

# BRAGA PERMAI ELEVATED

Densification and synergy of Bandung's inner-city  
growing from the values of shared heritage

*Luuk Borremans  
29 January 2019*

# CONTENT

Introduction

- Context
- Problem statement
- Challenge

Strategy

Implementation

Context



## STUDIO BANDUNG



STUDIO BANDUNG



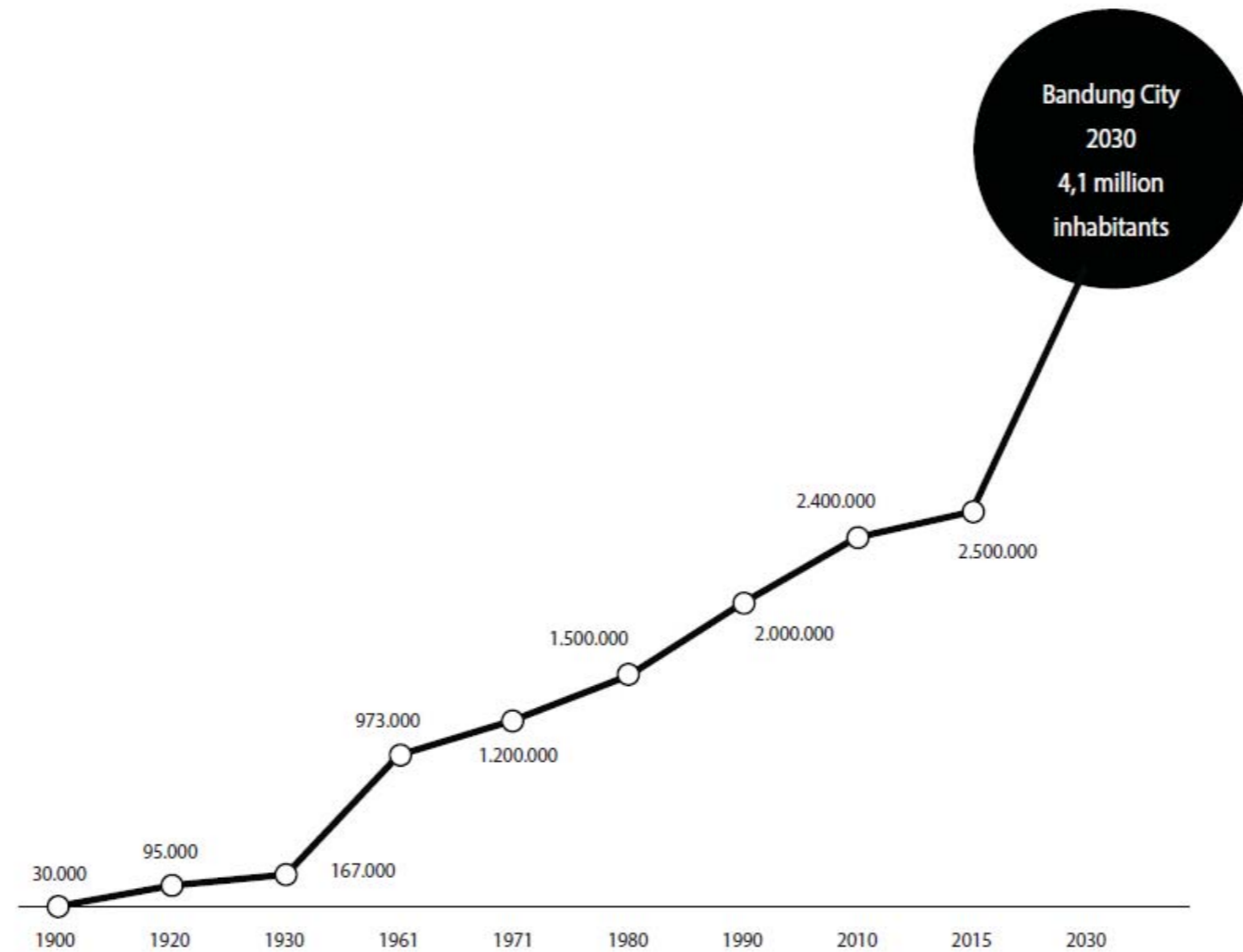
## STUDIO BANDUNG

*shared heritage lab*



## INDONESIAN URBANIZATION

*trend*



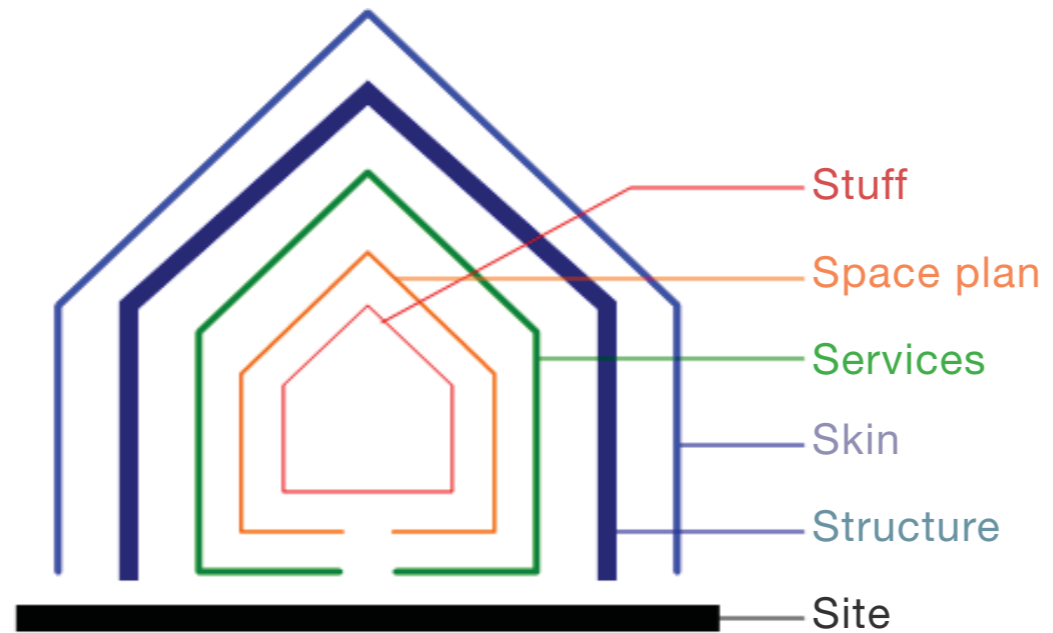
Growth of urban population in Bandung 1900 - 2030 *source COCOCAN*

FUTURE



*'How to give new meaning and use to this environment taking the past, present and future into account?'*

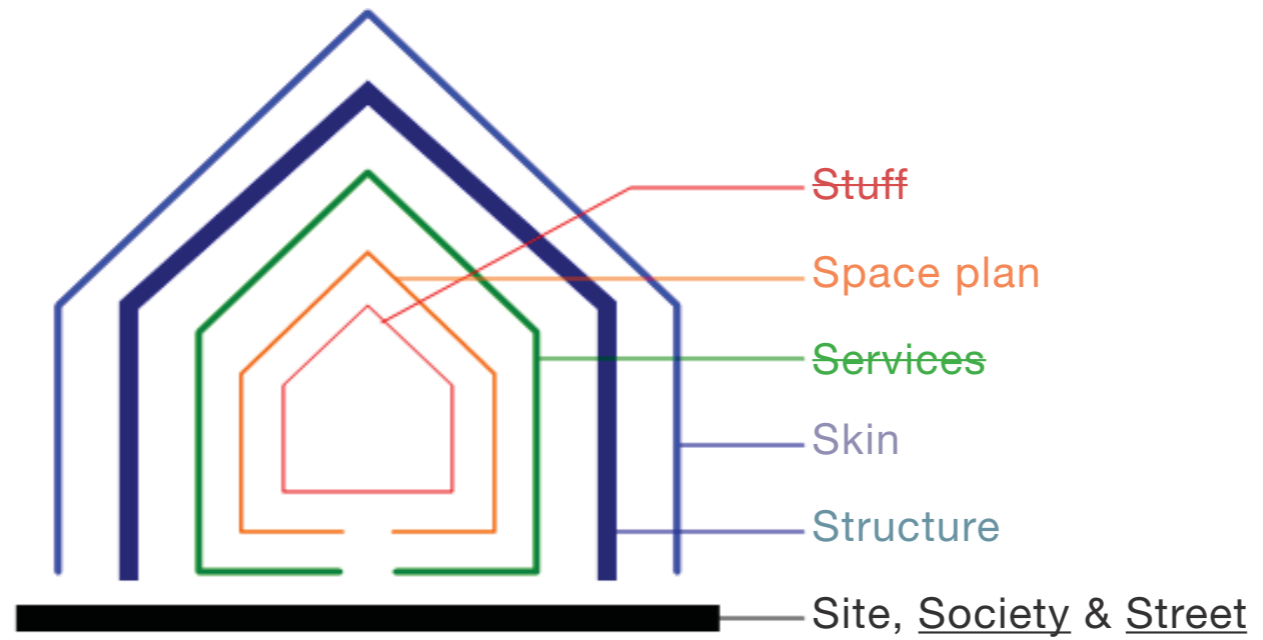
## How Buildings Learn



UNDERSTANDING PAST, PRESENT AND FUTURE

*layers of change - stewart brand*

## How Cities Learn



UNDERSTANDING PAST, PRESENT AND FUTURE

*layers of change*



TIMELINE BANDUNG

*3 periods*



RURAL

- Green and spacious
- Social connection street
- Visual control
- Gradual transtion public-private



## RURAL

*site* | *society* | *street* | *structure* | *skin* | *space plan*

- Open structure
- Porous skin
- Passive climatic principles
- Flexible in use
- Replaceable elements



## RURAL

*site | society | street | structure | skin | space plan*



COLONIAL



Kampong

Formal Street

COLONIAL



- Diminishing of green space
- Strong connection street
- Semi-public streets



- Defined use of space
- Strong separation public-private
- Clear hierarchy streets

## COLONIAL

*site* | *society* | *street* | *structure* | *skin* | *space plan*



- Structure and layout more fixed
- Hybrid of materials
- Closed off towards street



- Form follows function
- Heavy skin
- Adapted to climate

## COLONIAL

*site | society | street | structure | skin | space plan*



MODERN

Urban Kampong

Formal Street

MODERN



- Diminishing of green and social space
- Streets become social clusters
- Difficulty maintaining safety



- Efficient use of space
- Connection street lost
- Strong separation public-private for safety

## MODERN

*site* | *society* | *street* | *structure* | *skin* | *space plan*



- Unsafe structure
- Closed skin
- Possibility to express identity



- Fixed construction and layout
- Closed off from climate
- Heritage elements succumb

## MODERN

*site | society | street | structure | skin | space plan*

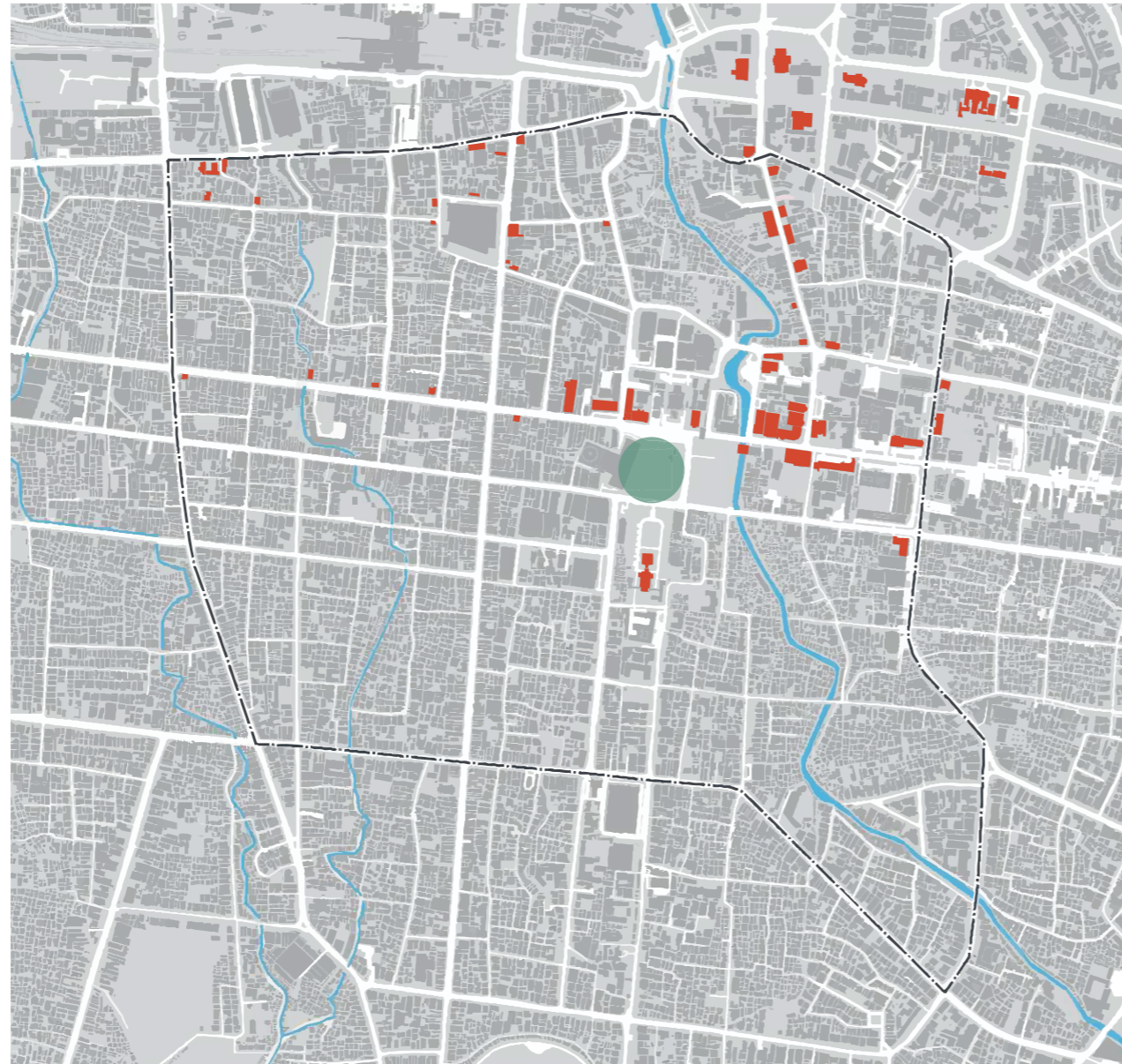
Problem statement



*'The densification of Bandung's urban structure isn't done in an appropriate manner and currently a threat to its social and shared heritage values'*



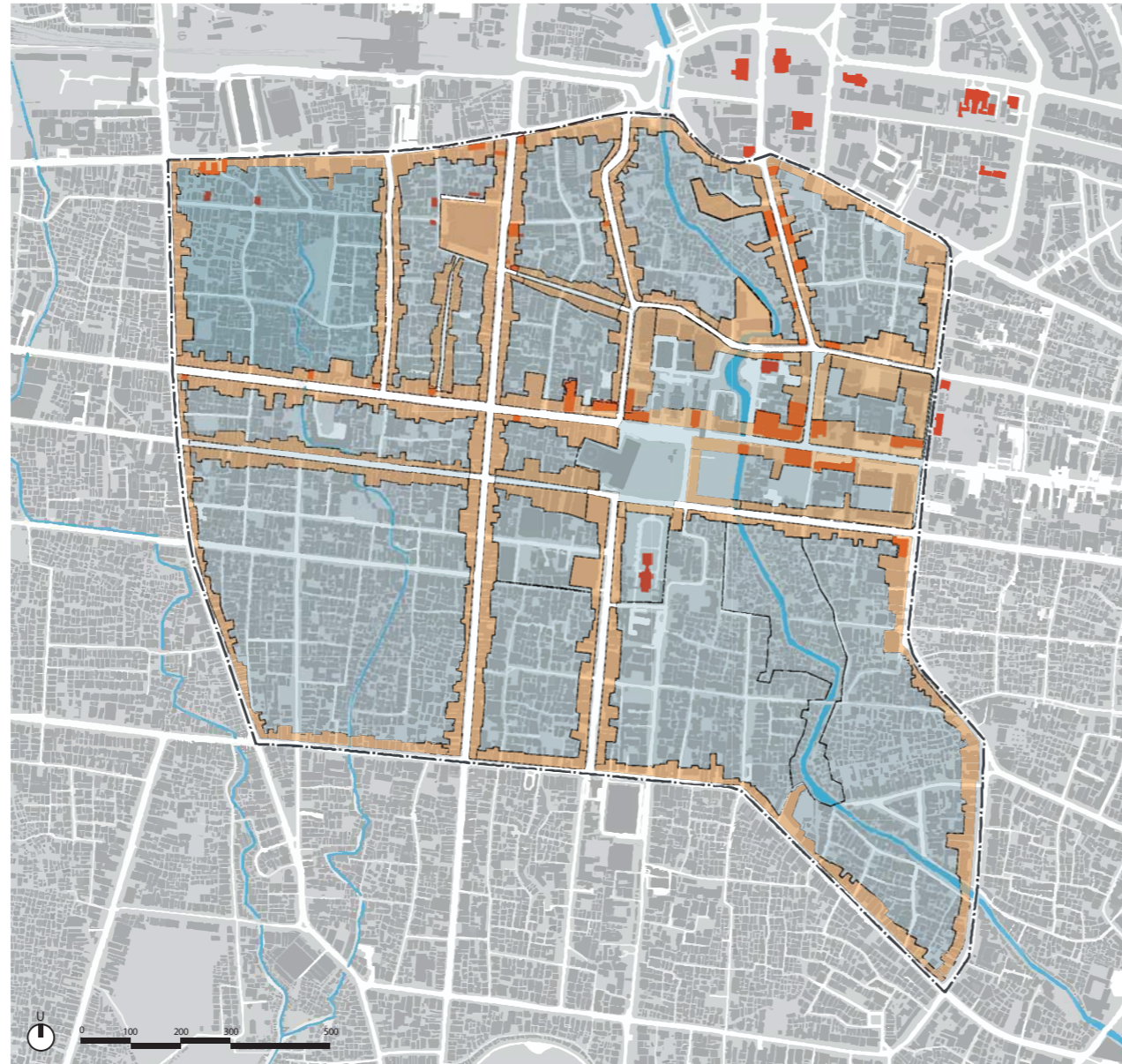
NOW  
*bandung*



- Listed monument
- Alun-Alun (city's central square)

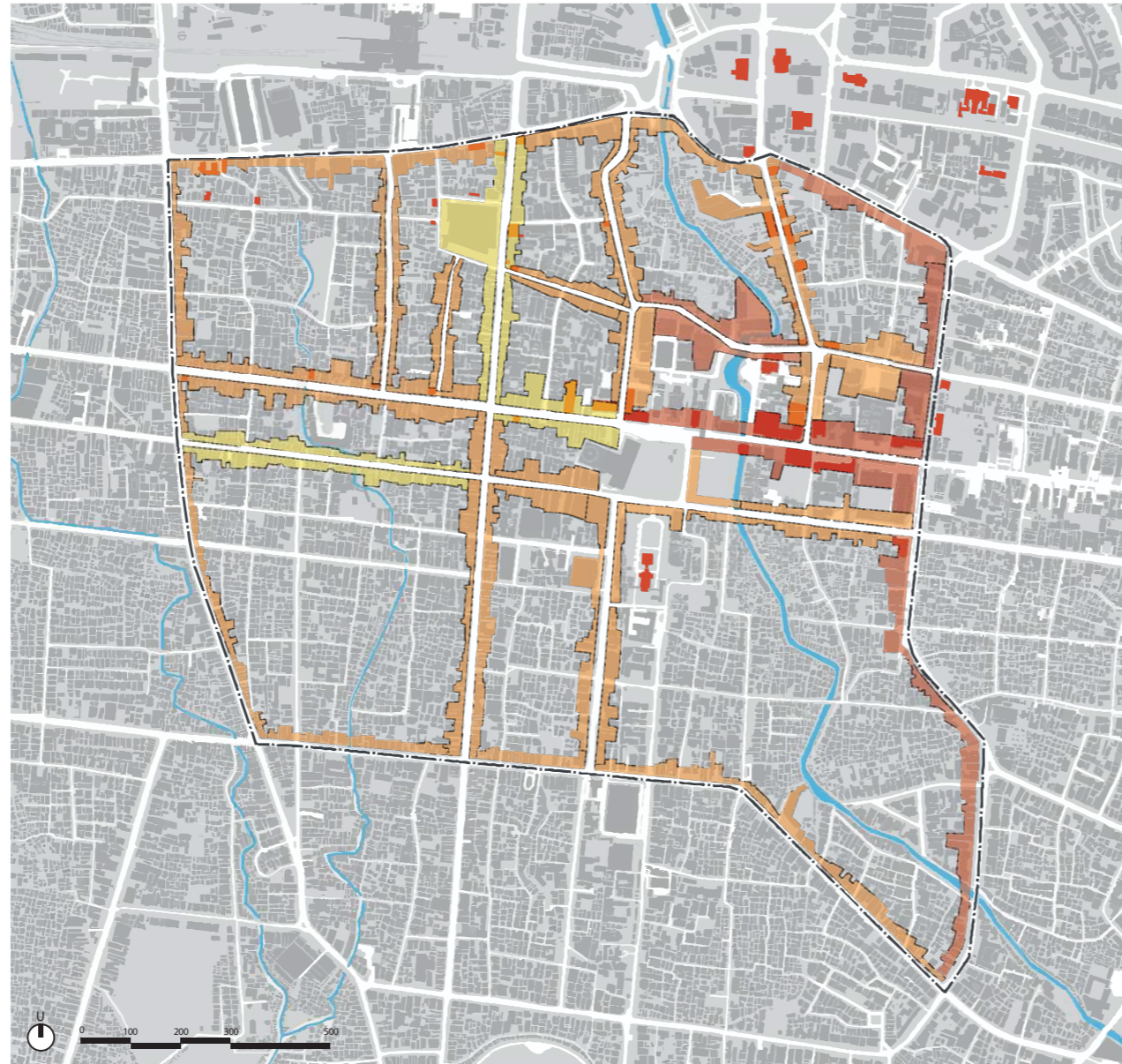
# HISTORICAL CITY CENTRE

*densification biggest threat*



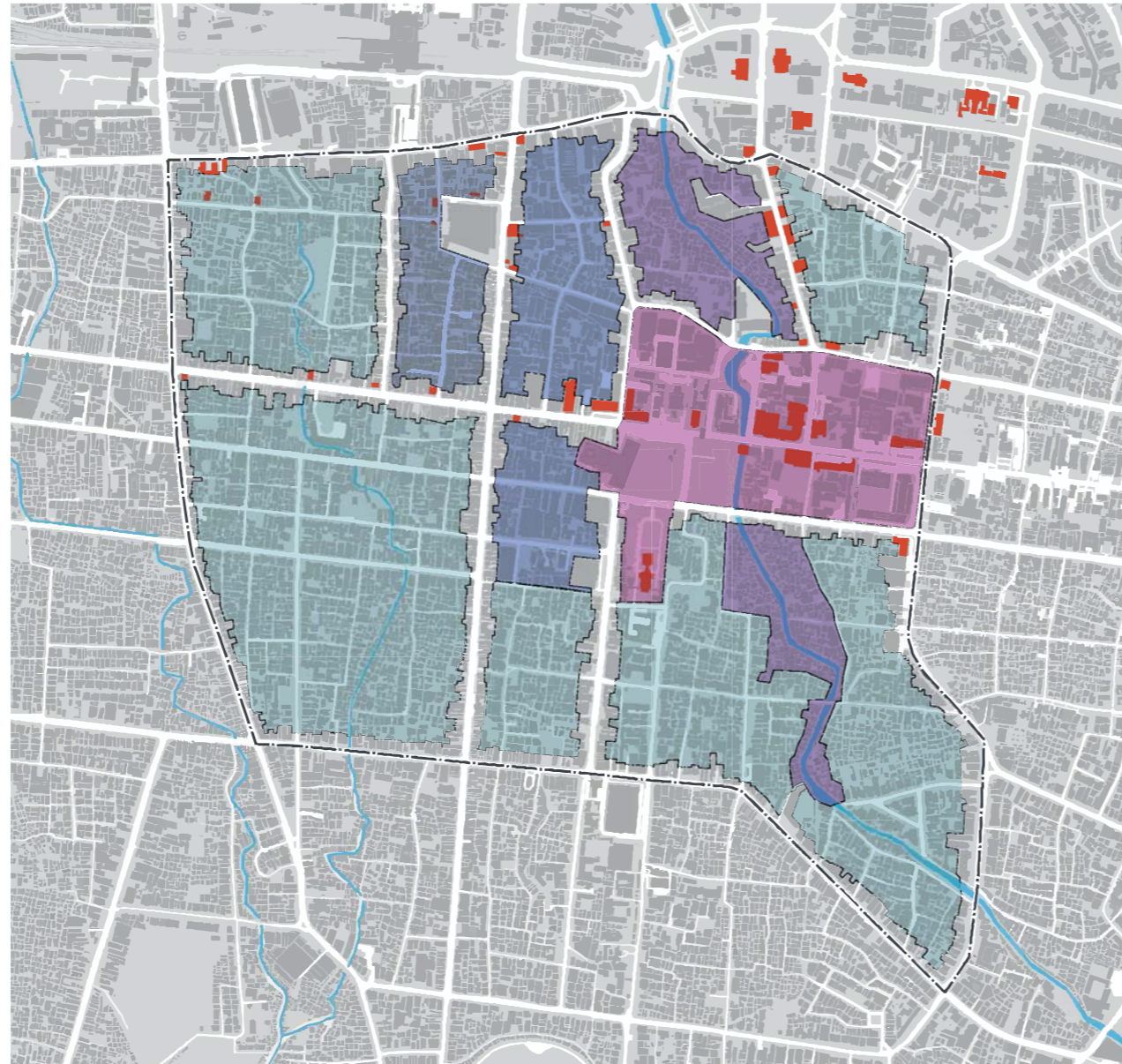
- Urban kampong
- Formal street

NOW  
*two structures*



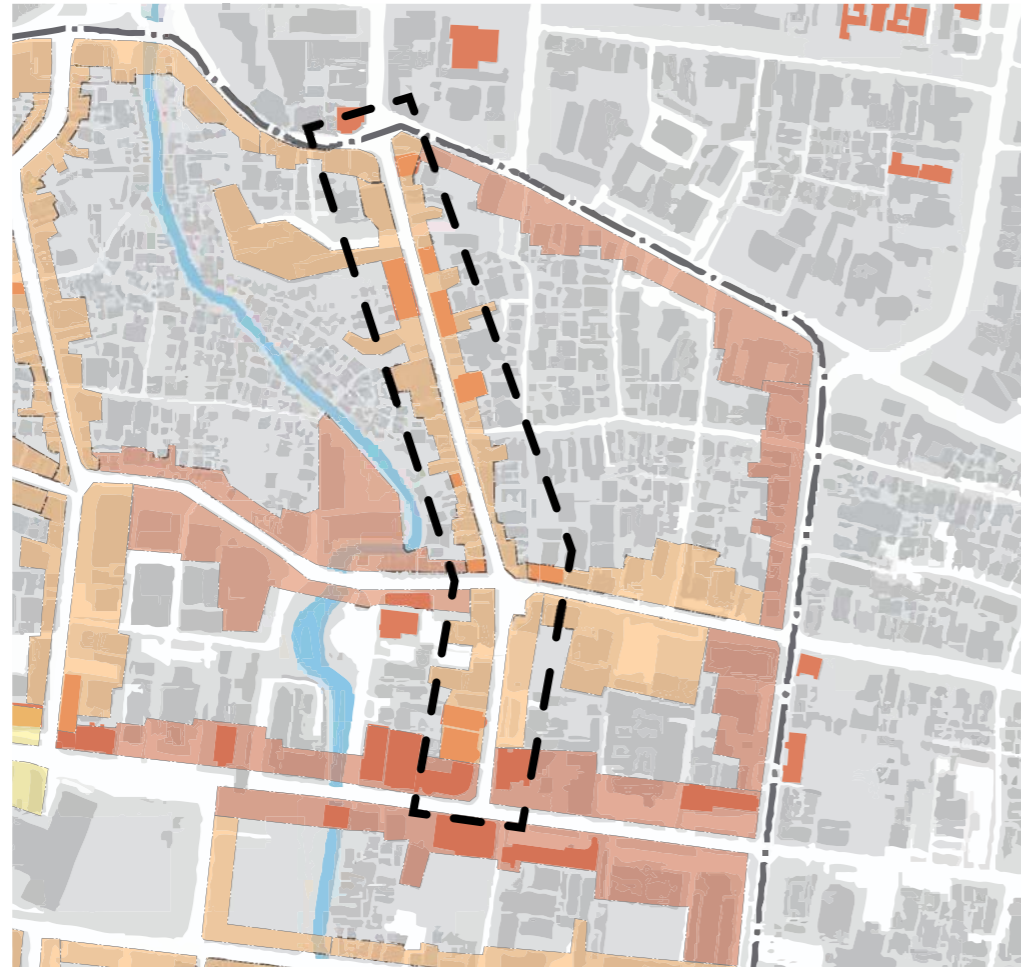
- High density - High heritage
- Low density - High heritage
- Low density - Low heritage

# URBAN STREET

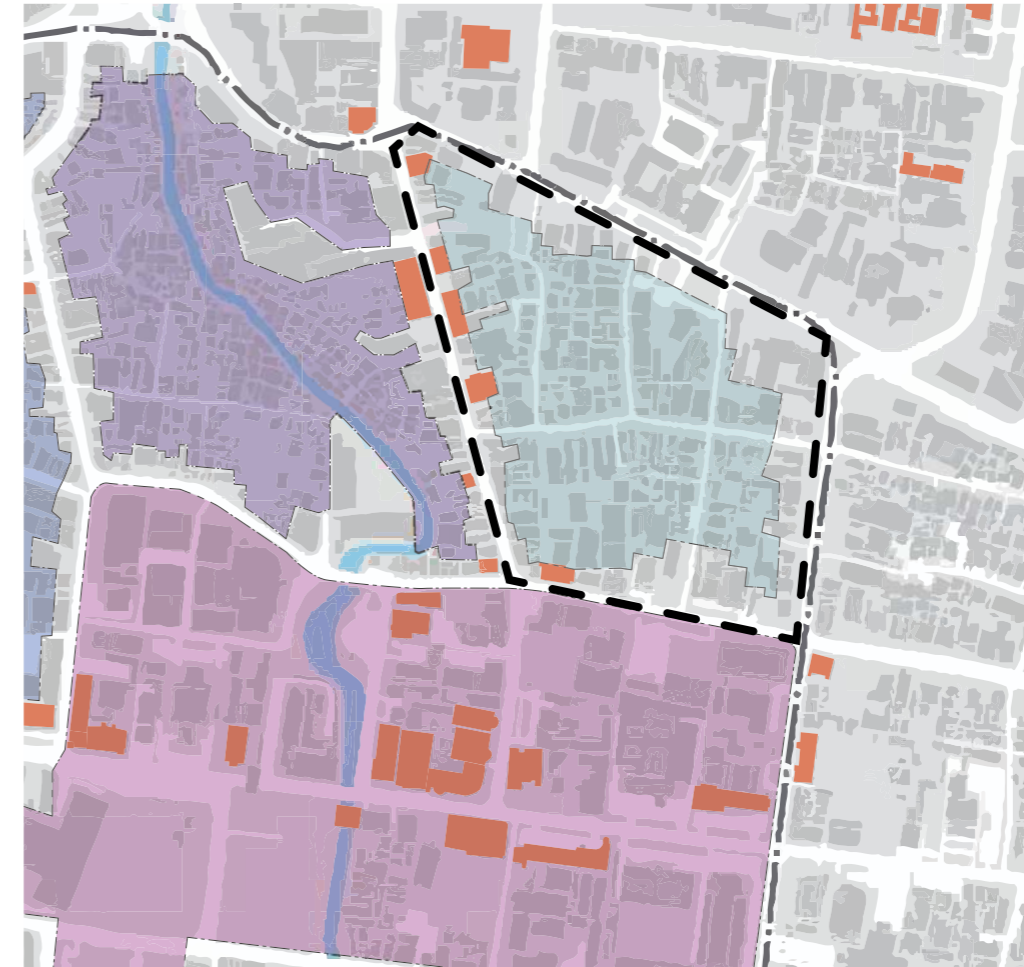


- High hor. density - High vert. density
- High hor. density - Medium vert. density
- Medium hor. density - Medium vert. density
- Medium hor. density - Low vert. density

INNER-BLOCK



- High density - High heritage
- Low density - High heritage
- Low density - Low heritage



- High hor. density - High vert. density
- High hor. density - Medium vert. density
- Medium hor. density - Medium vert. density
- Medium hor. density - Low vert. density

## BRAGA NORTH-EAST

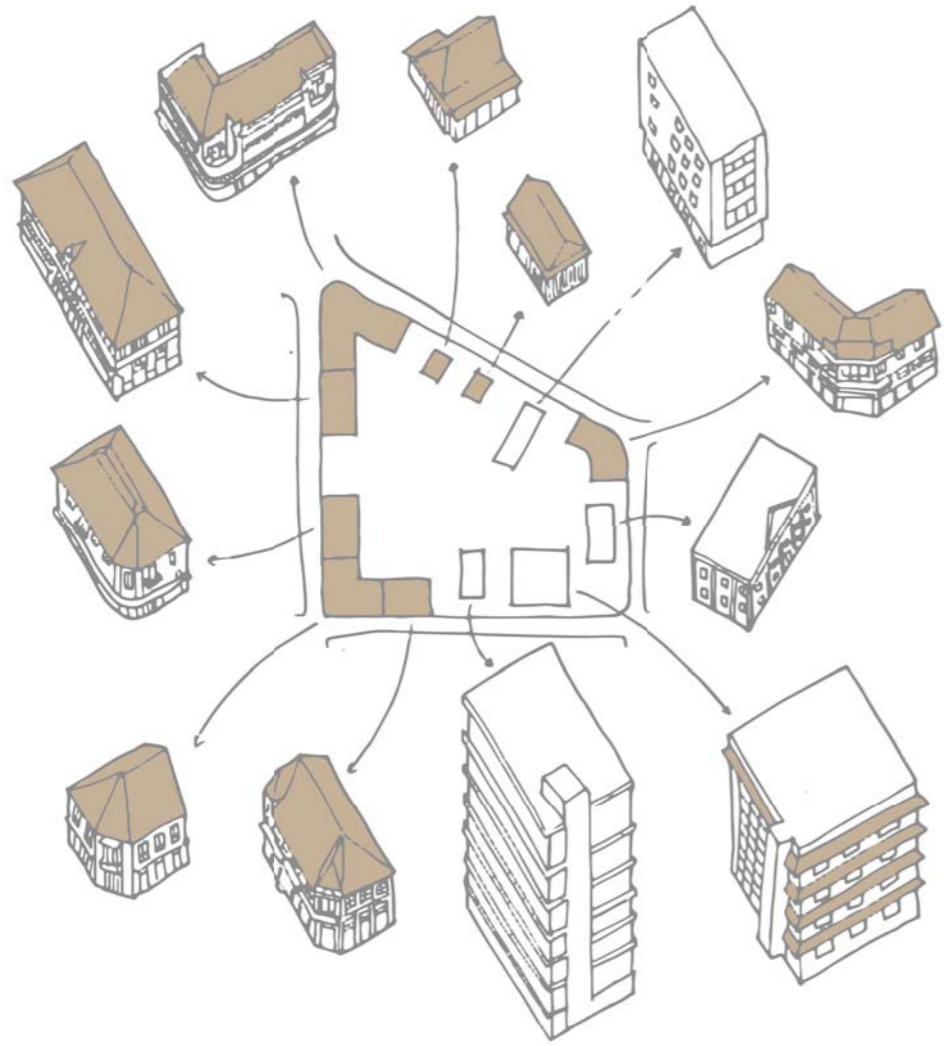


Formal street

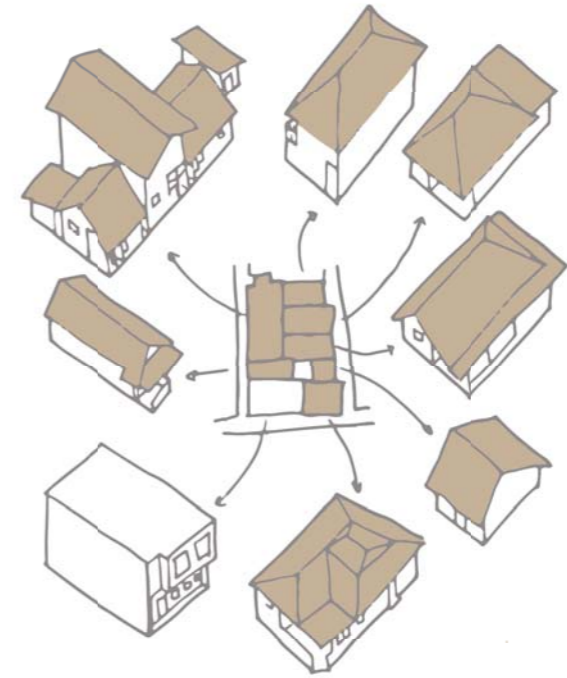
Urban kampong

# BRAGA NORTH-EAST



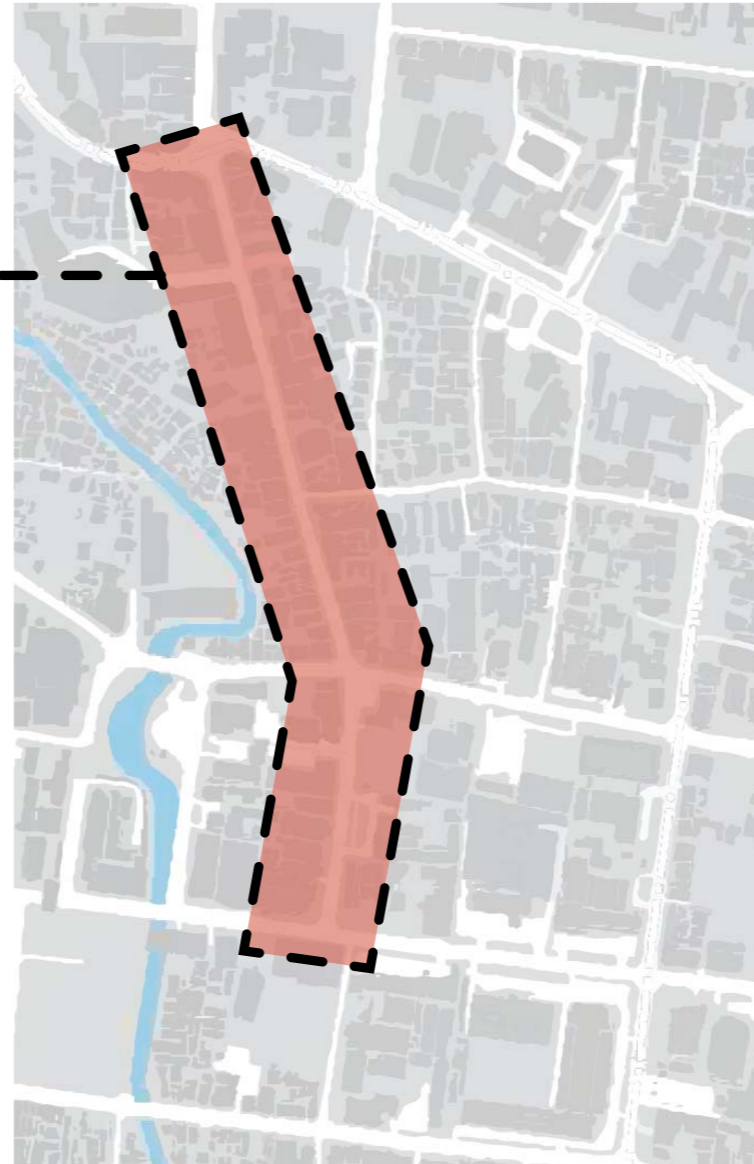


Formal street



Urban kampong

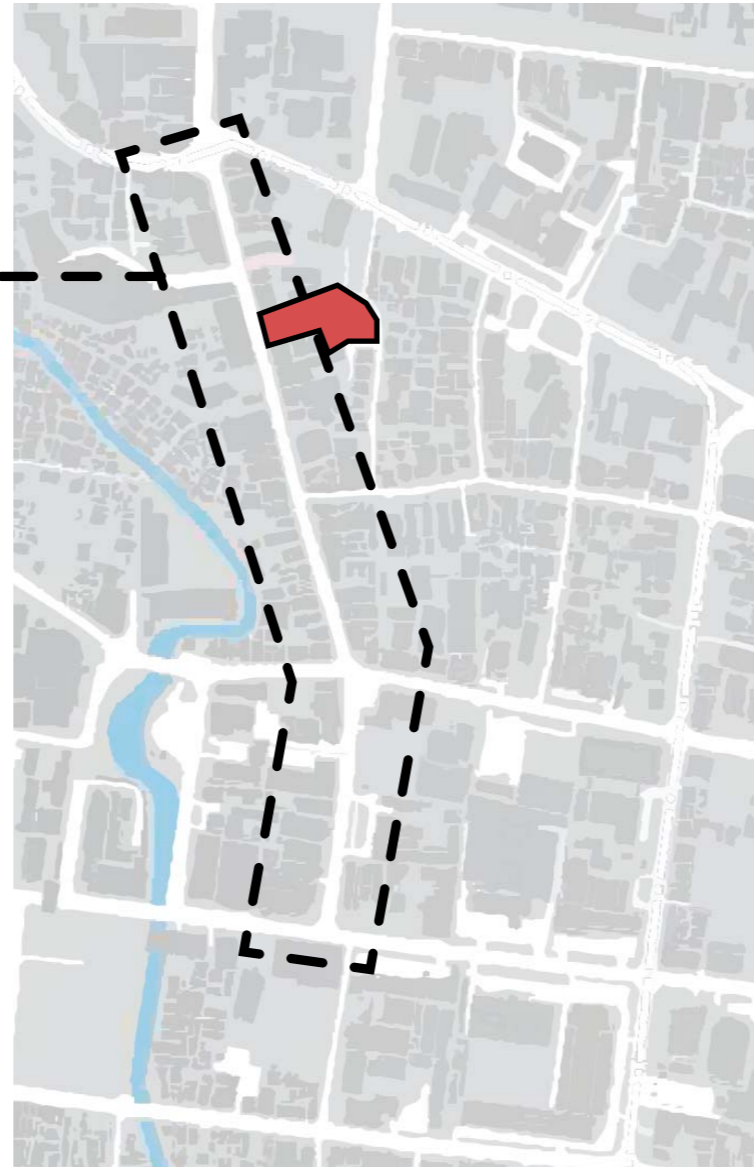
## BRAGA NORTH-EAST



## Ridwan & Budi

- Ridwan wants to acquire and develop a plot in the Braga district
- With high demands he is interested in making a big scale and profitable project
- Budi works as a civil servant for the Bandung planning gallery
- She is interested in making Bandung a liveable and modern megacity
- Looking for a big plot with low density and unused space

