AN URBAN TRANSIT ZONE

a permanent structure for temporary inhabitation

P5

+
Monica Carlota Lelieveld
+
Dwelling, Global Housing
+
Affordable Housing for Sustainable Development in the Global Urban South, Addis Ababa
+
Nelson Mota, Dick van Gameren, Anteneh Tola
+
28 June 2017

RESEARCH

+
facts and numbers;
growth, migration and slums
+
challenge
+
research question
+
themes:
type of movement
location of settlement

BASHA WOLDE CHILOT
site survey

qualities
current situation
+

STRATEGY

+
design hypothesis
+
target groups
+
concept:
infill vs. permanent grid
hierarchy of spaces
+
three block types
+

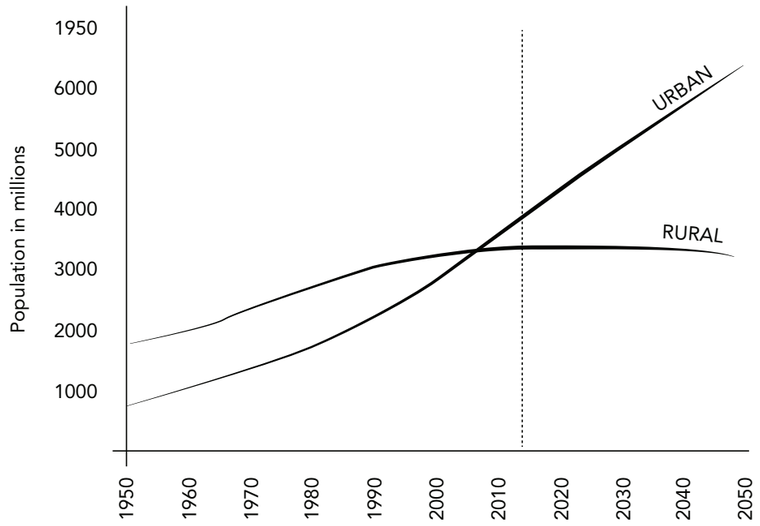
DESIGN PROPOSAL

+
complex:
design principles
transformation
masterplan 2028
+
possible other locations
+
cluster:
design principles
transformation
clusterplan 2043
circulation
climate
+
block:
transformation
floorplan 2018; and possible transformations
elevaions in transition
construction; technique and material
section and detail
+
impressions

+
TRANSFORMATION through time
+
to conclude
+

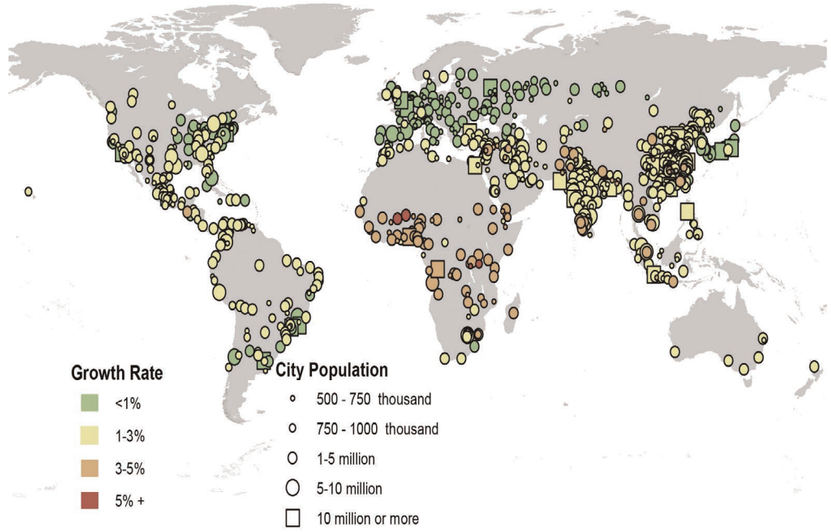
Research

World **Population growth** in rural and urban areas



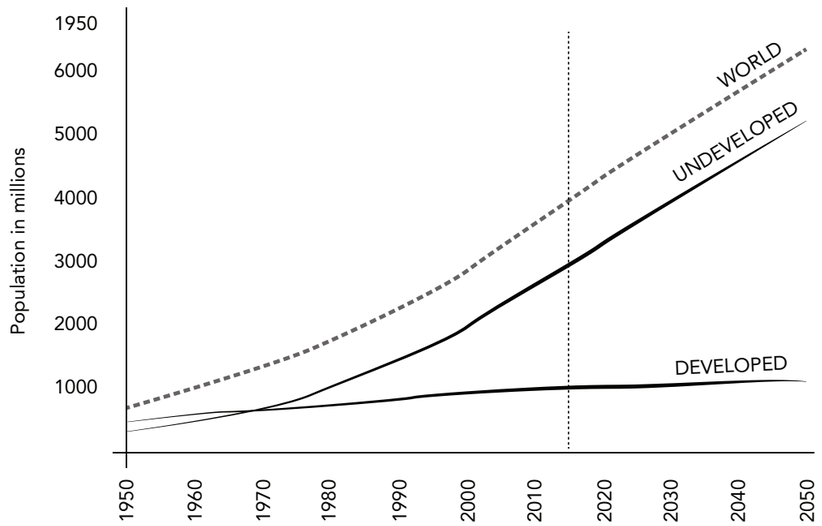
Source:
United Nations, World Urbanisation Prospect Revision 2014, p.7

Unequal growth rates of urban agglomerations by size class



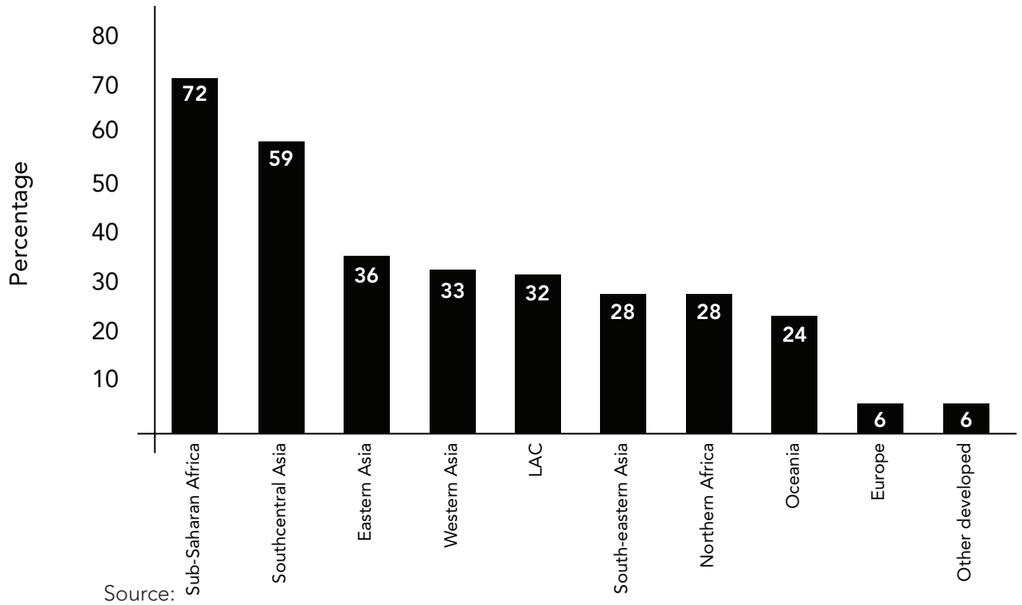
Source:
United Nations: https://esa.un.org/unpd/wup/Maps/City-Growth/CityGrowth.aspx

Urban Population growth in developed and less developed areas

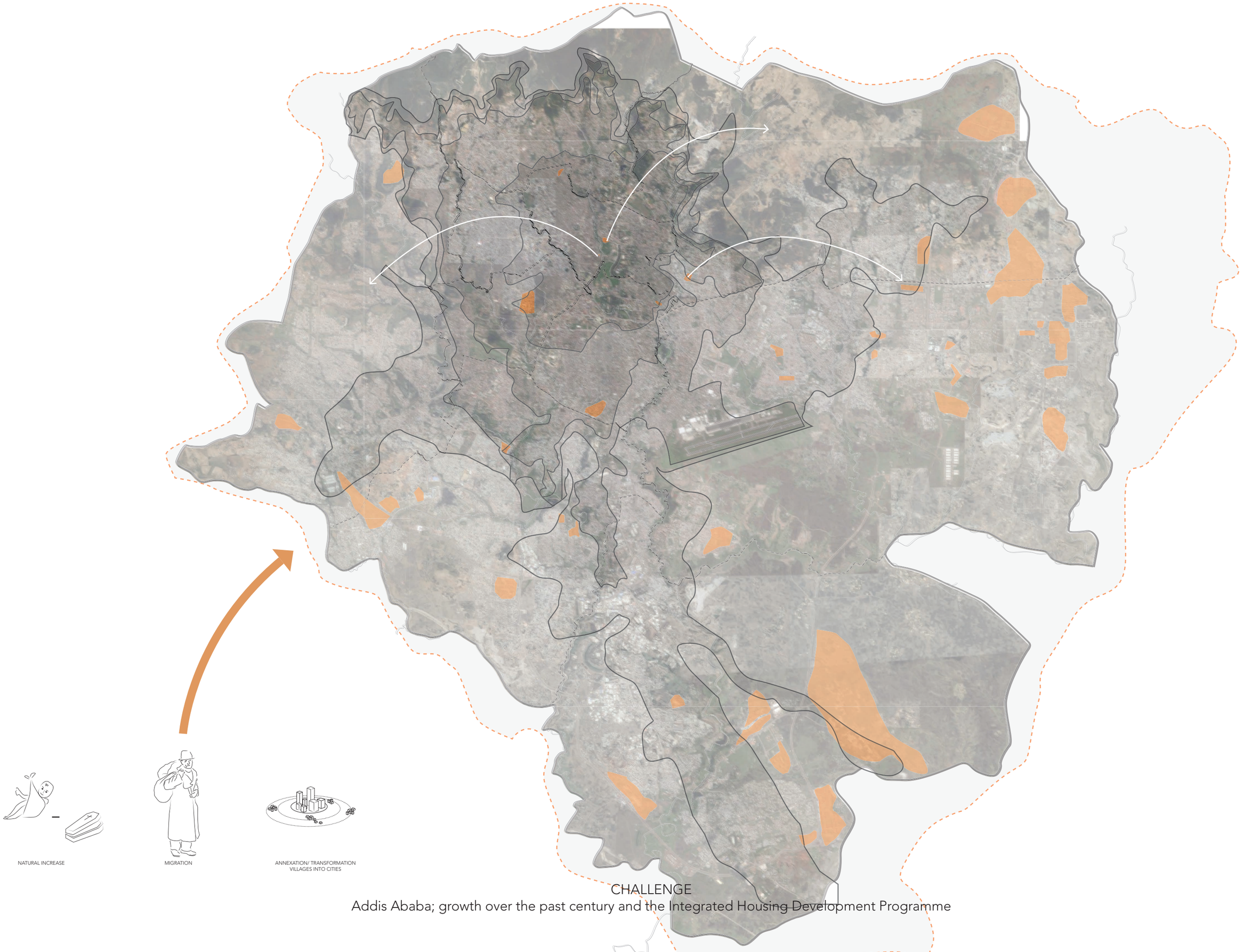


Source:
United Nations, World Urbanisation Prospect Revision 2014, p.25

Slum Dwellers as a percentage of urban population



Source:
UN-Habitat, The Challange of Slums: Global Report on Human Settlements 2003, p.15

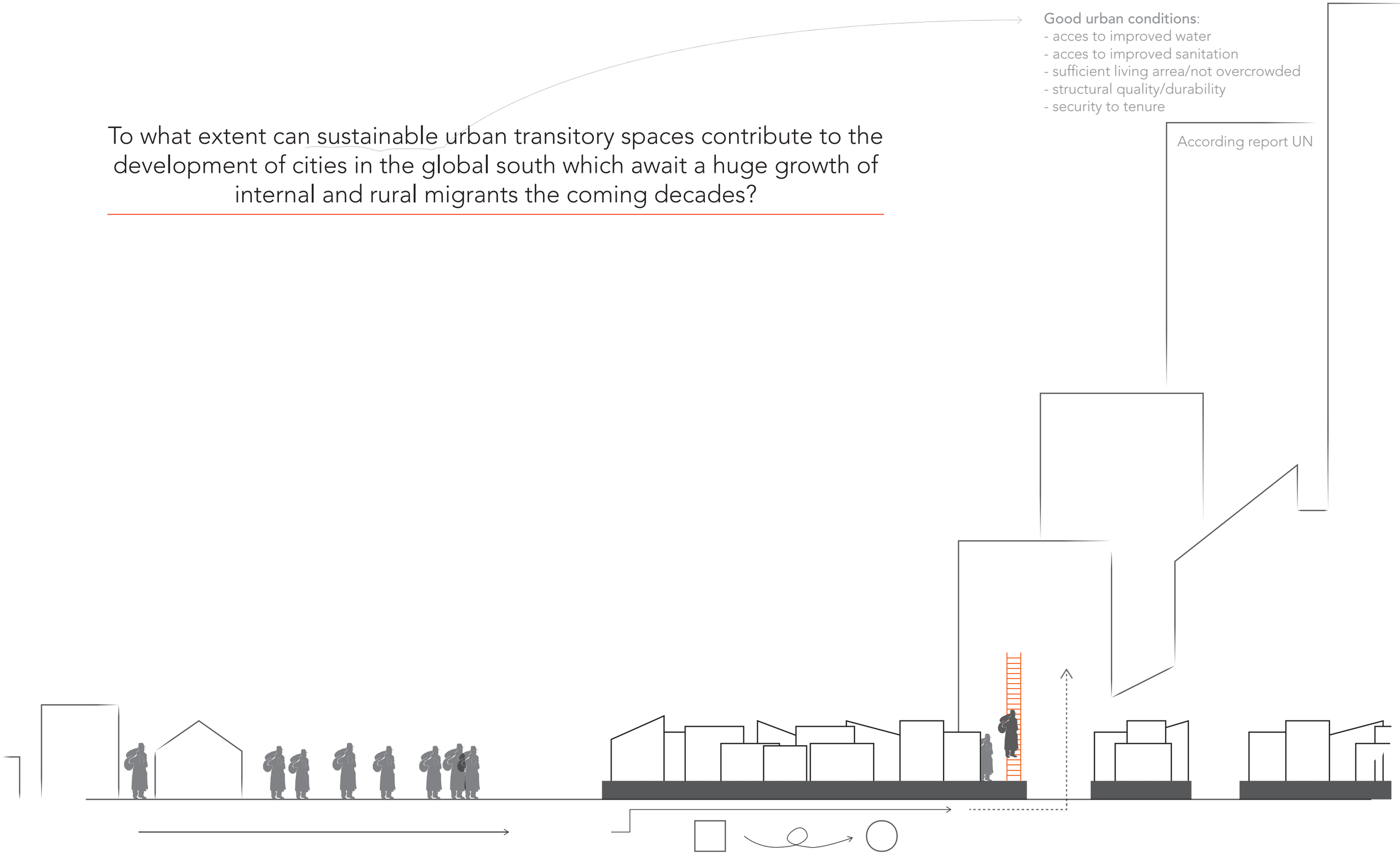


CHALLENGE
Addis Ababa; growth over the past century and the Integrated Housing Development Programme

To what extent can sustainable urban transitory spaces contribute to the development of cities in the global south which await a huge growth of internal and rural migrants the coming decades?

Good urban conditions:
- acces to improved water
- acces to improved sanitation
- sufficient living arrea/not overcrowded
- structural quality/durability
- security to tenure

