

AN INCREMENTAL TAMANSARI

A proposal for a new, healthy kampung development system
in Bandung, Indonesia

Danny Janse



Kampung Kali Code, Yogyakarta (Source: Authors Own)



Slum neighborhood in Gang-7, Jakarta (Source: Authors Own)



Kampung along railway, Jakarta (Source: Authors Own)



Kampung Tamansari, Bandung (Source: Authors Own)



Kampung street view (Source: Authors Own)



Kampung street view (Source: Authors Own)



Kampung street view (Source: Authors Own)



New kampung street proposal (Source: Authors Own)



KS Tubun flat in West-Jakarta (Source: Manggala mi / Arya)

Current kampung development projects

'100-0-100' project

Current kampung development projects

'100-0-100' project

100% supply of clean water throughout the country

0% slums in Indonesia

100% fulfillment of sanitation

Current kampung development projects

'100-0-100' project

100% supply of clean water throughout the country

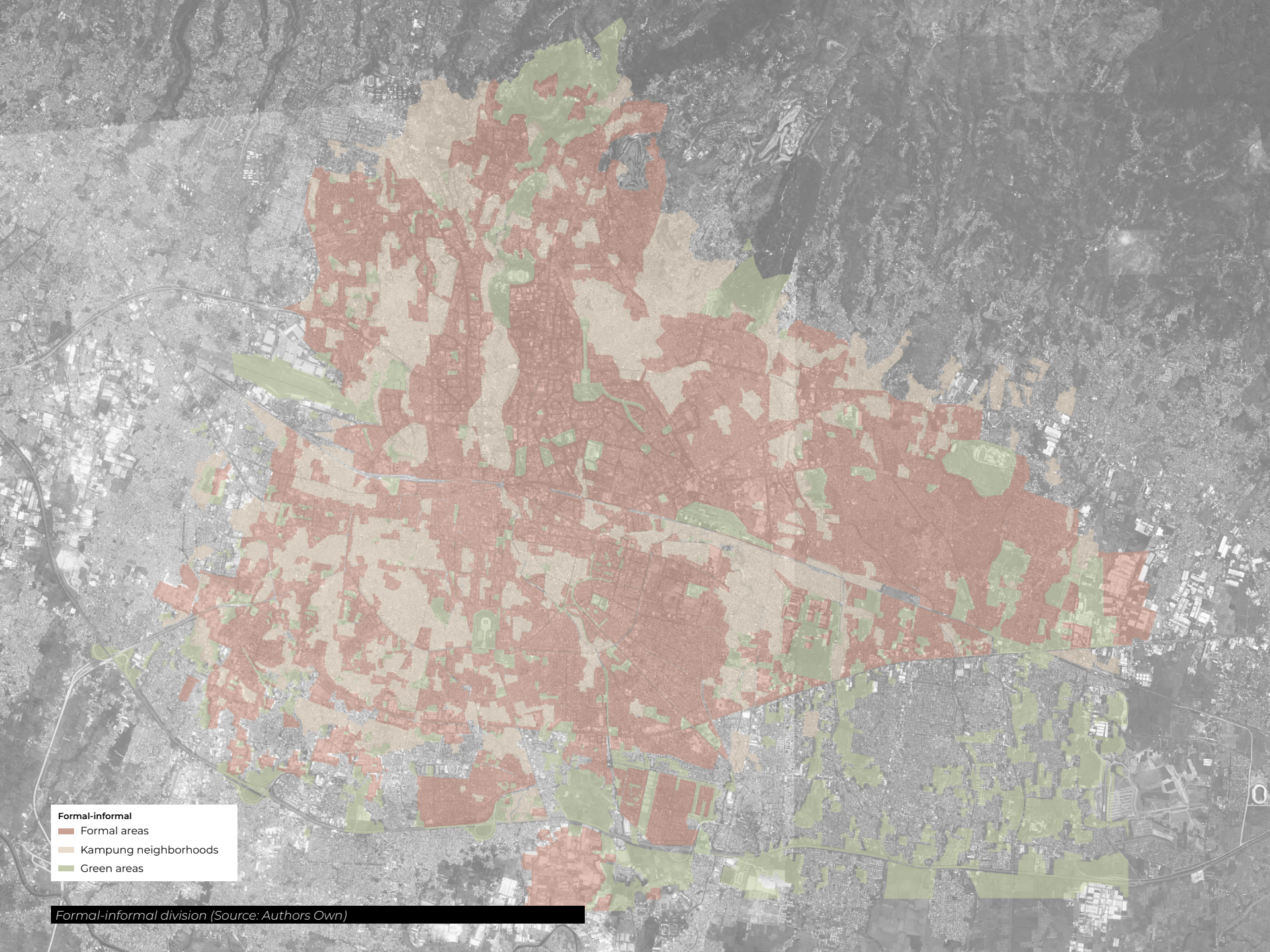
0% slums in Indonesia

100% fulfillment of sanitation

Current kampung development projects

- **Loss of social structure**
(From kampung structure to vertical buildings)
- **Social isolation**
(Re-located in the outskirts of the city)
- **Loss of jobs**
(Distance to current jobs)
- **Huge debts**
(Rent, public transport fees)
- **Low quality housing**
- **Child unfriendly**





Formal-informal

- Formal areas
- Kampung neighborhoods
- Green areas

Formal-informal division (Source: Authors Own)

History

• Europeesche ontspanning na den schoolarbeid. •

BANDOENG EN OMGEVING

zijn een Paradijs, ook voor de Jeugd!

HOTEL VILLA „SOLA“

Dit

BIEDT BANDOENG U!

**BANDOENG:
EUROPA IN DE TROPEN**

De ideale woonstad!

Zoekt U een woonplaats waar stedelijke sfeer en natuur schoon elkaar in een heerlijk klimaat raken? Kom dan bij ons en U zult zien, dat Bandoeng op dit punt Uw ideaal benadert! Bandoeng geeft een combinatie van alle voordelen van het wonen in een groote stad en in een aan natuurschoon rijke strek met een heerlijk klimaat.

Vestigt U zich daarom te Bandoeng
Lage belastingen
Gezond, frisch, droog, heerlijk, bergklimaat.

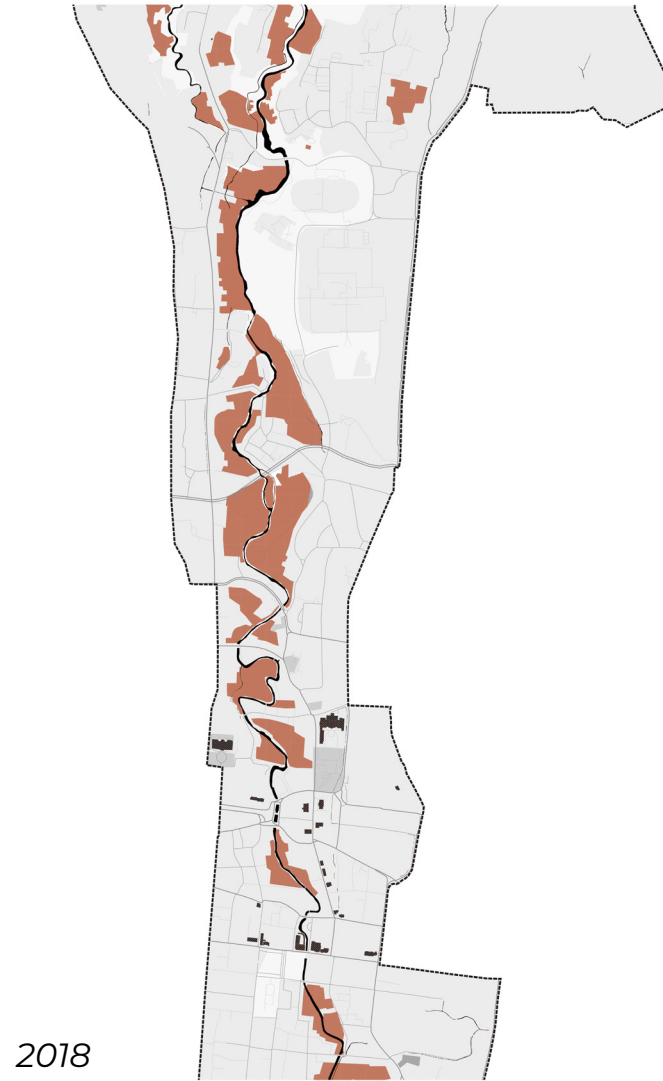
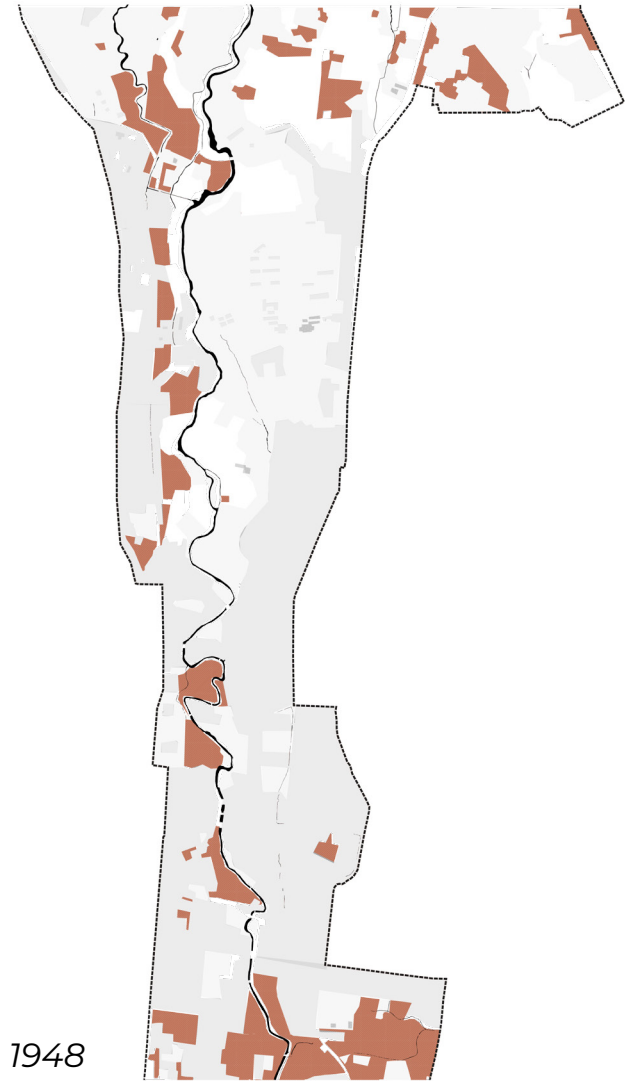
Rust en Ontspanning
op vele manieren en vele plaatsen

De heerlijke bergmeeren en het Zuiderstrand geven U alles wat U op „Lido“-gebied wensch.

Current kampung development projects



History

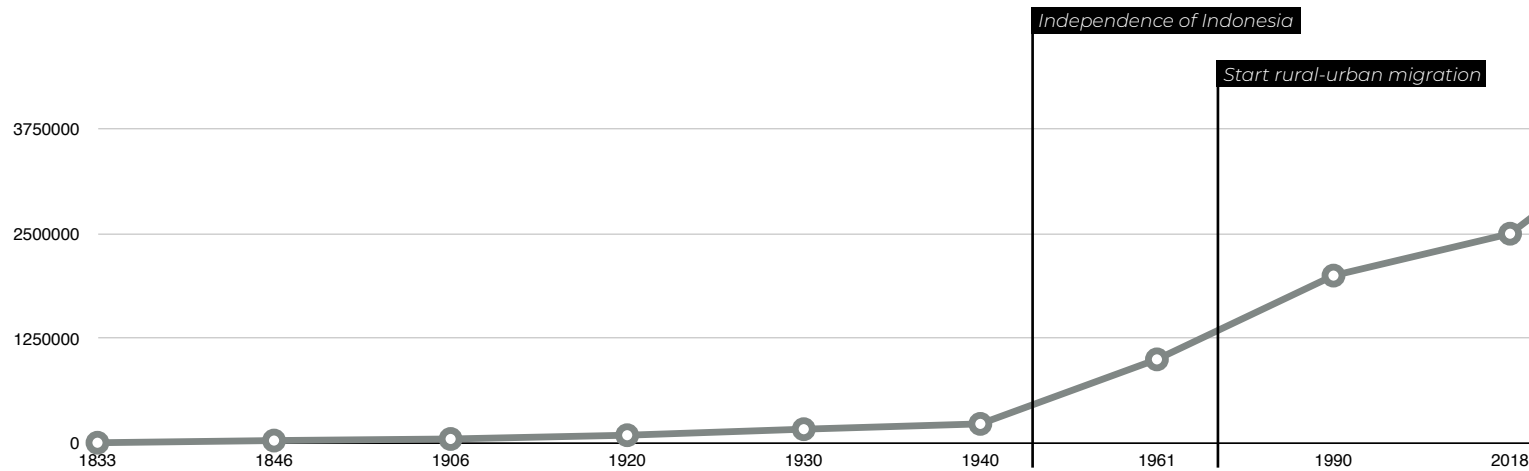


Legend:

- Formal area
- Informal area
- Green area
- Colonial Building
- Chikapundung
- Medium road
- Big road

Rapid urbanization

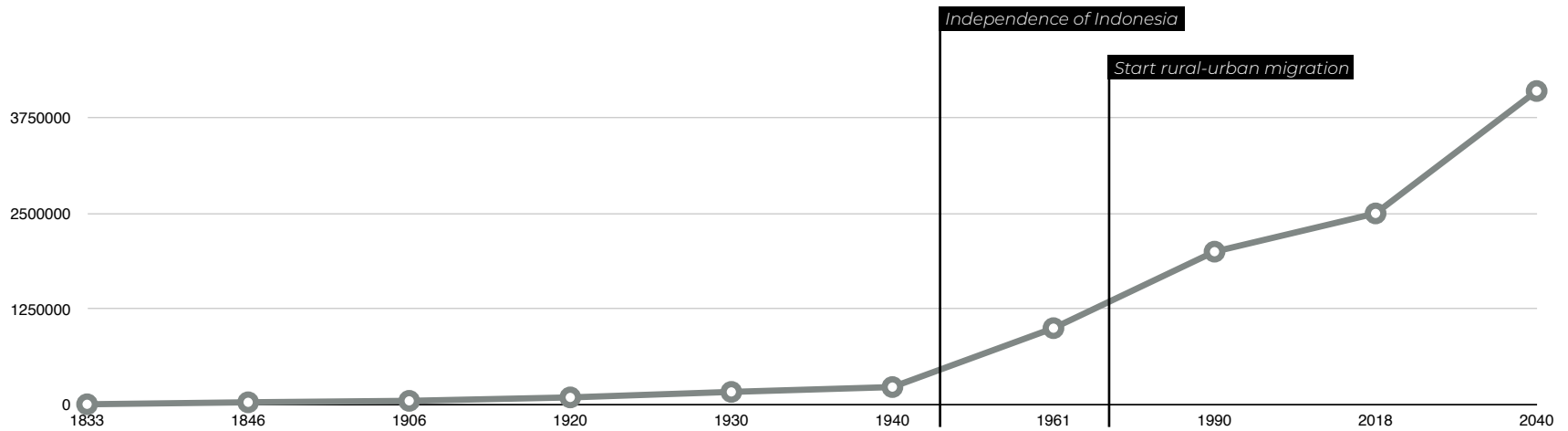
1940	-	250	thousand
1961	-	1	million
1990	-	2	million
2018	-	2,5	million



