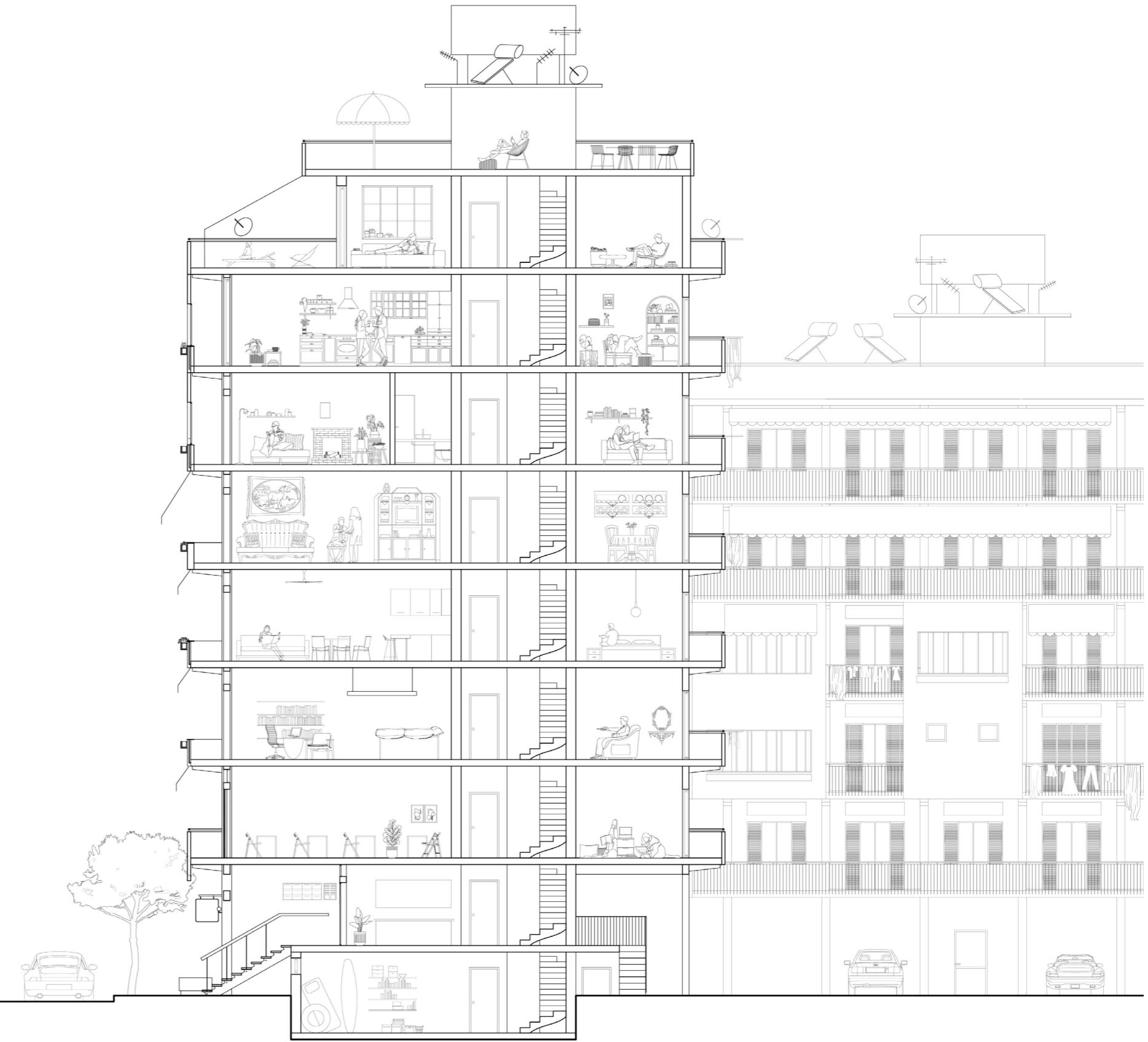
# What is a Polykatoikia?



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The term **Polykatoikia** (πολυκατοικια) /po.li.ka.ti'ci.a/ is a composite word, from (Πολυ) poly, translated as **multi**, and the noun (Κατοικια) katoikia, **dwelling**.

# Ownership Regime



# Ownership Regime



How can we modernize this model to overcome its limitations while retaining its strengths?

## Design Aspiration



The aim is to recover the sense of community, the collaborative management of spaces and the adaptation to the modern needs of the city.

# Introduction



"Where are all your Polykatoikia buildings?"

# Introduction

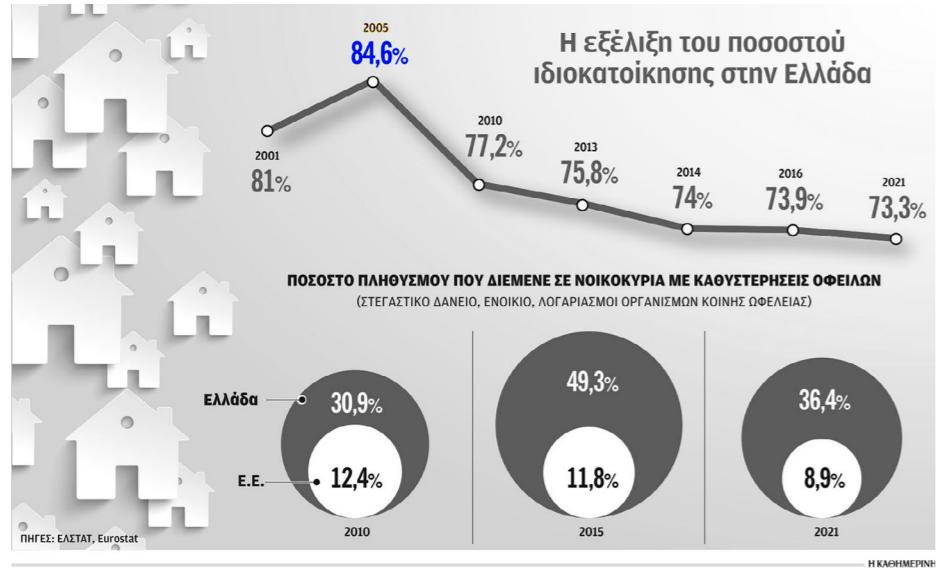
*"Sharing"*



During the interwar period, urbanization drove people to Athens for better job opportunities and economic recovery. They brought a countryside mentality, fostering neighborhood and small community life within Polykatoikias.

# Introduction

## Ownership



84.6% in 2005



# Introduction

## *Ownership*



# Introduction

## *Communal living examples in Europe*



Isokon Building, designed by Wells Coates, London, 1934

Hofje in Amsterdam, 16th and 17th centuries

The building at John Ericssonsgatan 6 in Stockholm, 1935

Unité d'Habitation, designed by Le Corbusier, Marseille, 1952

Central wonen, 1970s

# Introduction

Isokon Building, designed by Wells Coates, London, 1934



"an experiment in collective housing designed for left-wing intellectuals."

# Introduction

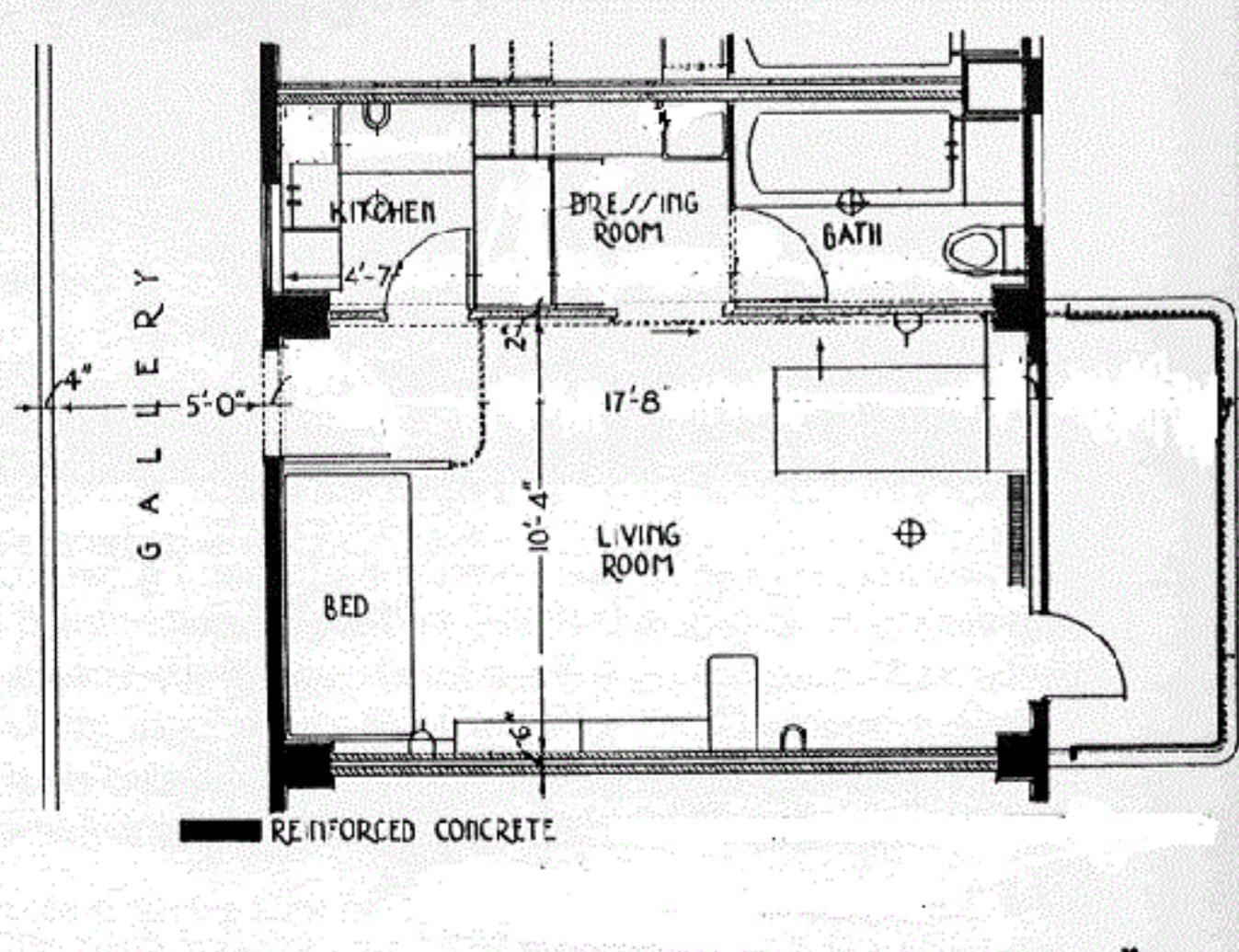
Isokon Building, designed by Wells Coates, London, 1934



where people live in small spaces but have a place for everything.

# Introduction

Isokon Building, designed by Wells Coates, London, 1934



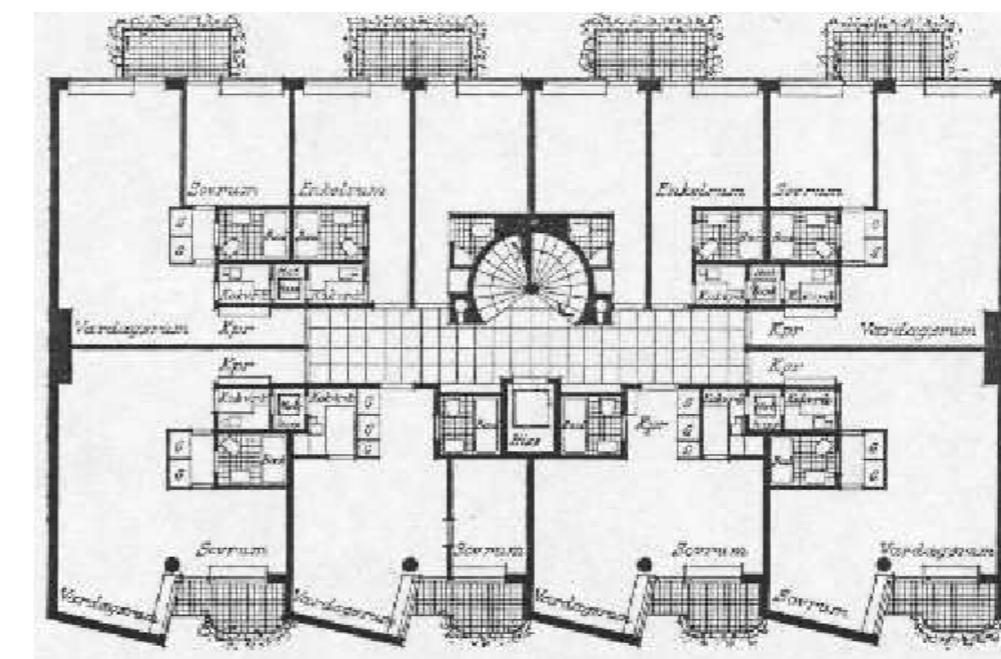
# Introduction

Hofje in Amsterdam, 16th and 17th centuries



# Introduction

The building at John Ericssongatan 6 in Stockholm, 1935



Floor-plan of one of the first collective housing projects in Stockholm, with common diners, child care and small shop

# Introduction

Unité d'Habitation, designed by Le Corbusier, Marseille, 1952



# Introduction

Central wonen, 1970s



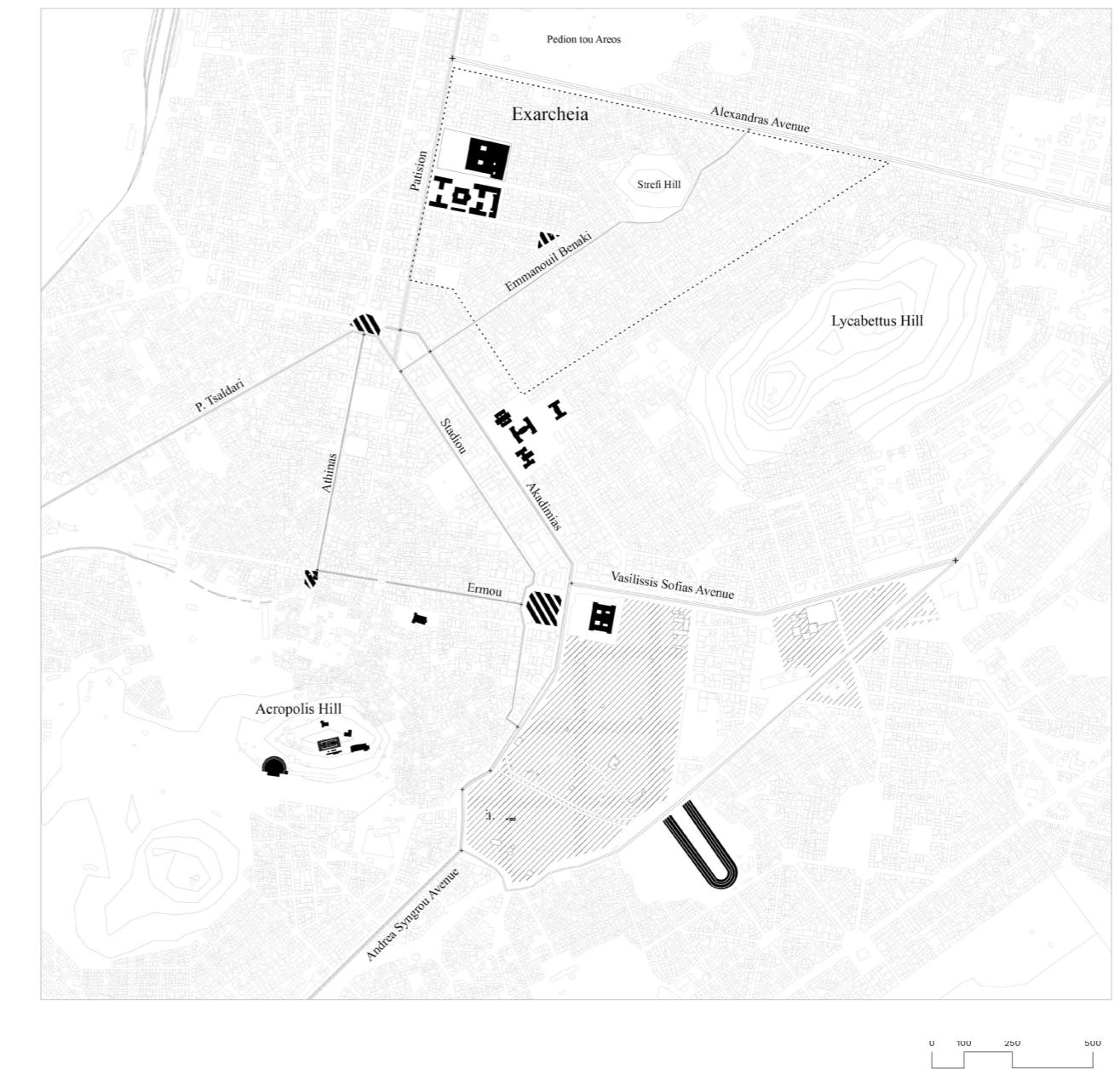
# Citizens



"The city does not belong to them."

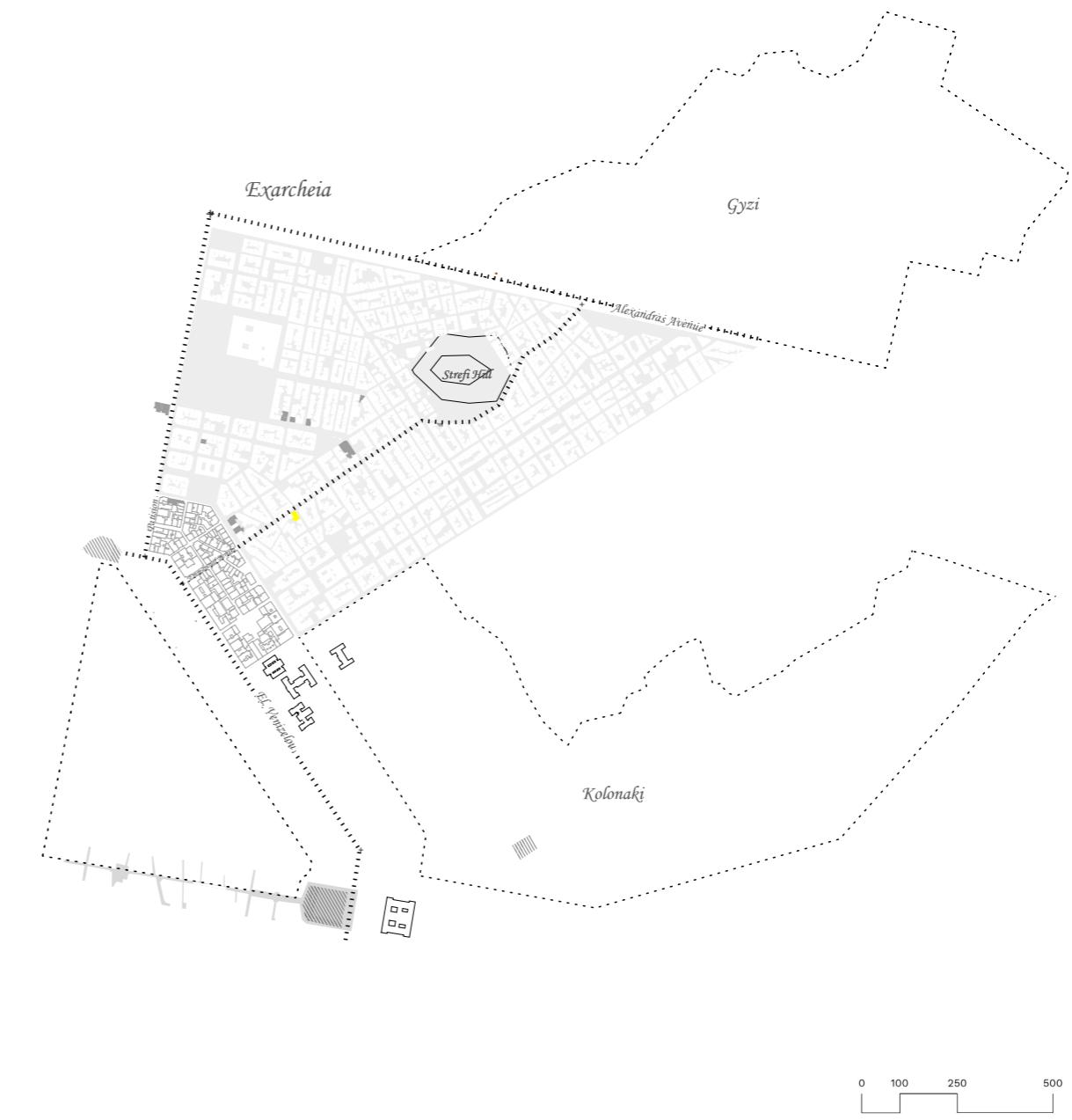
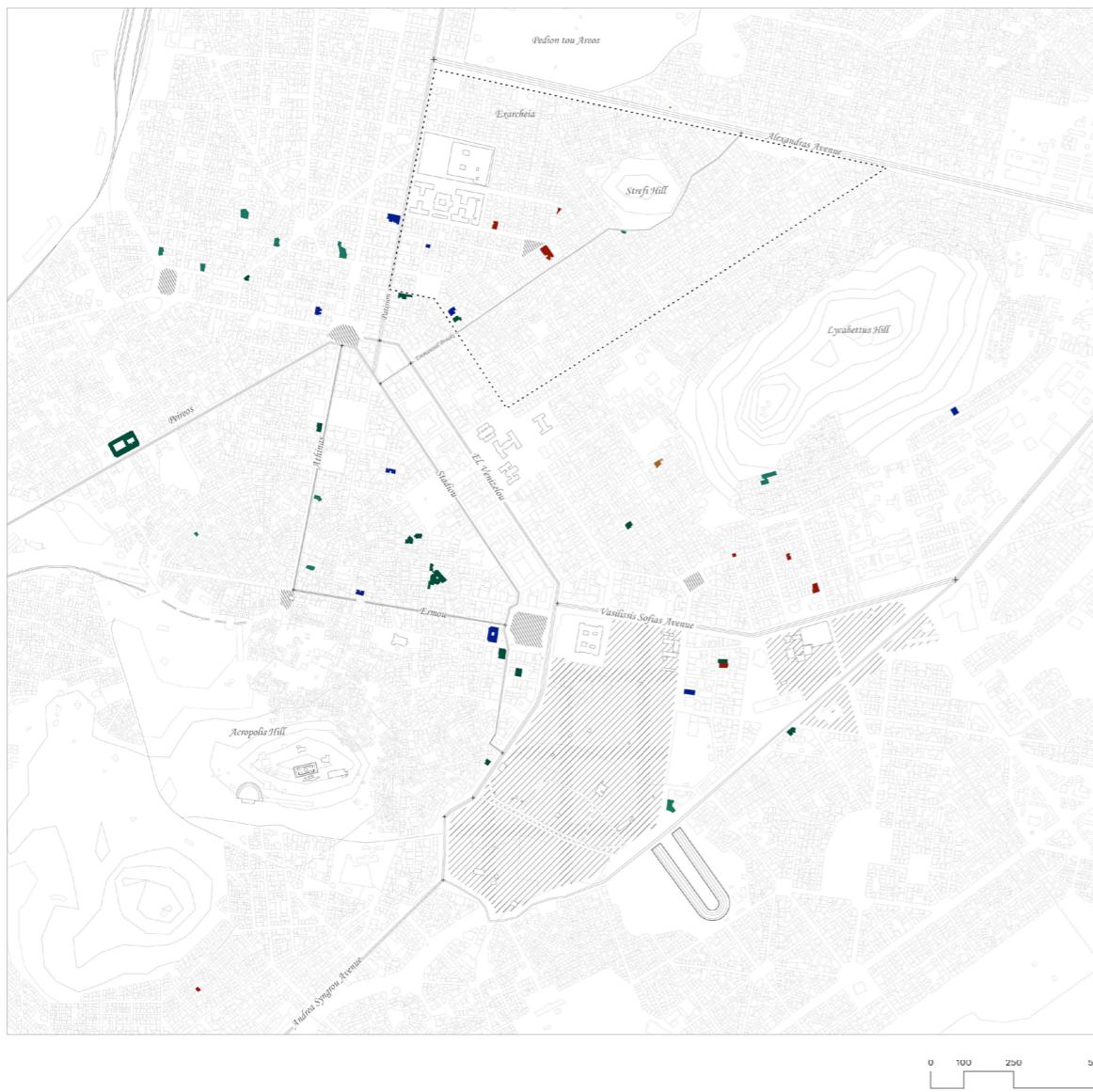
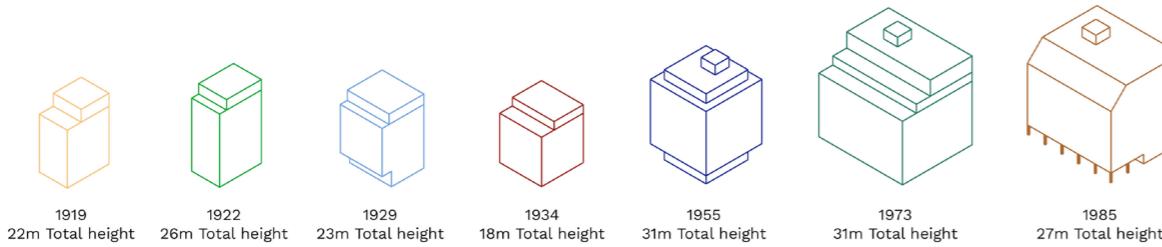
# Site

as a case study



# Site

as a case study



# Site

as a case study

Rebellion



Object Weapons



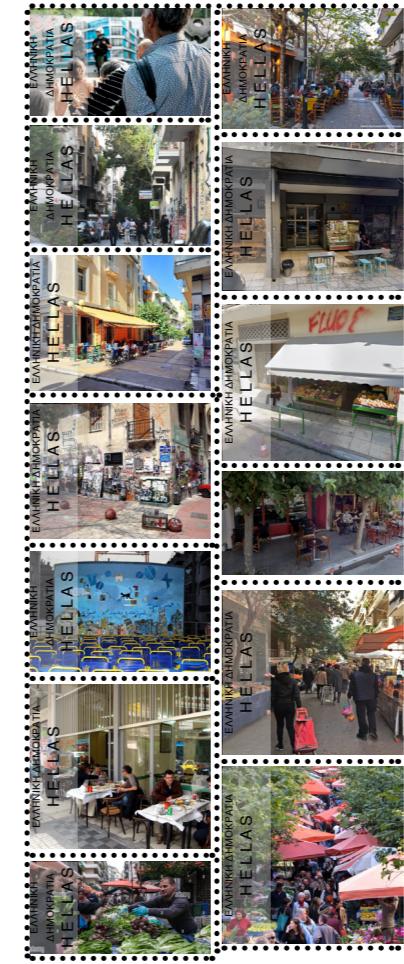
Defence



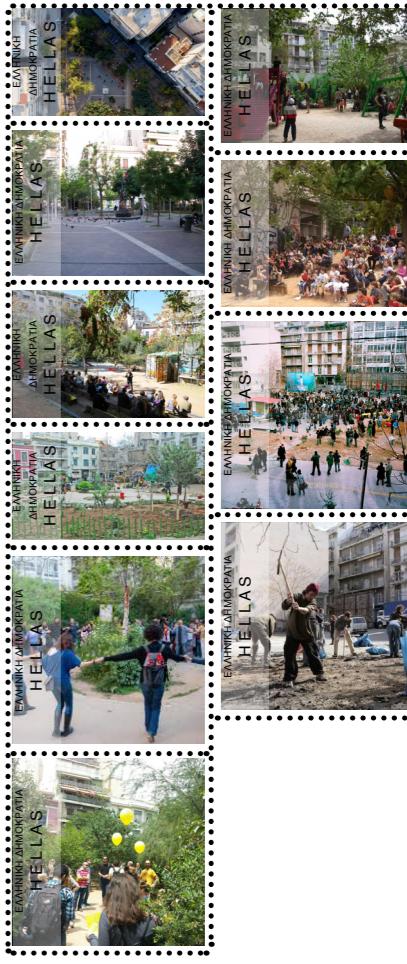
Architecture



Social



Public Space



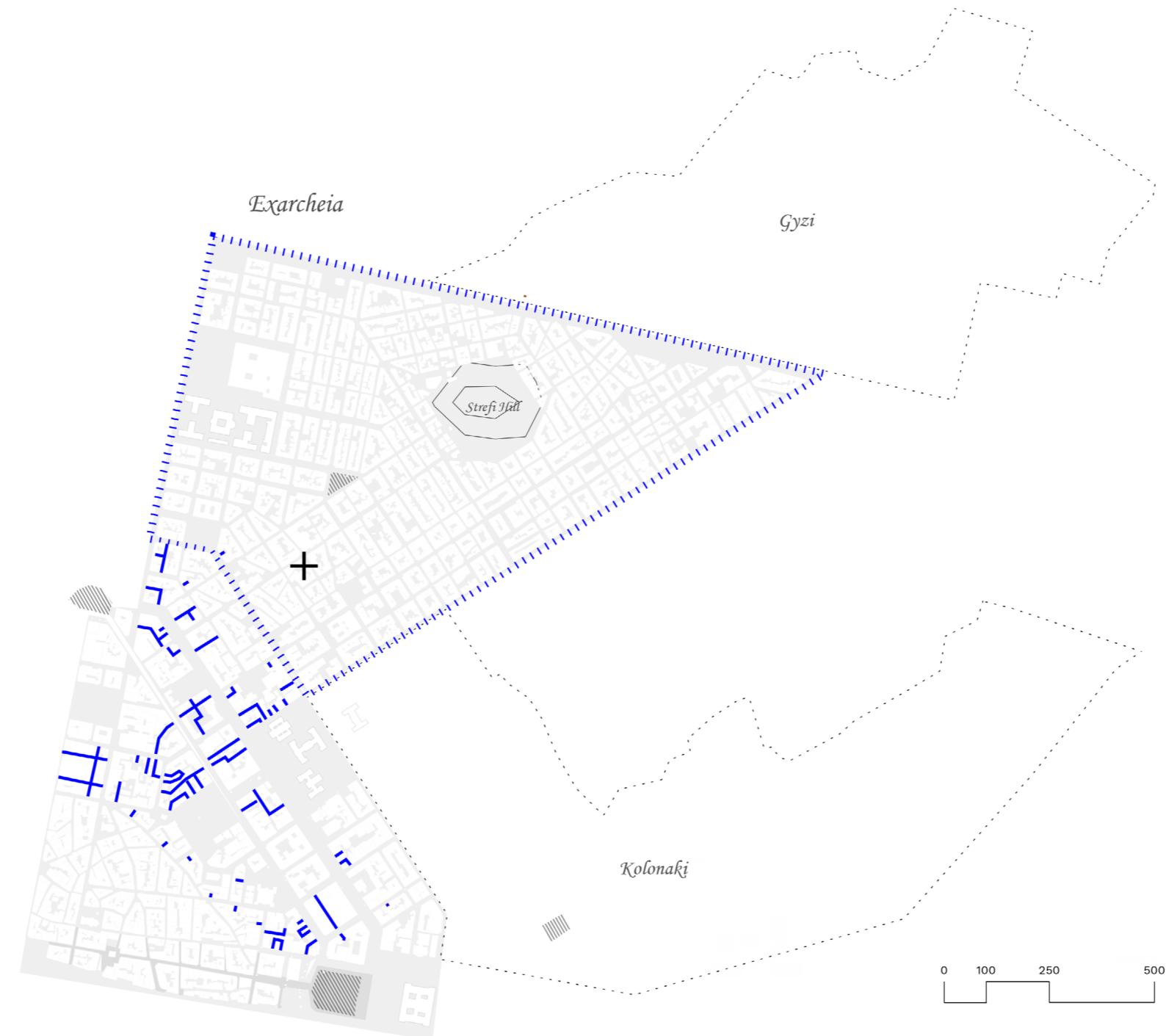
## Case Study: Exarchia as a Setting

- Chosen for its unique social and cultural dynamics:
  - Social diversity.
  - Rich cultural heritage and rebellious spirit.
  - Strong traditions of protest and civic engagement.

- Reflects citizens' concerns about reclaiming their city.