According report UN



RESEARCH QUESTION

the ***TYPE*** of movement

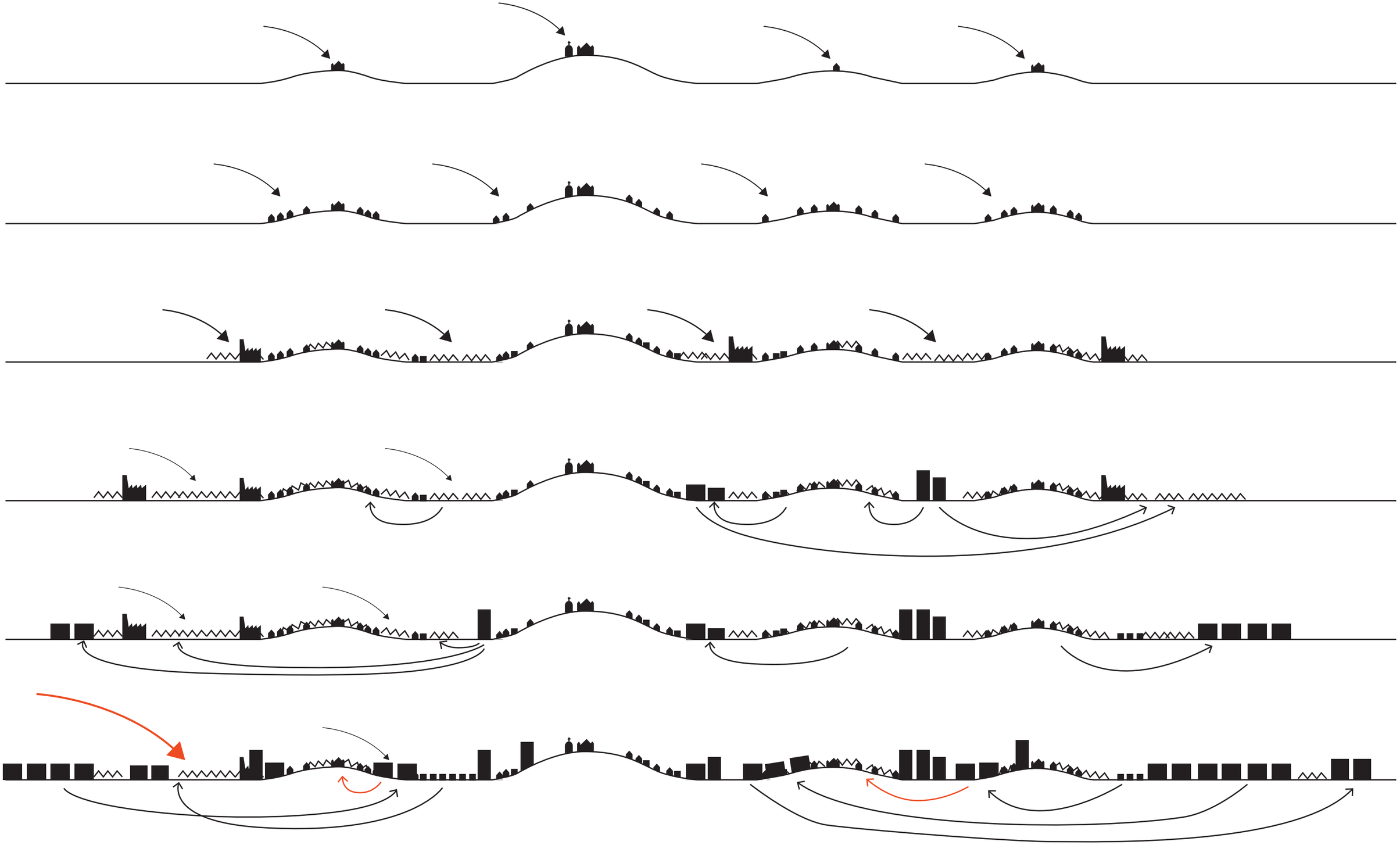
the LOCATION of these settlements

the social and spatial ***QUALITIES***

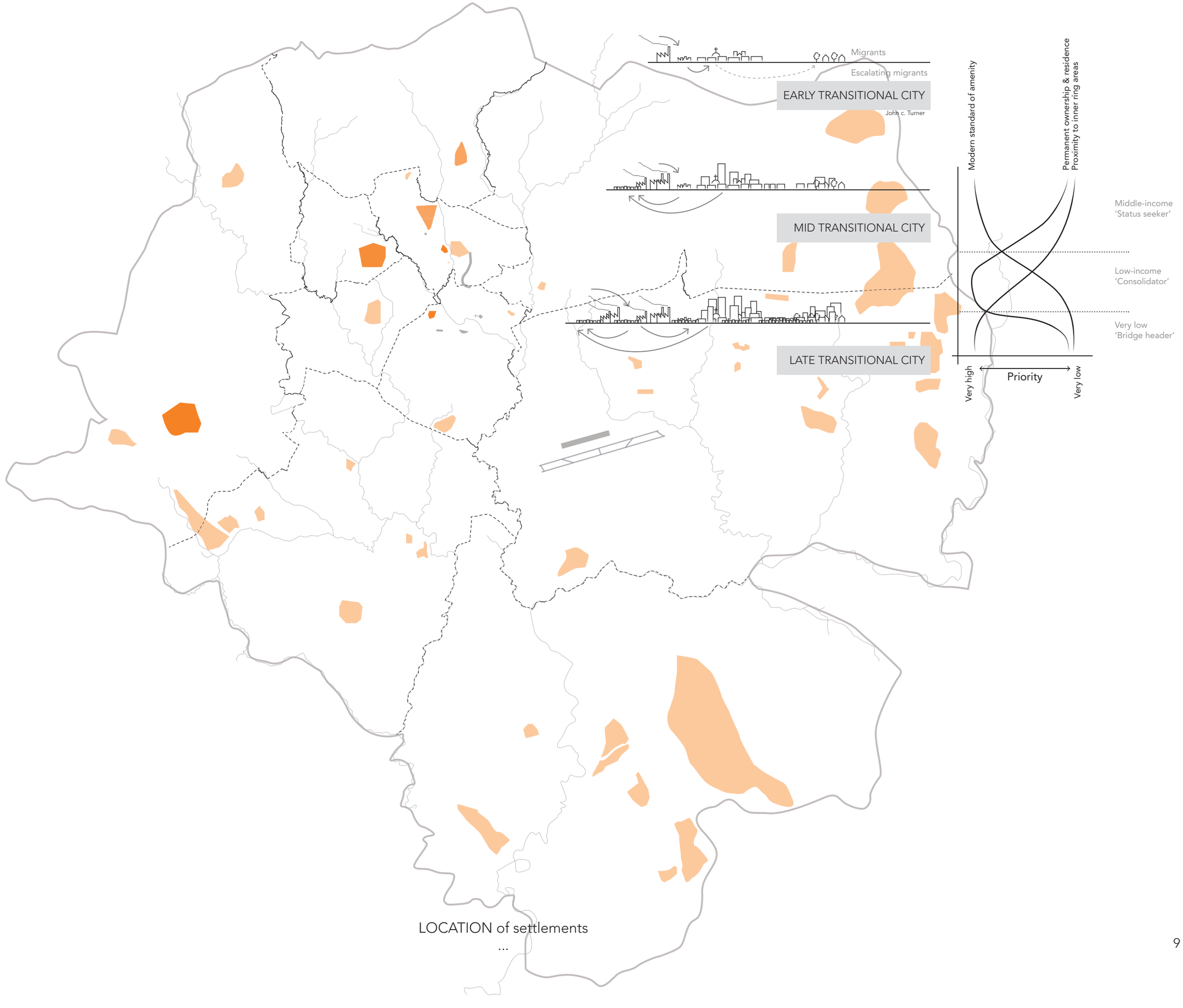
their CONTRIBUTION to the city

the current ***SITUATION*** and examples

Basha Wolde Chilot



TYPES OF MOVEMENT on an urban scale
relocation and migration



LOCATION of settlements

...

Dense ground bound shacks

Cheap accomodation/
workspace/
shop

Lack of regulation
↳ Fexibility

Close relation to the street
↳ Public interaction

"City slums are dynamic entities where people move in and move out and where they reach success or fail hopelessly "

Peter Cutt Lloyd, 1979

"the arrival city is both populated with people in transition […] and is itself a place of transition"

Doug Sauders, 2010

Network linking the village to the city

Entry mechanism

The establishment of an urban platform

Social mobility path towards the middle class

QUALITIES
by literature and site visit

Location

Basha Wolde Chilot

2005

Location

Basha Wolde Chilot

2016

TWO OPPOSITES ON EACH SIDE OF THE RIVER

NEW DEVELOPMENT IS LACKING SOCIAL FACILITIES

LARGE UNDIFINED OPEN SPACES

UNFINISHED SPACES/ BLOCK FORMATIONS

?

?

?

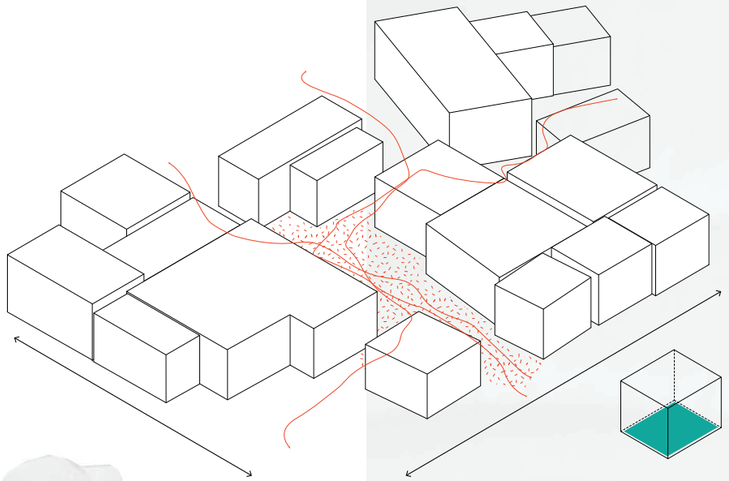
people living in the Serategna sefer will have to morve out in the coming years due to future development

the permanent structure as a revitalisor of 'unfinished' urban spaces

QUALITIES

by site visit

QUALITIES
sharing facilities, courtyards and clusters of dwellings



QUALITIES
intertwined social and infrastructural network

QUALITIES
the degree of freedom causing financial opportunities

SHARING

THE GROUND FLOOR

INFORMAL JOB POTENTIAL

(very) AFFORDABLE

FREEDOM vs. RESPONSIBILITY

COSTS

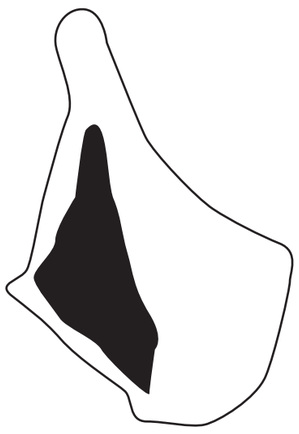
TRANSITION

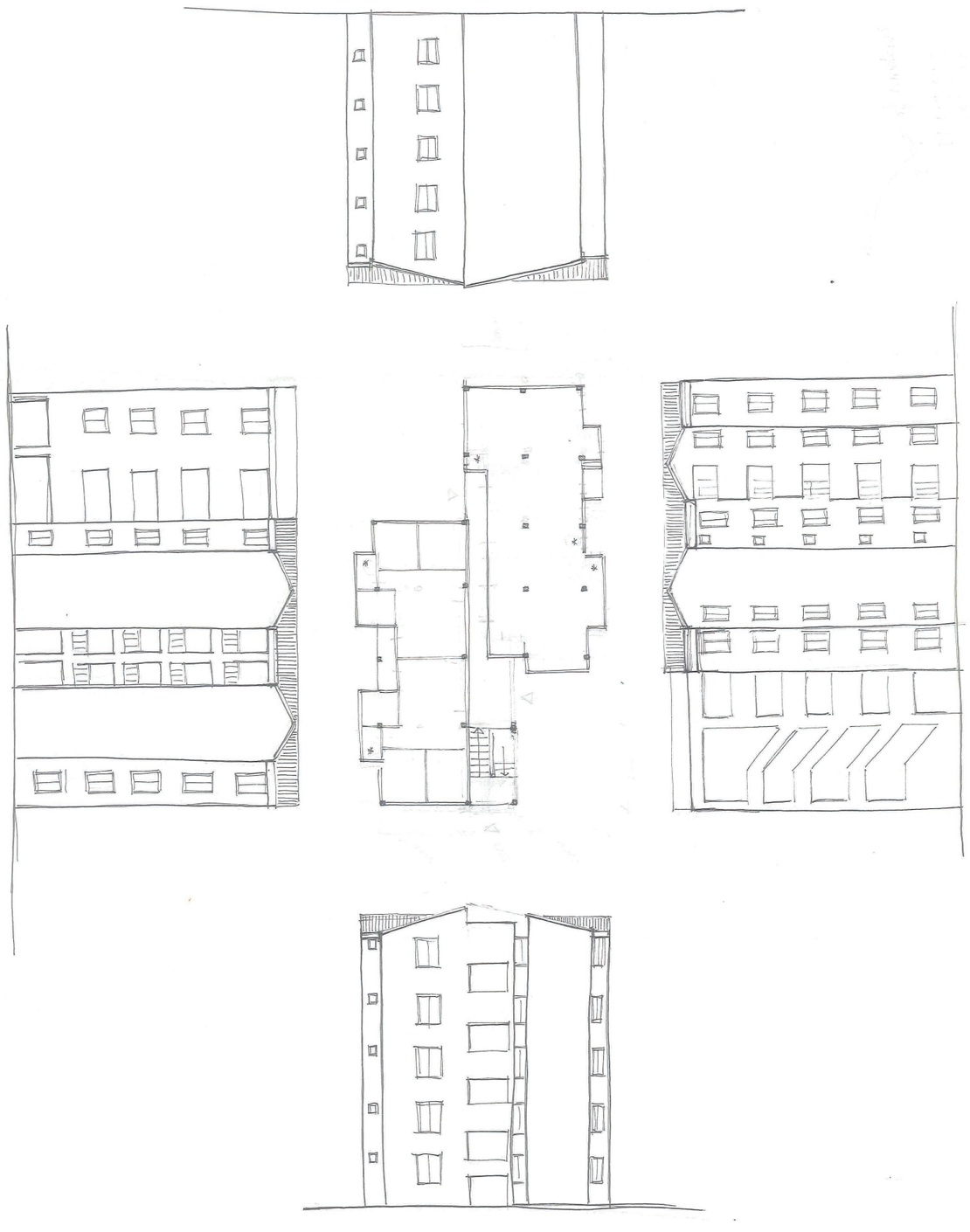
COURTYARD

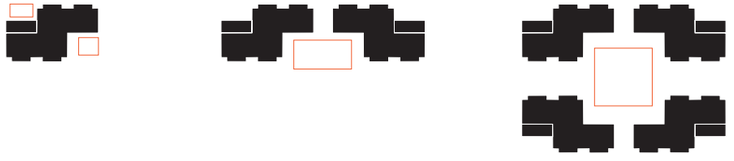
OPPORTUNITIES

SOCIAL NETWORK

SIMILARITIES BUT NOTHING IS THE SAME







CLUSTER
placed in pares/ foursome creating a social space in between or on the inside

PER BLOCK

Units:	20 / 25
Persons:	44-64 / 55-80

load bearing
CONSTRUCTION
0,284 m3 concrete
per m2

FACADE
0,612 m2 ext. facade
per m2

Footprint:
330 m2
Area needed for placement:
427 m2
Floors:
G+4/5
Staircases (stairs):
1 (4 stairs)

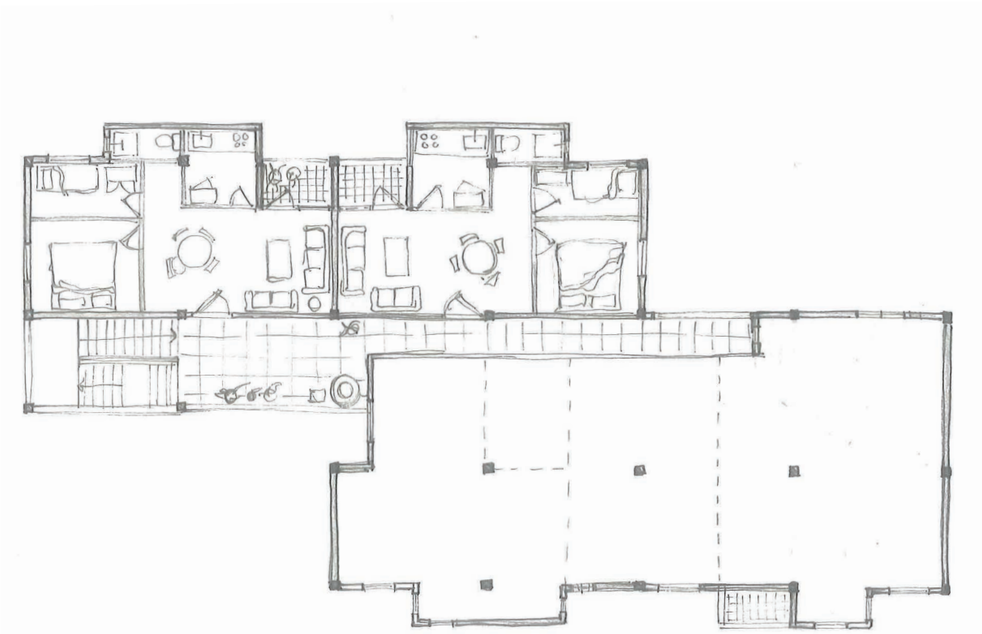
PER FLOOR
Residential surface: 282 m2
Corridor: 48 m2

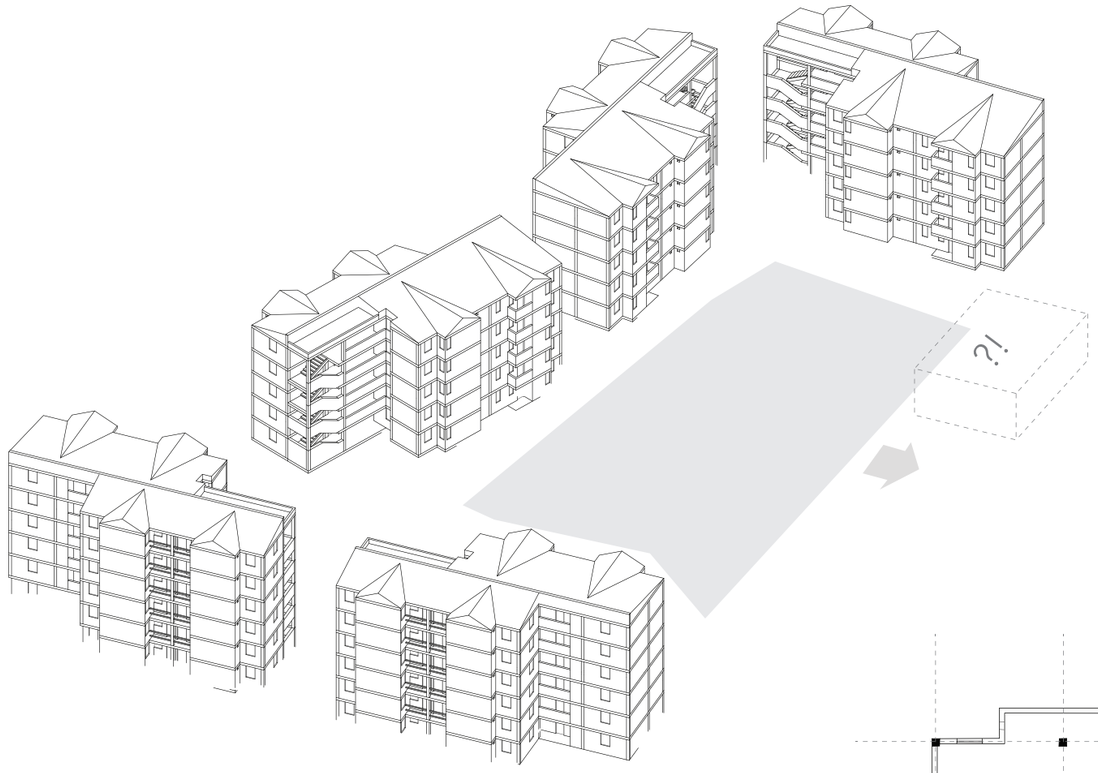
Floor: 315 m2
315 x 0.28 = 88,2 m3
of concrete
Columns: 24
0.3 x 0.3 x 2,52 = 0,2268
0,2268 x 24 = 5,4432 m3

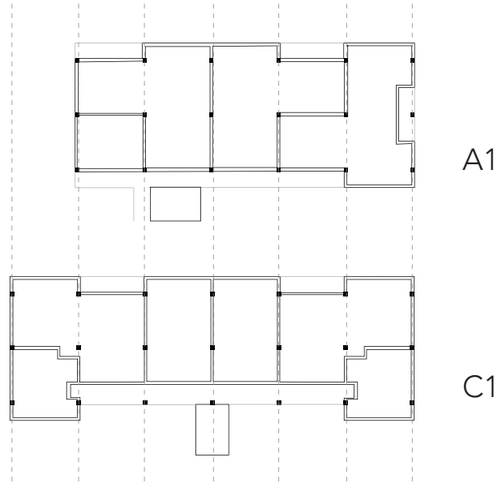
Beams: -
Facade (ext.): 80,2 m
80,2 x 2,52 x 0.2 = 40,42 m3
of hollow blocks
(int.): 36,2 m
36,2 x 2,52 x 0,2 = 18,25 m3
22,7 m
22,7 x 2,52 x 0,2 = 11,44 m3

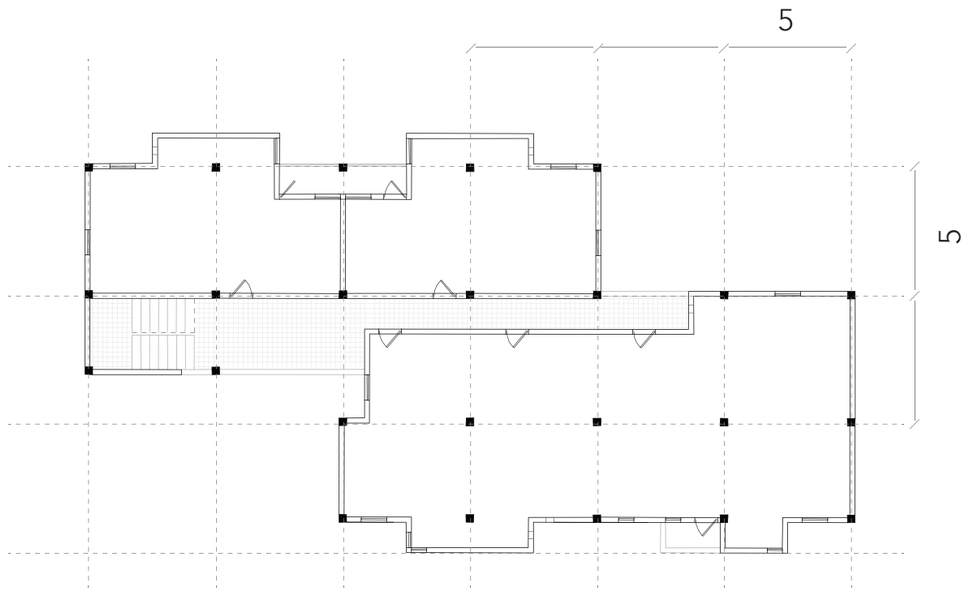
Partition walls/ panels: ?
Doors (ext.): 8
(int.): 18
Windows: S 5
M 6
L 10

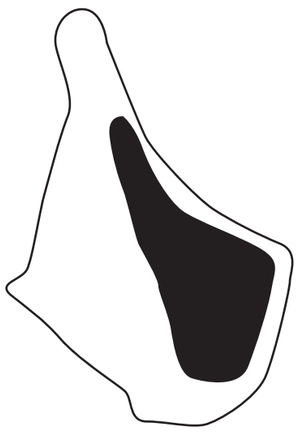
Units per floor: 5
Type of units: studio (1)
1 room app (1)
2 room app (2)
3 room app (1)
Persons p/floor: 11-16











CONDOMINIUM
large undefined spaces, lack of social facilities vs. grid

Strategy

?