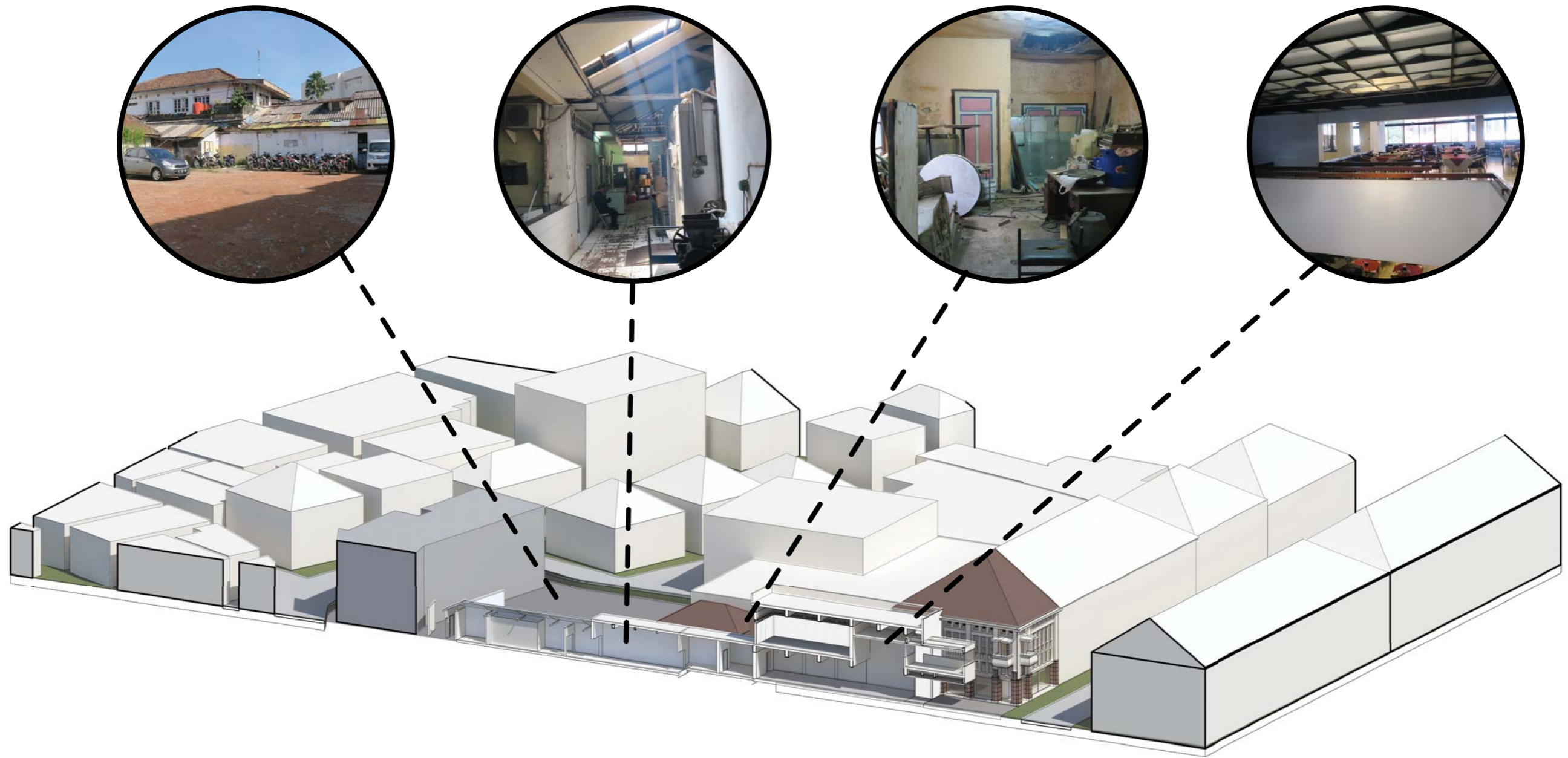
STAKEHOLDERS



## Ridwan & Budi

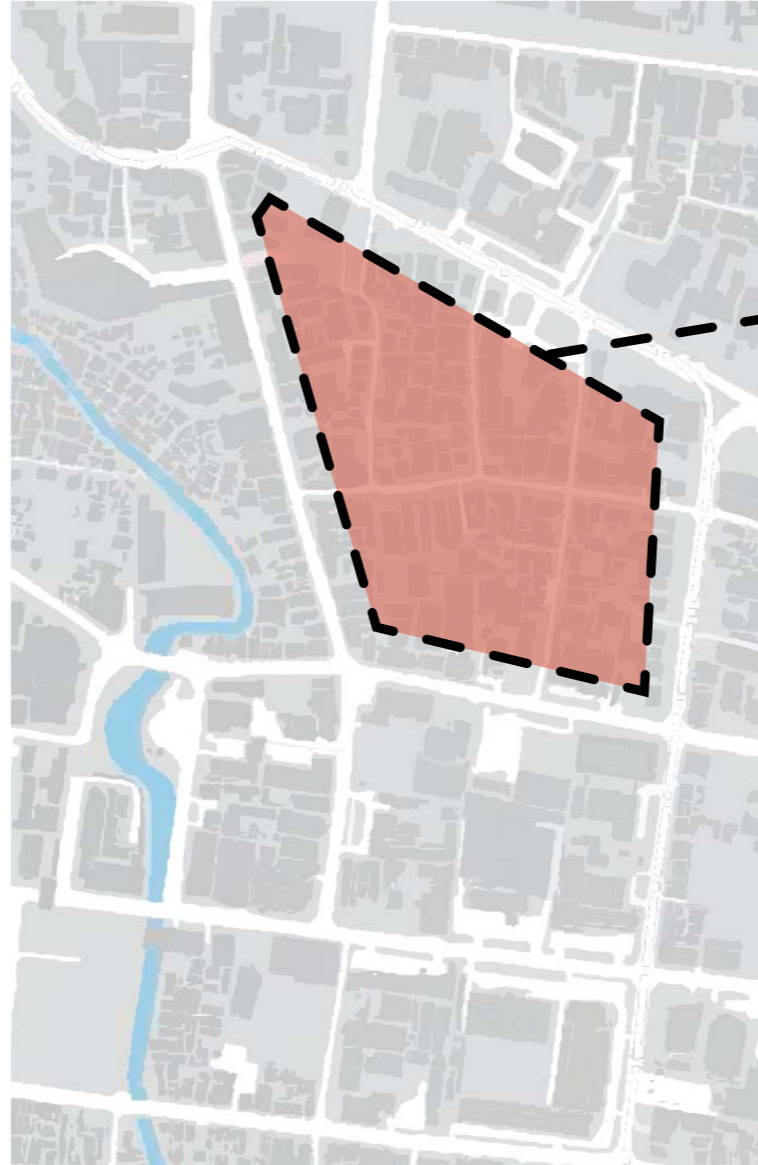
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BRAGA PERMAI



# BRAGA PERMAI

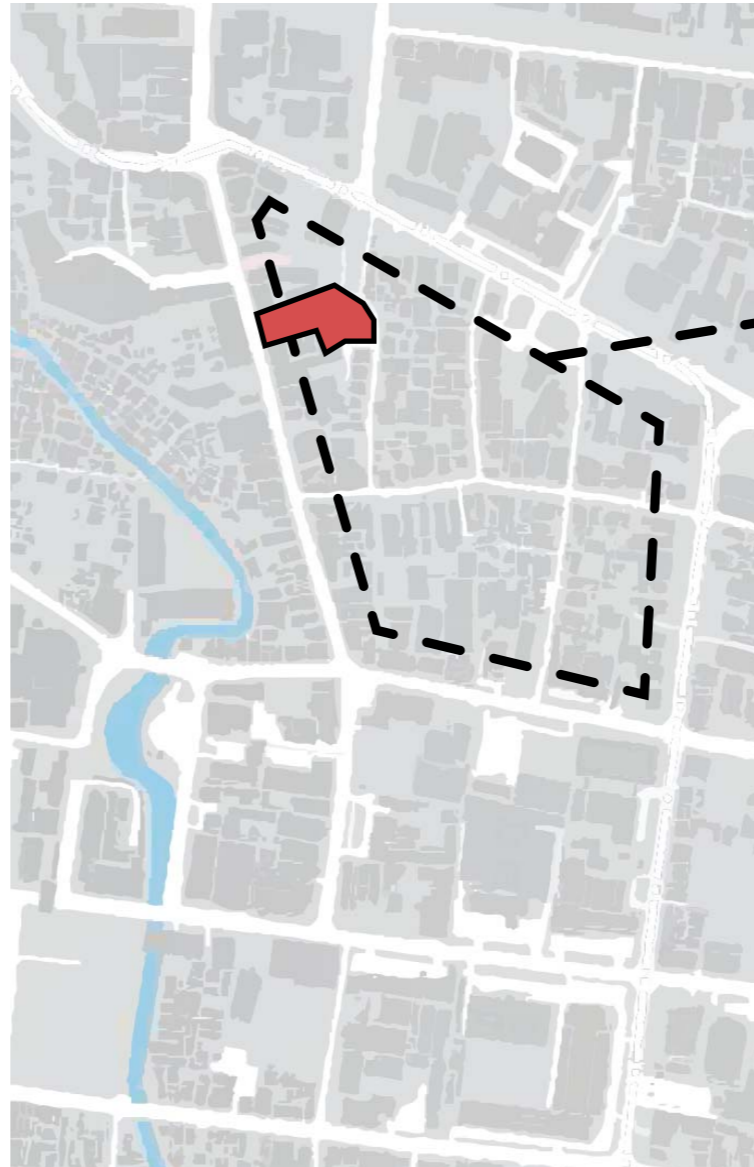
*big plot, low density & not used optimal*



Siska & Intan

- They live and work in the Braga area
- He comes from the area and has his family living closeby
- They value the history of the area and are part of the strong existing community
- They value a healthy living environment
- They would like to have a more health living environment and more space to expand their family

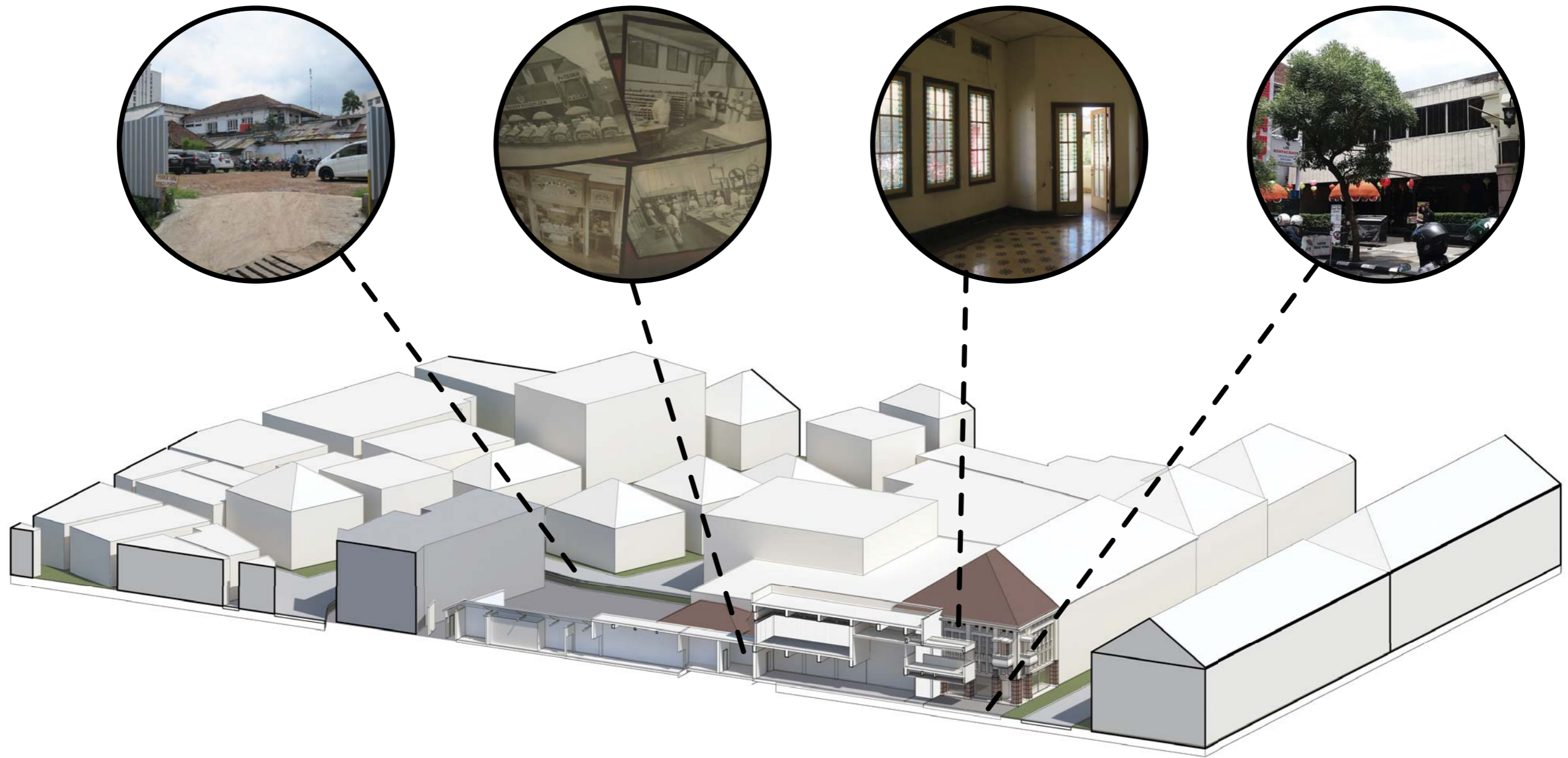
## STAKEHOLDERS



Siska & Intan

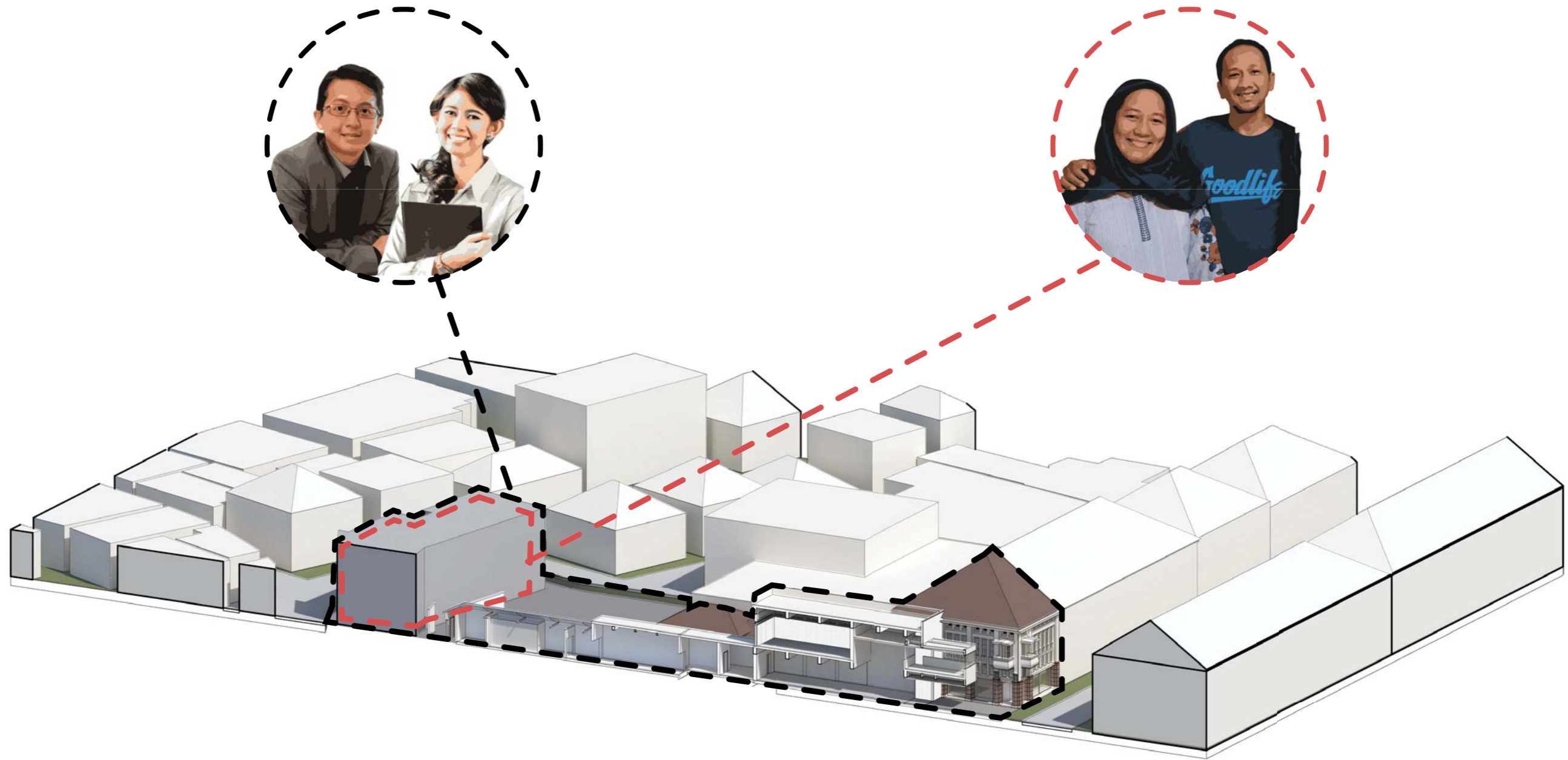
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## BRAGA PERMAI



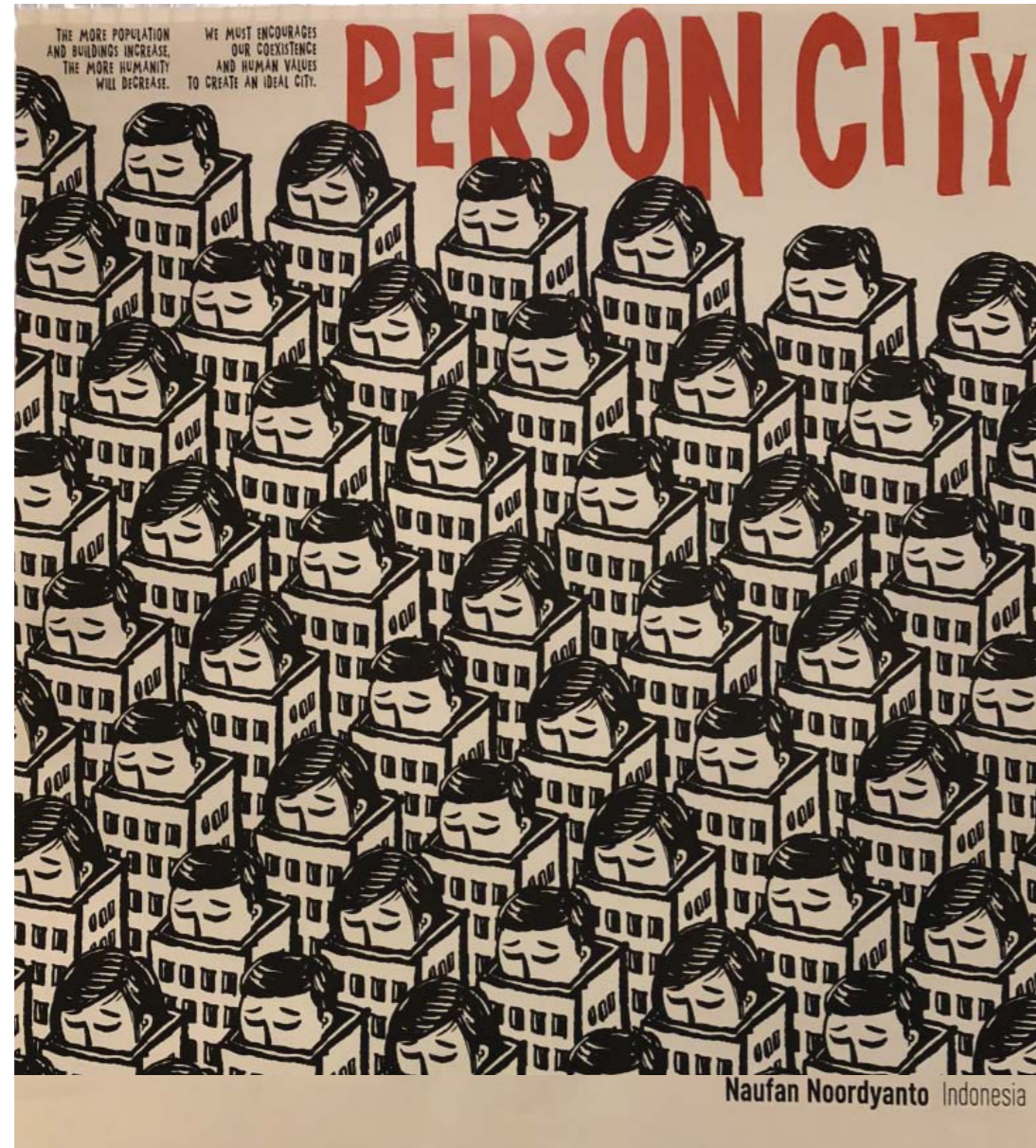
## BRAGA PERMAI

*part of their heritage, unable to transfer history & exclusive*



HOW TO DEVELOP?

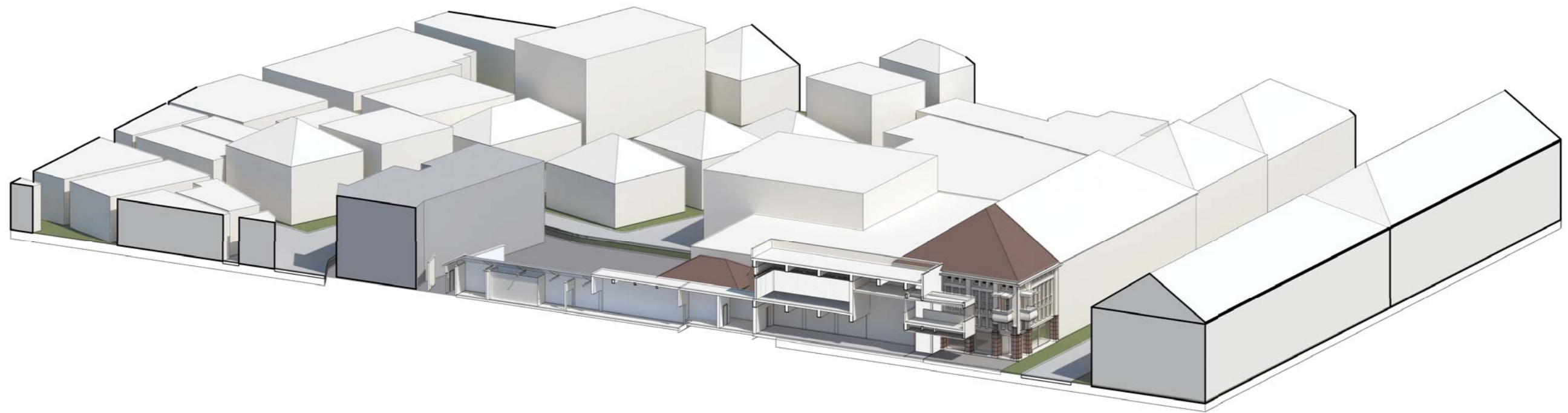




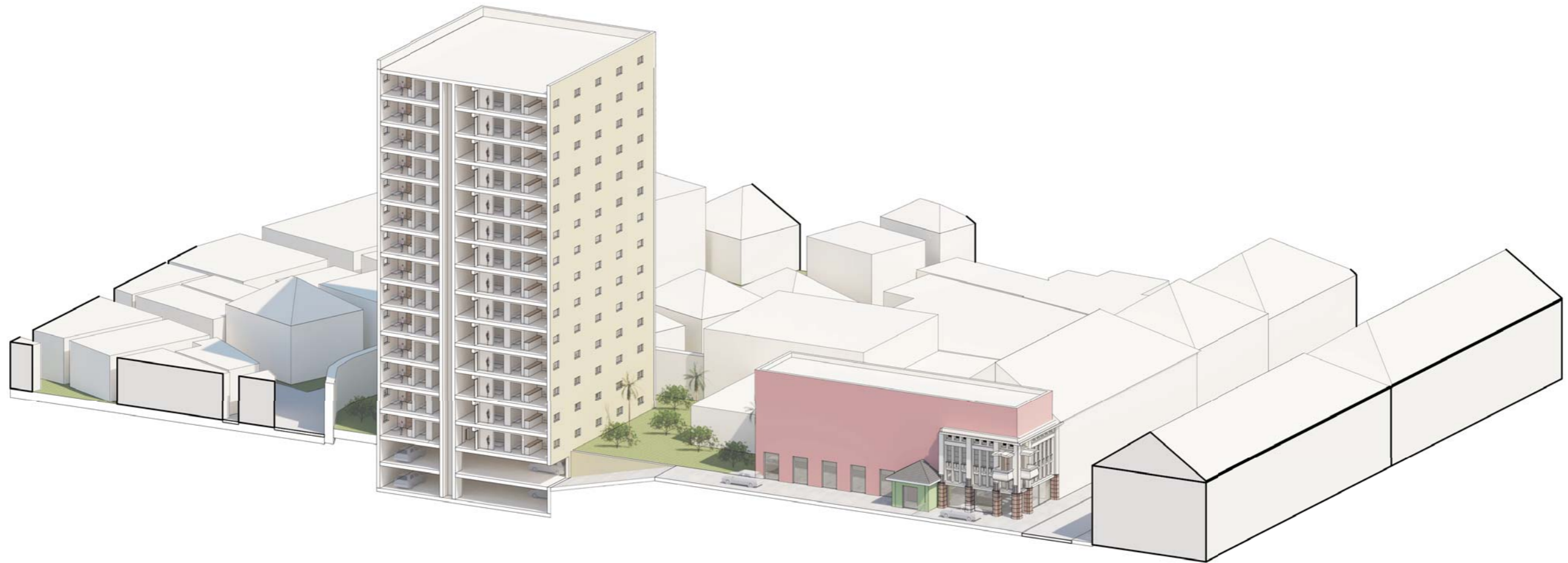
*'the more population and buildings increase,  
the more humanity will decrease'*

*- Naufan Noordyanto*

FUTURE FORMAL STREET



FUTURE FORMAL STREET



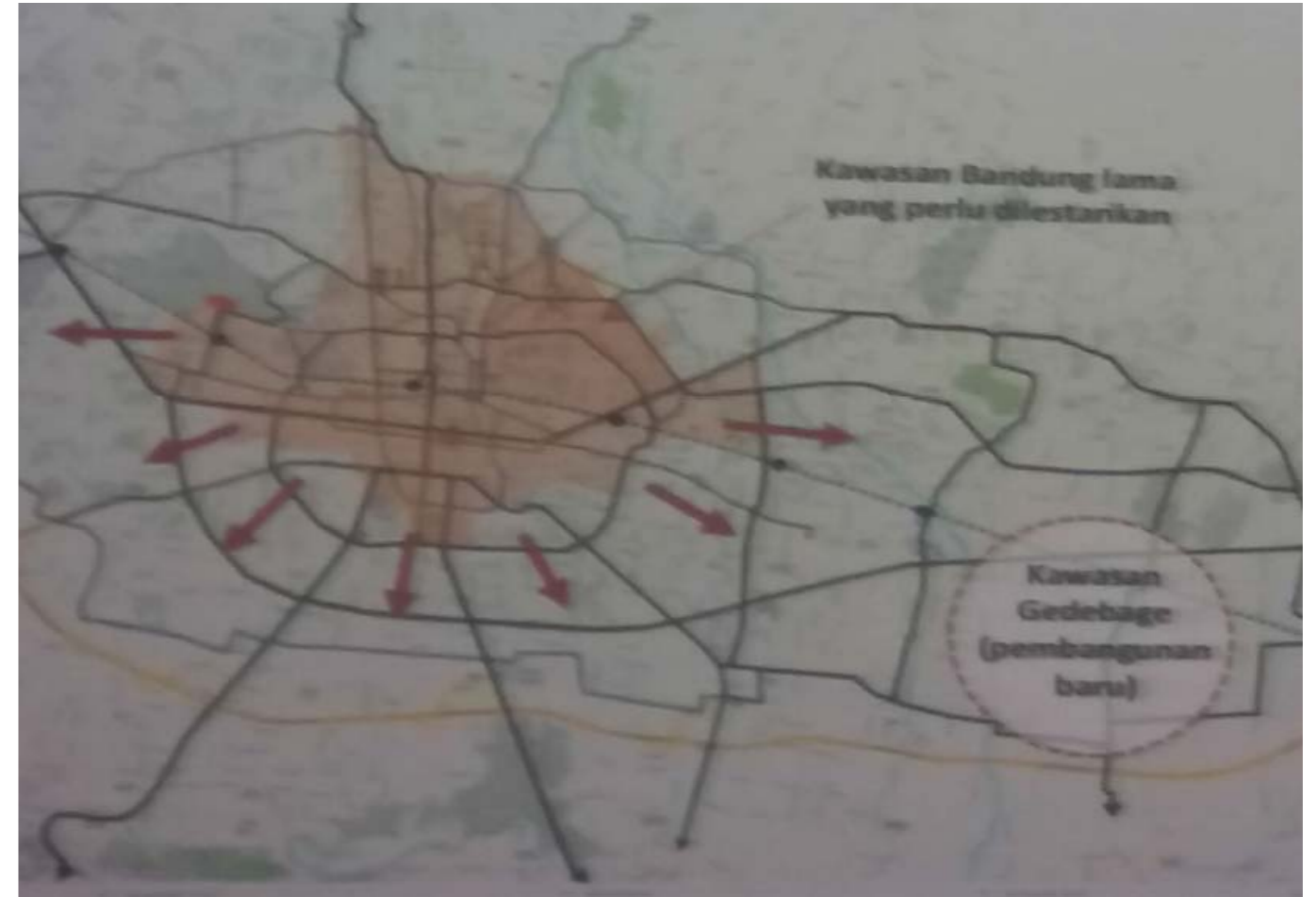
## FUTURE FORMAL STREET

*closed off from the kampong, loss of heritage, no identity & no community*



*“Move densification out of the city  
centre?”*

*plan Bandung Heritage Society*



FUTURE URBAN KAMPONG



*‘Manhattan of Java remains dead concrete jungle’*

*Volkscrant 25 October 2018*



REPORTAGE NIEUWBOUWSTAD MEIKARTA

**Manhattan van Java blijft doodse betonkolos**

Meikarta zal mooier, beter en moderner zijn dan de stoffige, verstopte, stinkende oude hoofdstad Jakarta, die 60 kilometer verderop uit zijn voegen barst. Als de gedroomde stad ooit werkelijkheid wordt. Overmoed, geldgebrek en corruptie zitten de bouw in de weg.

Michel Maas  
Meikarta

Deze week is Meikarta een stad van beton en staal. Het is de nieuwe hoofdstad van de provincie West-Java. De stad is gebouwd op een voormalig landbouwgebied. Het is een gebied dat ooit was bebouwd met rijst en andere gewassen. Nu is het een gebied van beton en staal. Het is een gebied dat ooit was bebouwd met rijst en andere gewassen. Nu is het een gebied van beton en staal.



Van bouwvakker bij de bouw van Meikarta in beeld.

MEIKARTA

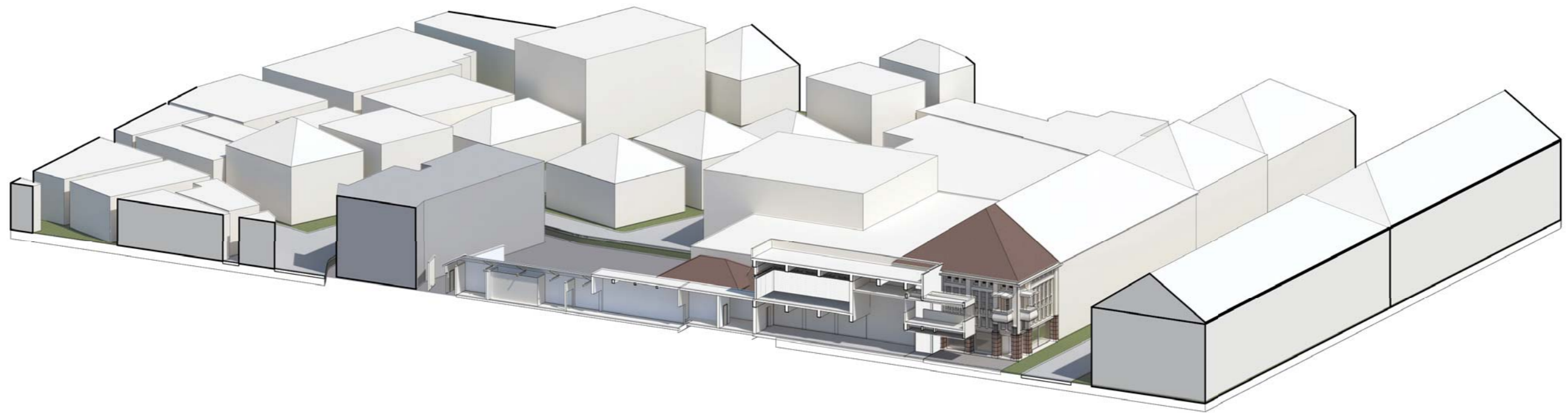


Meikarta in beeld.

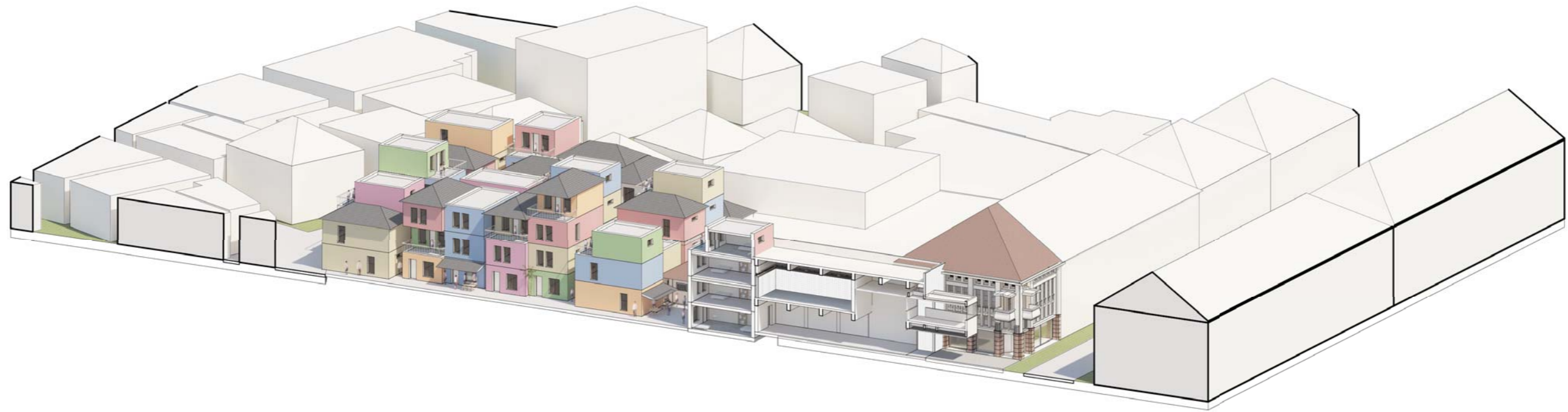
De bouw van Meikarta is een groot project. Het is een gebied dat ooit was bebouwd met rijst en andere gewassen. Nu is het een gebied van beton en staal. Het is een gebied dat ooit was bebouwd met rijst en andere gewassen. Nu is het een gebied van beton en staal.