Rapid Urbanization

2019 - 2,5 million

2040 - 4,1 million



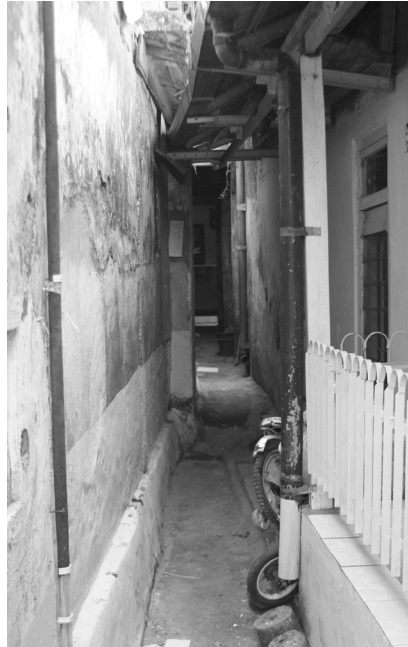
Kampung Tamansari



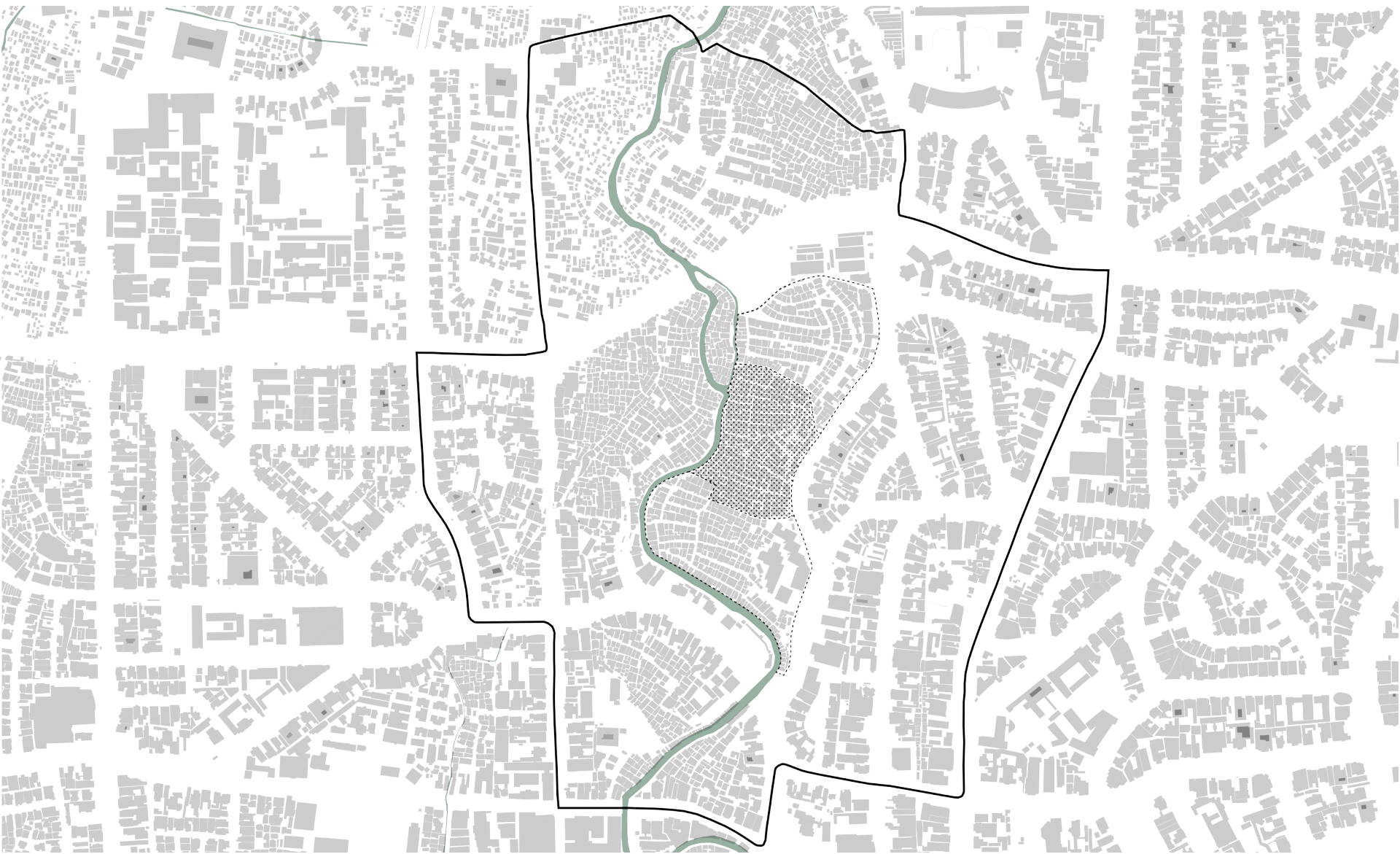
Kampung Tamansari



Kampung Tamansari



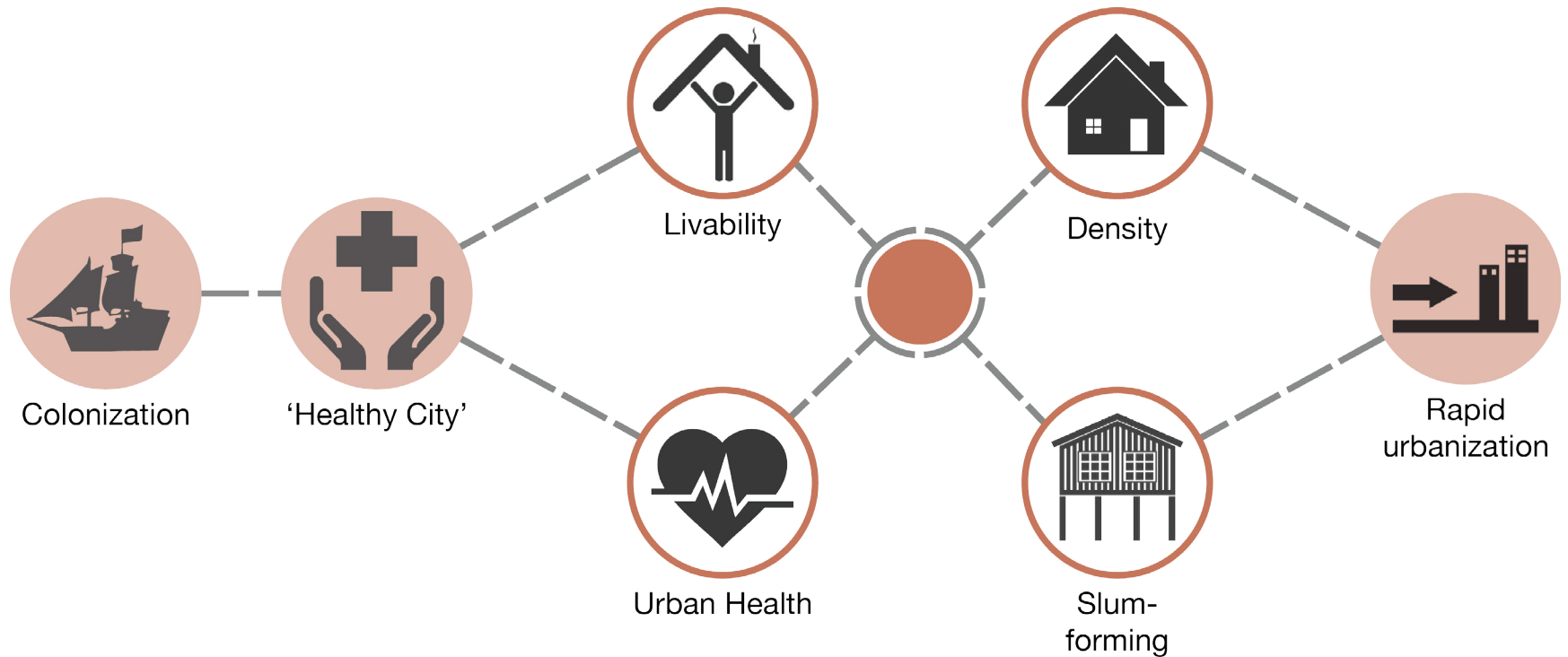
Kampung Tamansari



Research Question

How can we re-interpret the old 'Healthy City' identity of the 1920's, in order to improve the public health, and therefore the livability, whilst meeting the densification requirements of kampung Tamansari in Bandung?

Conceptual framework



- Position of research & design
- Concepts
- Causing factors
- - Connections

Research Question

*How can we re-interpret the old 'Healthy City' identity of the 1920's, in order to improve the **public health**, and therefore the **livability**, whilst meeting the *densification* requirements of kampung Tamansari in Bandung?*

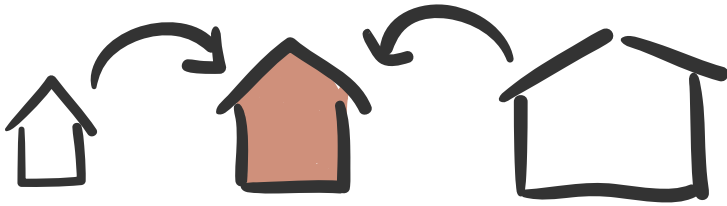
Livability

*“Even though there is yet to date no clear definition, it is clear that Livability is about the relation between **subject** (organism, person or community) and its **surroundings**, and the extent to which this surrounding is able to **sustain the needs of the social life it contains**”*

Components of Livability

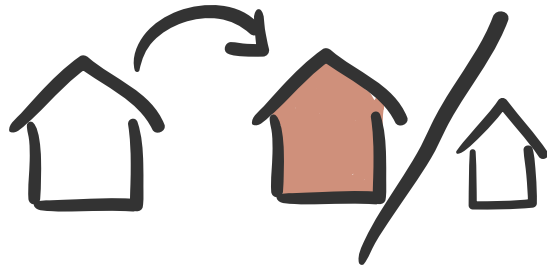
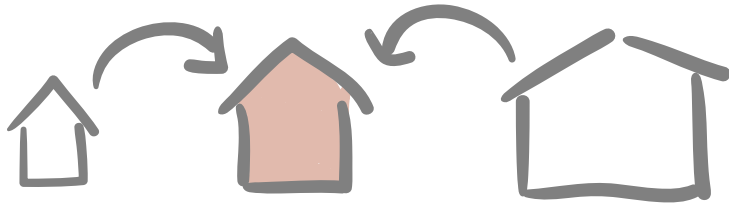
1. Crime and safety
2. Housing
3. Education
4. Employment and income
5. **Health** and social services
6. Transport
7. Public open space
8. Social cohesion and local democracy
9. Leisure and culture
10. Food and other local goods
11. Natural Environment

Livability



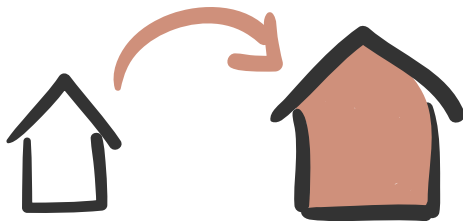
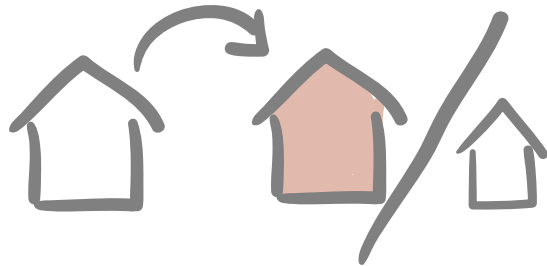
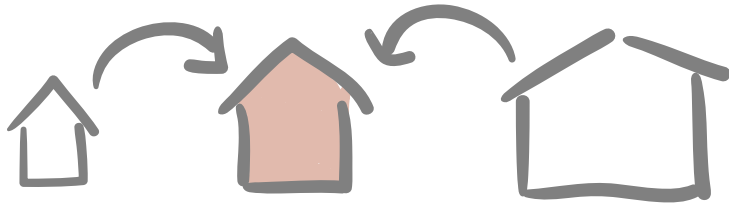
- **Livability = contrast**
(The personal perception of livability is based on the the individuals perception of 'the normal')

Livability



- **Livability = contrast**
(The personal perception of livability is based on the the individuals perception of 'the normal')
- **Kampung improvement**
(The current kampung redevelopment projects are not creating a positive contrast, but rather a equal contrast or even a negative one)

Livability



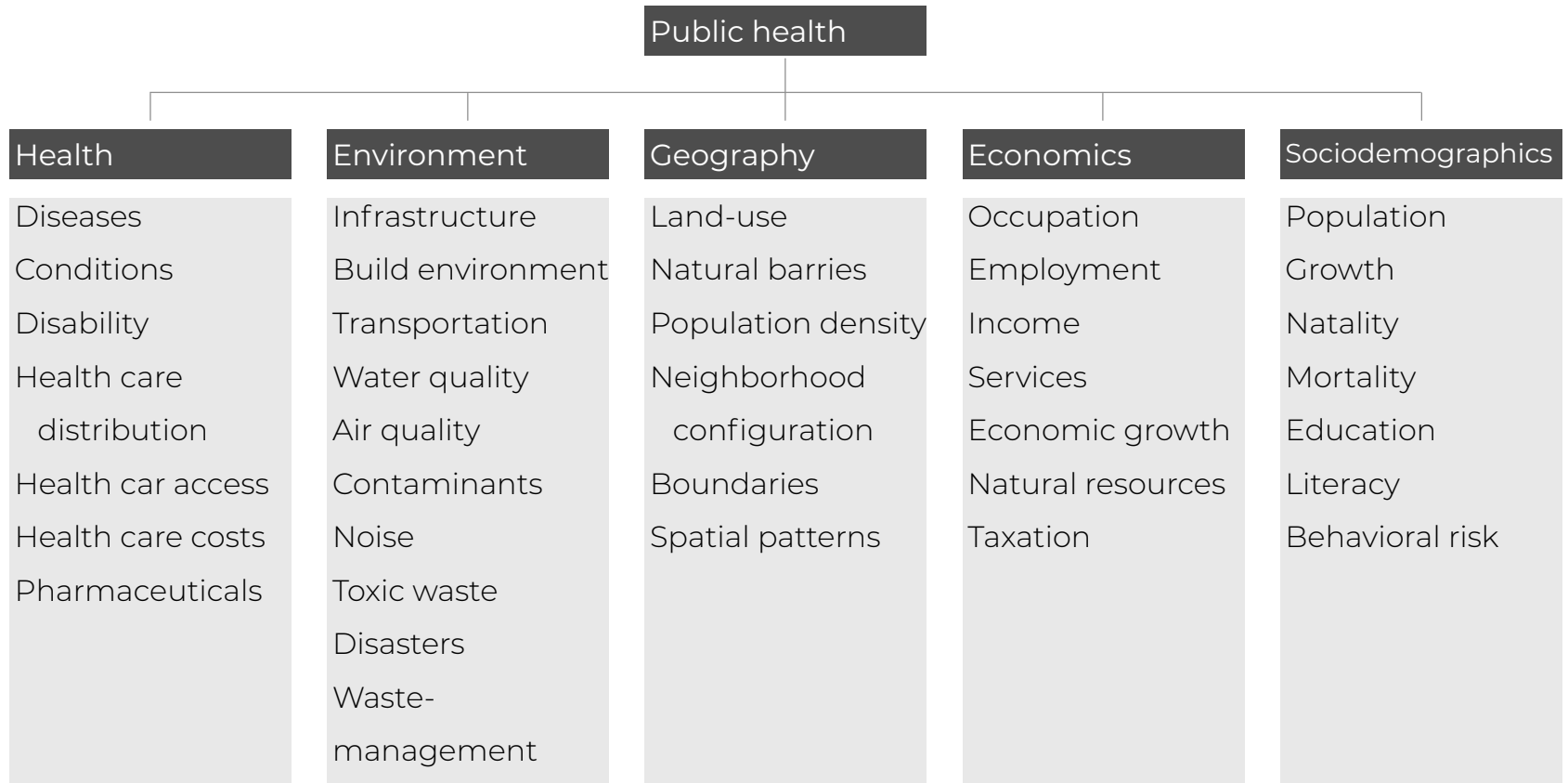
- **Livability = contrast**
(The personal perception of livability is based on the the individuals perception of 'the normal')
- **Kampung improvement**
(The current kampung redevelopment projects are not creating a positive contrast, but rather a equal contrast or even a negative one)
- **An Incremental Tamansari**
(Create a focus not only on the improved kampung, but also the realization of the contrast)

Public health

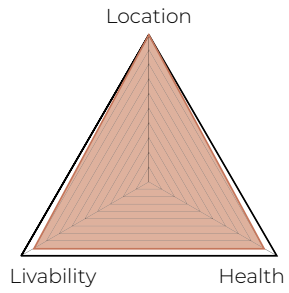
“A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”