What kind of structure encourages transformation and is able to absorb transformation through time and how can the costs of a such a structure, providing shelter, be diminshed?

Create a PERMANENT structure for TEMPORARY inhabitation, which can evolve with the changing housing needs of the future.

-

Create a foothold for people whom do not possess over the economic capabilities to buy or rent a dwelling (affordable housing)

-

Assist them towards permanent housing elsewhere in the city, as this is already being provided

-

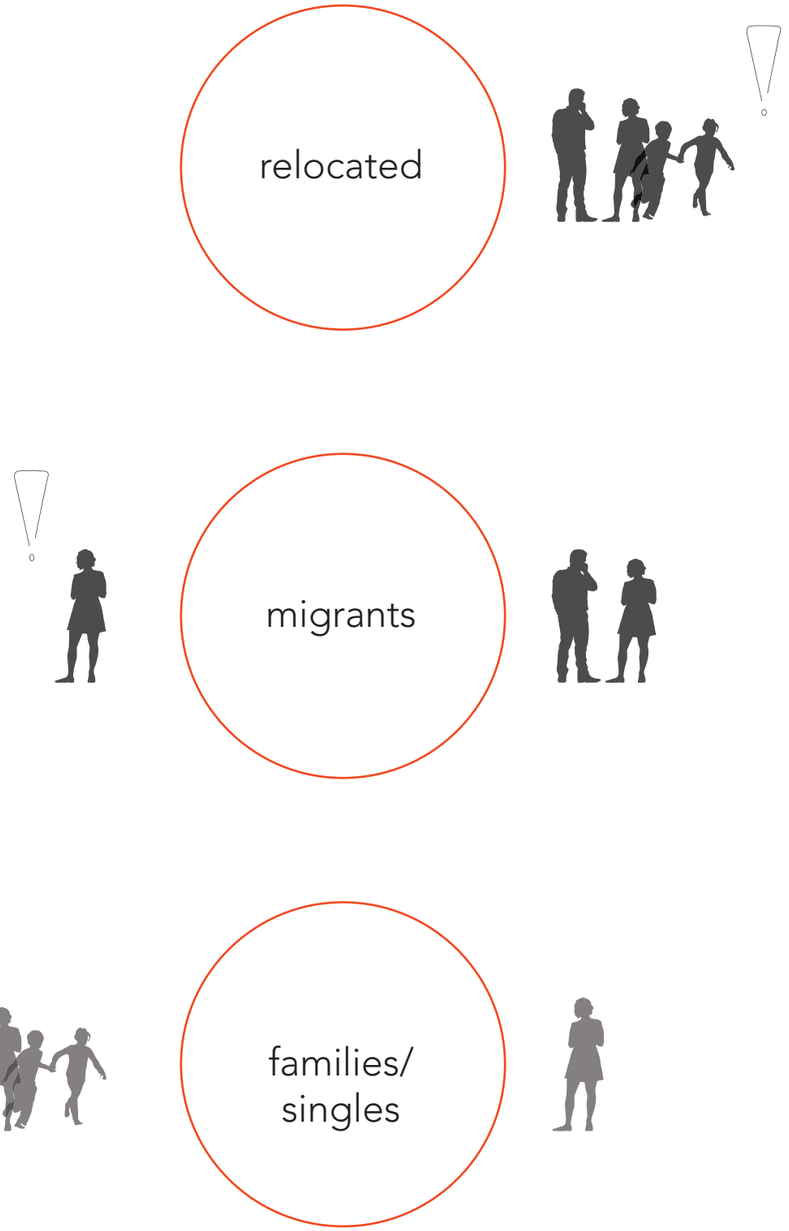
Deal with ‘unfinished’ places in the existing urban fabric

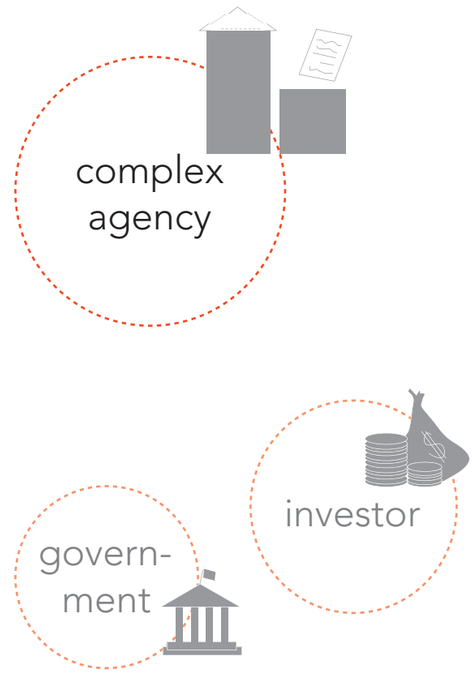
-

Create a structure that can evolve through time

-

Create a sustainable model concerning cheap and temporary housing which is still attractive to invest in



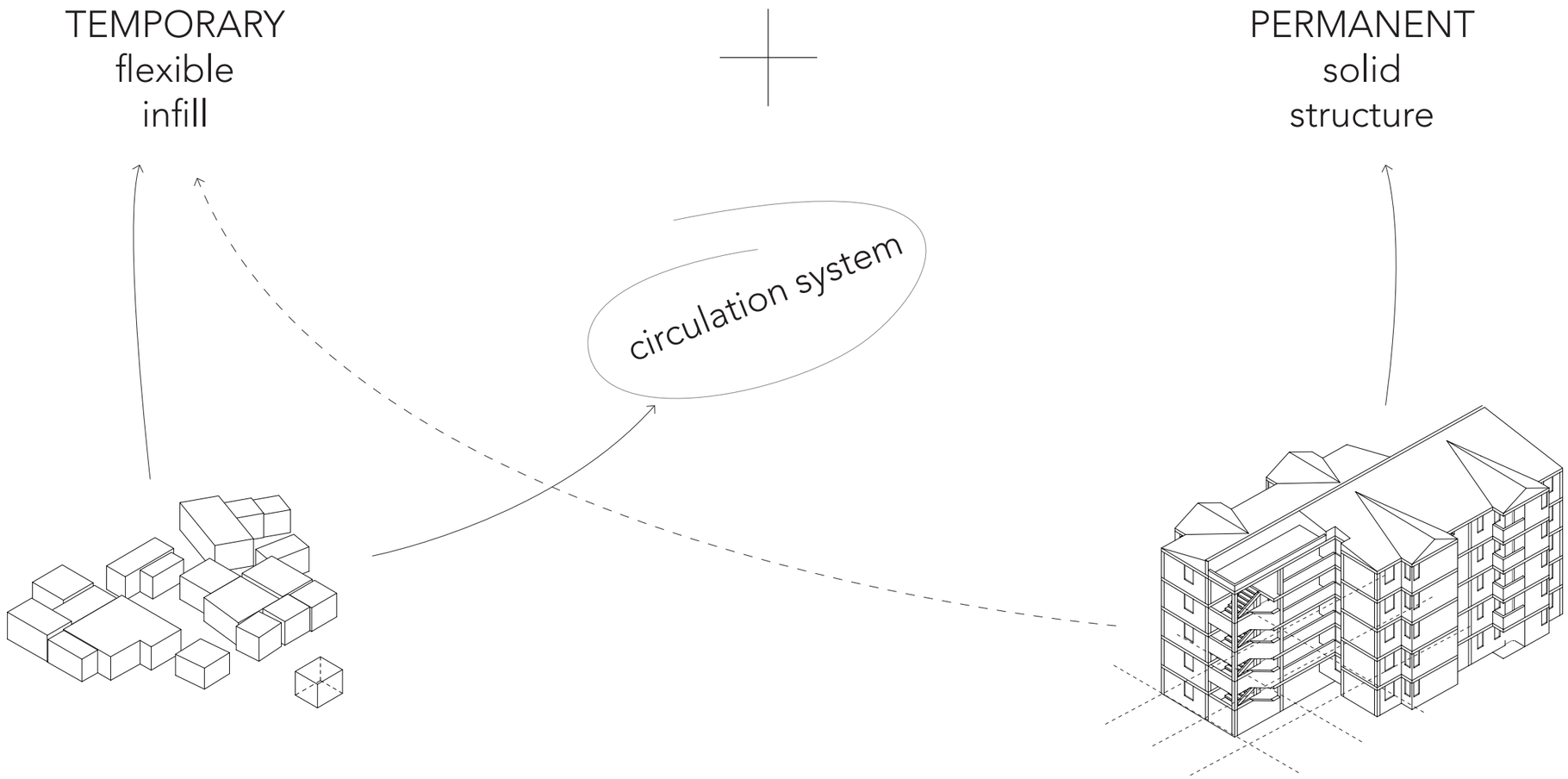


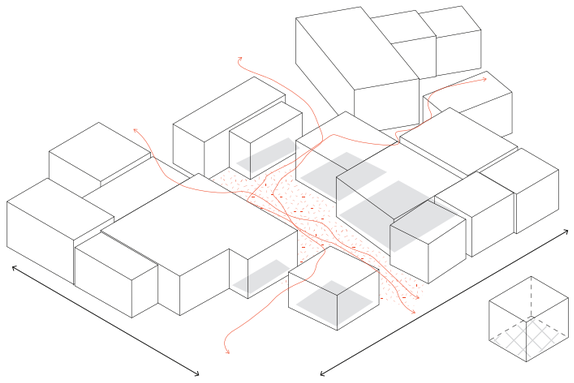
WHO are in need of this temporary housing, now and in the future?
Different social groups in various phases, with different needs

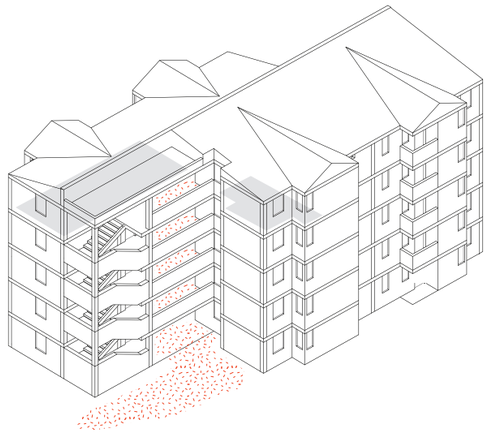
Hierarchy of SHARED facilities;
created by:

