Inclusive
Re-densification of the city center of Addis Ababa

Dwelling Graduation Studio: Global Housing - Cross-cultural Methods and Positions
TUDelft - Juan Camilo Arboleda Gomez - June - 2015
“...Affordable urban housing is not an isolated problem - it is the product of an equation that includes at least two other crucial parameters: job location and available transport (infrastructure)...”

- Charles Correa
- Capital city of Ethiopia
- Capital of Africa
- 530 km²
- Elevation: 2355m
- 4'000,000 inhabitants aprox.
- World’s fastest growing economy (WB)
Top-Down Administrative Institutions

Bottom-Up Administrative Institutions

ADDIS ABABA (Charter City)

SUB-CITIES (Districts)

KEBELE (Neighborhood)
Iddir

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ADDIS ABABA
(Charter City)
SUB-CITIES
KEBELE (Neighborhood)
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Informal Settlements (70% in the city center)
- Capital city of Ethiopia
- Capital of Africa
- 530 km²
- Elevation: 2355m
- 4,000,000 inhabitants aprox.
- World’s fastest growing economy (WB)
2 times its size every decade (UN)

80 %
Informal Settlements
(70% in the city center)

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Dwelling in Addis Ababa
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of the current population of Addis Ababa is living in “slums”.

80%

UN HABITAT 2003
Concentration of Informal housing settlements

Growth of the city 1973-2003

Concentration of Informal housing settlements

80% of the current population of Addis Ababa is living in "slums".

UN HABITAT 2003
1. Kirkos Market
1. Kirkos Church
1. Kirkos Cemetery
1. Meskel Square
1. La Gare
Informal housing / compound

#1 Informal Shop
#2 Food Production
#3 Breeding Craft
#4 Room Sublet
Informal housing / compound

1. Informal housing / compound

2. Kitchen are still not part of the housing unit
   The tenants start to add rooms to the initial building

3. The housing unit loses the contact with the ground floor
   Toiletters are still not part of the housing unit

Informal Housing
RESEARCH
Kirkos - small scale infrastructure
Bole Road - Large scale infrastructure
LightRail - City scale infrastructure
Ring Road - City scale infrastructure
Merkato - Commercial street infrastructure
new imposed road
New developments in the area
Informal City
Low density
High income

Formal City
Low density
High income

Informal City
High density
Low income

Understanding the pressures
**Problem Statement**

ADDIS ABABA

- 80% slums
- 70% in the inner city
- Big investment in large scale infrastructure
- Real Estate pressure
- Rise of land price
- Uncontrolled and exclusive developments
- Strong eviction policies and relocation programmes
“How to propose a High-density dwelling scheme in the city centre of Addis Ababa that both responds to the unavoidable Real Estate pressures in the areas surrounding a Metro Station and at the same time guarantees the Right to the City of the slum dwellers already present in site?”
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High Income developments

Middle Income developments
*partially subsidized*

Public/open space

Low income developments
*to relocate the existing slum dwellers*
High Income developments

Public/open space

Low income developments

to relocate the existing slum dwellers

Middle Income developments

partially subsidized

Design Strategy

Strip of Simultanities

Low income developments

to relocate the existing slum dwellers
<table>
<thead>
<tr>
<th>Characteristics and Necessities</th>
<th>Low Income</th>
<th>Medium Income</th>
<th>High Income</th>
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</thead>
<tbody>
<tr>
<td>Formality</td>
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Design Strategy
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<td>Terraces that allow vertical and horizontal growing.</td>
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<td>High desire/necessity of public space</td>
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<tr>
<td>Less square meters required</td>
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<td>High degree of neighborhood living</td>
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<td>- Less incrementality, mainly horizontal/more flexibility in the house</td>
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<td>- More square meters required</td>
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<tr>
<td>- Rare/Non-necessary direct contact with the street</td>
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**Design Strategy**

- **Low Income**:
  - High Income: Commercial
  - Middle Income: Low Income
  - Low Income: Medium Income

- **Medium Income**:
  - High Income: Low Income
  - Middle Income: Medium Income
  - Low Income: Commercial

- **High Income**:
  - High Income: Medium Income
  - Middle Income: Medium Income
  - Low Income: Commercial

- **Formality**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Incrementality**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Flexibility**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Height/visuals**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Population**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Density**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Unemployment**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Sqm/unit**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income

- **Public Space**:
  - Low Income: Medium Income
  - Medium Income: High Income
  - High Income: High Income
Economic Scheme

Funding scheme

Real Estate

state

1

2

3

High Income 1
Private funded

Middle Income 2
Mixed funded

Low Income 3
Public funded
Economic Scheme

- High Income
  - Private funded

- Middle Income
  - Mixed funded

- Low Income
  - Public funded

Funding scheme: CROSS-SUBSIDIZATION

1. Real Estate
2. State
3. Working force
CROSS - SUBSIDIZATION

- High Income
- Middle Income
- Low income
- Commercial

Public Space
- Include High-Quality Low income and middle income dwelling units.
- Relocate the existing slum dwellers in Site.
- Provide the project with different scales of public space.
- Densify the city center
- Provide a different and responsible way of designing housing schemes in highly inequal societies.
Urban Considerations

Urban access and circulations

Thematic sectorization

Vegetation axes and nodes

Facilities and context relations

city-scale public space

semi-private/open courtyard

semi-private courtyard

semi-private courtyard - production facilities

Urban Considerations
1. COMMERCIAL

Commercial Level/City door
2. LOW INCOME
Low Income

Unit A

Basic Unit 30m2

Characteristics:
- Direct access from the street (level 0), avoiding vertical cores and galleries.
- Neighborhood scale.
- Contact with neighbors in semi private spaces, stairs and street.
- Design and areas product of the analysis of low income dwelling units.
Low Income Basic Unit

- 1 Bedroom+working space+patio
- 2 Bedrooms+patio
- 3 Bedrooms
- 60m²

Unit B

Characteristics:
- Direct access from the street (level 0), avoiding vertical cores and galleries.
- Neighborhood scale.
- Contact with neighbors in semi private spaces, stairs and street.
- Design and areas product of the analysis of low income dwelling units.
- Flexibility and adaptation according to necessities due to structural freedom.
Low Income
Unit A + Unit B
View of the living room
View of the bedroom
Characteristics:
- Access from the vertical core
- Circulations through corridors every other floor
- Contact with neighbors in communal/Laundry spaces distributed across the floor
- Two-Storey units, second floor with two facades

Middle Income
View of the living room
4. HIGH INCOME
High income Type A
130m²

Characteristics:
- Spacious penthouses on top of the tower
- Direct access from the parking through an exclusive elevator or from the vertical core
- High Quality materials
- Customized design
- Visuals over the city and public space

High income Type B
200m²

Characteristics:
- Spacious penthouses on top of the tower
- Direct access from the parking through an exclusive elevator or from the vertical core
- High Quality materials
- Customized design
- Visuals over the city and public space
View of the living room
No. Low income units: 232
No. Middle income units: 229
No. High income units: 40
TOTAL: 501
Plot Area: 18900 m²
Public Space: 3700 m²
DENSITY: 263 d/Ha