# Site

as a case study



# Site

as a case study  
**STOA**



# Site

as a case study



Typological analysis of the blocks around the site

# Site

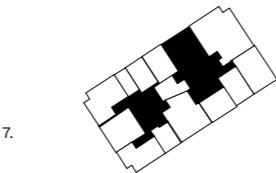
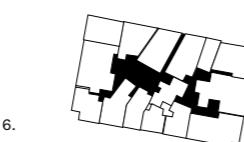
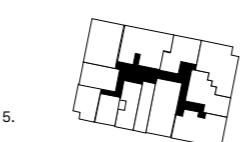
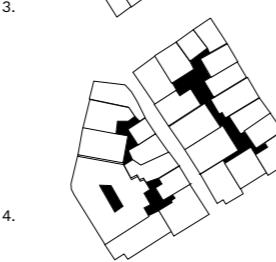
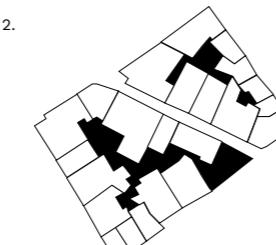
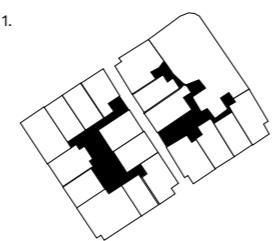
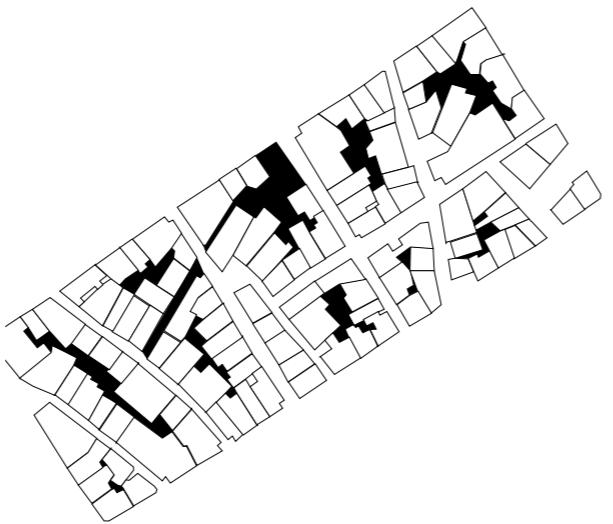
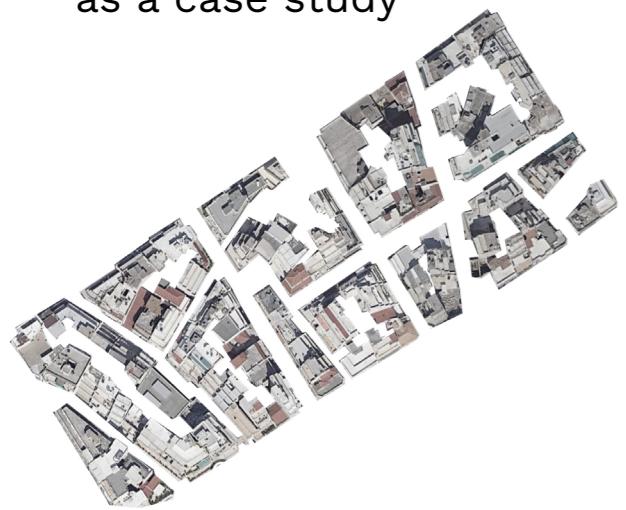
as a case study



Blocks

# Site

as a case study

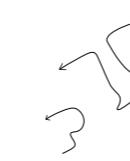
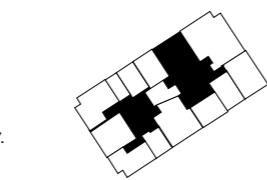
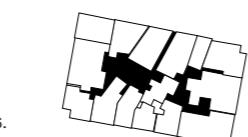
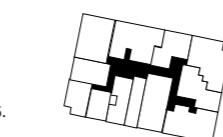
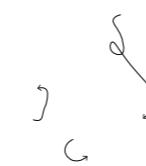
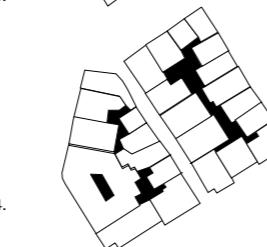
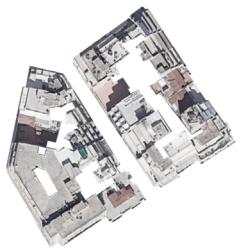
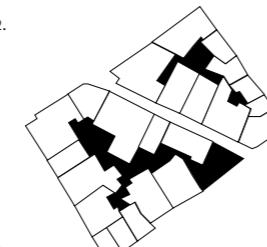
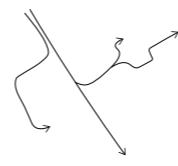
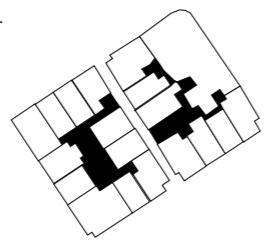
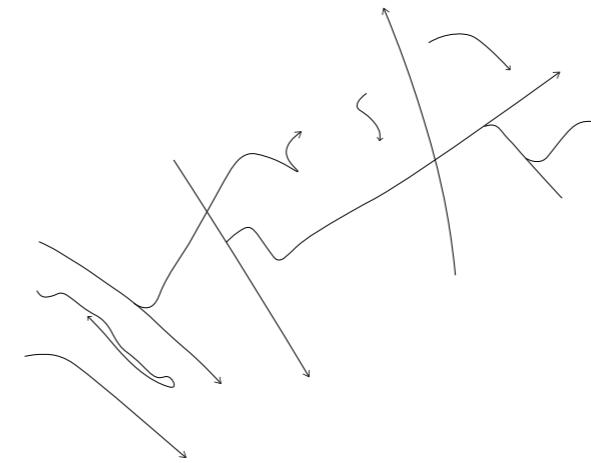
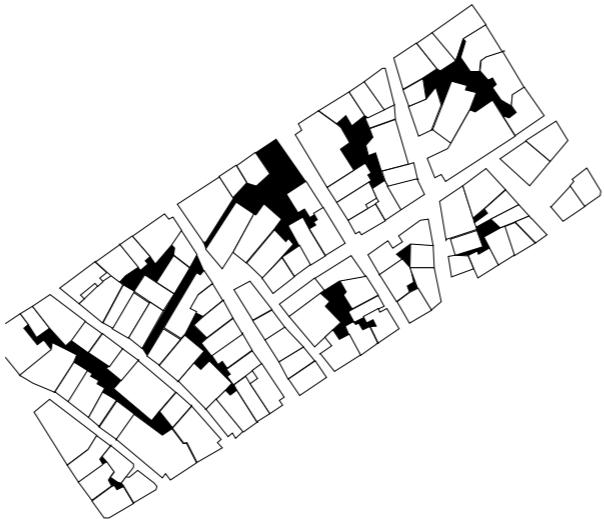


Blocks

Internal open air core

# Site

as a case study



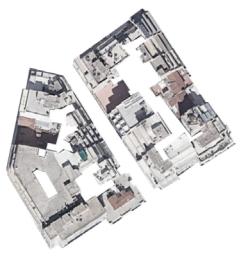
Blocks

Internal open air core

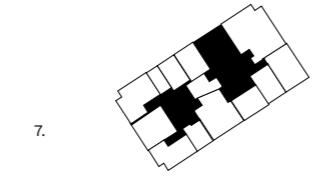
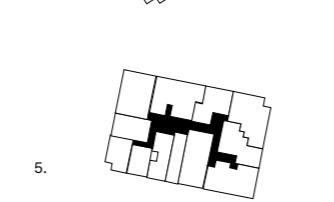
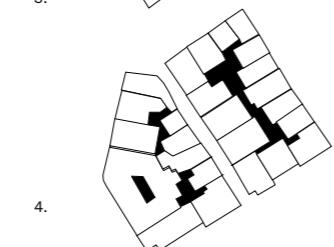
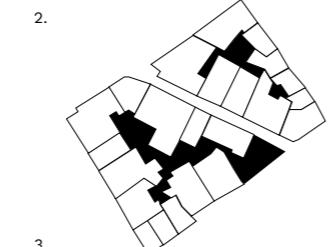
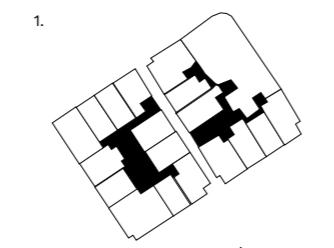
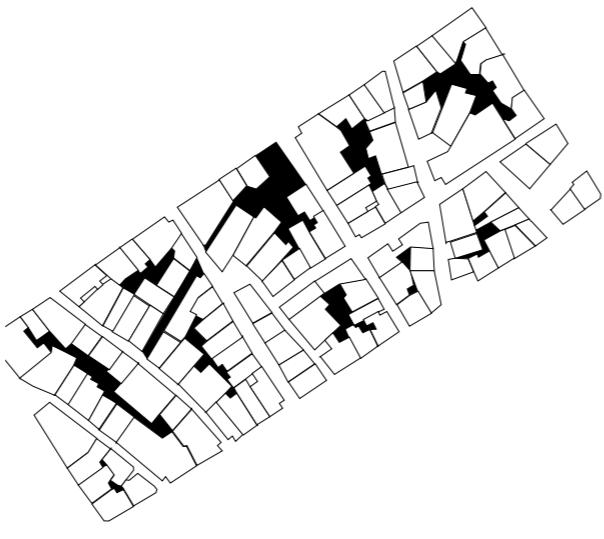
Circulation

# Site

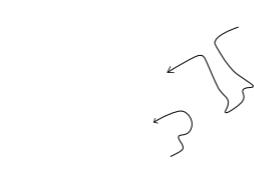
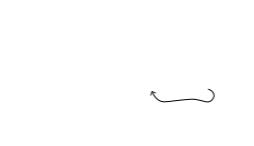
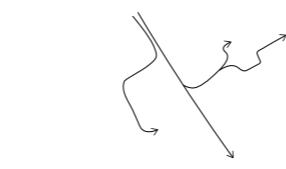
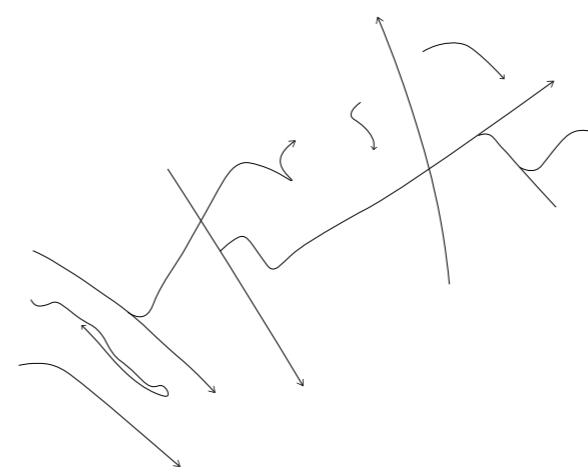
as a case study



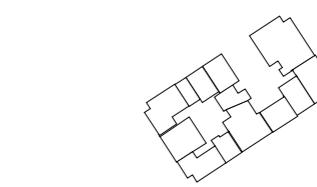
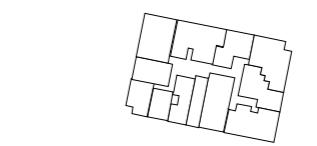
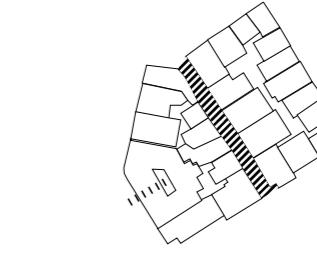
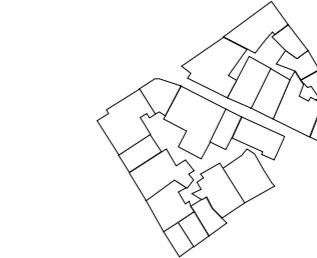
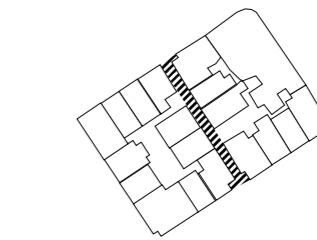
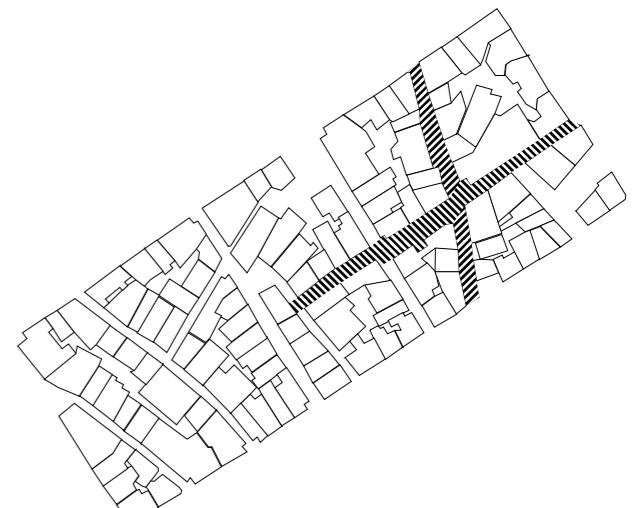
Blocks



Circulation

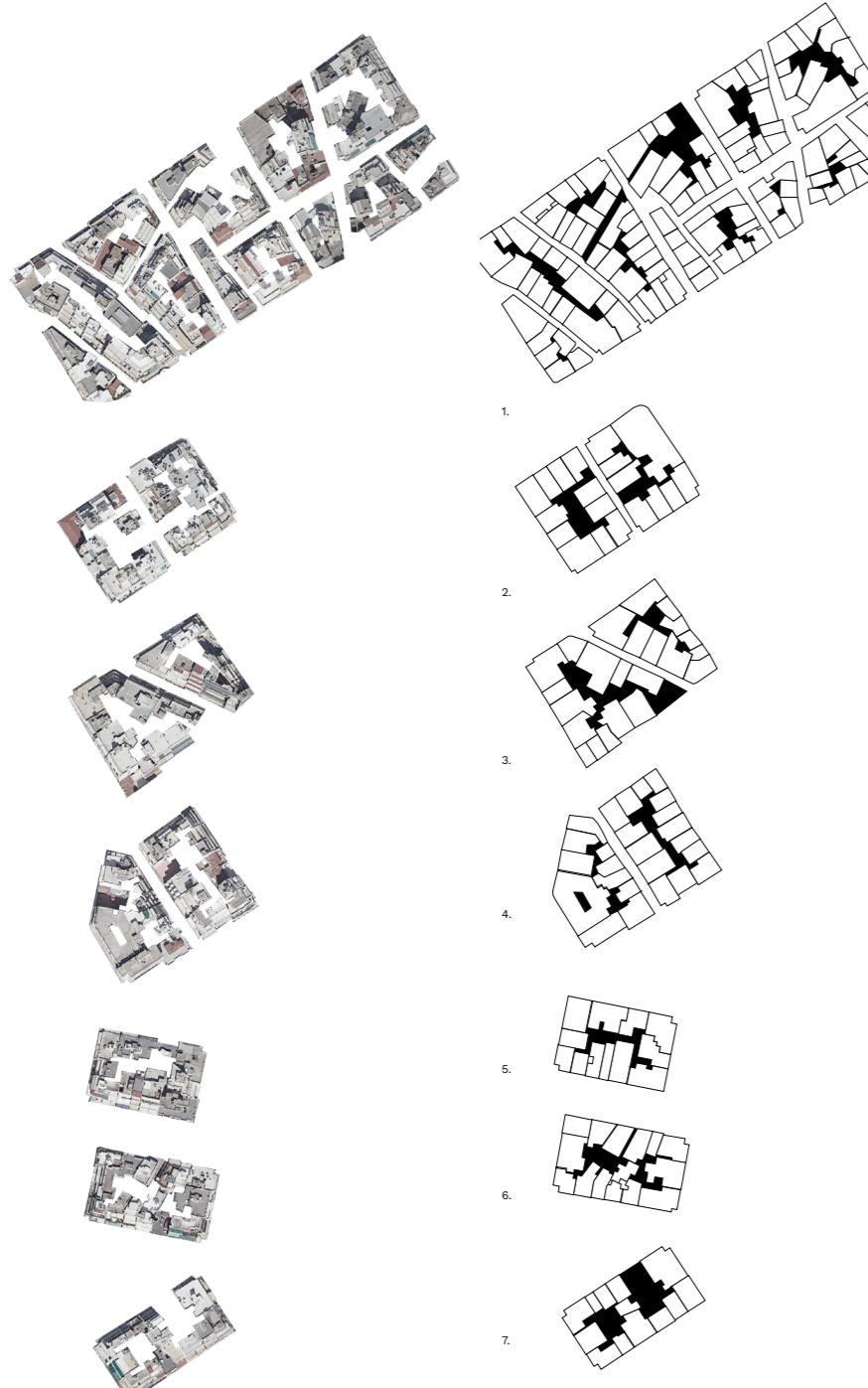


Pedestrian Street



# Site

as a case study

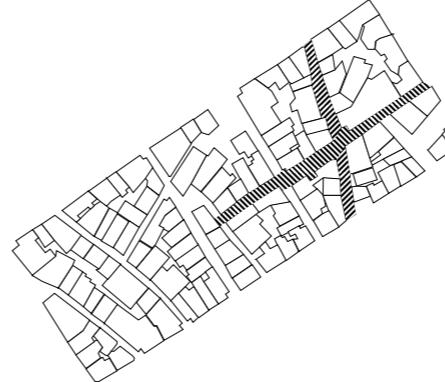
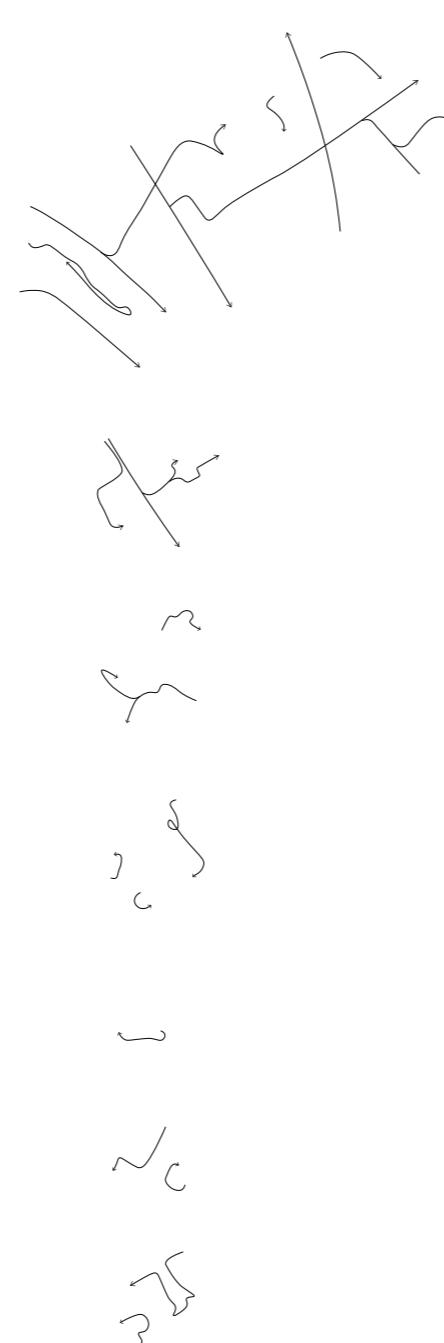


Blocks

Internal open air core

Circulation

Pedestrian Street



Typological analysis of the blocks around the site

# Site

as a case study



Typological analysis of the blocks around the site

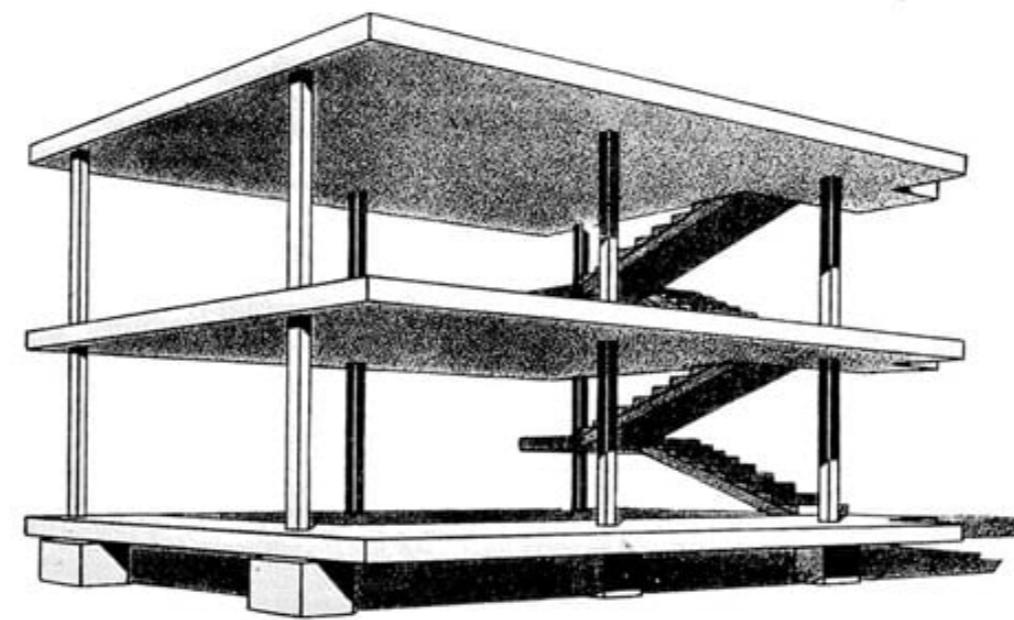
# Site

as a case study



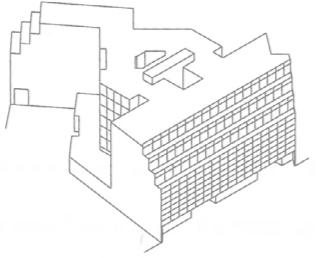
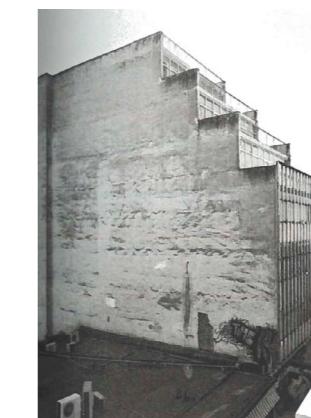
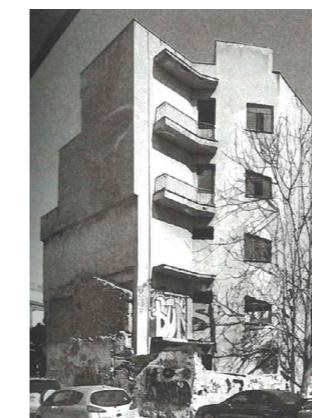
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## Design Approach and Methodology

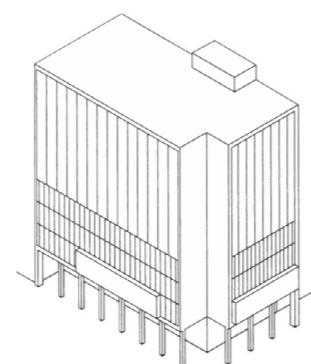


Le Corbusier's Domino model

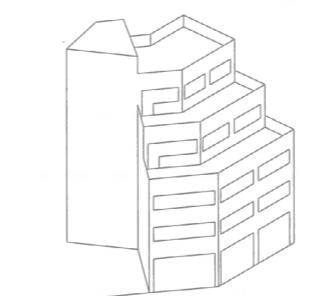
# Design Approach and Methodology



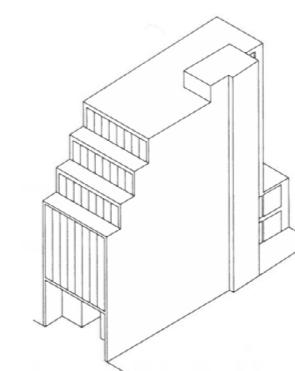
Konstantakopoulos  
Building  
Lekka Street, Peri-  
cleous Street, Em-  
manuel Vourekas,  
1964, 7 Floors,  
1600 m<sup>2</sup>



Athinas Street,  
Kratinas Street,  
Athinas Street,  
Gerasimos Klaou-  
datos SA, 1961, 9  
Floors, 373 m<sup>2</sup>



Lepeniotou, Ogy-  
gou, Street, Psir-  
ri, Eleutherios  
Makris, 1972, 5  
Floors, 101 m<sup>2</sup>



Avramiotou Street  
4, Panagiotis  
Maglaras, 1977, 7  
Floors, 230 m<sup>2</sup>

## Design Approach and Methodology

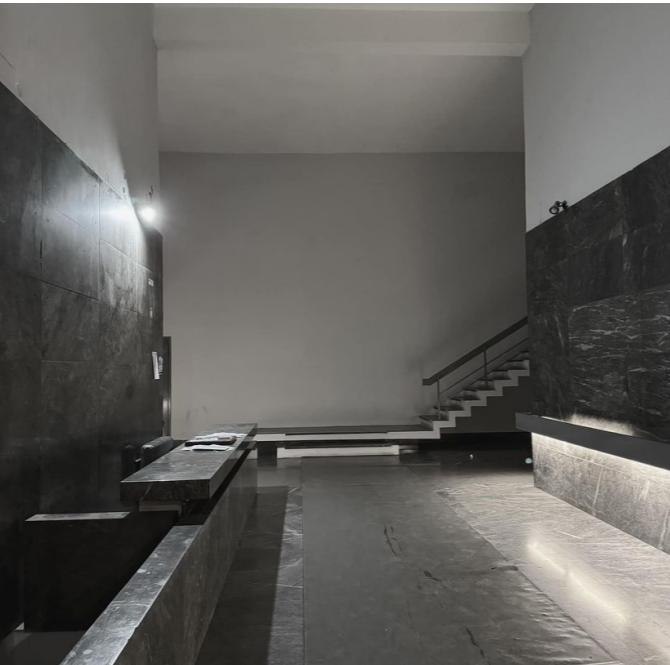


- Lean, functional design.
- Small community mentality originating from the countryside.