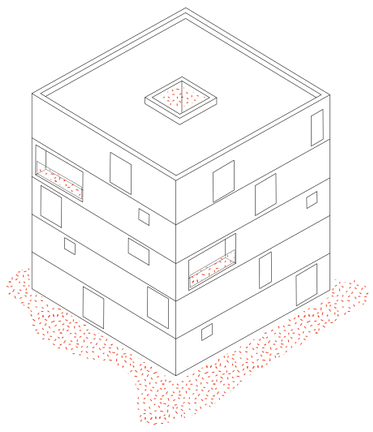
TEMPORARY
flexible
infill

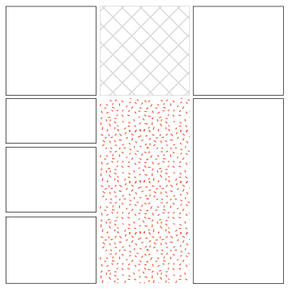
PERMANENT
solid
structure

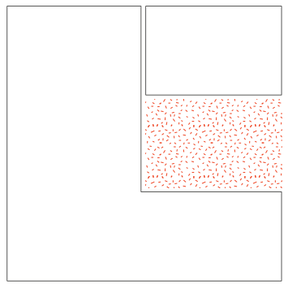


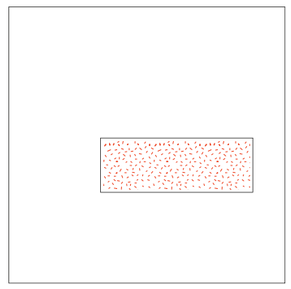


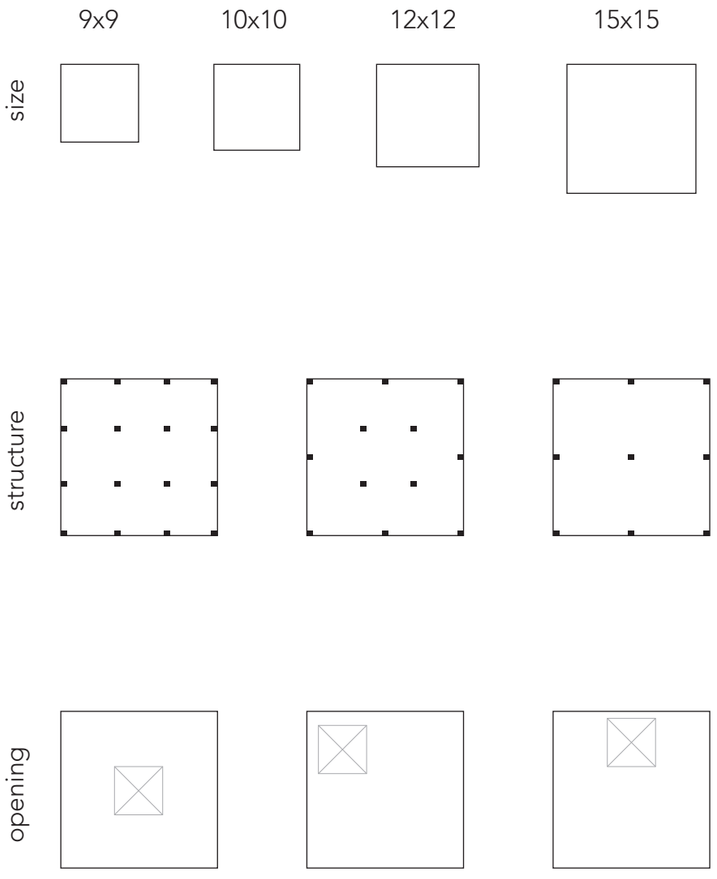


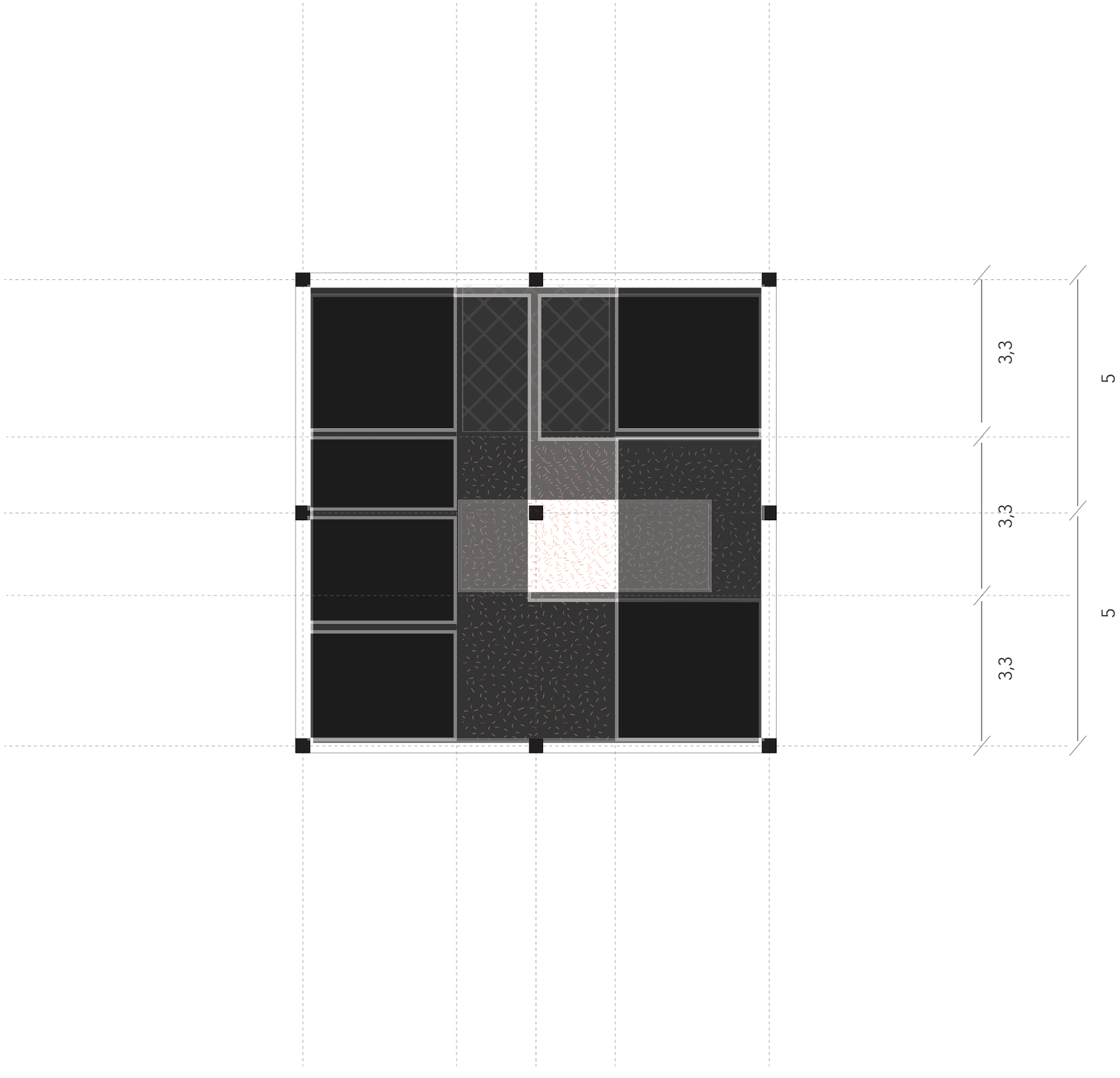


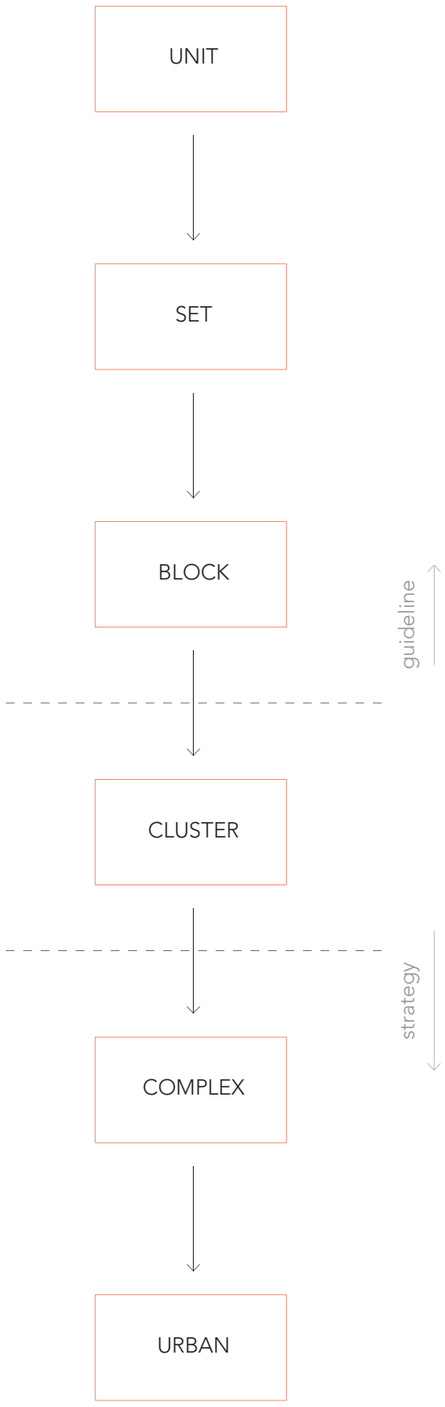




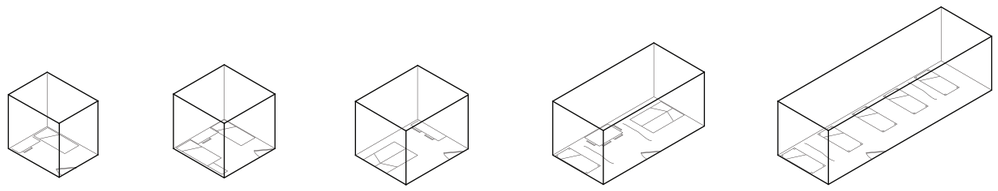


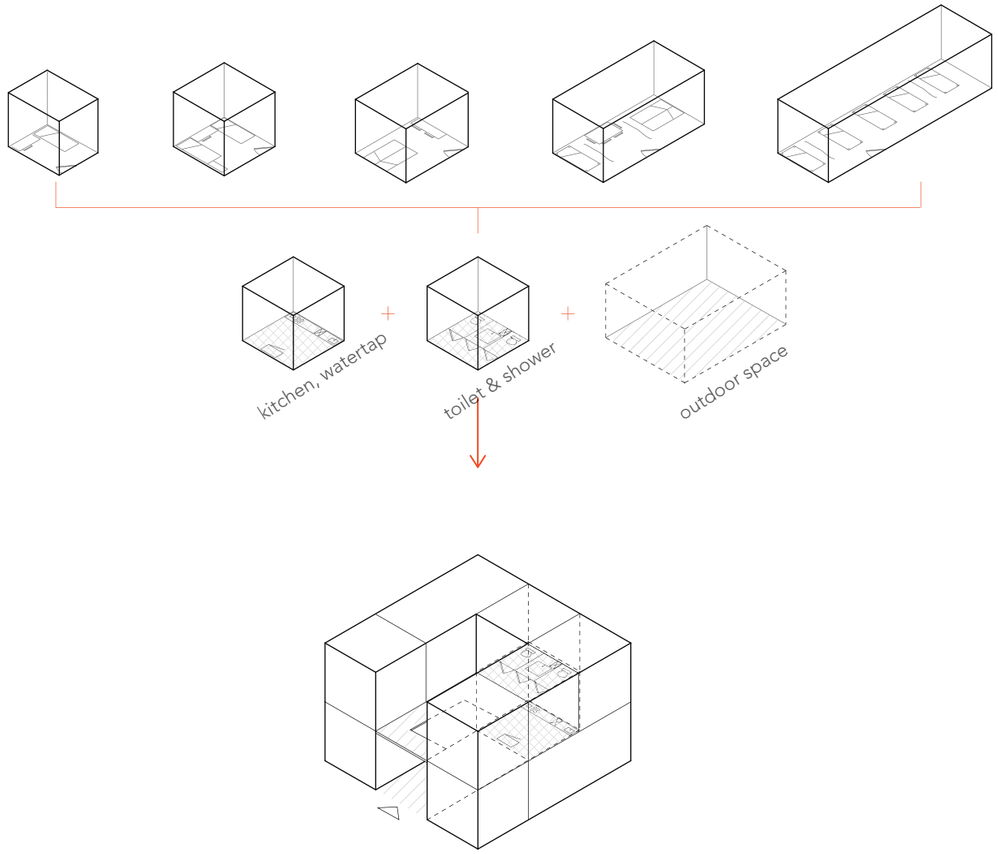

9x9
10x10
12x12
15x15
size
structure
opening


3,3
3,3
3,3
5
5

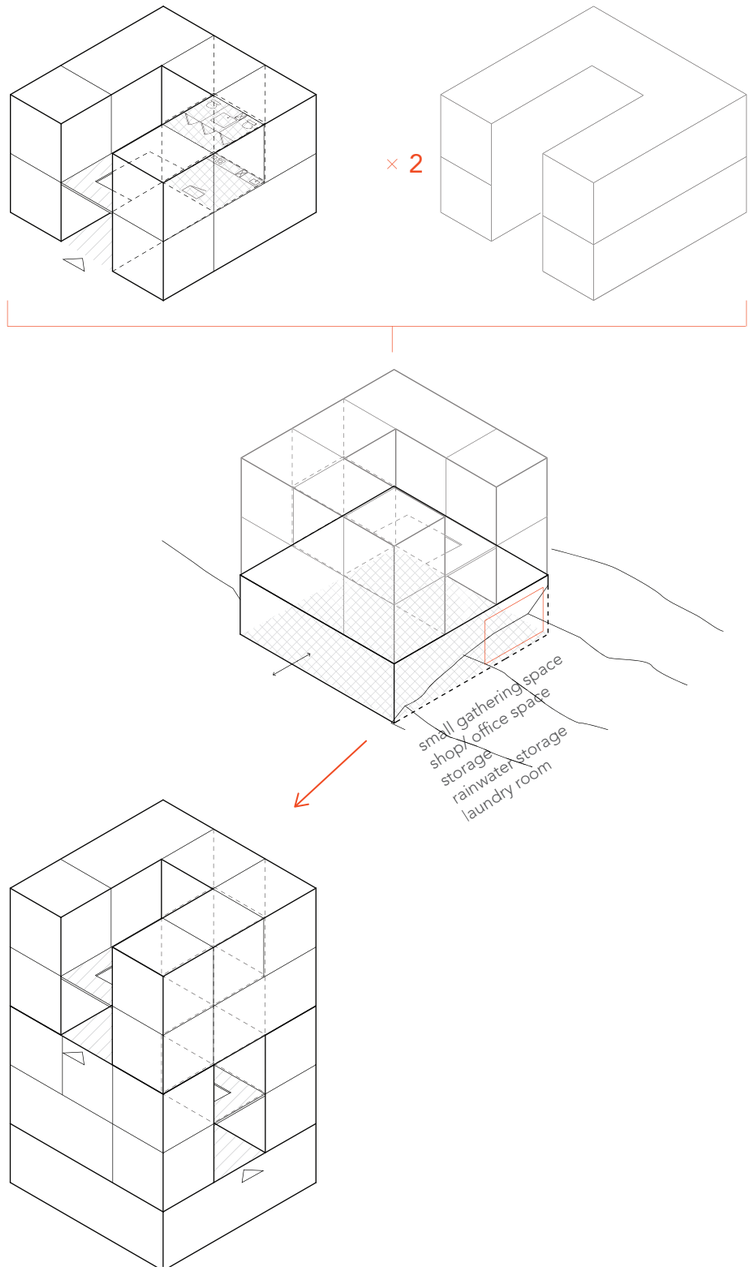


HIERARCHY OF SHARED FACILITIES

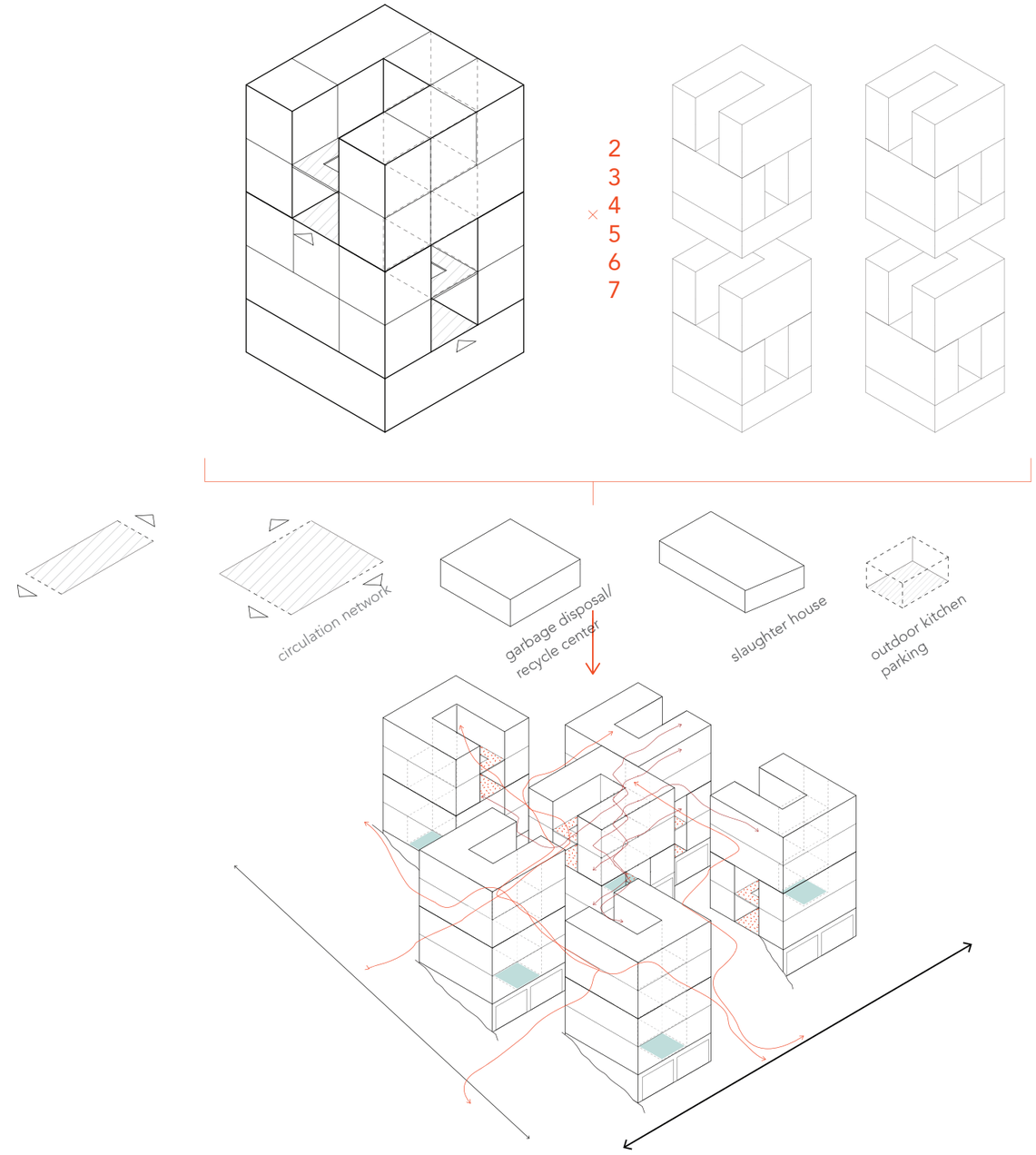




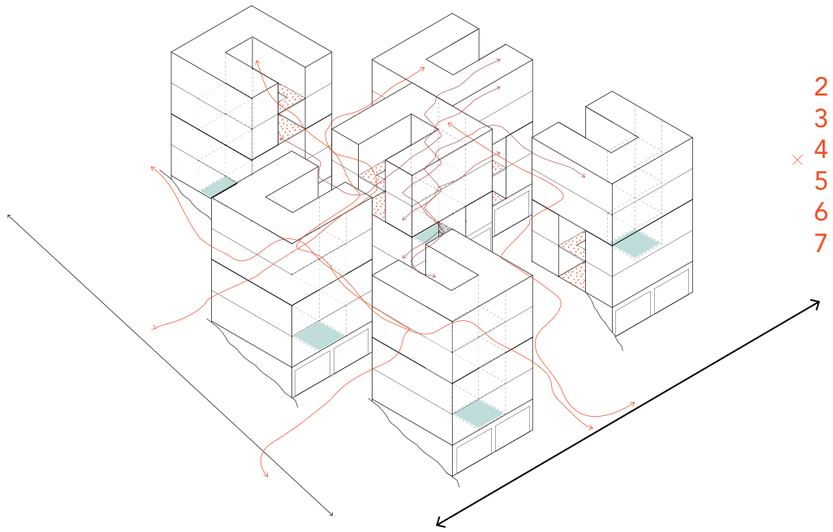
SET


× 2
small gathering space
shop/ office space
storage
rainwater storage
laundry room

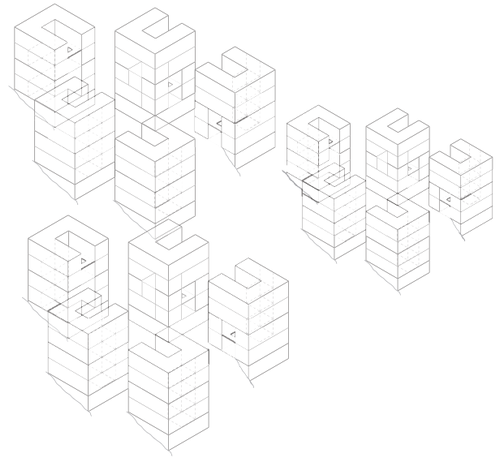
BLOCK

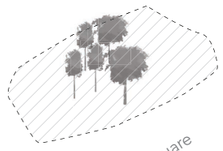

2
3
4
5
6
7
circulation network
garbage disposal/
recycle center
slaughter house
outdoor kitchen
parking
outdoor public area
playground

CLUSTER

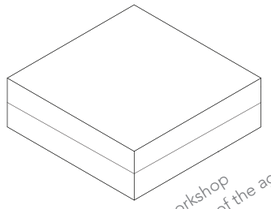


2
3
4
5
6
7

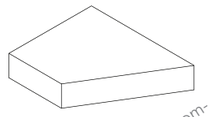




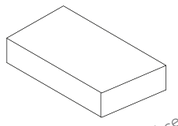
large public square
market area



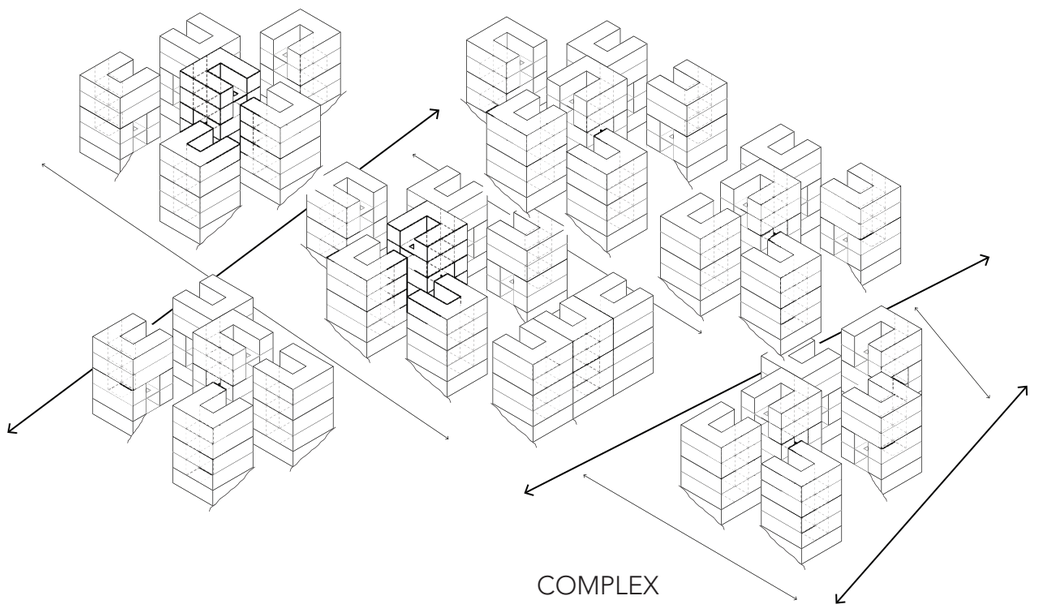
workshop
office of the agency



large indoor com-
munity centre
clinic



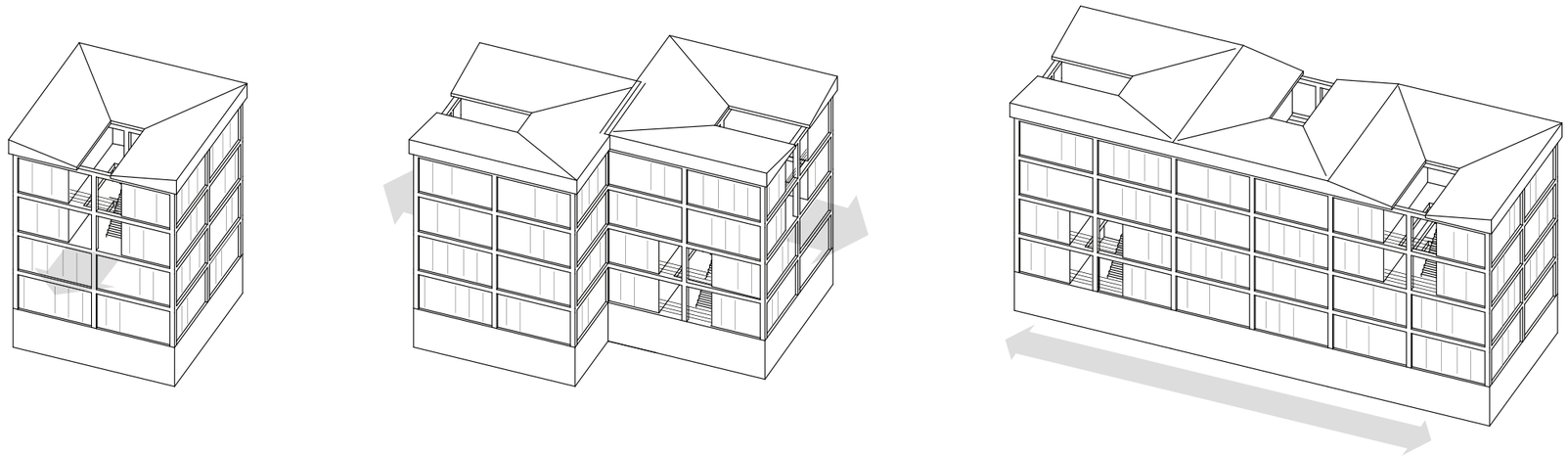
educational centre
kindergarten



COMPLEX

load bearing
CONSTRUCTION
0,284 m3 concrete
per m2

FACADE
0,612 m2 ext. facade
per m2



the single block/
parasite

106,1 m2
4-7 1-2
units per floor

load bearing
CONSTRUCTION
0,281 m3 concrete per
m2

FACADE
0,821 m2 ext. facade per
m2

the interconnected block

210,5 m2
8-14 2-4
units per floor

load bearing
CONSTRUCTION
0,288 m3 concrete per
m2

FACADE
0,691 m2 ext. facade per
m2

the slab

312,1 m2
10-17 3-6
units per floor

load bearing
CONSTRUCTION
0,289 m3 concrete per
m2

FACADE
0,51 m2 ext. facade per
m2

THREE BLOCK TYPES

How is the transient strategy applied in the case of the Basha Wolde Chilot?!