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FUTURE URBAN KAMPONG



FUTURE URBAN KAMPONG

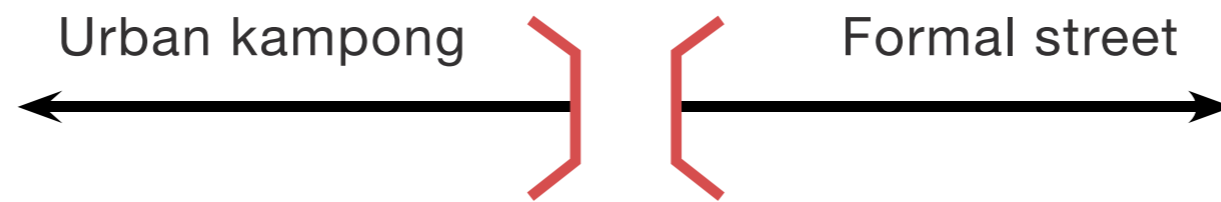


## FUTURE URBAN KAMPONG

*unhealthy living environment, unsafe & no public/green space*

Challenge





Urban kampong

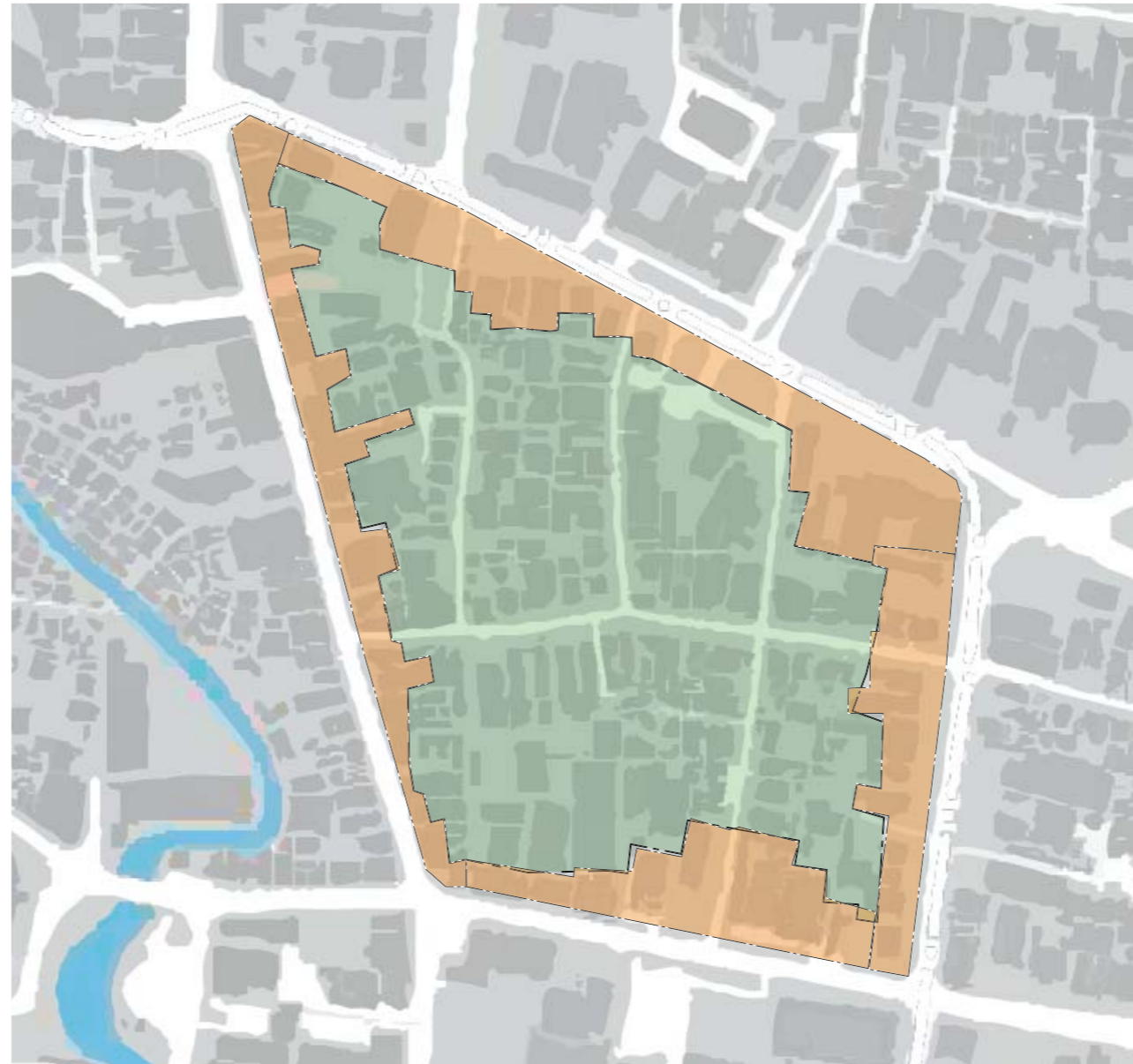
Formal street





*‘Developing and testing an approach to the densification of Indonesian inner cities that grows from the values of shared heritage to create a synergy between its formal street and urban kampong structure’*

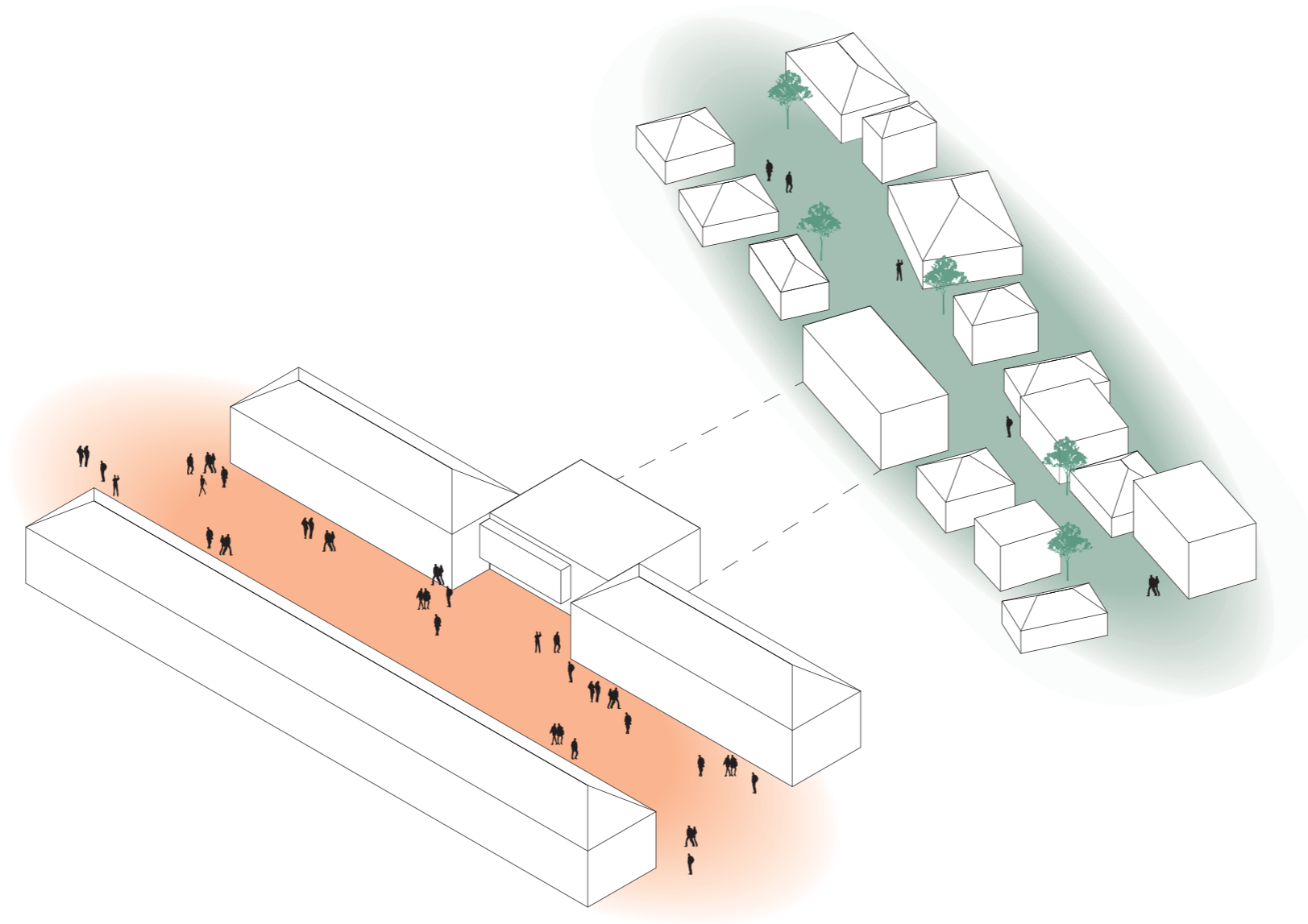
# Strategy



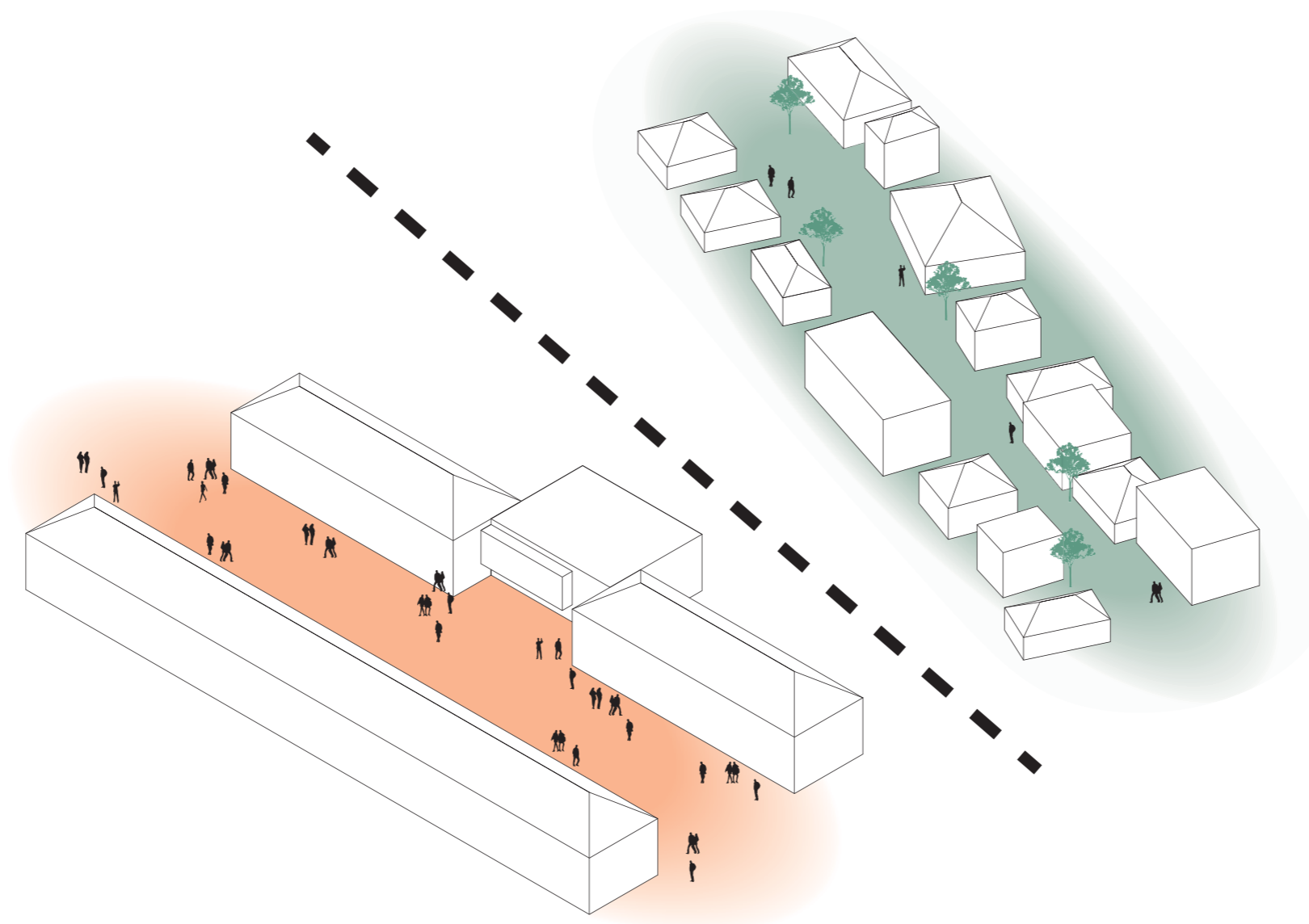
- Urban kampong
- Formal street

## BRAGA NORTH-EAST

*not generic*

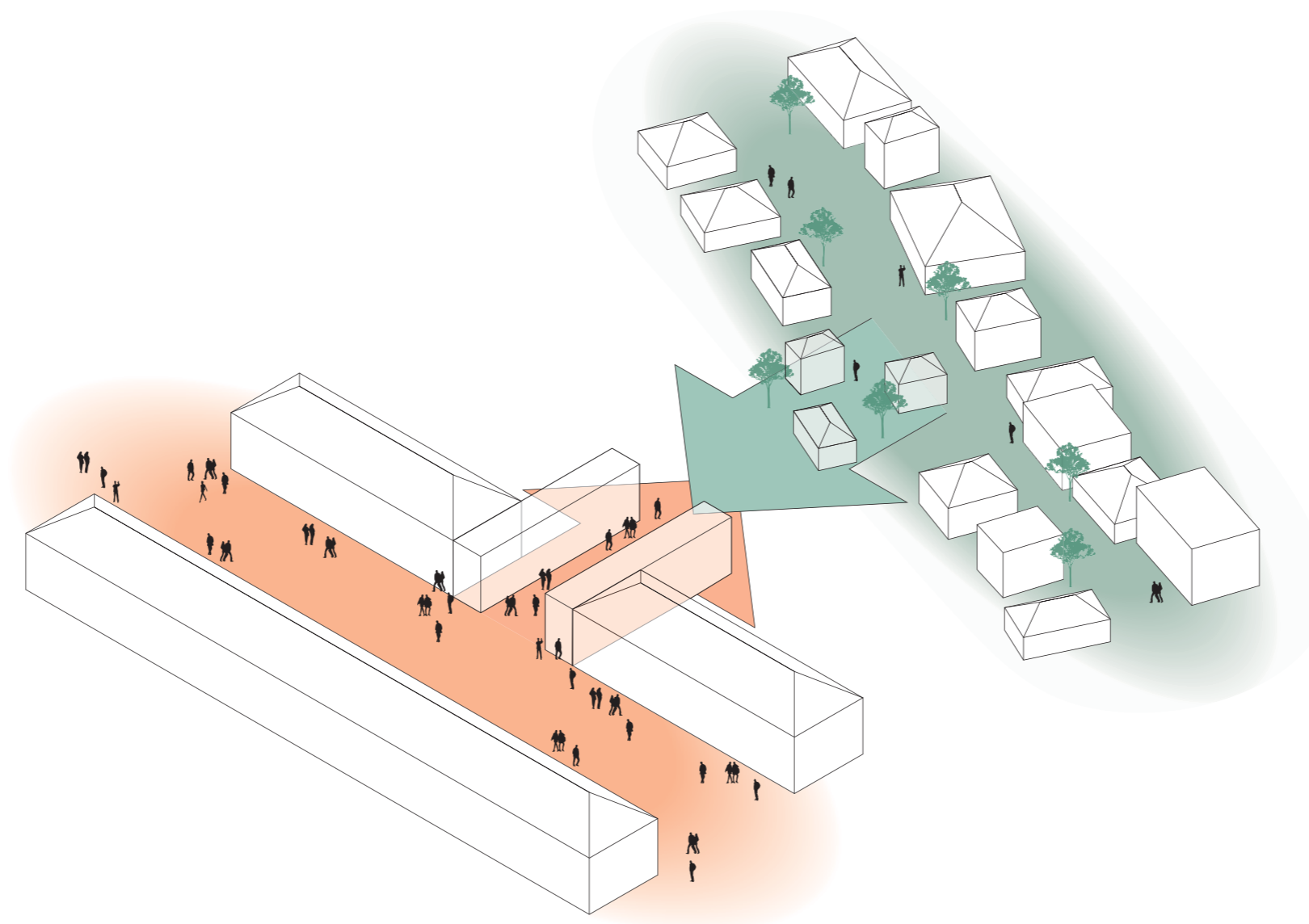


TWO STRUCTURES

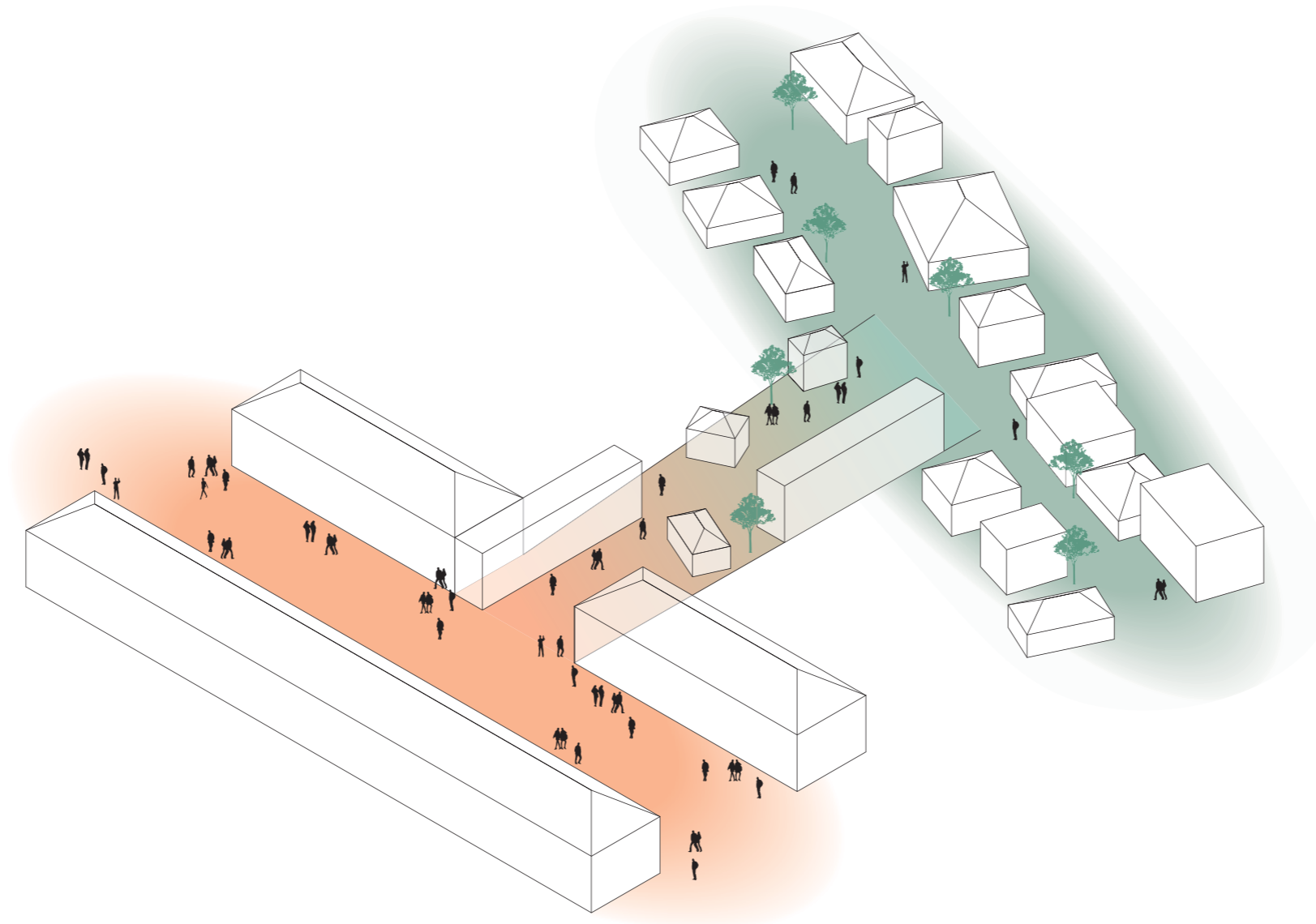


SEPARATED

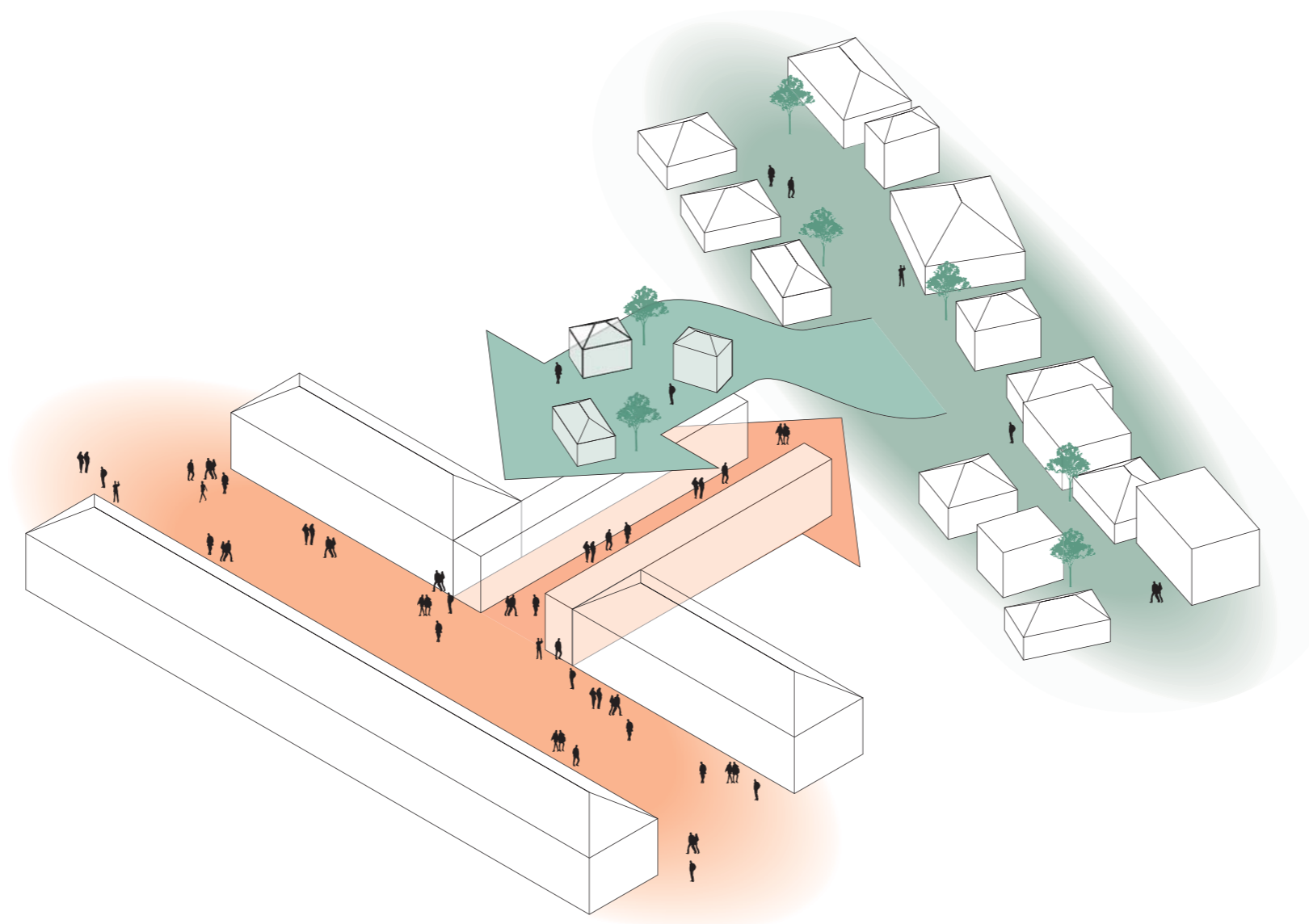




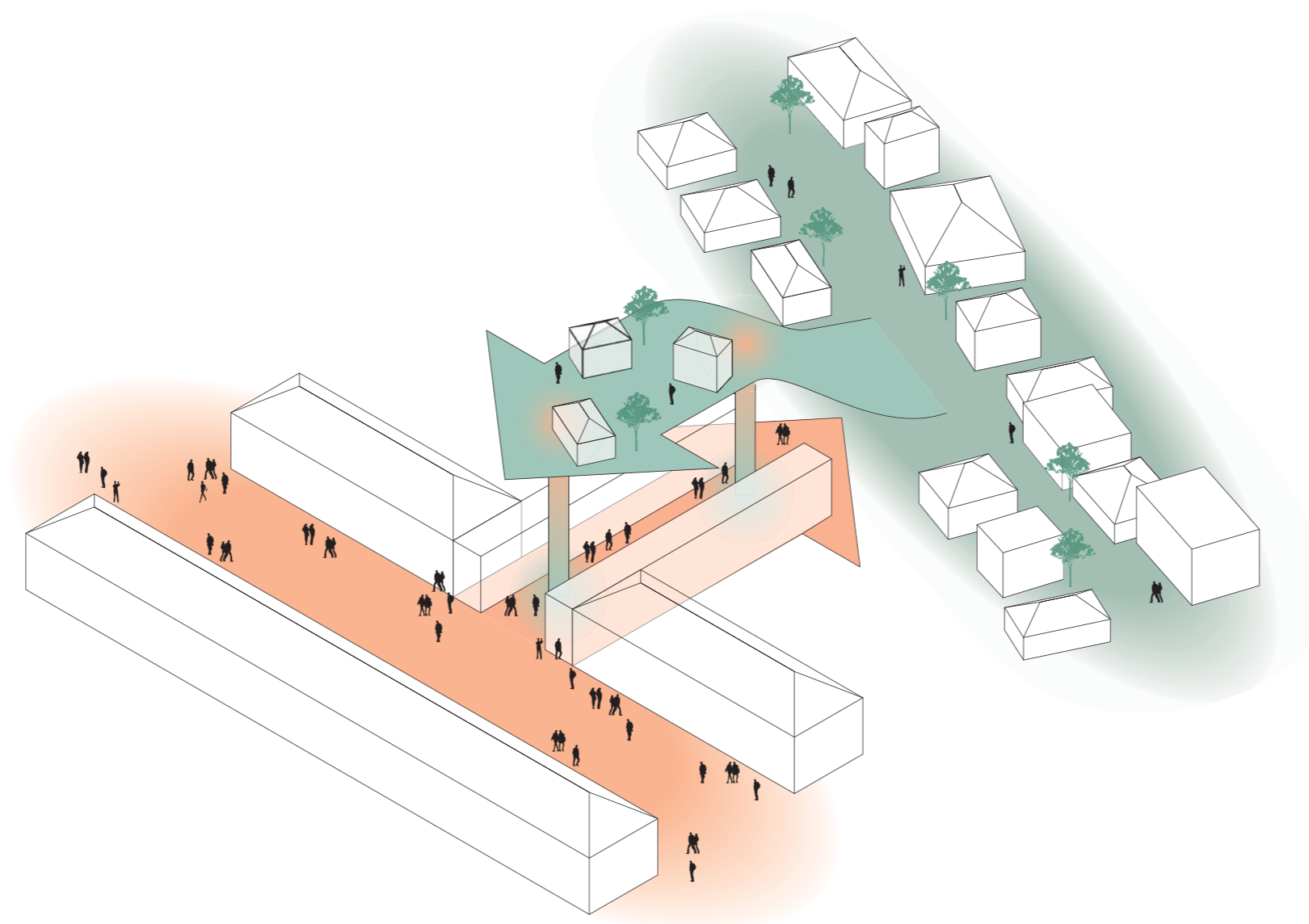
CLASH



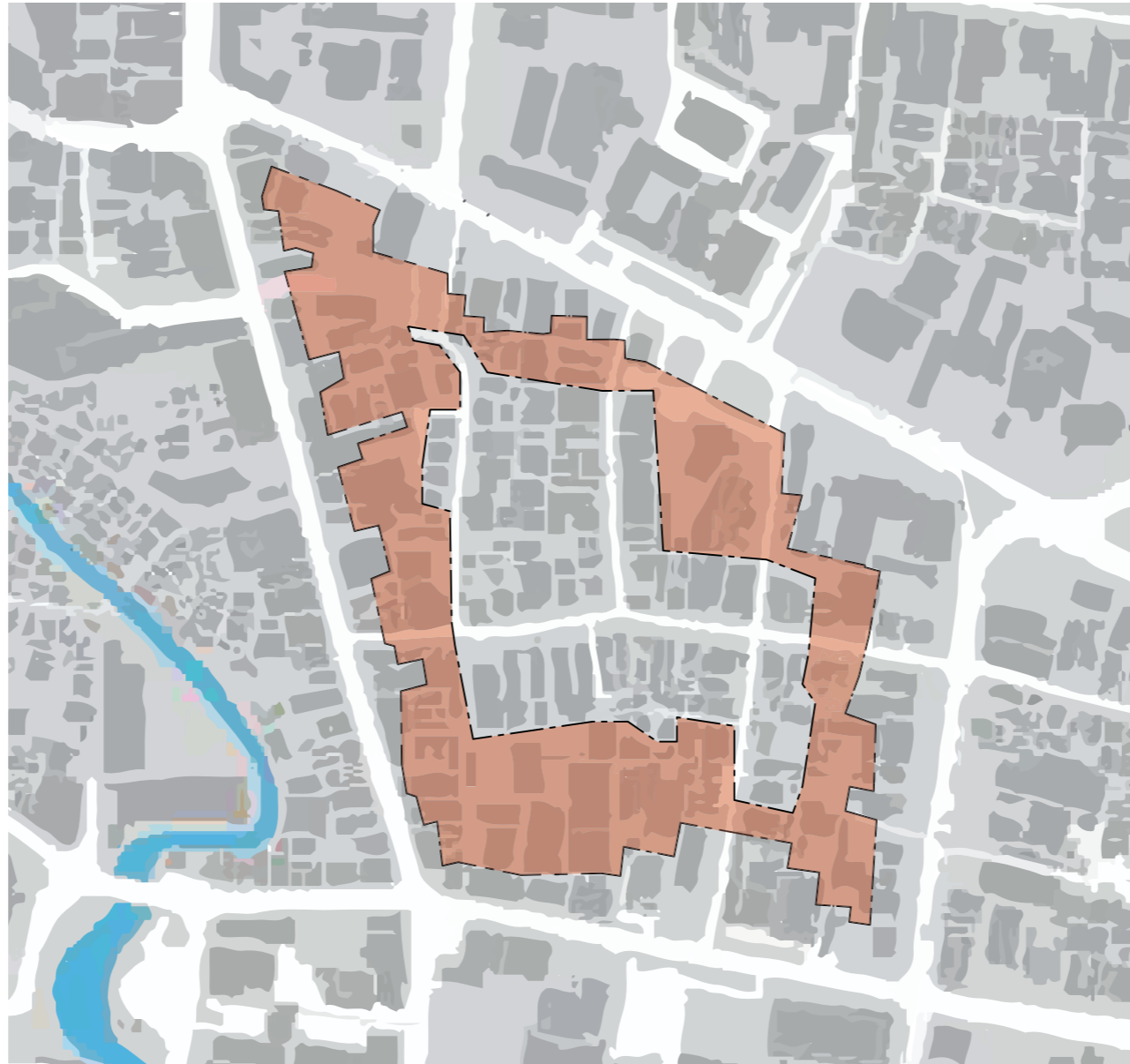
LOSS OF QUALITIES



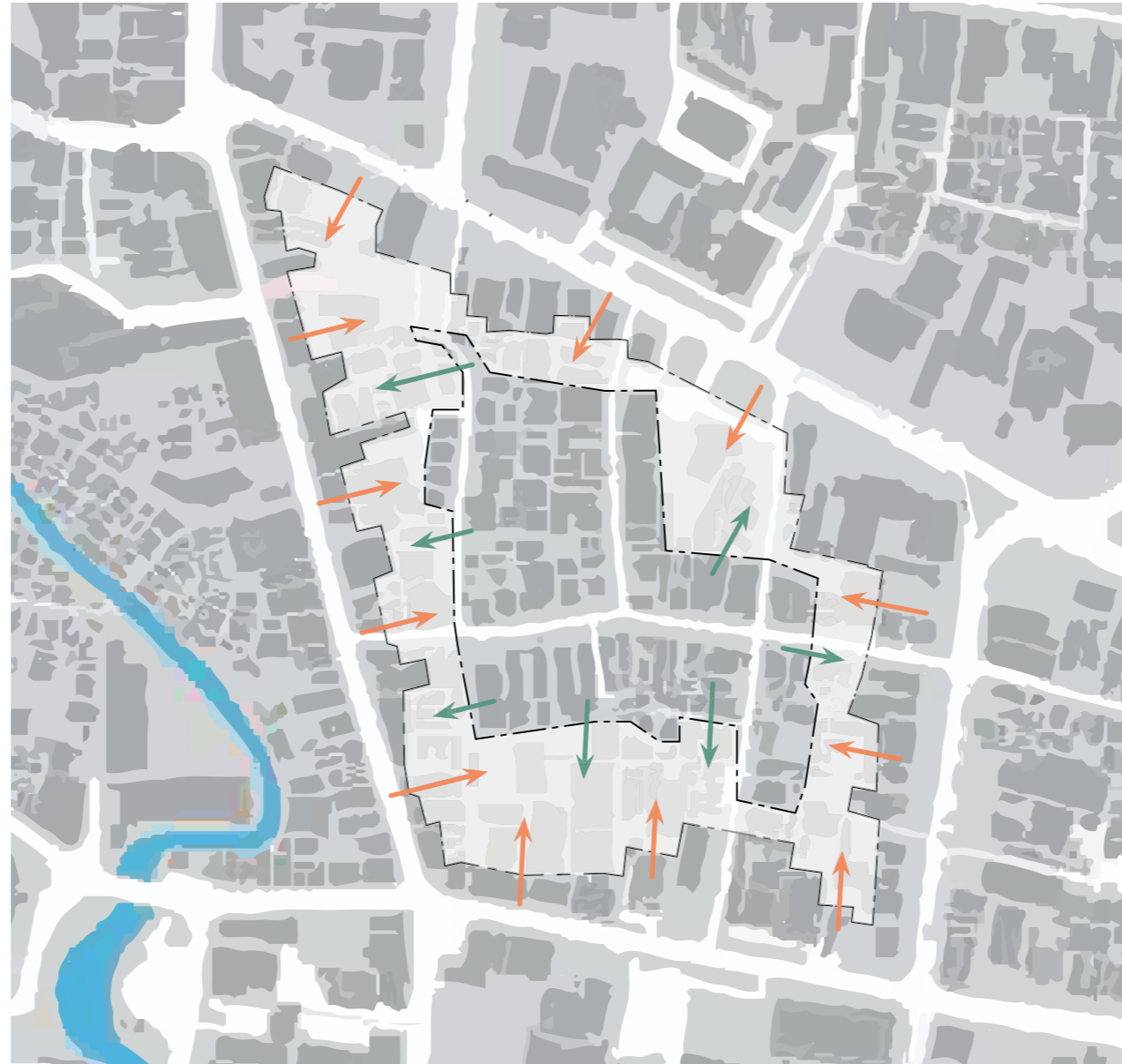
ELEVATED



SYNERGY

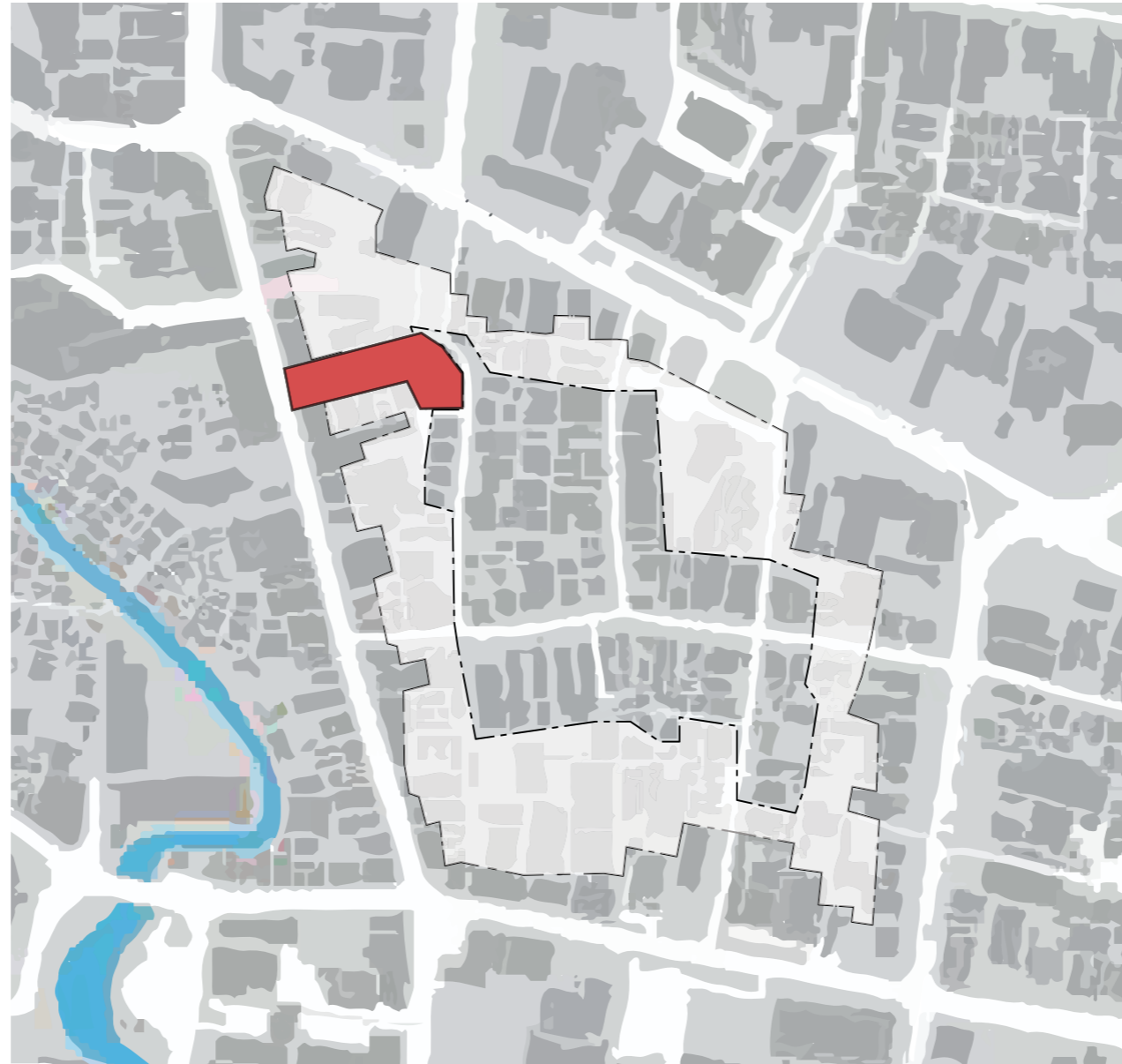


POSSIBLE SIZE



## URBAN IMPACT

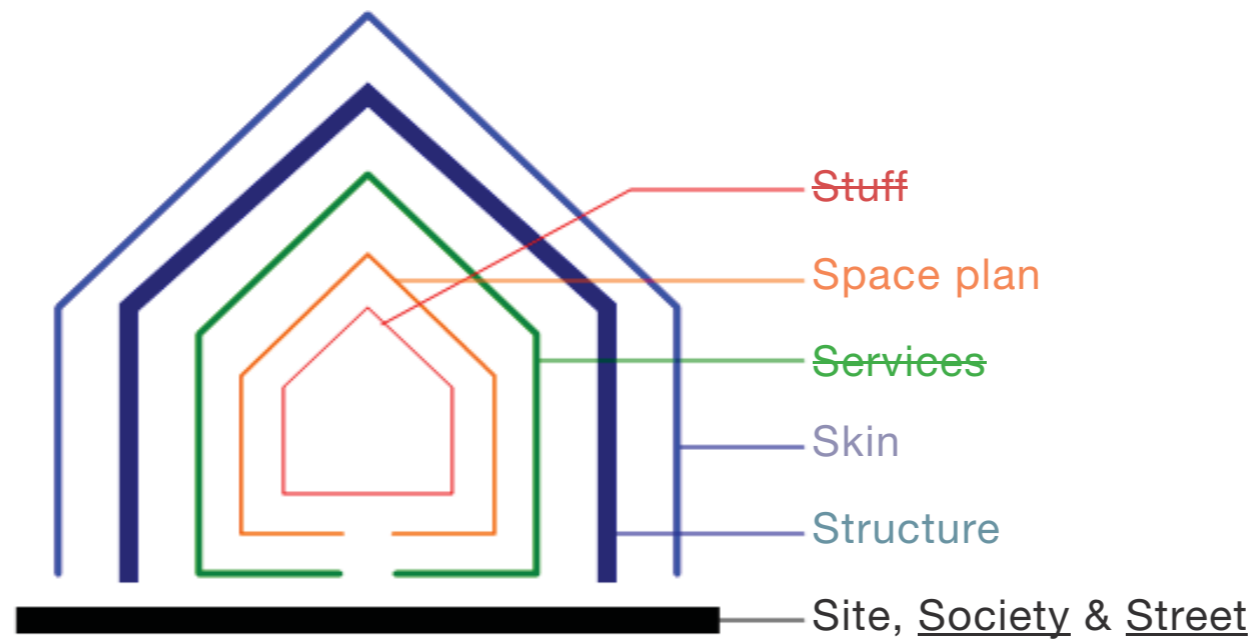
Implementation



BRAGA PERMAI ELEVATED



# How Cities Learn



## LAYERS OF CHANGE

*site | society | street | structure | skin | space plan*

*site* | *society* | *street* | *structure* | *skin* | *space plan*

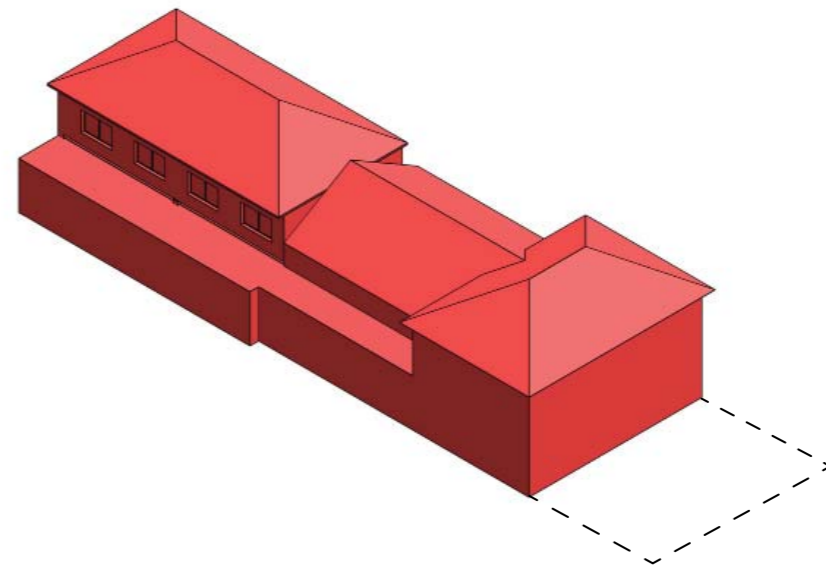
1. Remove “rotten apples” from fabric
2. Improve spatial quality