# Design Approach and Methodology



Street Balcony



Concierge



Staircase



Balcony



Uncovered Courtyard



Terrace/Penthouse balcony



Uncovered Space



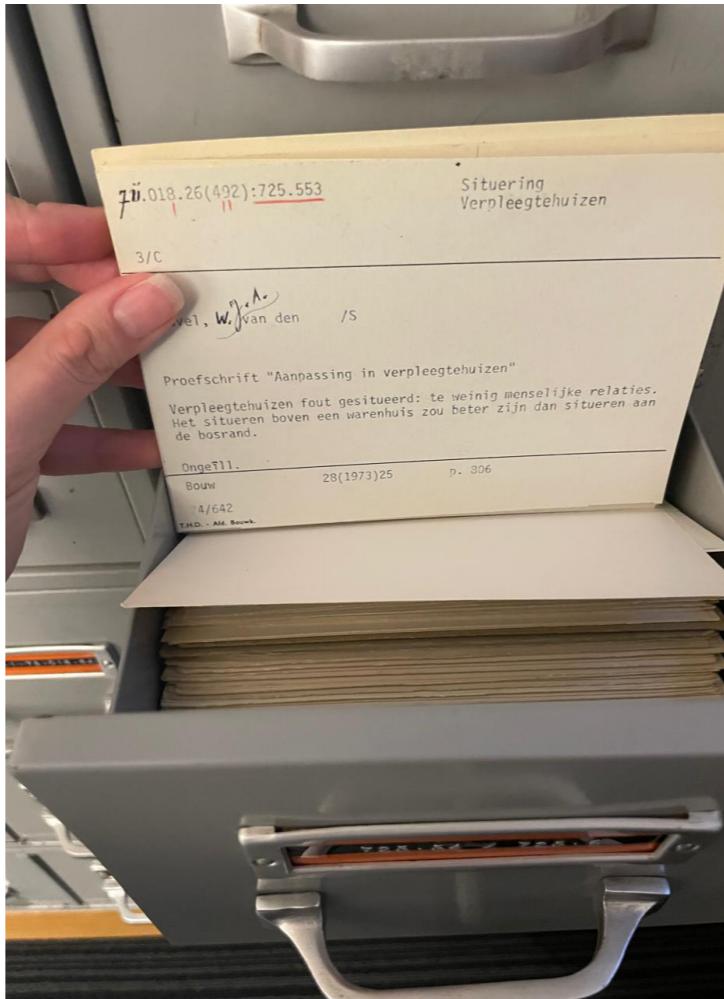
Corridor



Skylight

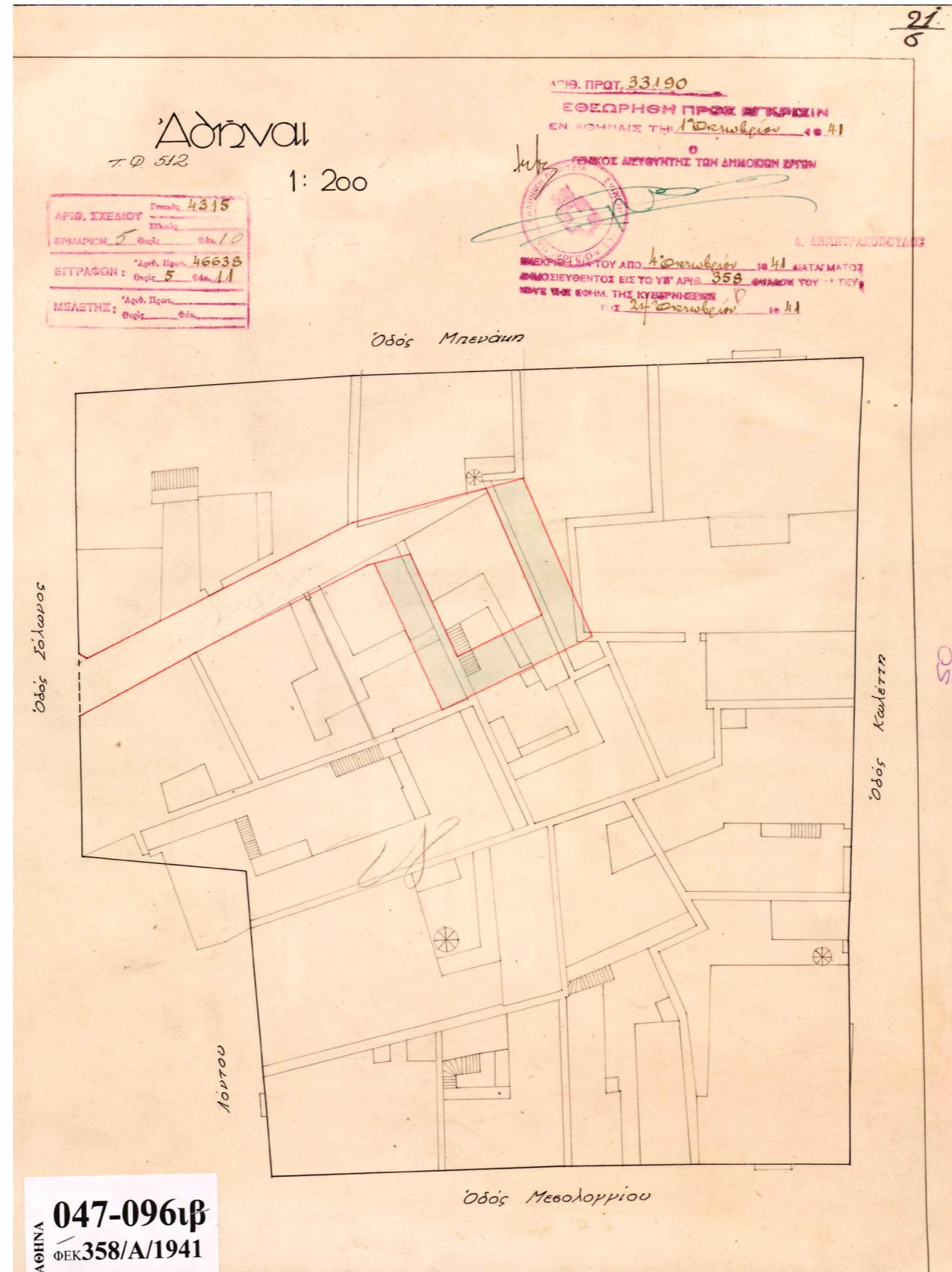
# Sharing and theoretical framework

## Archival analysis



## Sharing and theoretical framework

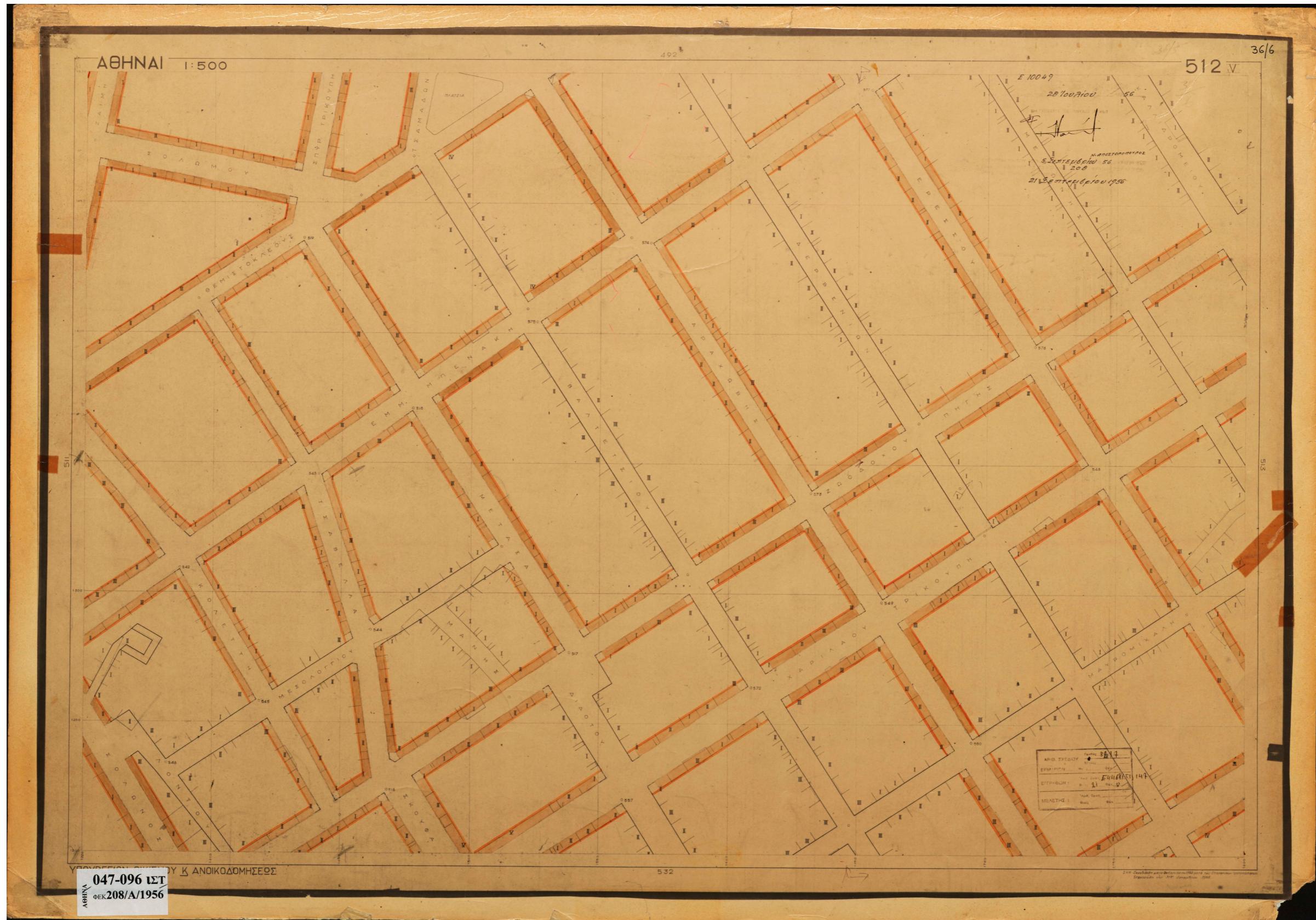
## Archival analysis



ФЕК 1941

## Sharing and theoretical framework

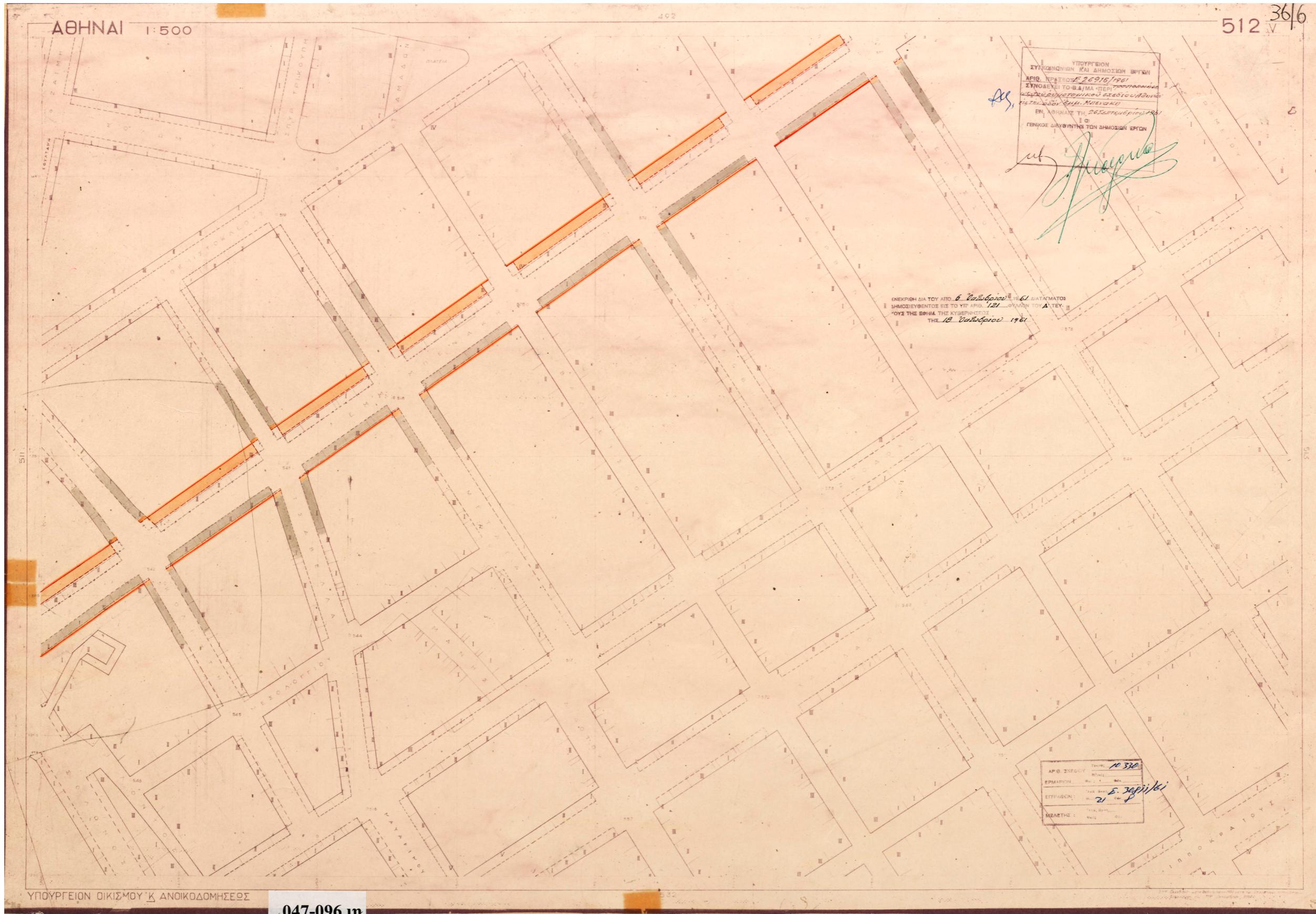
## Archival analysis



1:500 scale topographic STOA map September, 1956

# Sharing and theoretical framework

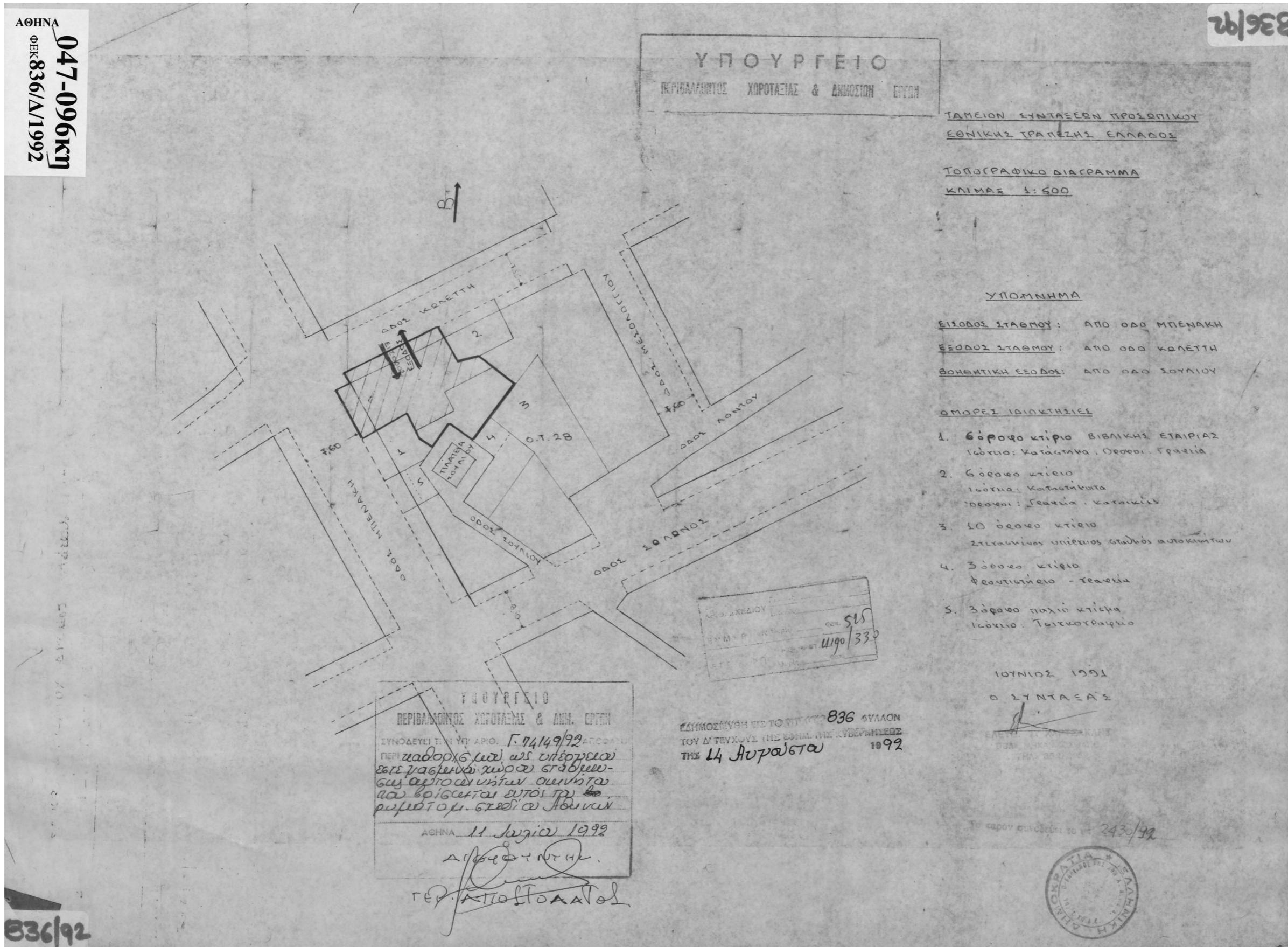
## Archival analysis



1:500 scale topographic map October 1961

# Sharing and theoretical framework

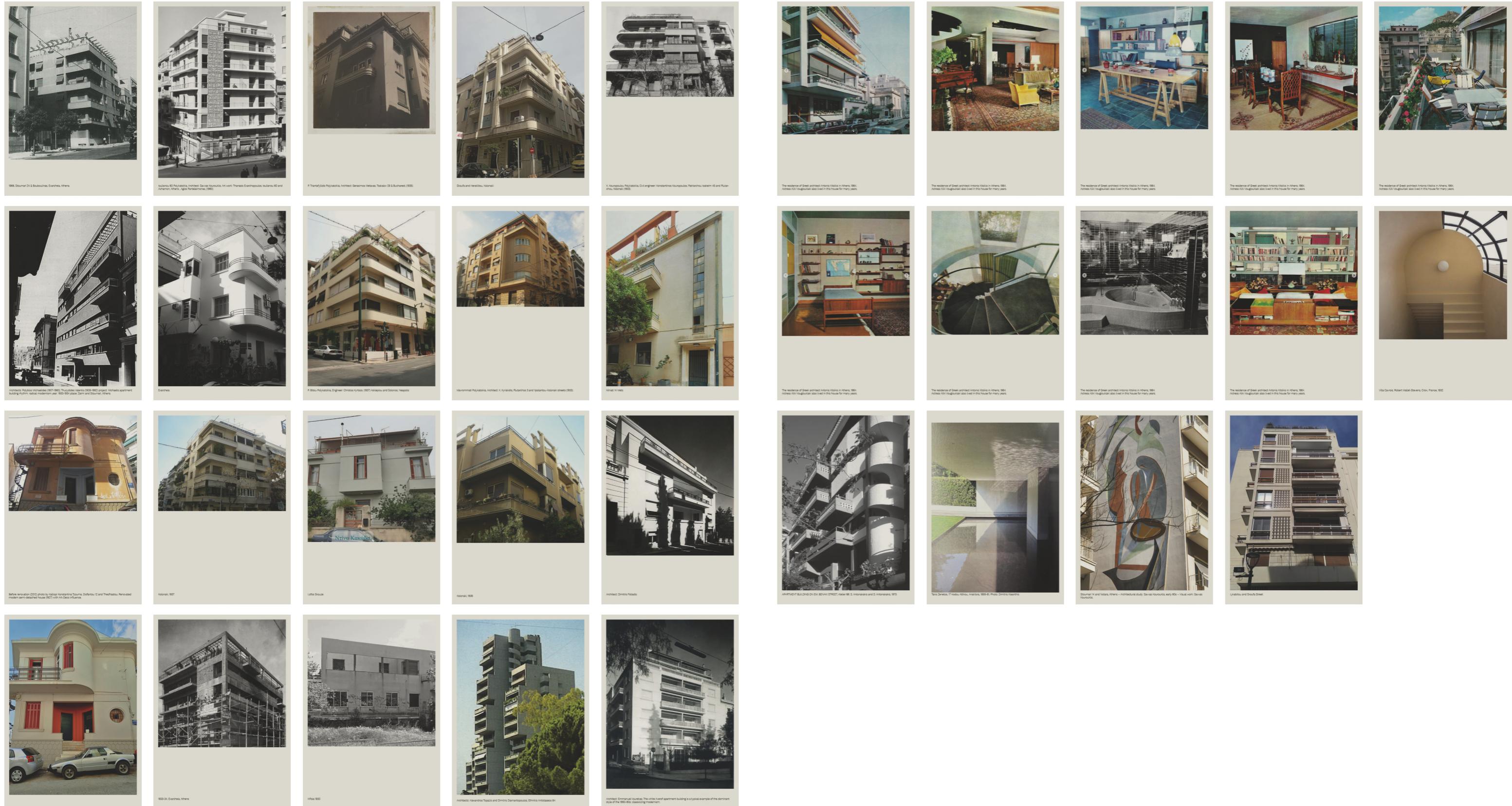
## Archival analysis



1:500 scale topographic map of the plot, 1992

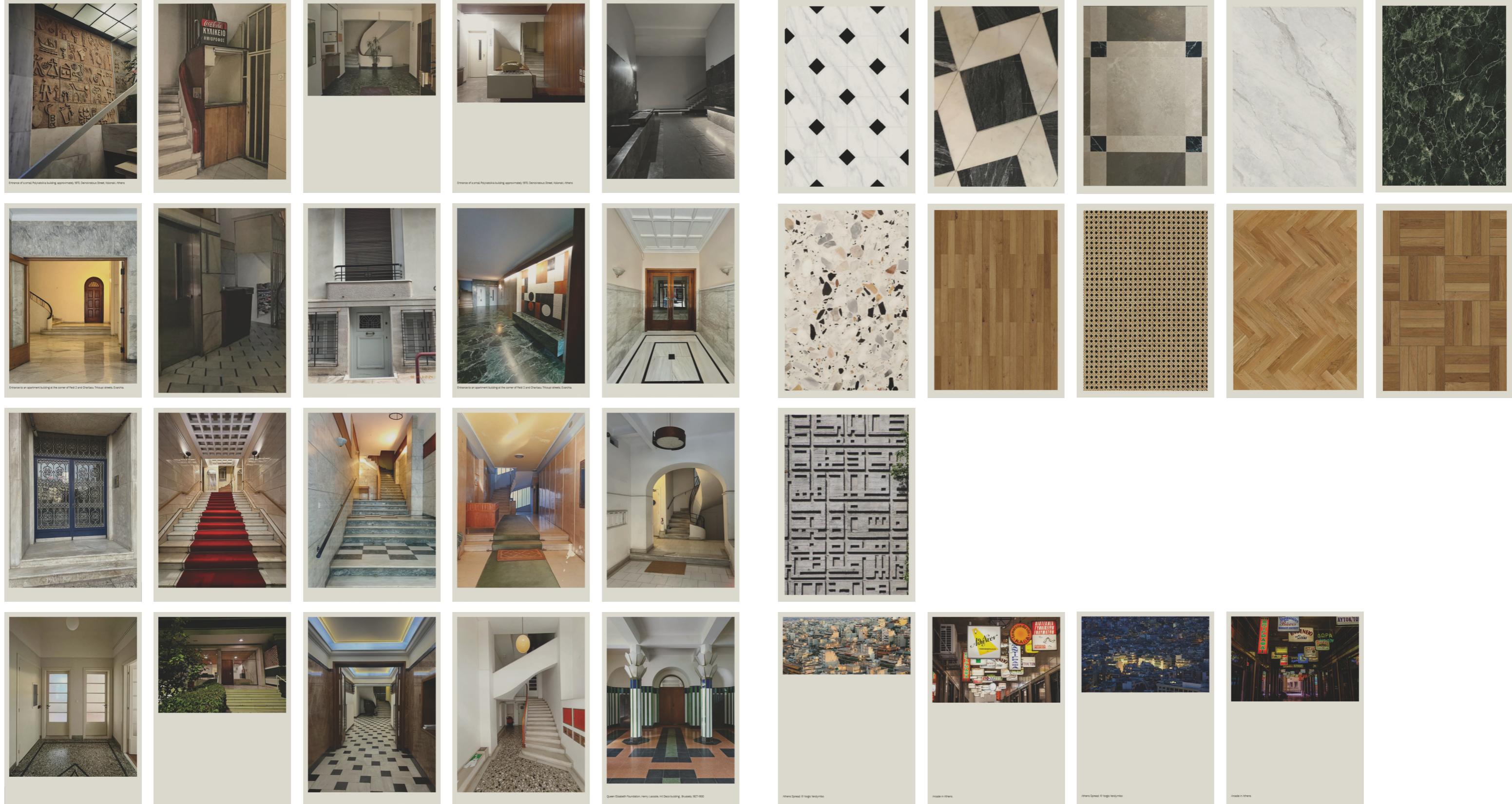
# Sharing and theoretical framework

## Material culture study



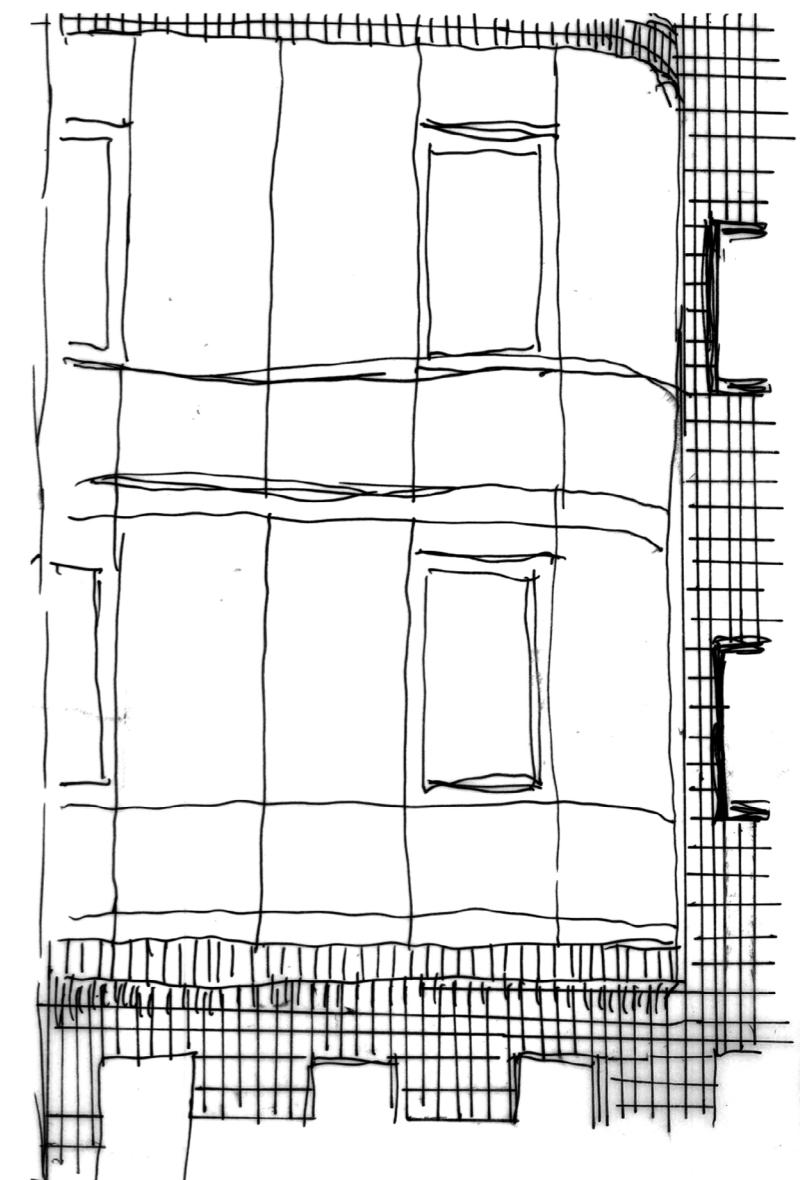
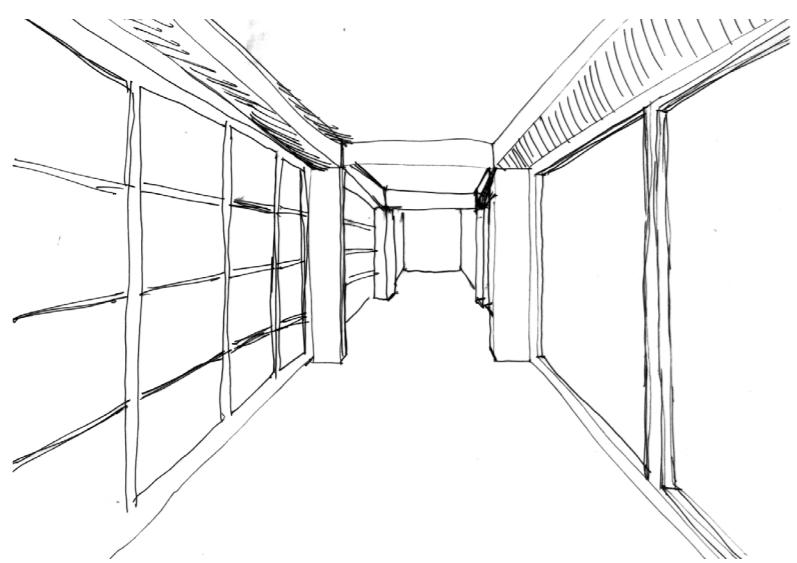
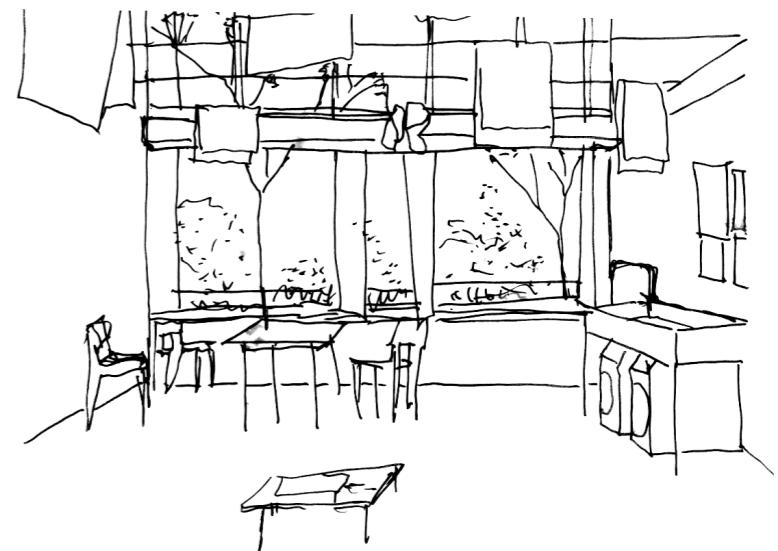
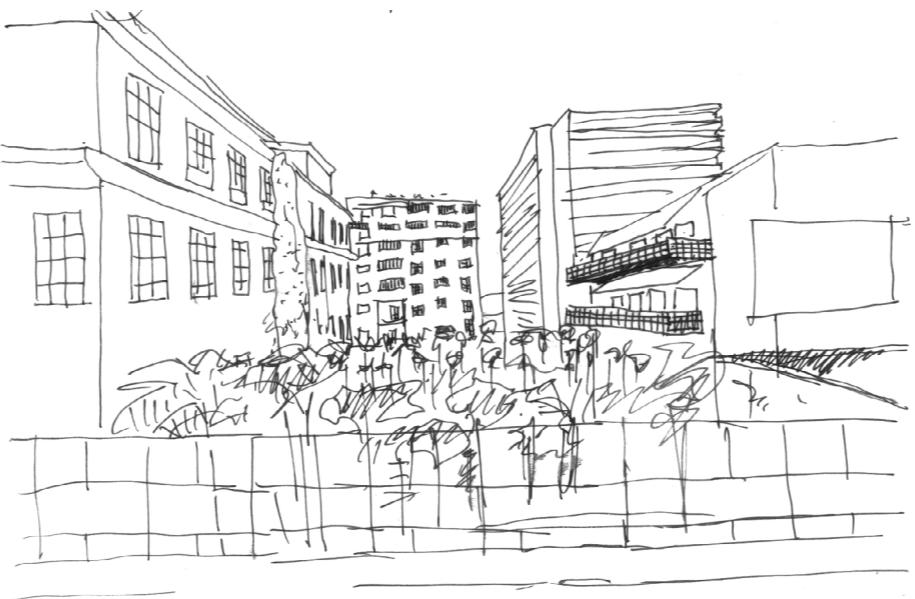
# Sharing and theoretical framework

## Material culture study



# Translating the Manifesto into practice

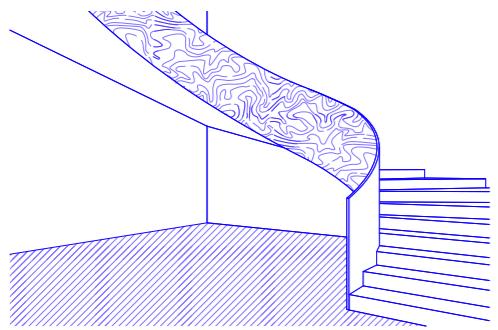
## Space qualities



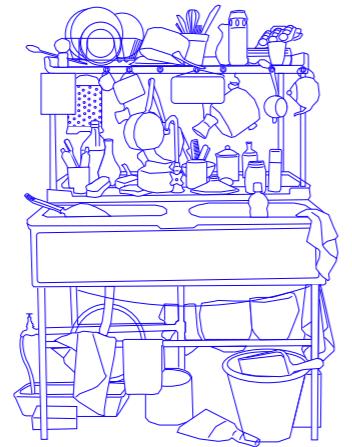
# Sharing and theoretical framework

Project journal

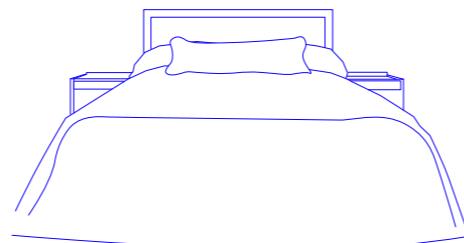
From private to "shared"



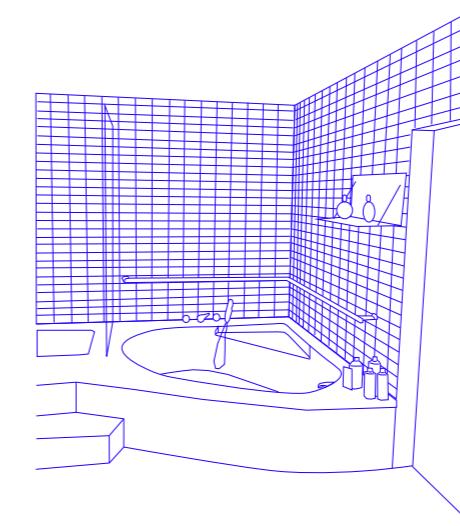
Large inviting staircase at the entrance of the apartment building



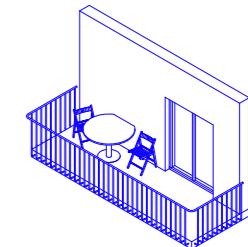
Tiny functional individual kitchens in each apartment



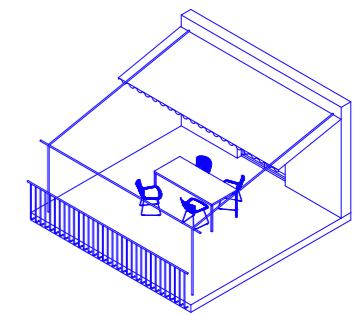
A collective guest room that can be accessed by all tenants



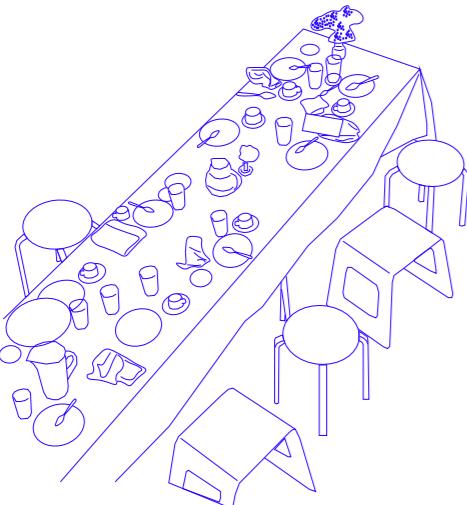
A collective bathroom that can be accessed by all tenants



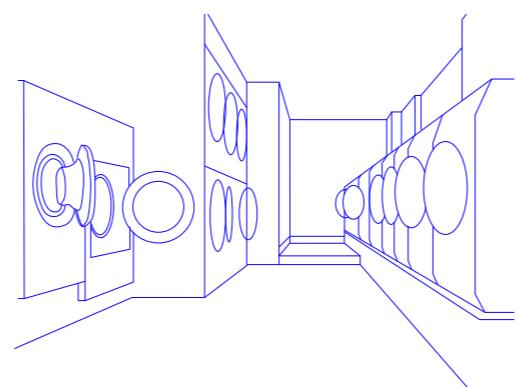
Small balconies on lower floors



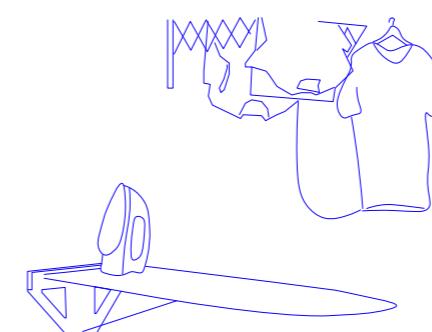
Penthouse Balcony



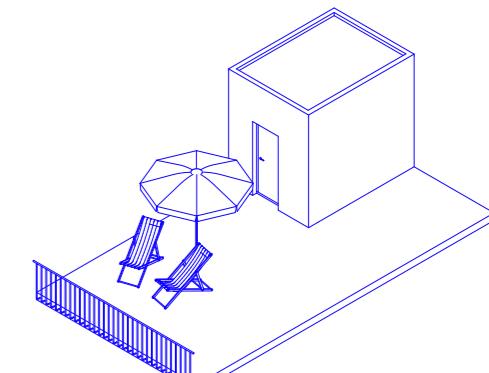
Collective access to a table for celebrations and events



Collective laundry room



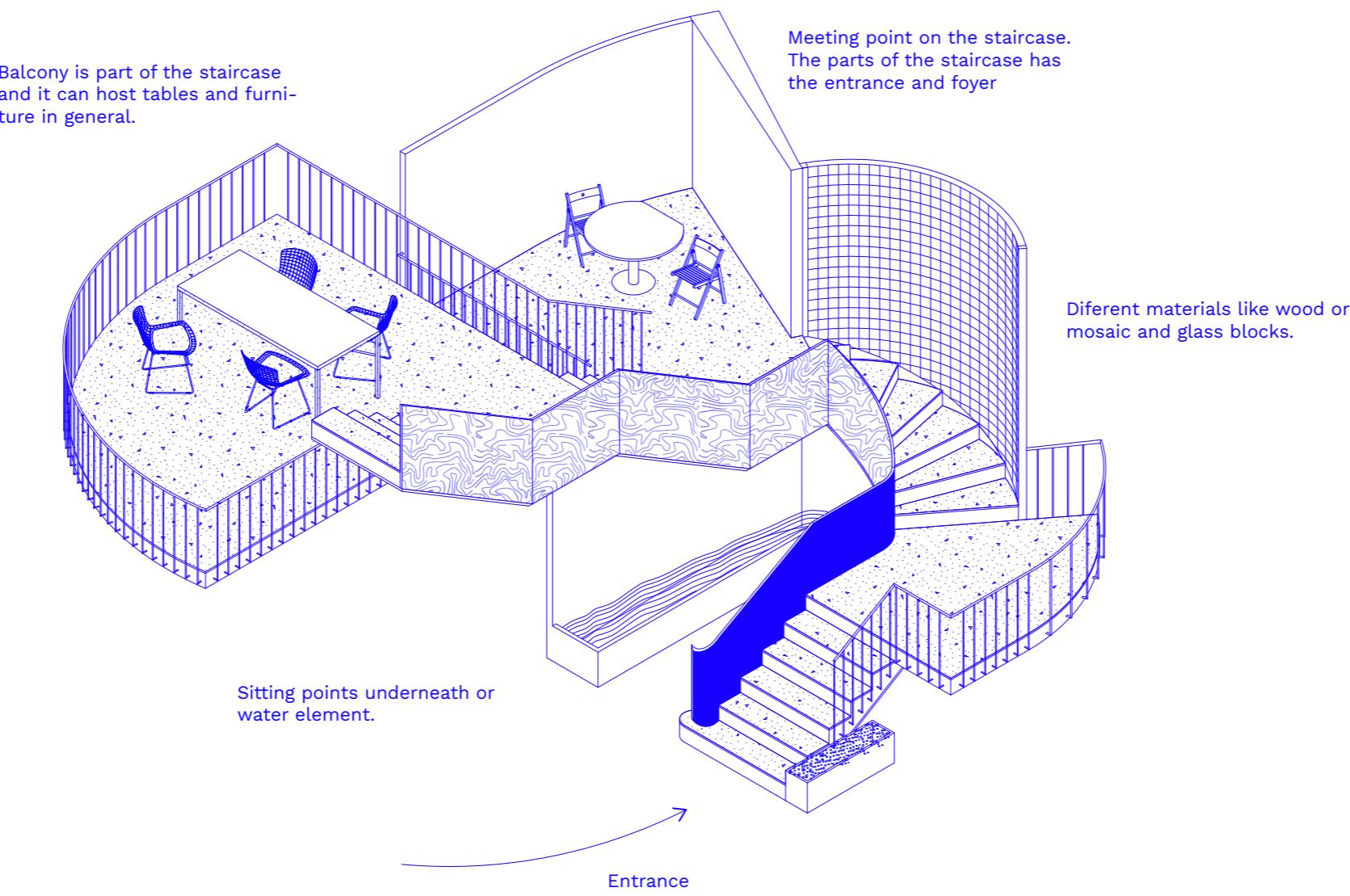
Collective ironing and drying of clothes



Terrace

# Sharing and theoretical framework

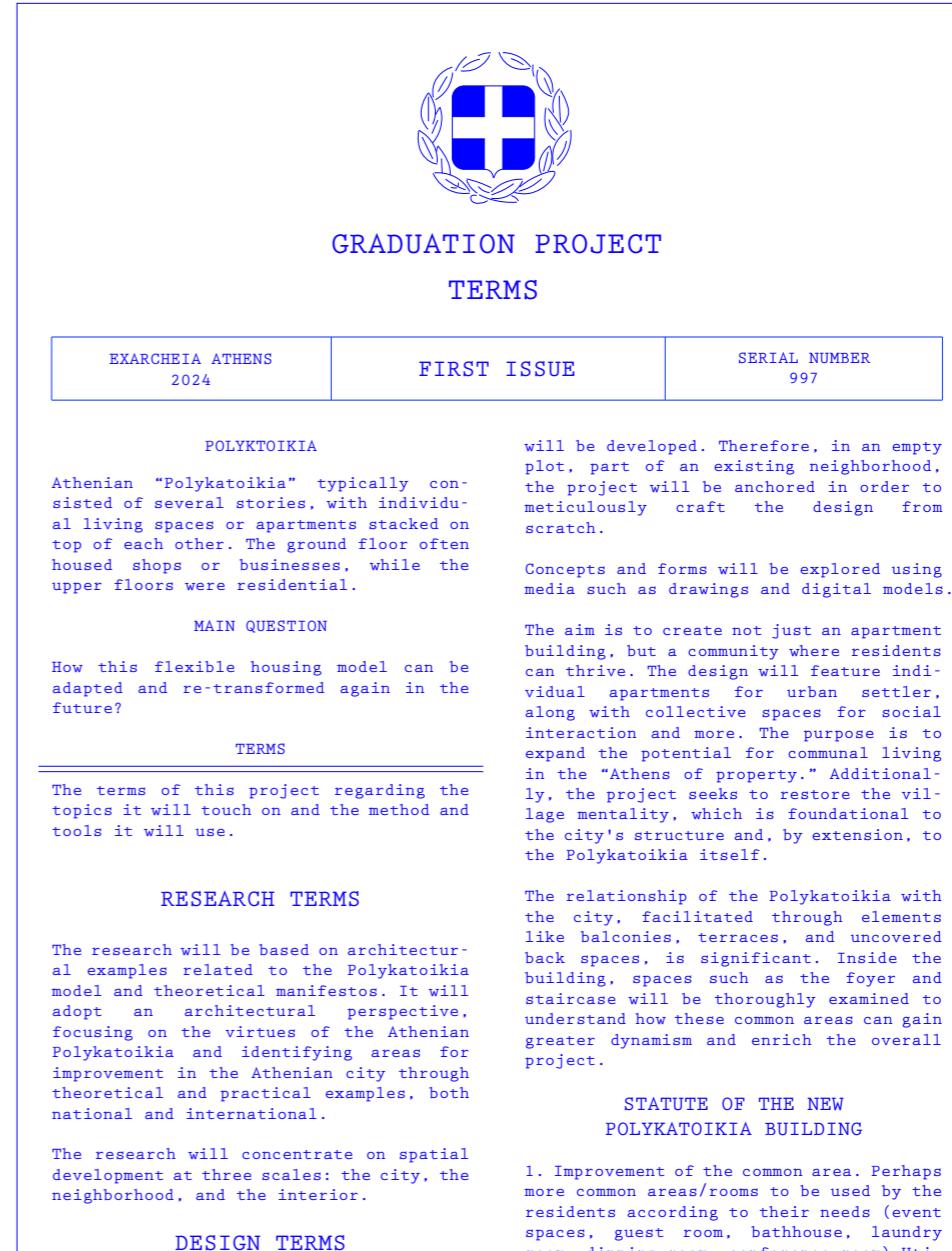
## Project journal



# *“Terms” of the New Polykatoikia*



From 1950 to 1960, the system of "Antiparochi" becomes widely known. With this system, the plot owner gives a part of their land to the contractor, who in return, builds and gives them a certain number of apartments in the Polykatoikia.



The charter of the new Polykatoikia as a new Antiparochi system that has nothing to do with the ownership and purchase of the plot but the features of Polykatoikia as a new housing model.

# "Terms" of the New Polykatoikia

001.

## Redefining Housing:

The new polykatoikia is not merely a place to live but a tool for transformation. It challenges the individualistic mindset of the past and embeds the principle of collectivity in every aspect.

Minimize private living spaces giving more space for collective spaces

---

002.

## The Power of Collective Spaces:

Balconies, rooftops, stairwells, and foyers are not just transitional areas. They are spaces of shared luxury, accessible to all.

Shared kitchens, workshops, and recreational areas elevate daily life and foster social interaction.

---

003.

## Embracing Flexibility:

- Flexibility of the use and layout of the apartment.
- Spaces blending private and communal uses.

---

004.

## Sustainability as a Responsibility:

- Sustainable energy systems and the least possible material such as use of renewable energy sources, and energy efficient systems.

---

005.

## The Ground Floor as the Urban Core:

The open ground floor, with commercial and communal uses, strengthens interaction with the city.

Integration with courtyards and streets activates the urban block, bringing life to the public realm.

---

006.