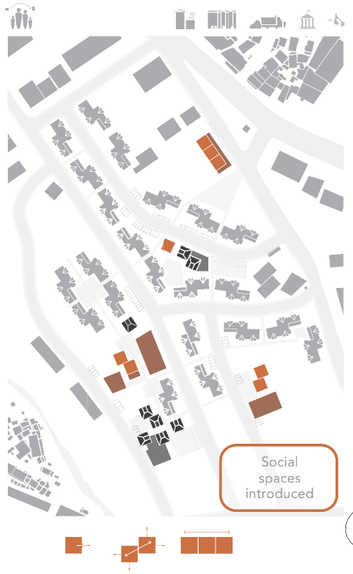
Design proposal

COMPLEX
Design principles

2017

73 Un/h

2018



84,4 Un/h

2019

120 Un/h

2022

156,8 Un/h

2025

216 Un/h

2028

265 Un/h

2032

300 Un/h

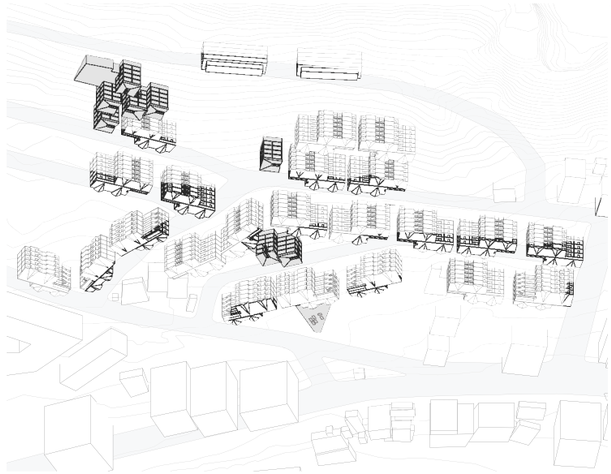
2038

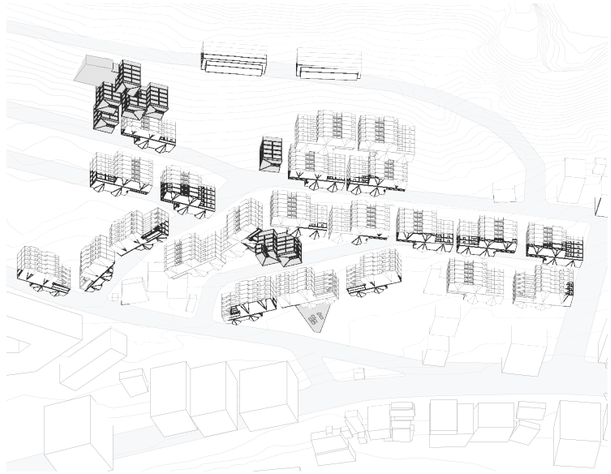
284 Un/h

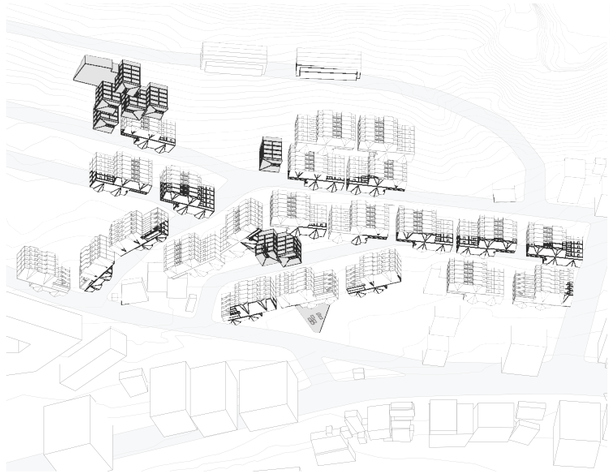
2043

266,2 Un/h

the blocks on their own can reach a density of ***600 Un/h***


2043


2038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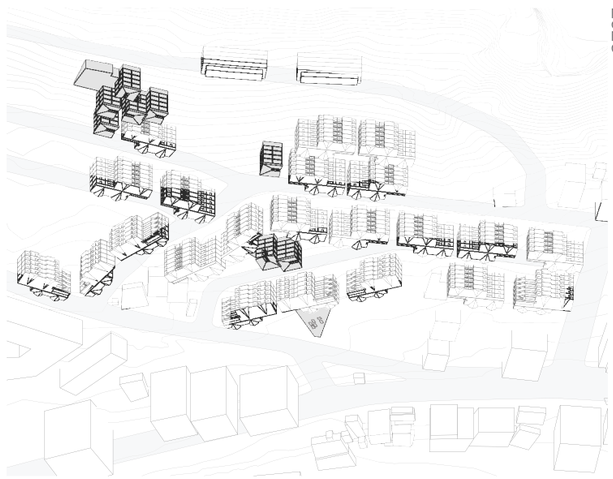
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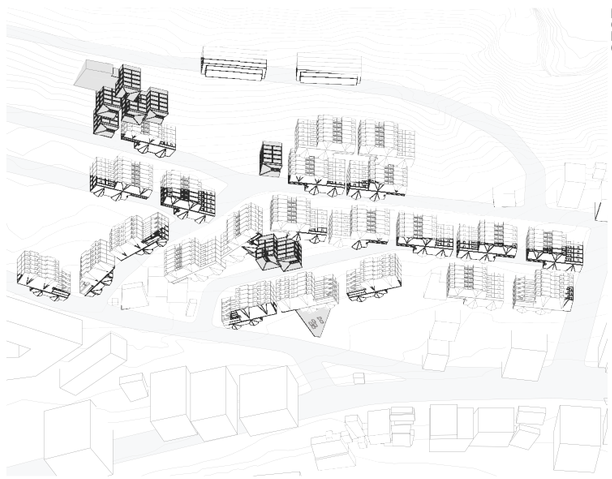
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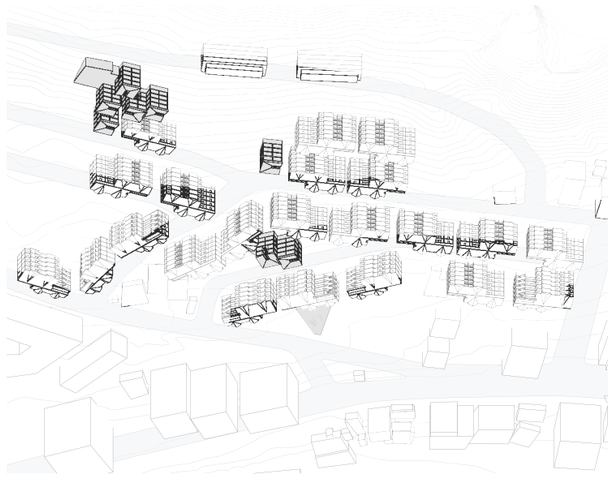
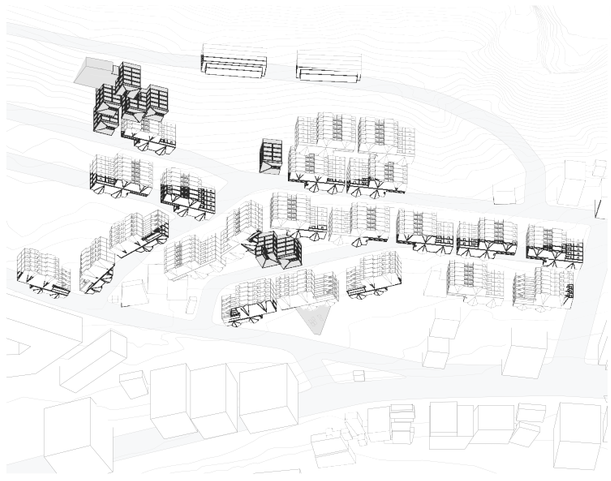
2022


2019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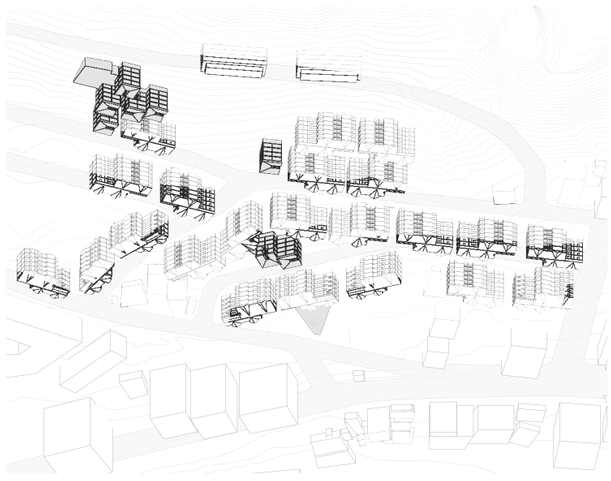
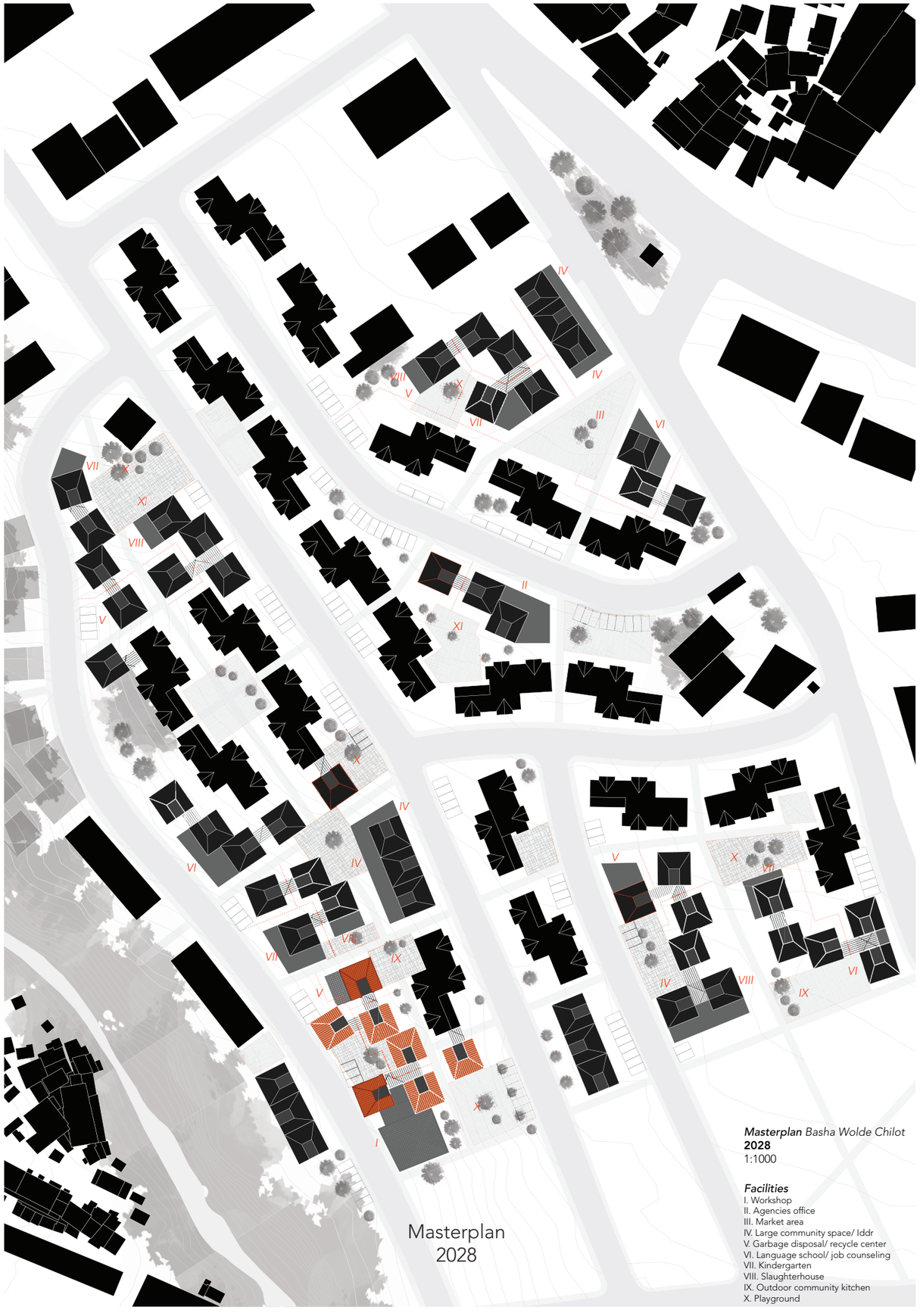
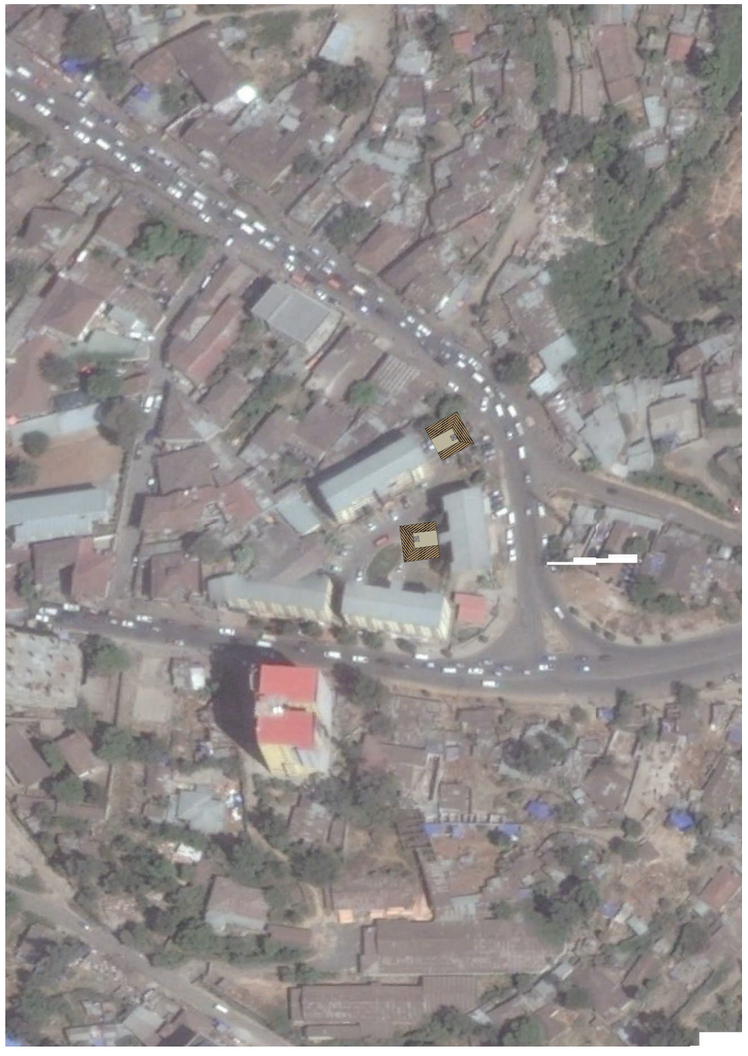

2017

2028

265 Un/h


Masterplan
2028
Masterplan *Basha Wolde Chilot*
2028
1:1000
Facilities
I. Workshop
II. Agencies office
III. Market area
IV. Large community space/ Iddr
V. Garbage disposal/ recycle center
VI. Language school/ job counseling
VII. Kindergarten
VIII. Slaughterhouse
IX. Outdoor community kitchen
X. Playground

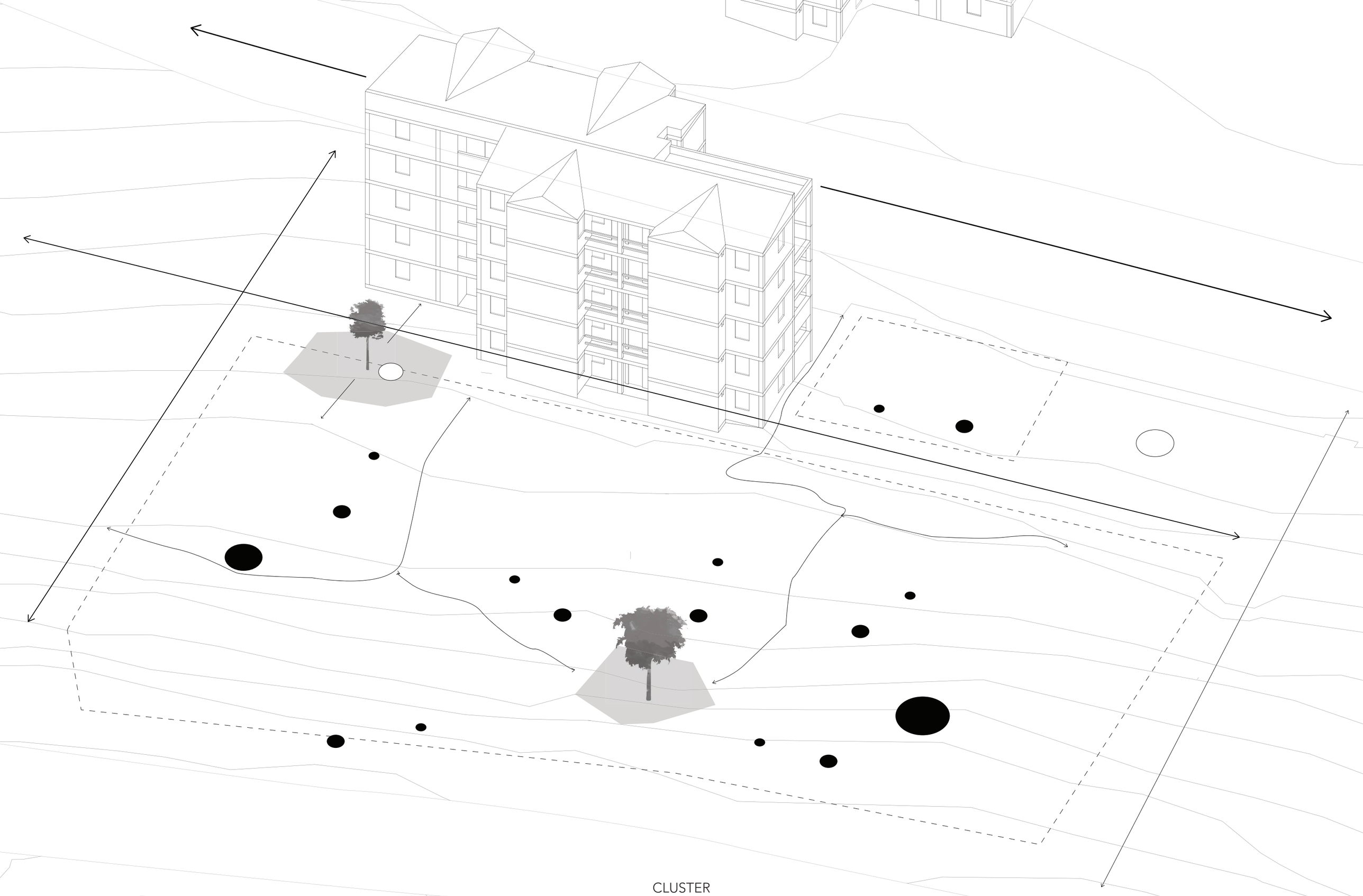


KEY BAHIR
The single block implemented as a single unit leeching of the existing condominium blocks.