## URBAN SURGERY

*site* | *society* | *street* | *structure* | *skin* | *space plan*

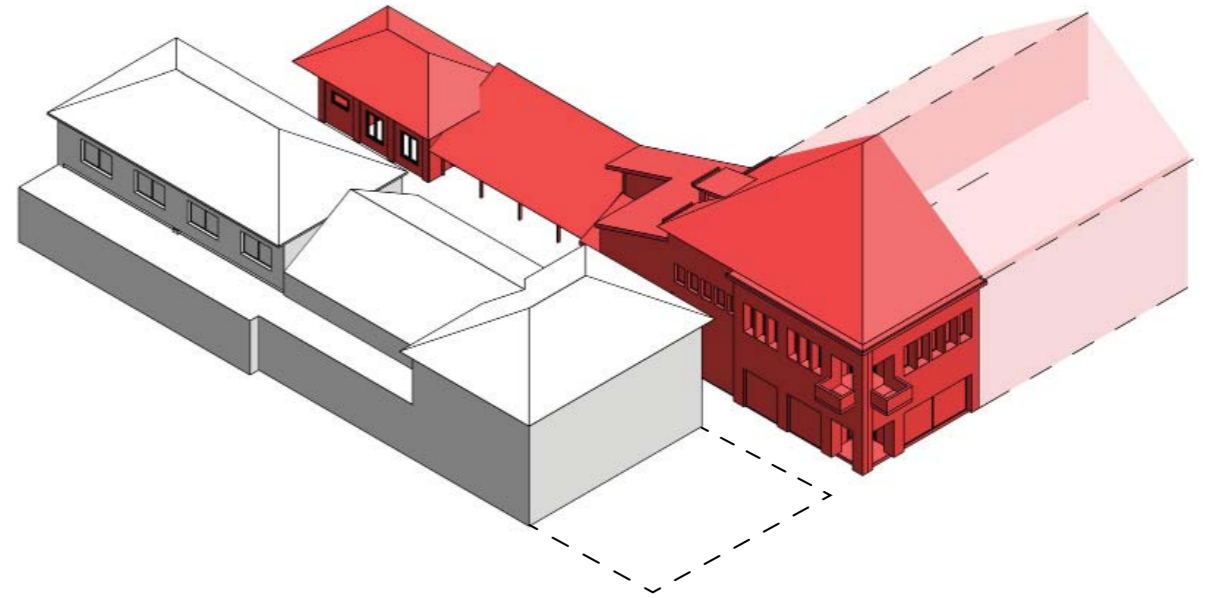
1924



## DEVELOPMENT

*Maison Bogerijen*

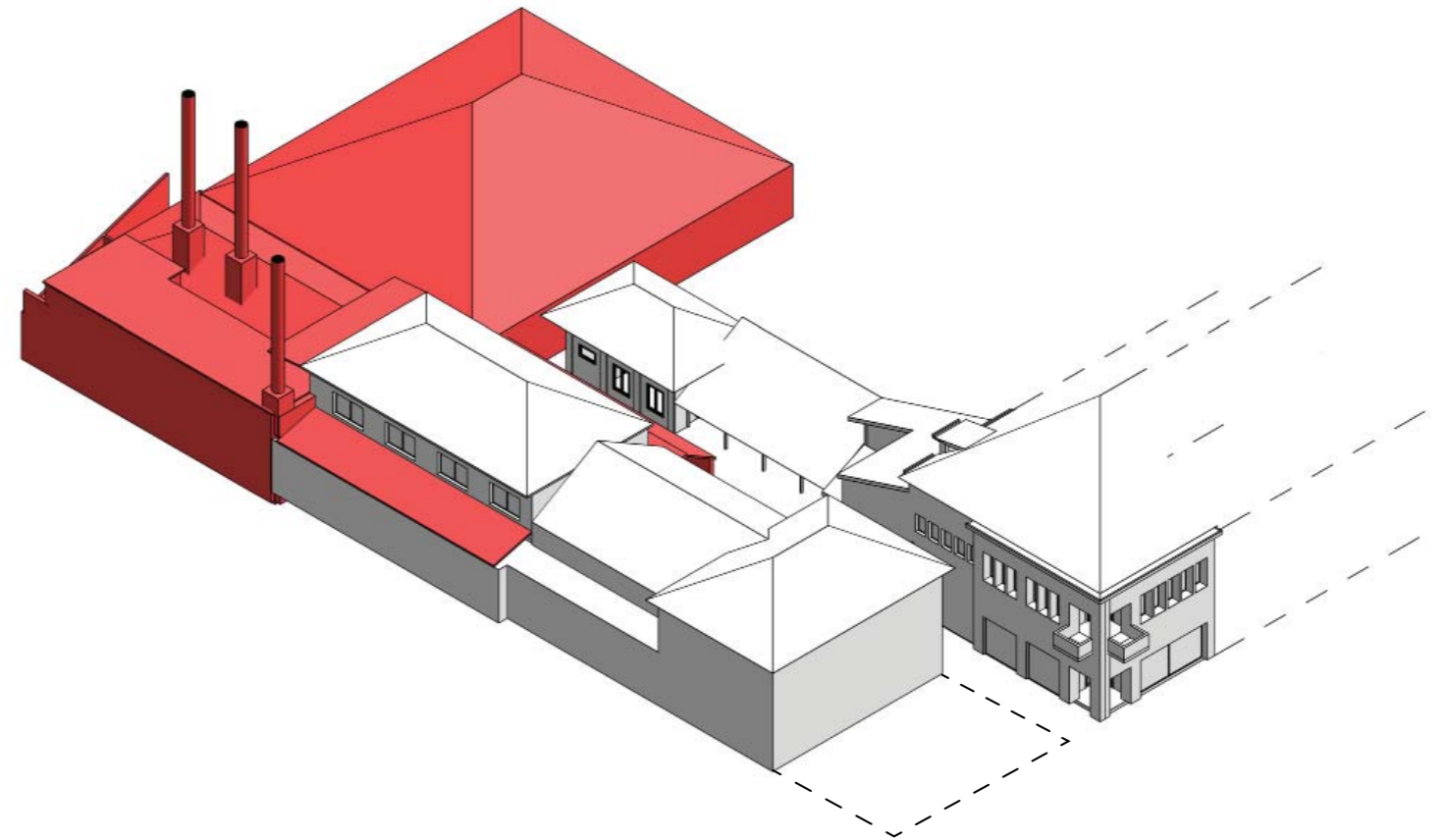
1926



## DEVELOPMENT

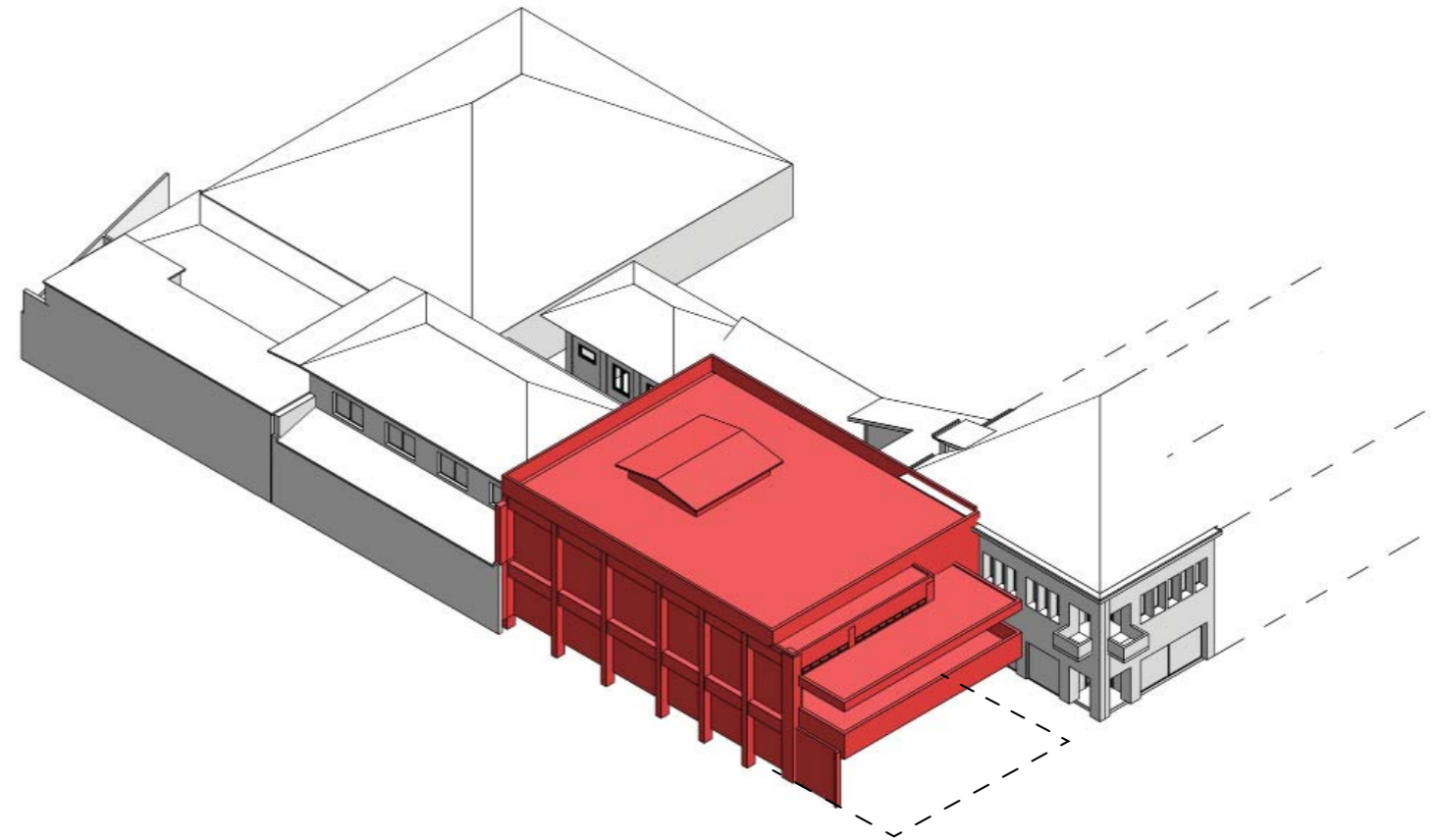
*Keller's shop-house*

1929



DEVELOPMENT  
*Ovens Maison Bogerijen*

1960



## DEVELOPMENT

*Braga Permai*

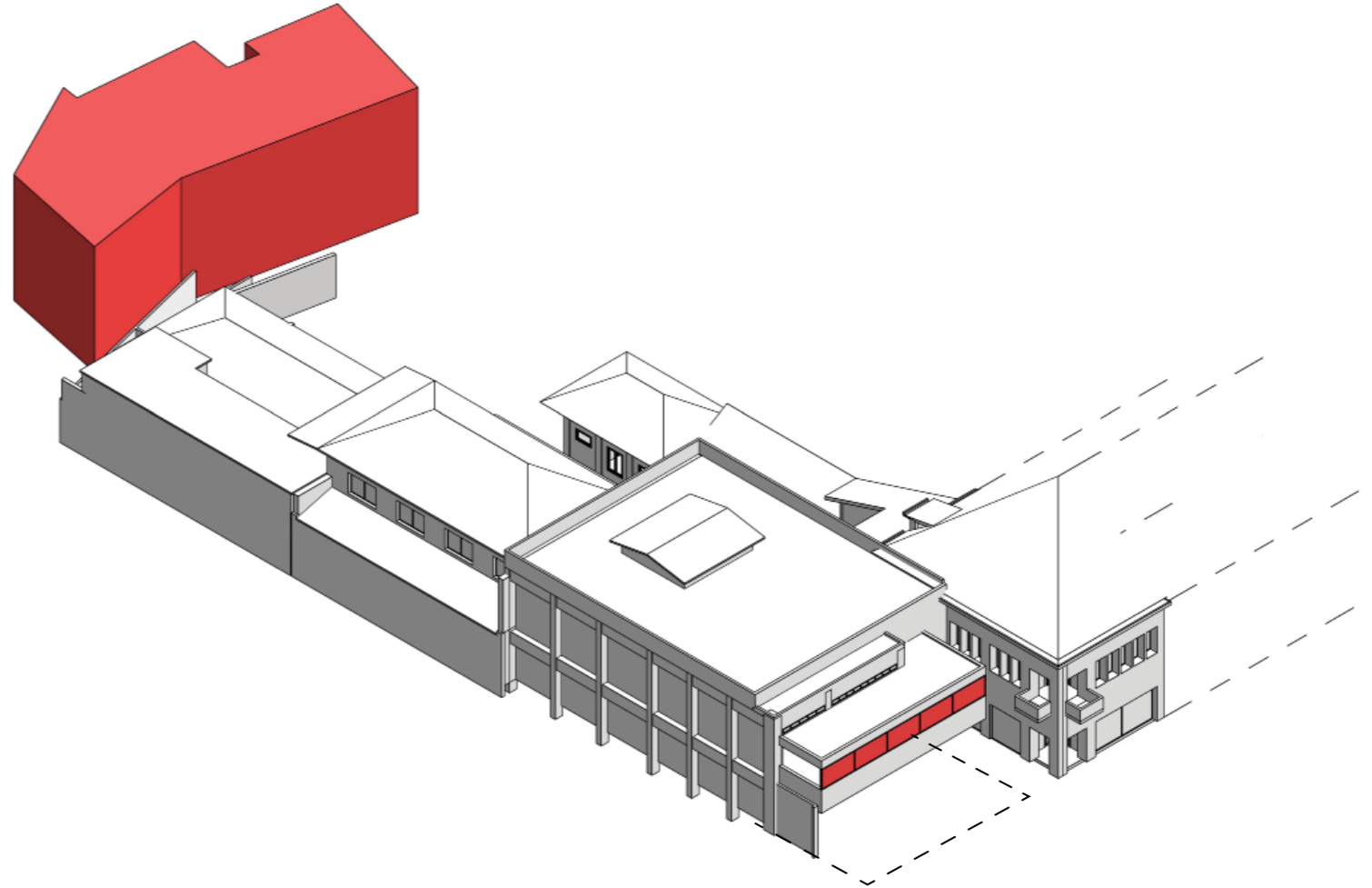


SOEJOEDI

*Braga Permai*



2018

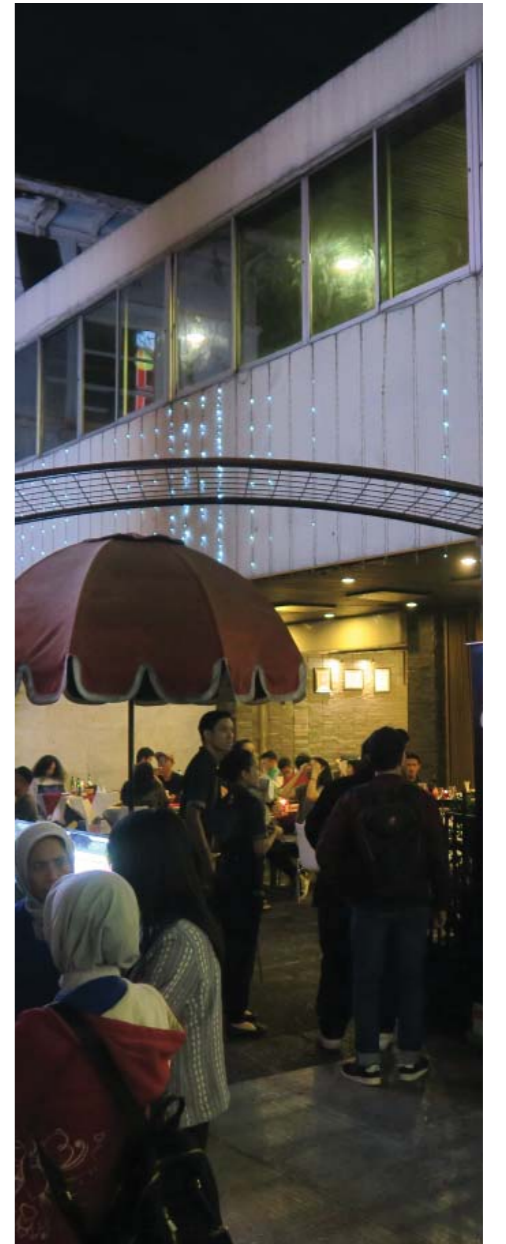


DEVELOPMENT  
 *dwellings*



## CULTURAL VALUE

*Keller's Shop-house*

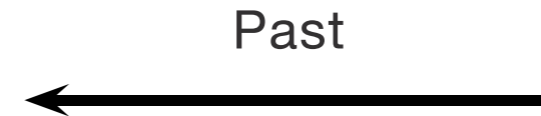
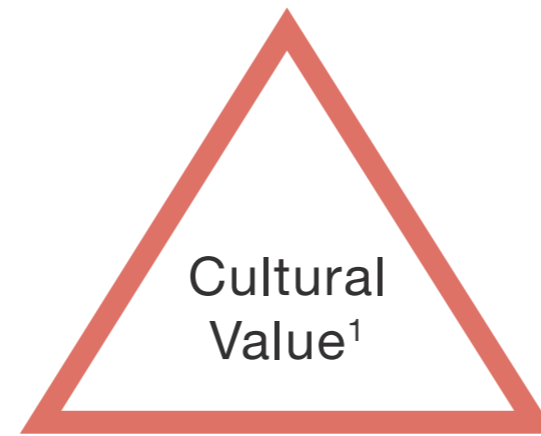


## CULTURAL VALUE

*Braga Permai*



SHARED HERITAGE  
*site*



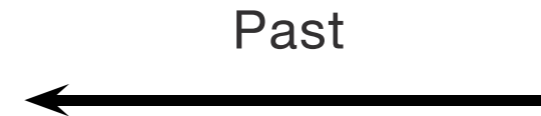
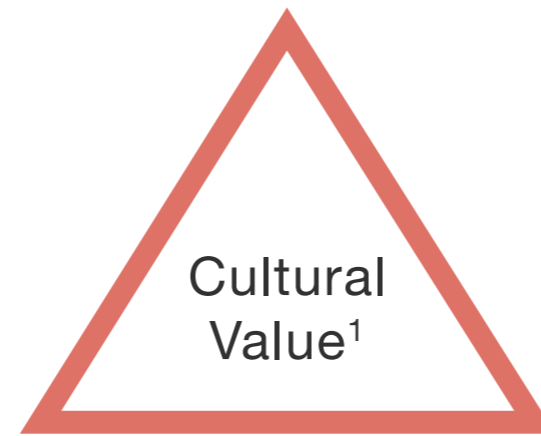
<sup>1</sup>age, historical, rarity, commemorative, artistic & newness values

*site* | *society* | *street* | *structure* | *skin* | *space plan*



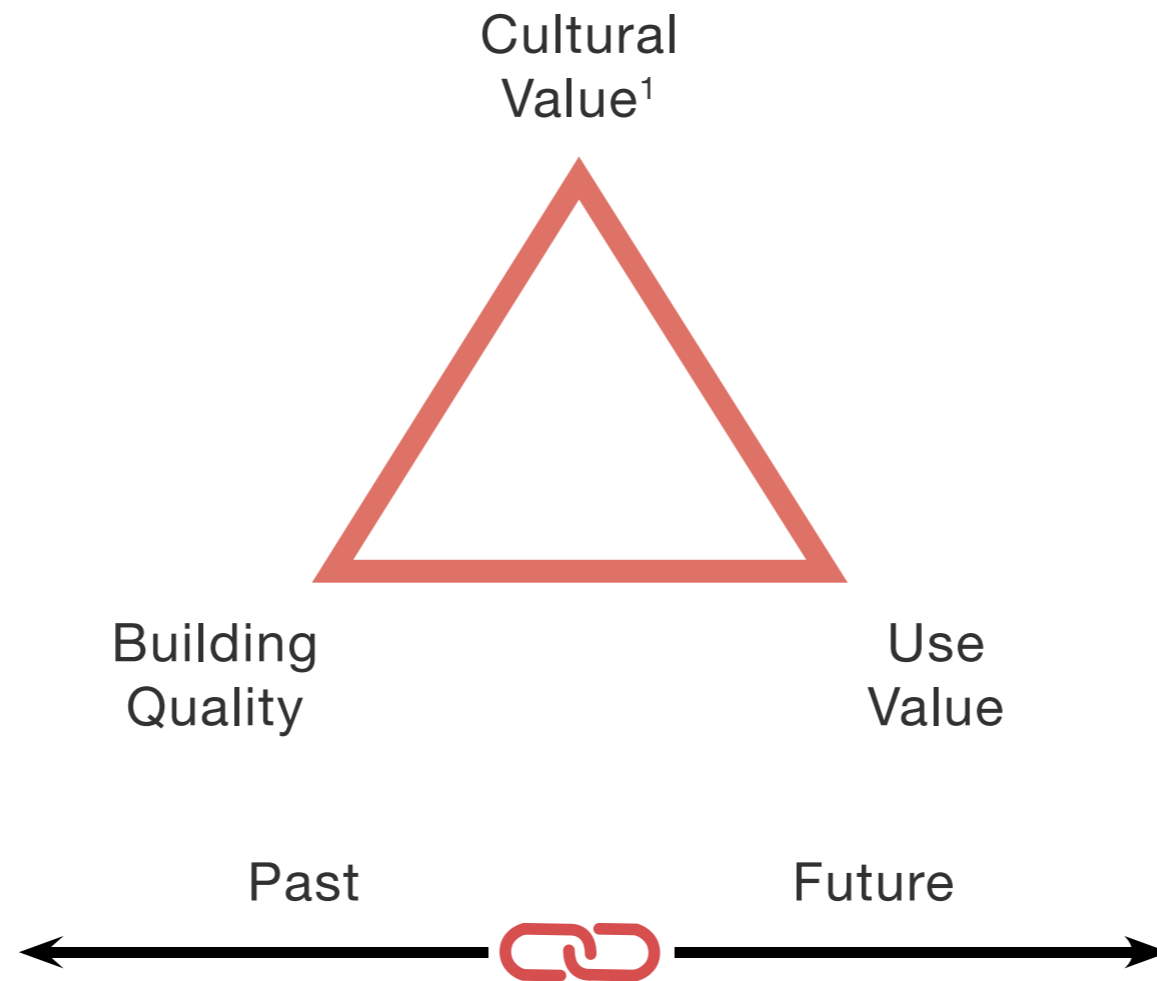
## OBSOLETE SPACES

*site | society | street | structure | skin | space plan*



¹age, historical, rarity, commemorative, artistic & newness values

*site* | *society* | *street* | *structure* | *skin* | *space plan*



<sup>1</sup>age, historical, rarity, commemorative, artistic & newness values

| *site* | *society* | *street* | *structure* | *skin* | *space plan*





## PROGRESS

*site | society | street | structure | skin | space plan*



## PROGRESS

*site | society | street | structure | skin | space plan*



## PROGRESS

*site | society | street | structure | skin | space plan*

*site* | *society* | *street* | *structure* | *skin* | *space plan*

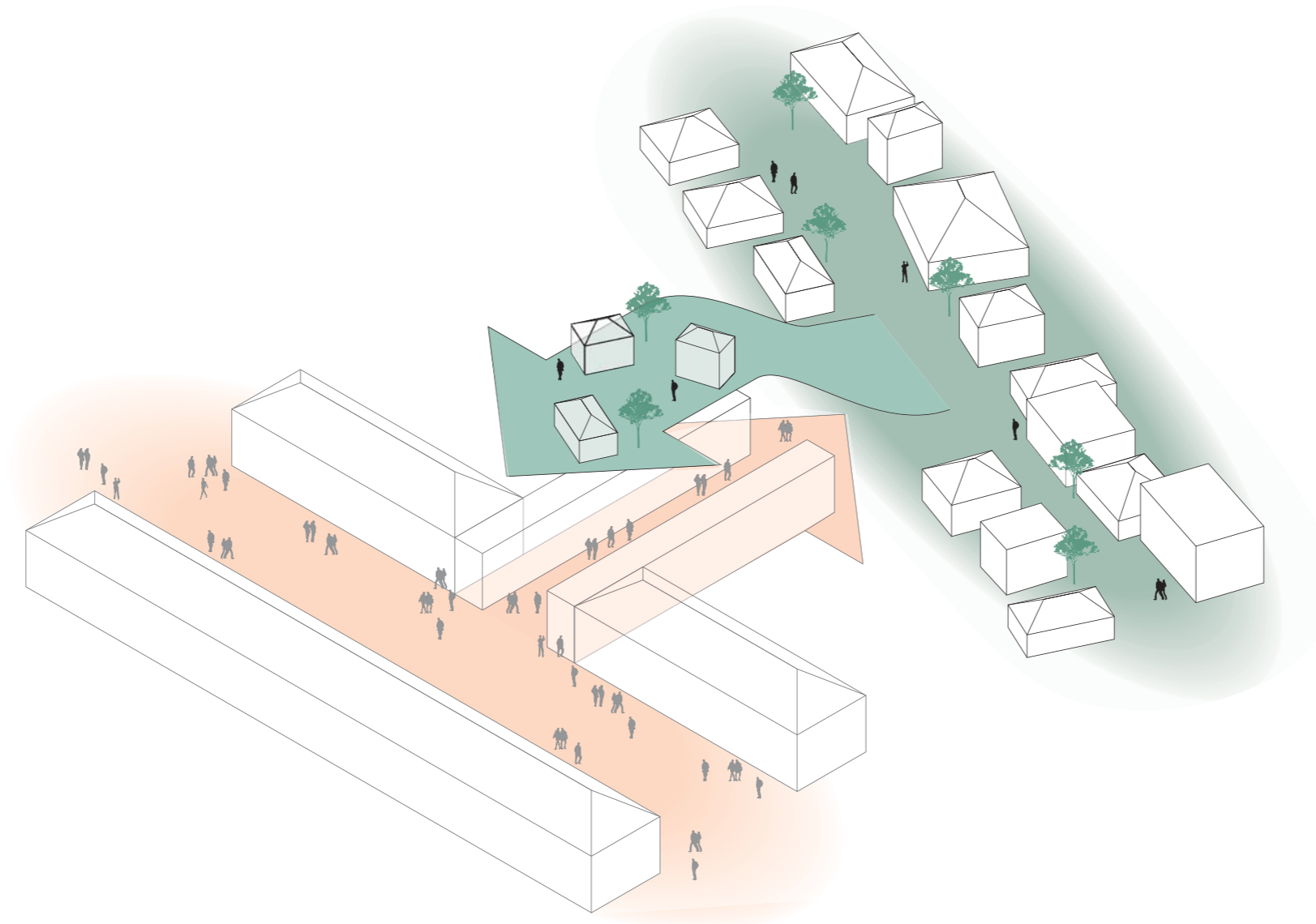
## Urban Surgery

1. Implement housing
2. Implement communal functions



## SOCIAL SUISTAINABLE

*site | society | street | structure | skin | space plan*



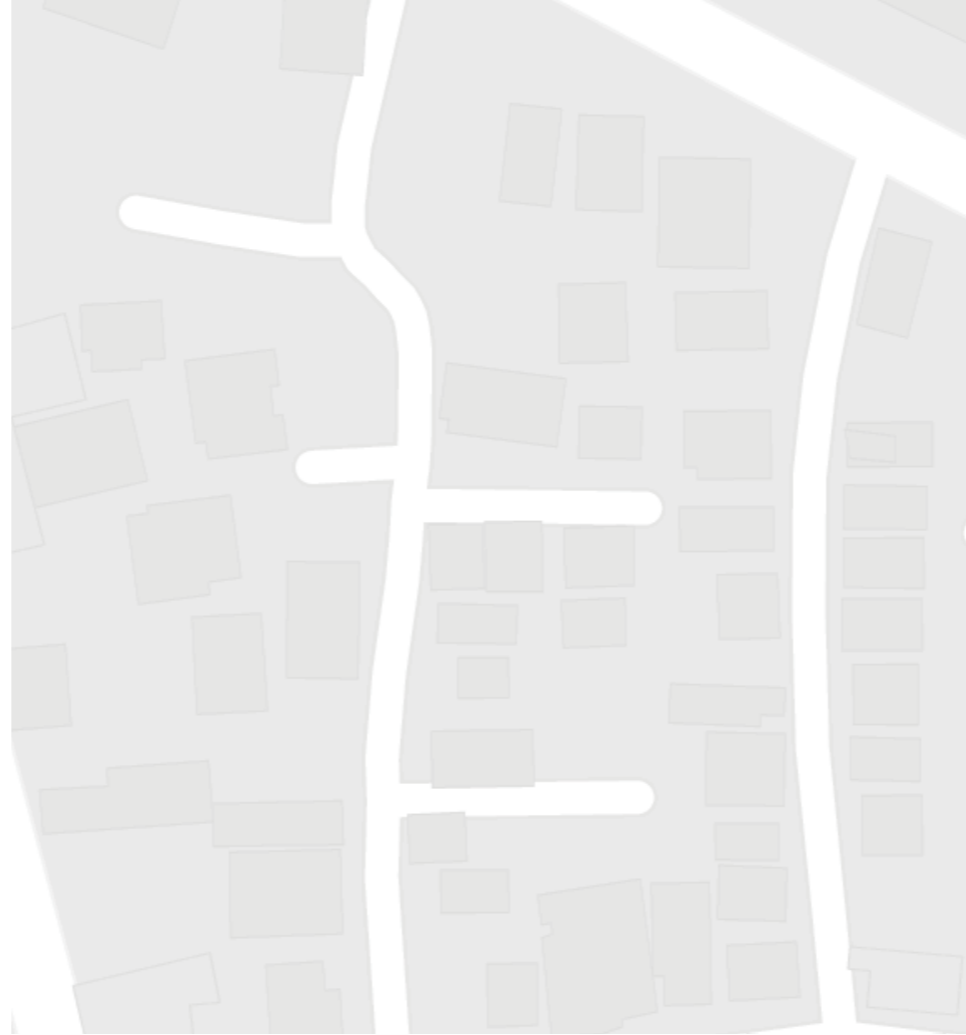
## ELEVATED - URBAN KAMPONG

*site | society | street | structure | skin | space plan*



## Social sustainable housing

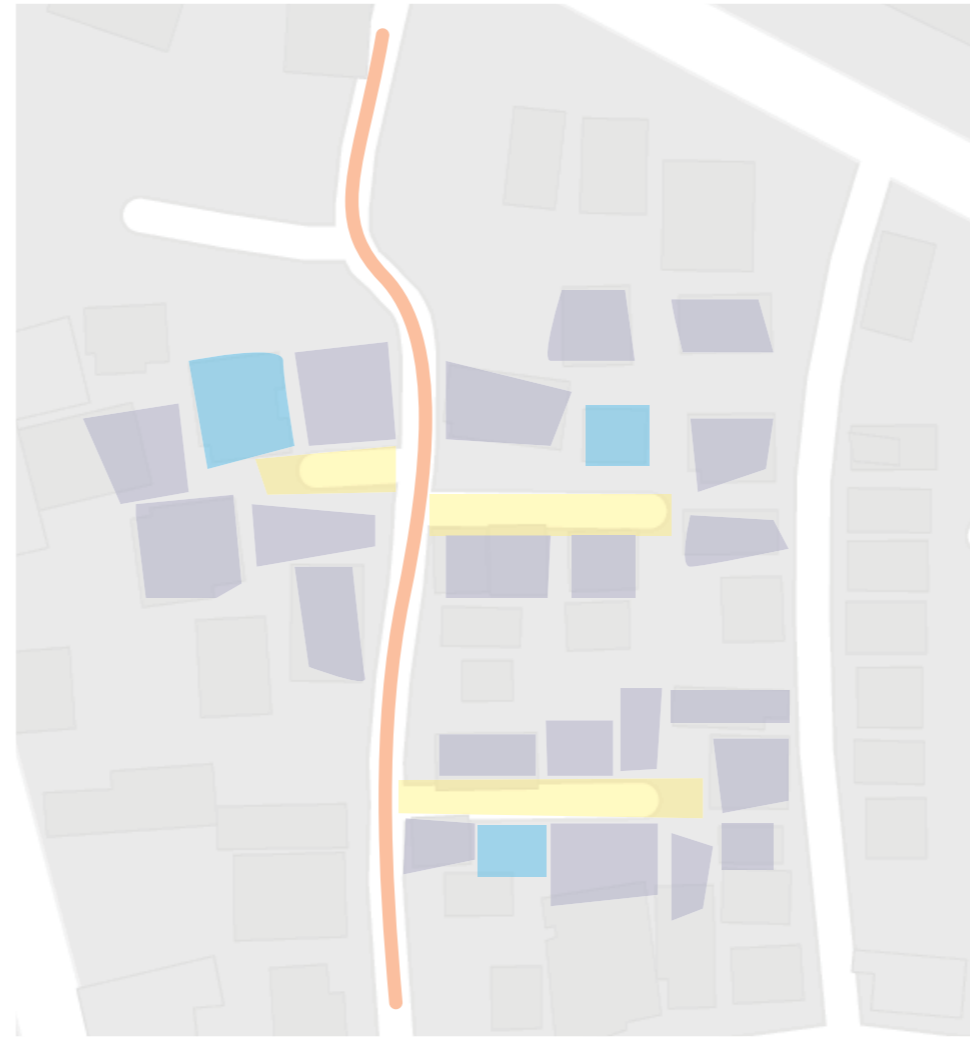
*site | society | street | structure | skin | space plan*



## URBAN KAMPONG STRUCTURE

*site | society | street | structure | skin | space plan*





- places for social activity
- urban kampong street
- semi-public street
- dwellings
- shared services

## URBAN KAMPONG STRUCTURE

*site | society | street | structure | skin | space plan*



structured and safe  
housing





## CLUSTER HOUSING

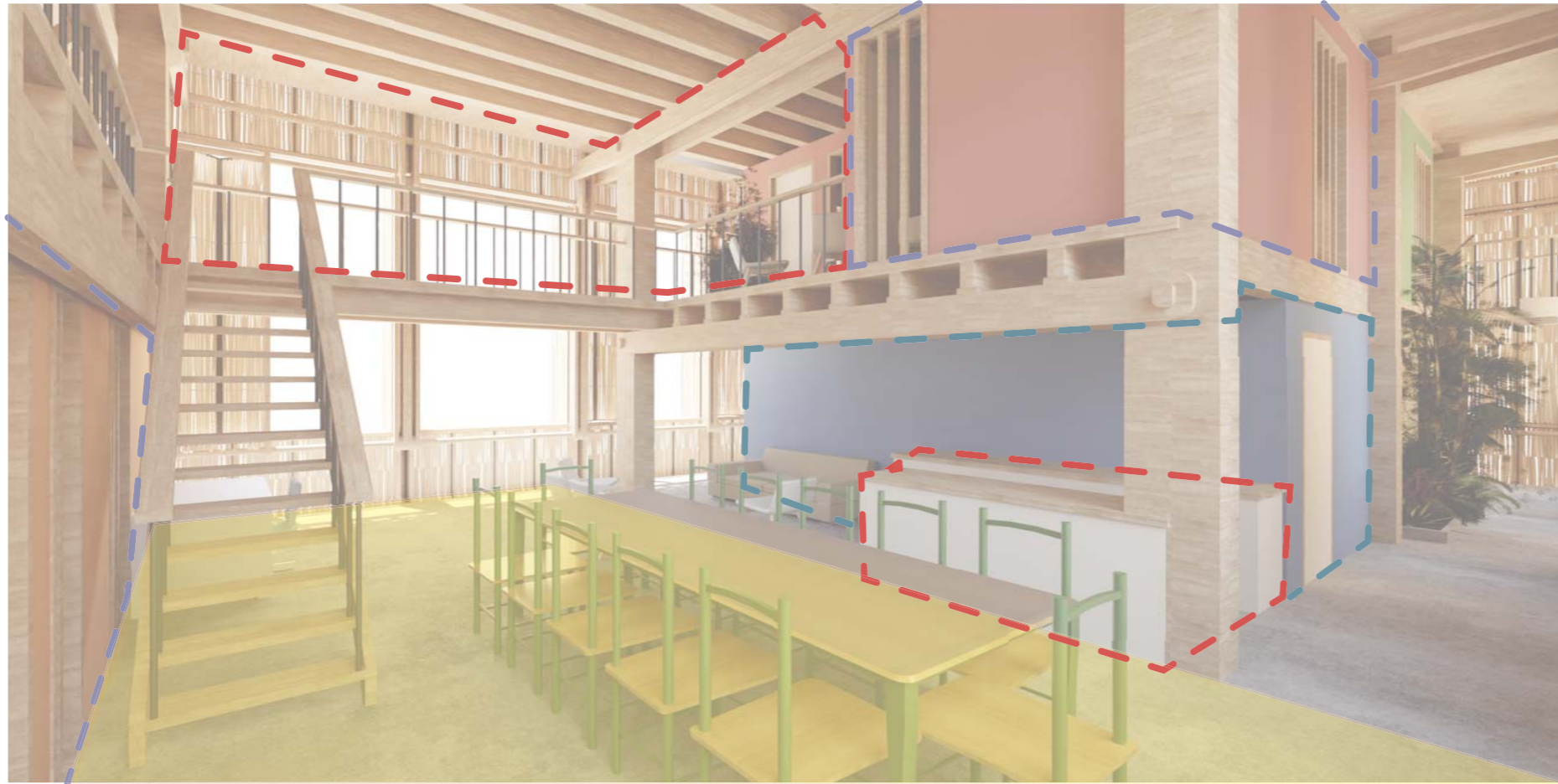
*site | society | street | structure | skin | space plan*



- cluster
- places for social activity
- street
- communal space
- unit
- shared services

## CLUSTER HOUSING

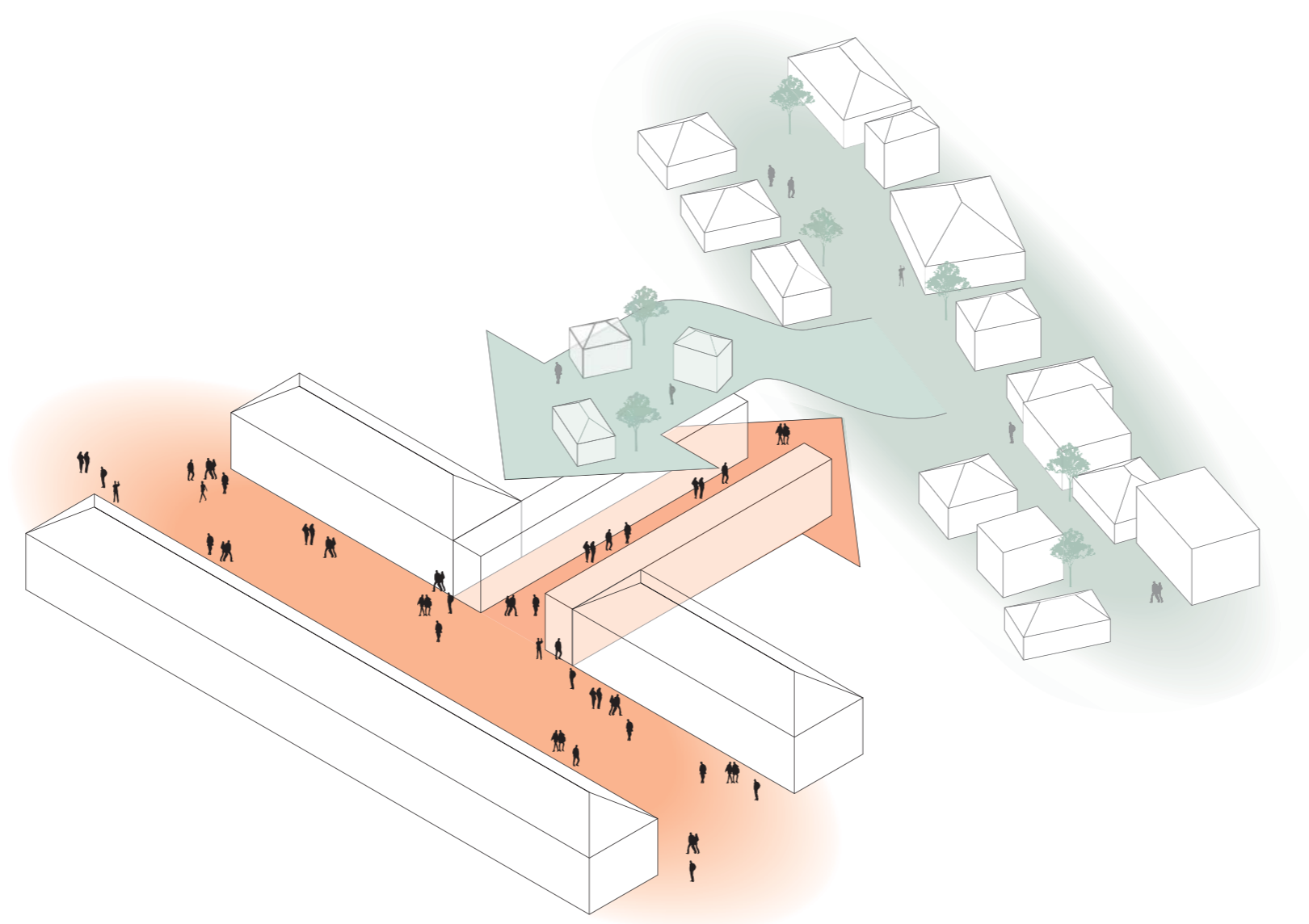
*site | society | street | structure | skin | space plan*



- cluster
- places for social activity
- street
- communal space
- unit
- shared services

# CLUSTER HOUSING

*site | society | street | structure | skin | space plan*



## ELEVATED - FORMAL STREET

*site | society | street | structure | skin | space plan*



## GENIUS LOCI

*site | society | street | structure | skin | space plan*



covered & structured  
commercial space







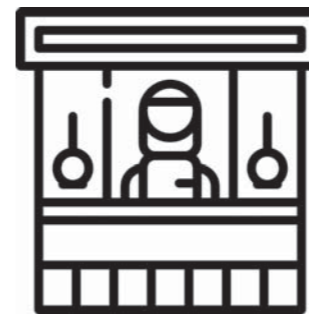
Sell and buy at  
small shop/warung

*site | society | street | structure | skin | space plan*



Present

Future



## HAWKER CENTER

*site | society | street | structure | skin | space plan*



## COMMUNITY CENTRE

*site | society | street | structure | skin | space plan*

*site* | *society* | *street* | *structure* | *skin* | *space plan*

## Urban Surgery

### Social sustainable

1. clear circulation hierarchy
2. gradual transition public to private
3. no dead-ends