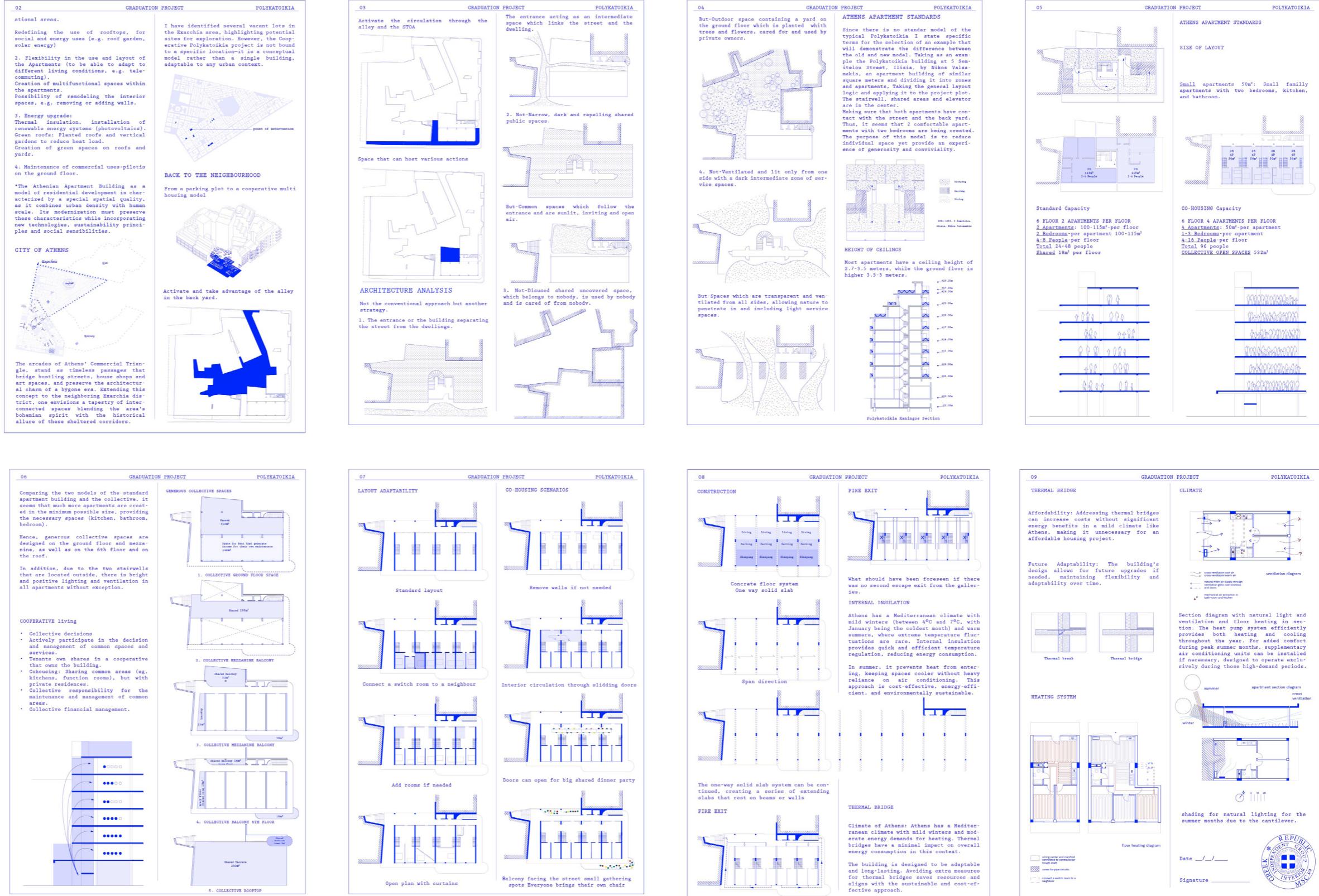
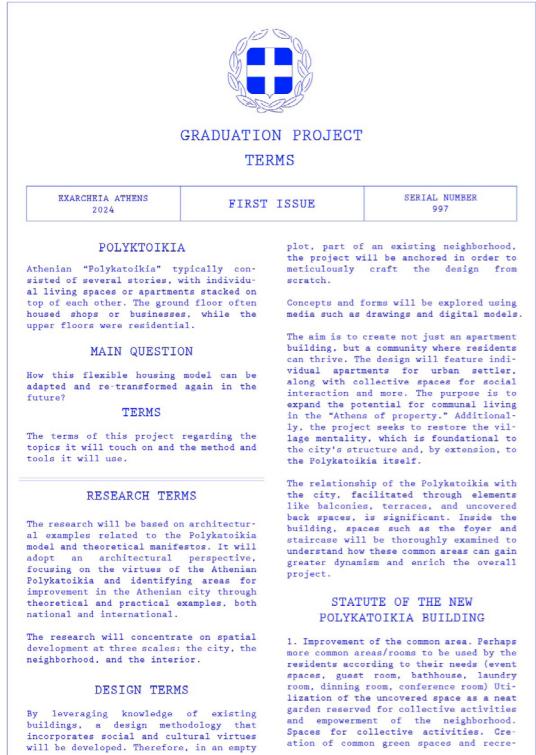
## Continuous Evolution:

Shared spaces are maintained collectively, fostering a sense of responsibility and collaboration.

The building adapts to societal changes and emerging needs, ensuring it remains vibrant over time.

Spaces that they can generate income.

# Translating my "New Terms" into practice



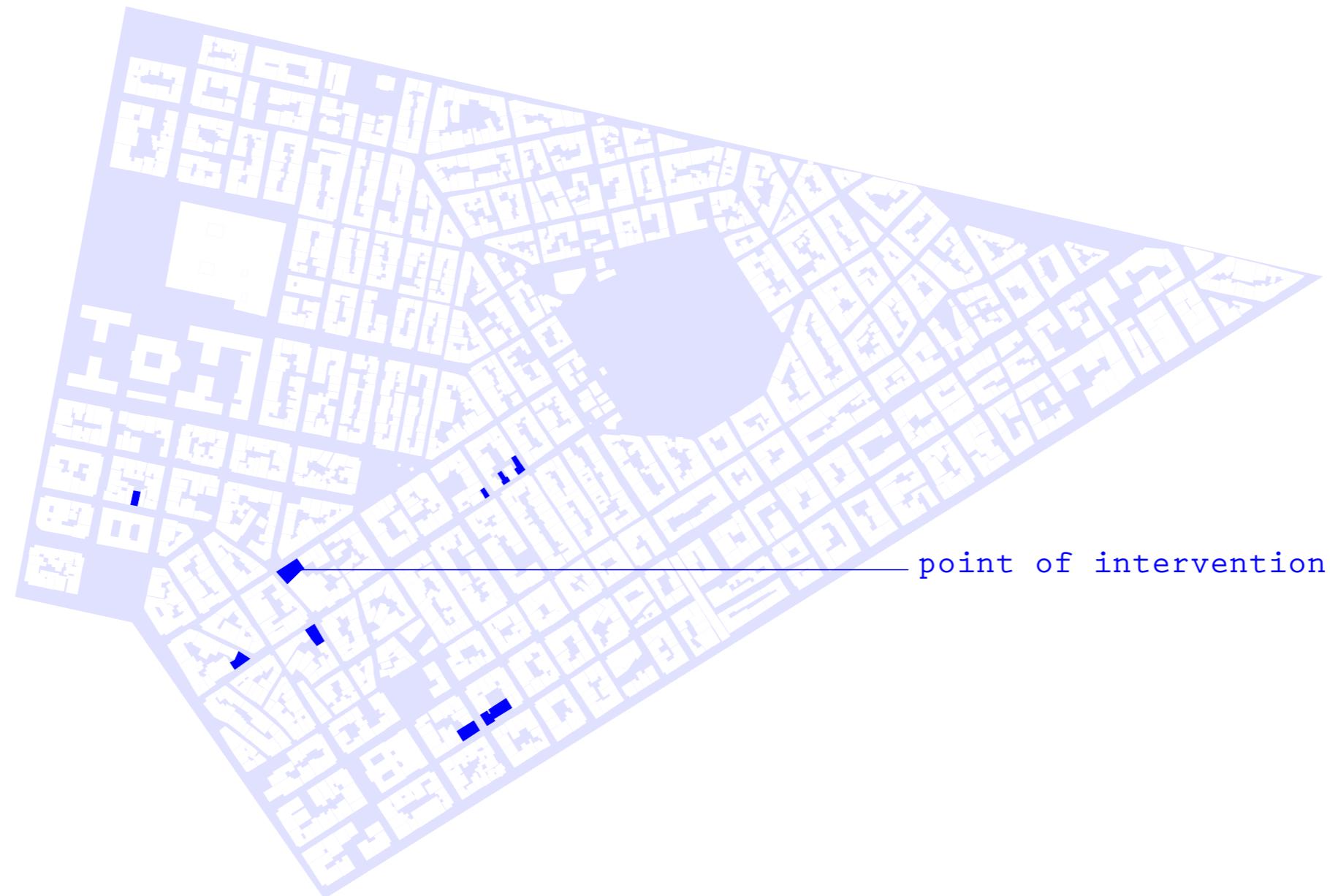
# Translating my "New Terms" into practice

Urban Aproach



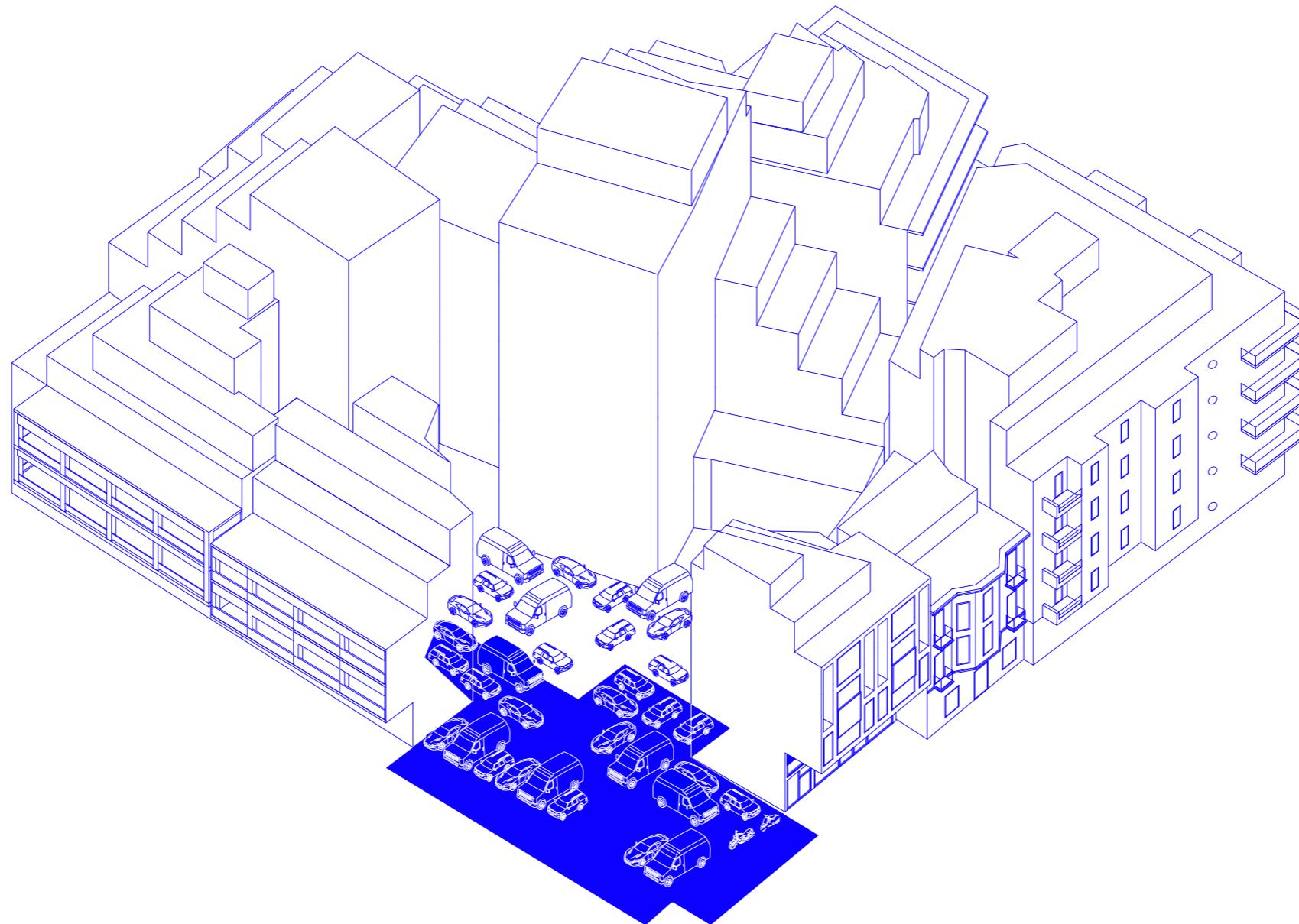
# Translating my *"New Terms"* into practice

Urban Aproach



# Translating my *"New Terms"* into practice

Urban Aproach



From a parking lot to a co-oporative dwelling model

# Translating my *"New Terms"* into practice

Back to the neighborhood

## UNBUILT CORE



Activate and take advantage of the alley in the back yard

# Translating my *"New Terms"* into practice

Back to the neighborhood

## PROMENADE

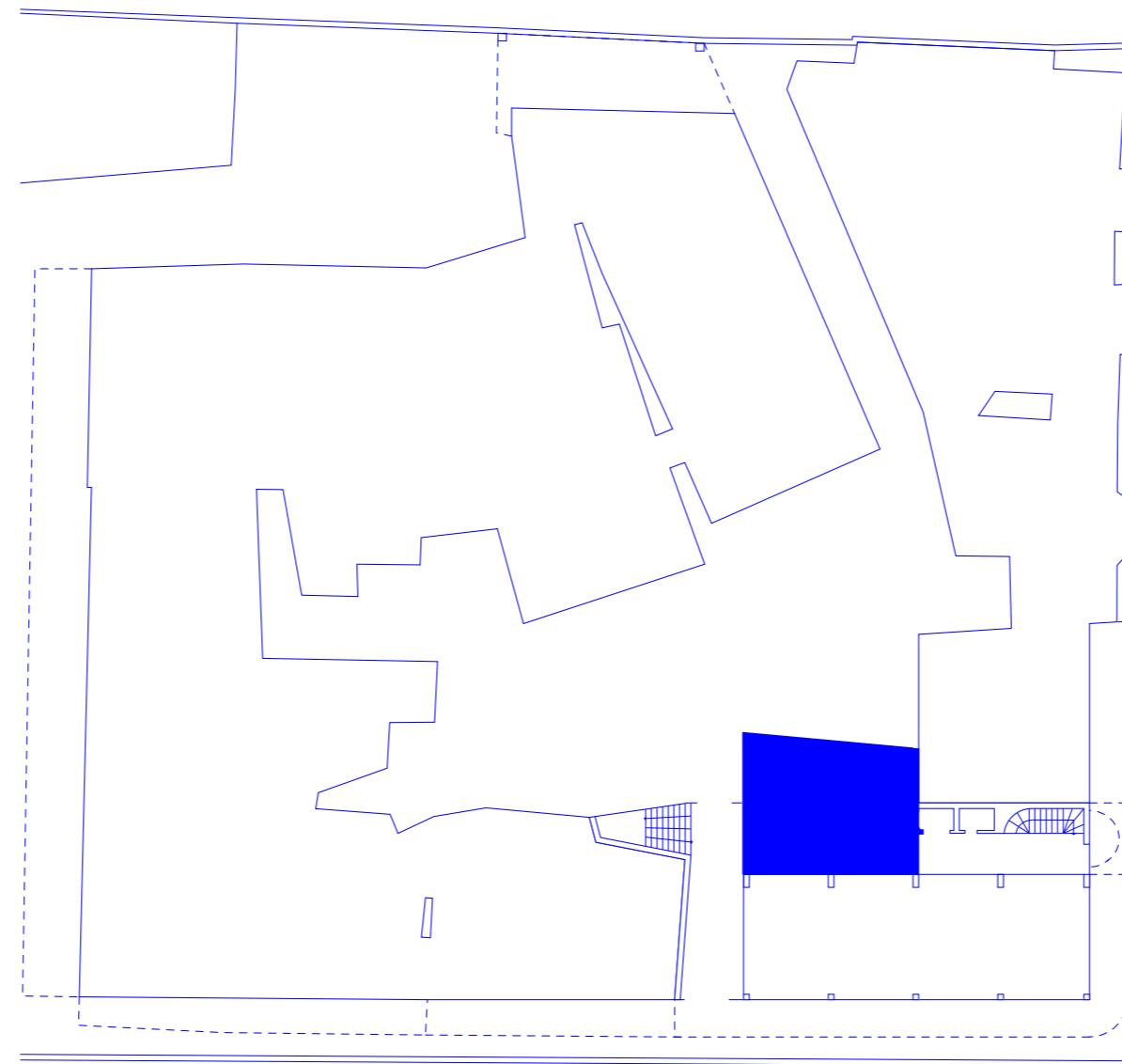


Activate the circulation through the alley and the STOA

# Translating my *"New Terms"* into practice

Back to the neighborhood

## ASSEMPLY ROOM

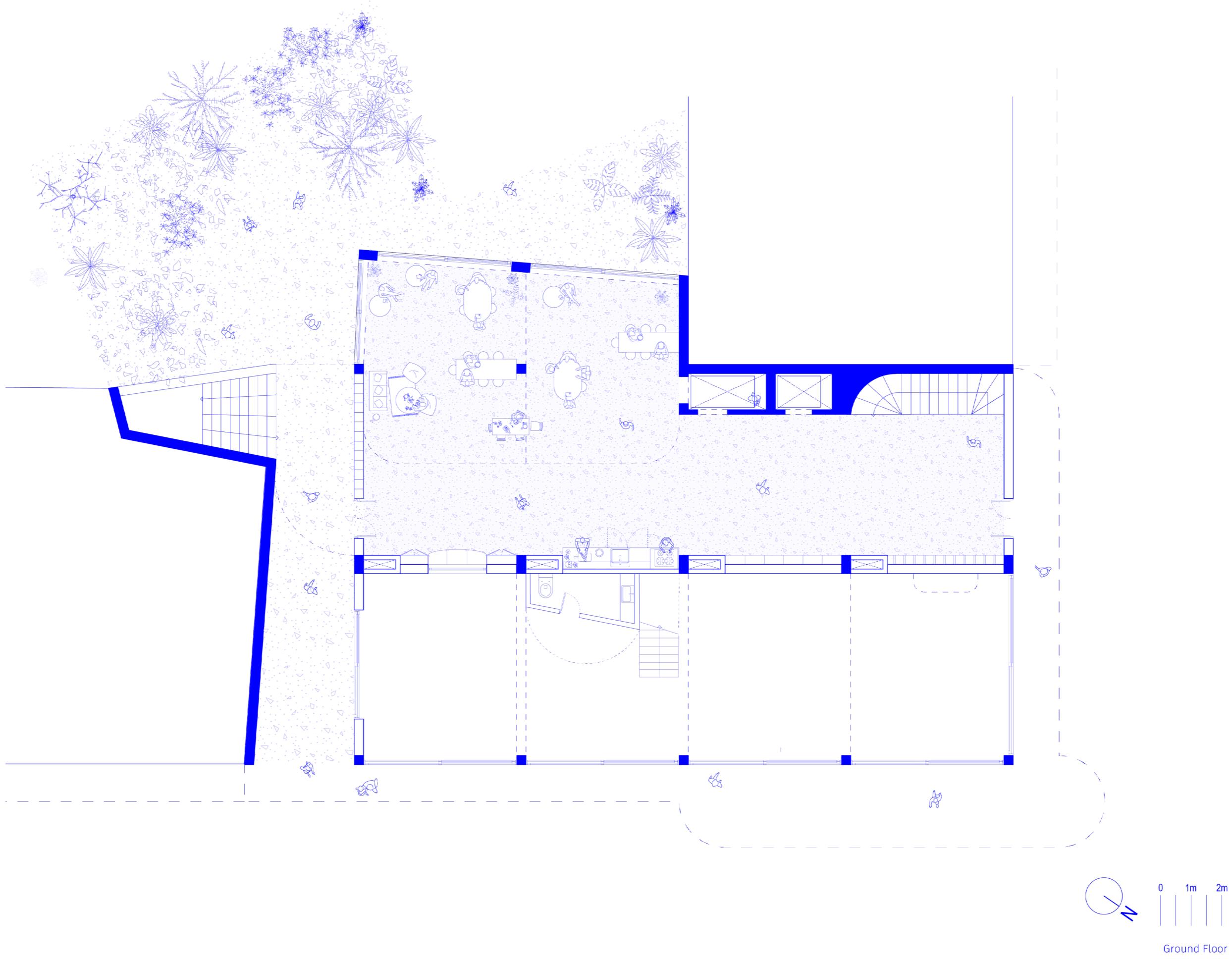


Collective space in the back yard that can host various actions

# Translating my *"New Terms"* into practice



# Translating my *"New Terms"* into practice



Translating my *"New Terms"* into practice



# Translating my *"New Terms"* into practice



Translating my *"New Terms"* into practice



# Translating my *"New Terms"* into practice

The threshold of gathering: A garden Embrace

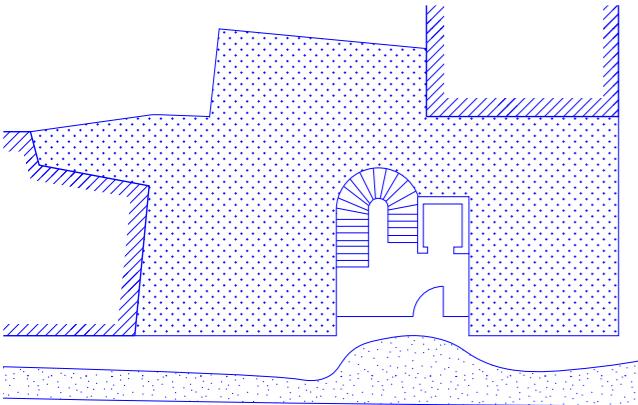


# Translating my "New Terms" into practice

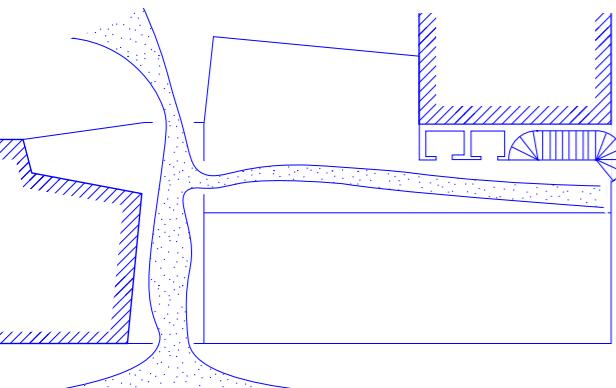
## Architectural Analysis

Not the conventional approach but another strategy.

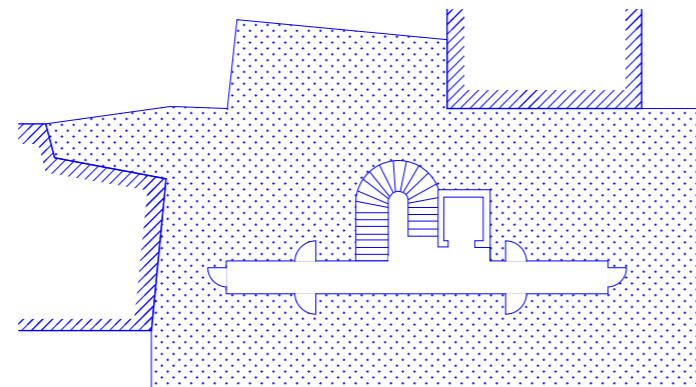
1. The entrance or the building separating the street from the dwellings.



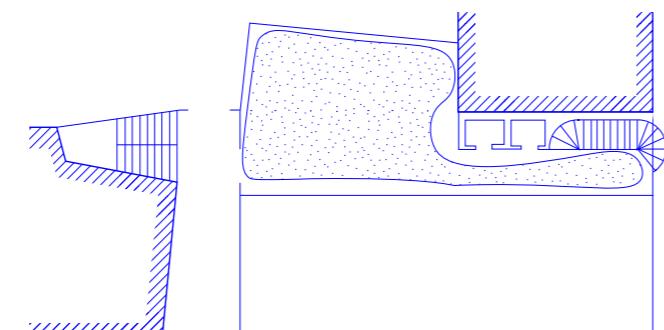
The entrance acting as an intermediate space which links the street and the dwelling.



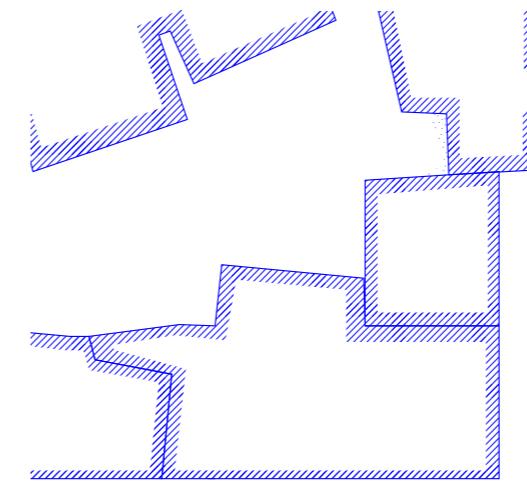
2. Not-Narrow, dark and repelling shared public spaces.



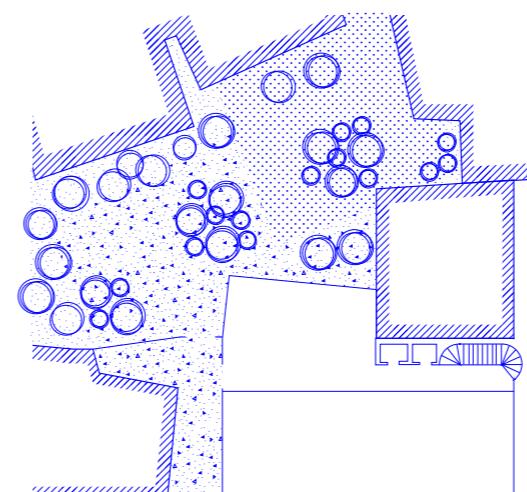
But-Common spaces which follow the entrance and are sunlit, inviting and open air.



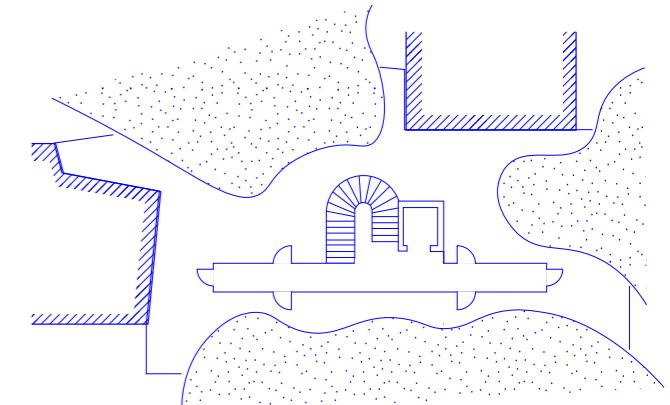
3. Not-Disused shared uncovered space, which belongs to nobody, is used by nobody and is cared of from nobody.



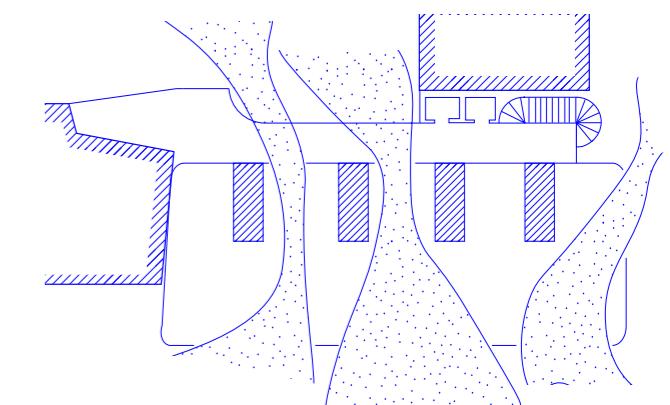
But-Outdoor space containing a yard on the ground floor which is planted with trees and flowers, cared for and used by private owners.



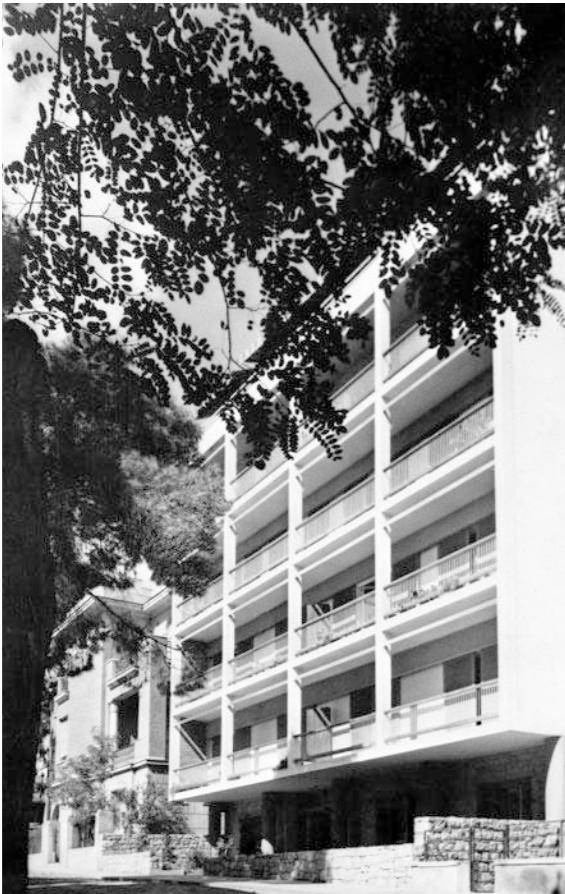
4. Not-Ventilated and lit only from one side with a dark intermediate zone of service spaces.



But-Spaces which are transparent and ventilated from all sides, allowing nature to penetrate in and including light service spaces.



# Case study



Apartment Building on  
Semetelous street / Nikos  
Valsamakis, Front View



Coop Housing at River Spreefeld /  
Carpaneto Architekten + Fatkoehl Ar-  
chitekten + BARarchitekten



House For Artists / Apparata Archi-  
tects

## Case study

### Standard Polykatoikia Model



Apartment Building on Semetelous street /  
Nikos Valsamakis, Front View

## Case study

### Standard Polykatoikia Model



Shared space

## Case study

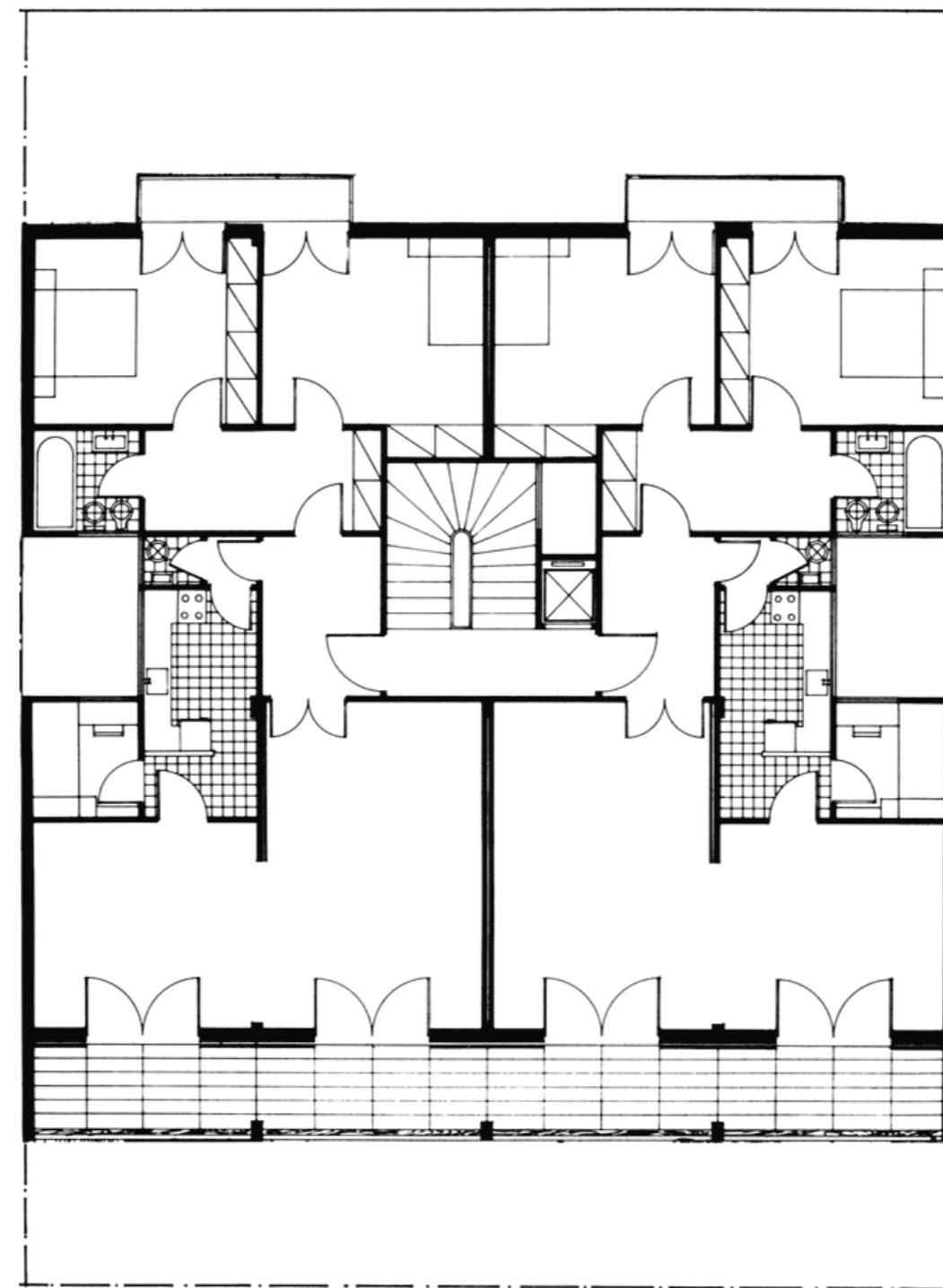
Standard Polykatoikia Model



Private Balcony

## Case study

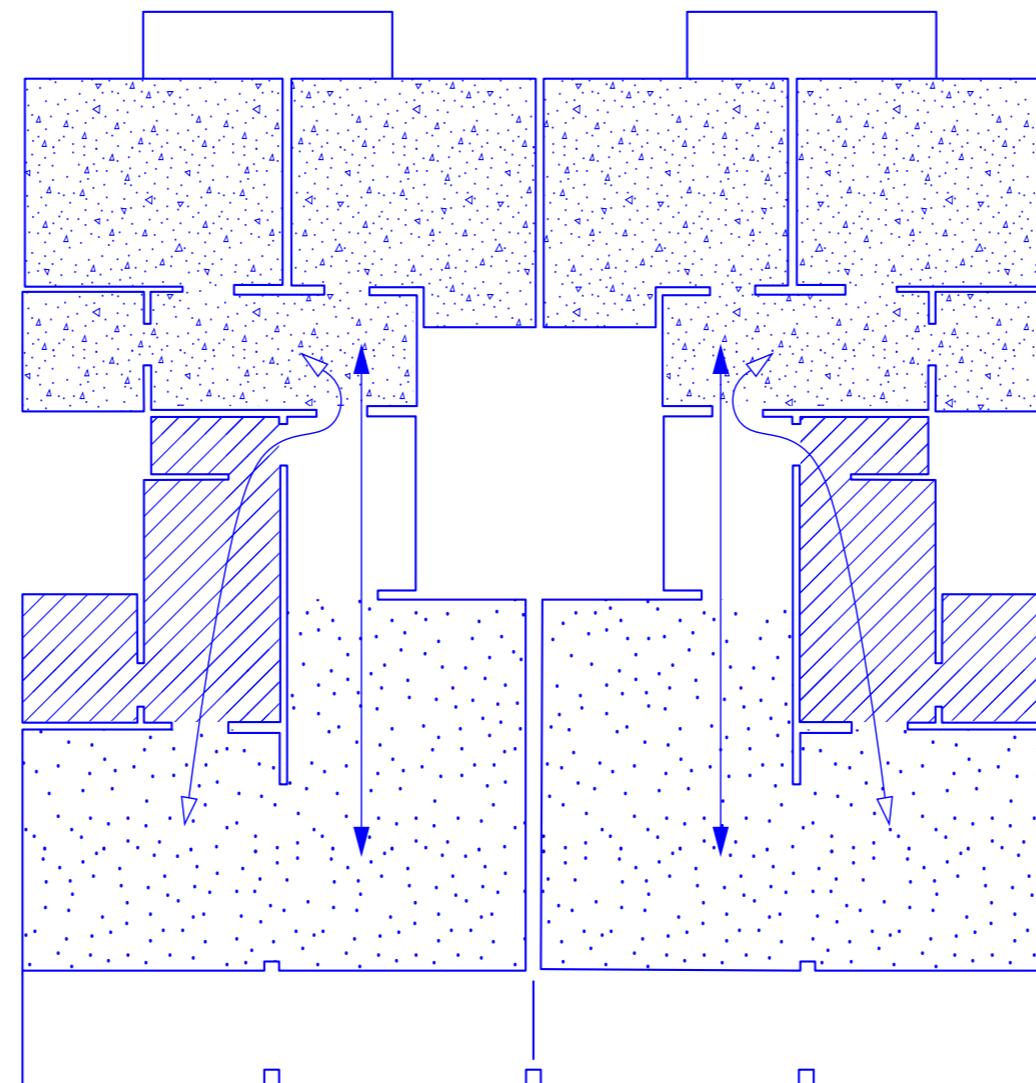
### Standard Polykatoikia Model



Floor plan

# Case study

## Standard Polykatoikia Model



# Case study

## Standard Polykatoikia Model

### Standard Capacity

6 FLOOR 2 APARTMENTS PER FLOOR

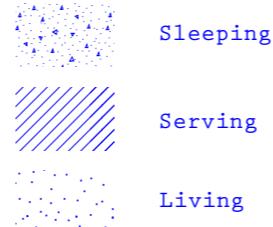
2 Apartments: 100-115m<sup>2</sup>-per floor