SERATEGNA SEFER
The block implemented as a cluster could be used to densify the area and to function as a site for people which have less financial abilities to move when the complete area will be redeveloped.

PHERIPHERY ADDIS
The block could be implemented as a cluster in large open areas or ‘unfinished’ spaces.

The strategy on other locations



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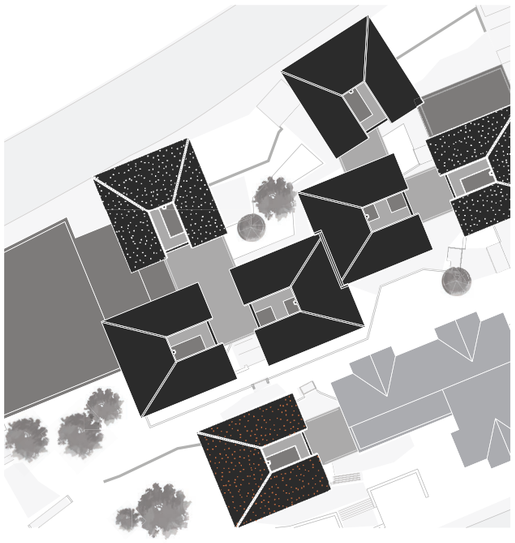

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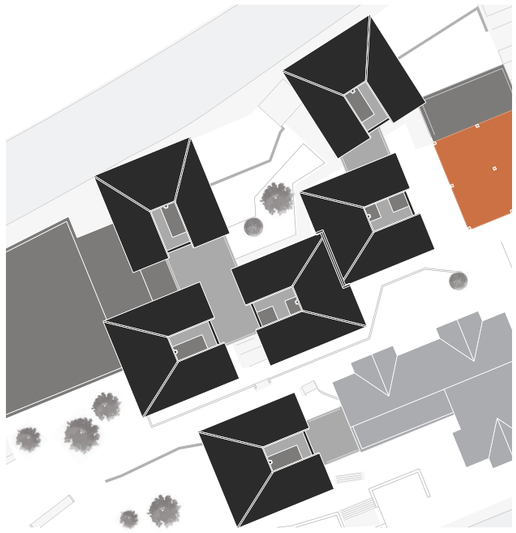
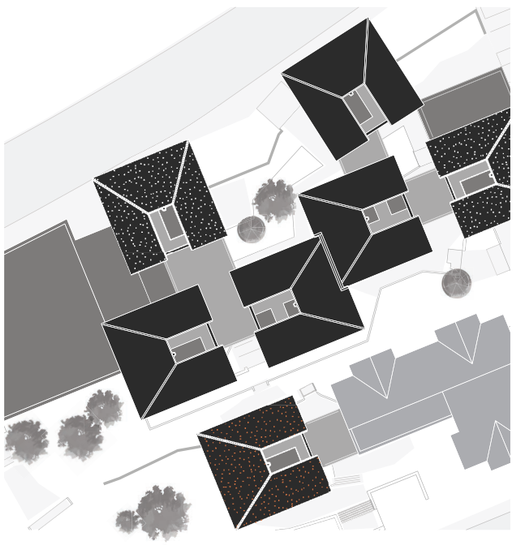


2017

2038



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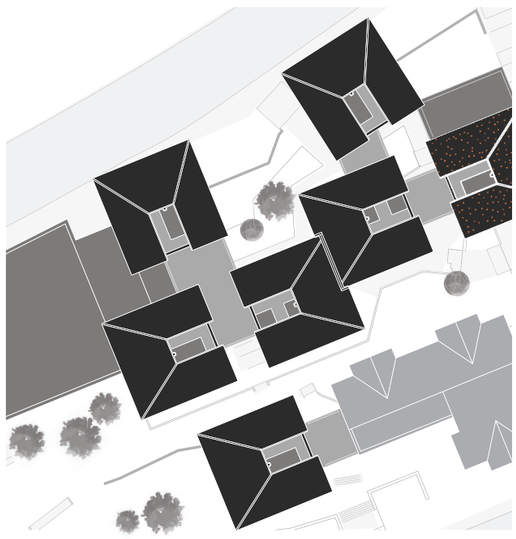

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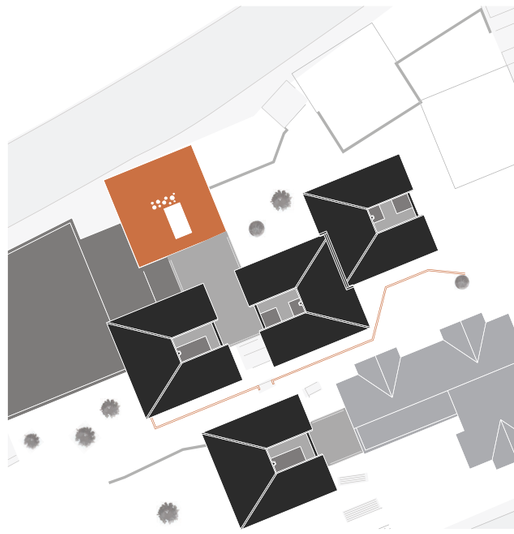

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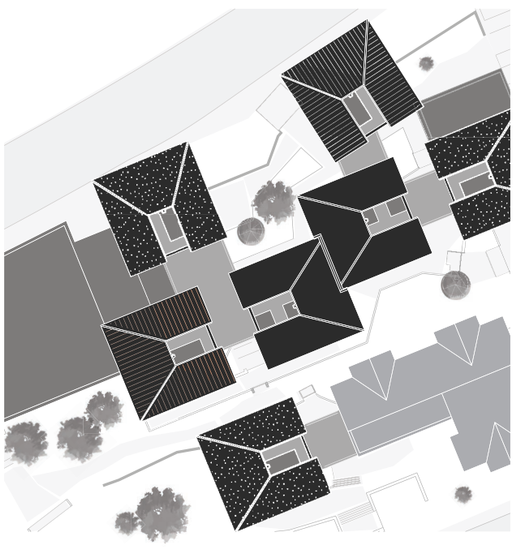

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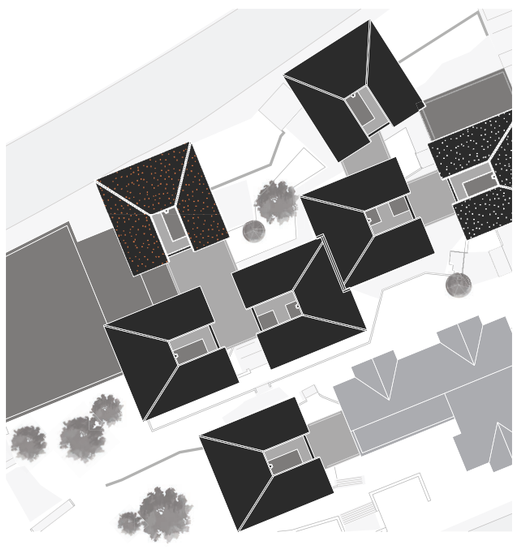

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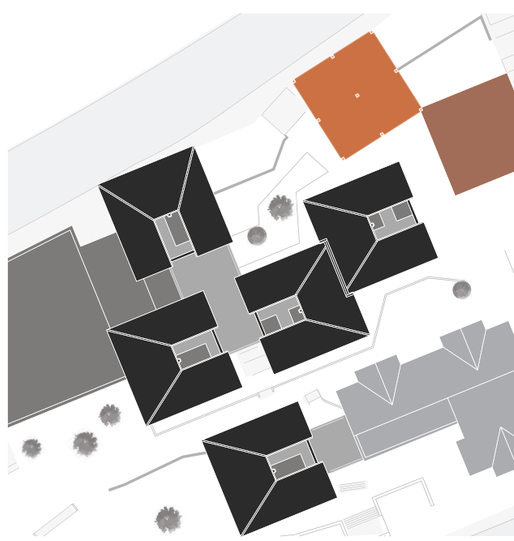
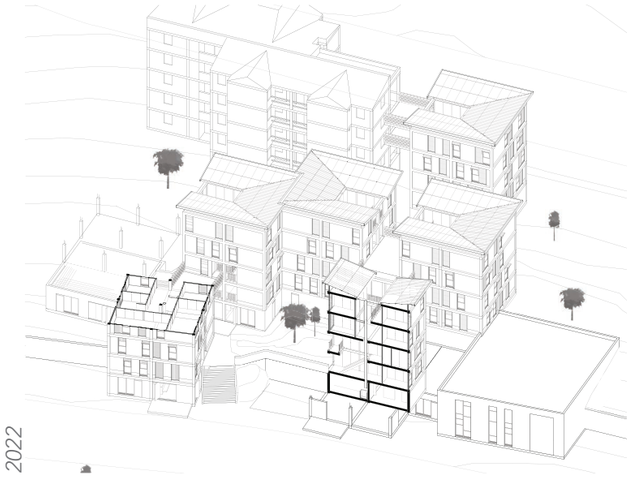