## COGENT CIRCULATION

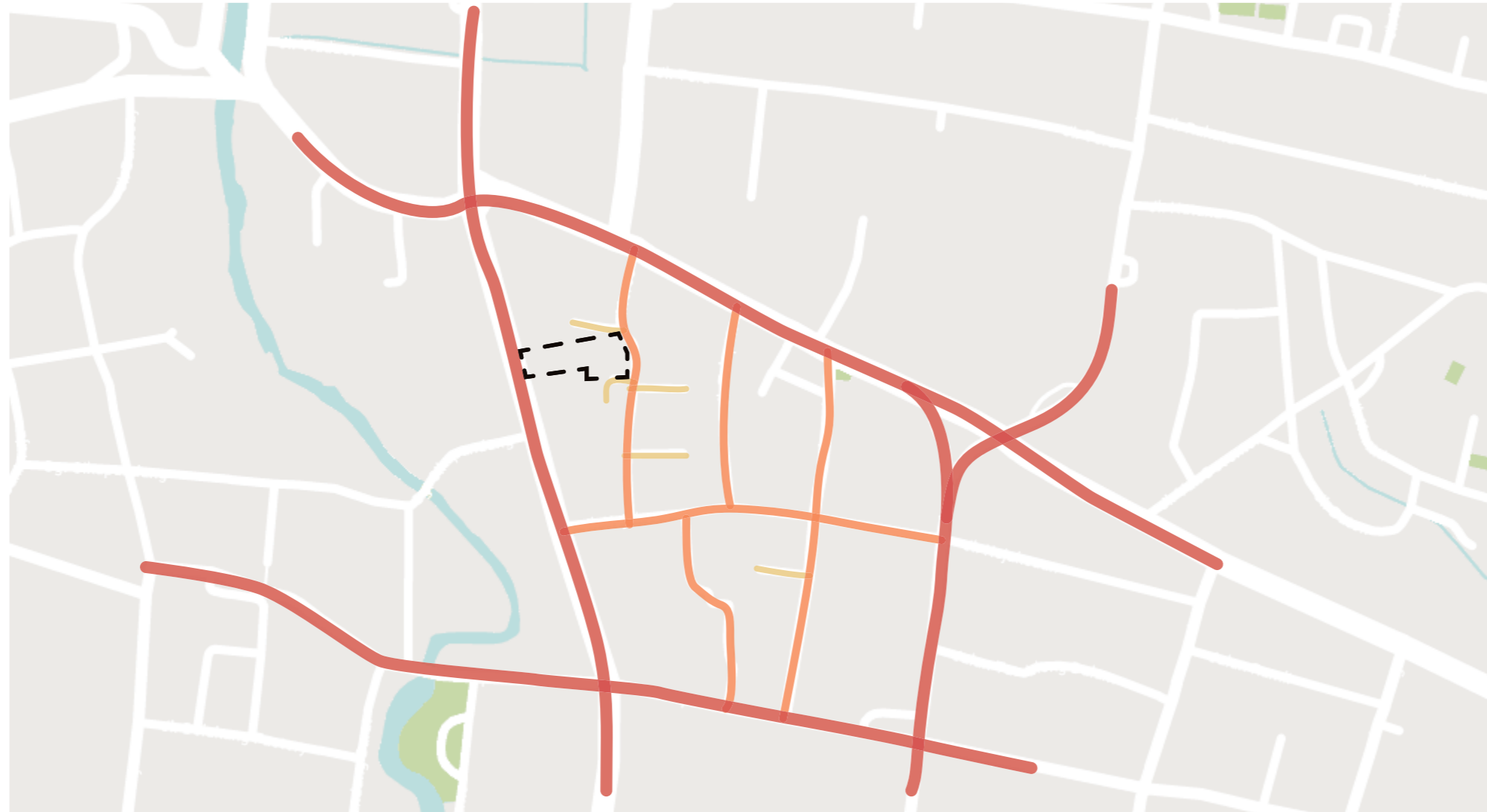
*site | society | street | structure | skin | space plan*



- formal street
- modest street
- semi-public street

## CURRENT FABRIC

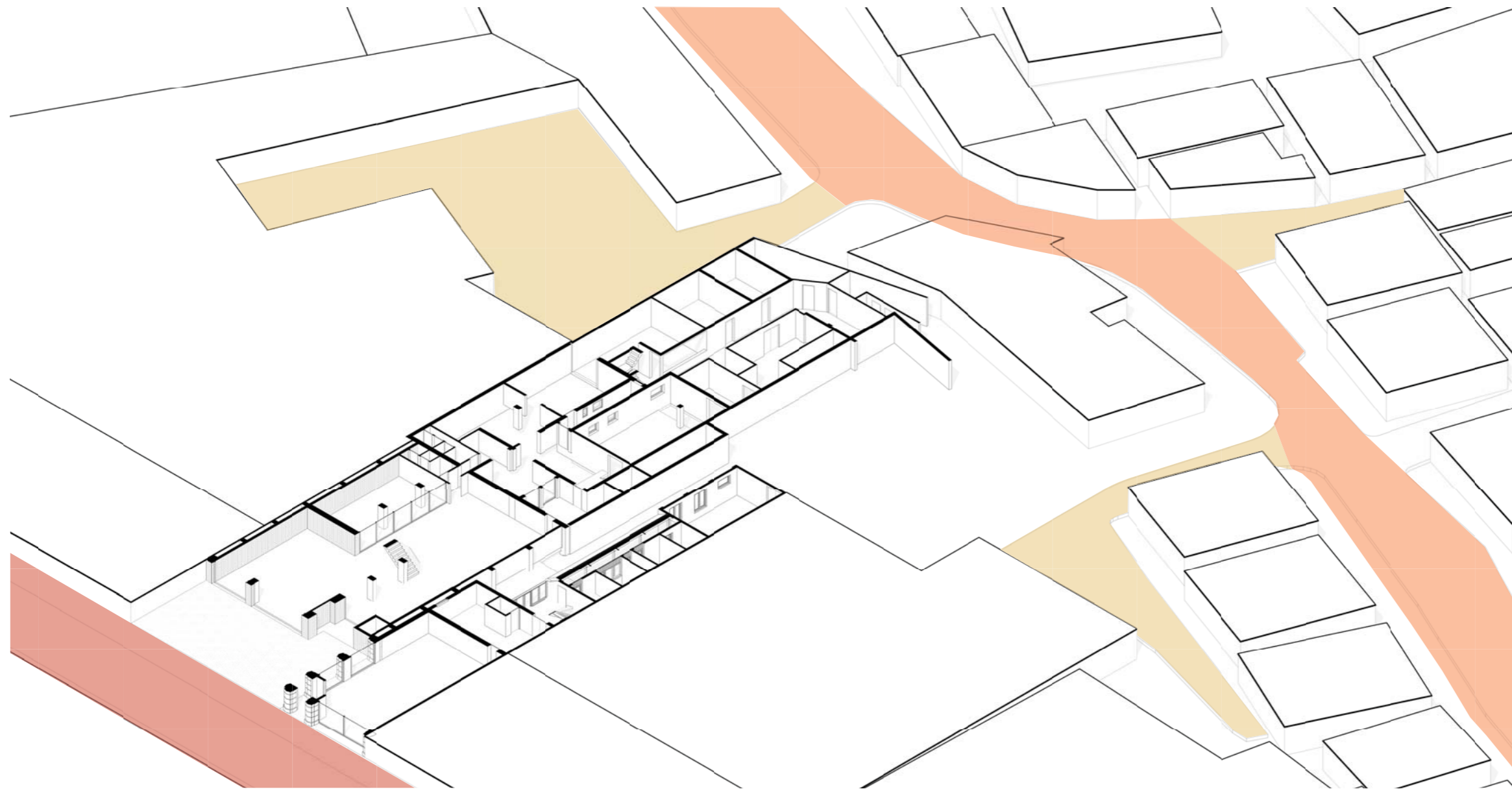
*site | society | street | structure | skin | space plan*



- formal street
- modest street
- semi-public street

## LOCATION

*site | society | street | structure | skin | space plan*

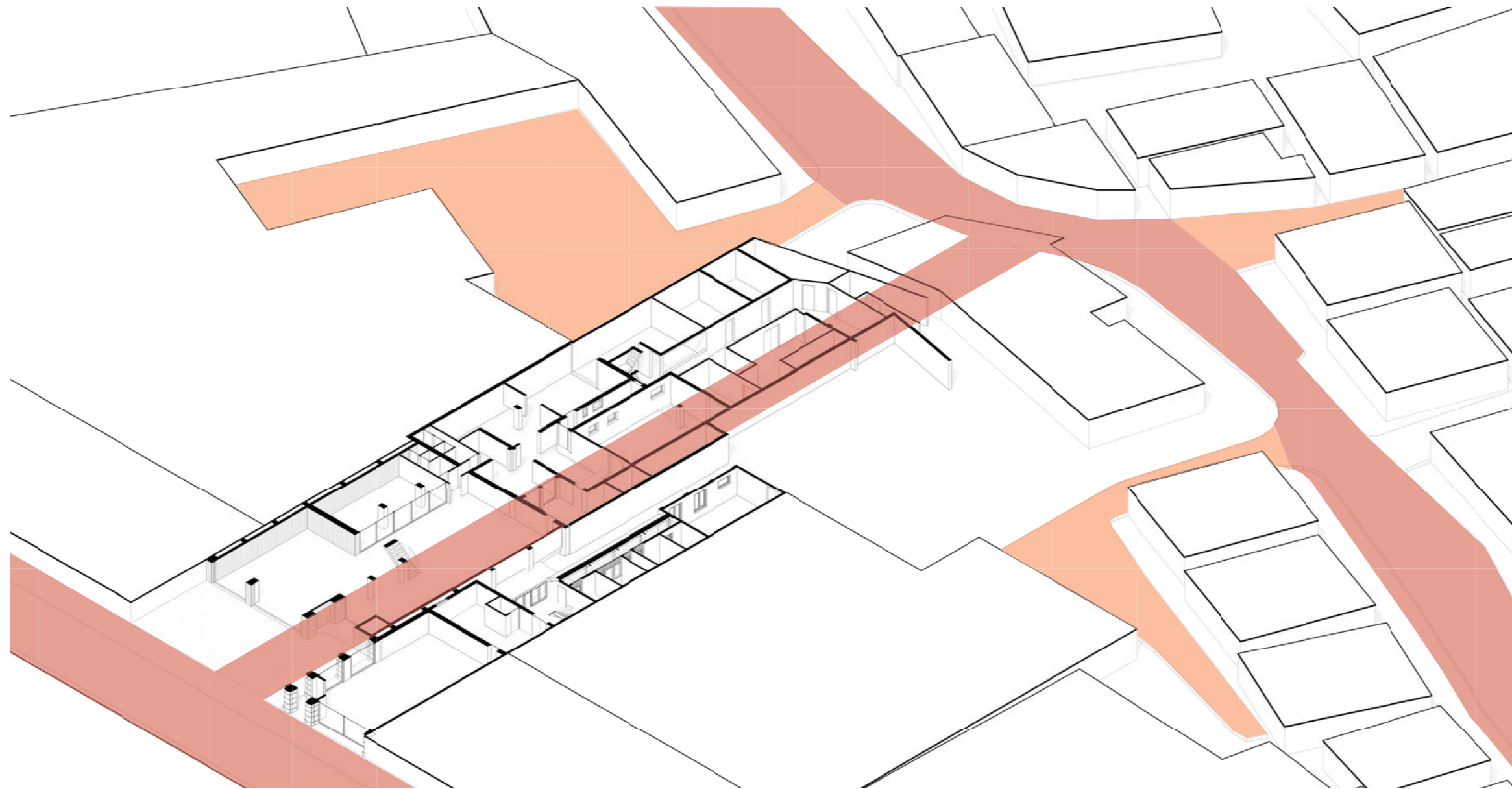


- formal street
- public street
- semi-public street

# CURRENT SITUATION

*site | society | street | structure | skin | space plan*

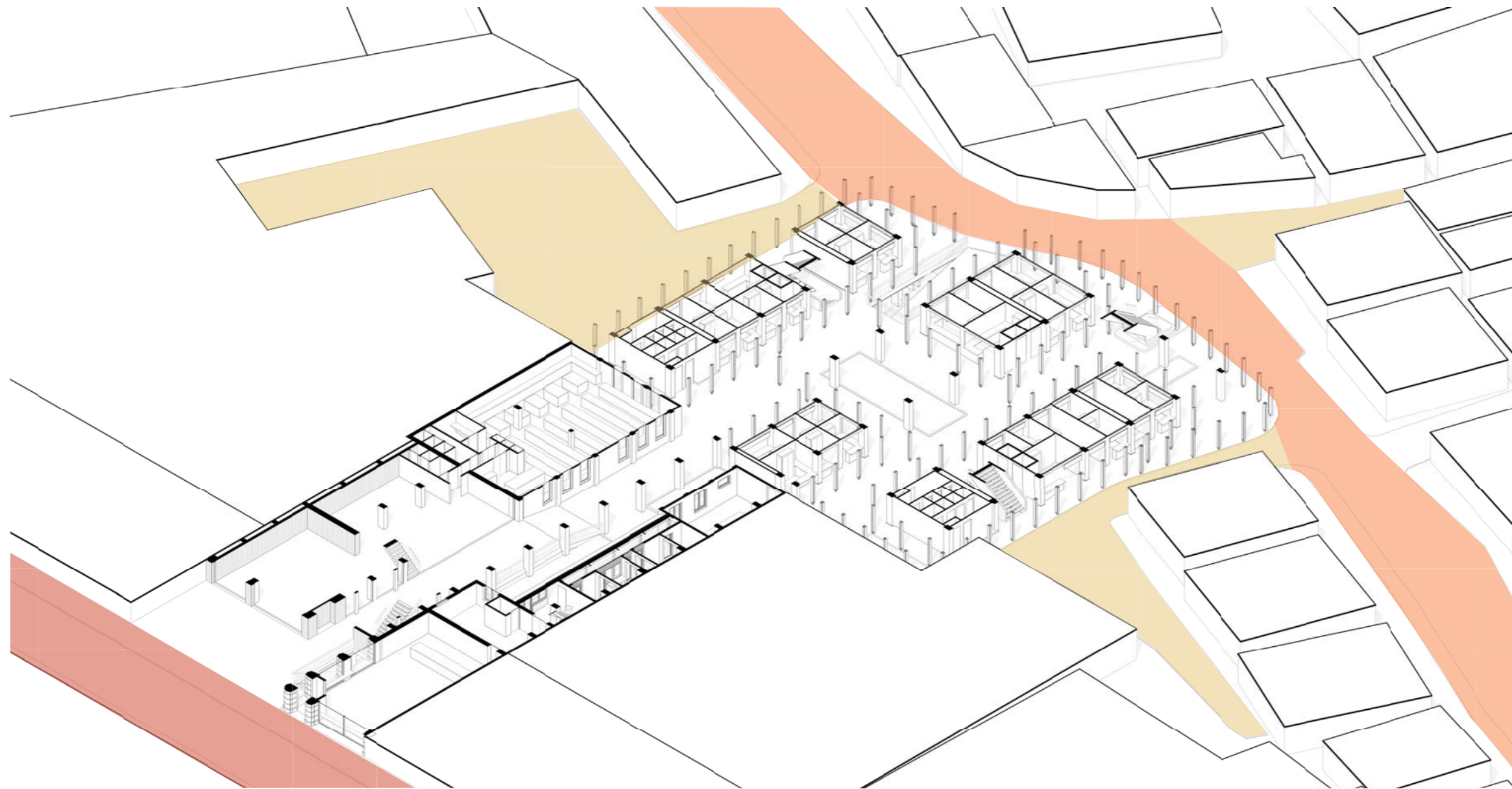




- formal street
- public street
- semi-public street

# PROGRESS - DIRECT CONNECTION

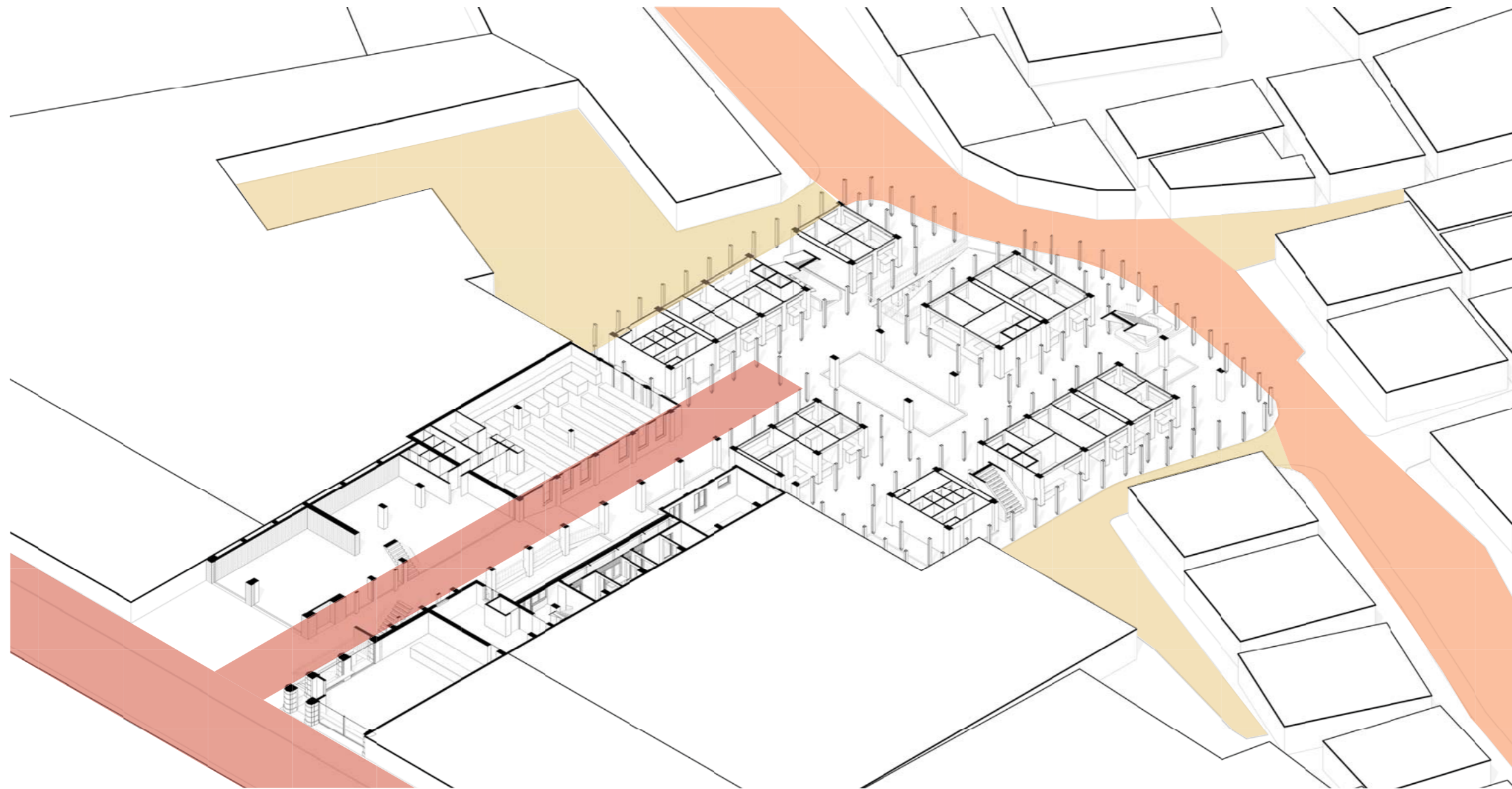
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

## NEW SITUATION

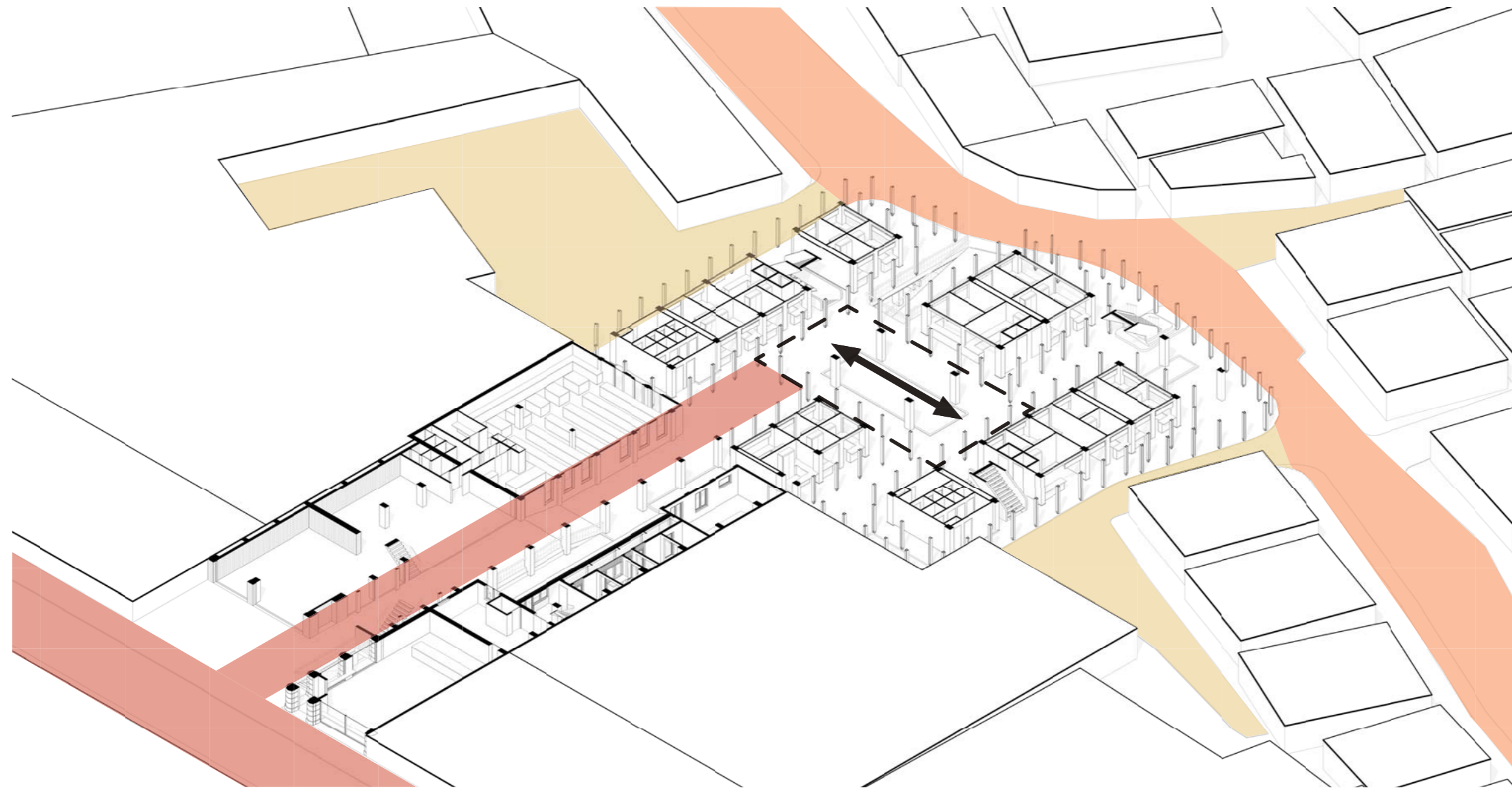
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

# FORMAL STREET

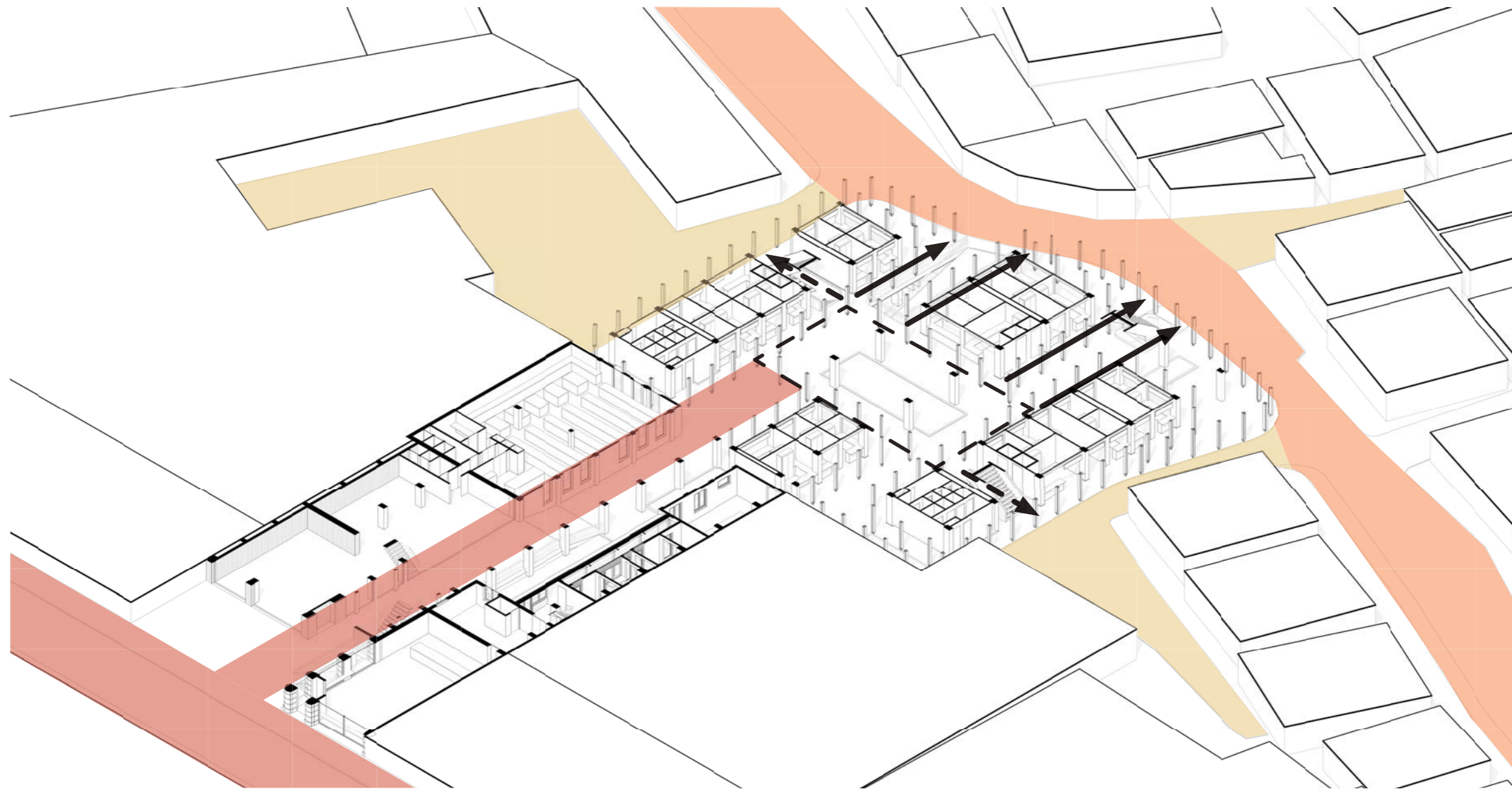
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

# NODE

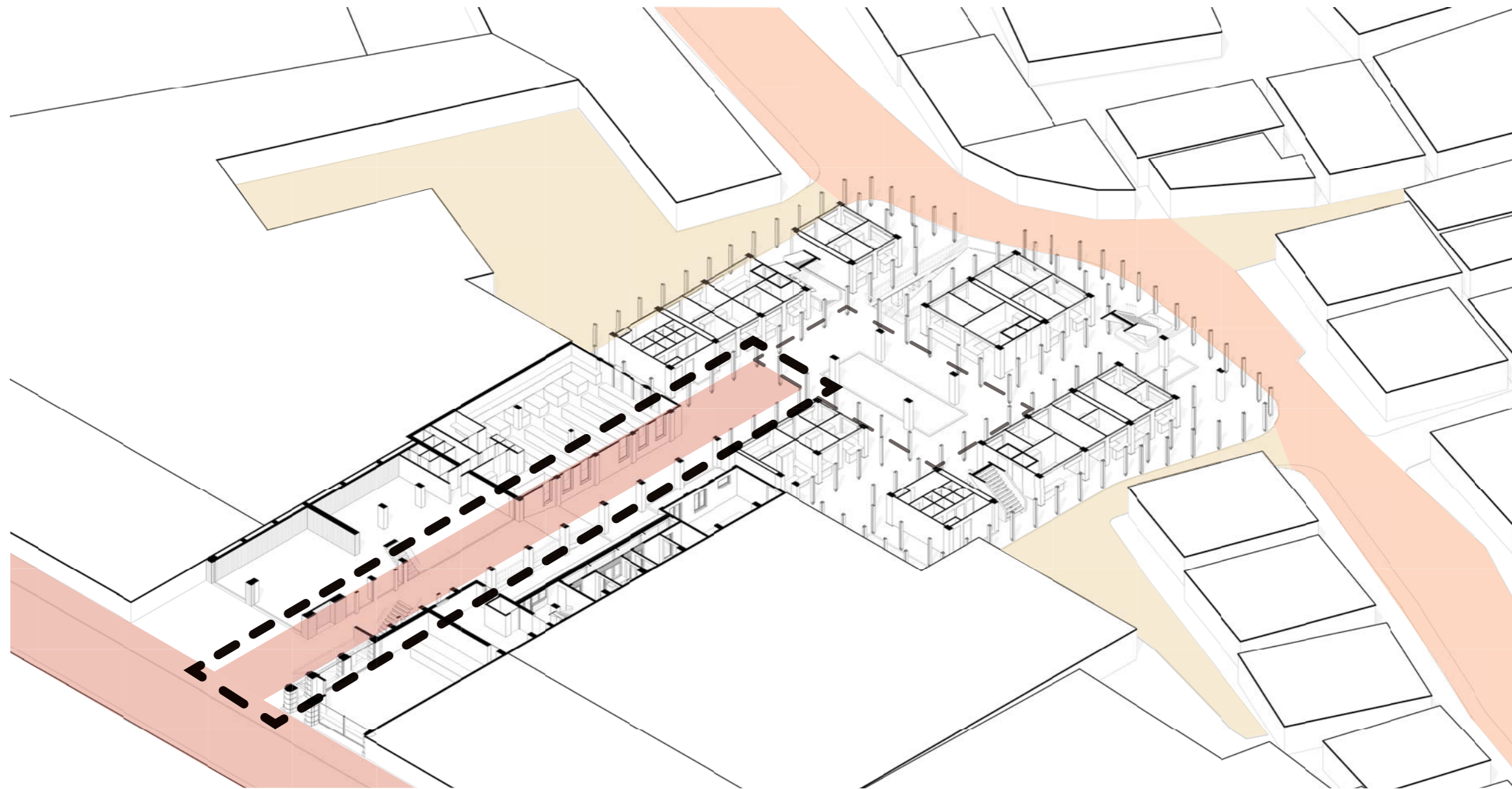
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

# POROSITY TOWARDS KAMPONG

*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

# NEW SITUATION

*site | society | street | structure | skin | space plan*



## CURRENT SITUATION

*site | society | street | structure | skin | space plan*



## CURRENT SITUATION

*site | society | street | structure | skin | space plan*





## NEW SITUATION

*site | society | street | structure | skin | space plan*



## EXISTING

*site | society | street | structure | skin | space plan*

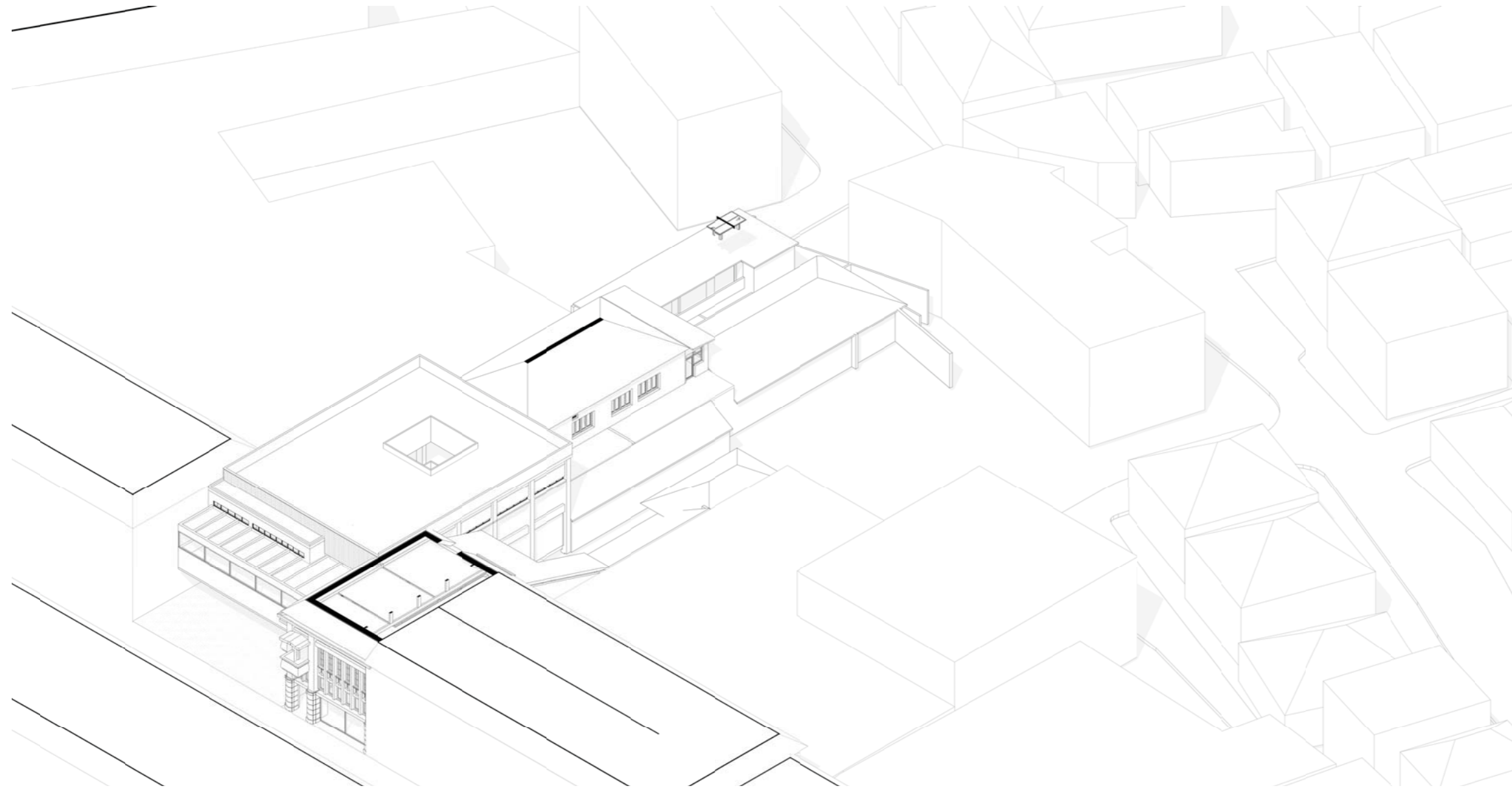


## NEW SITUATION

*site | society | street | structure | skin | space plan*



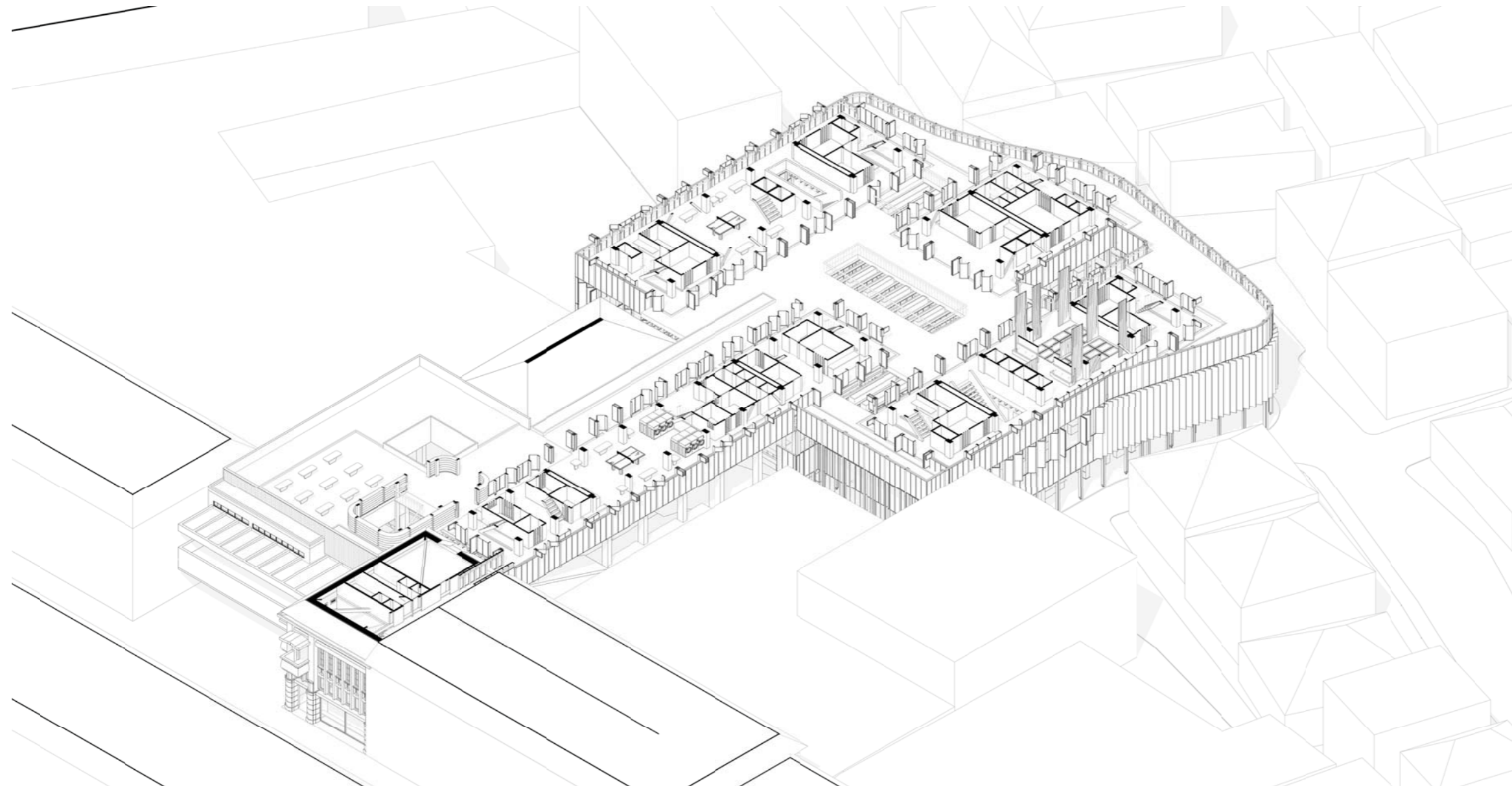
ENHANCE AND MAINTAIN QUALITIES  
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

## SECOND FLOOR

*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

# ELEVATED STREET

*site | society | street | structure | skin | space plan*



## CONNECTED TO BRAGA

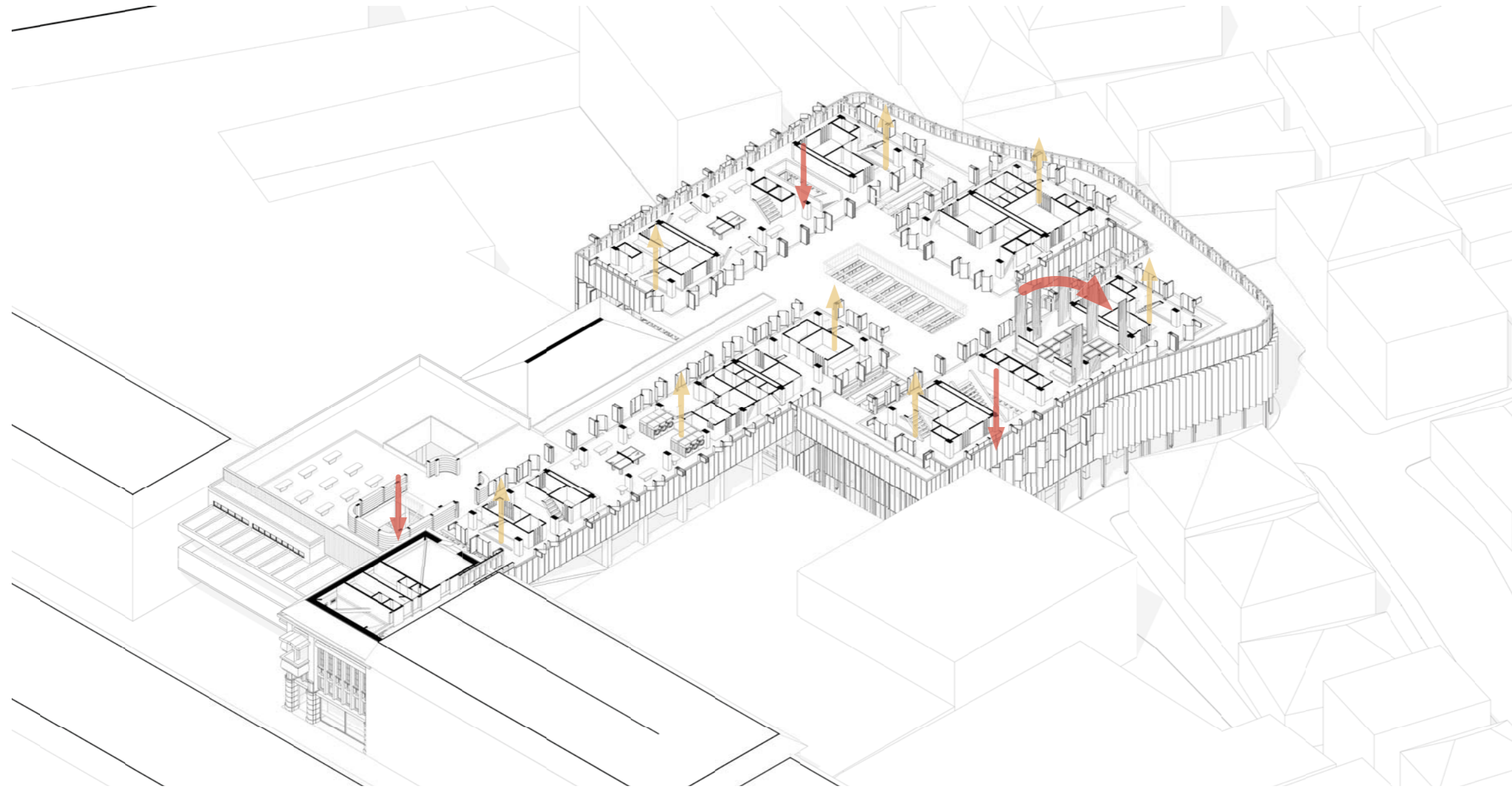
*site | society | street | structure | skin | space plan*