World Health Organisation 1948

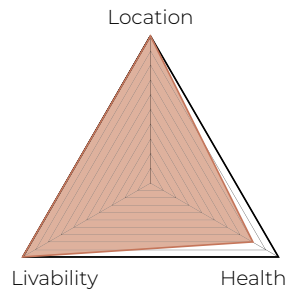
Public health



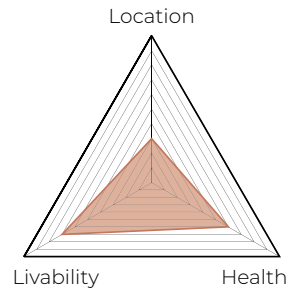
Public health



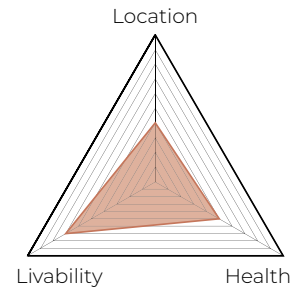
Infrastructure



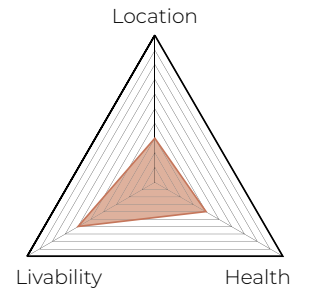
Build Environment



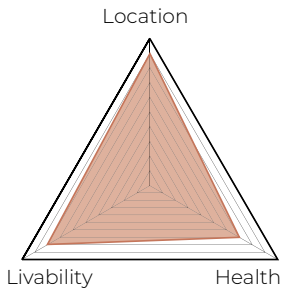
Transportation



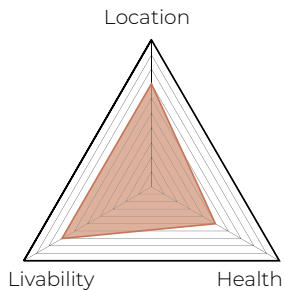
Land-use



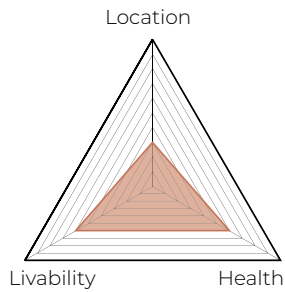
Natural Barriers



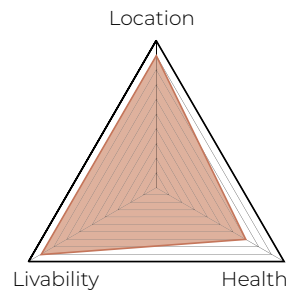
Population Density



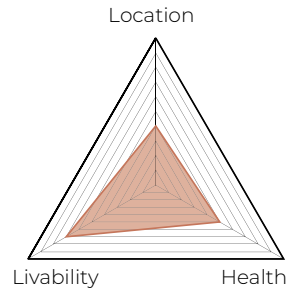
Neighborhood Configuration



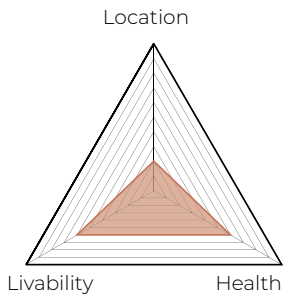
Boundaries



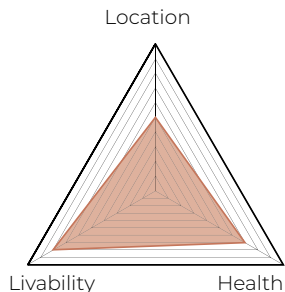
Spatial Pattern



Services

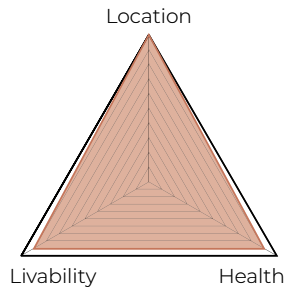


Natural Resources

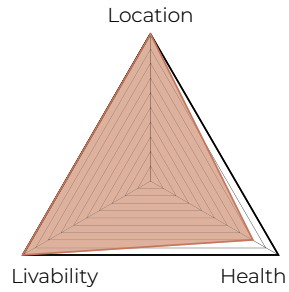


Population

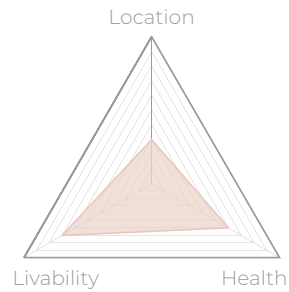
Public health



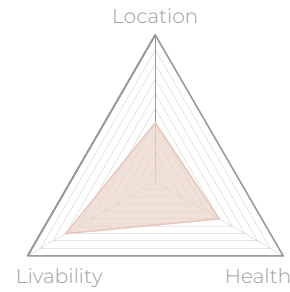
Infrastructure



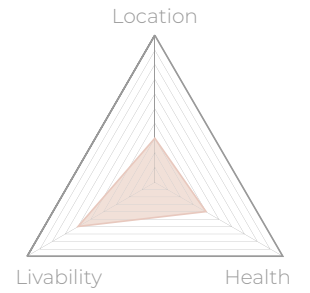
Build Environment



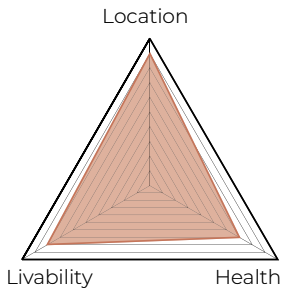
Transportation



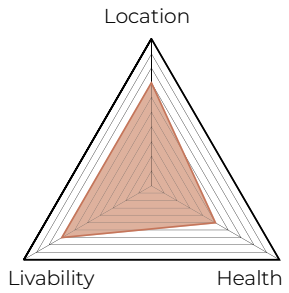
Land-use



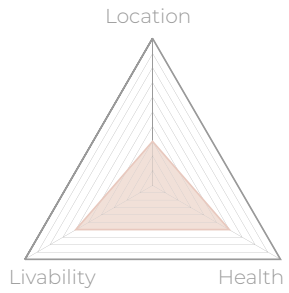
Natural Barriers



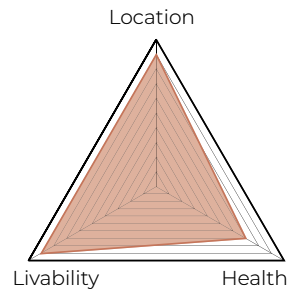
Population Density



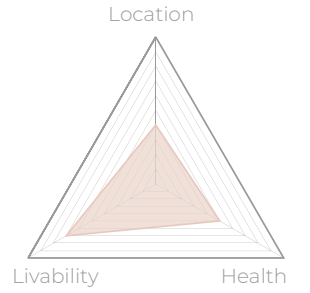
Neighborhood Configuration



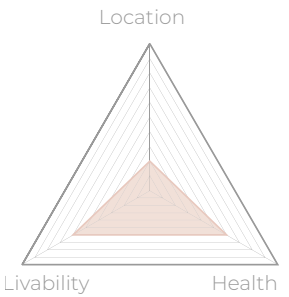
Boundaries



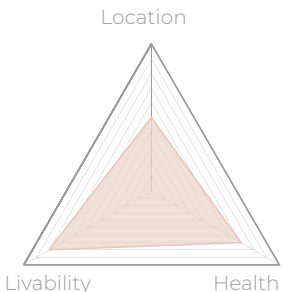
Spatial Pattern



Services

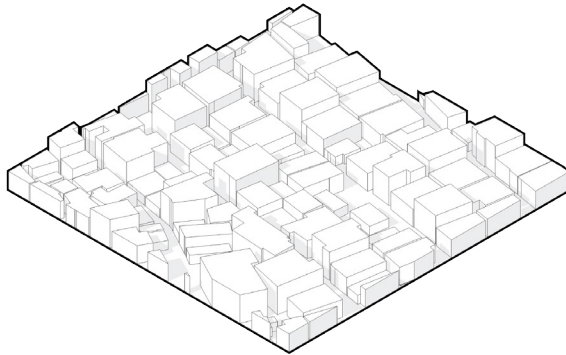


Natural Resources



Population

Public health



100 x 100 m 'Formal pocket'

Floor Space Index

1,43

Ground Space Index

0,64

Open space Ratio

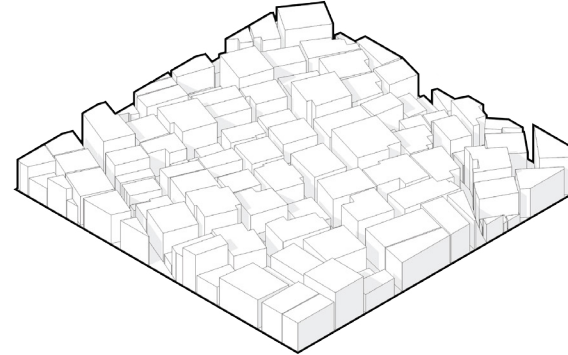
0,24

Average Amount of Layers

1,92

Average Street Width *

4,49 m



100 x 100 m 'Maze area'

Floor Space Index

2,24

Ground Space Index

0,77

Open space Ratio

0,10

Average Amount of Layers

2,24

Average Street Width *

2,19 m

Public health

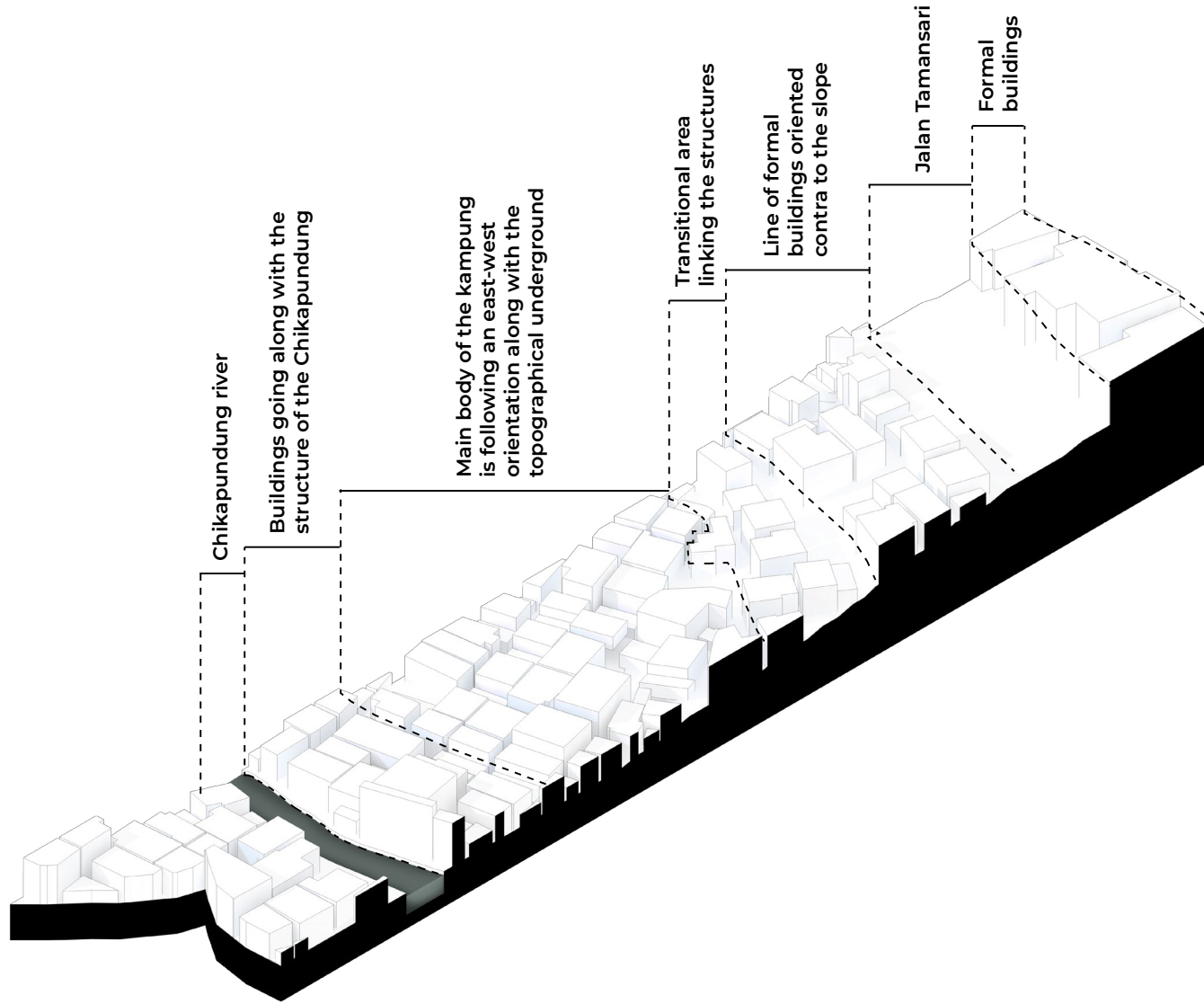


50m 100m 200m

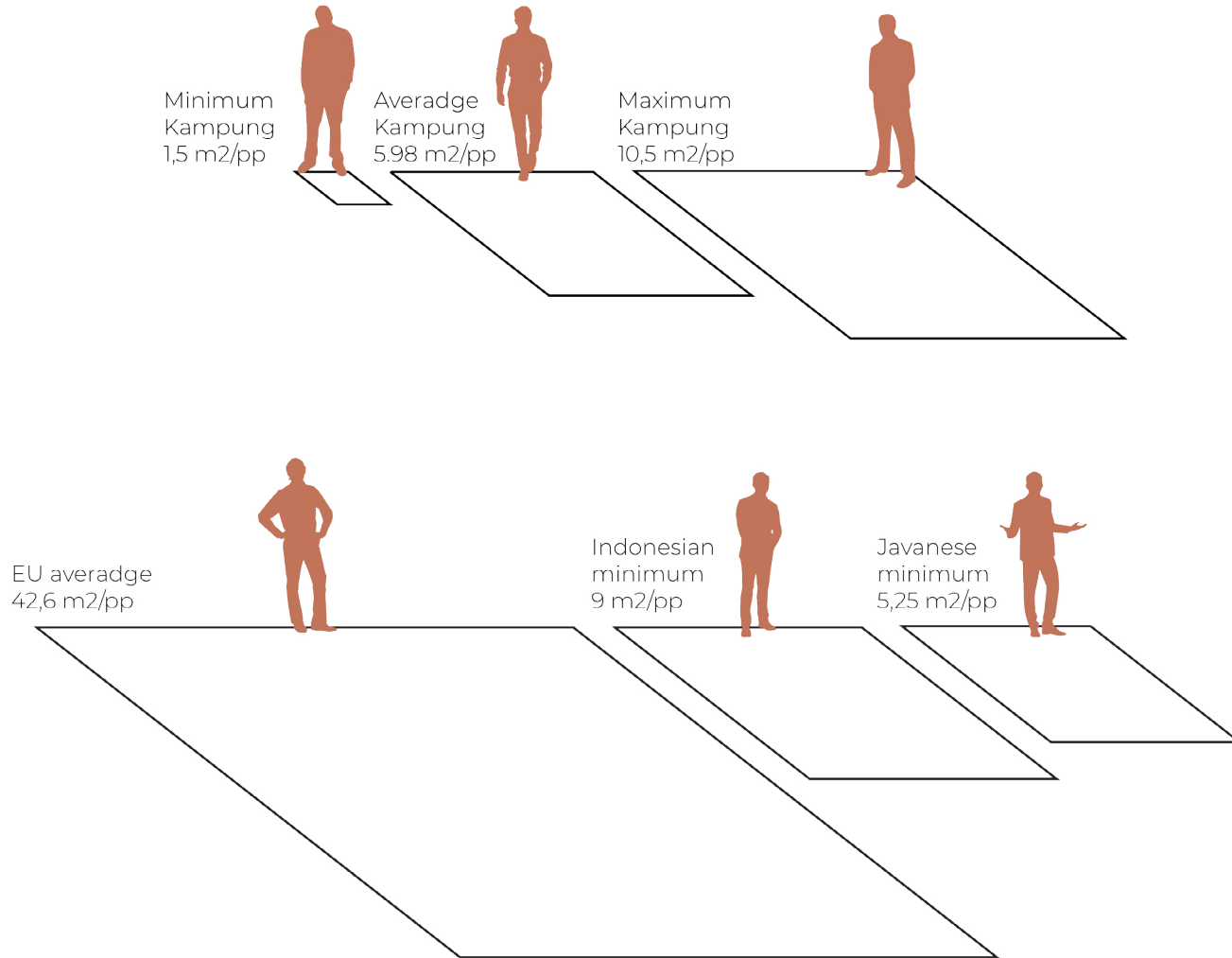


Zoning spatial patterns
(Source: Authors Own)