2 Bedrooms-per apartment 100-115m<sup>2</sup>

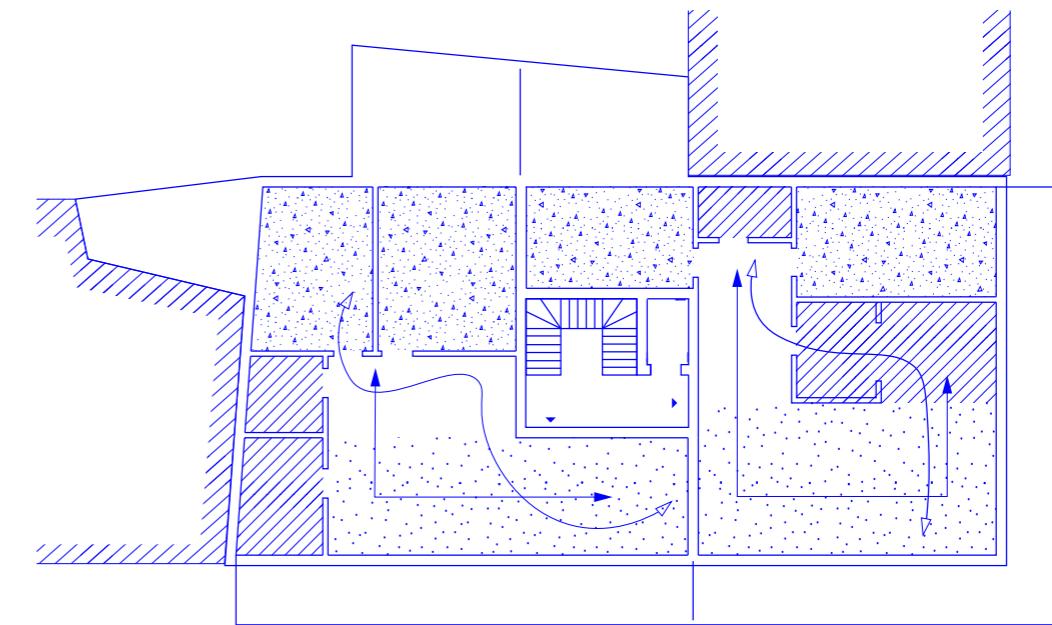
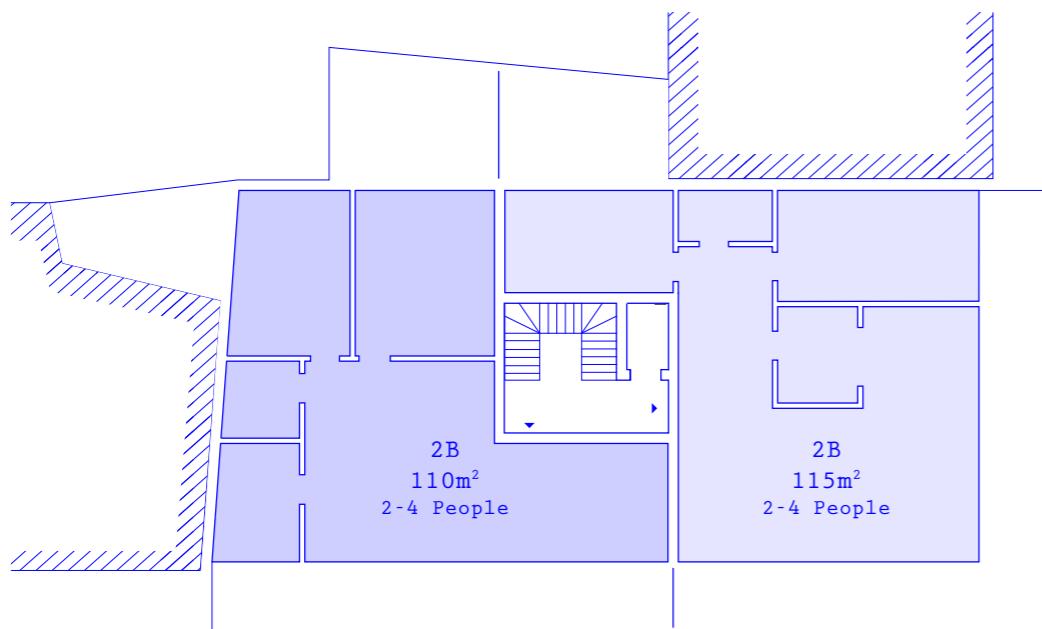
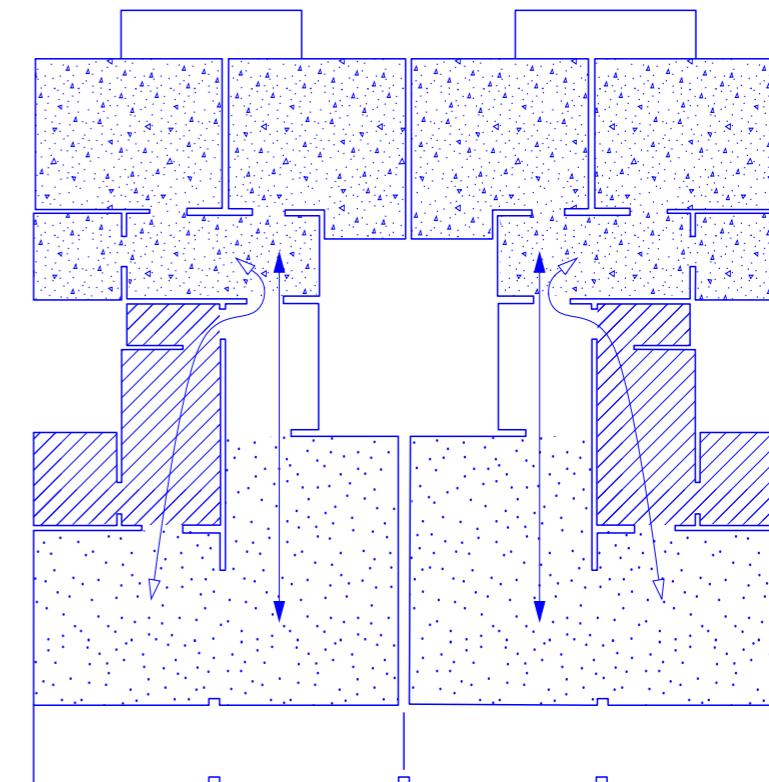
4-8 People-per floor

Total 24-48 people

Shared 18m<sup>2</sup> per floor



1951-1953, 5 Semitelou,  
Ilisia, Nikos Valsamakis

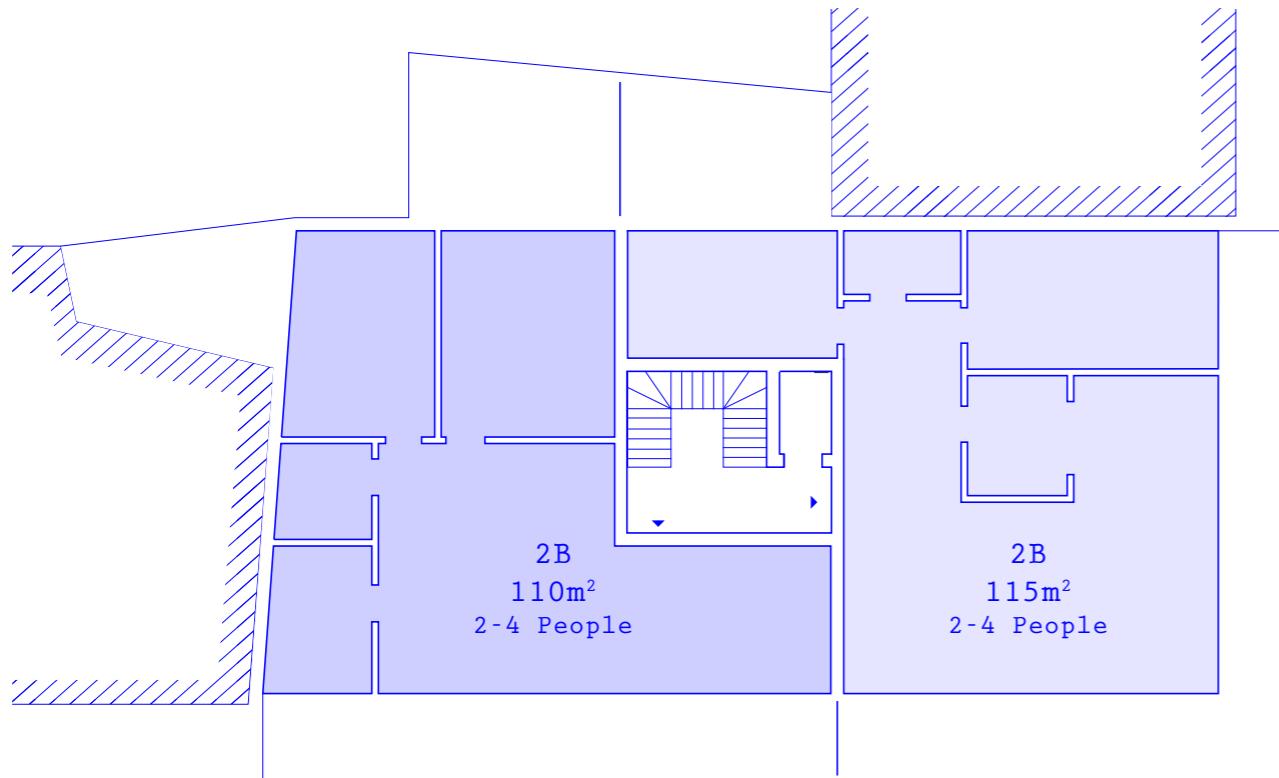


# Translating my "New Terms" into practice

Cooperative

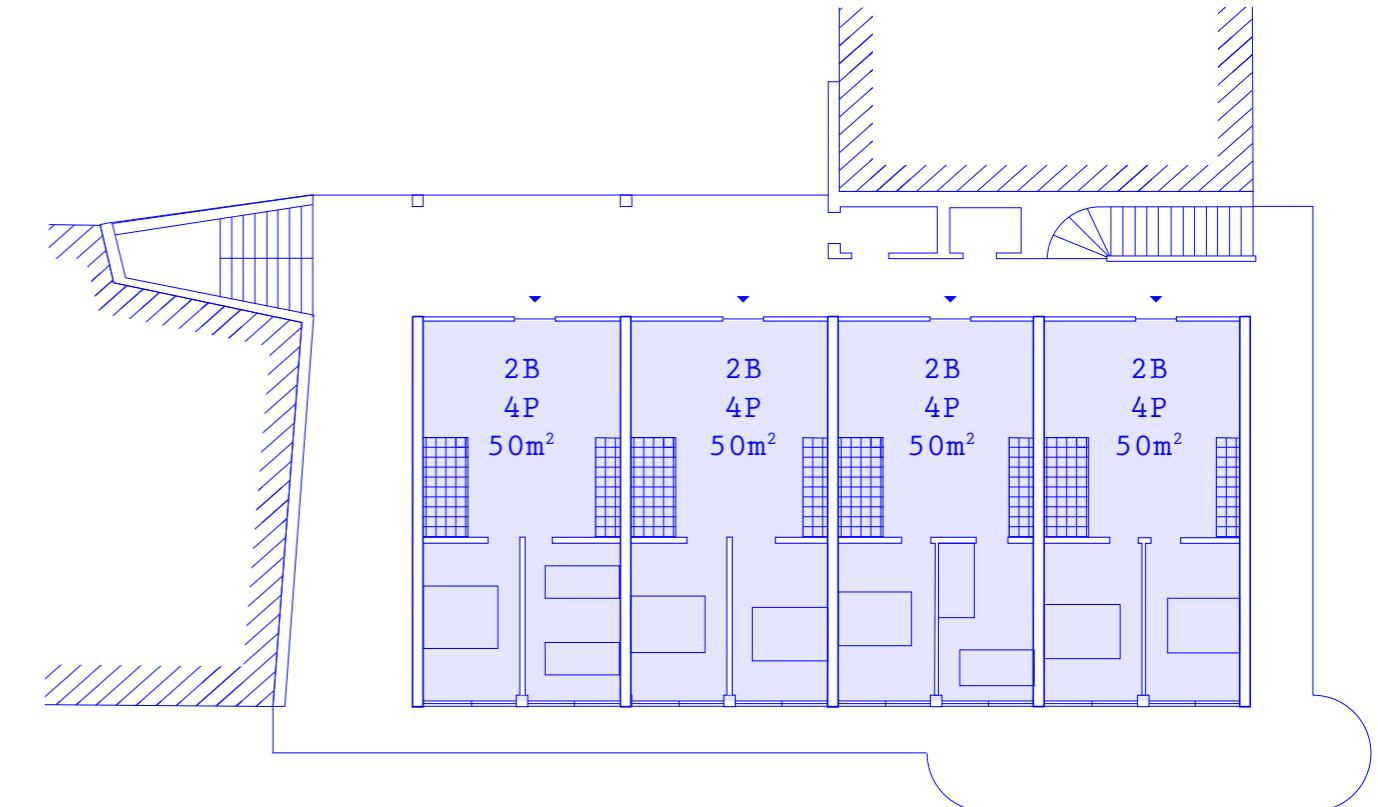
## Standard Capacity

6 FLOOR 2 APARTMENTS PER FLOOR  
2 Apartments: 100-115m<sup>2</sup>-per floor  
2 Bedrooms-per apartment 100-115m<sup>2</sup>  
4-8 People-per floor  
Total 24-48 people  
Shared 18m<sup>2</sup> per floor



## CO-HOUSING Capacity

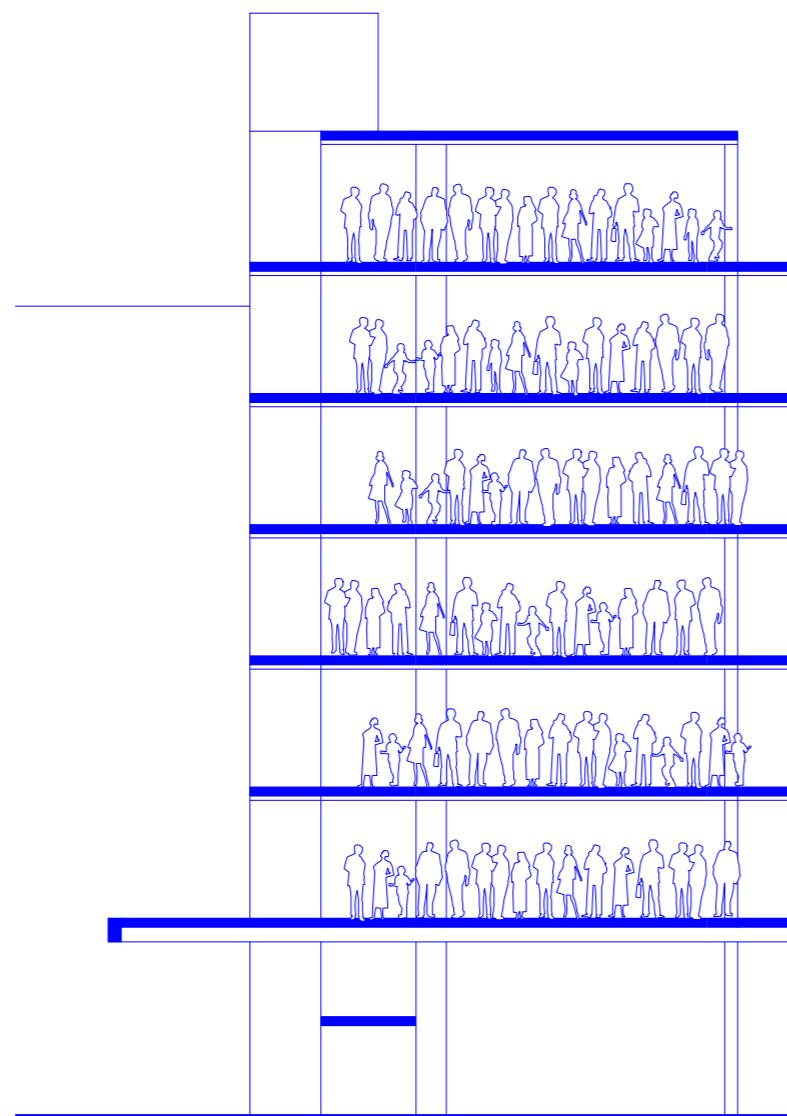
6 FLOOR 4 APARTMENTS PER FLOOR  
4 Apartments: 50m<sup>2</sup>-per apartment with two bedrooms, kitchen, and bathroom.  
1-3 Bedrooms-per apartment  
4-16 People-per floor  
Total 96 people  
COLLECTIVE SPACES 350m<sup>2</sup> +balconies



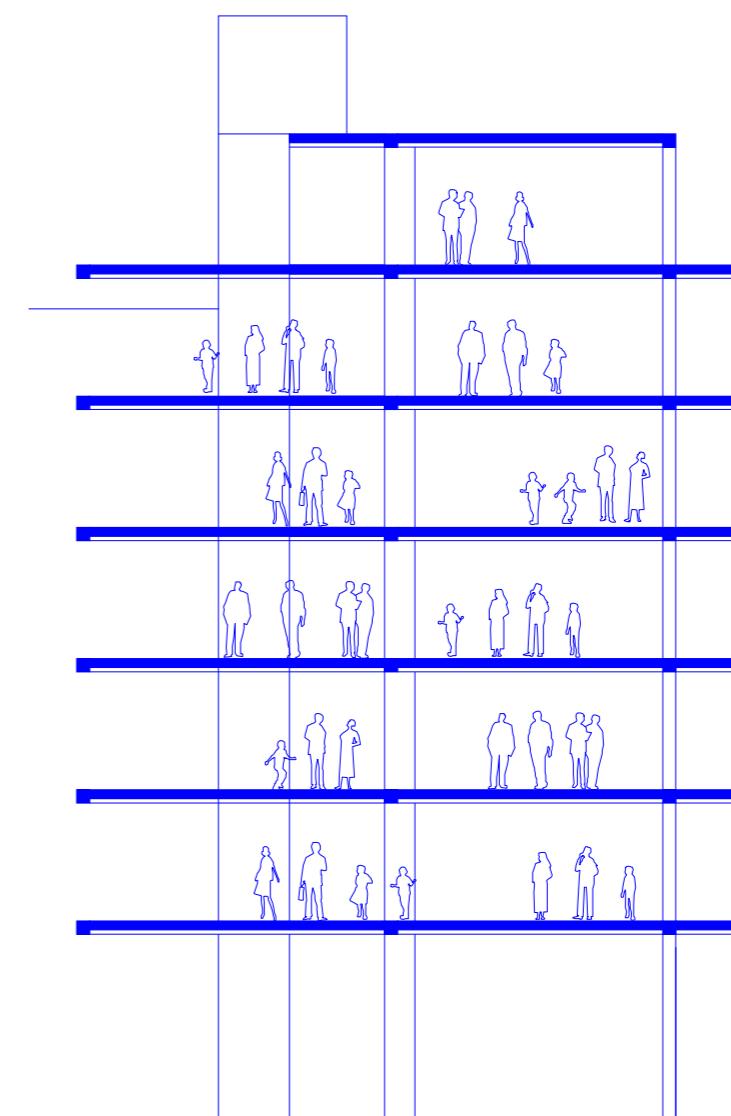
# Translating my *"New Terms"* into practice

Cooperative

CO-HOUSING Capacity



Standard Capacity



# Translating my "New Terms" into practice

## The Financial and the Cooperative Model

Cooperative Model: €117,638 per apartment

Annual Maintenance Costs: Covered by income

Traditional Model: €180,375 per apartment

Annual Maintenance Costs: €900/year per apartment

## The Financial Superiority of the Cooperative Model

# Invoice 997

Date: 2025

	Cooperative Model:	Traditional Model:
Construction cost per square meter:	€1,500/sq.m.	
Insulation cost:	For internal insulation: ~€40/sq.m., For external insulation: ~€50/m <sup>2</sup> ,	
Photovoltaic cost:	~€25,000 (about 10 kW).	Not included
Heating Systems cost:	Heat pump cost: ~€40,000 for the entire building.	Individual heating/cooling systems: €6,000/apartment
Shared Spaces:	350m <sup>2</sup> shared spaces (€525,000)	Minimal (only staircase/lobby)
Annual Maintenance:	~€11,136 (covered by rental income)	~€1,200
Energy Costs:	Covered by photovoltaics, low utility bills	~€800/apartment/year
Rental Income Potential:	€7-10/m <sup>2</sup> from ground-floor spaces	None
Flexibility:	Adaptive layouts for shared and private use	Standardized apartment layouts
Sustainability:	High (renewables, shared systems)	Moderate (individual energy consumption)
Total Cooperative Model:	~€117,638	Total Traditional Model: ~€180,375

## Polykatoikia

tapestry of shared ownership.	Exarcheia Athens	2024	Interior Building Cities	Msc3/4
The reinterpretation of the Athenian Polykatoikia	Graduation Project		Independent Group	Papaoikonomou Zoe

# Case study

## Cooporative Housing Model



Coop Housing at River Spreefeld / Carpaneto Architekten + Fatkoehl Architekten + BARArchitekten

# Case study

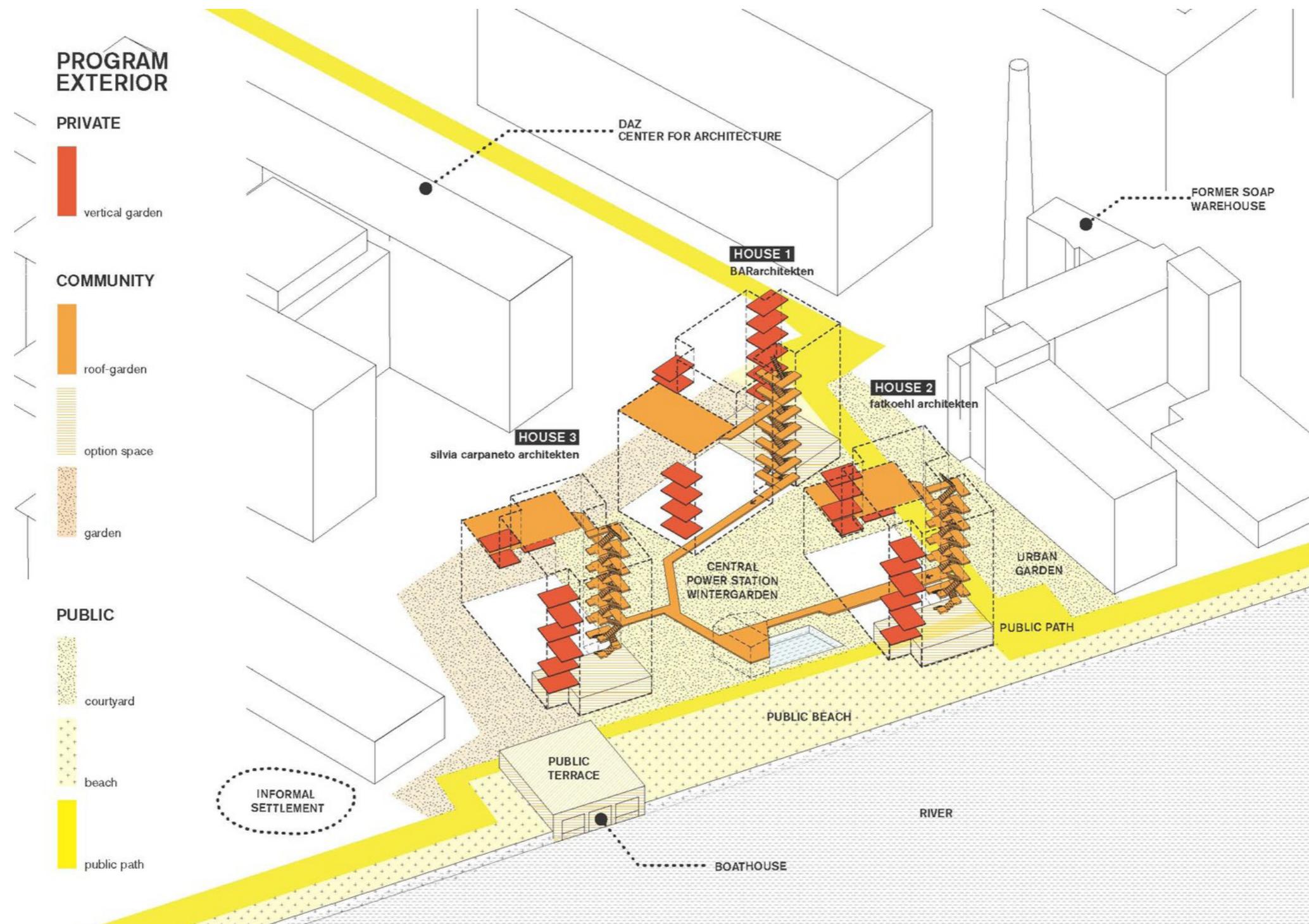
## Cooporative Housing Model



The objectives have been implemented for the most part, and the project generates income in the form of value in its use for both residents and the city.

# Case study

## Cooporative Housing Model



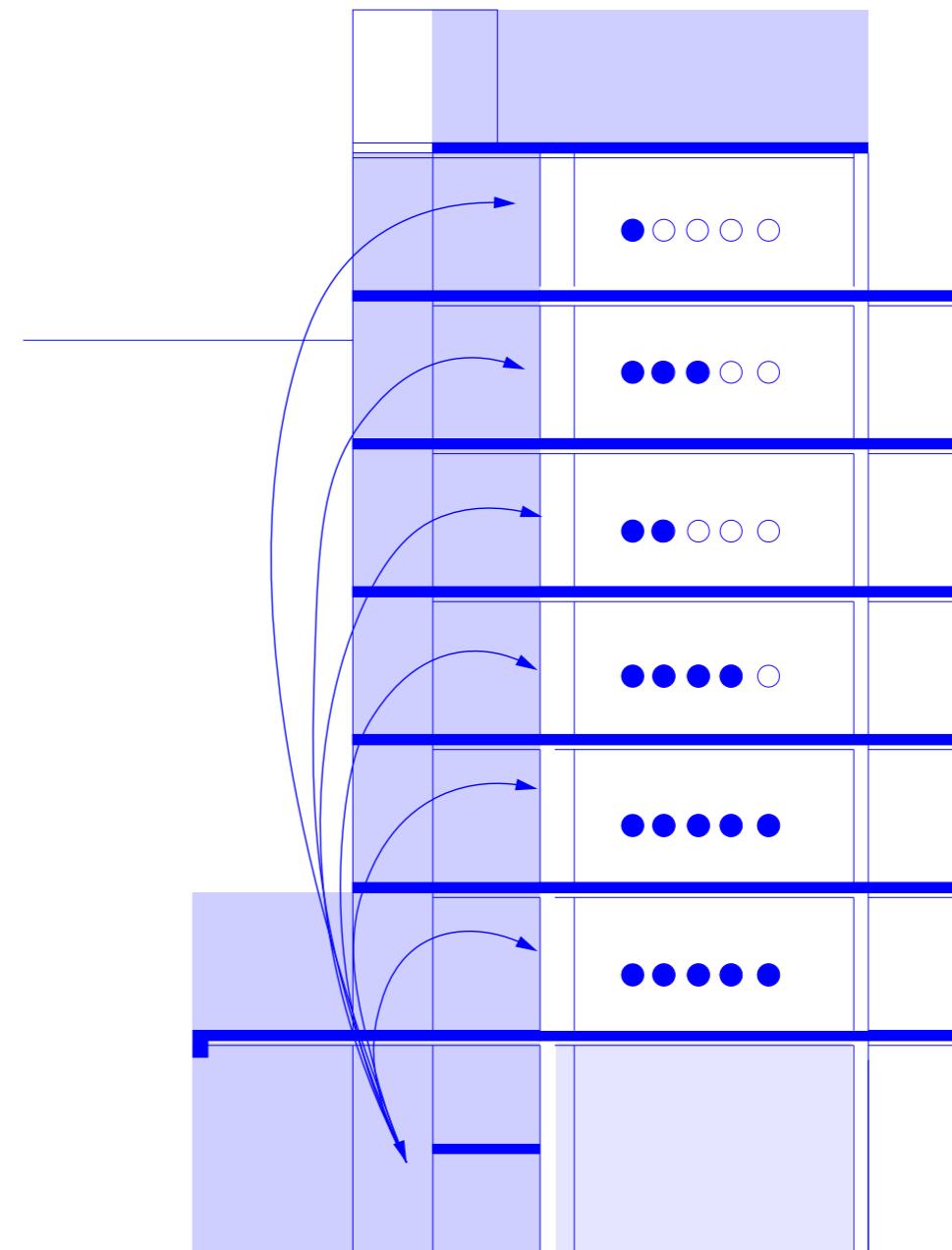
Create a socially just, economically stable, and environmentally responsible urban building block.

# Translating my "New Terms" into practice

Cooperative / Standard

## COOPERATIVE living

- Collective decisions
- Actively participate in the decision and management of common spaces and services.
- Tenants own shares in a cooperative that owns the building.
- Cohousing: Sharing common areas (eg, kitchens, function rooms), but with private residences.
- Collective responsibility for the maintenance and management of common areas.
- Collective financial management.