## RELATED TO ROOFS KAMPONG

*site | society | street | structure | skin | space plan*

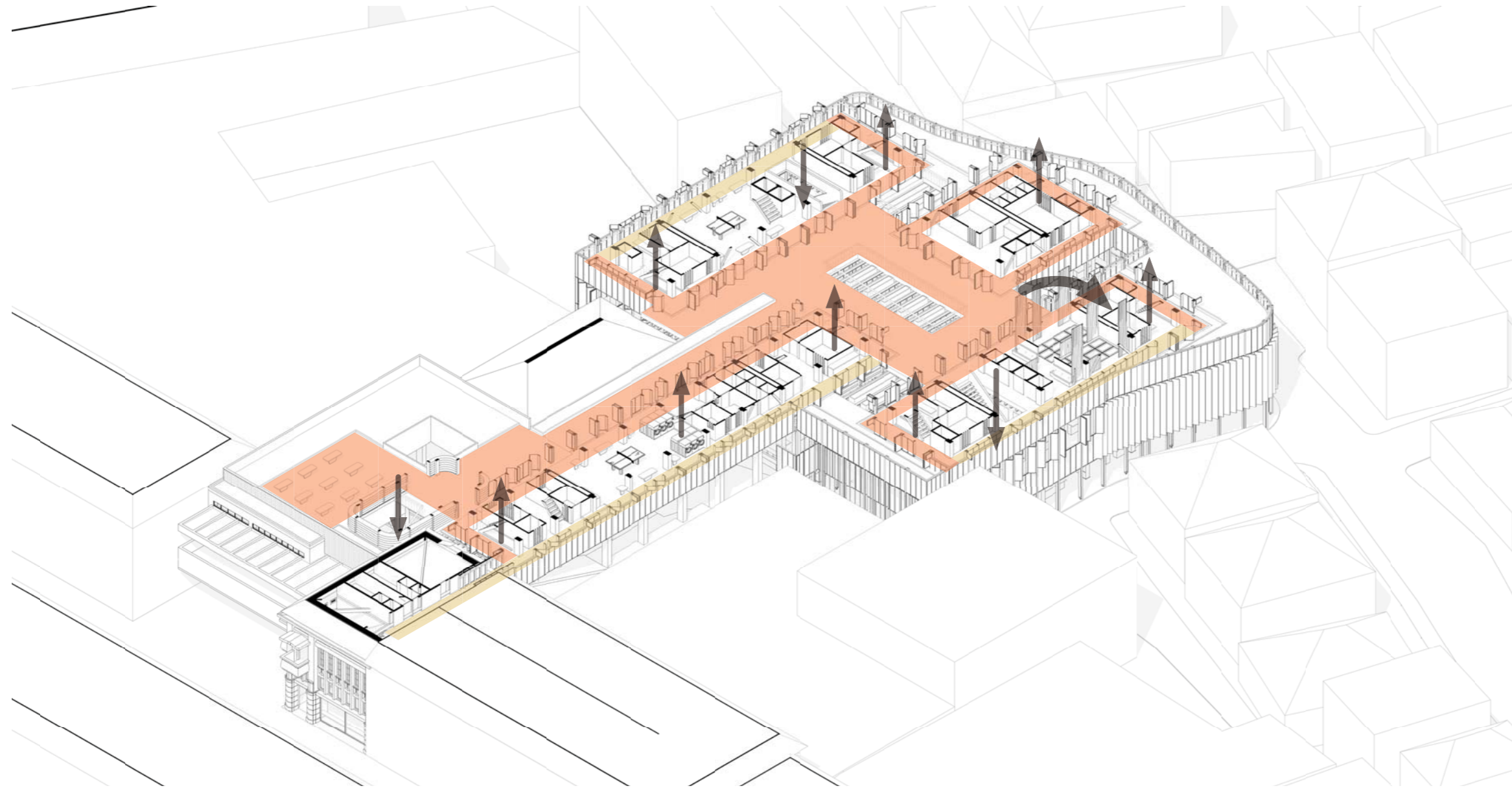




- formal street
- public street
- semi-public street

# SWITCH

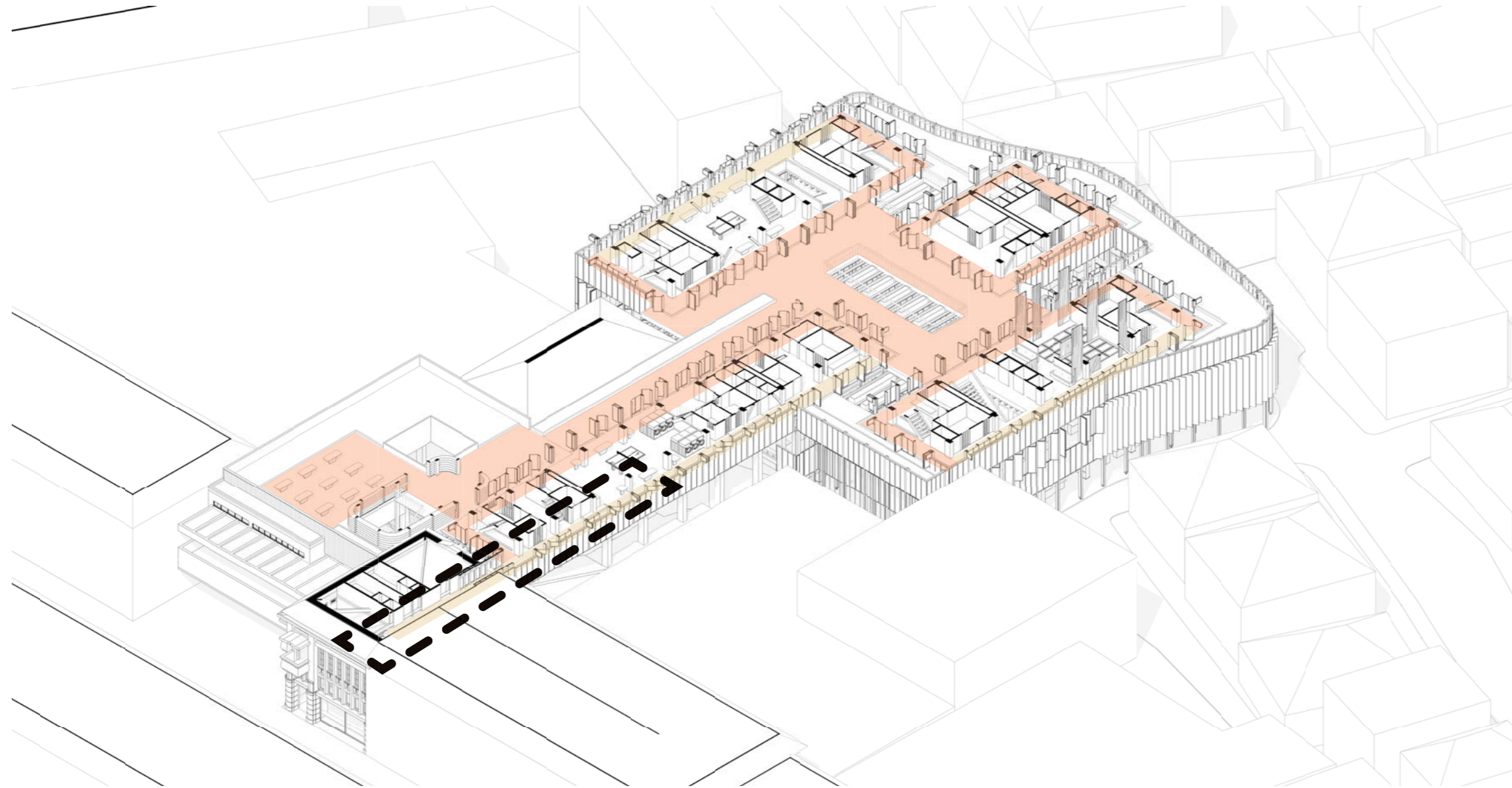
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

# GRADUAL TRANSITION

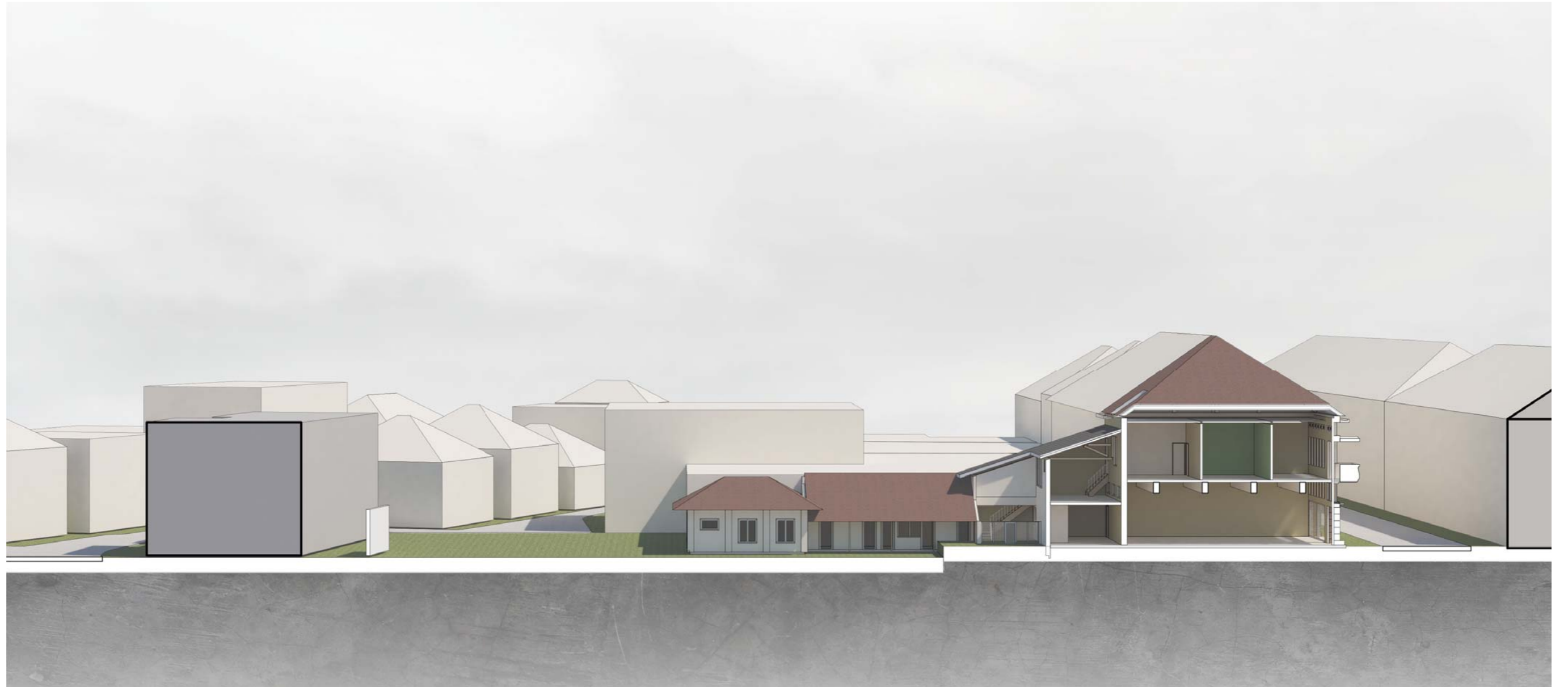
site | society | street | structure | skin | space plan



- formal street
- public street
- semi-public street

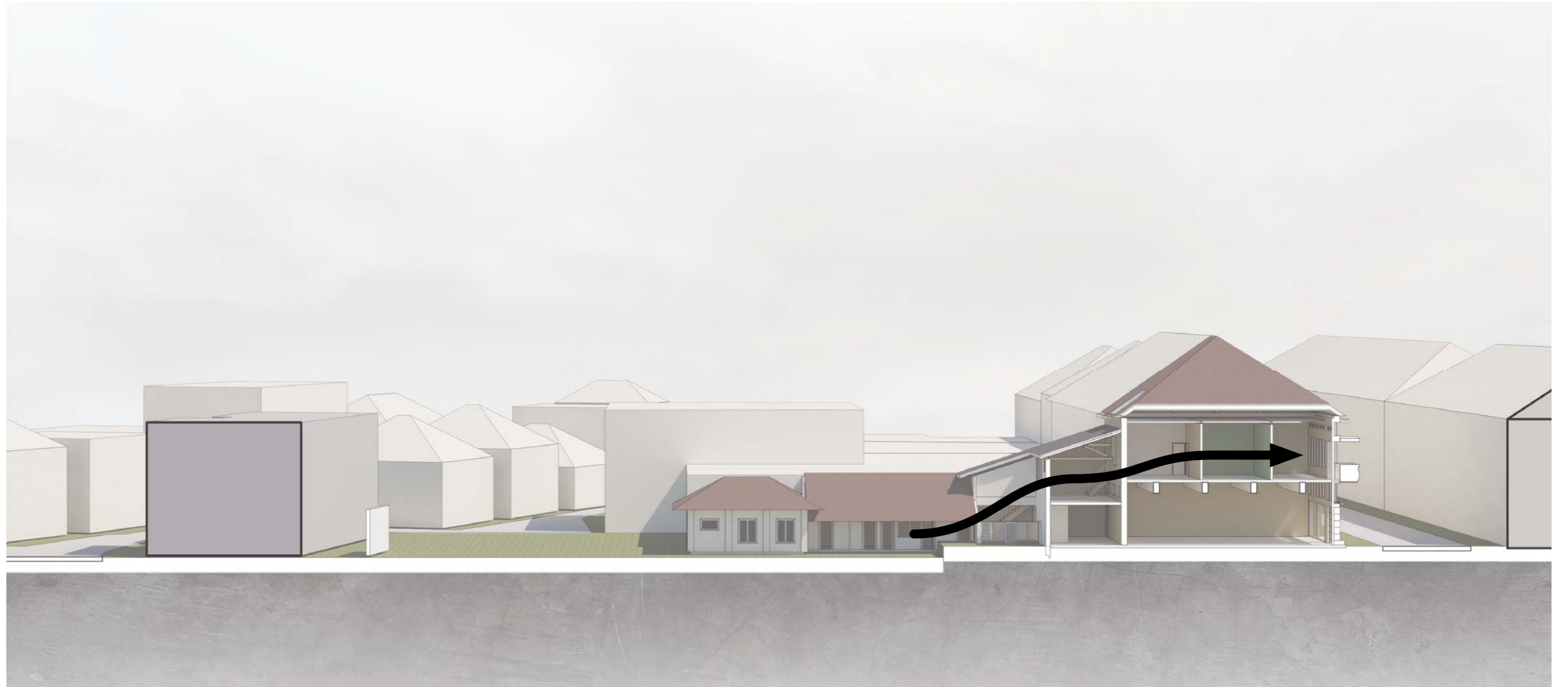
# CONNECT TO SHOP-HOUSE

site | society | street | structure | skin | space plan



## EXISTING

*site | society | street | structure | skin | space plan*



## DISCONNECTED

*site | society | street | structure | skin | space plan*



## NEW SITUATION

*site | society | street | structure | skin | space plan*



CONNECTED TO ELEVATED STREET  
*site | society | street | structure | skin | space plan*



## BRING LIFE BACK TO BRAGA STREET

*site | society | street | structure | skin | space plan*





## CONNECTION

*site | society | street | structure | skin | space plan*



## CONNECTION

*site | society | street | structure | skin | space plan*



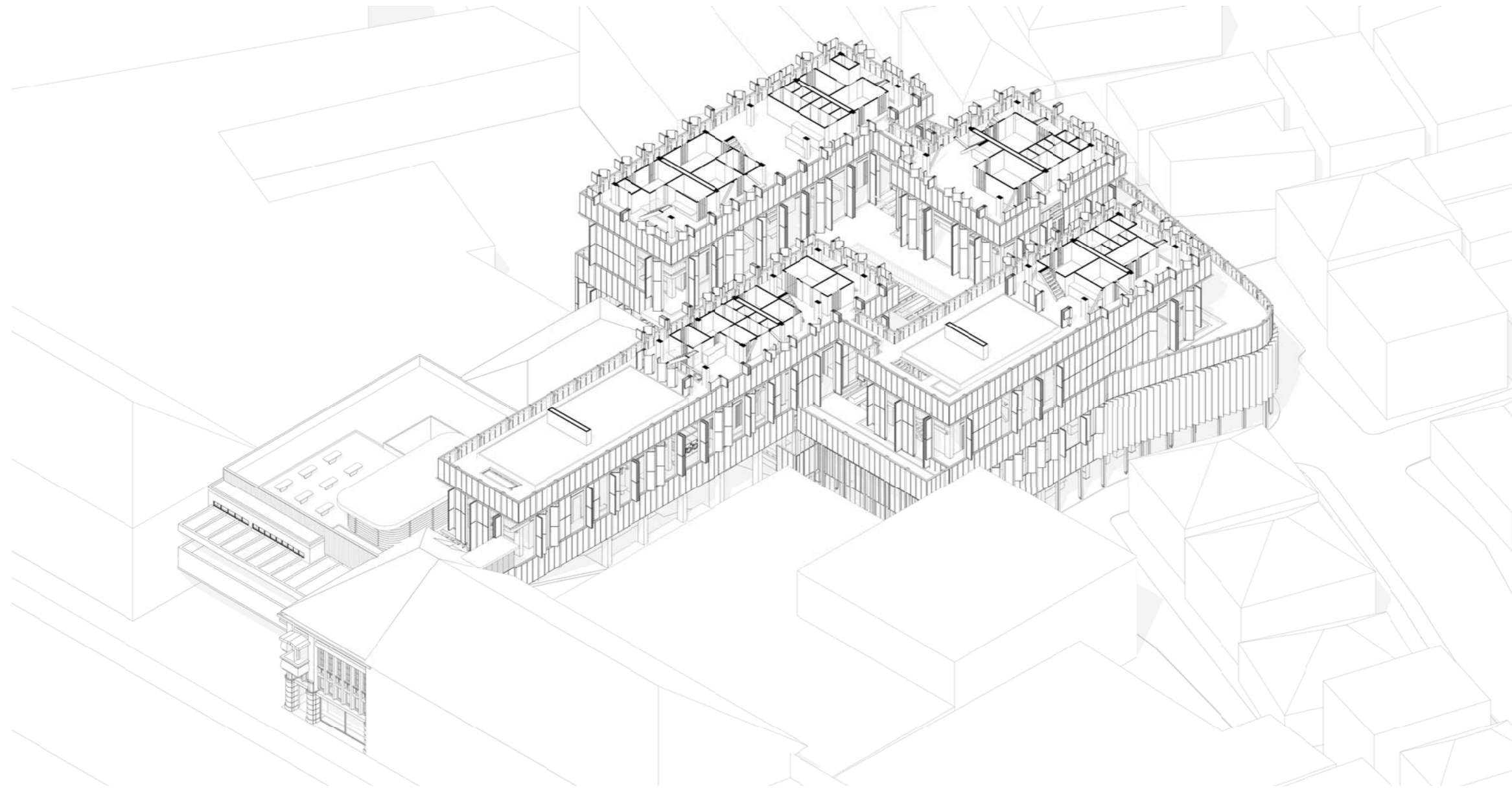
## CONNECTION

*site | society | street | structure | skin | space plan*



## CONNECTION

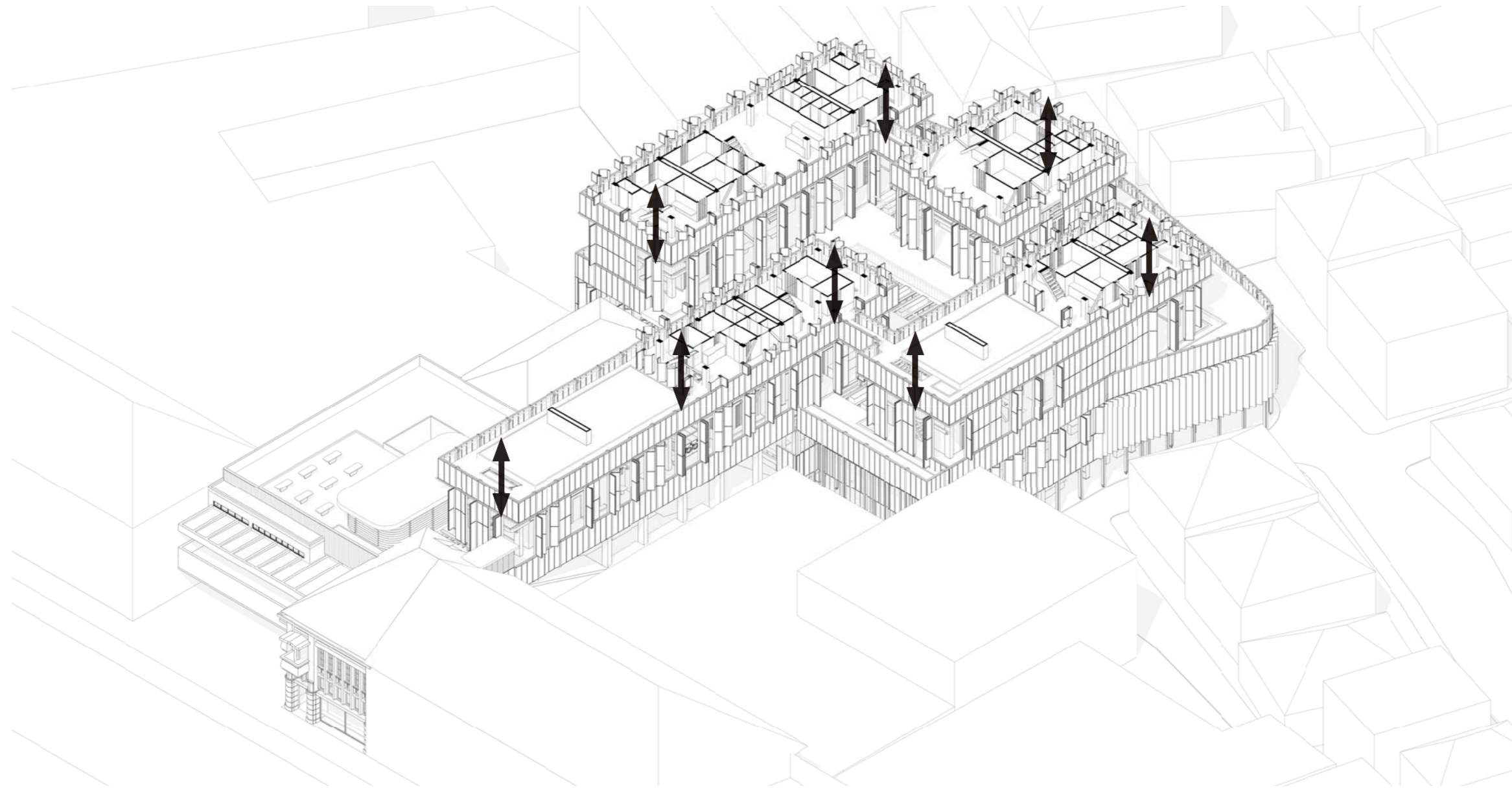
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

## THIRD FLOOR

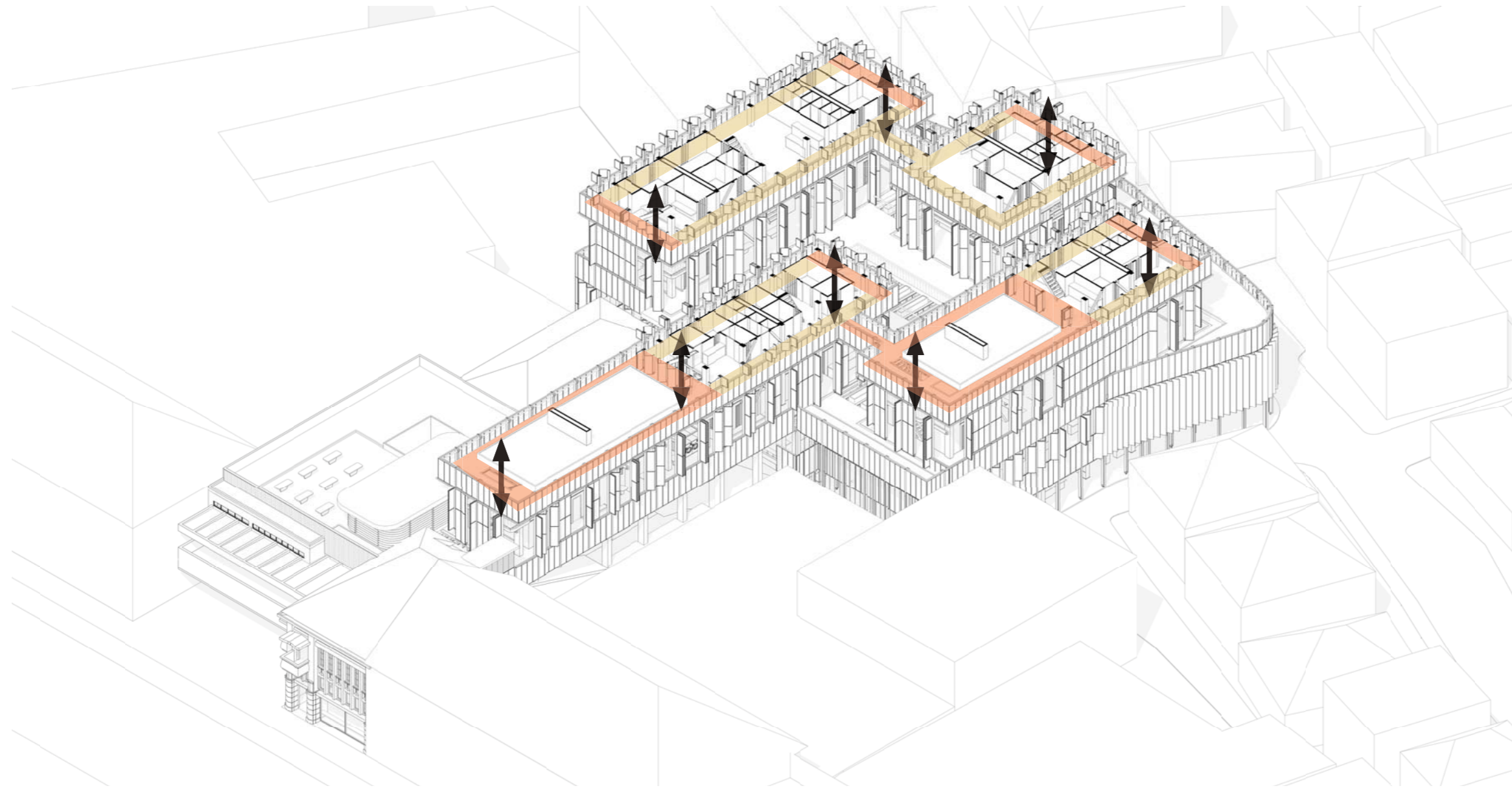
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

# CORES

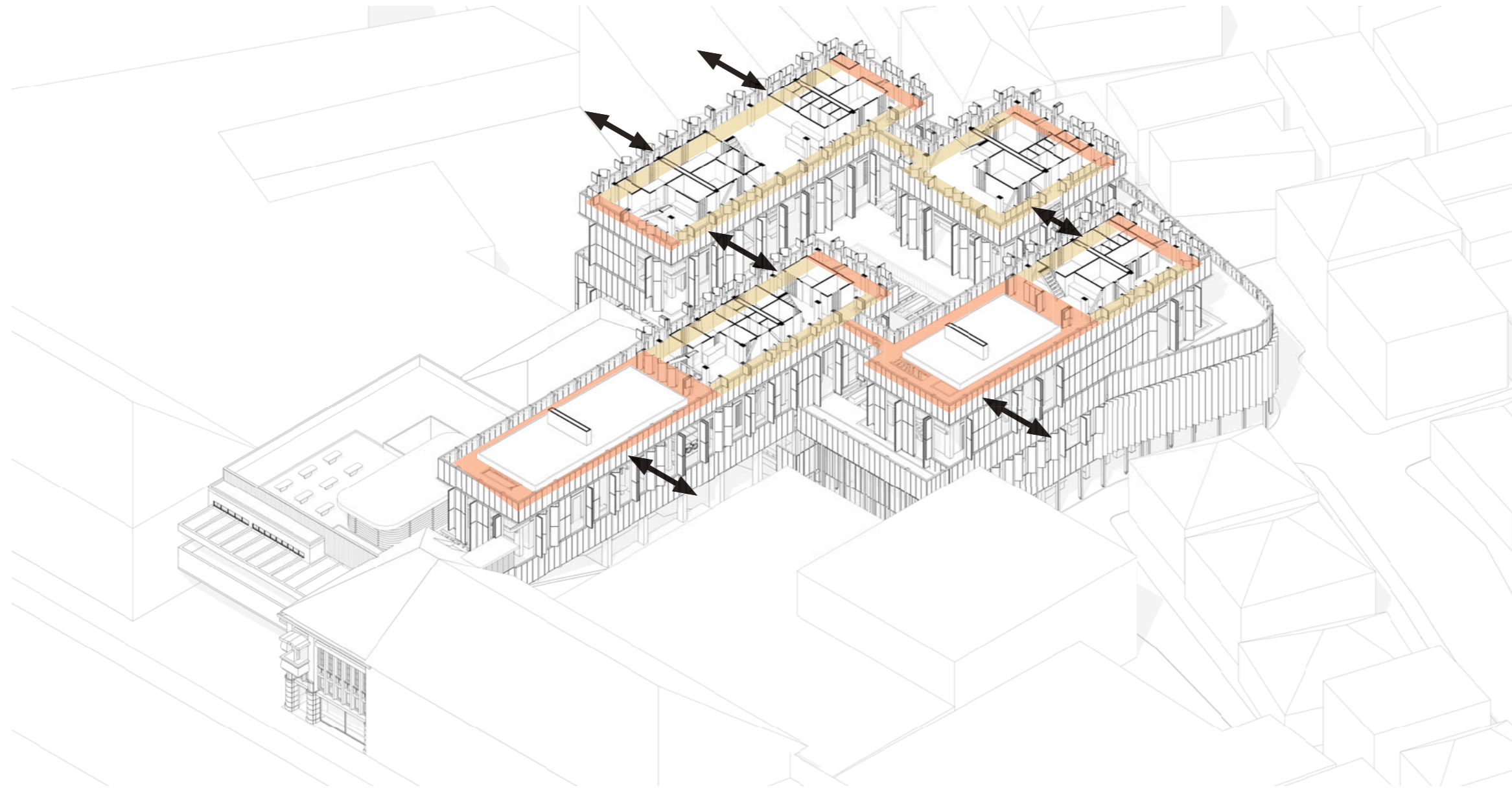
*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