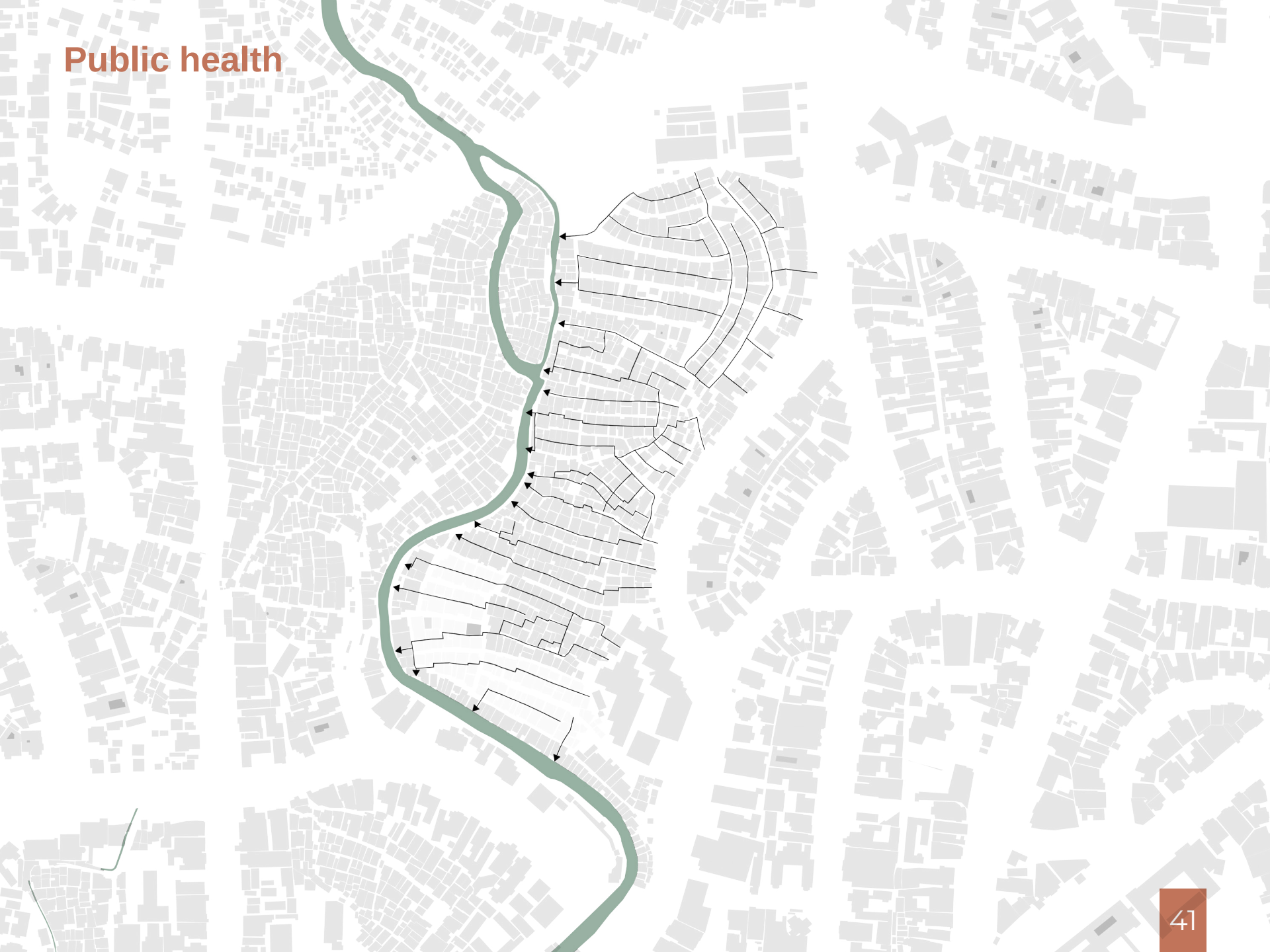
Public health



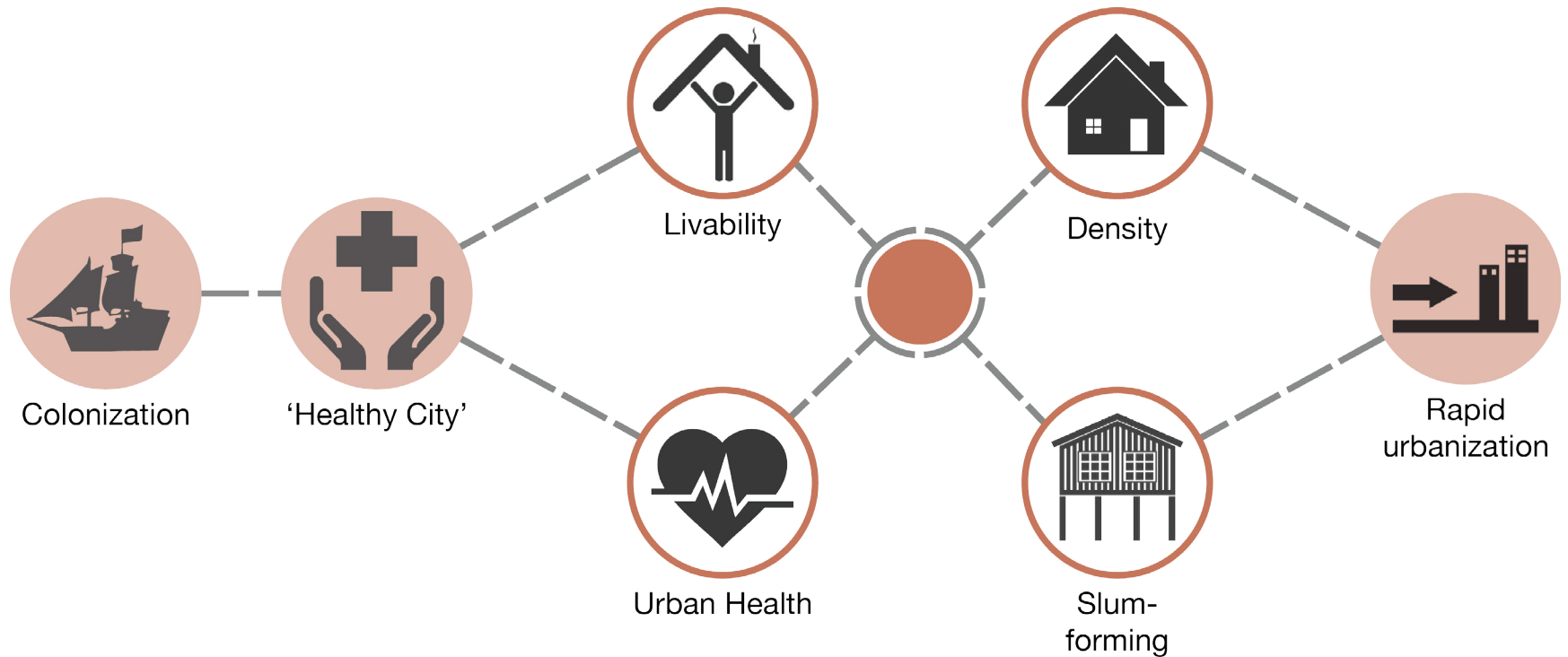
Public health



Public health



Conclusion

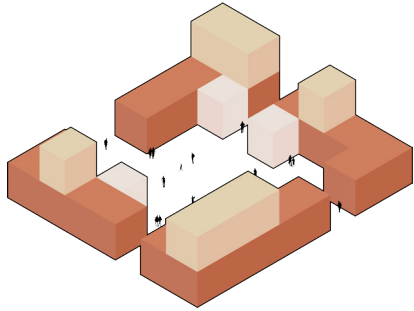


- Position of research & design
- Concepts
- Causing factors
- - Connections

An ideal future

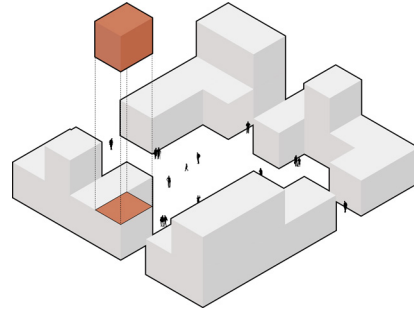
*“The aim for the project is to turn kampung Tamansari into a highly **livable, healthy, green, sustainable, affordable** and **feasible** kampung neighborhood”*

An ideal future



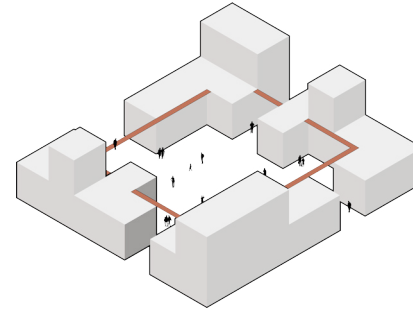
Block structure

A reinterpretation of the back-to-back structure, with each block having its own shared facilities.



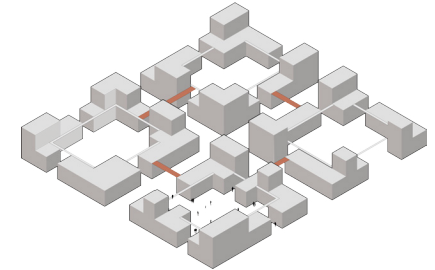
Incremental development

A feasible, affordable and collaborative development strategy within the healthy-framework.



Roofscapes

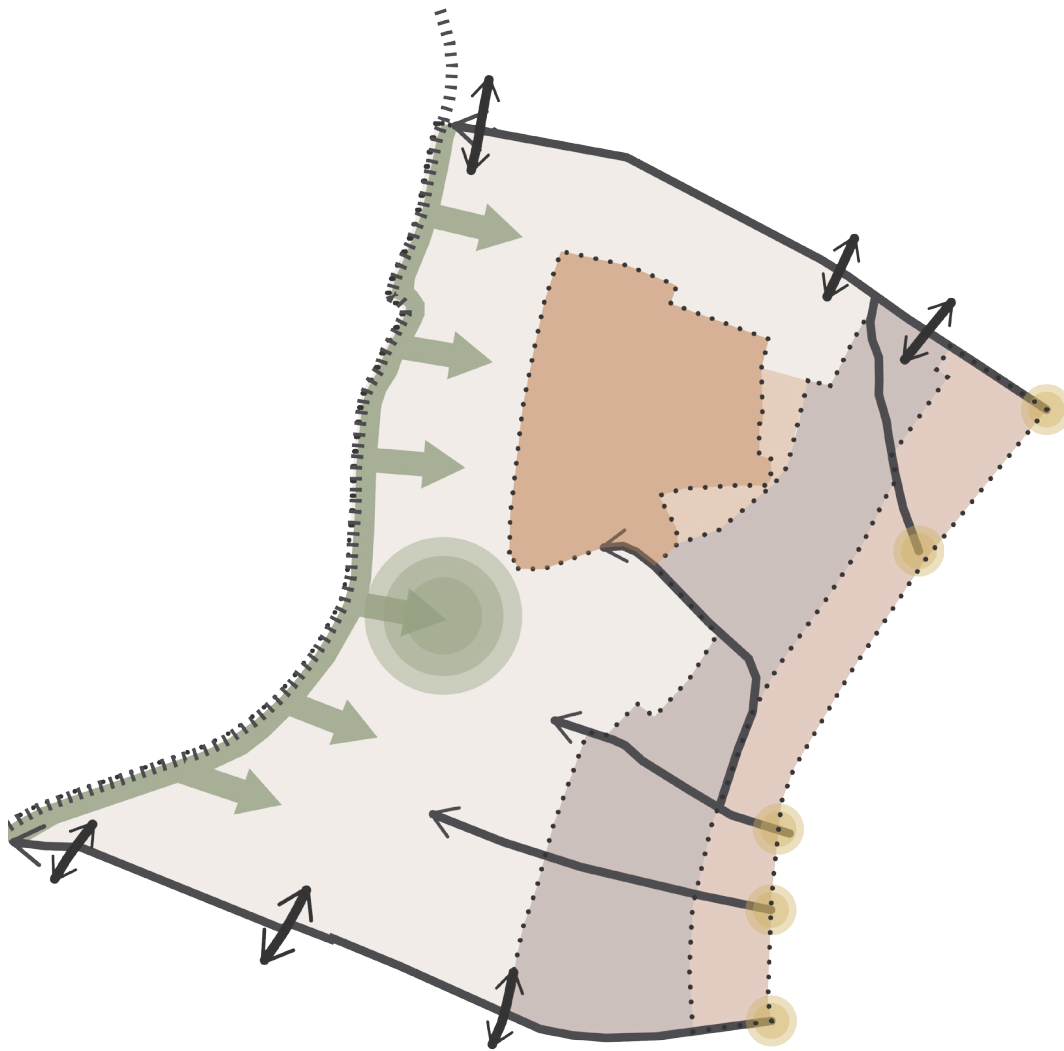
The roofscapes will make the roofs of the incremental elements available as semi-public spaces for the block inhabitants.



Vertical street-network

The vertical-streets will make sure that the kampung-lifestyle can continue within a vertical oriented structure.

An ideal future



Key-components

- Keep the entrances
- connect to surrounding structure
- Central green pocket park
- Build upon the river promenade proposed by Eco-District plan

- Keep the buildings along the Jalan Tamansari
- Upper part oriented along with the slope
- Keep the existing structure, but improve the buildings
- Realize block structure

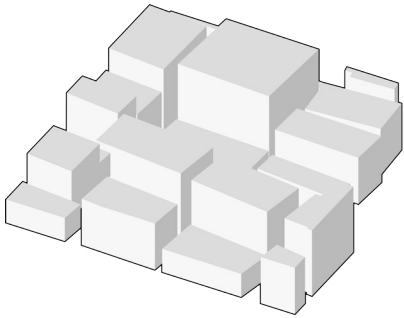
An ideal future



Key-components

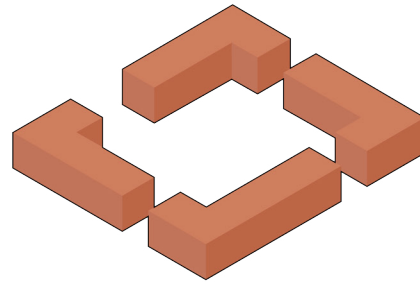
- Use the existing structure to create the new block structure
- Create central pocket park
- Realize connection over river
- Strip of functions along the riverbank

An ideal future



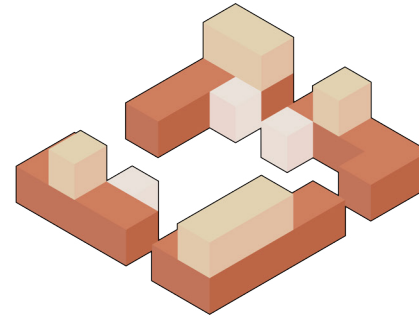
2019

The current kampung structure will be the basis for the new neighborhood plan.



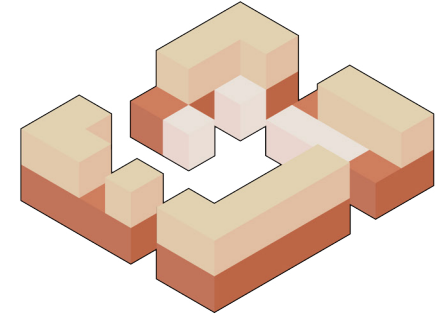
2025

Completely or partially cleared areas will be designed for a minimum housing number.



2030

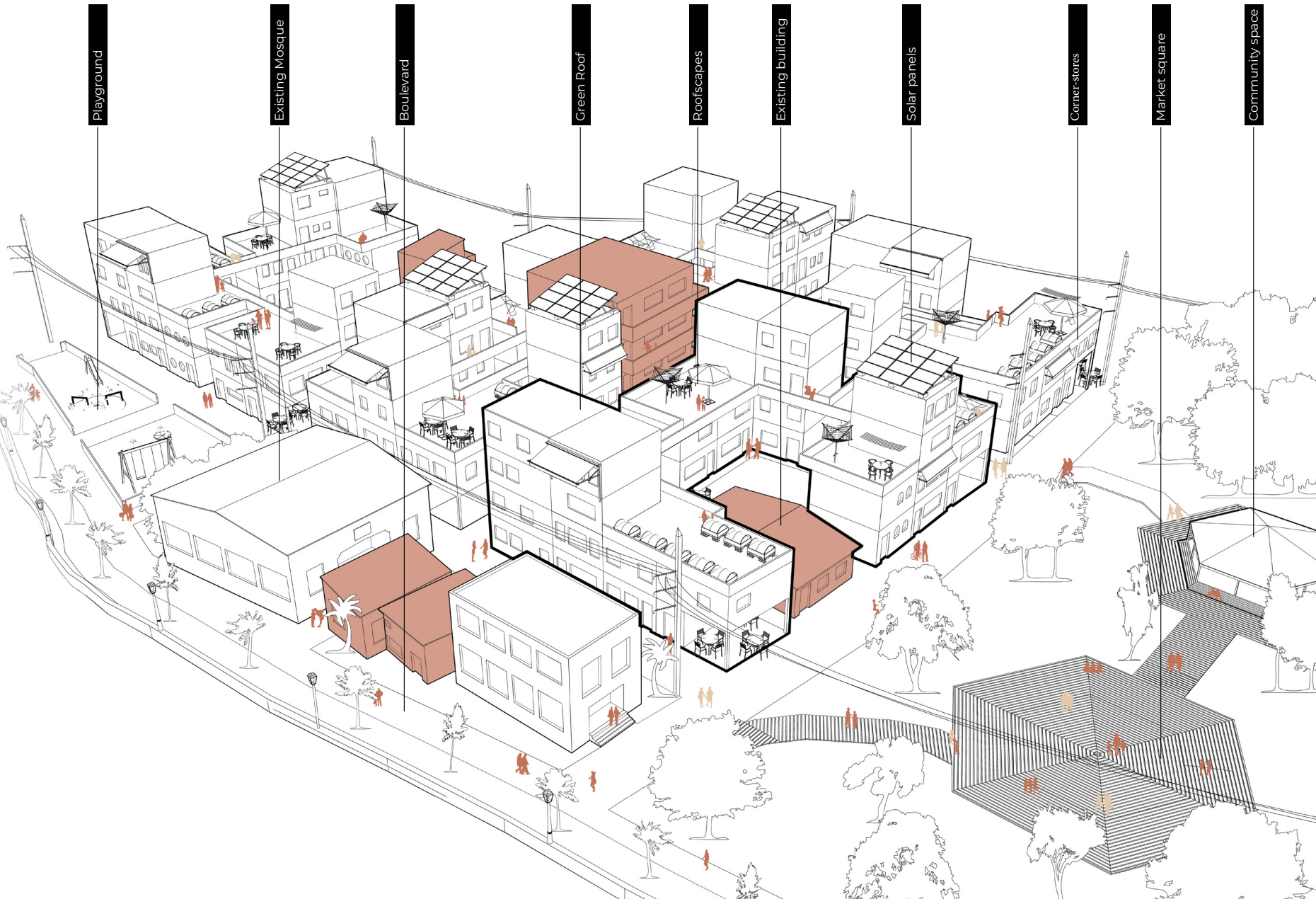
From here on, the kampung population has the opportunity to expand their own block structure.