2017


2018


2019

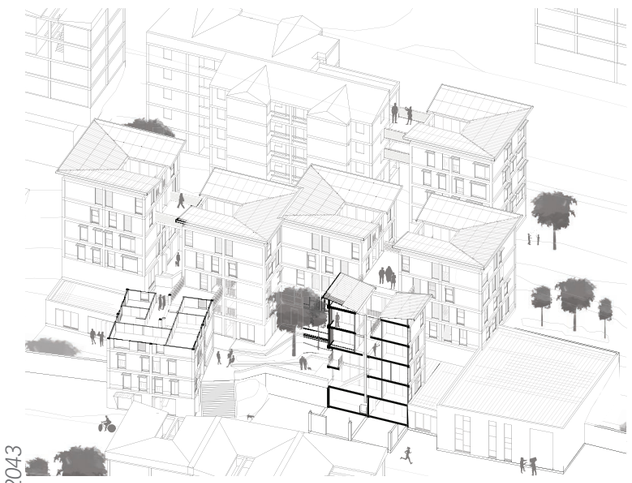

2022


2025


2028


2032


2038


2043

2043

CLUSTER
Circulation

Clusterplan
2043

Cluster *- Level 4*
1:200

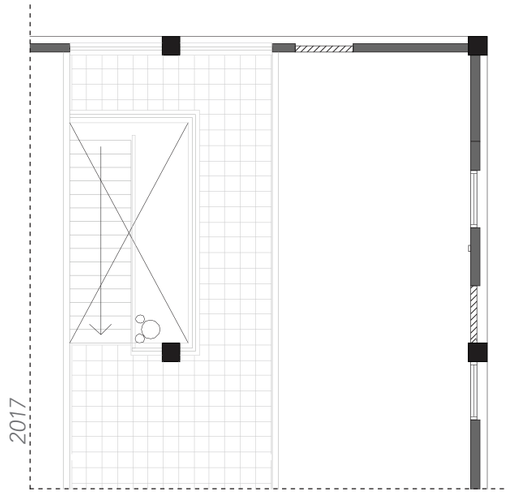
Clusterplan
backbone

***Cluster** - Level 4*
1:200

CLUSTER
Climate

CLUSTER
Climate

BLOCK
Design principles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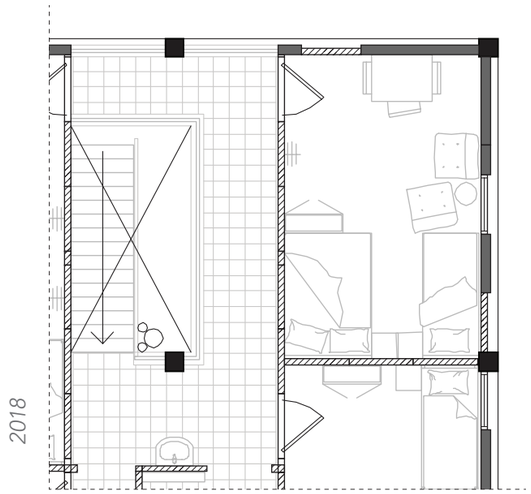
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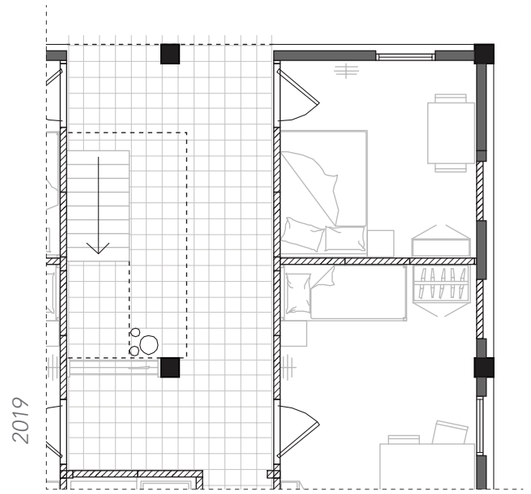
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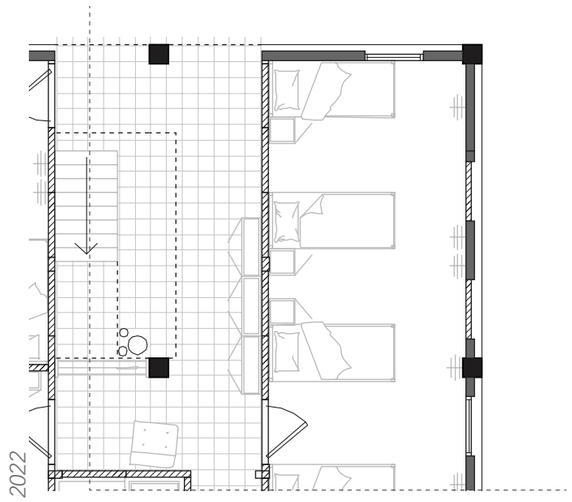
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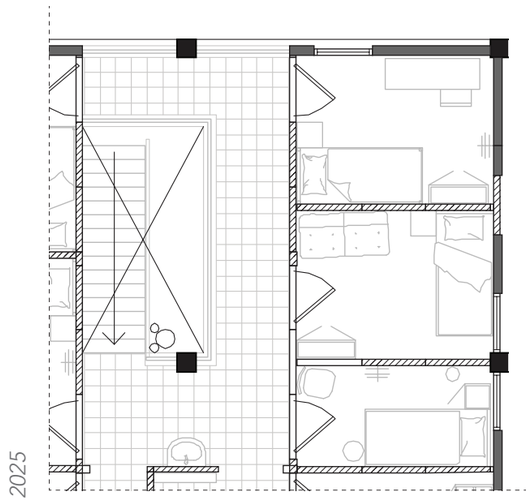
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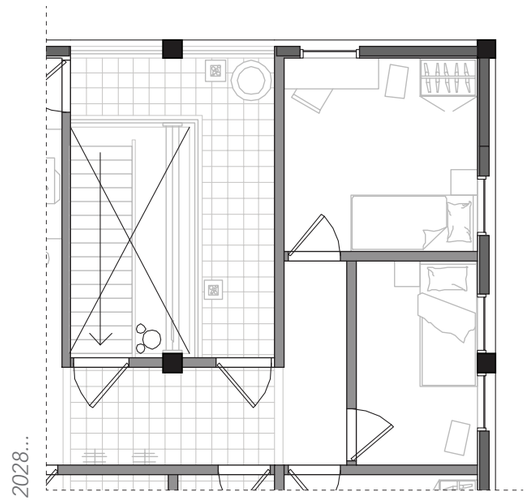
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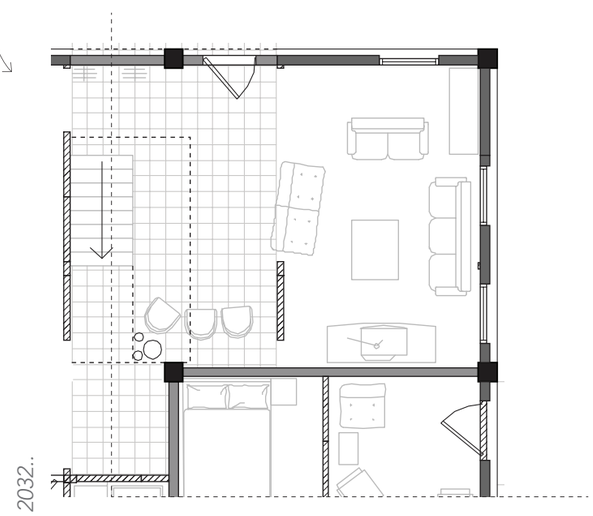
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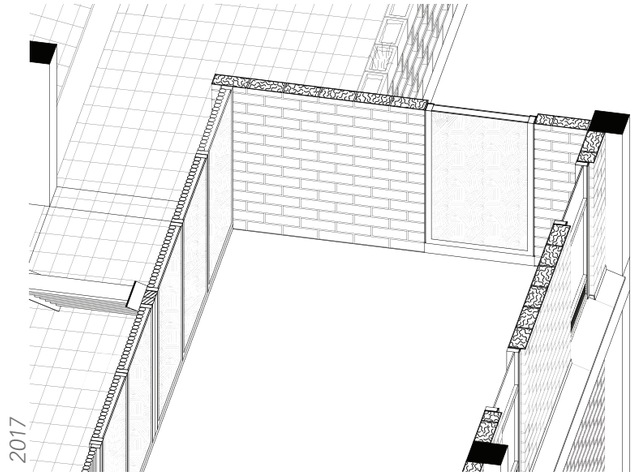
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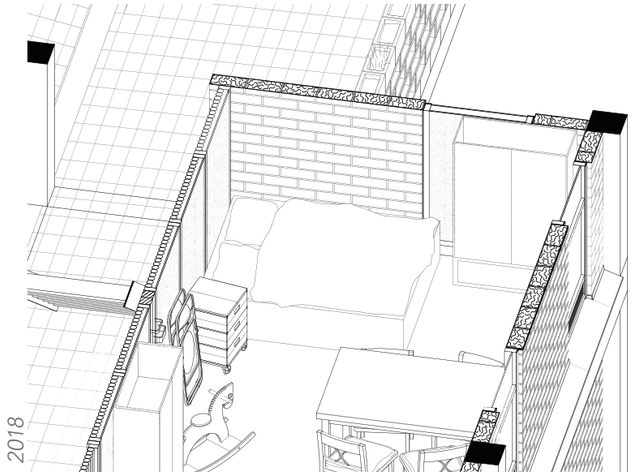
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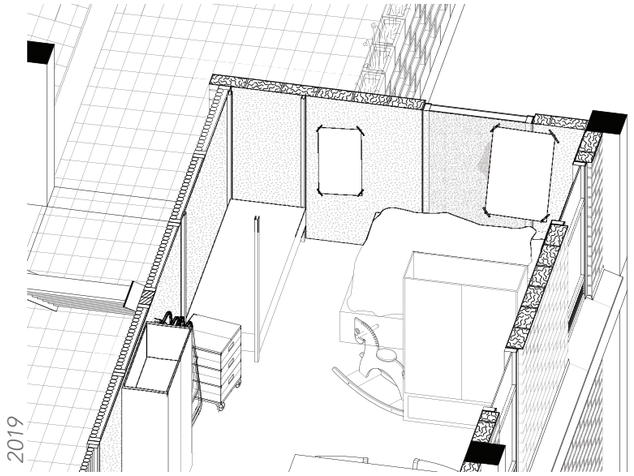
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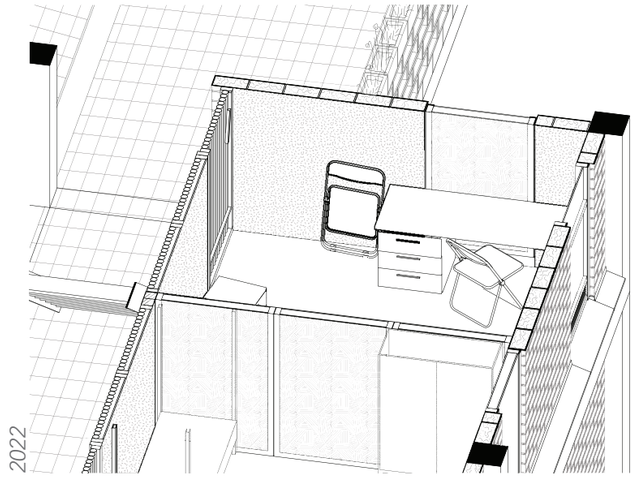
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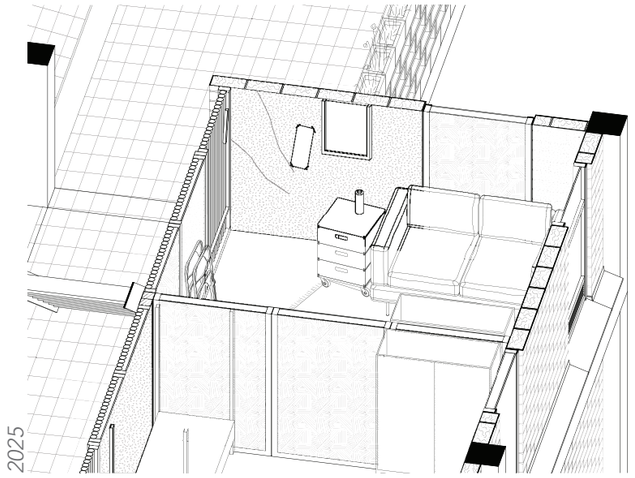
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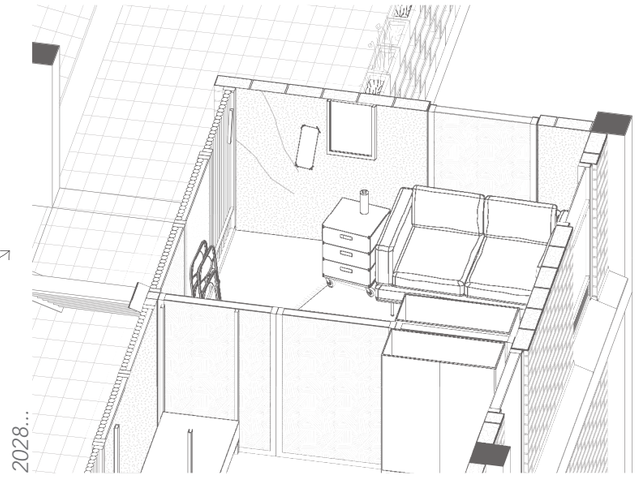
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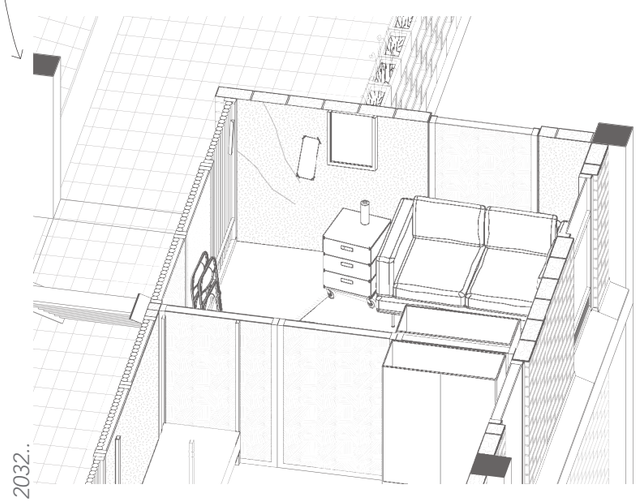
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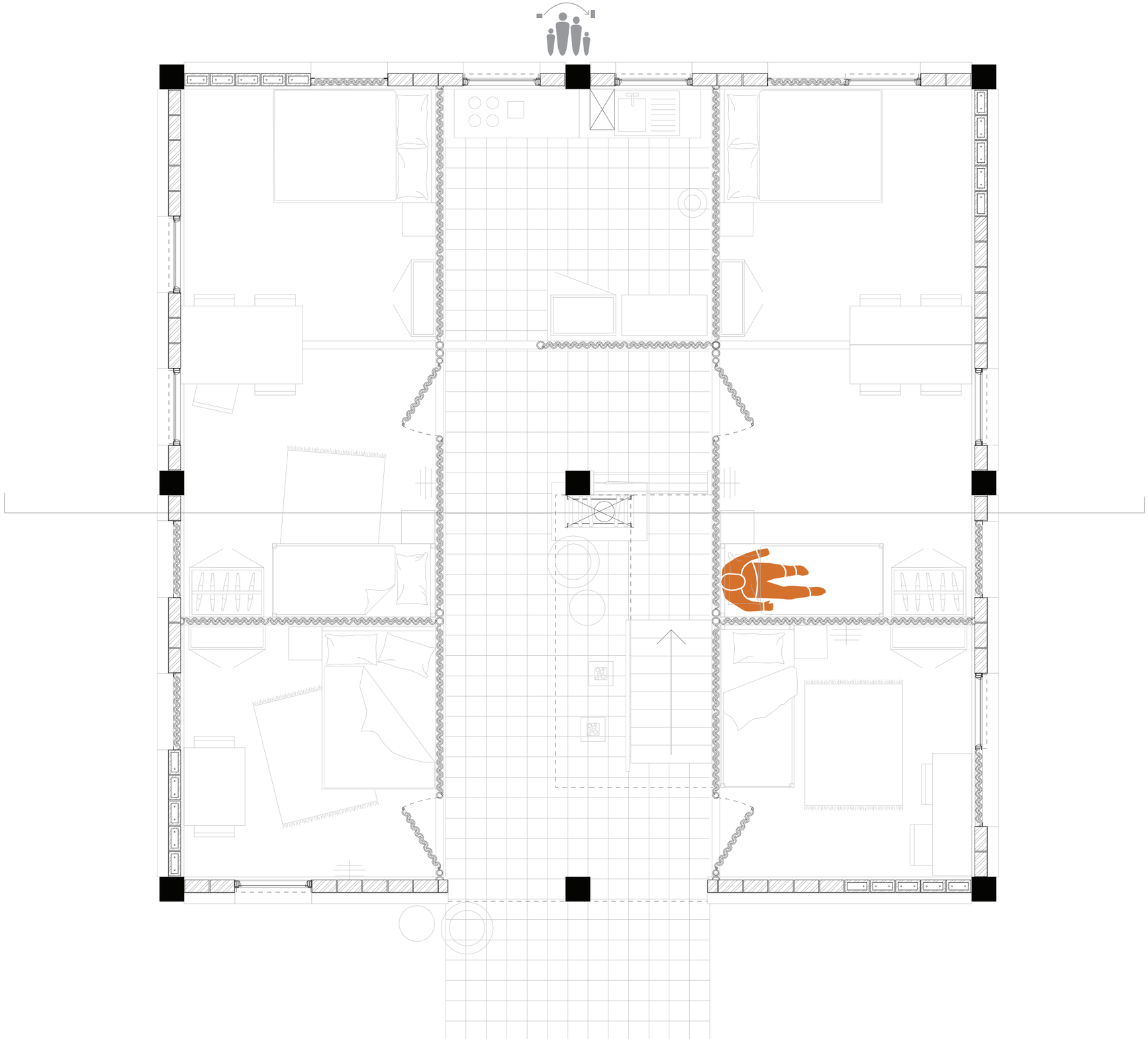
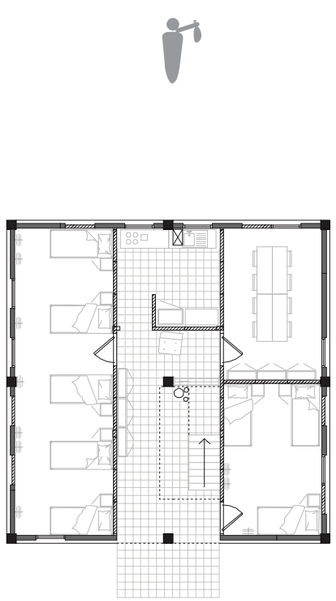
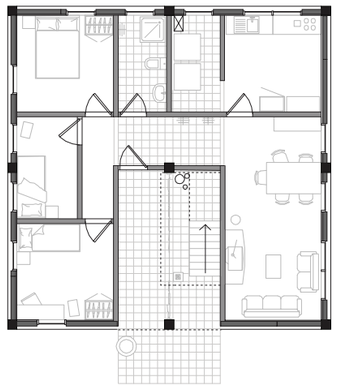
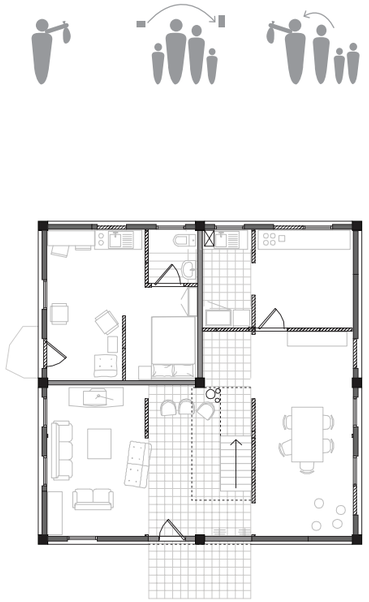