## EXTERIOR CIRCULATION

*site | society | street | structure | skin | space plan*



- formal street
- public street
- semi-public street

## POSSIBILITY TO CONNECT

*site | society | street | structure | skin | space plan*



*site | society | street | structure | skin | space plan*

Urban Surgery

Social sustainable

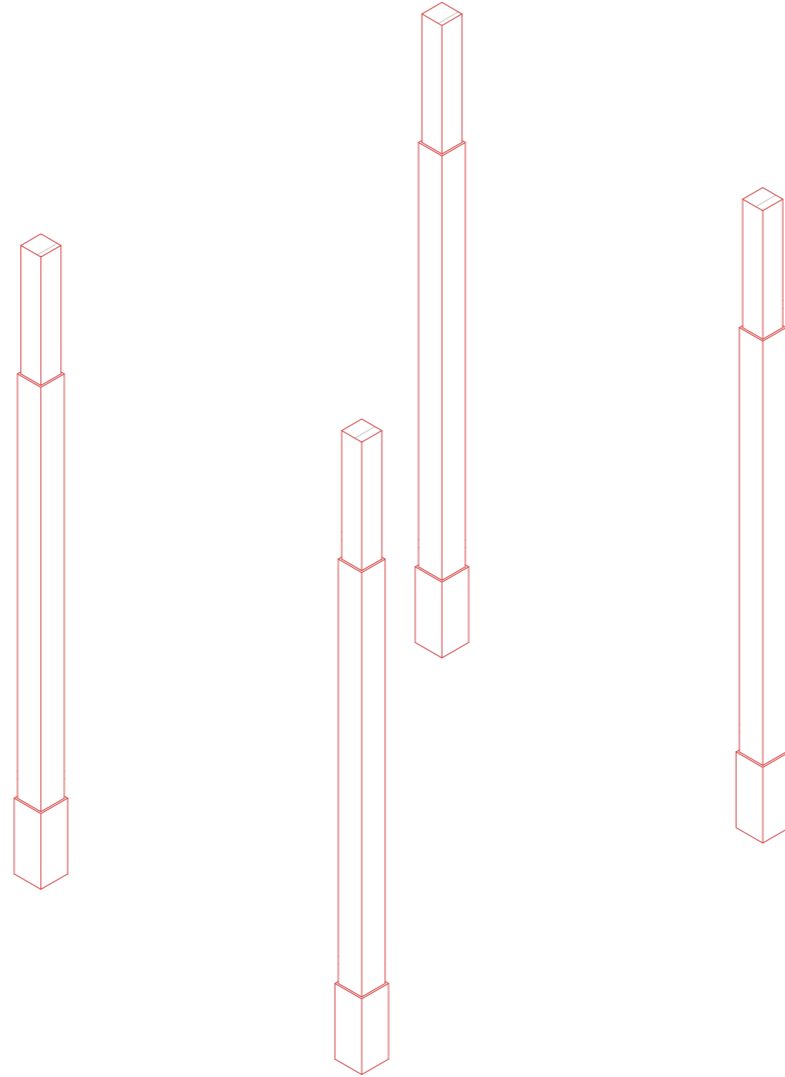
Cogent circulation

1. Adaptable
2. Expandable



## OPEN STRUCTURE

*site | society | street | structure | skin | space plan*



## FLEXIBLE GRID

*site* | *society* | *street* | *structure* | *skin* | *space plan*



## EXISTING

*site | society | street | structure | skin | space plan*



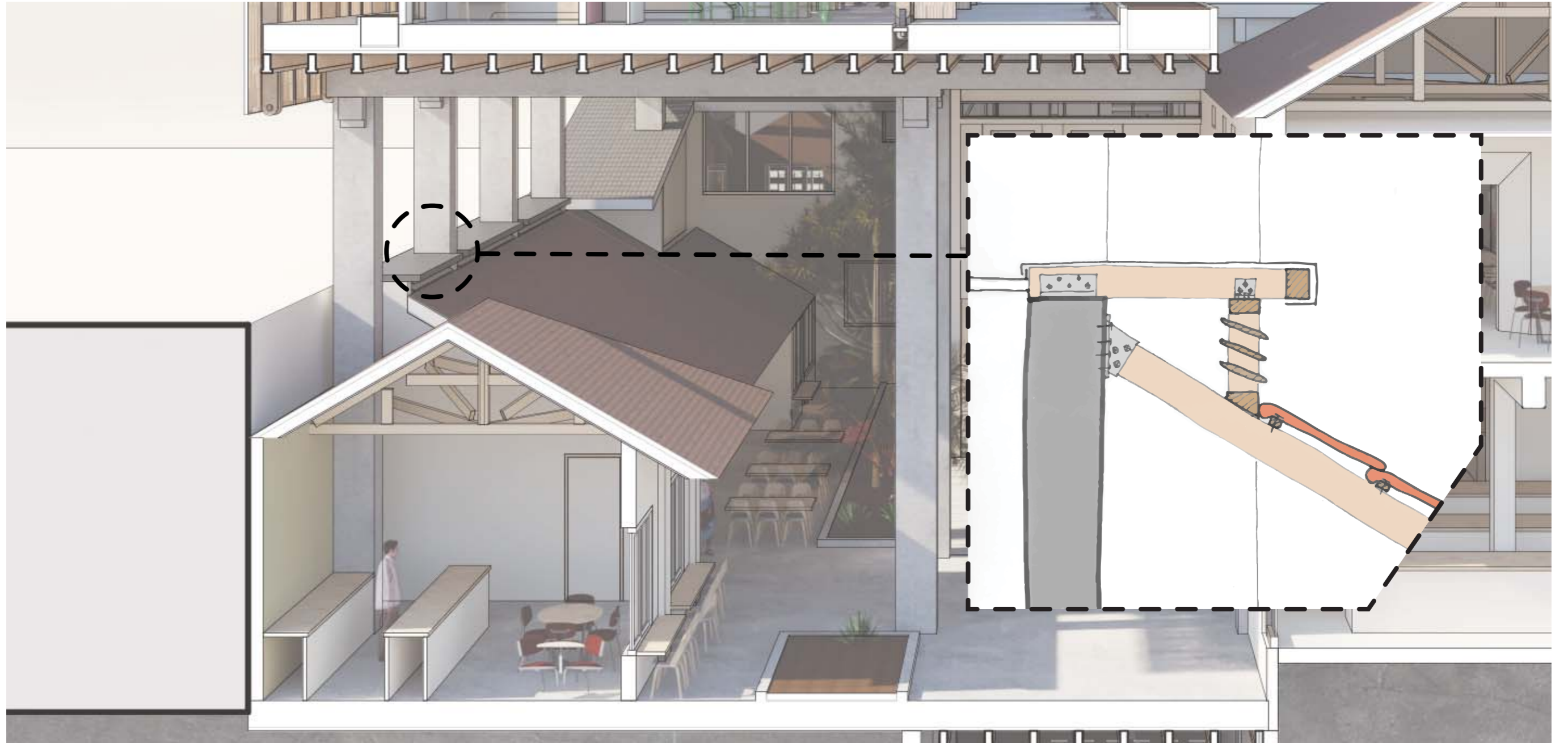
## NEW SITUATION

*site | society | street | structure | skin | space plan*



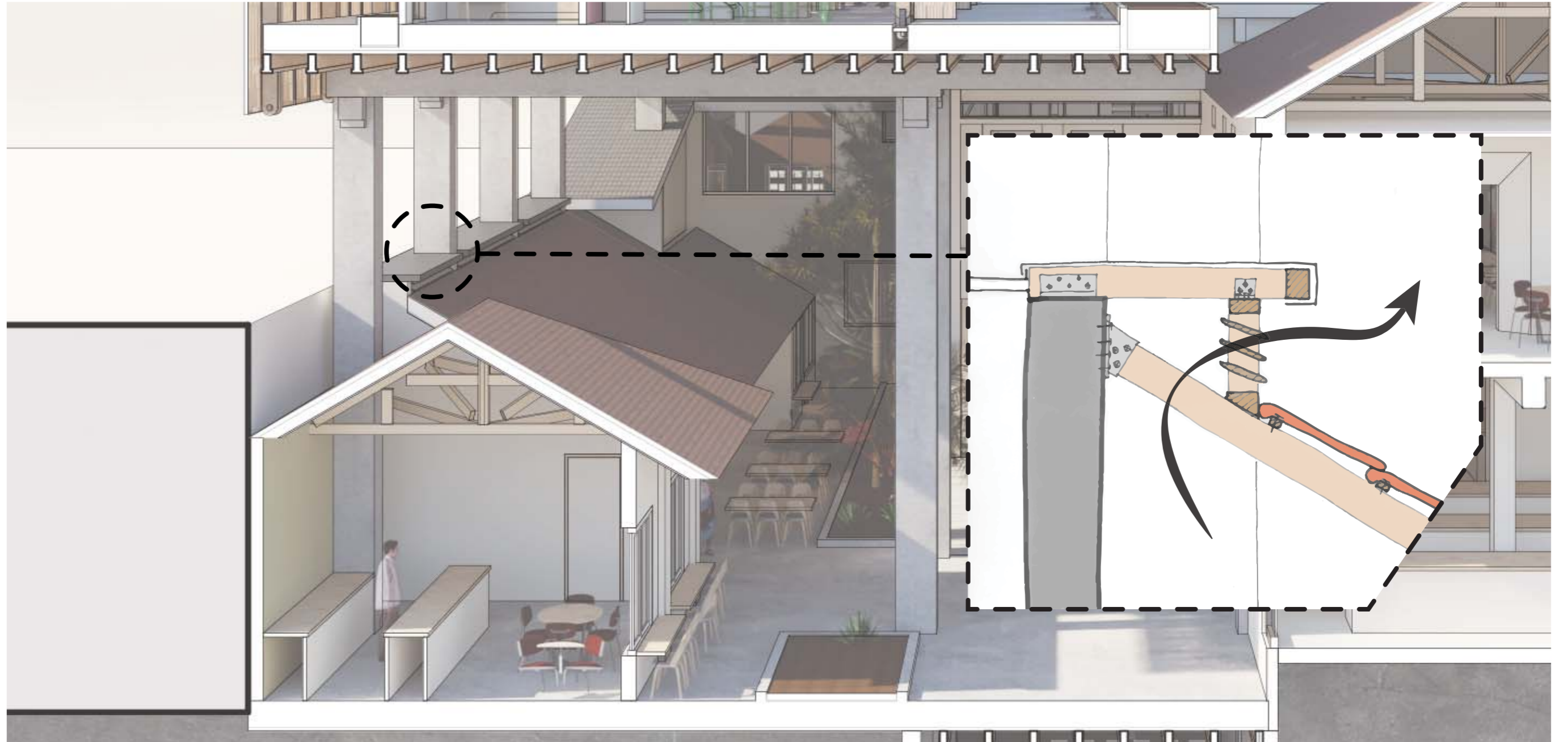
## SERVICE BUILDINGS

*site | society | street | structure | skin | space plan*



## CONNECTION

*site | society | street | structure | skin | space plan*



## DILEMMA TO OPPORTUNITY

*site | society | street | structure | skin | space plan*





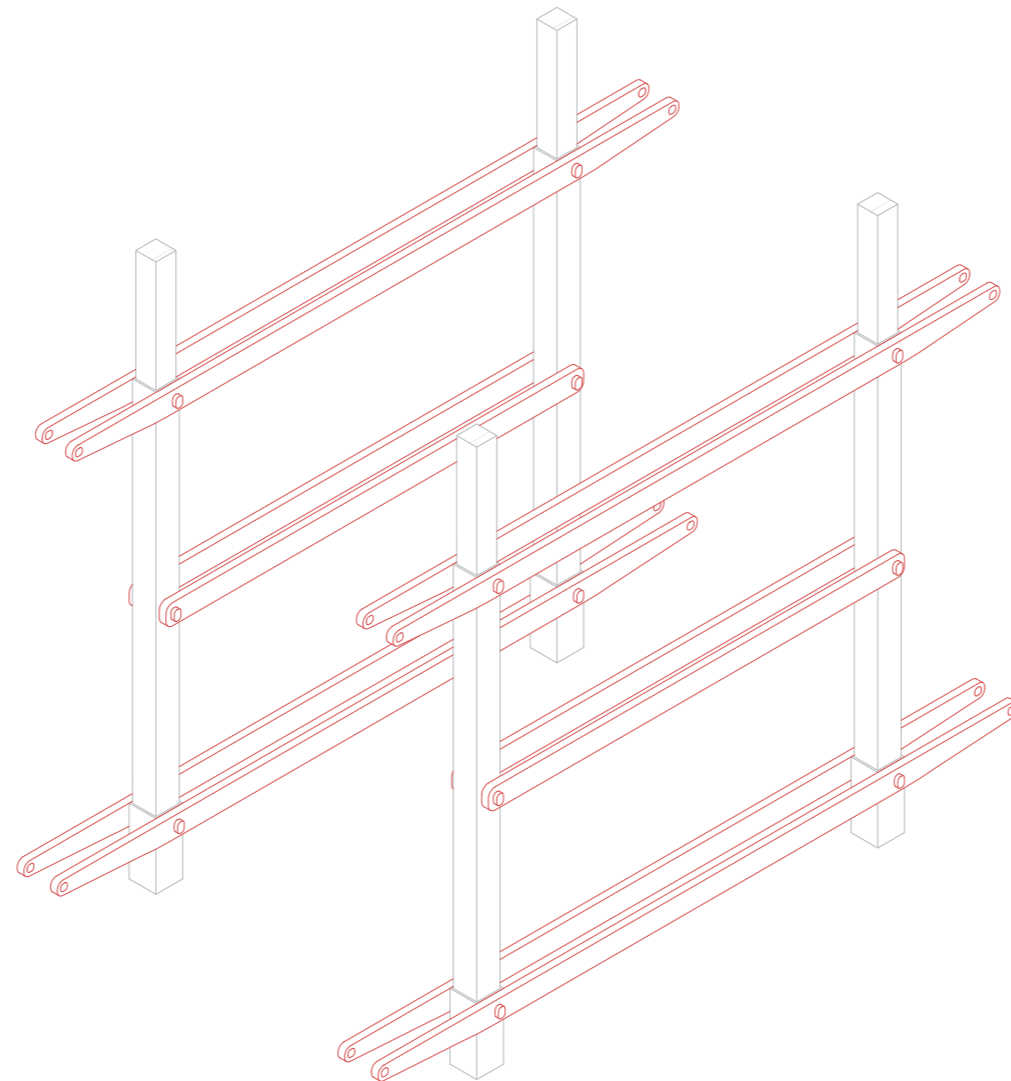
## EXISTING

*site | society | street | structure | skin | space plan*



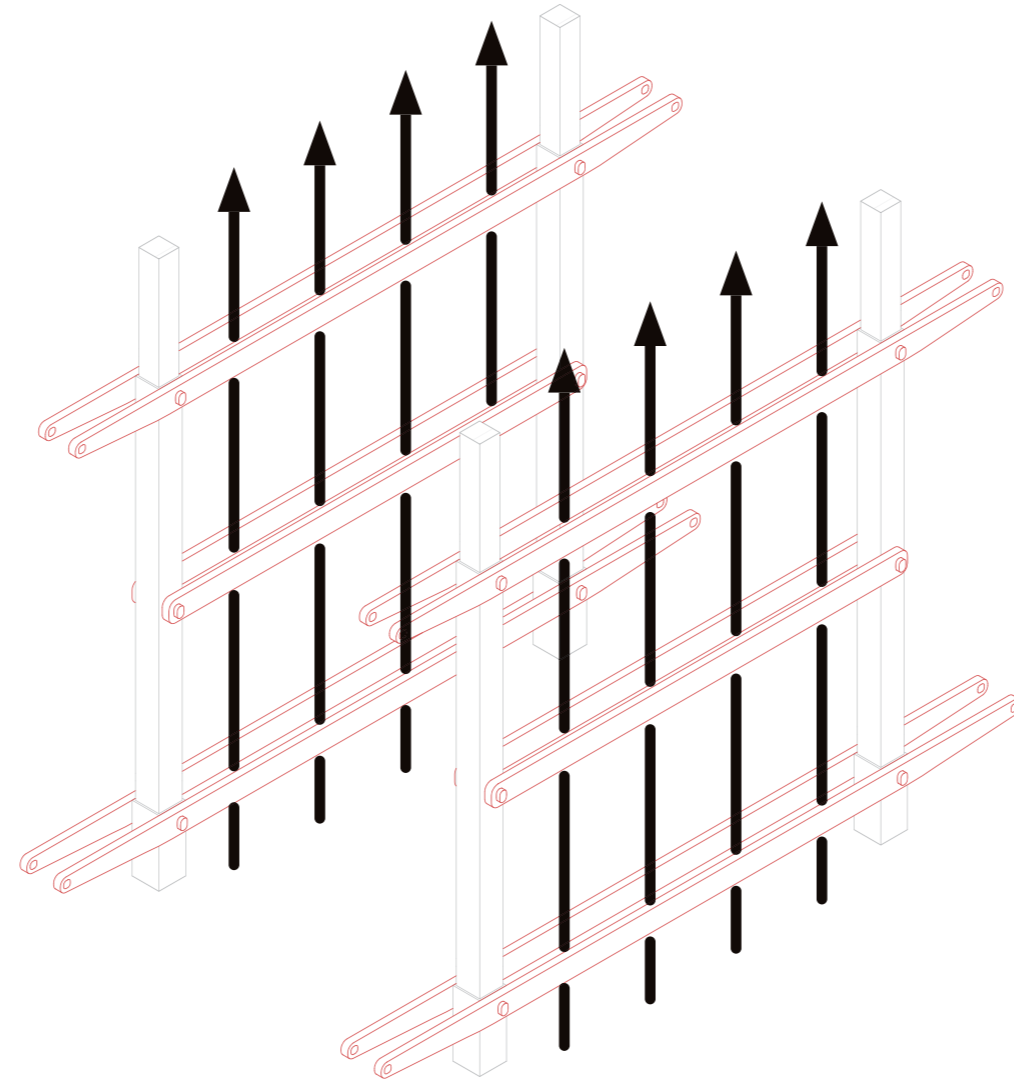
## NEW ENVIRONMENT

*site | society | street | structure | skin | space plan*



## BEAMS

*site* | *society* | *street* | *structure* | *skin* | *space plan*



## VERTICAL SHAFTS

*site | society | street | structure | skin | space plan*



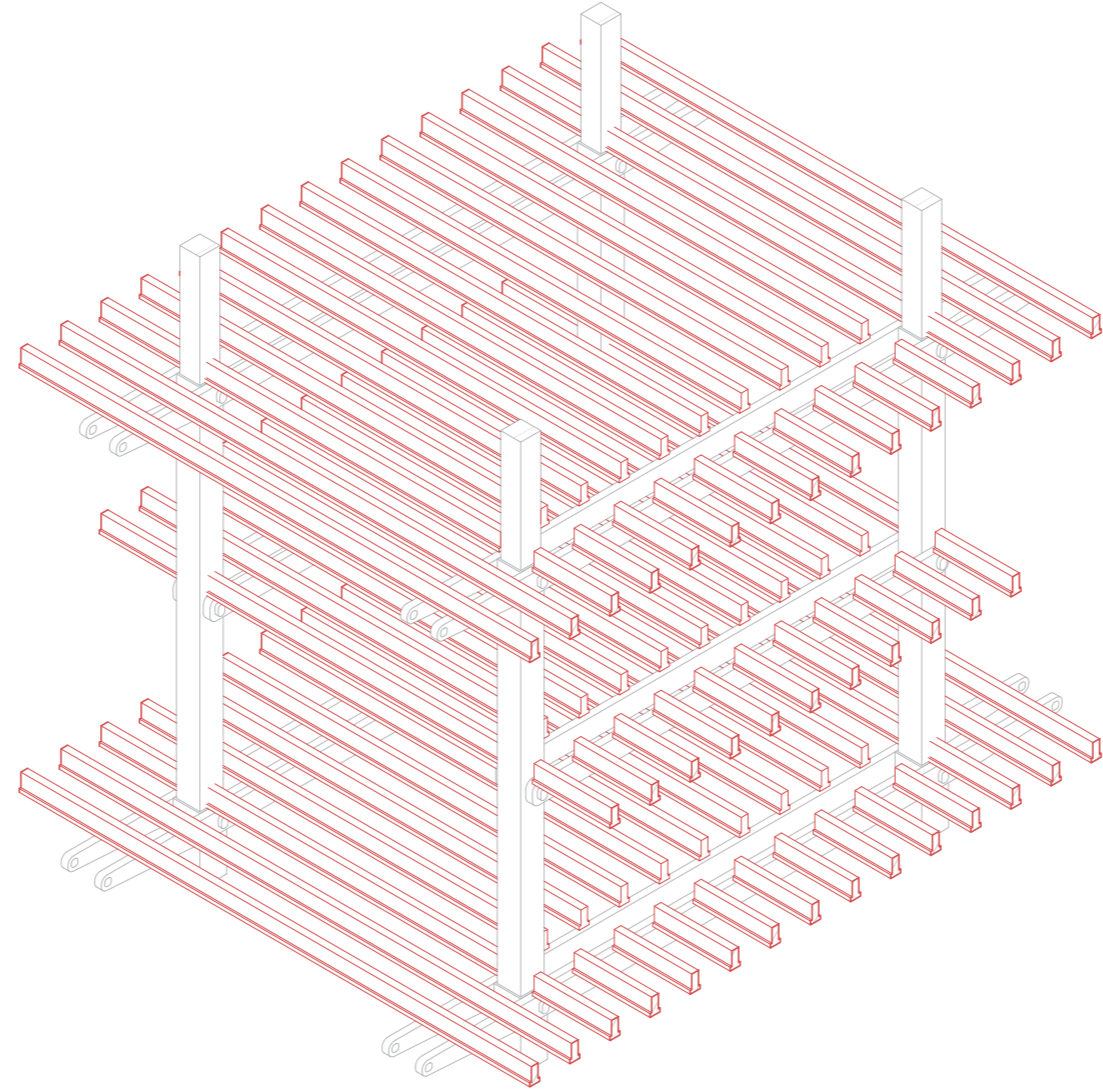
## NEW SITUATION

*site | society | street | structure | skin | space plan*



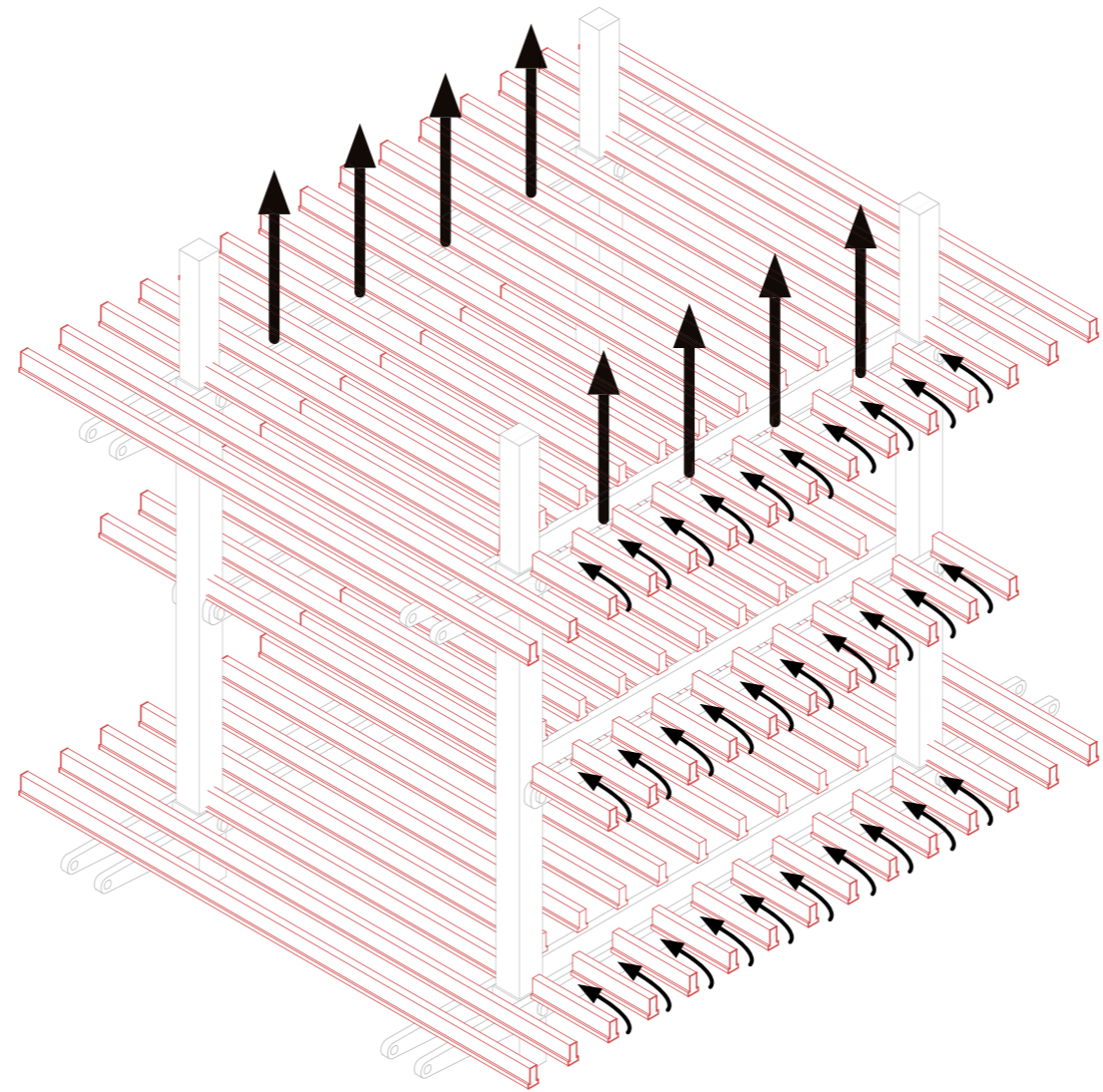
## STACK VENTILATION

*site | society | street | structure | skin | space plan*



## BEAMS

*site | society | street | structure | skin | space plan*



## HORIZONTAL SHAFT

*site | society | street | structure | skin | space plan*





## STACK VENTILATION

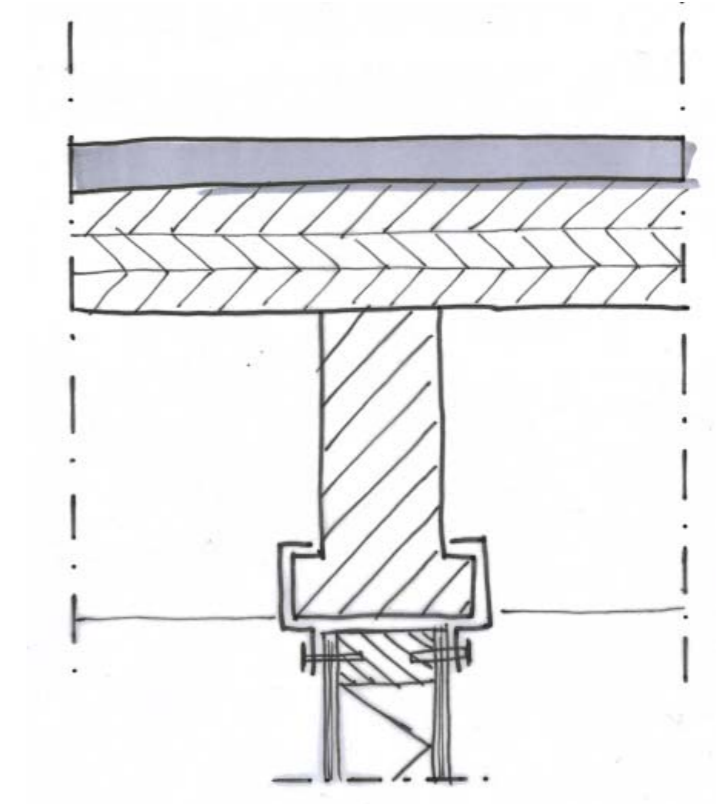
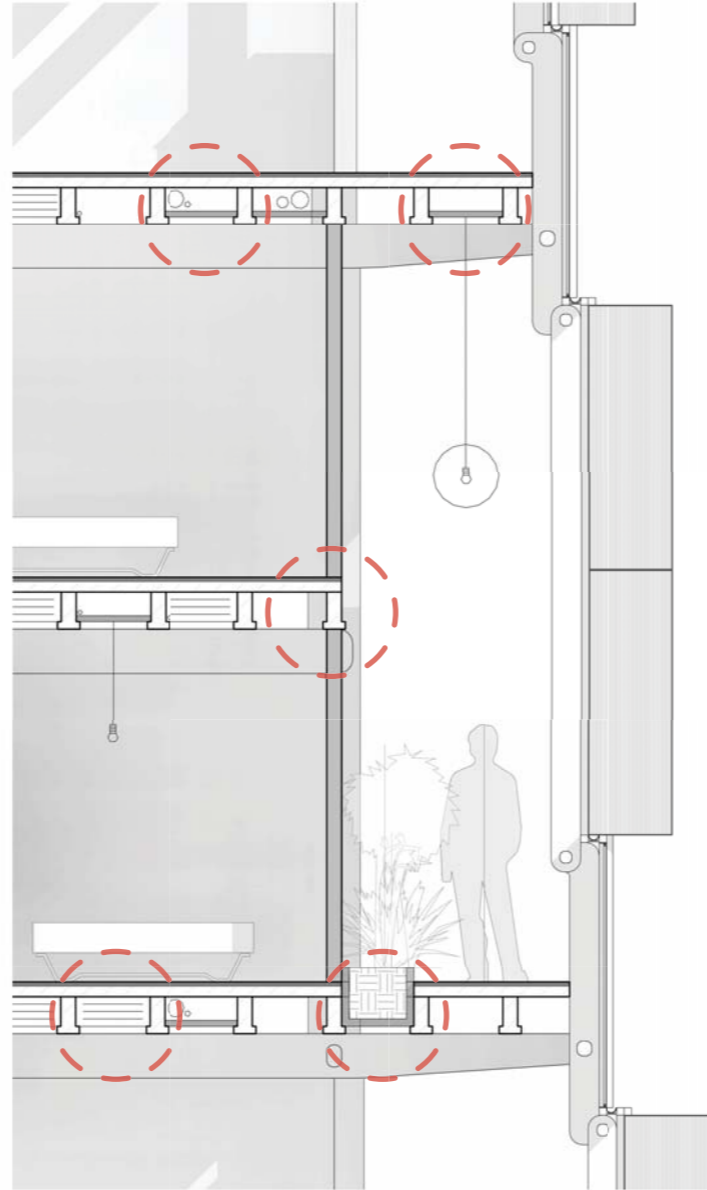
*site | society | street | structure | skin | space plan*



## STACK VENTILATION

*site | society | street | structure | skin | space plan*

- Installations
- Ventilation shaft
- Wall connection
- Grille
- Green



## FLEXIBLE IN USE

*site | society | street | structure | skin | space plan*

*site | society | street | structure | skin | space plan*

Urban Surgery

Social sustainable

Cogent circulation

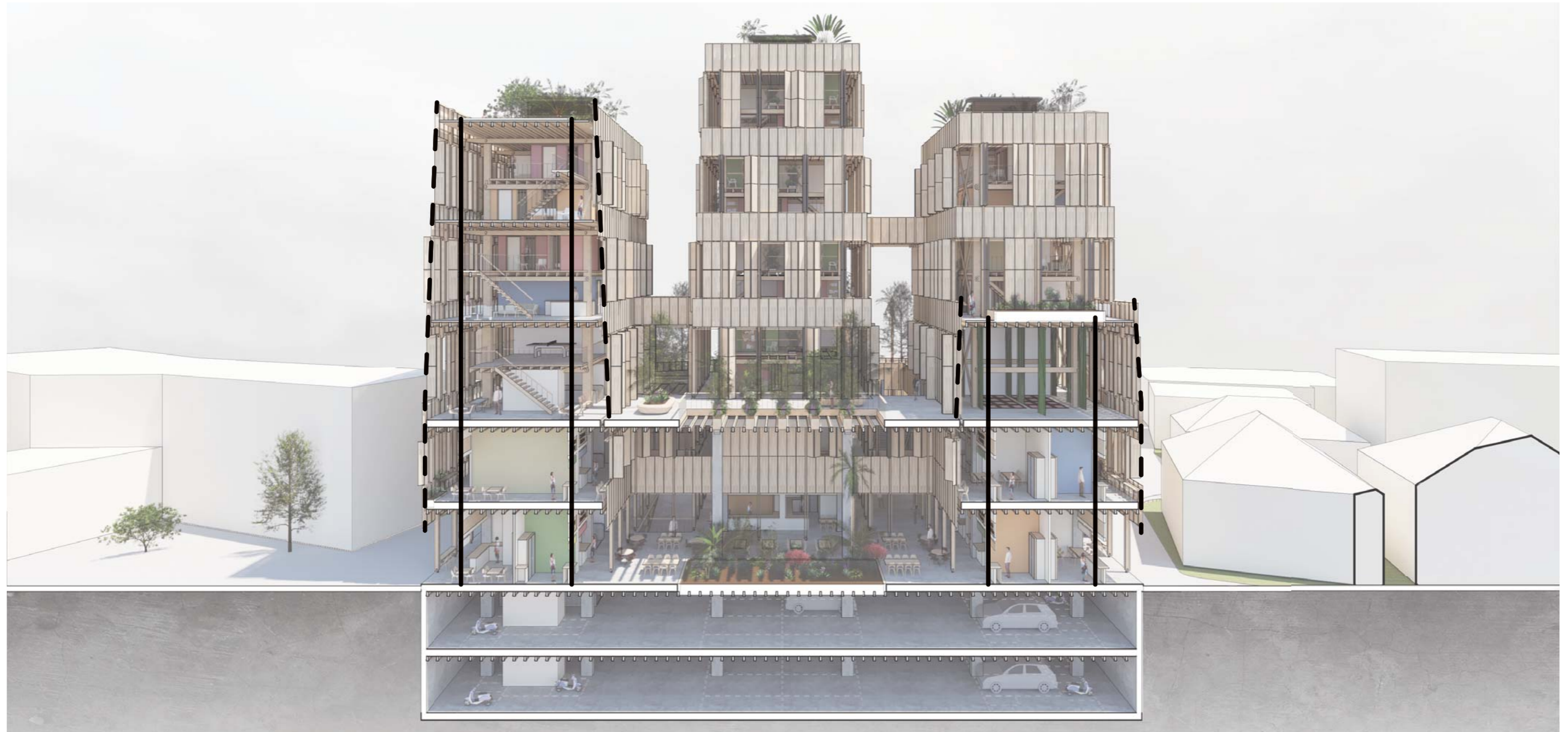
Open structure

1. Gradual transition open - closed
2. Allows regulating indoor climate



## CLIMATIC ADAPTIVITY

*site | society | street | structure | skin | space plan*



## DOUBLE SKIN

*site | society | street | structure | skin | space plan*



# MASS

*site | society | street | structure | skin | space plan*



# LIGHT

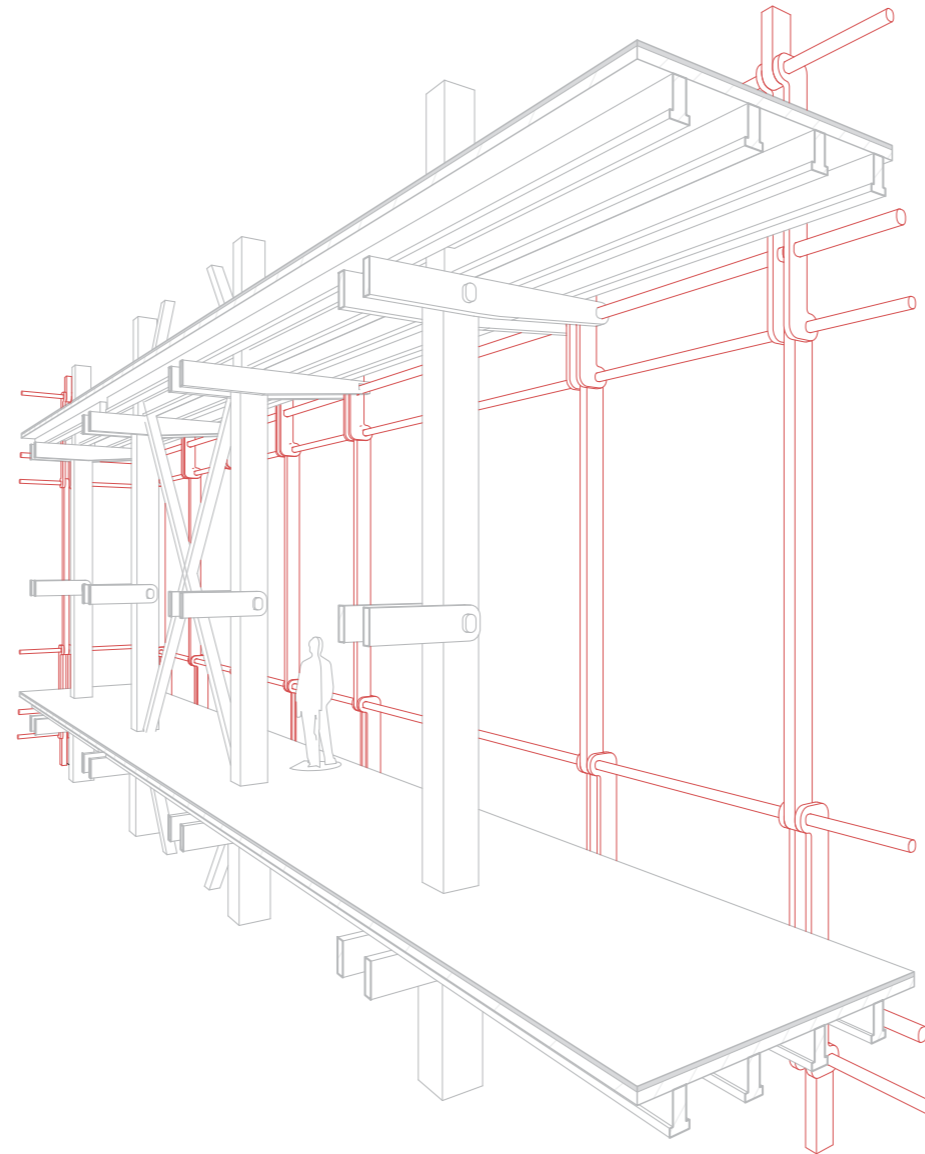
*site | society | street | structure | skin | space plan*