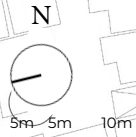
2040

The growing amount of kampung inhabitants will result in growing housing blocks.

An ideal future



An incremental Tamansari



img 102 - Incremental development framework
 (Source: Urban & Architects Own)

- Functions & Facilities**
- 1 - Community Center
 - 2 - Mosque
 - 3 - Mosque
 - 4 - Mosque
 - 5 - Kindergarten/Daycare
 - 6 - RW-office
 - 7 - Building material storage / Workplace
 - 8 - Optional Shophouse / Warung
 - 9 - Kos Kosan (Boarding housing)
 - 10 - Apartment Building
 - 11 - Housing element XL
 - 12 - Community place
 - 13 - Market Square
 - 14 - Playground

An incremental Tamansari



An incremental Tamansari



img 10.2 - Incremental development framework

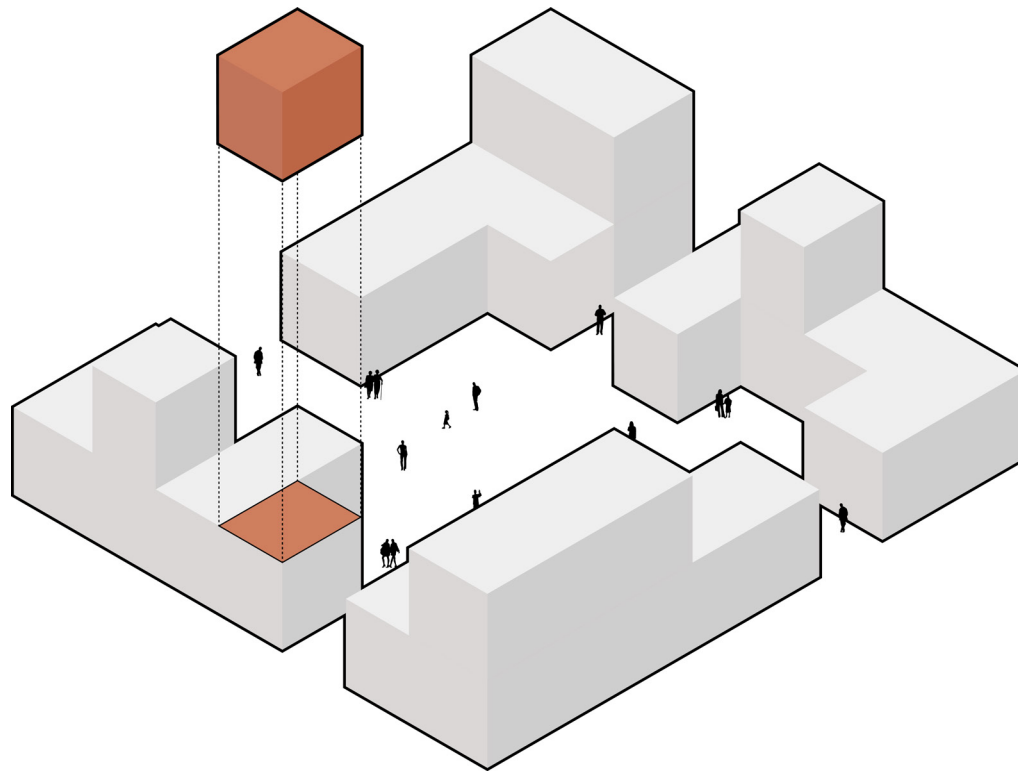
Source: Urban Design (Own)

- Functions & Facilities**
- 1 - Community Center
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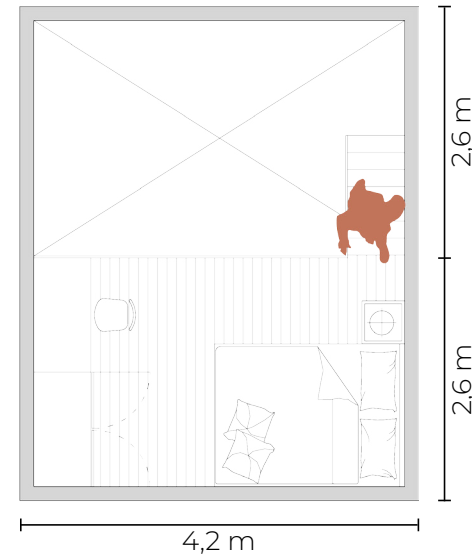
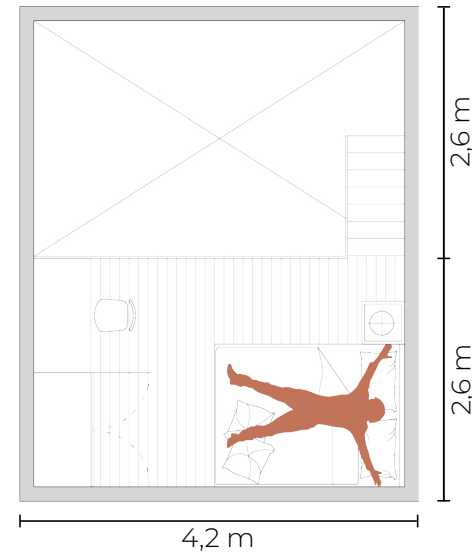
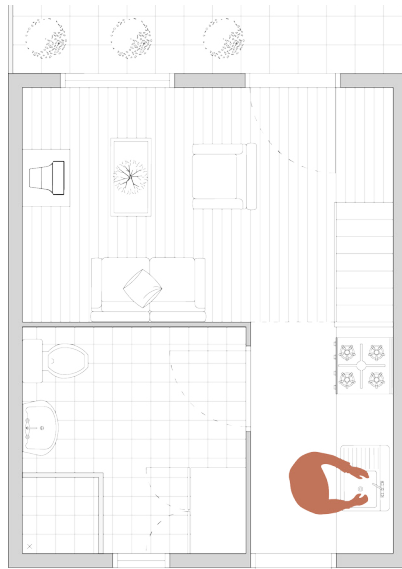
Basic housing element
 Housing element

An incremental Tamansari



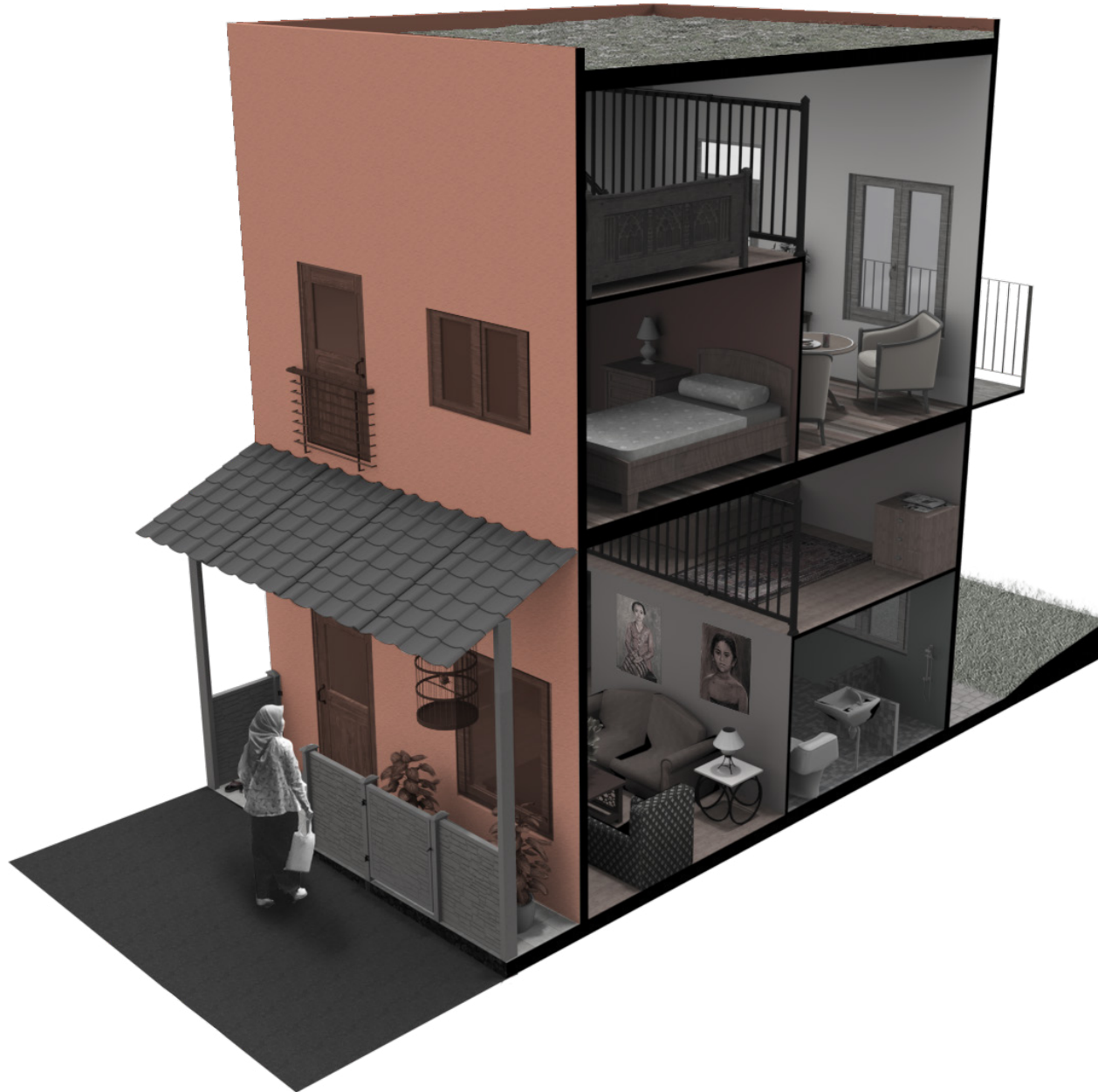
Incremental development

An incremental Tamansari



Housing element possible floor plan (Source: Authors own)

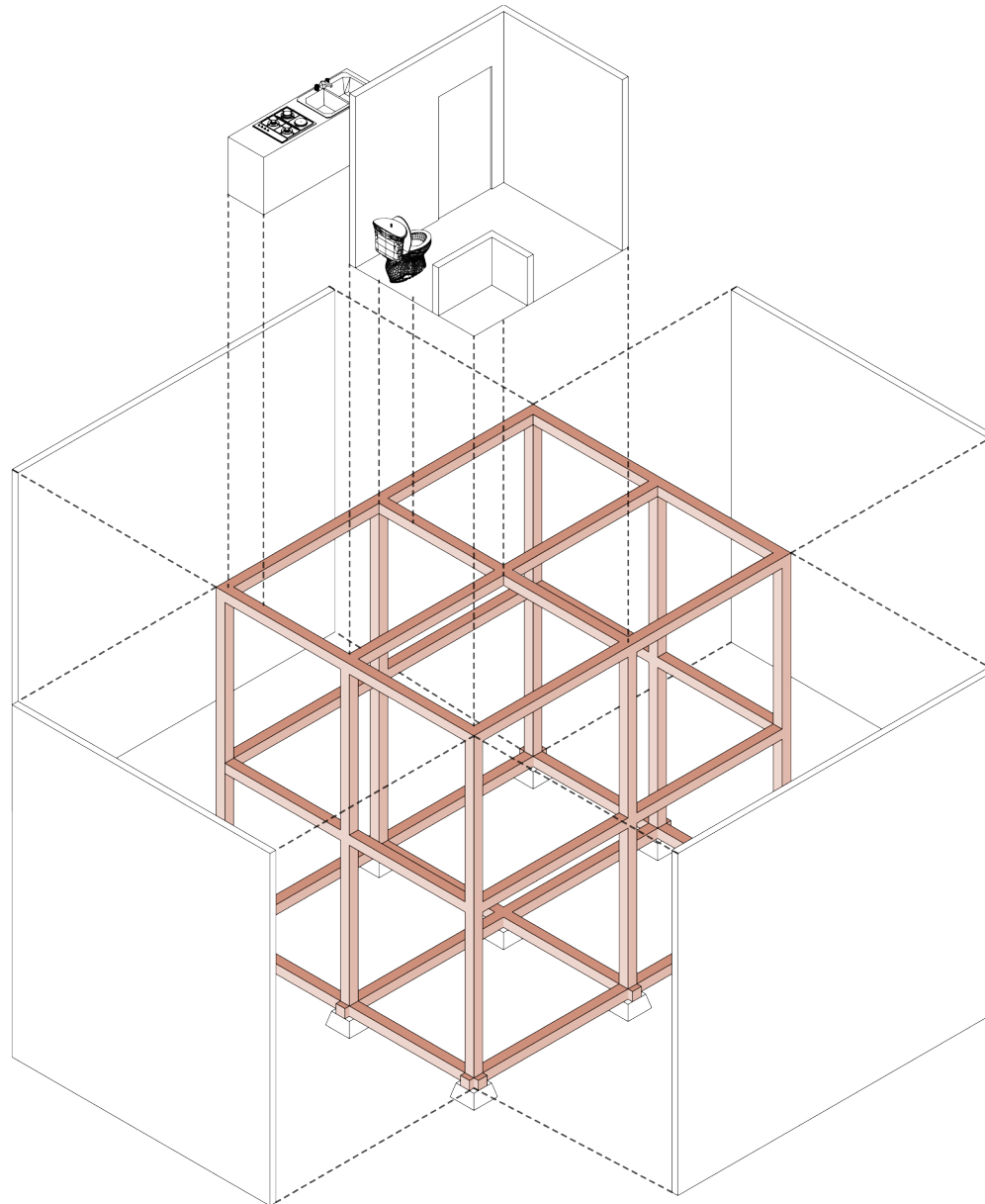
An incremental Tamansari



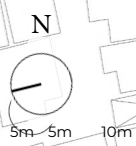
An incremental Tamansari



An incremental Tamansari



An incremental Tamansari



img 10.2 - Incremental Masterplan (Source: Urban Owners Own)

Functions & Facilities

- 1 - Community Center
- 2 - Mosque
- 3 - Mosque
- 4 - Mosque
- 5 - Kindergarten/Daycare
- 6 - RW-office
- 7 - Building material storage / Workplace
- 8 - Optional Shophouse / Warung

- 19 - Kos Kosan (Boarding housing)
- 10 - Apartment Building
- 11 - Housing element XL
- 12 - Community place
- 13 - Market Square
- 14 - Playground

- Other housing typologies**
- Kos Kosan (Boarding housing)
 - Apartment building
 - Housing element XL

An incremental Tamansari



img 10.2 - Incremental Masterplan (Source: Urban Owners Own)

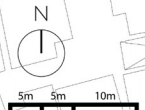
Functions & Facilities

- 1 - Community Center
- 2 - Mosque
- 3 - Mosque
- 4 - Mosque
- 5 - Kindergarten/Daycare
- 6 - RW-office
- 7 - Building material storage / Workplace
- 8 - Optional Shophouse / Warung
- 9 - Kos Kosan (Boarding housing)
- 10 - Apartment Building
- 11 - Housing element XL
- 12 - Community place
- 13 - Market Square
- 14 - Playground

Functions and facilities

- Shophouse / Warung
- Mosque
- Daycare
- RW-office / generator
- Community center
- Workshop / Storage