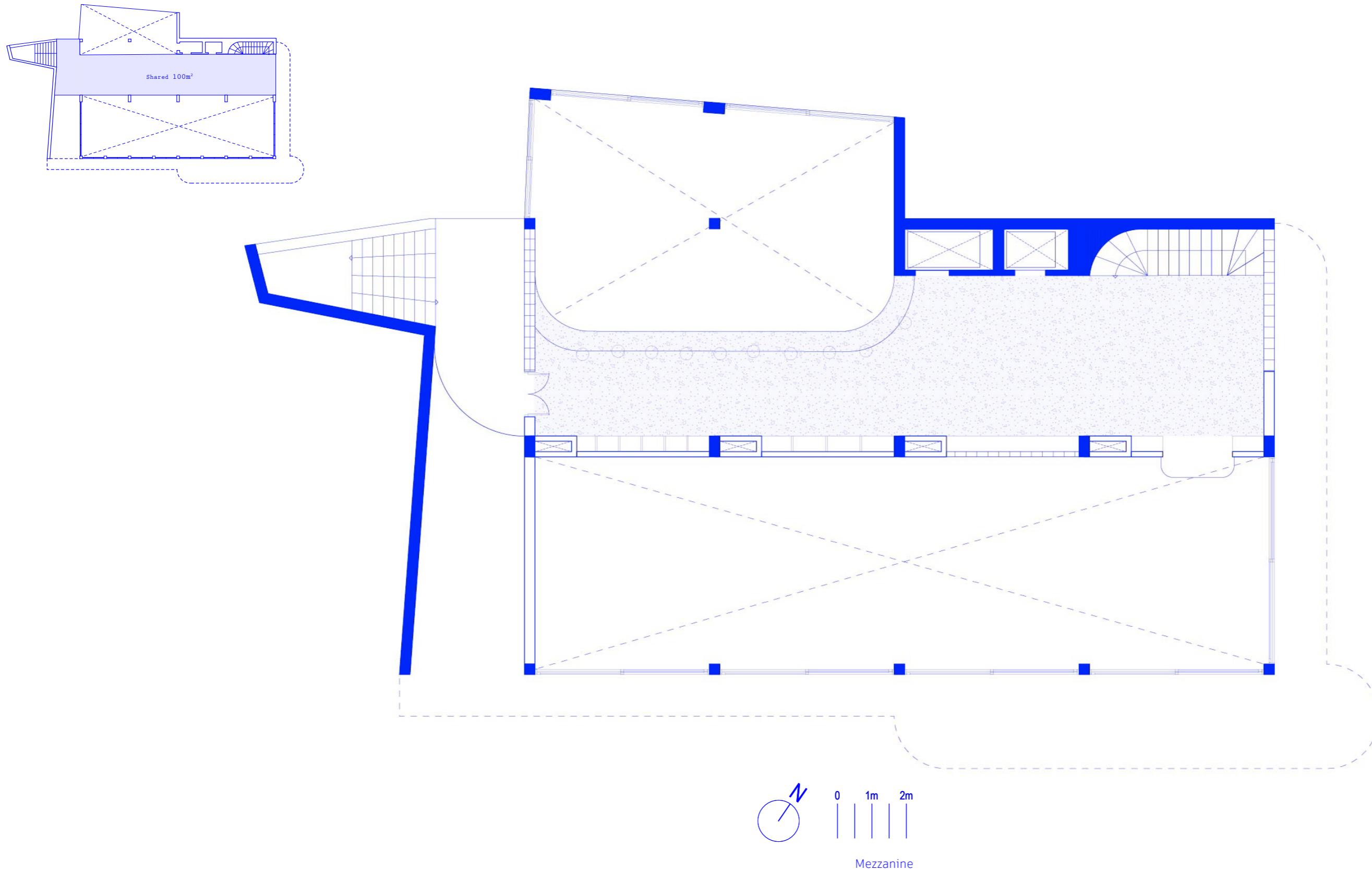


# Translating my *"New Terms"* into practice

Mezzanine

Shared Reading Nook

## 2. COLLECTIVE MEZZANINE BALCONY



# Translating my *"New Terms"* into practice

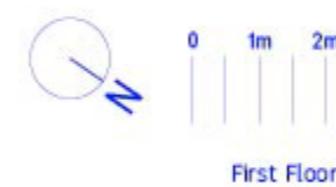
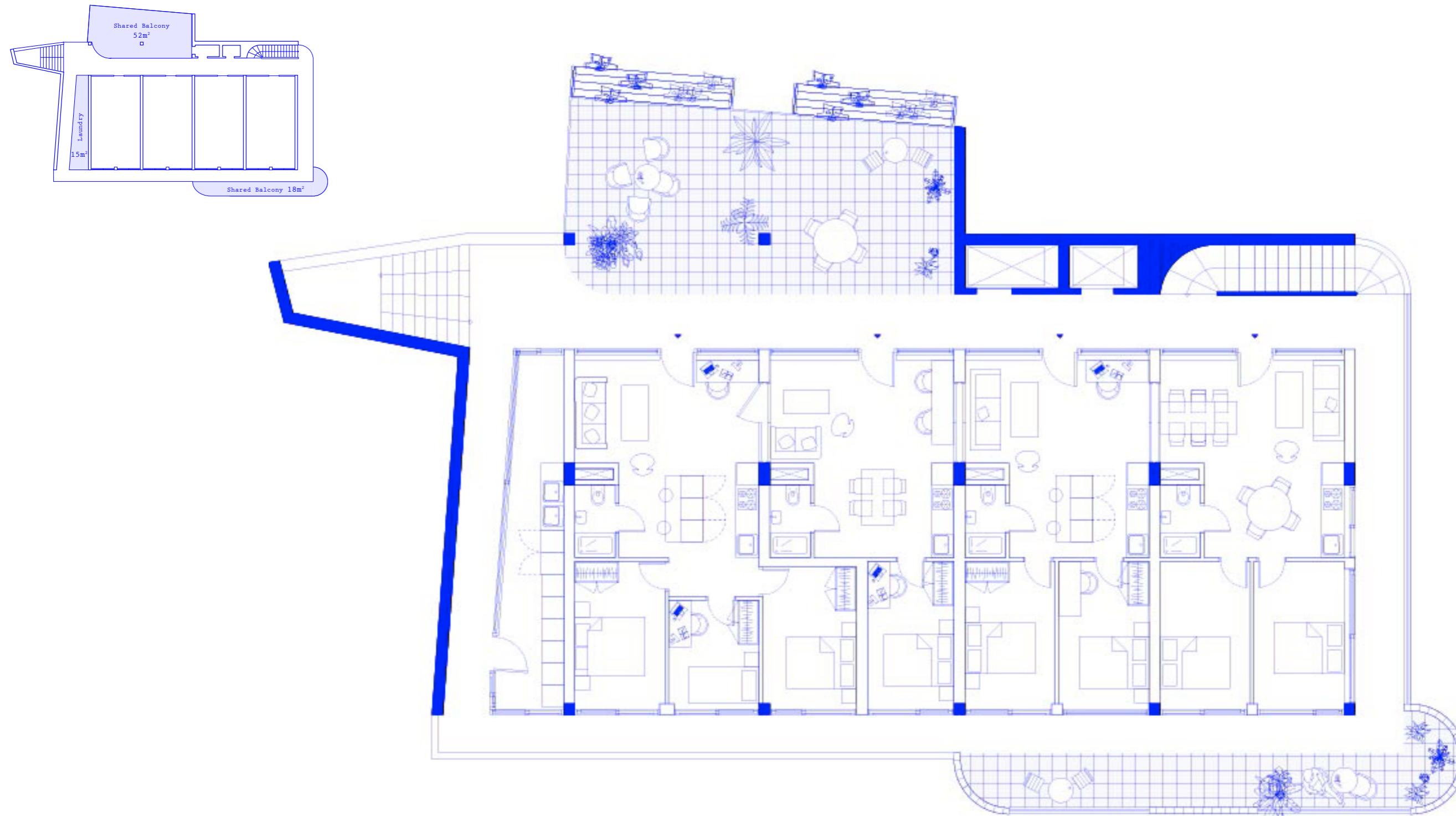
## Shared Reading Nook



# Translating my *"New Terms"* into practice

## Collective Porch

### 3. COLLECTIVE FACILITIES



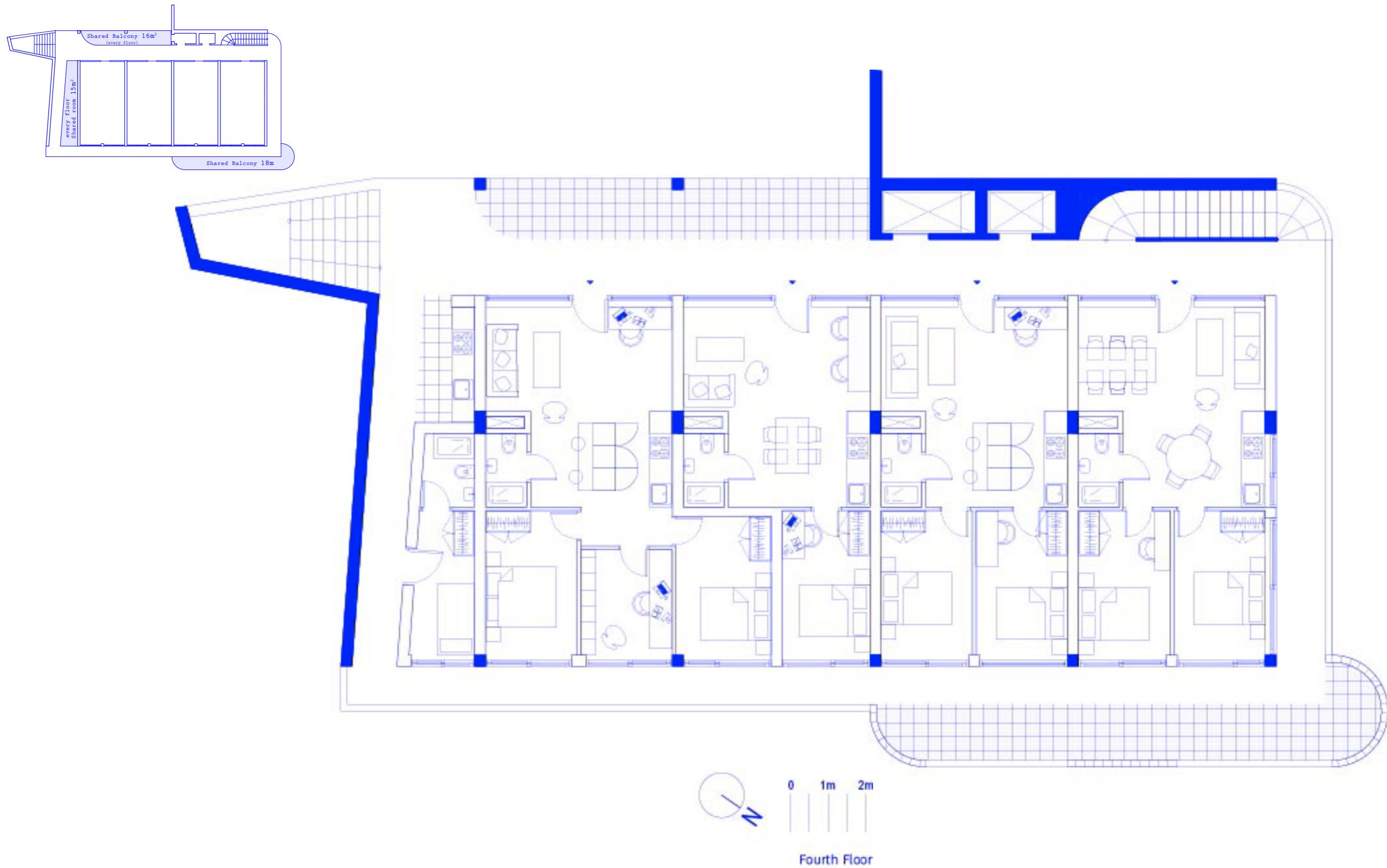
# Translating my *"New Terms"* into practice

## Collective Porch



# Translating my *"New Terms"* into practice

## 4. COLLECTIVE BALCONIES IN EVERY FLOOR



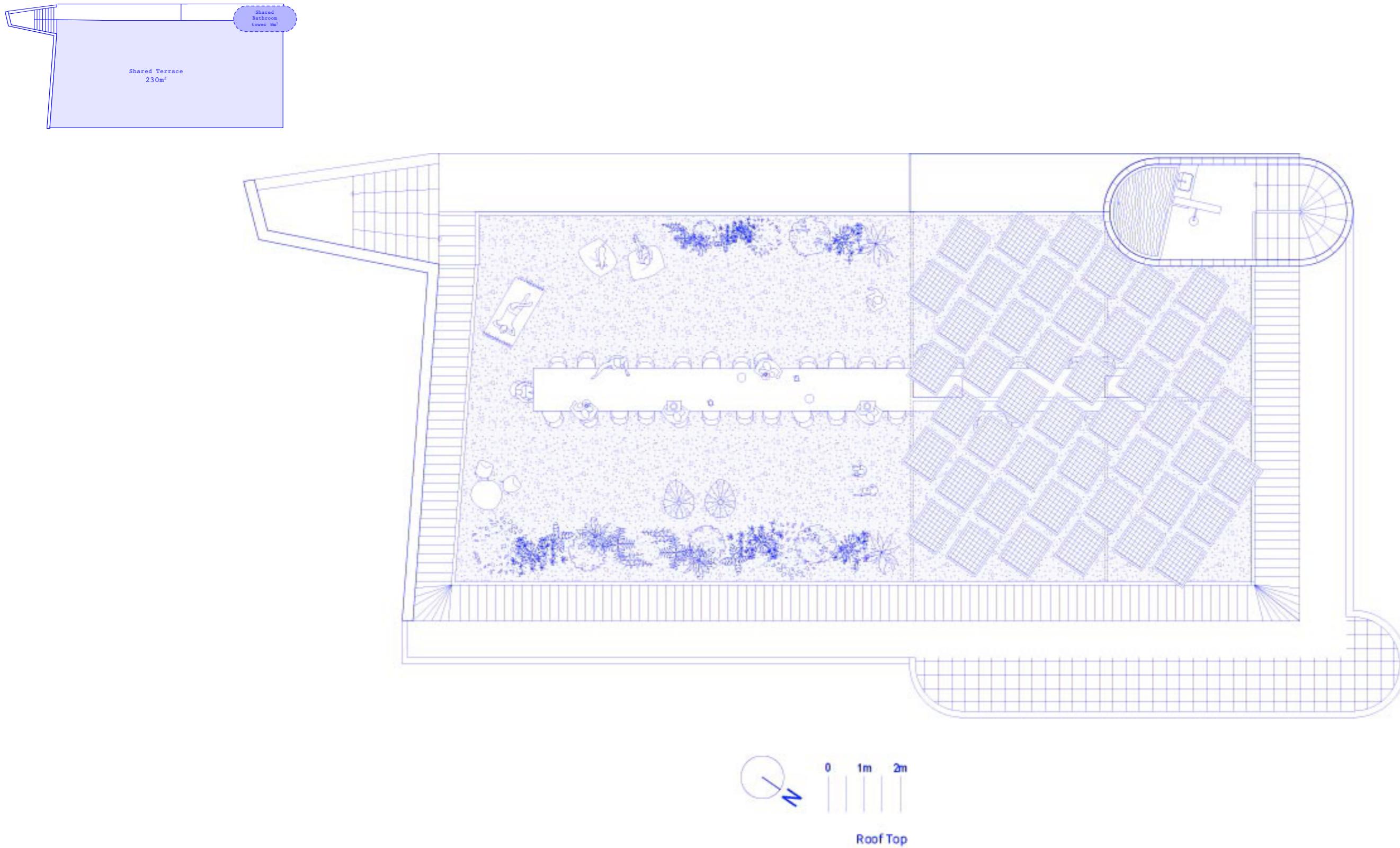
# Translating my *"New Terms"* into practice