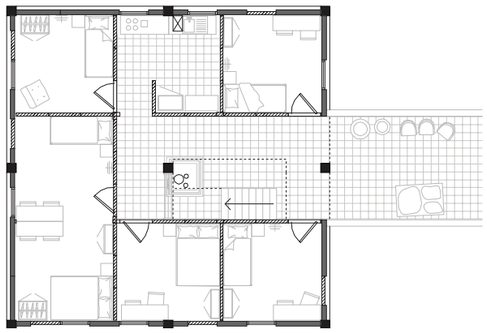
BLOCK
Floorplan 2018

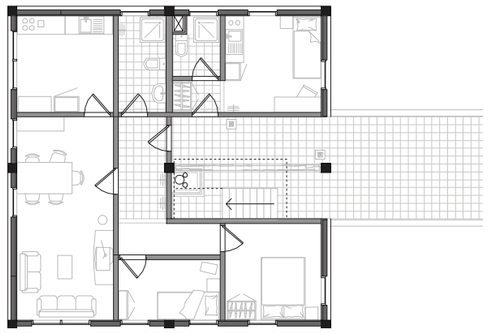


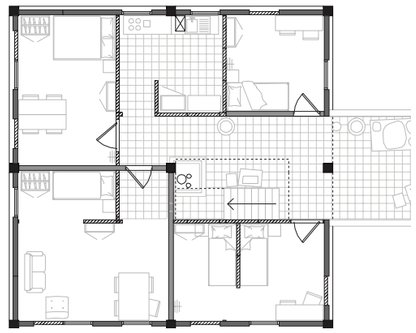




BLOCK
Transformation







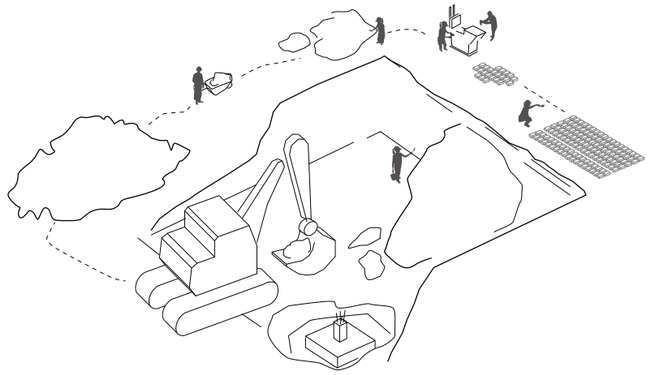
BLOCK
Transformation

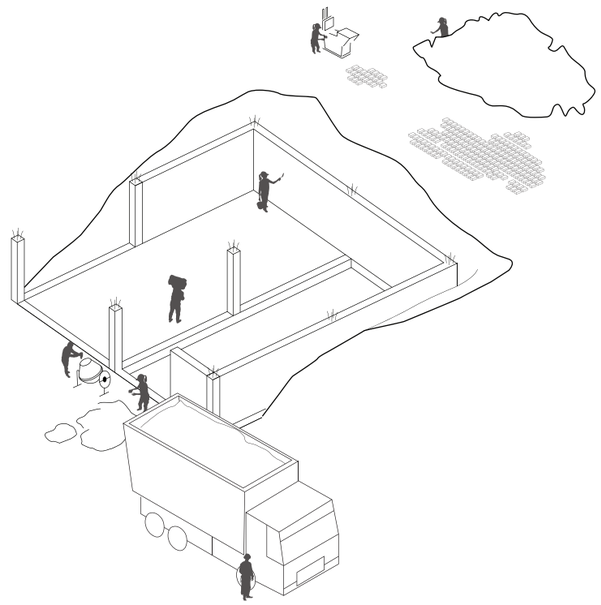
BLOCK
Elevation 1

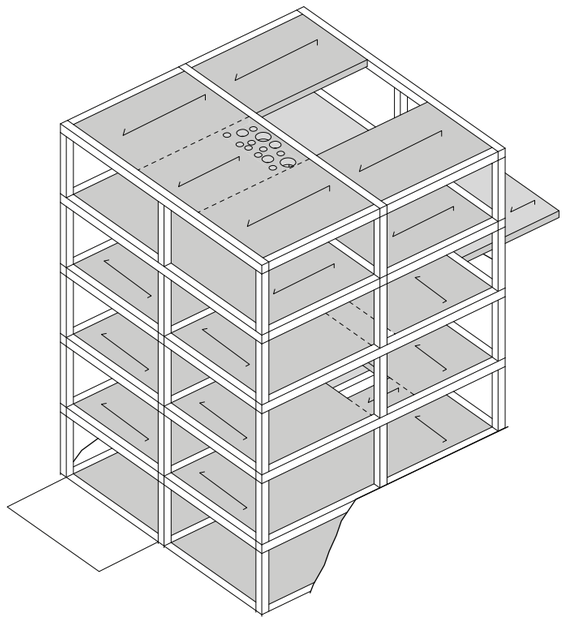
BLOCK
Elevation 1

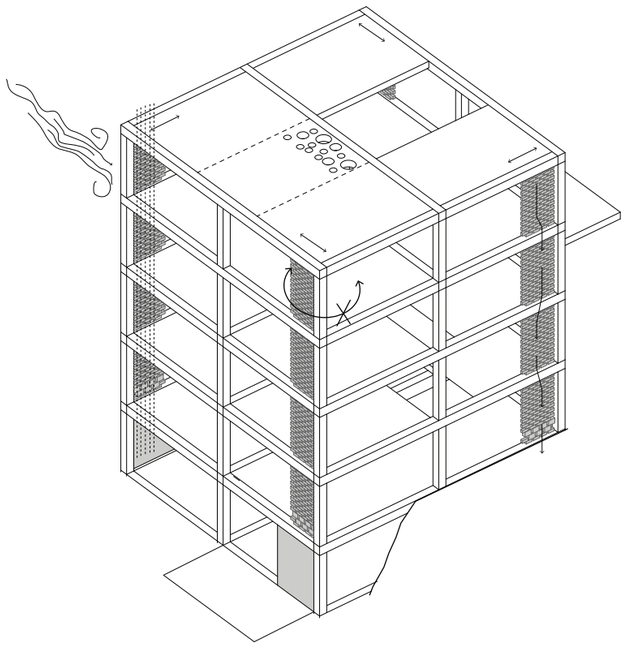
BLOCK
Elevation 1

BLOCK
Elevation 1

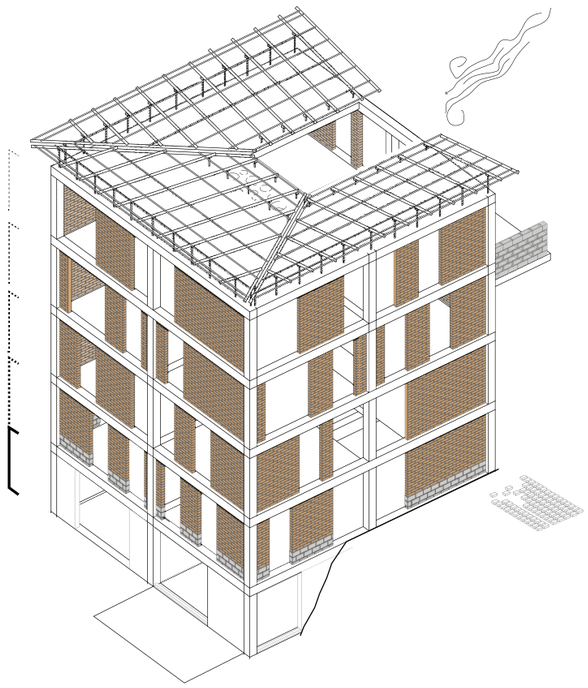


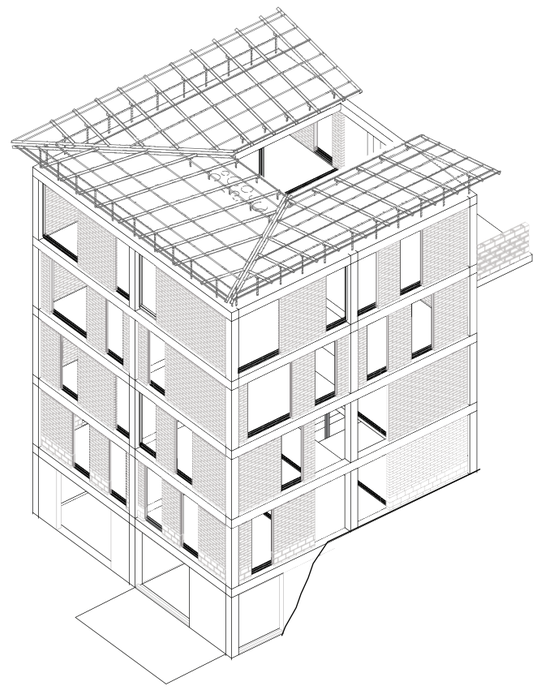




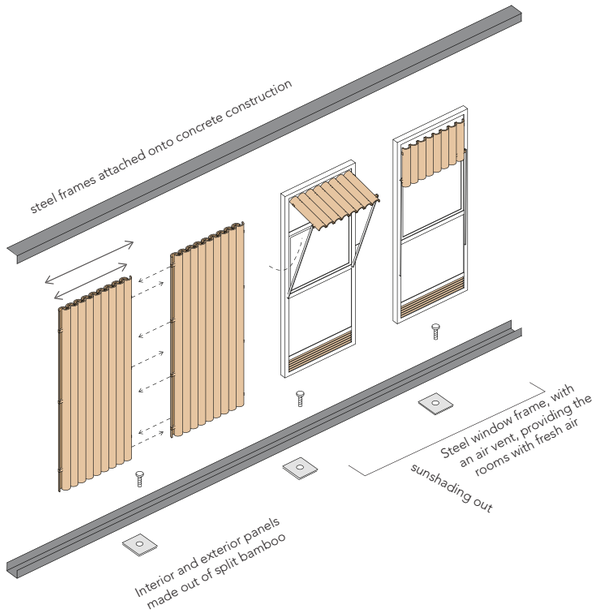


The block is built floor by floor, to diminish extra costs of large machines

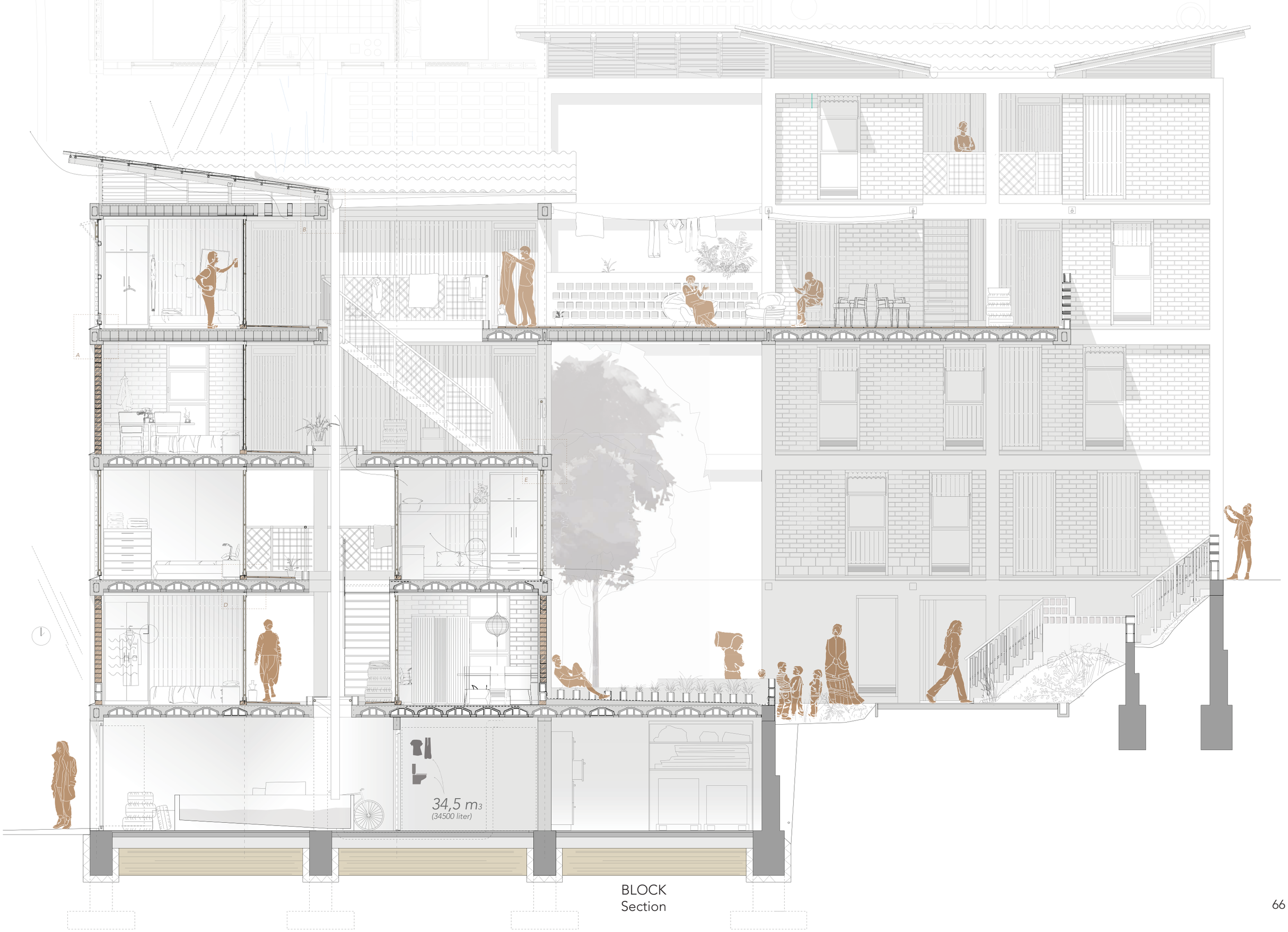




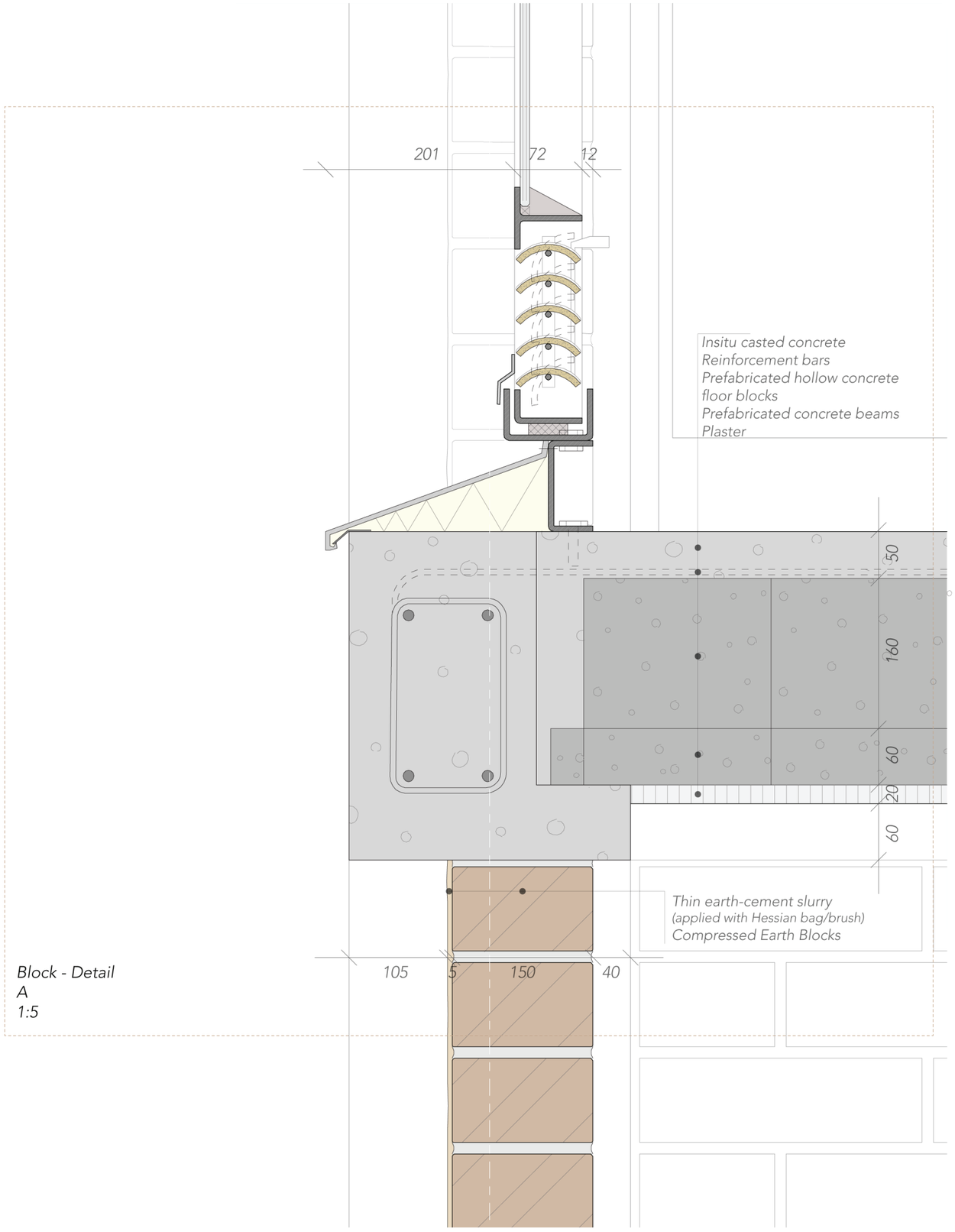
Steel frames; the connection between permanent and temporal



Flexible infill; panels future transition

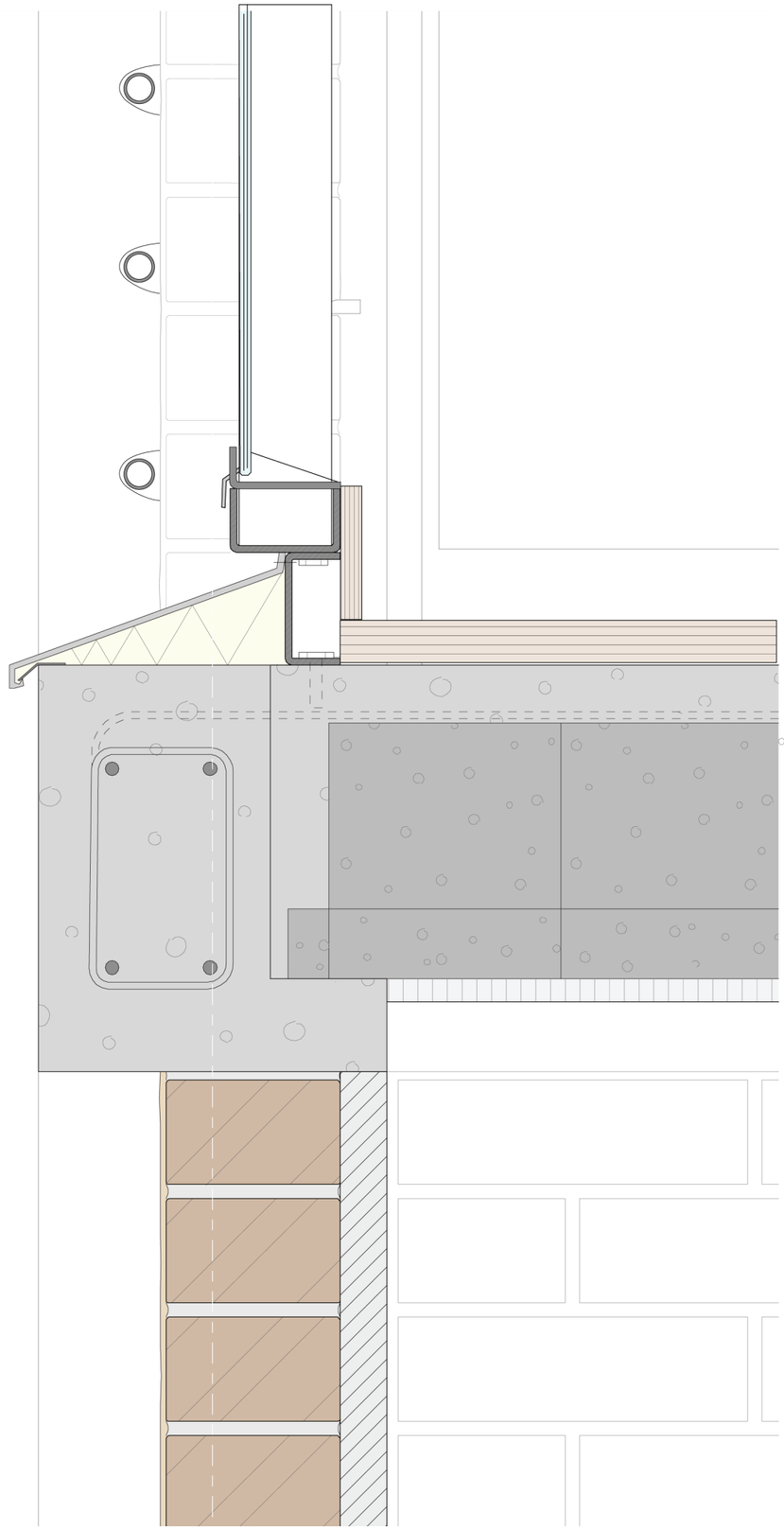


BLOCK
Section



Block - Detail
A
1:5

BLOCK
Detail

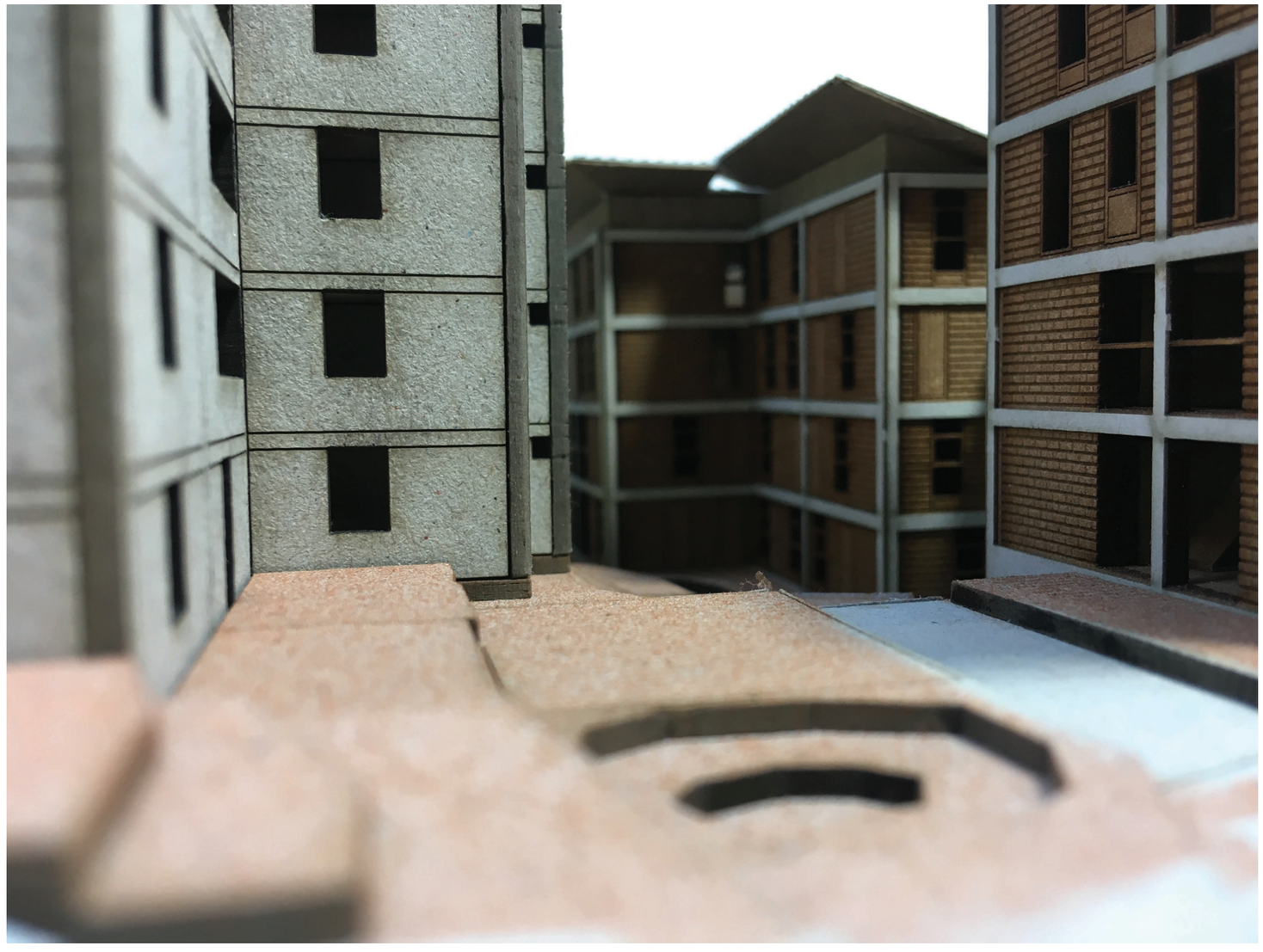


BLOCK
Detail; future scenario

IMPRESSION
set, shared facilities

IMPRESSION
block; network

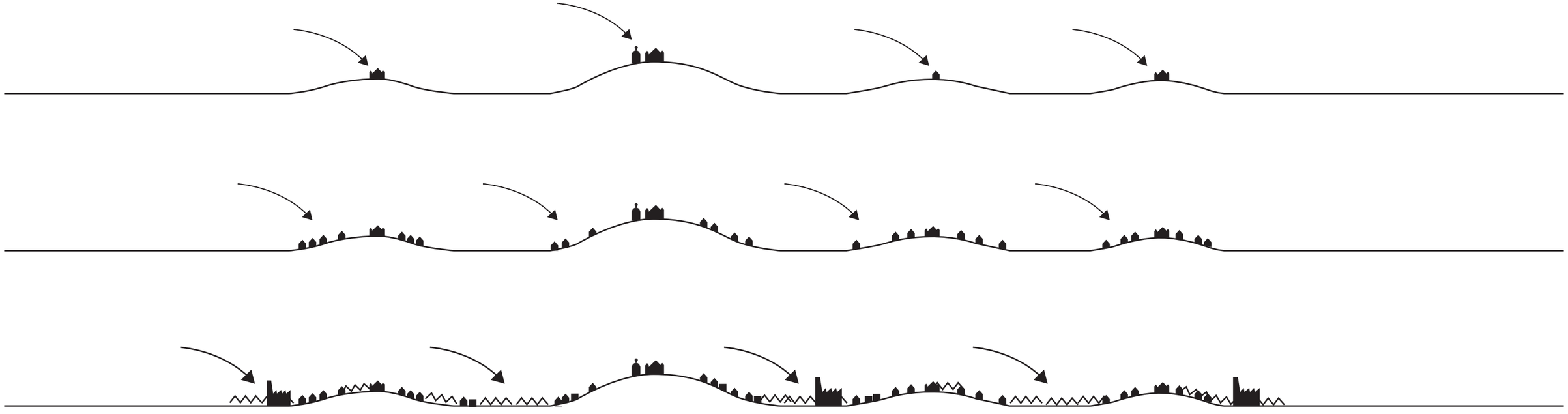
IMPRESSION
block; network



IMPRESSION
cluster; square

TRANSFORMATION
Scenario 1

To conclude



SHARING

SIMPLICITY

NETWORK