An incremental Tamansari

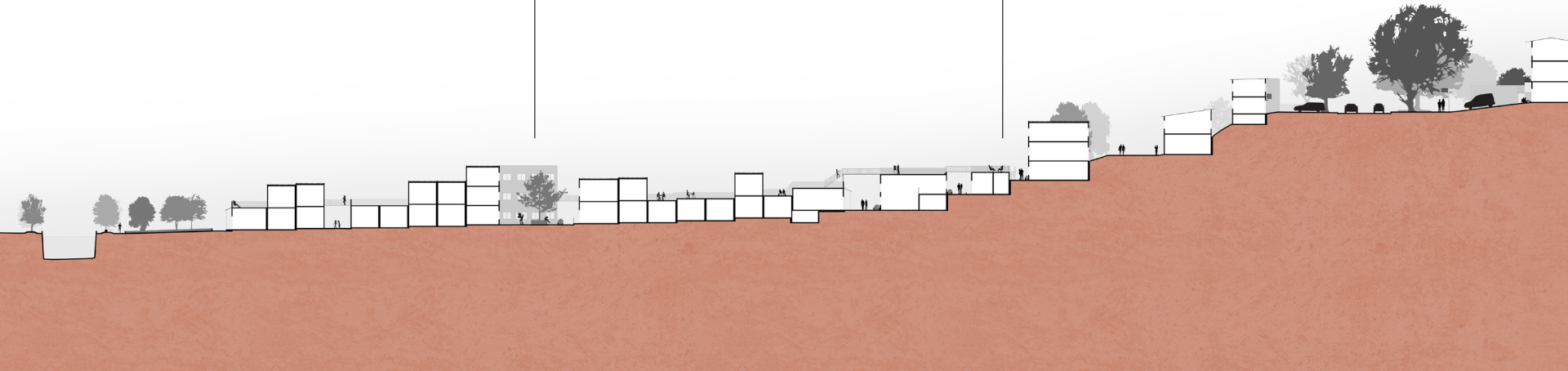
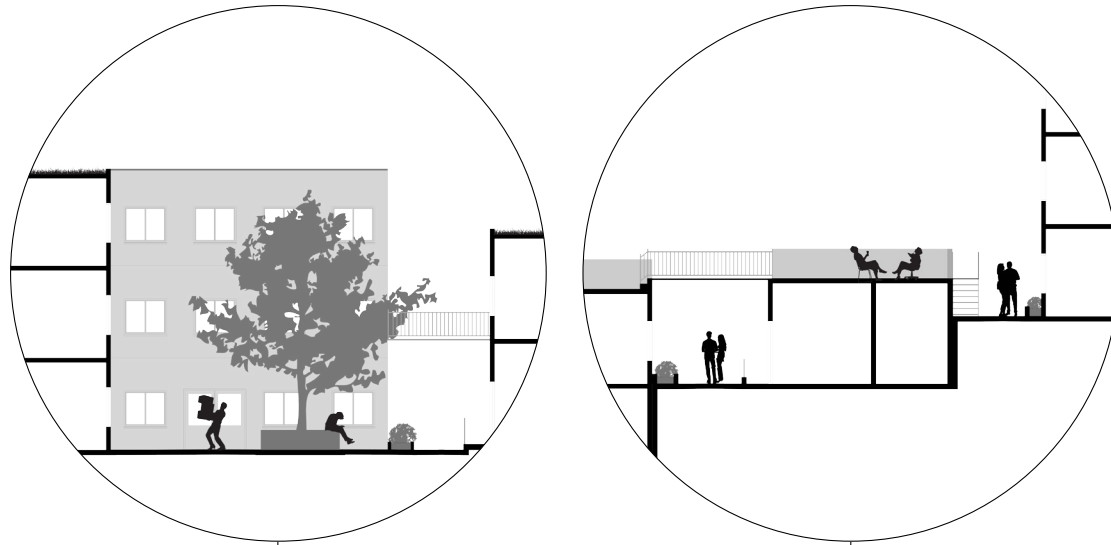


- Img XX.X - Masterplan**
 (Source: Authors Own)
- Functions & Facilities**
- 1 - Community Center
 - 2 - Mosque
 - 3 - Mosque
 - 4 - Mosque
 - 5 - Kindergarten/Daycare
 - 6 - RW-office
 - 7 - Building material storage / Workplace
 - 8 - Optional Shophouse / Warung

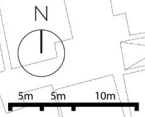
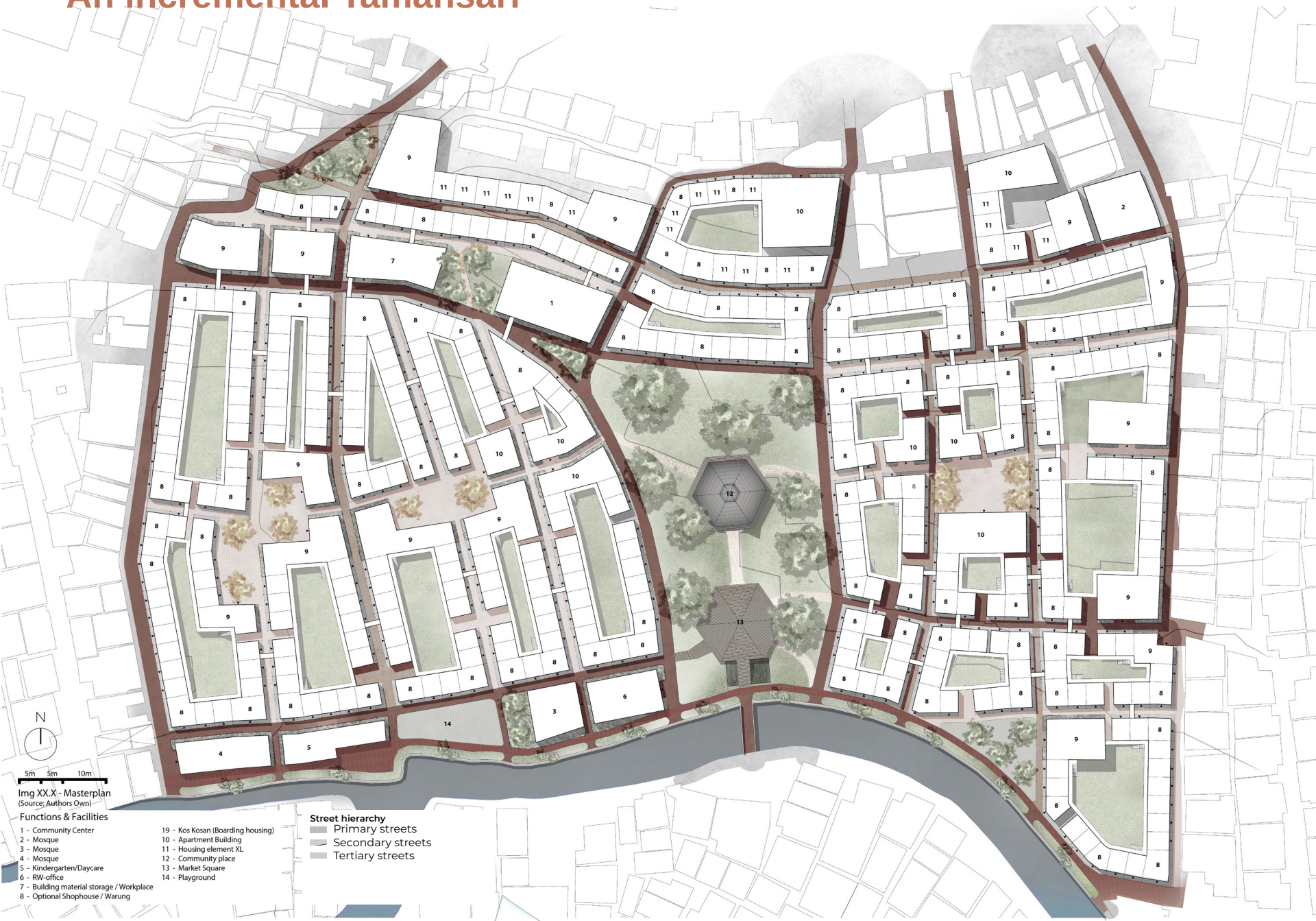
- 19 - Kos Kosan (Boarding housing)
- 10 - Apartment Building
- 11 - Housing element XL
- 12 - Community place
- 13 - Market Square
- 14 - Playground

- RT-structure**
- Rukun Tetangga 01
 - Rukun Tetangga 02
 - Rukun Tetangga 03
 - Rukun Tetangga 04
 - Rukun Tetangga 05
 - Rukun Tetangga 06

An incremental Tamansari



An incremental Tamansari



Img XX.X - Masterplan
(Source: Authors Own)

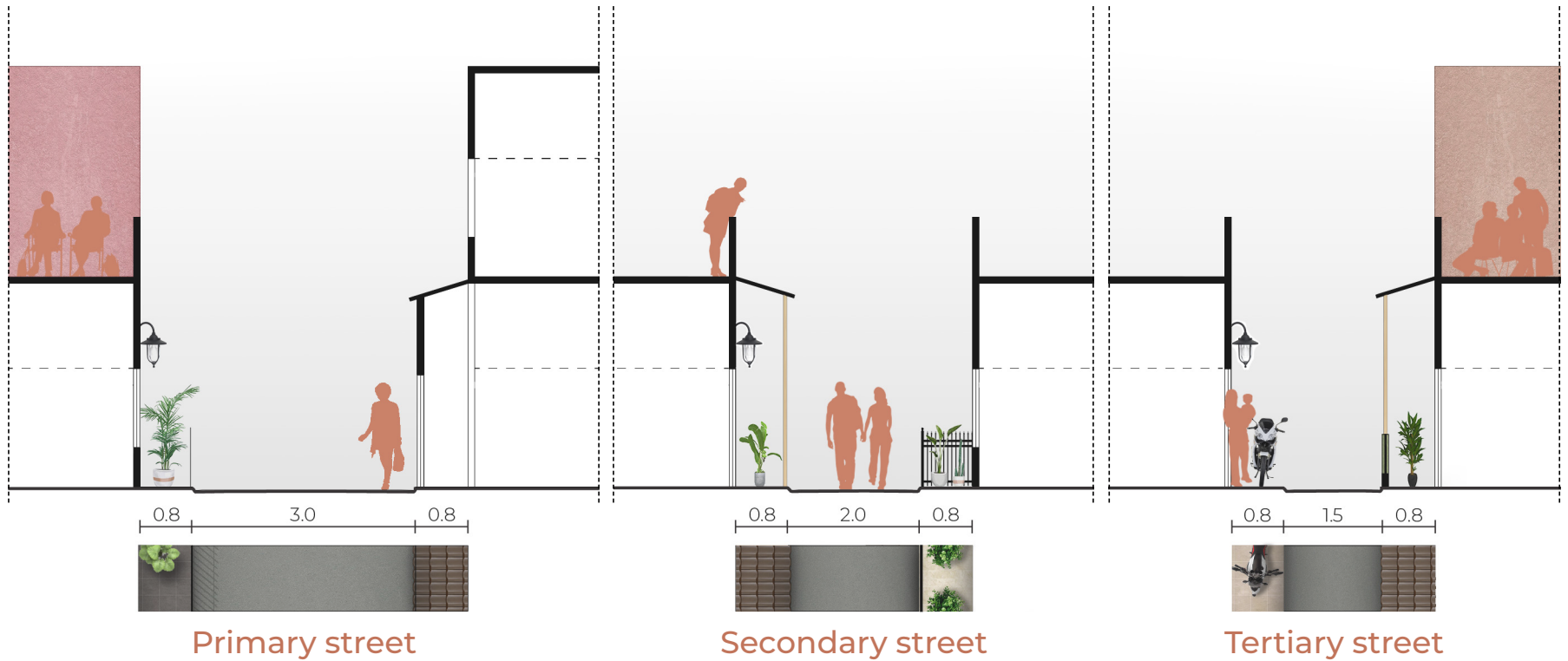
Functions & Facilities

- 1 - Community Center
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Street hierarchy