Fire Escape



# Translating my *"New Terms"* into practice

## 6. COLLECTIVE ROOFTOP



# Translating my *"New Terms"* into practice

Collective Roof Top



# Translating my *"New Terms"* into practice

Collective Roof Top

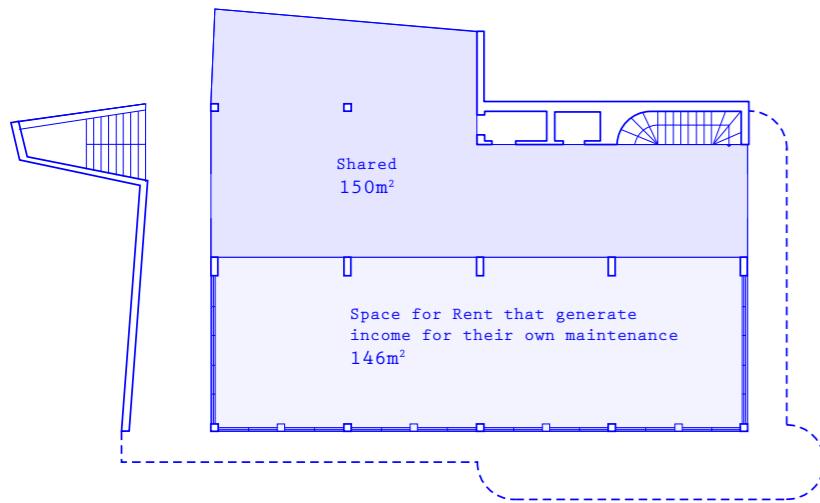


# Translating my *"New Terms"* into practice

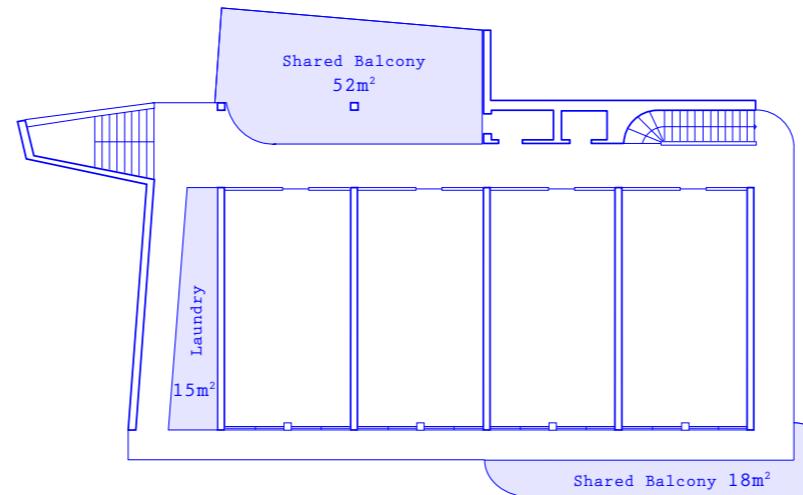
A tapestry of shared ownership

## GENEROUS COLLECTIVE SPACES

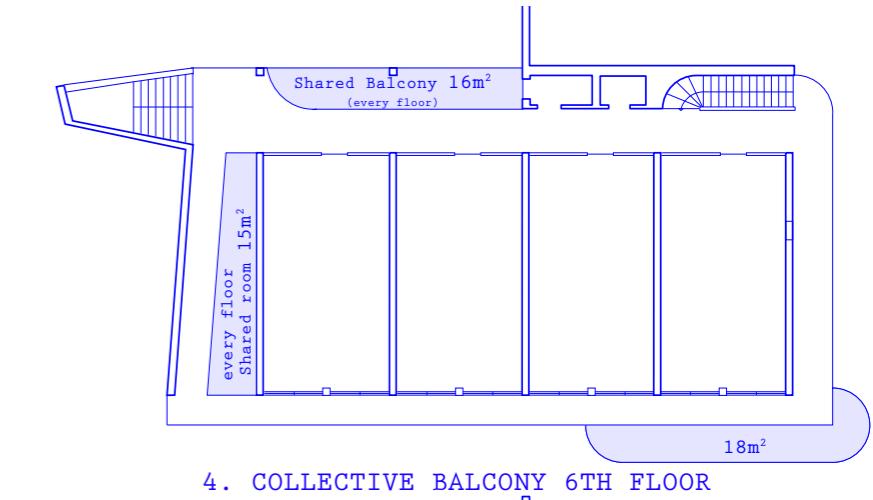
1. COLLECTIVE GROUND FLOOR SPACE



3. COLLECTIVE FACILITIES

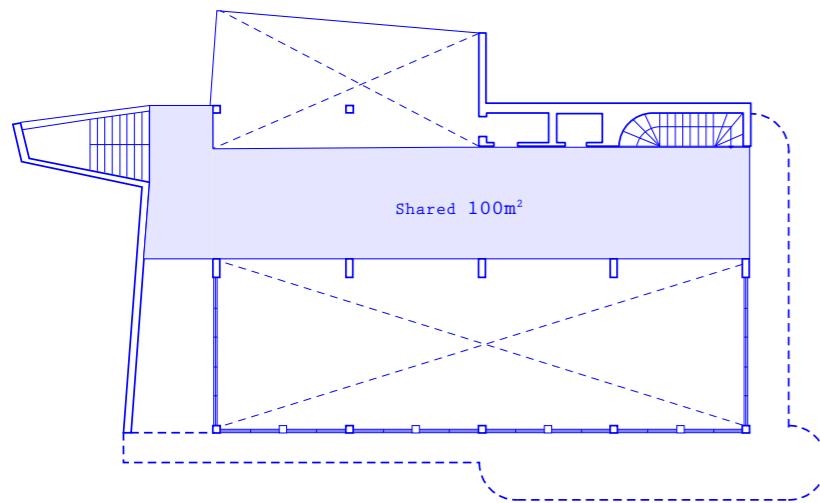


5. COLLECTIVE BALCONY 6TH FLOOR

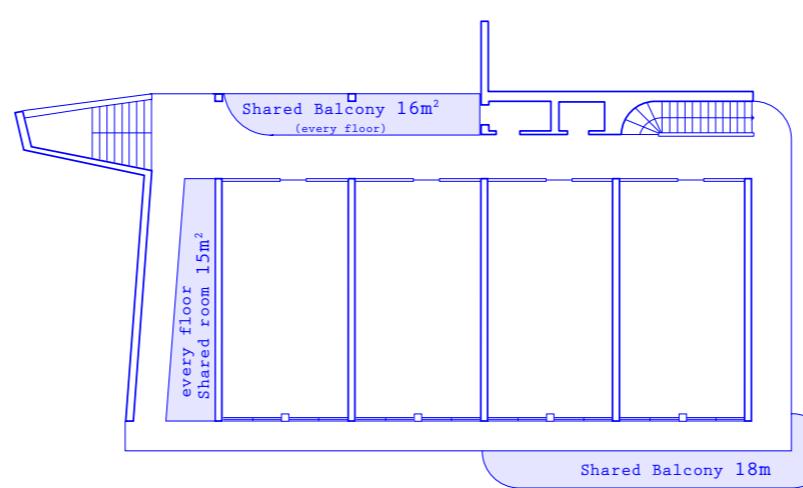


4. COLLECTIVE BALCONY 6TH FLOOR

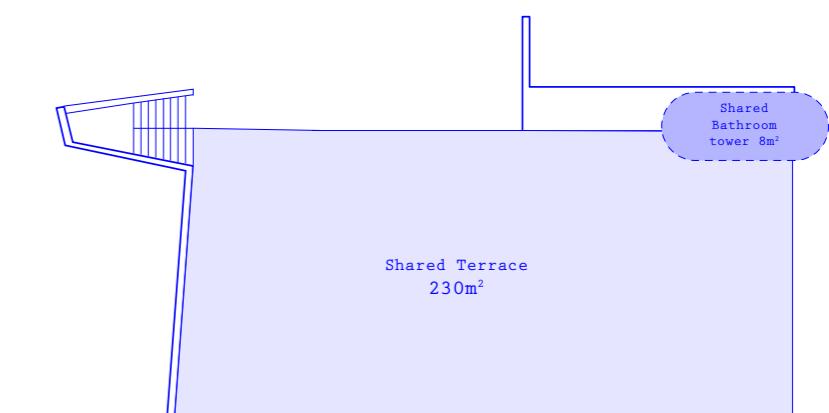
2. COLLECTIVE MEZZANINE BALCONY



4. COLLECTIVE BALCONIES IN EVERY FLOOR

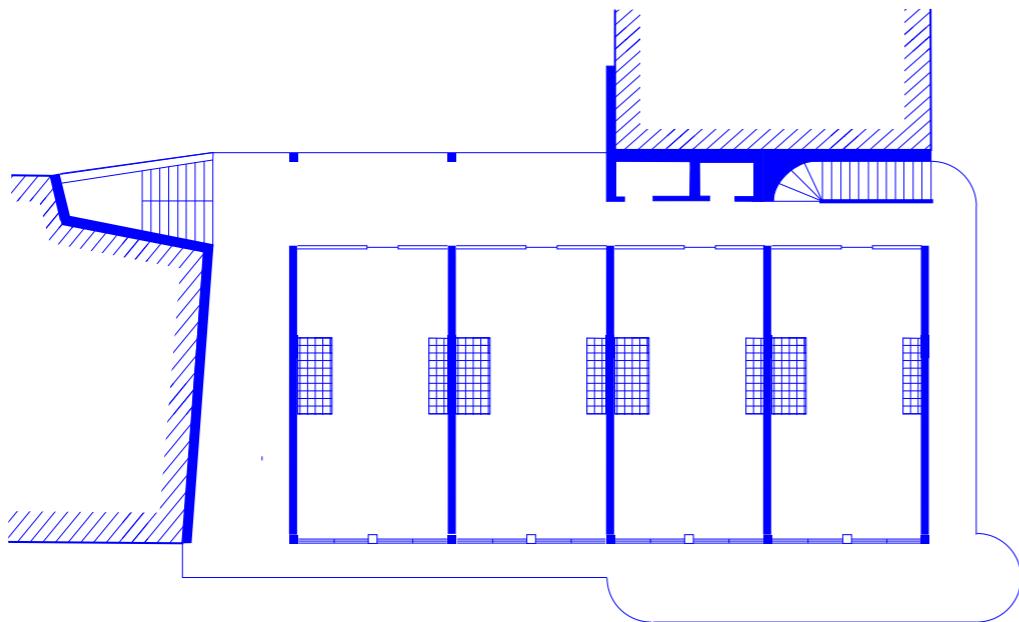


6. COLLECTIVE ROOFTOP

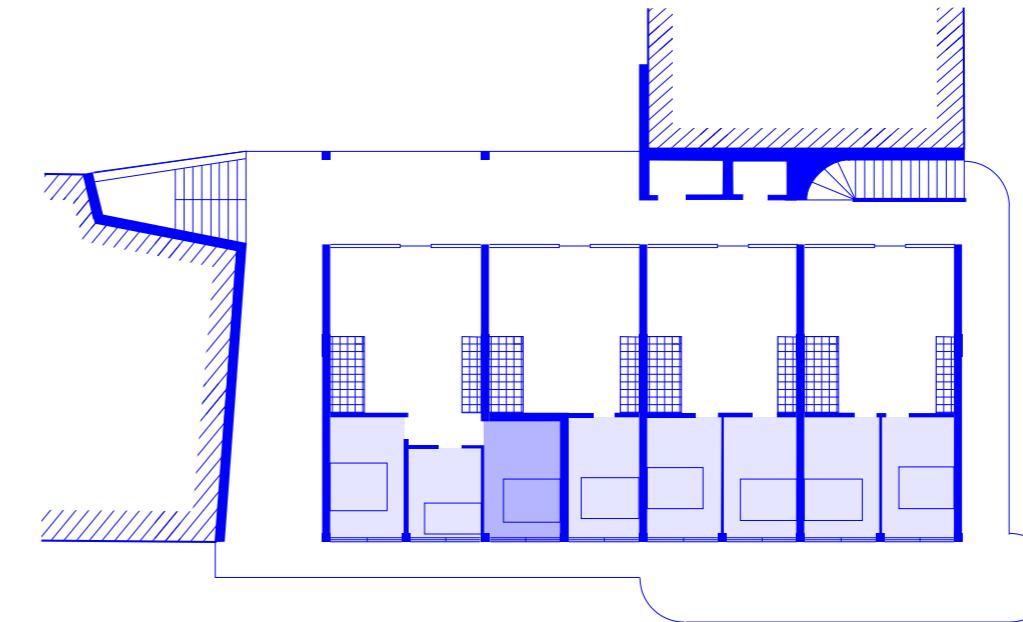


# Translating my "*New Terms*" into practice

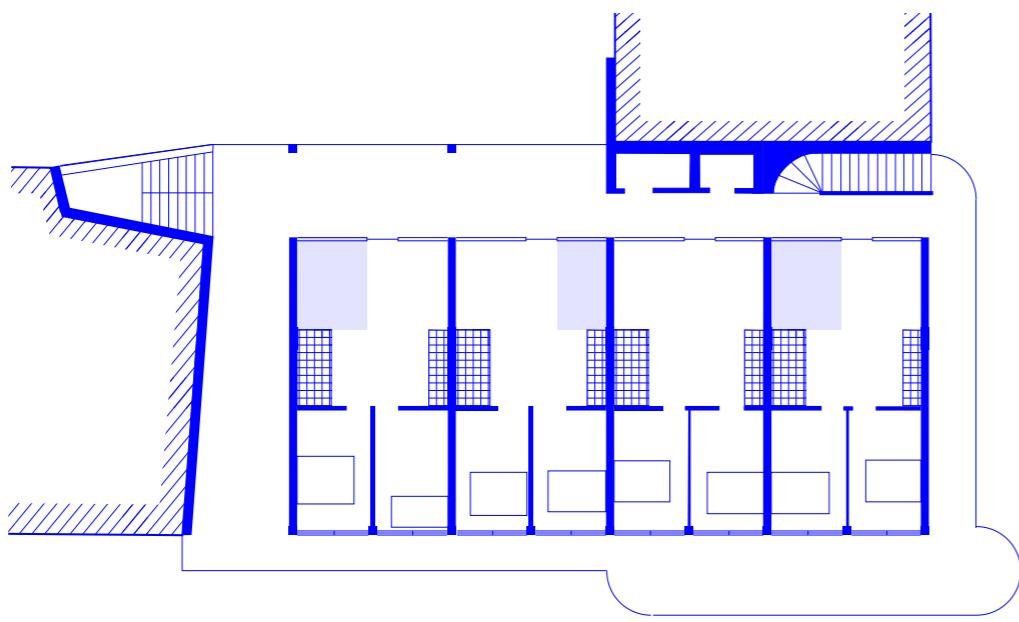
## LAYOUT ADAPTABILITY



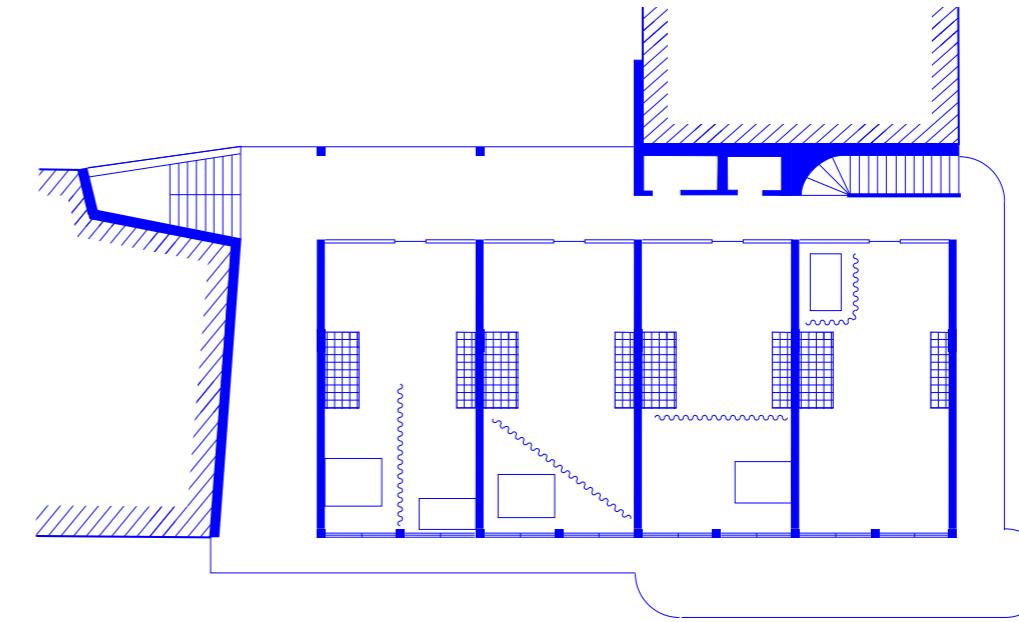
Standard layout



Connect a switch room to a neighbour



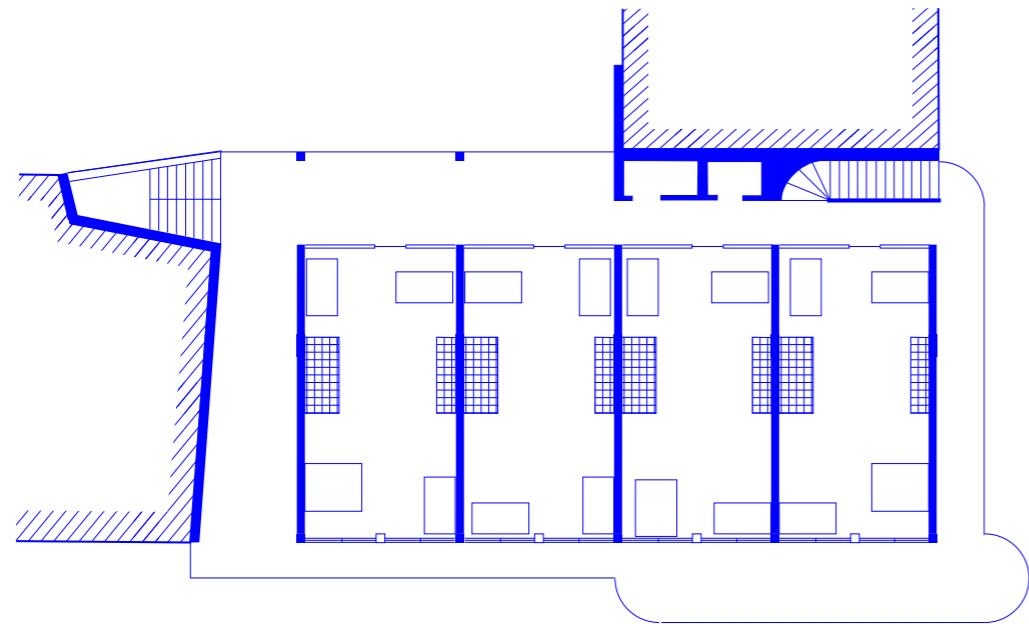
Add rooms if needed



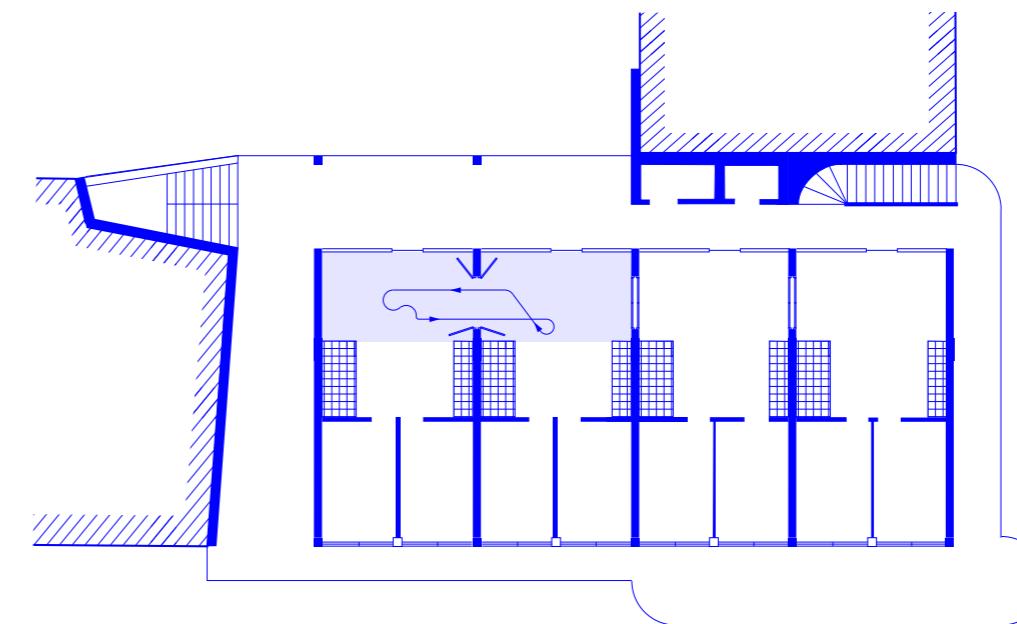
Open plan with curtains

# Translating my "New Terms" into practice

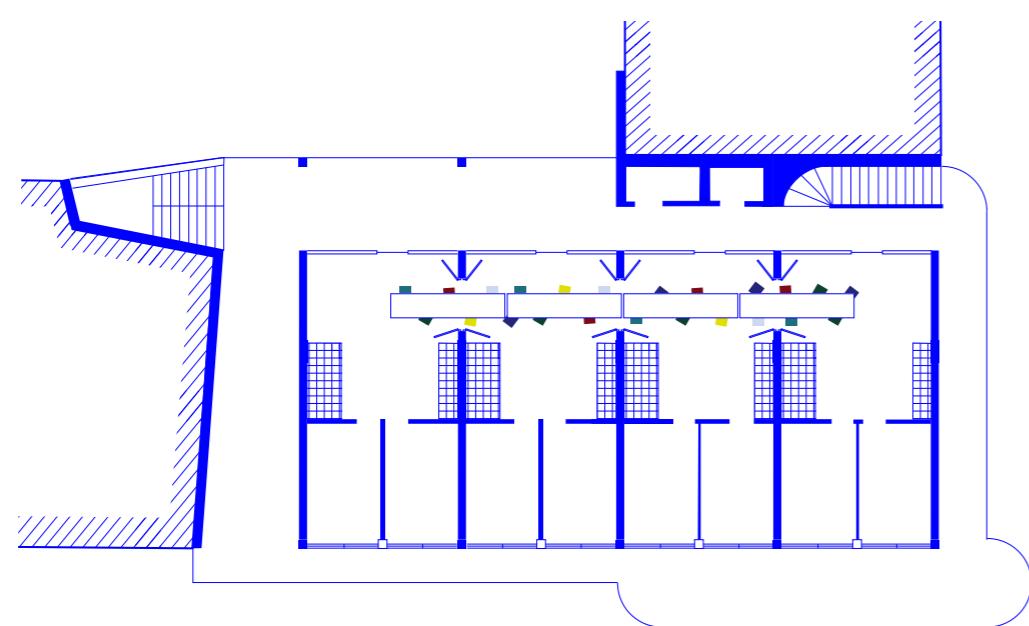
## CO-HOUSING SCENARIOS



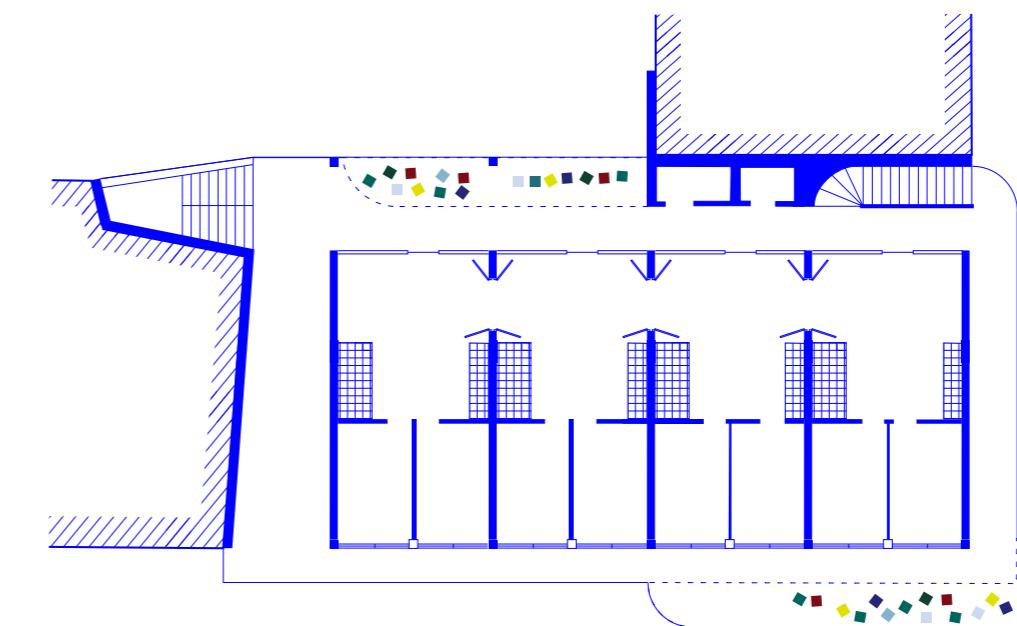
Remove walls if not needed



Interior circulation through sliding doors



Doors can open for big shared dinner party

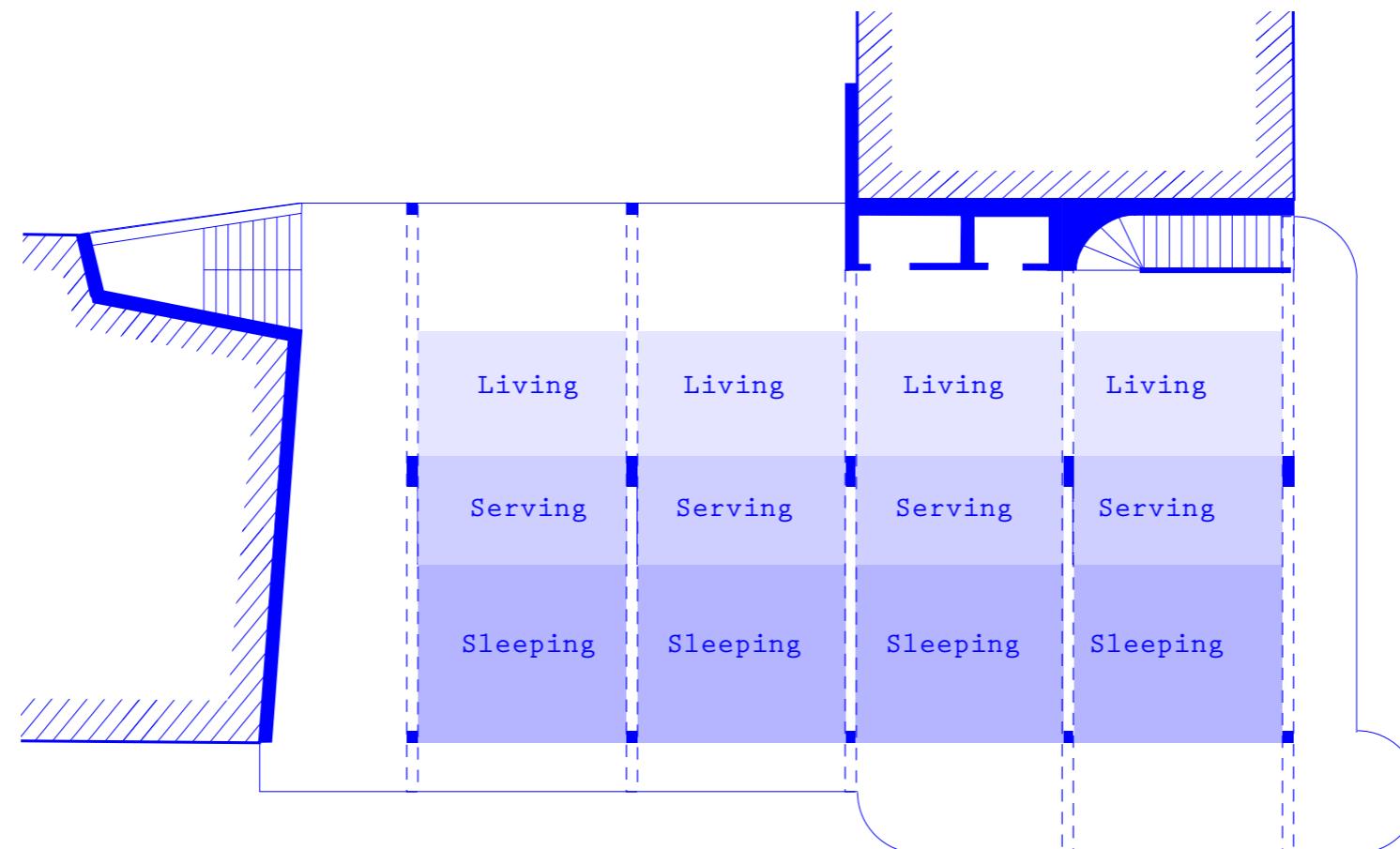


Balcony facing the street small gathering spots Everyone brings their own chair

# Translating my "New Terms" into practice

## Construction

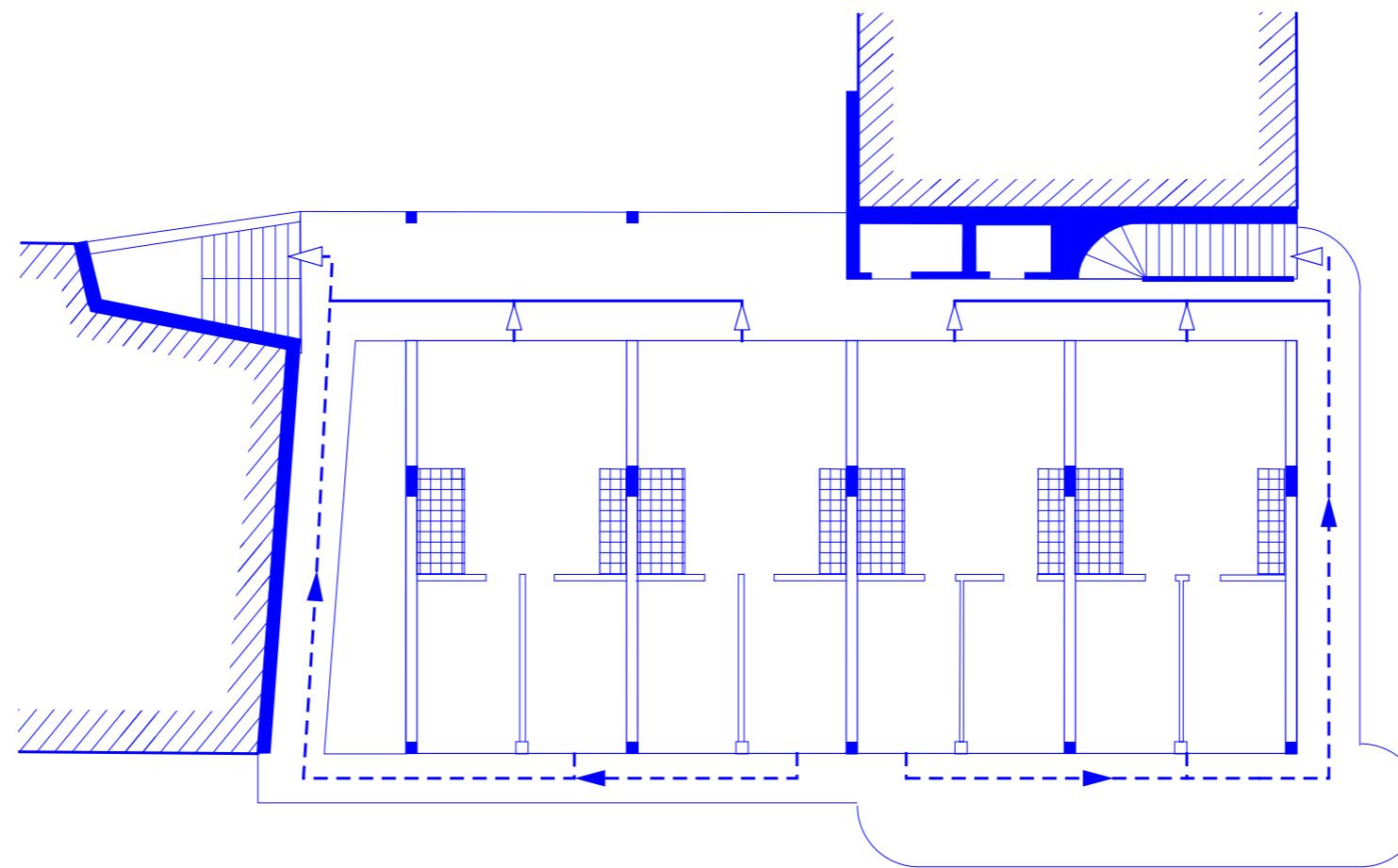
Concrete floor system One way solid slab



# Translating my "New Terms" into practice

Construction

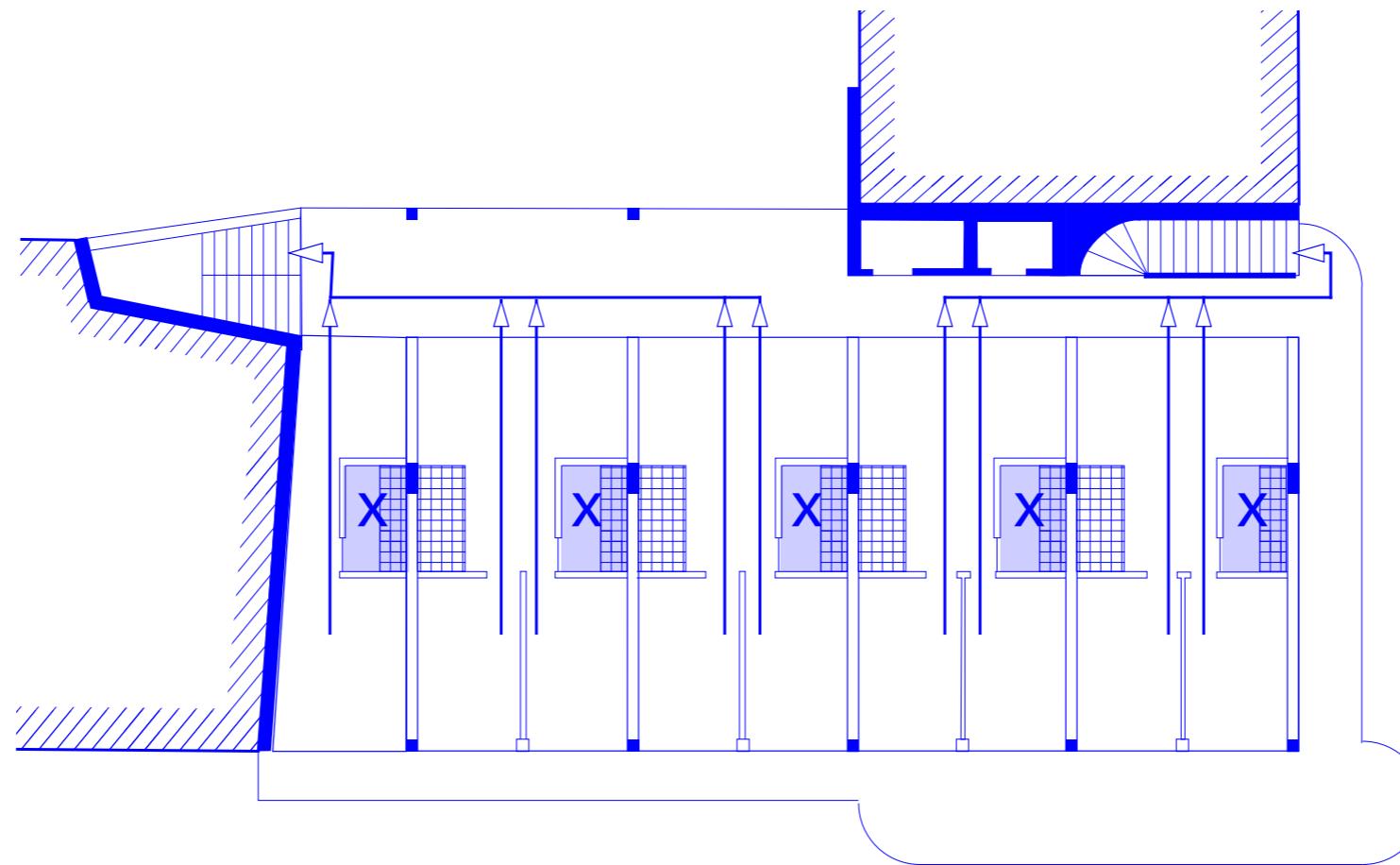
Fire exits



# Translating my "New Terms" into practice

## Construction

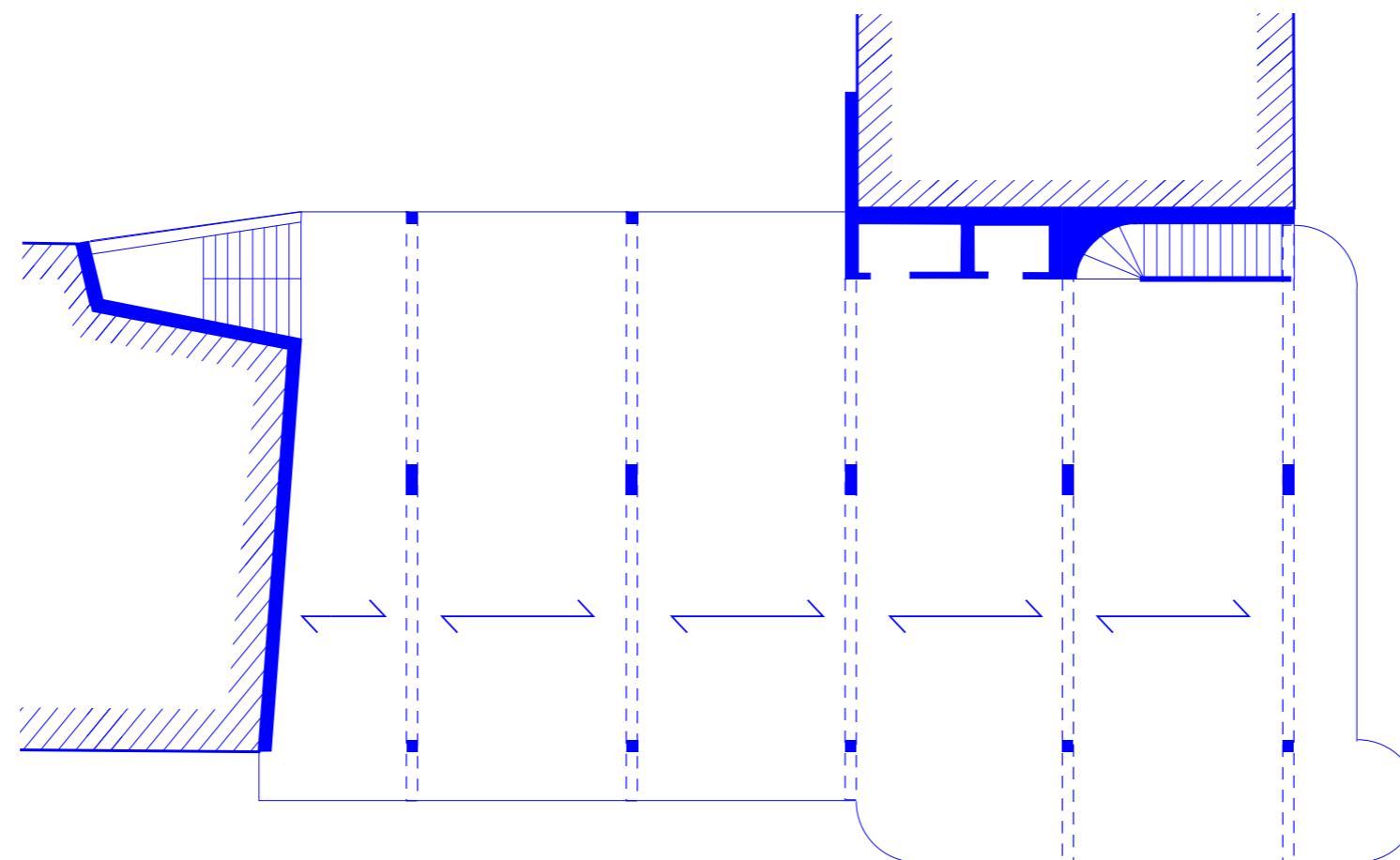
What should have been foreseen if there was no second escape exit from the galleries.



# Translating my "New Terms" into practice

## Construction

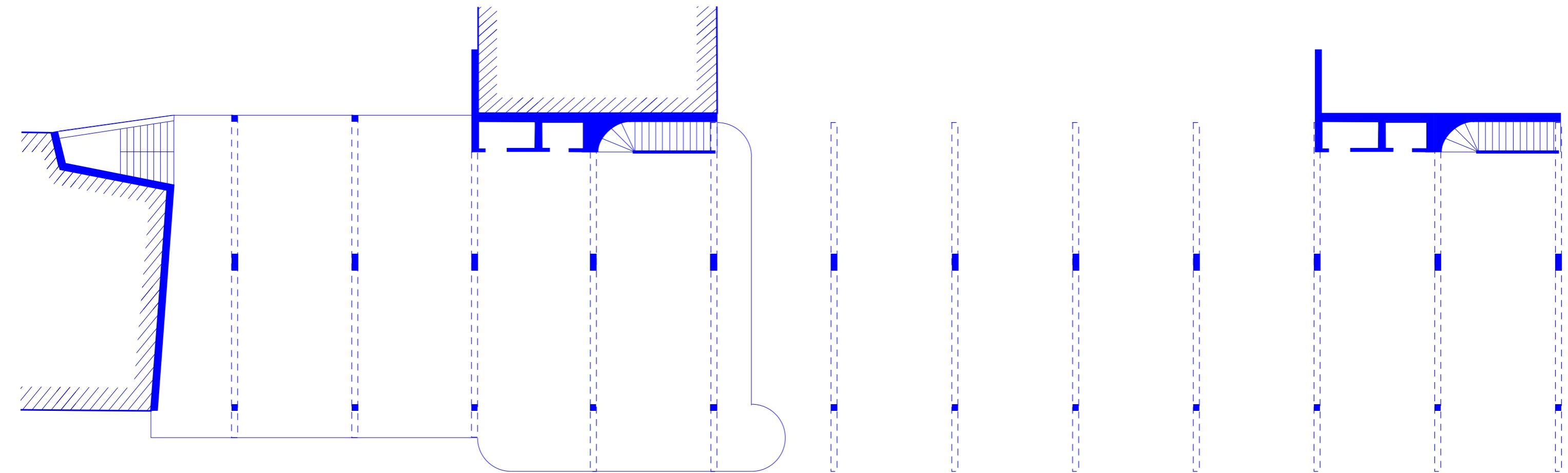
Span direction



# Translating my "New Terms" into practice

## Construction

The one-way solid slab system can be continued, creating a series of extending slabs that rest on beams or walls



# Translating my "*New Terms*" into practice

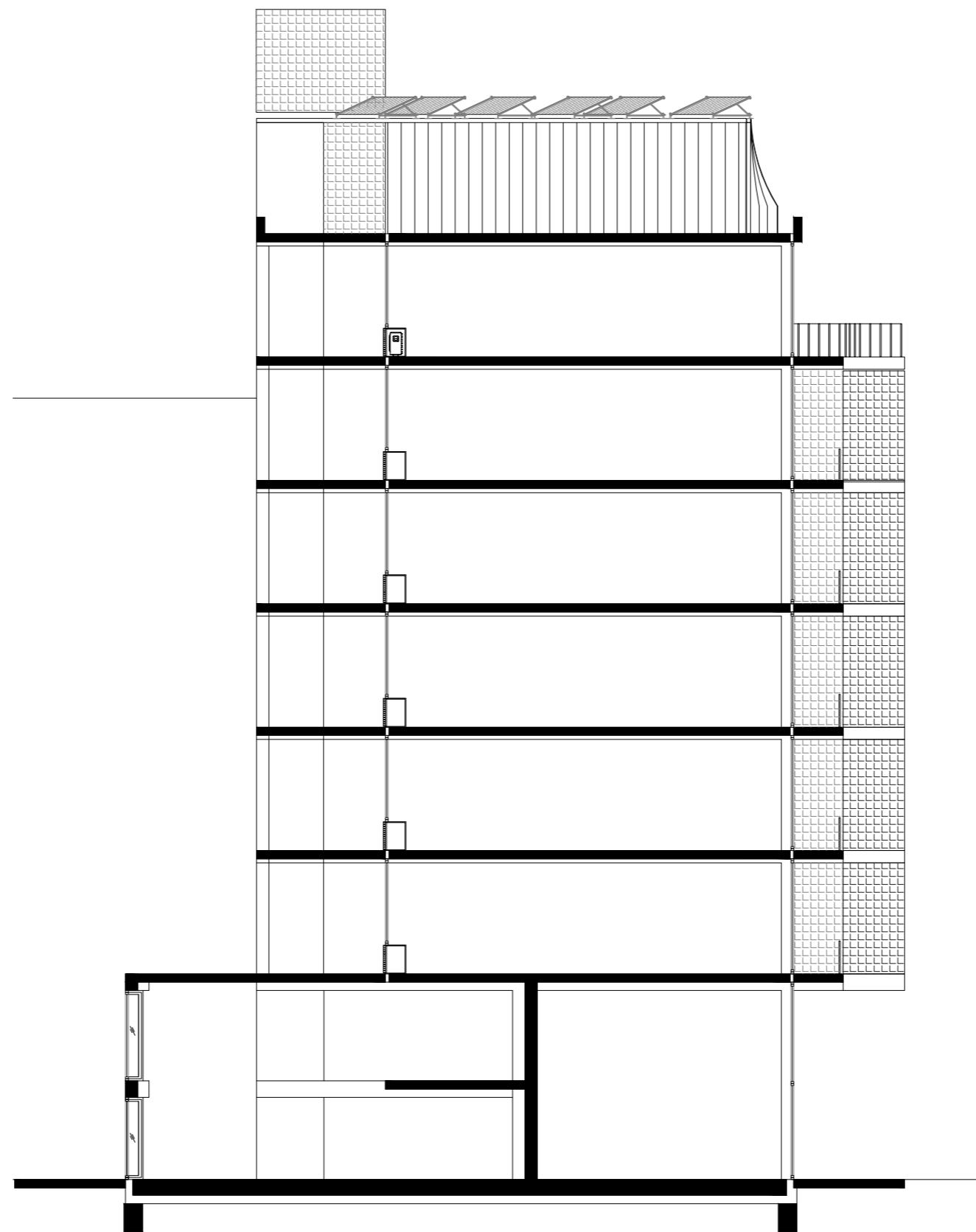
Construction  
Section A-A



A vertical lightweight construction embracing a more nostalgic character

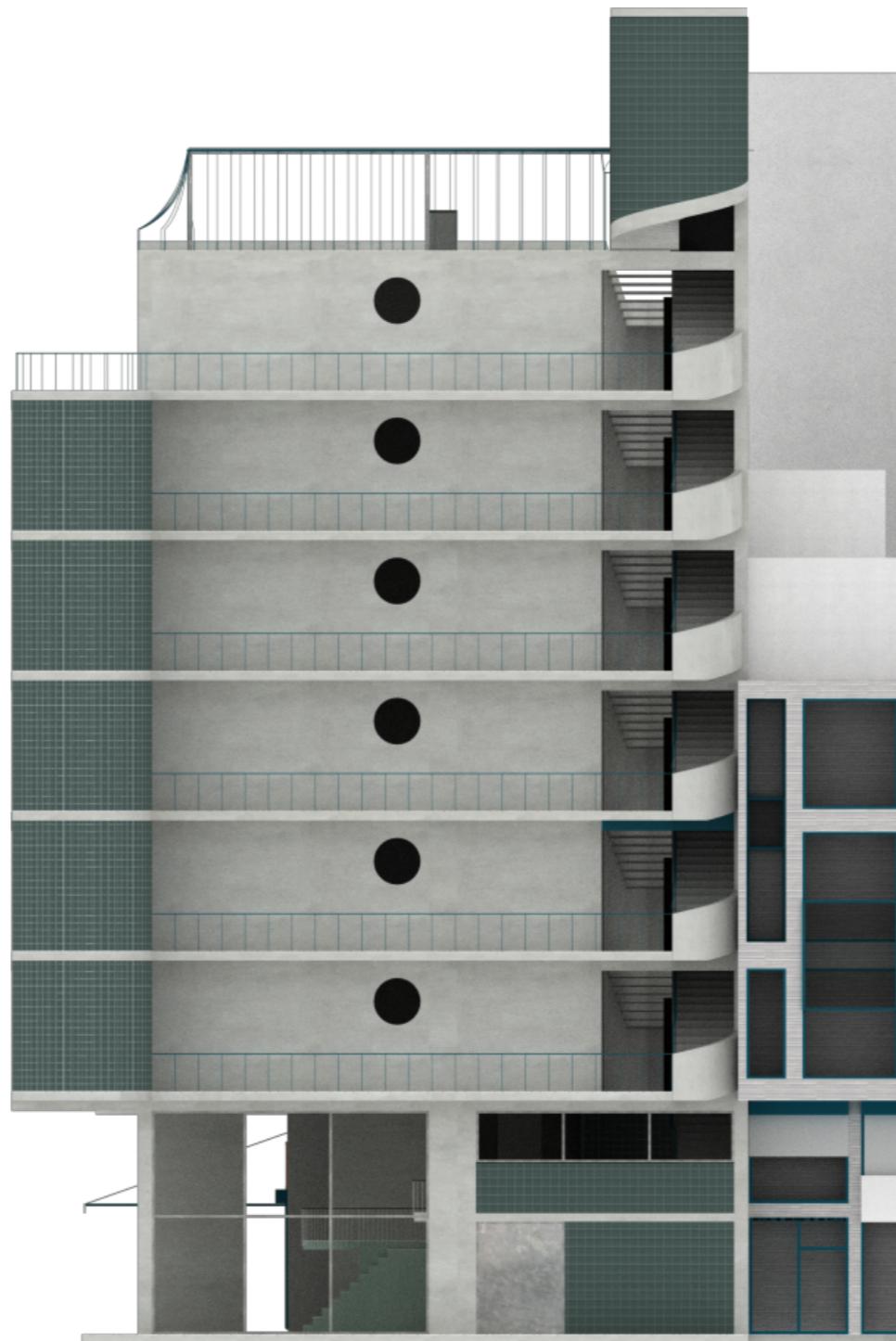
# Translating my *"New Terms"* into practice

Construction  
Section B-B



# Translating my *"New Terms"* into practice

Construction  
Front View



# Translating my *"New Terms"* into practice

Construction  
Side View



# Case study

## Construction Strategies



House For Artists / Apparata Architects

# Case study

## Construction Strategies

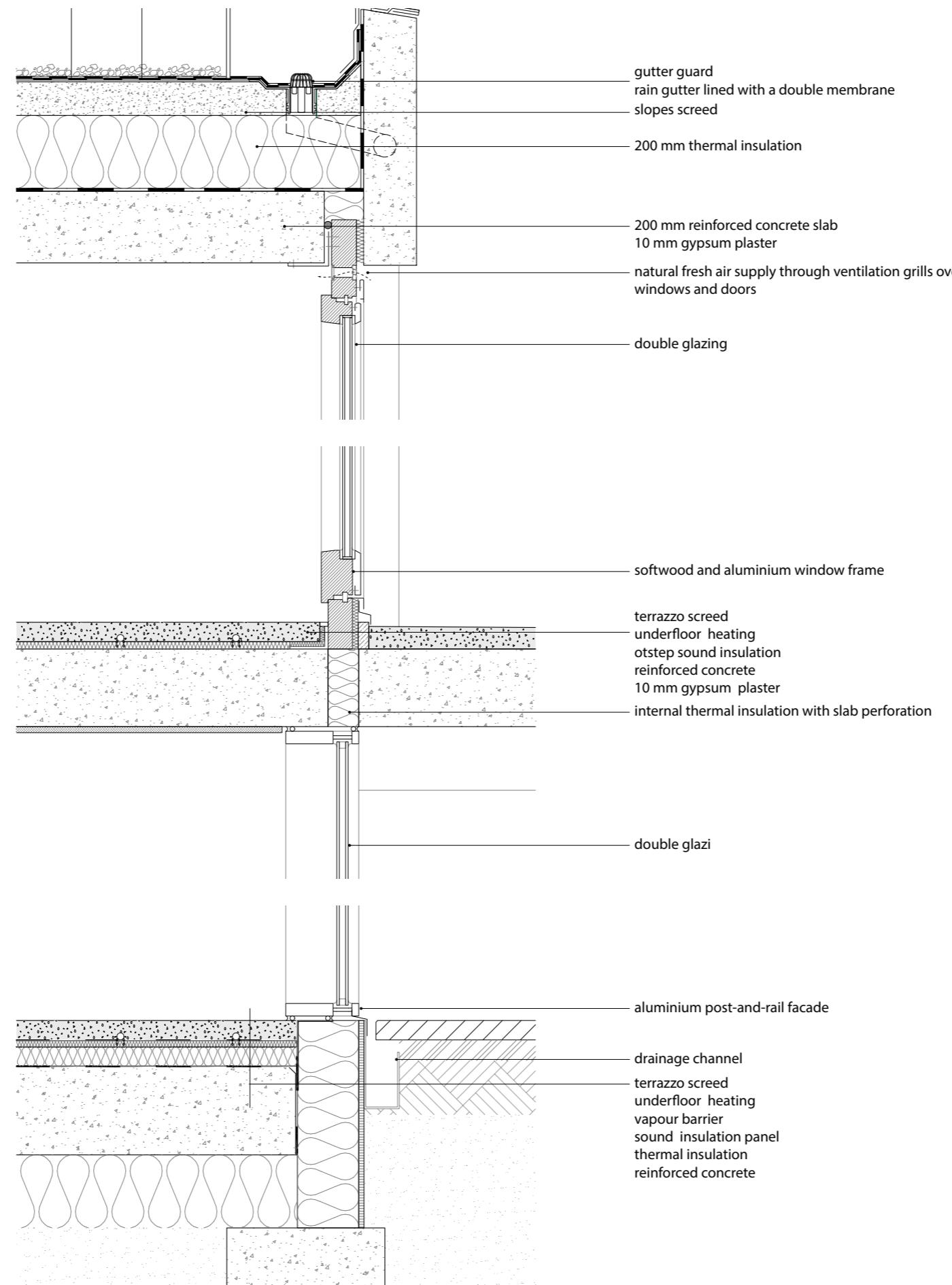


House For Artists / Apparata Architects

# Translating my "New Terms" into practice

Construction

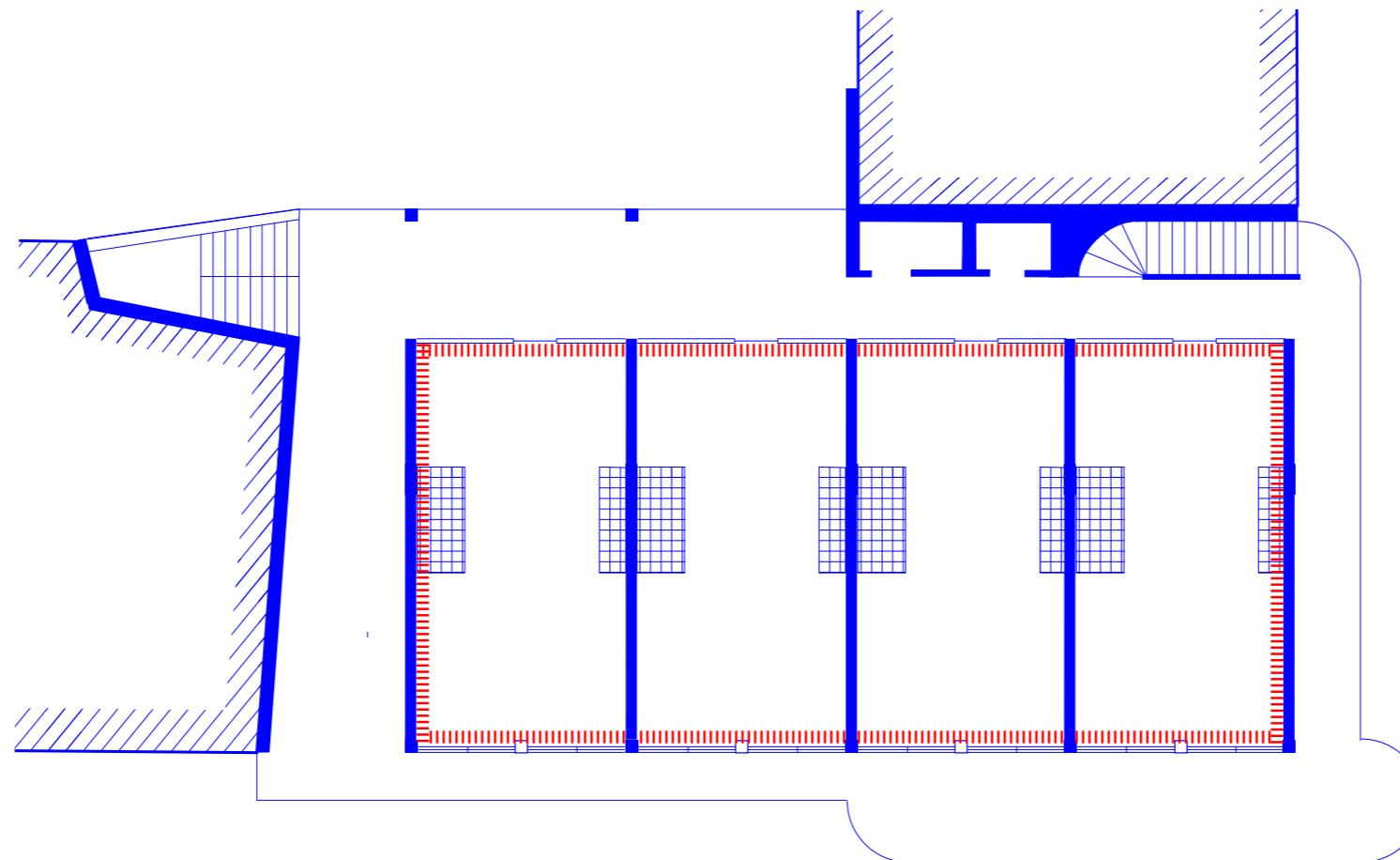
Detail 1:20



# Translating my "New Terms" into practice

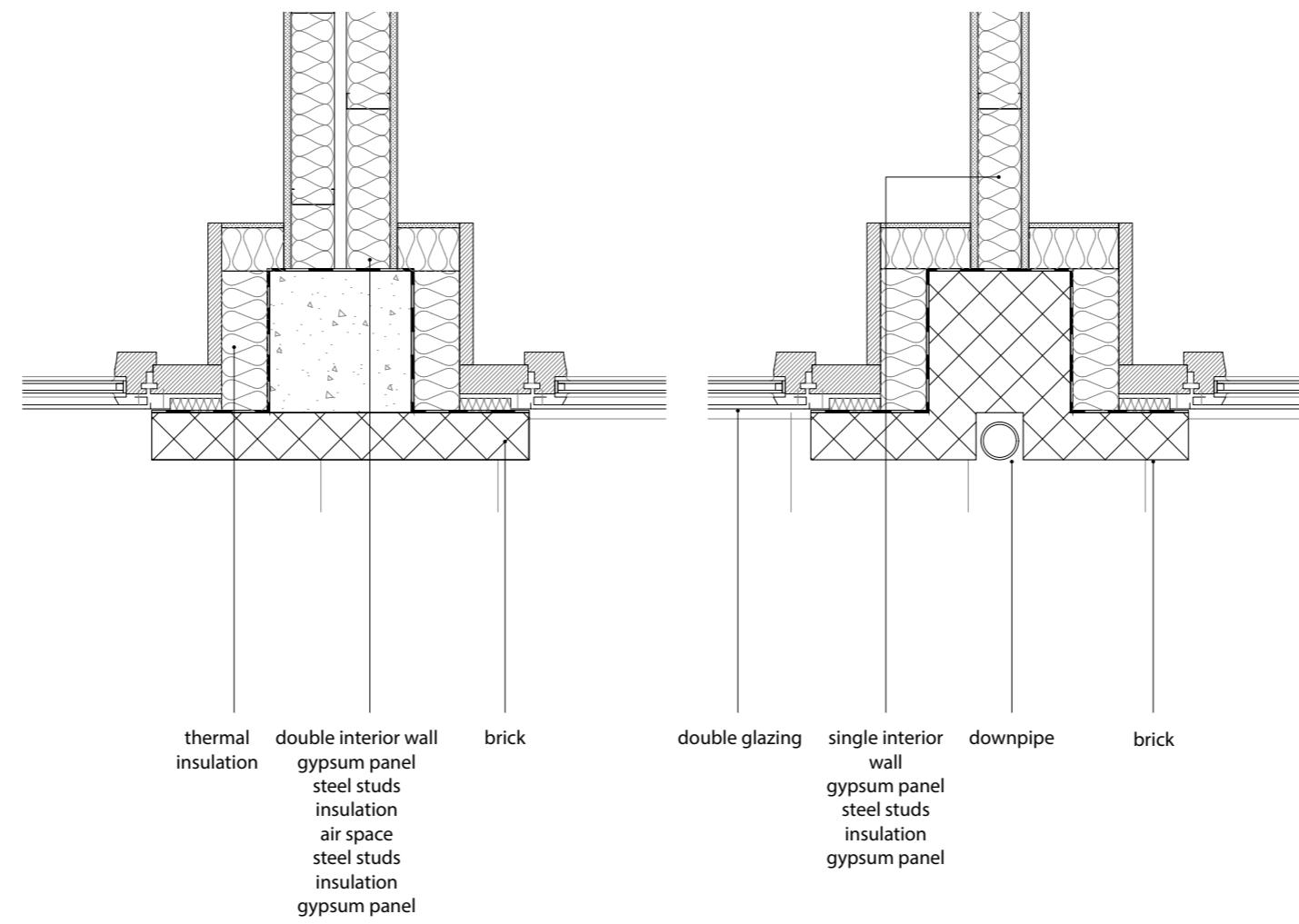
## Construction

Internal Thermal insulation



# Translating my "New Terms" into practice

Construction  
Detail 1:20

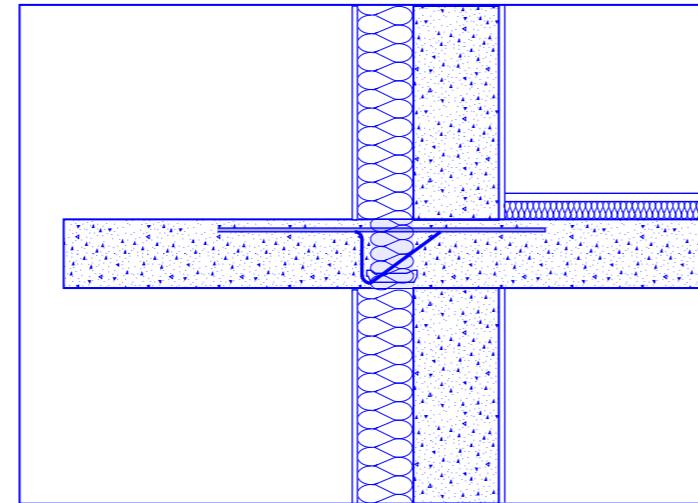


# Translating my "New Terms" into practice

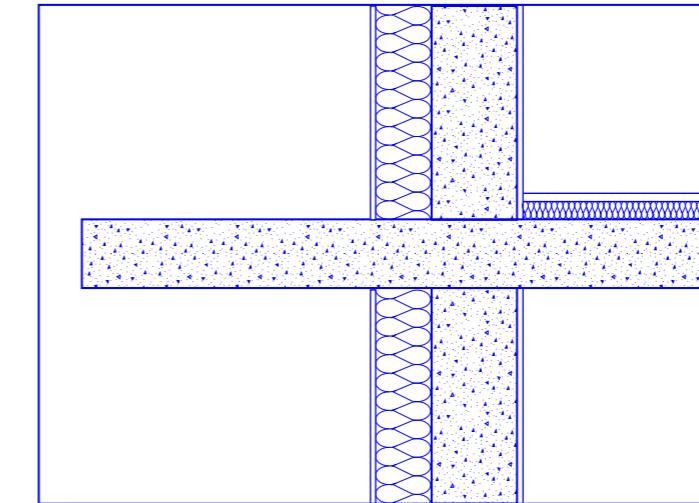
## Construction

Thermal bridge in the cantilever beams Given the climate of Athens with mild winters (between 4°C and 7°C, with January being the coldest month) and warm summers.