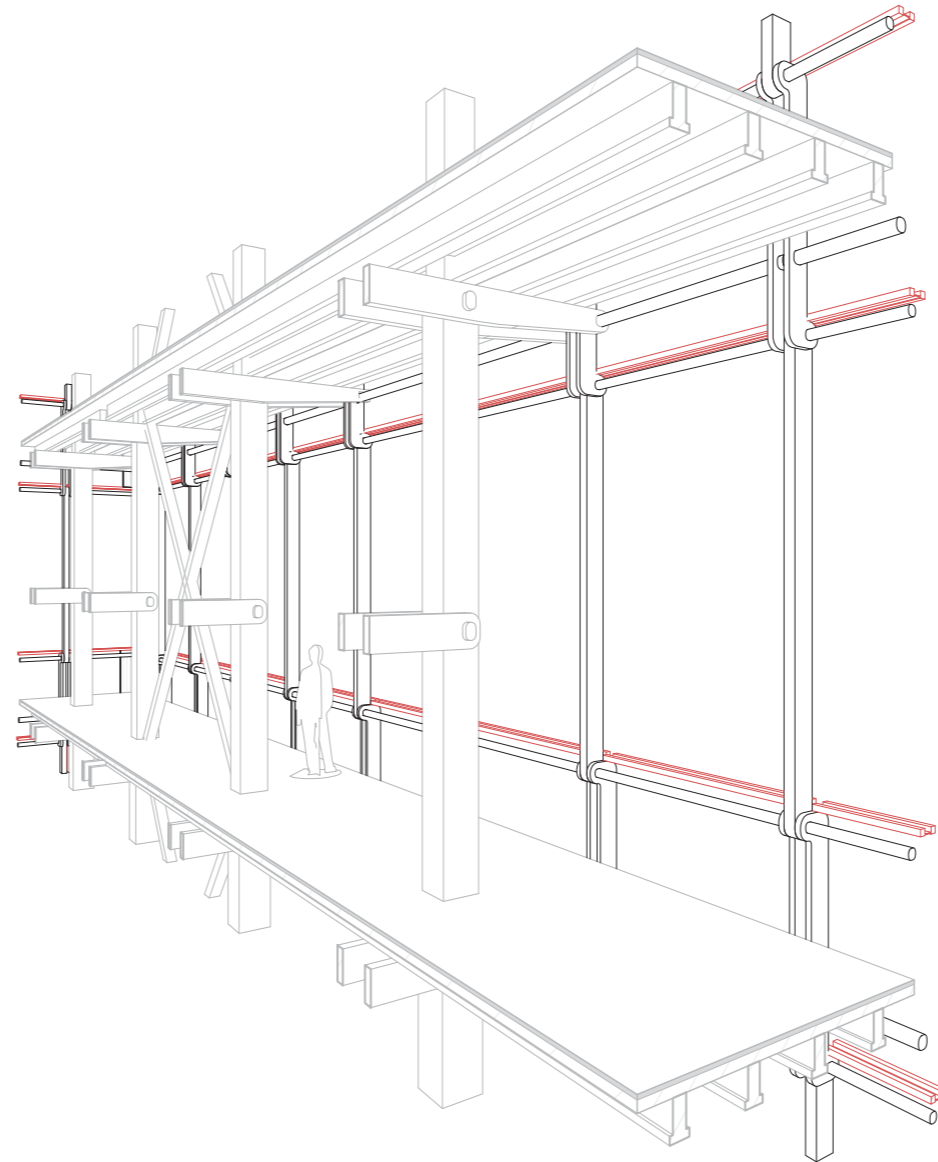
## EXTERIOR SKIN

*site | society | street | structure | skin | space plan*



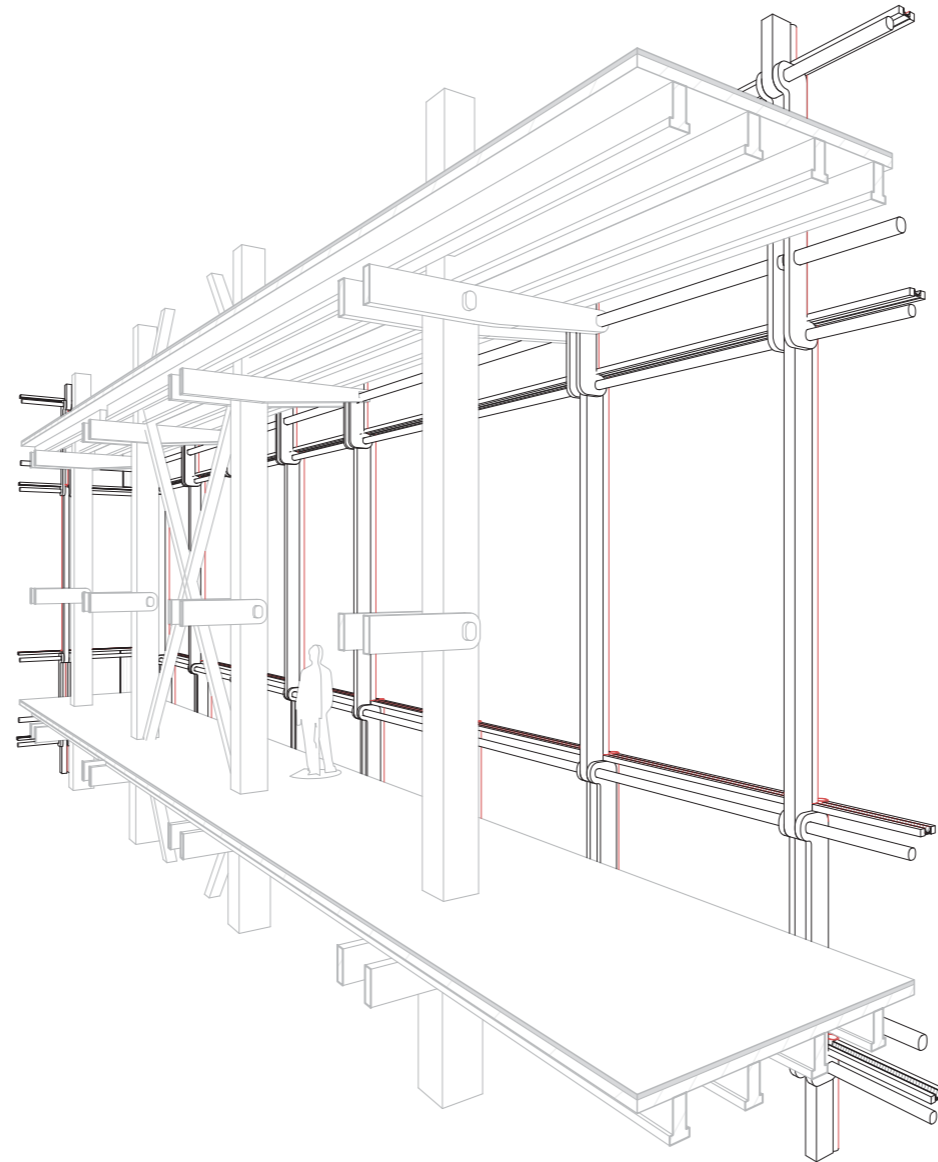
## COLUMNS

*site | society | street | structure | skin | space plan*



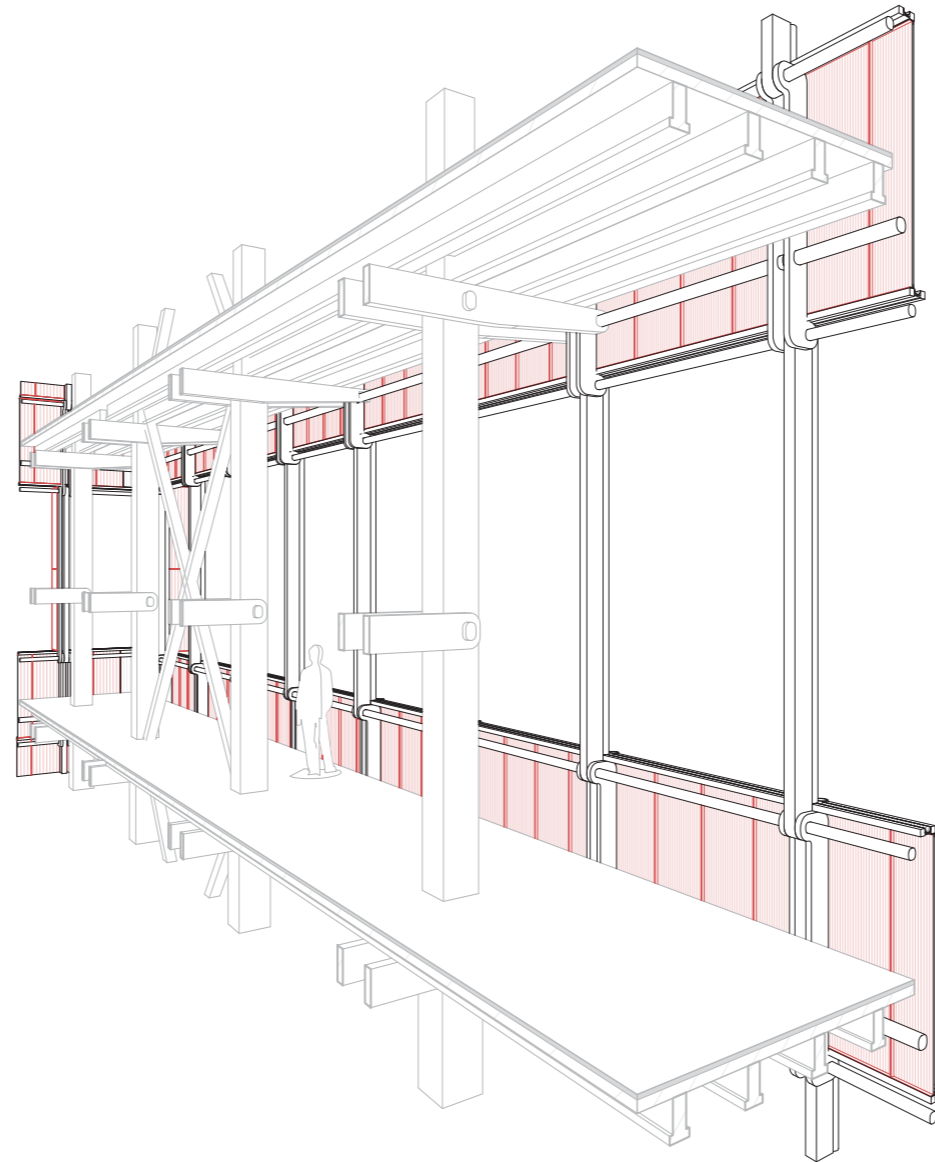
## BEAMS

*site | society | street | structure | skin | space plan*



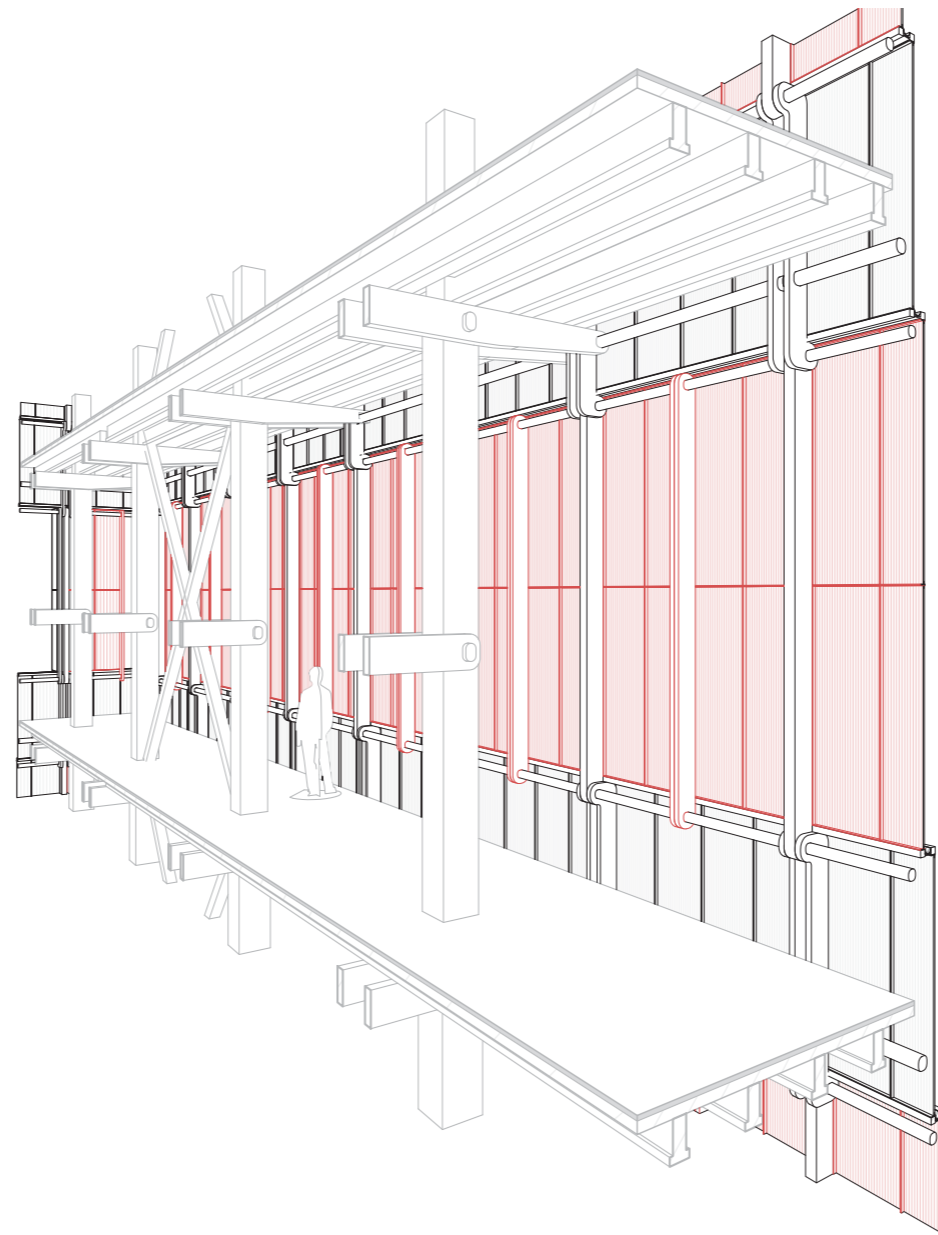
## GUTTERS

*site | society | street | structure | skin | space plan*



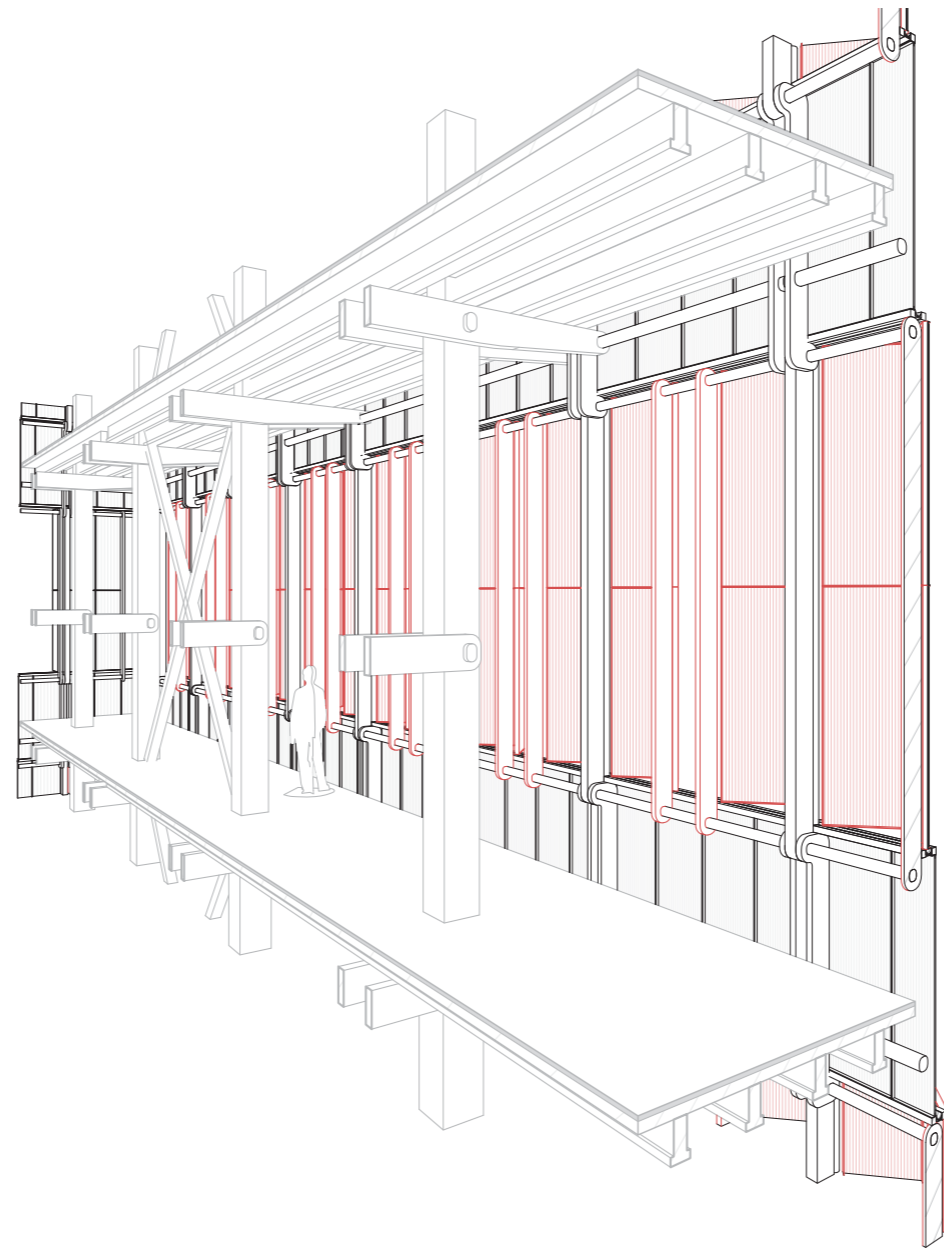
## FIXED PANELS

*site | society | street | structure | skin | space plan*



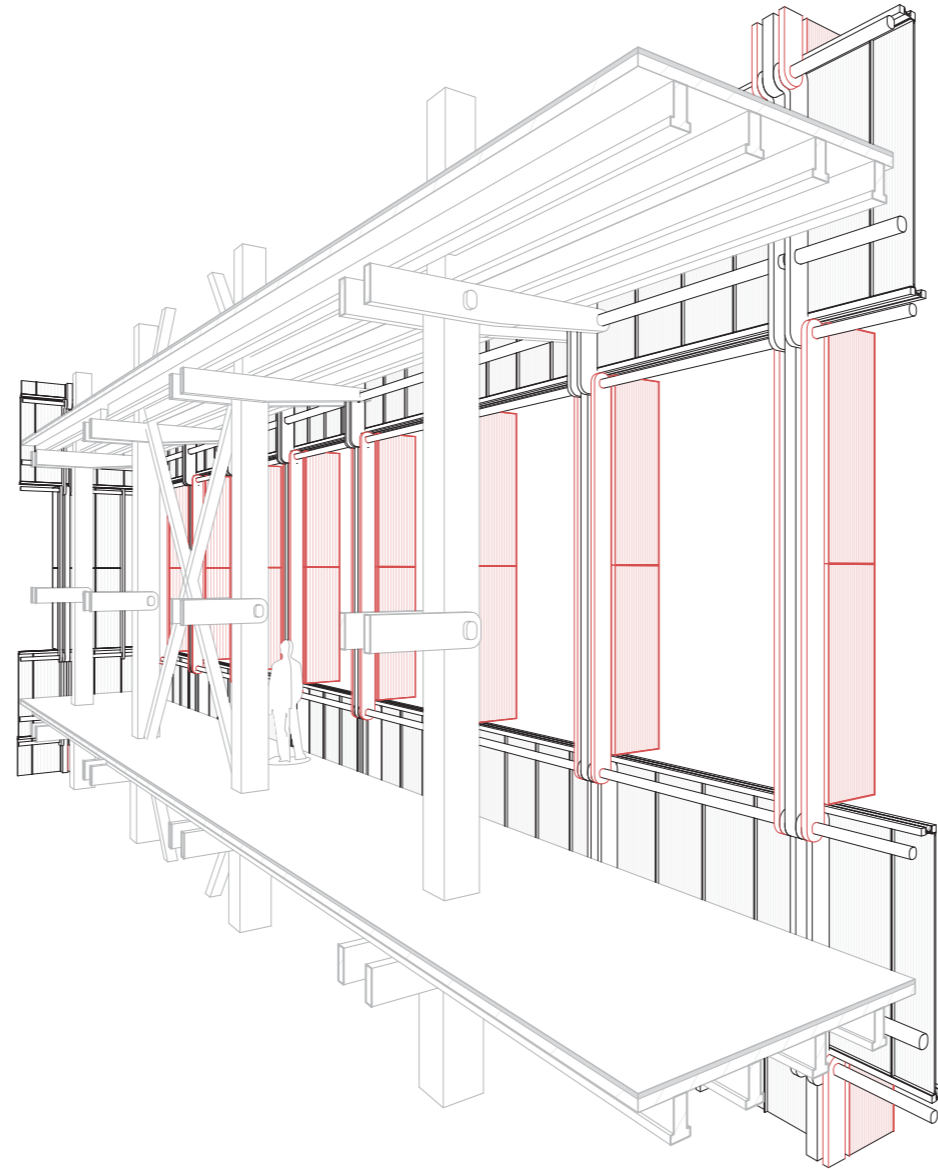
## OPENING PANELS

*site | society | street | structure | skin | space plan*



## OPENING PANELS

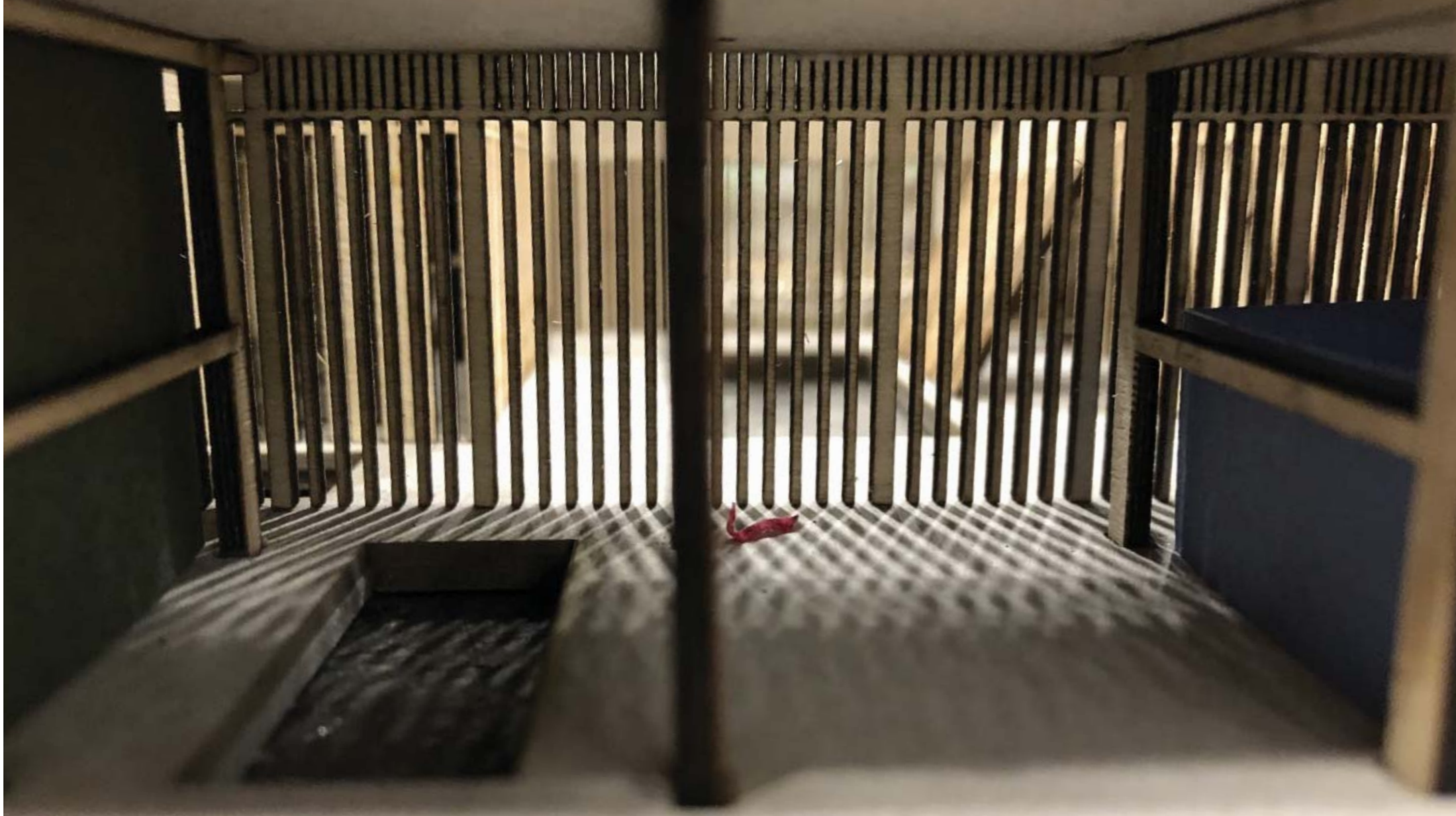
*site | society | street | structure | skin | space plan*



## OPENING PANELS

*site | society | street | structure | skin | space plan*





## GRADUAL TRANSITION

*site | society | street | structure | skin | space plan*



## HEIGHT

*site | society | street | structure | skin | space plan*



## POUROS PLINTH

*site | society | street | structure | skin | space plan*



## FROM KAMPONG

*site | society | street | structure | skin | space plan*



## FROM KAMPONG

*site | society | street | structure | skin | space plan*



## POCKETS

*site | society | street | structure | skin | space plan*



## INTERIOR SKIN

*site | society | street | structure | skin | space plan*



## INTERIOR SKIN

*site | society | street | structure | skin | space plan*





## GREEN ROOF

*site | society | street | structure | skin | space plan*

*site | society | street | structure | skin | space plan*

Urban Surgery

Social sustainable

Cogent circulation

Open structure

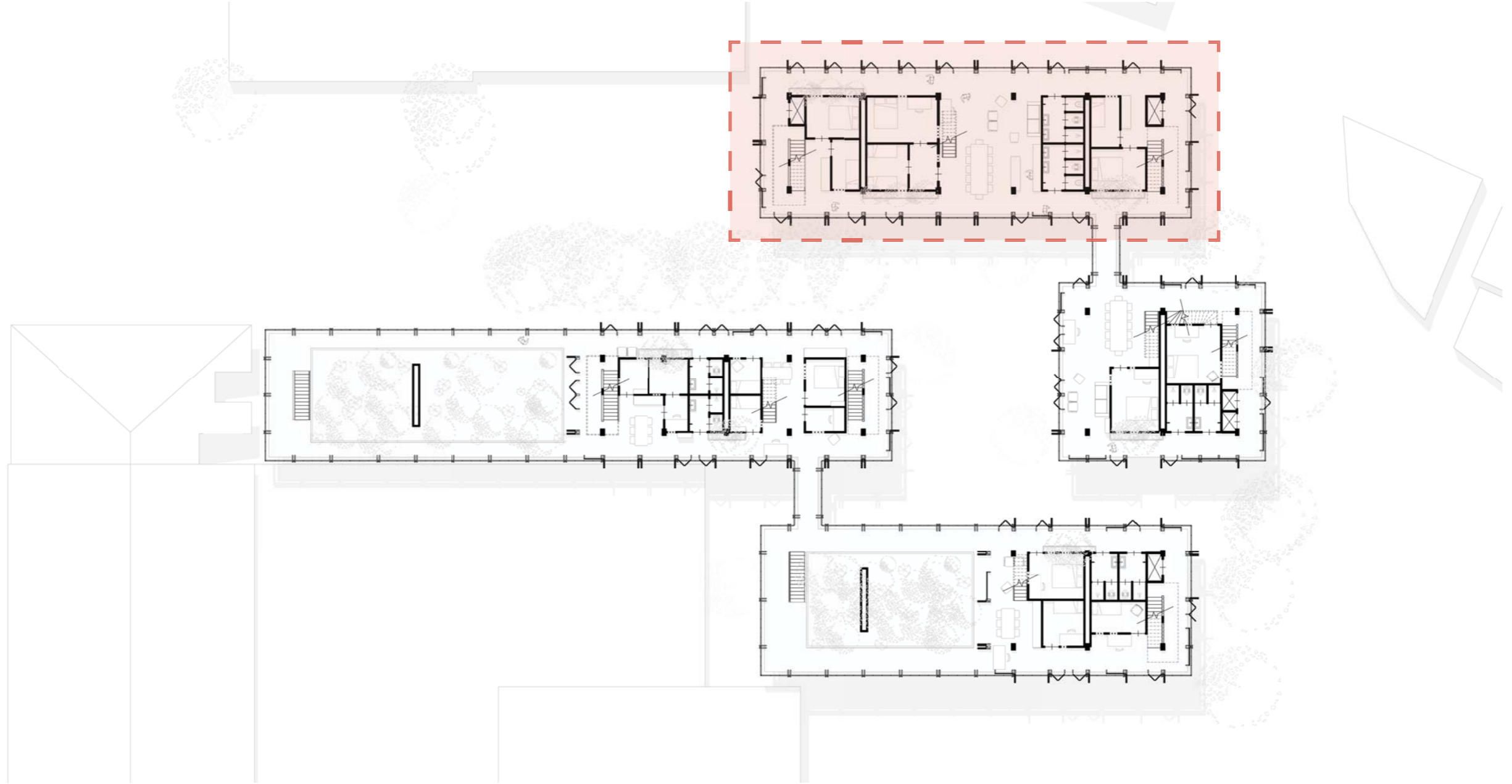
Climatic adaptivity

1. Flexible in layout
2. Possibility to express identity



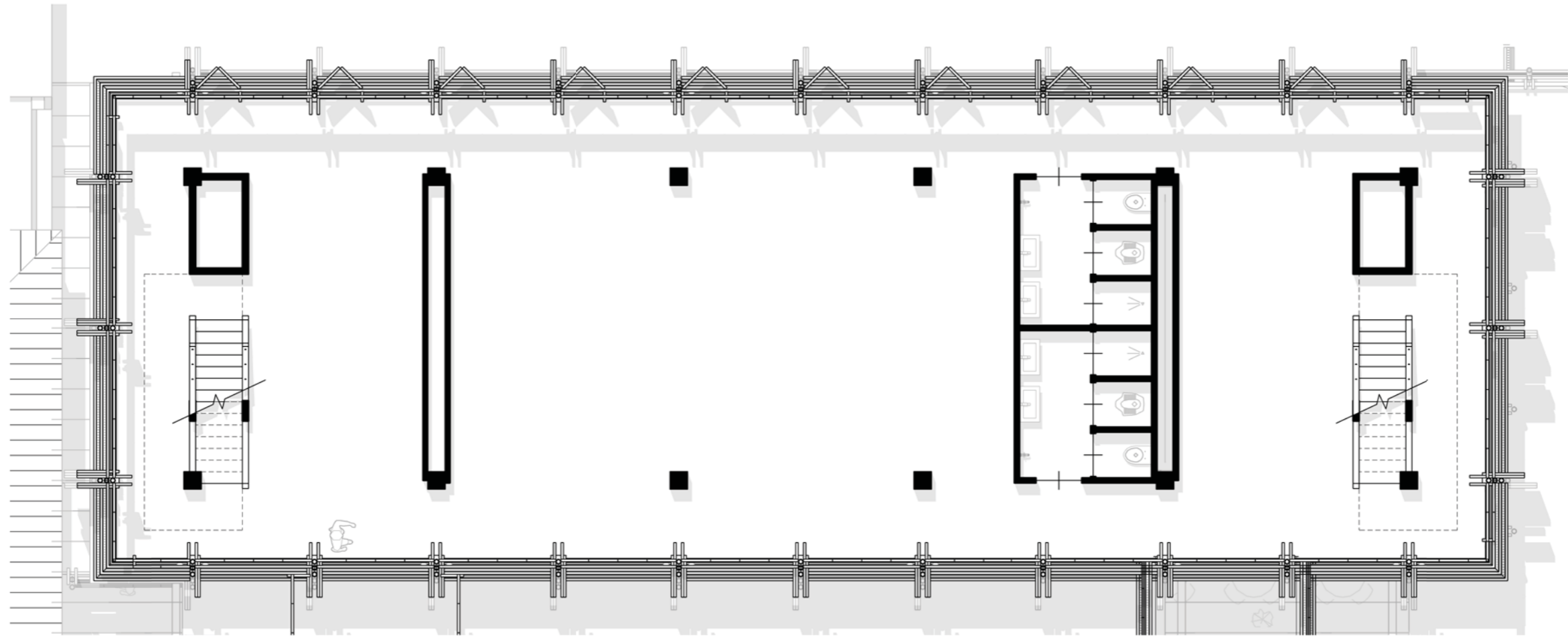
## PERSONAL

*site | society | street | structure | skin | space plan*



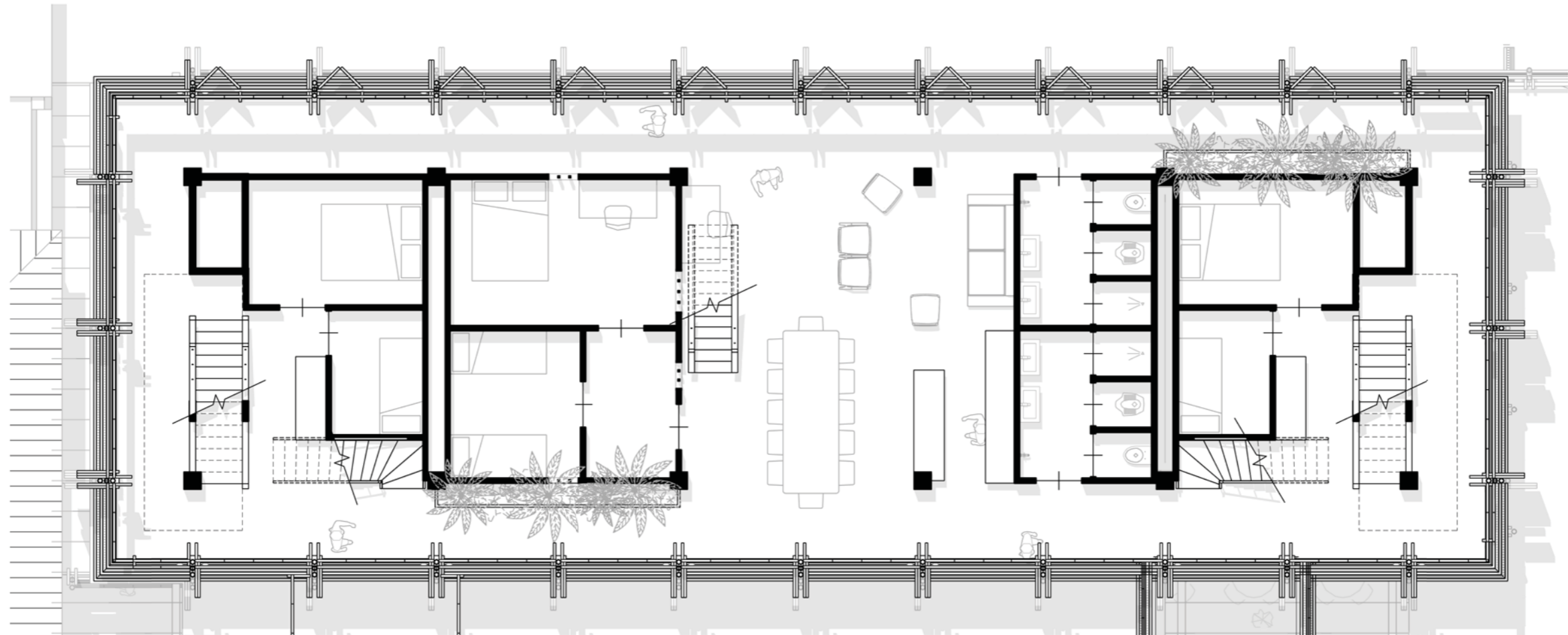
## CLUSTER HOUSING

*site | society | street | structure | skin | space plan*



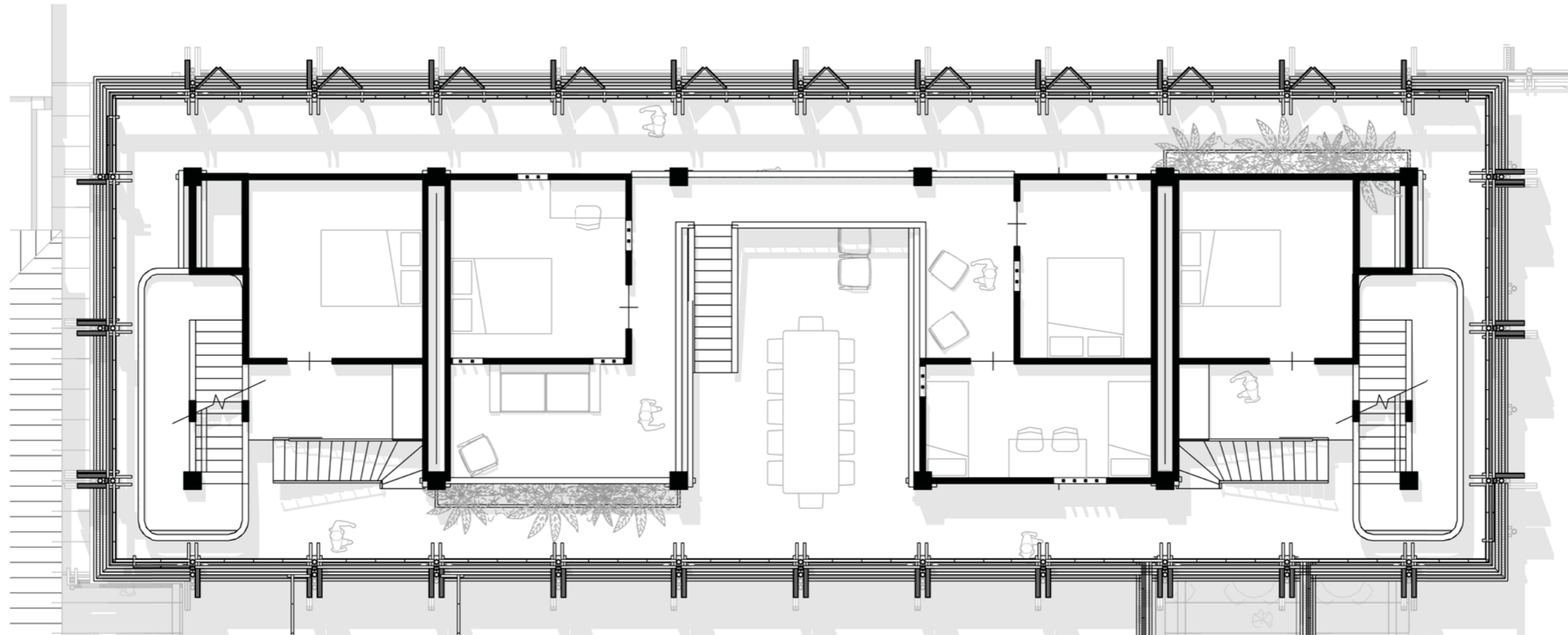
## SERVICES

*site | society | street | structure | skin | space plan*



## PERSONAL USE

*site | society | street | structure | skin | space plan*



## PERSONAL USE

*site | society | street | structure | skin | space plan*



## SERVICES

*site | society | street | structure | skin | space plan*





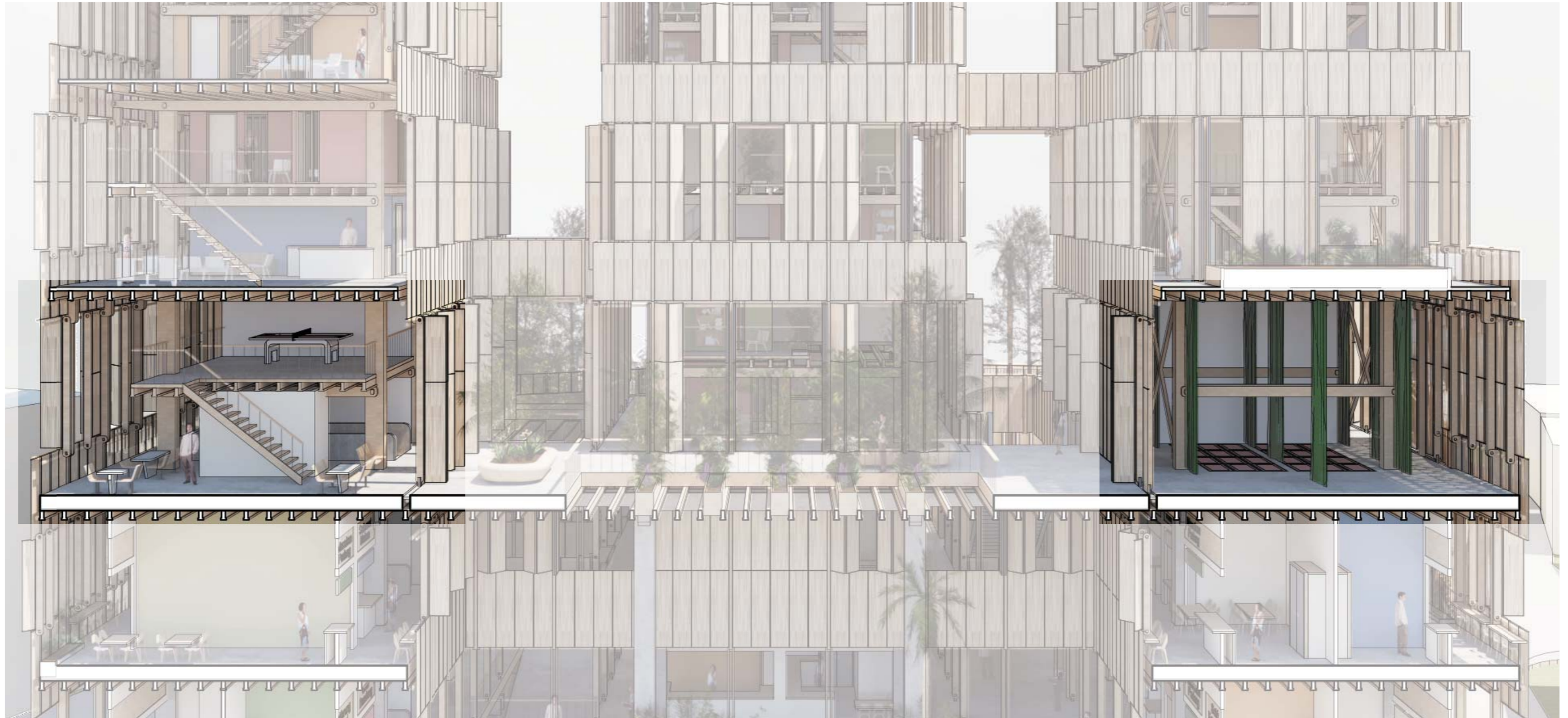
## PERSONAL USE

*site | society | street | structure | skin | space plan*



## PERSONAL USE

*site | society | street | structure | skin | space plan*



## VOID DECKS & COMMUNITY FUNCTIONS

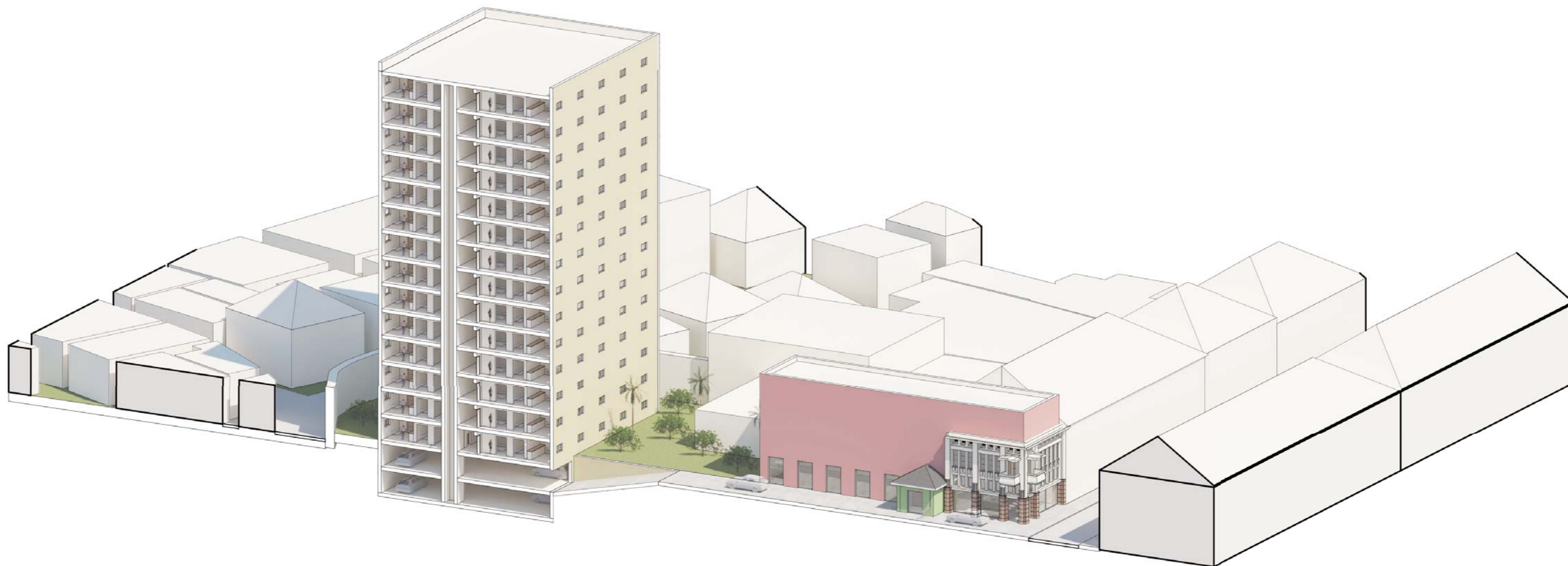
*site | society | street | structure | skin | space plan*



Urban kampung



Formal street

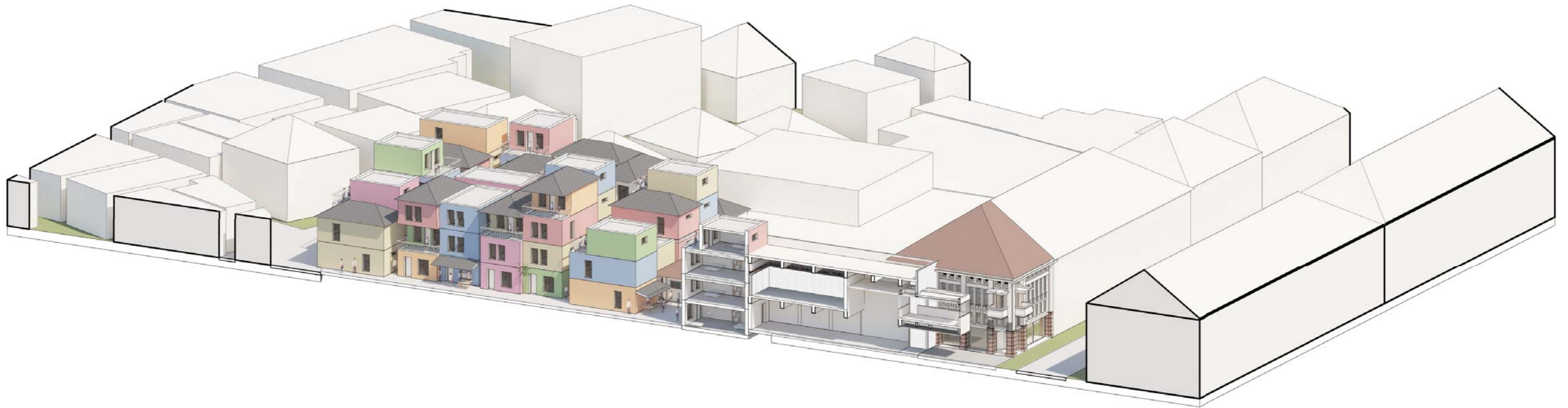




Urban kampong



Formal street





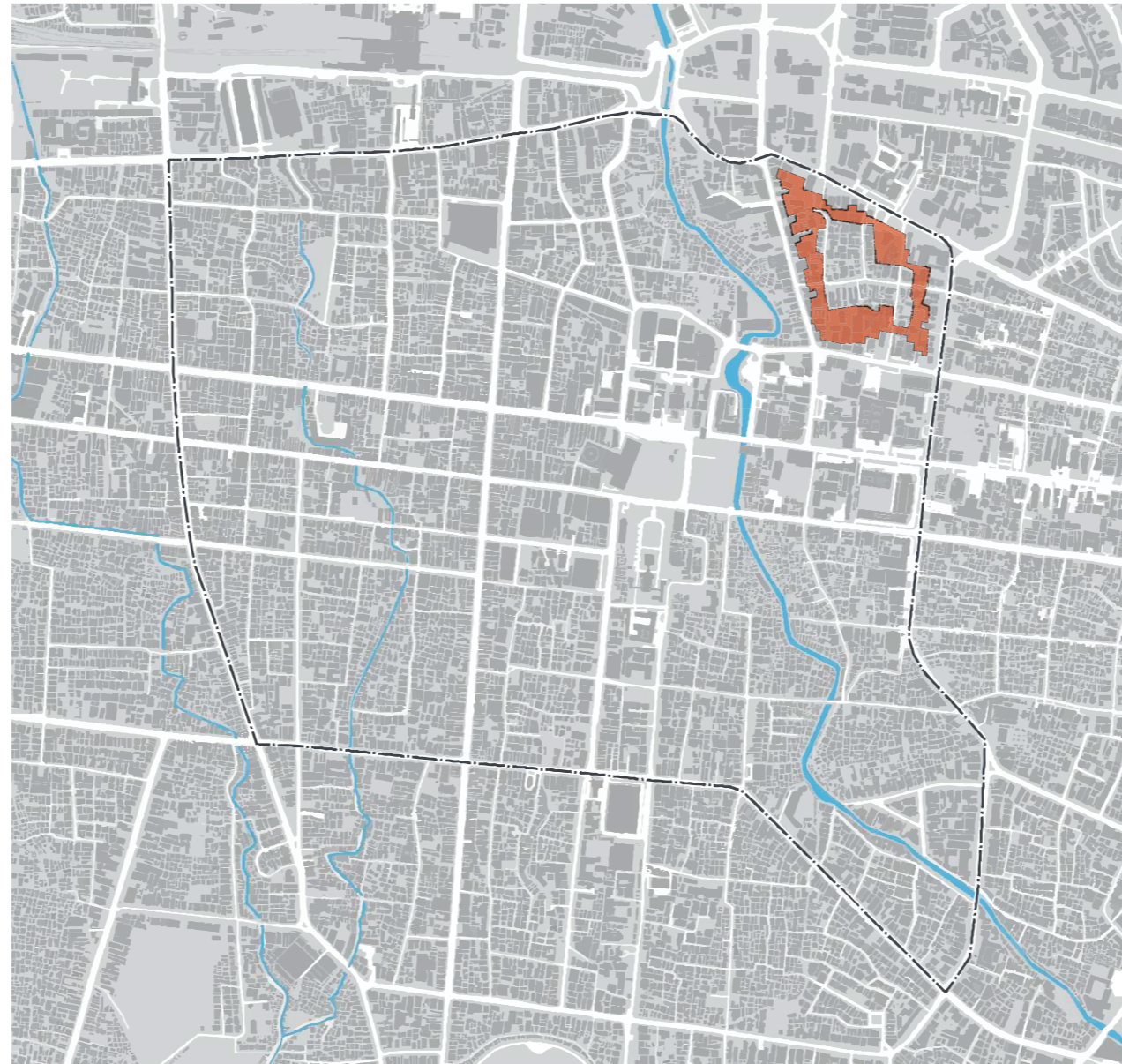
Urban kampong



Formal street







FURTHER RESEARCH  
*Implementation strategy different typology*





RELEVANCE  
*national*



## RELEVANCE

*international*



TERIMA KASIH