- Primary streets
- Secondary streets
- Tertiary streets

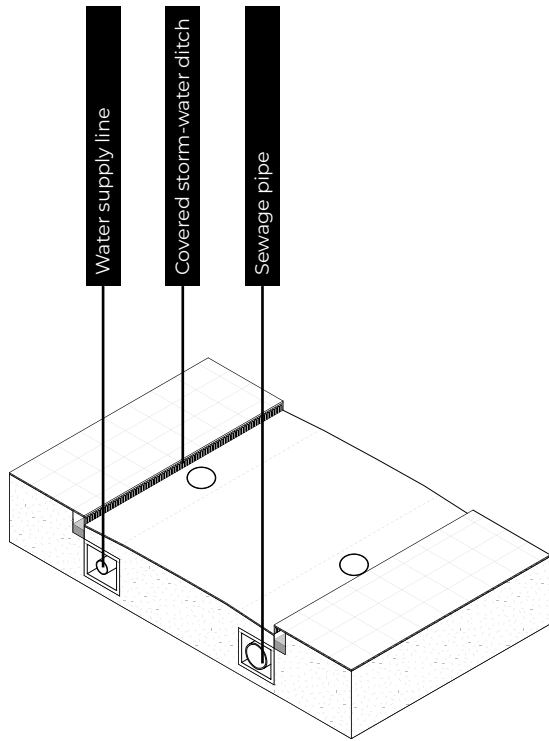
An incremental Tamansari



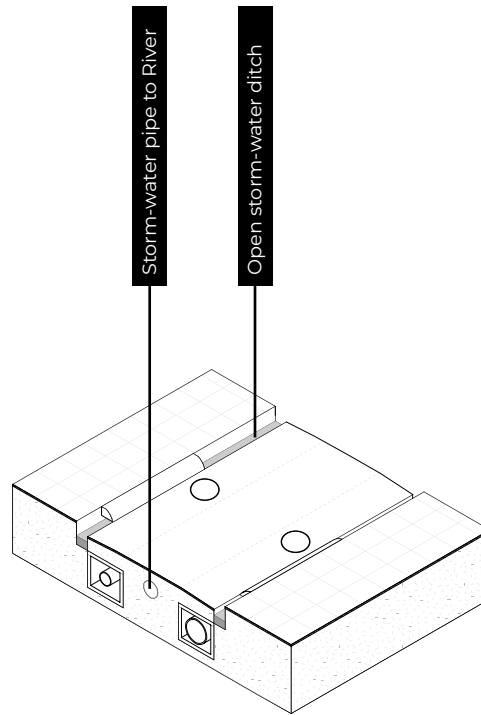




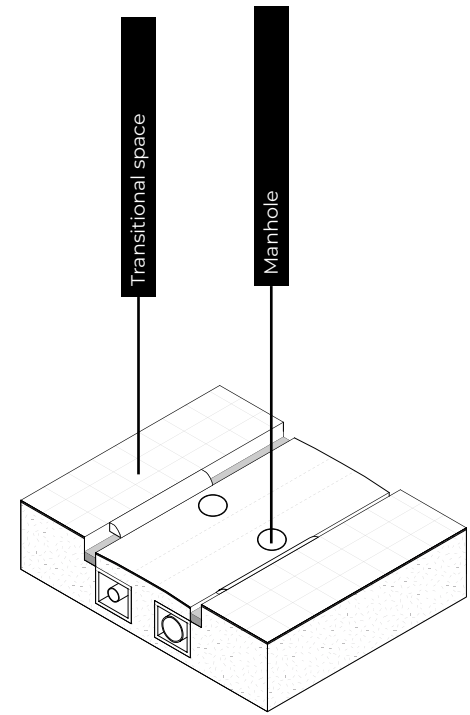
An incremental Tamansari



Primary street



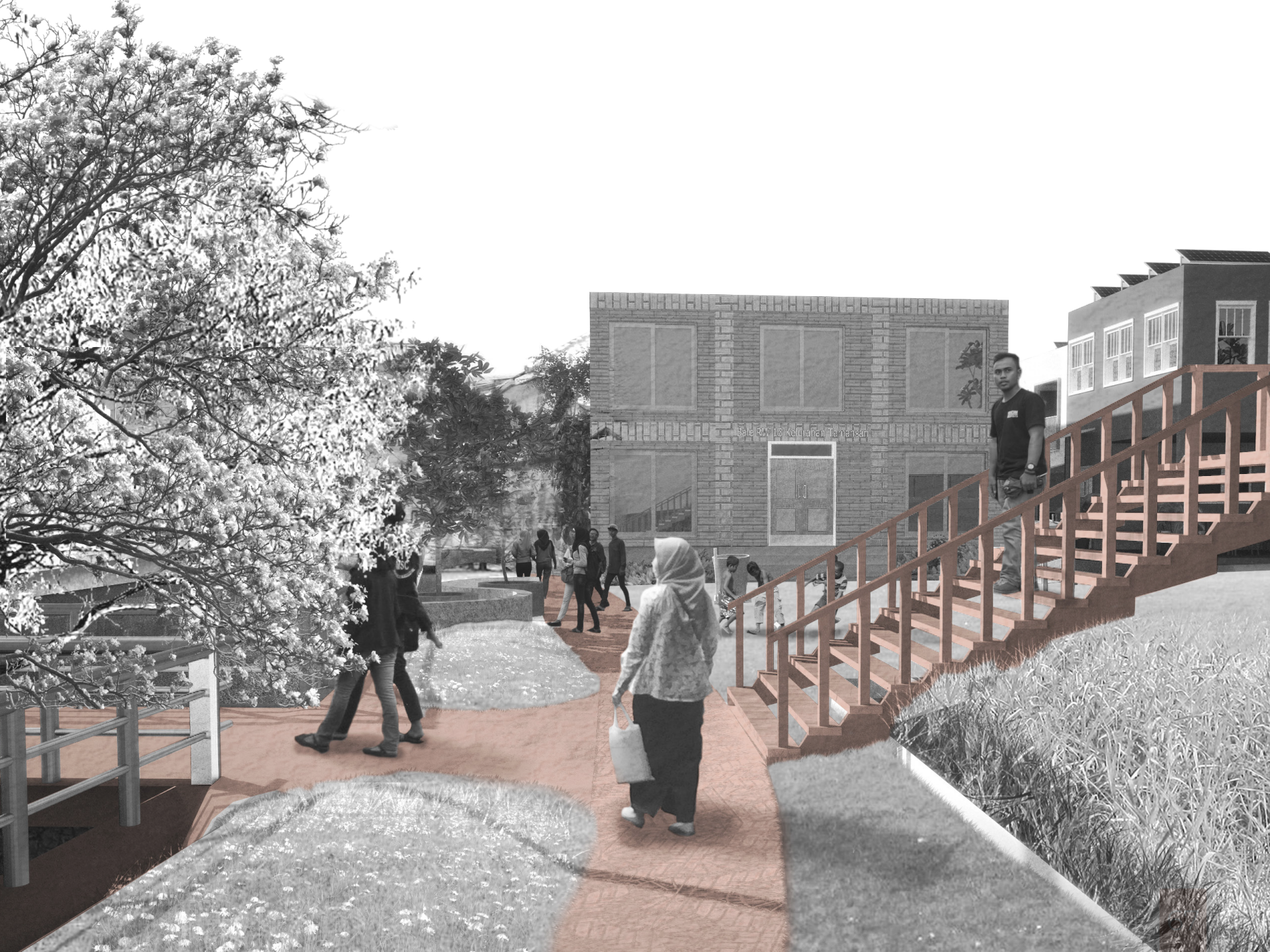
Secondary street



Tertiary street

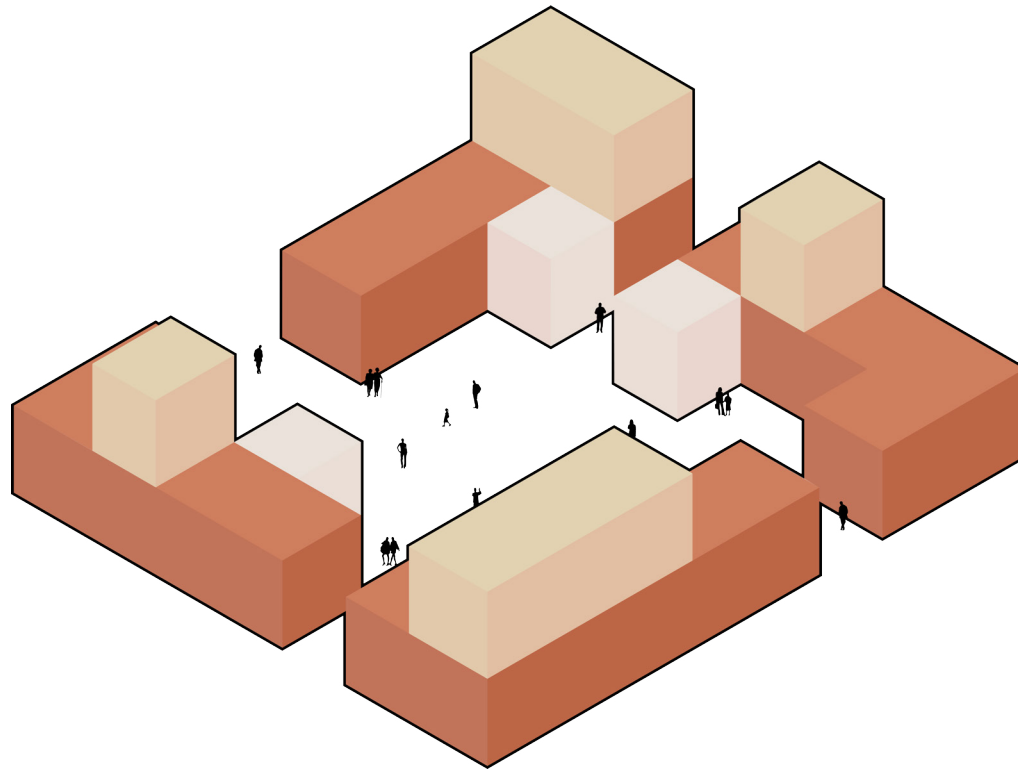


- Legend:**
- Primary sewage pipe
 - - - Secondary sewage pipe
 - ▨ Septik tank
 - Biodigester



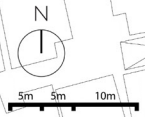
Hotel RW 18 Kelurahan Tanahbaru

An incremental Tamansari



Block structure

An incremental Tamansari



Img XX.X - Masterplan
(Source: Authors Own)

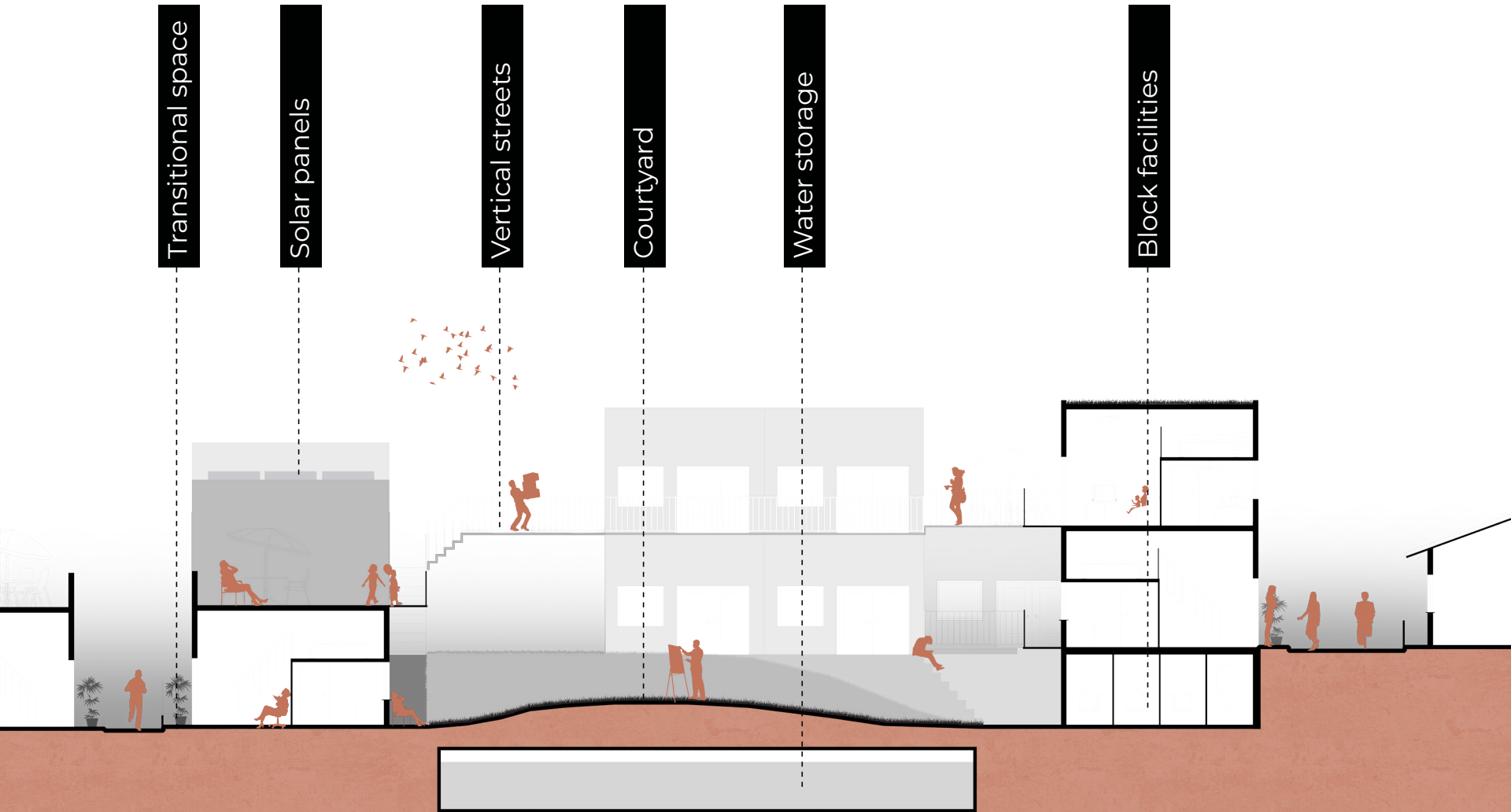
Functions & Facilities

- 1 - Community Center
- 2 - Mosque
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- 4 - Mosque
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An incremental Tamansari



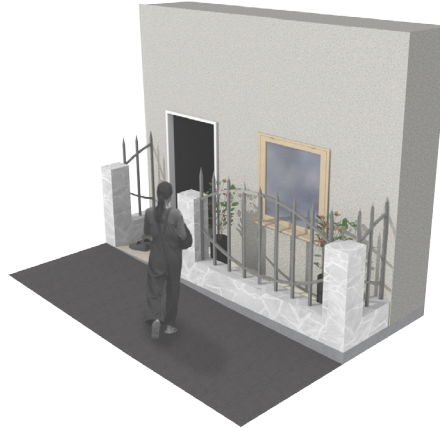
An incremental Tamansari



An incremental Tamansari



No infill



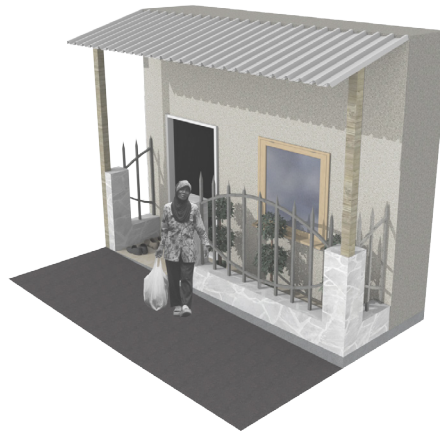
Fencing



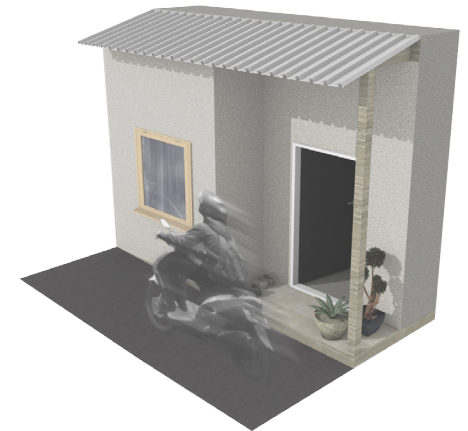
Roofing



Expansion

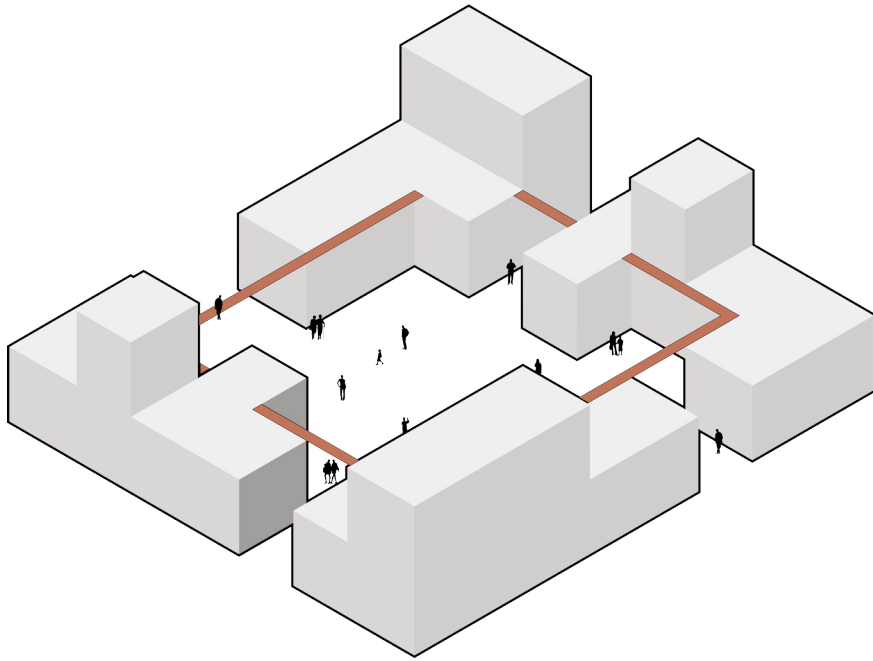


Combination 1

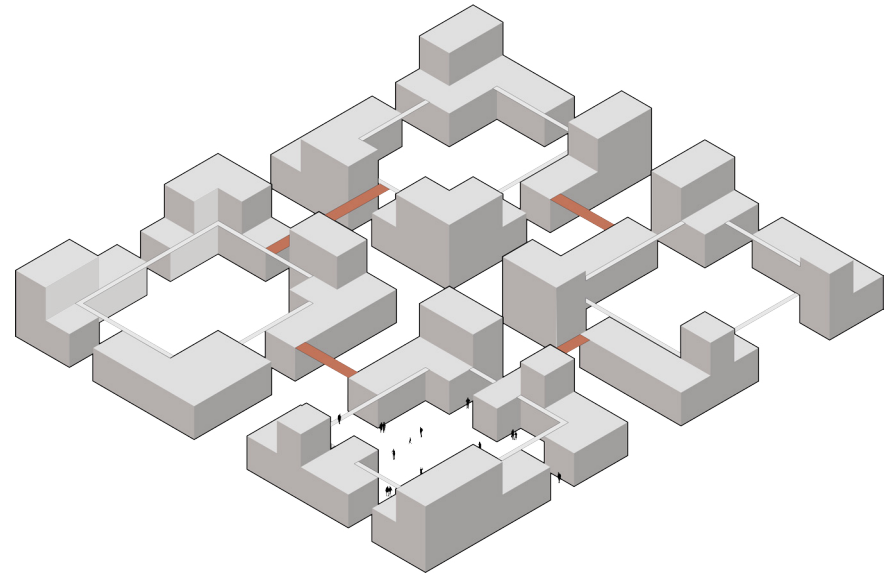


Combination 2

An incremental Tamansari



Roofscapes



Vertical street network



5m 5m 10m

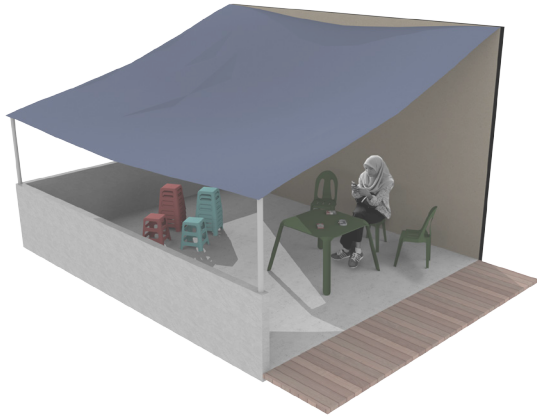
Img XX.X - Masterplan
(Source: Authors Own)