Affordability: Addressing thermal bridges can increase costs without significant energy benefits in a mild climate like Athens.



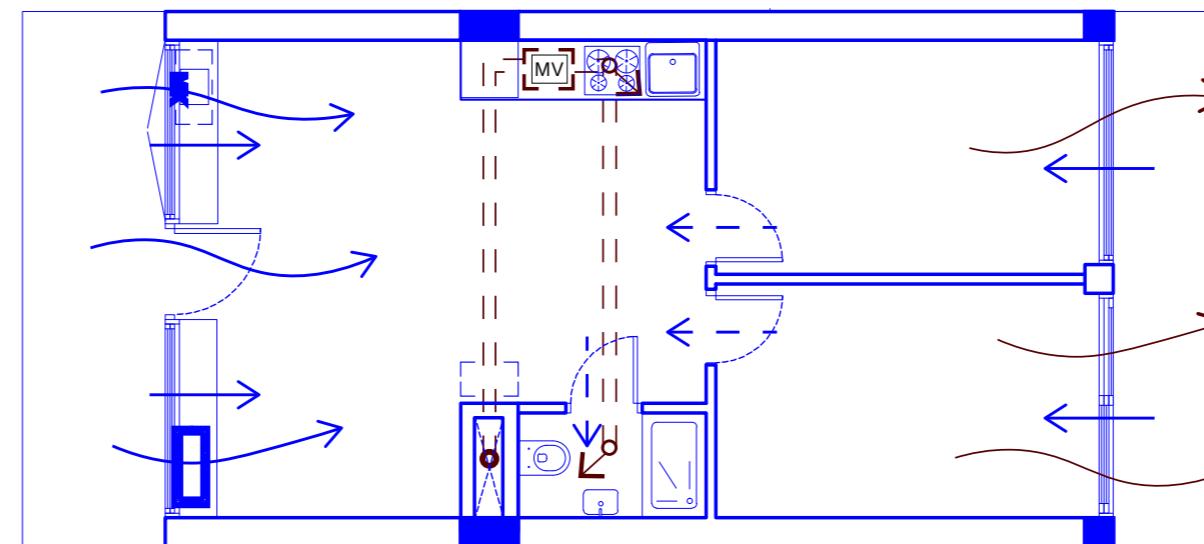
Thermal break



Thermal bridge

# Translating my "New Terms" into practice

Climate



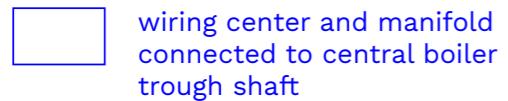
→ cross ventilation cool air  
→ cross ventilation warm air

← natural fresh air supply through  
ventilation grills over windows  
and doors

↖ mechanical air extraction in  
bath-room and kitchen

# Translating my *"New Terms"* into practice

# Climate Floor Heating



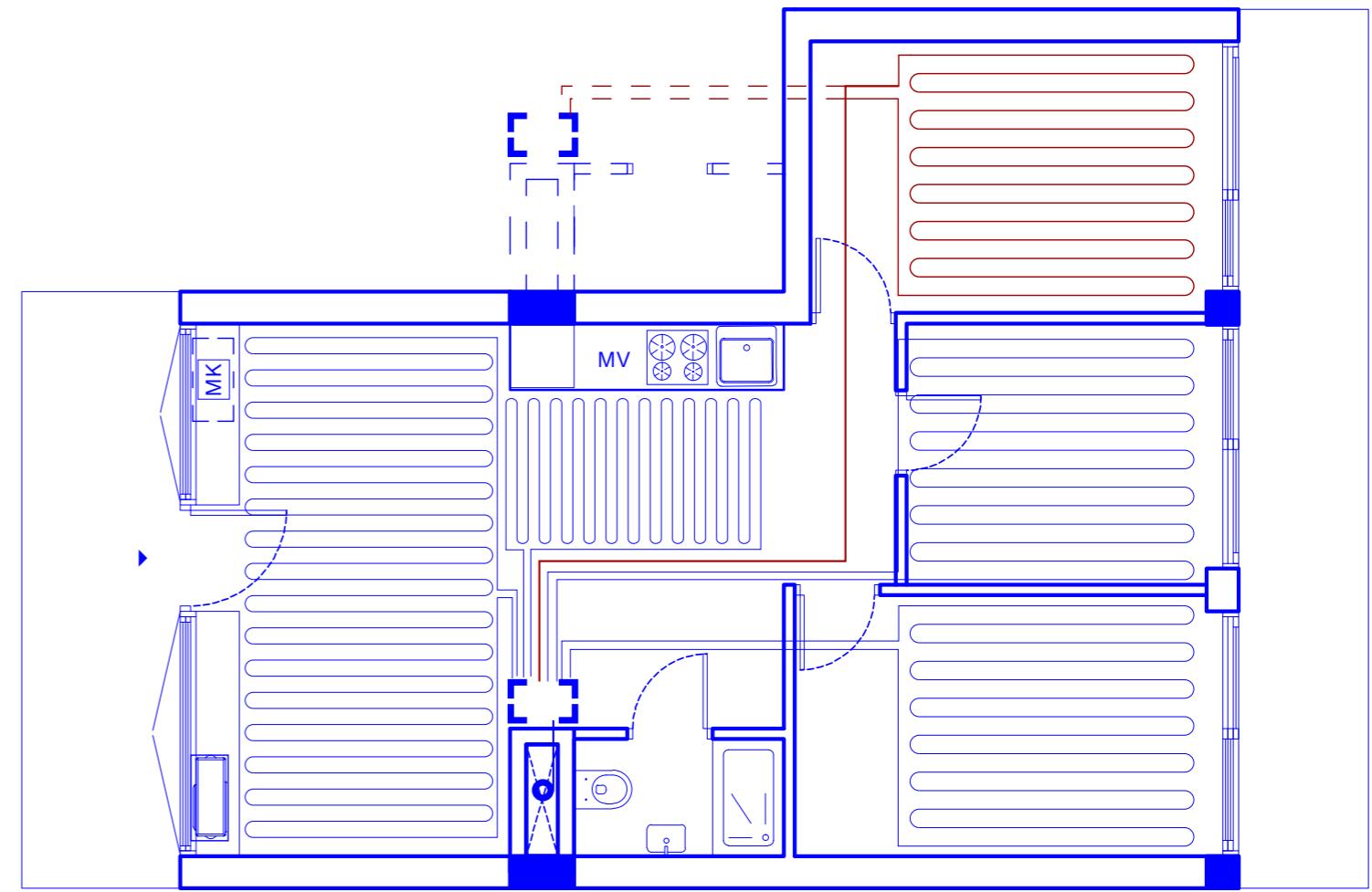
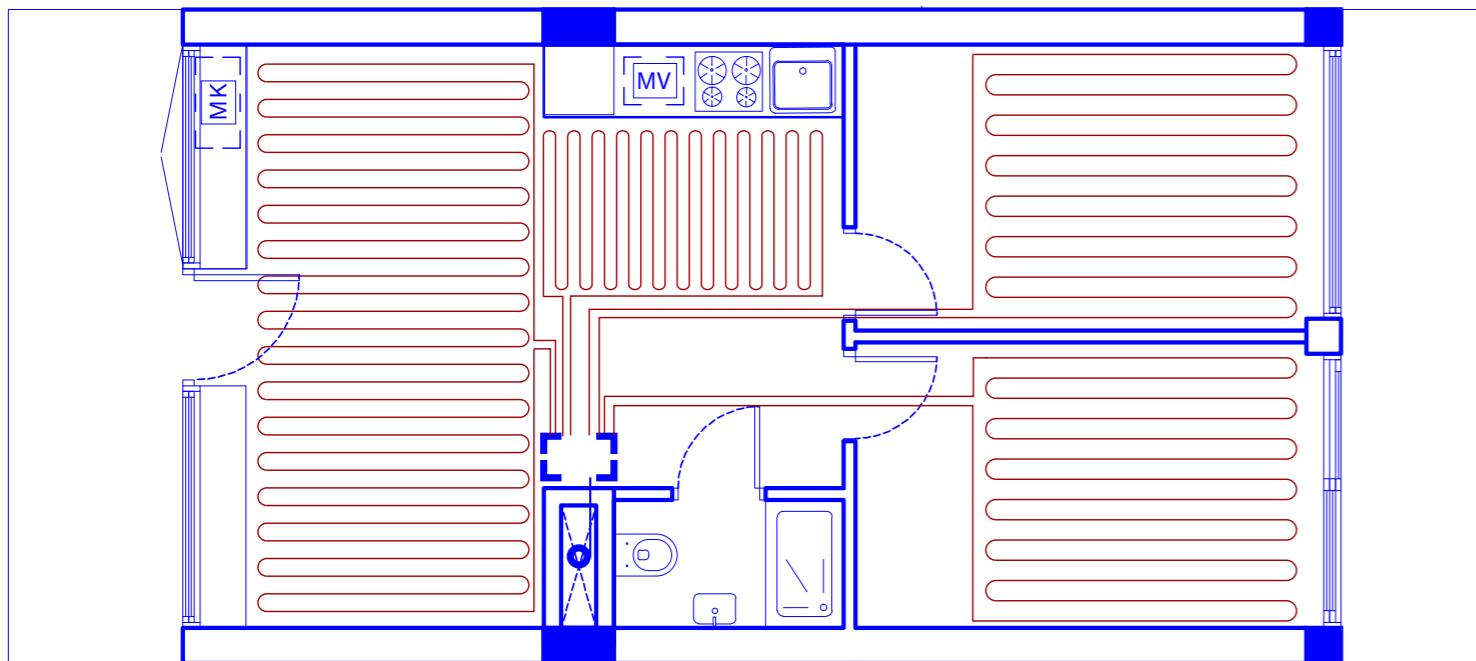
wiring center and manifold connected to central boiler trough shaft



## zones for pipe circuits

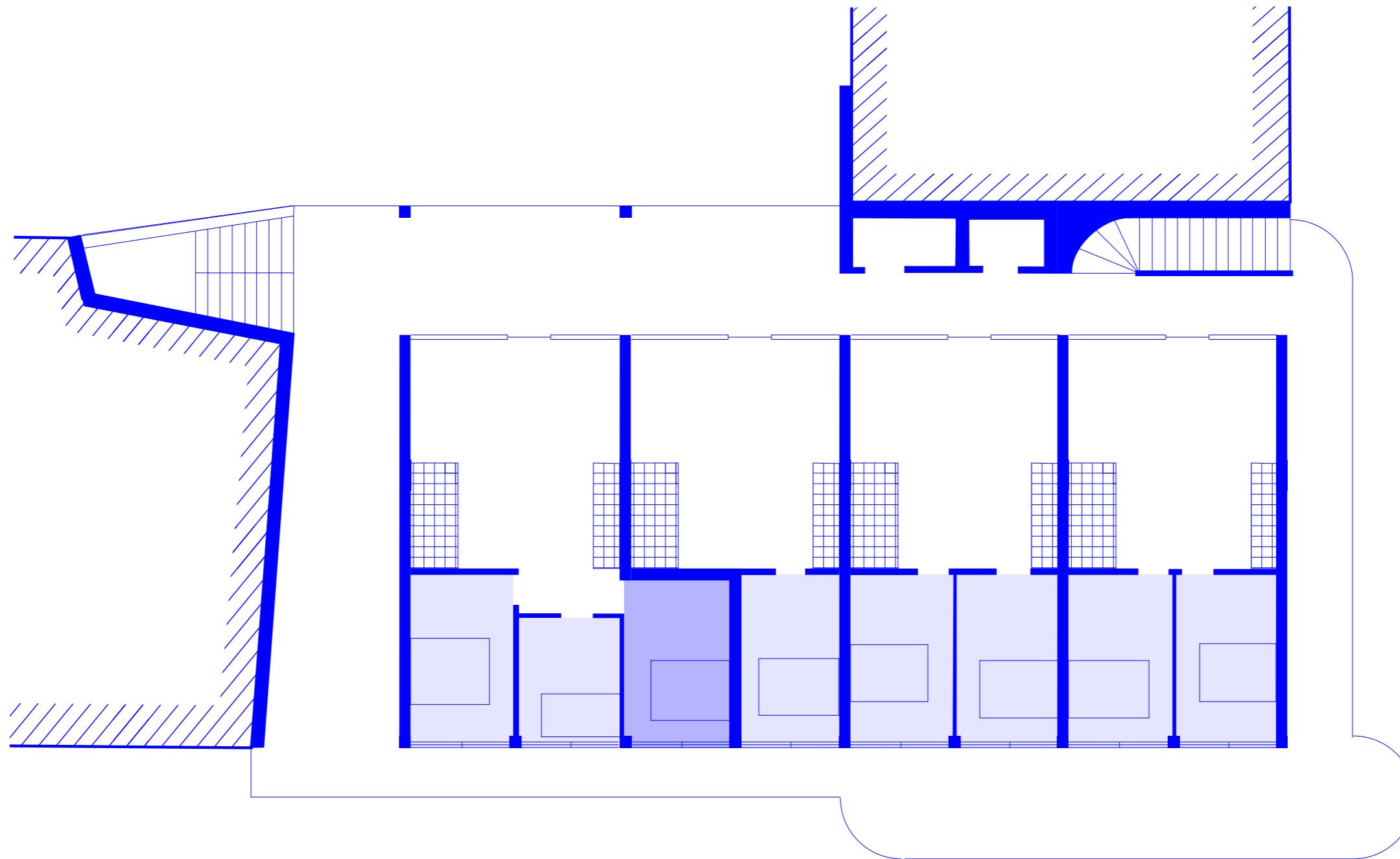


connect a switch room to a neighbor



# Translating my "*New Terms*" into practice

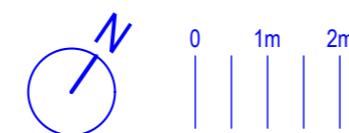
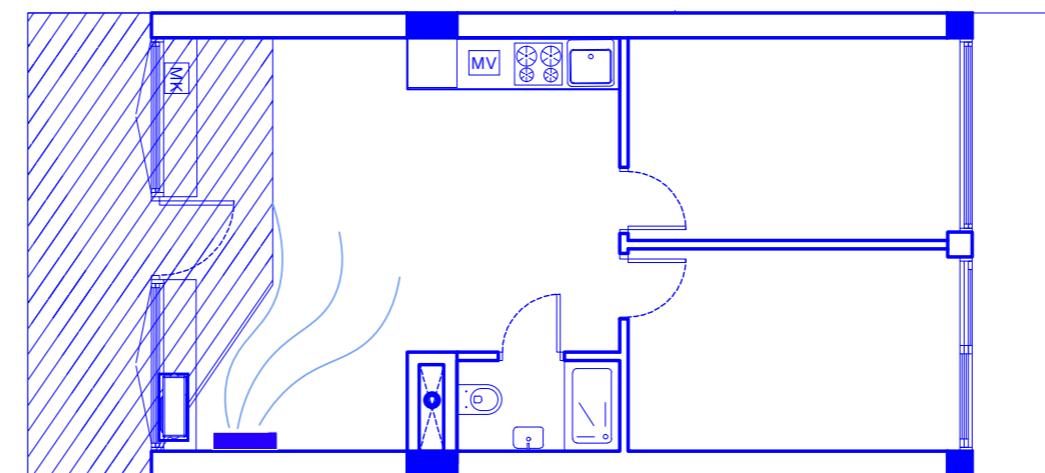
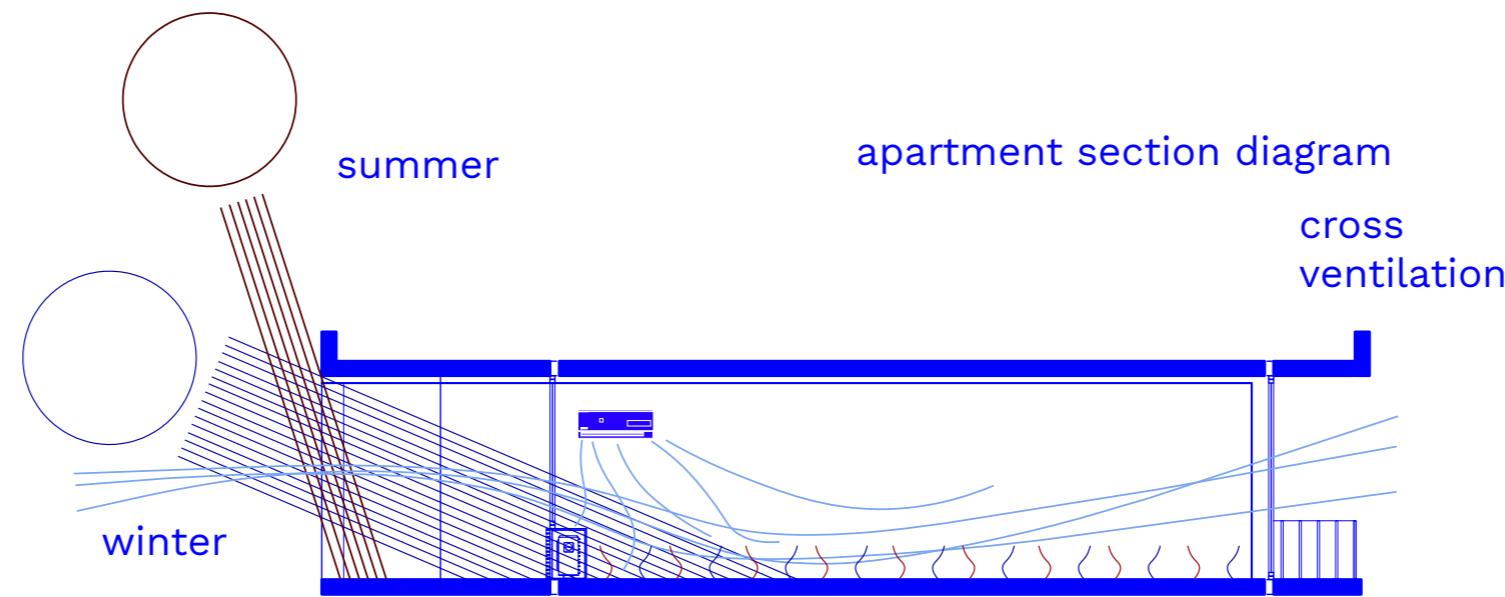
Climate  
Floor Heating



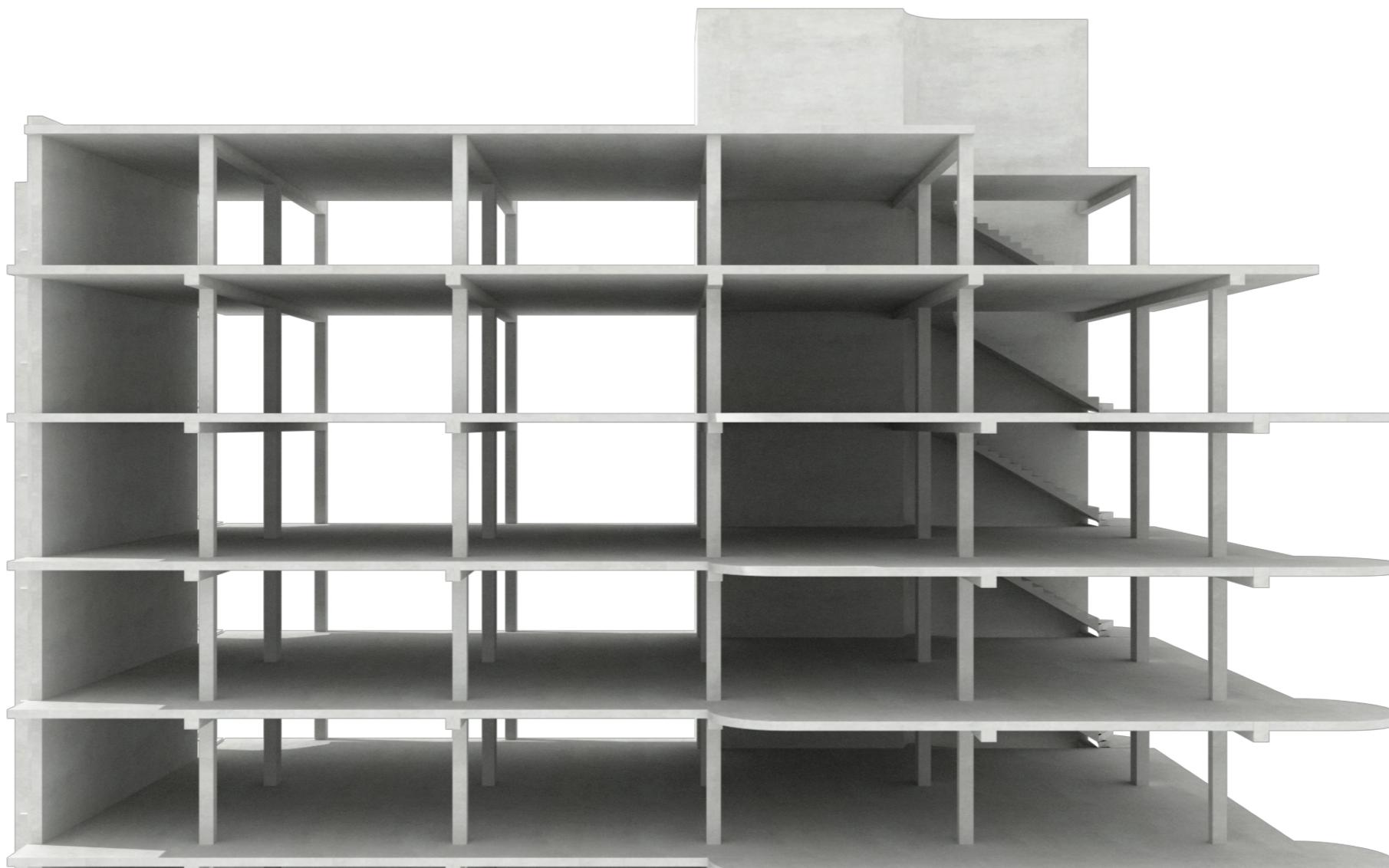
Connect a switch room to a neighbour

## Translating my "New Terms" into practice

Additional measures for heating and cooling if necessary.



## The repeating element



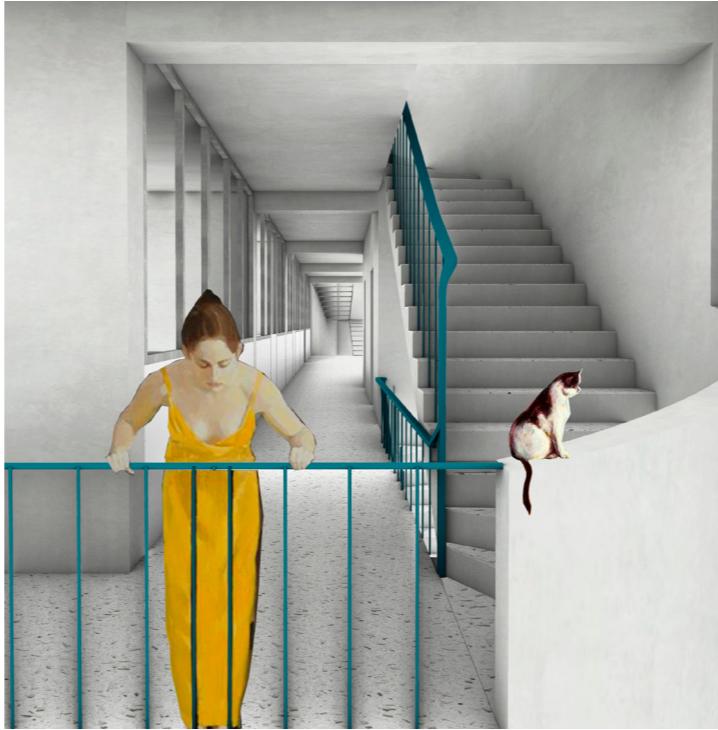
# Interior Sharing

Moments of interiory



# Interior Sharing

Moments of interiory

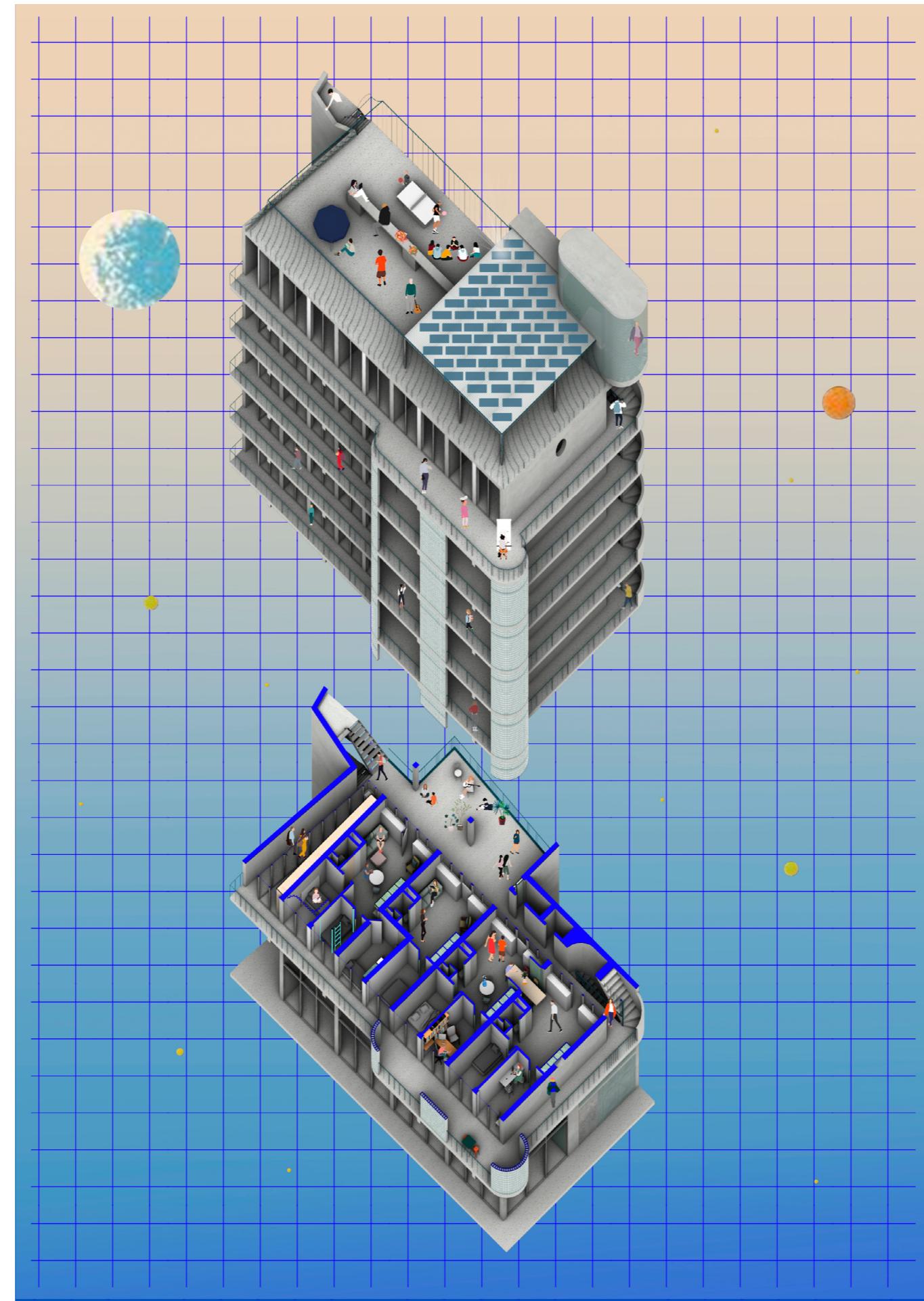


# Interior Sharing

Moments of interiory



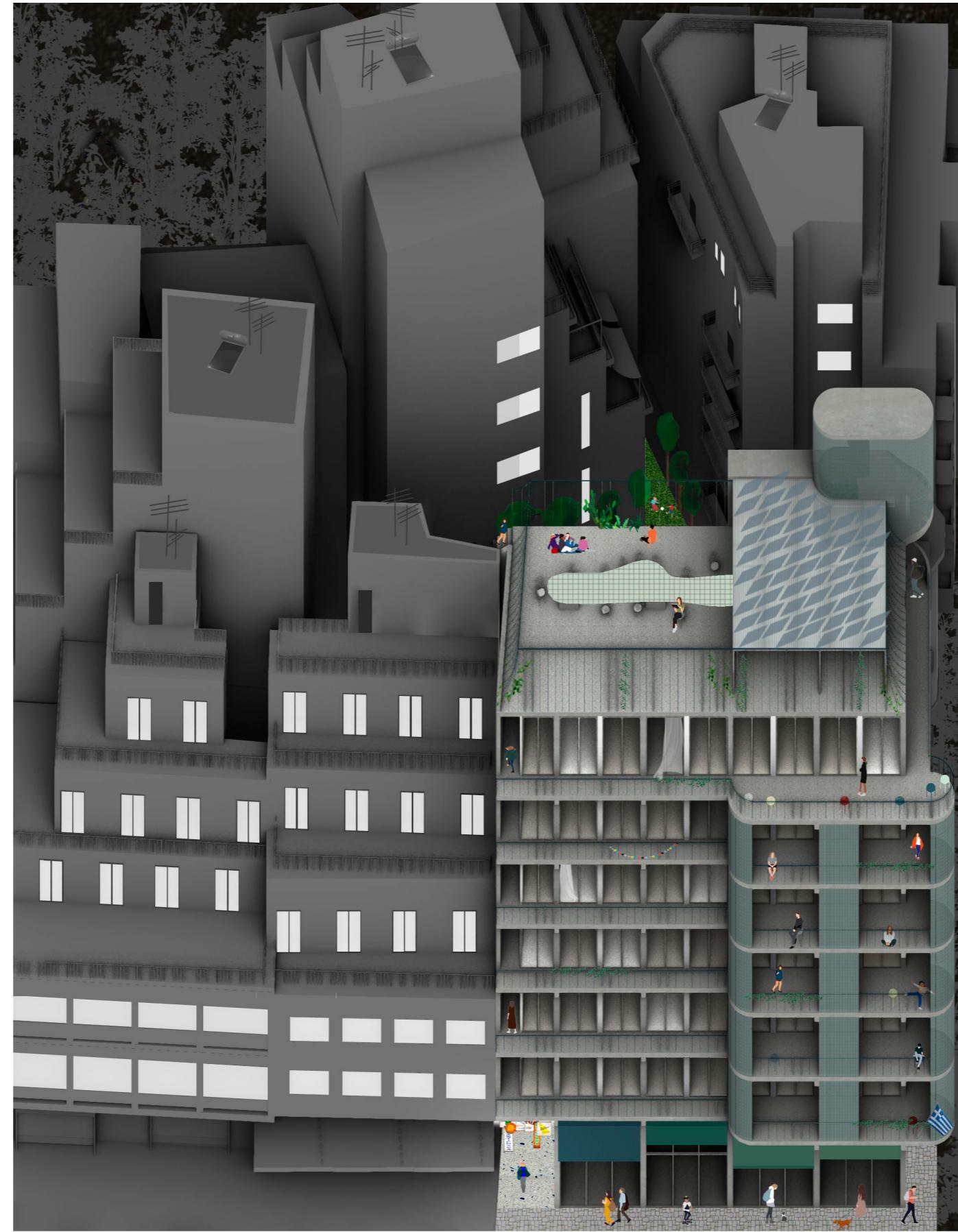
# Epilogue



# Epilogue



# Epilogue



# Epilogue





# THANK YOU!

**POLYKATOIKIA** tapestry of shared ownership.

The reinterpretation of the Athenian Polykatoikia