Functions & Facilities

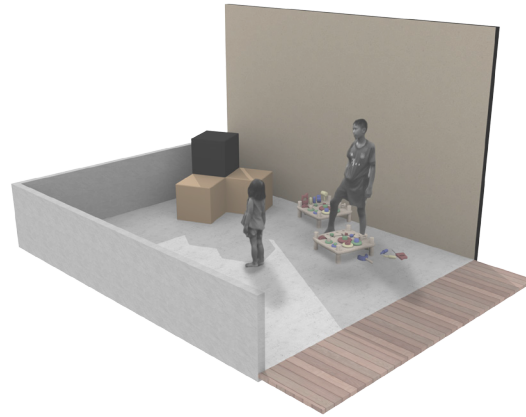
- 1 - Community Center
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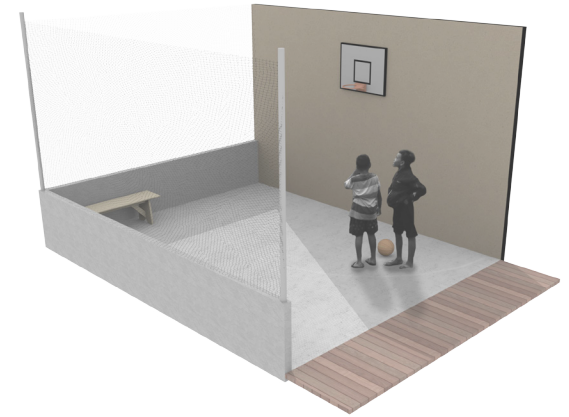
An incremental Tamansari



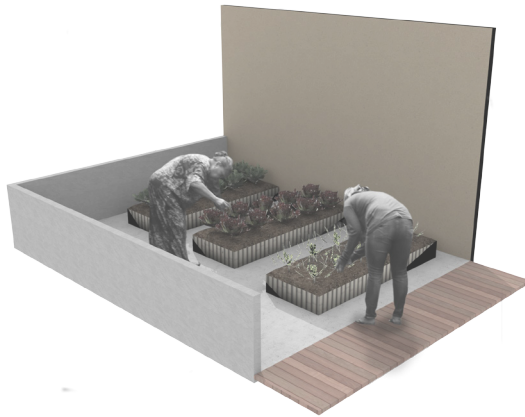
Recreational area



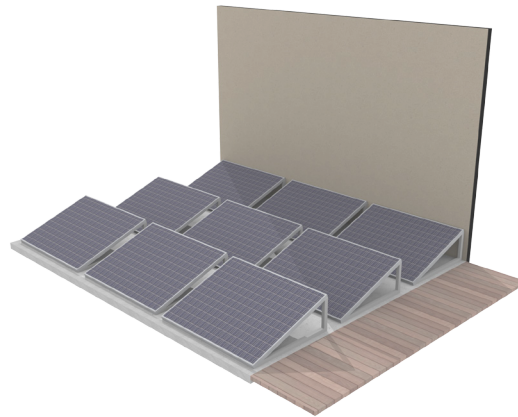
Playground for children



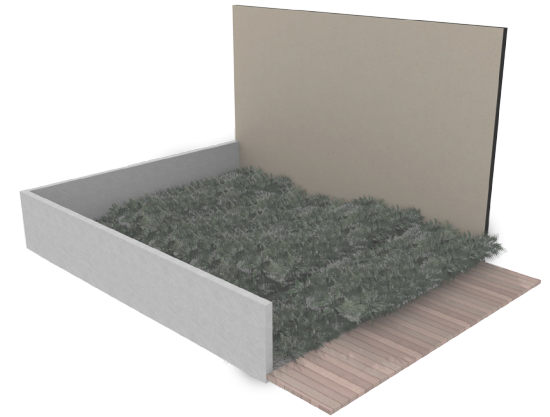
Small-scale sports functions



Urban farming

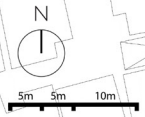


Solar panels



Green roofs

An incremental Tamansari



Img XX.X - Masterplan
(Source: Authors Own)

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Conclusion

How can we re-interpret the old 'Healthy City' identity of the 1920's, in order to improve the public health, and therefore the livability, whilst meeting the densification requirements of kampung Tamansari in Bandung?

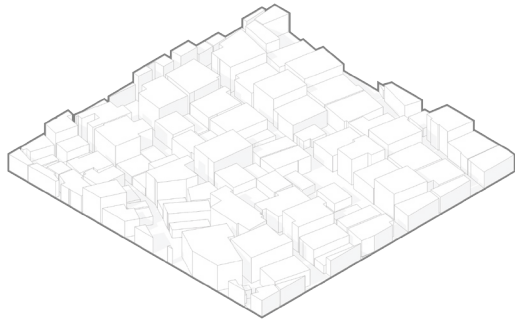
1920's Bandung

Densification

Livability

Public health

Built environment



**100 x 100 m
'Formal pocket'**

Floor Space Index

1,43

Ground Space Index

0,64

Open space Ratio

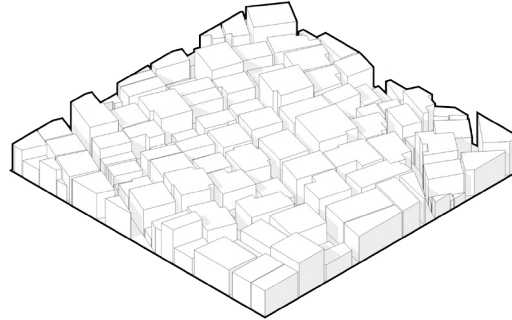
0,24

Average Amount of Layers

1,92

Average Street Width *

4,49 m



**100 x 100 m
'Maze area'**

Floor Space Index

2,24

Ground Space Index

0,77

Open space Ratio

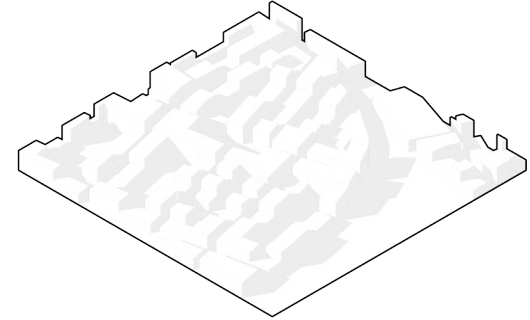
0,10

Average Amount of Layers

2,24

Average Street Width *

2,19 m



**100 x 100 m
Incremental
Tamansari**

Floor Space Index

0,56

Ground Space Index

0,43

Open space Ratio

1,00

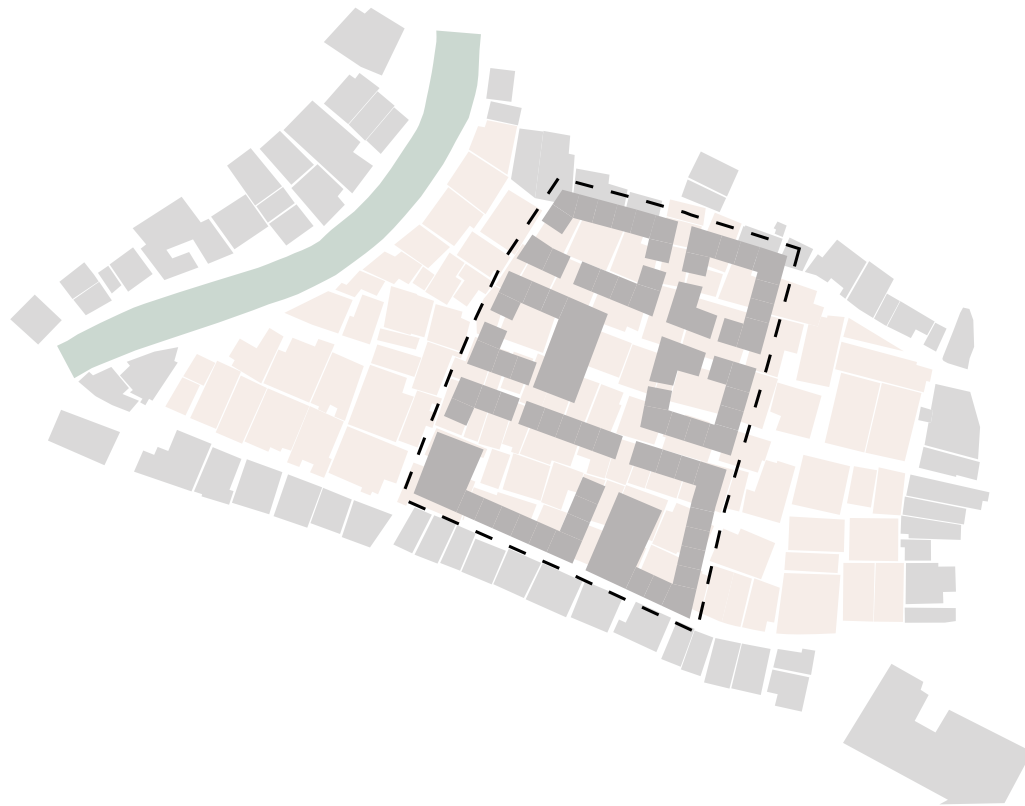
Average Amount of Layers

1,34

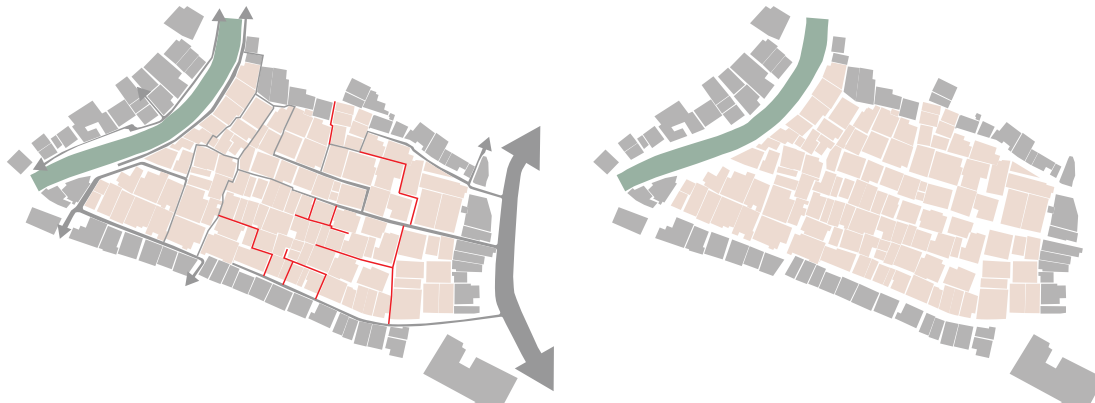
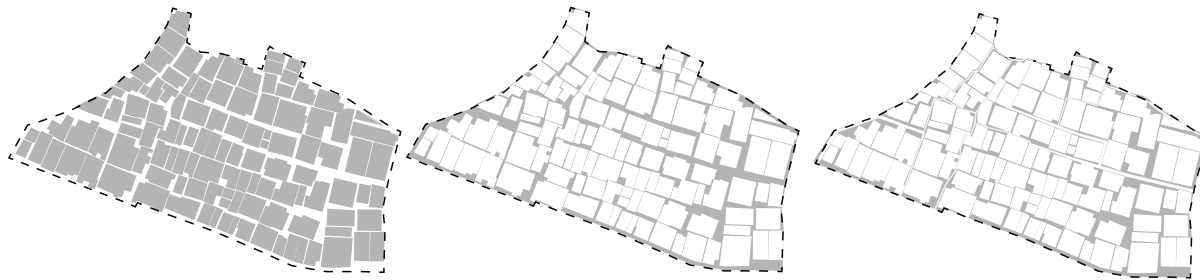
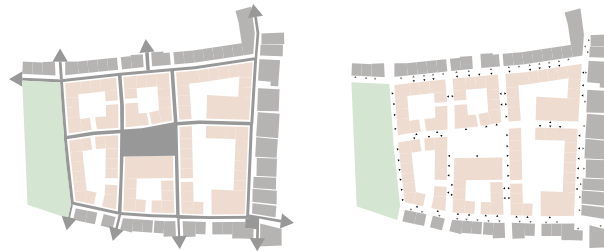
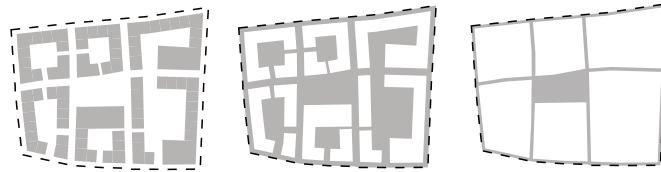
Average Street Width *

3,52 m

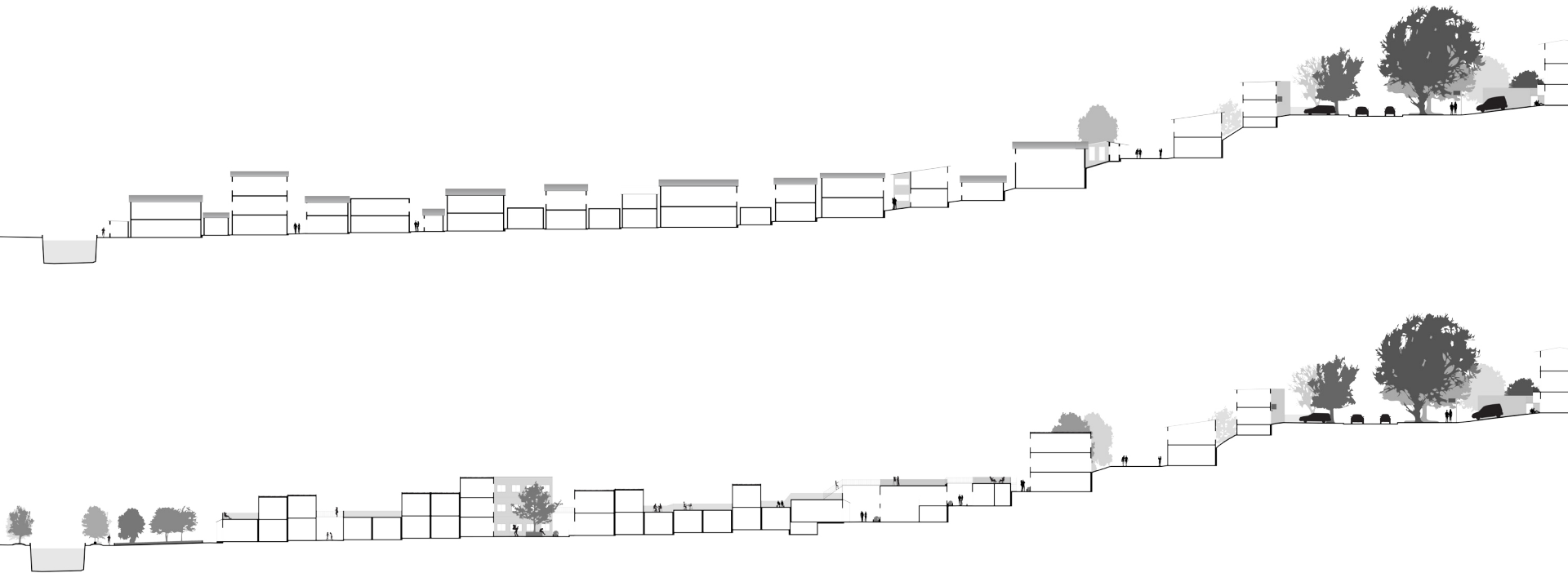
Spatial pattern



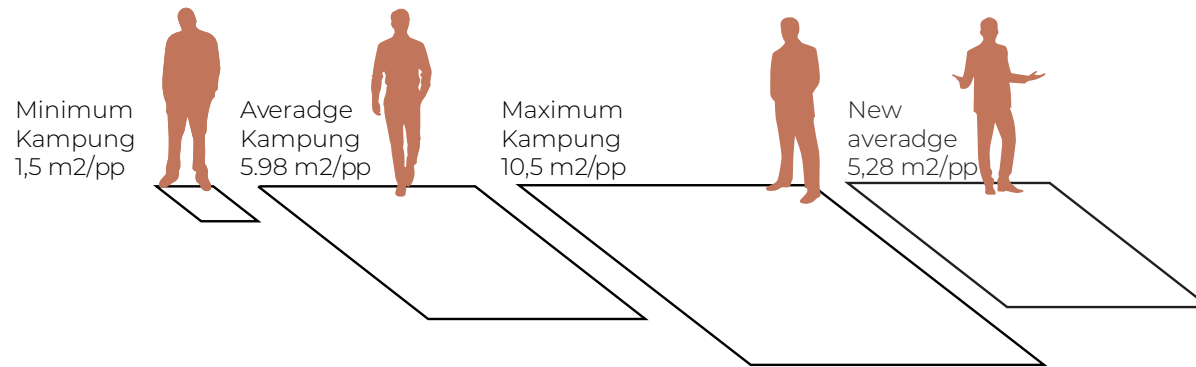
Spatial pattern



Neighborhood configuration



Population density



Infrastructure



Conclusion

How can we re-interpret the old 'Healthy City' identity of the 1920's, in order to improve the public health, and therefore the livability, whilst meeting the densification requirements of kampung Tamansari in Bandung?

1920's Bandung

Densification

Livability

Public health

Thank you.

