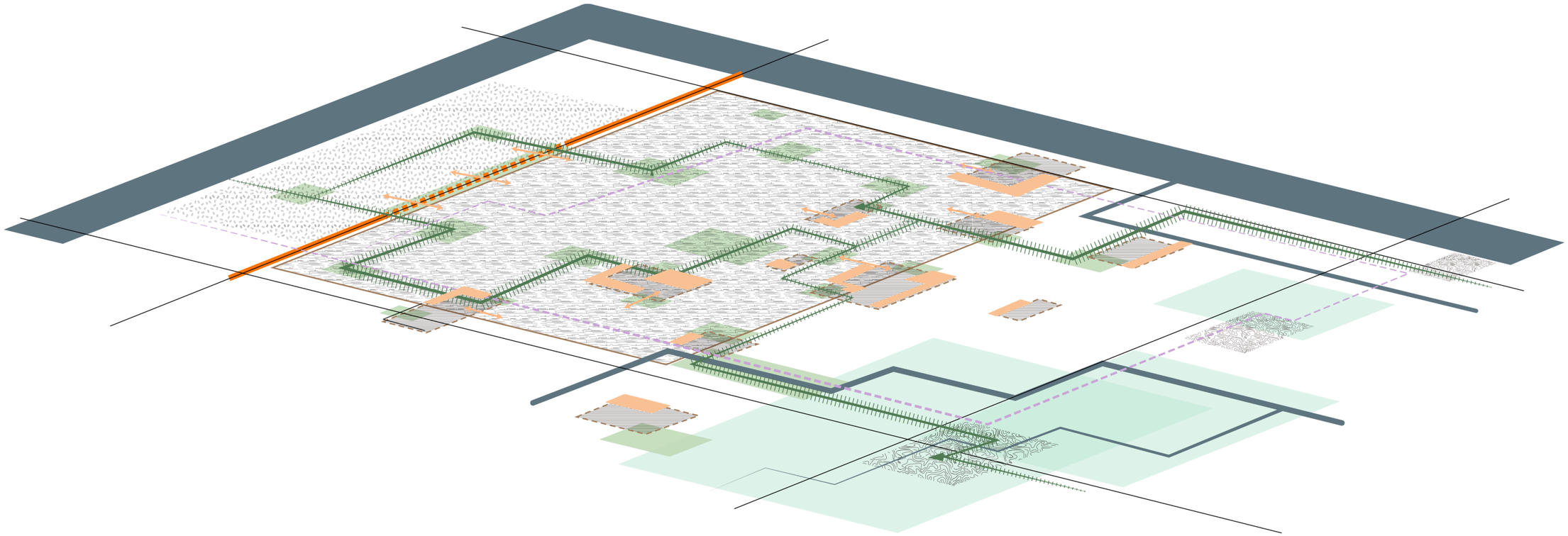


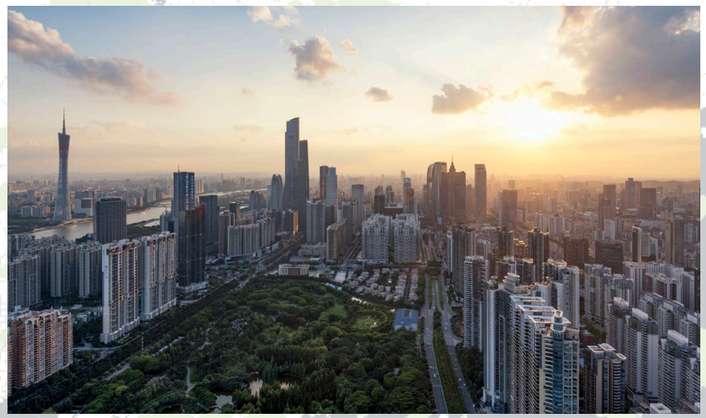
FROM SEGREGATION TO INTEGRATION

Planning and Designing for the Enhancement of Socio-spatial and Ecological Integration in Haizhu District, China

Adaptive Landscape Transformation Graduation Lab
Landscape Architecture MSc 2020
P5 Presentation

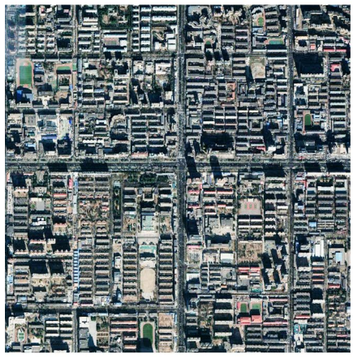
Xinyan Zhao
4843452

Fast Developing Delta

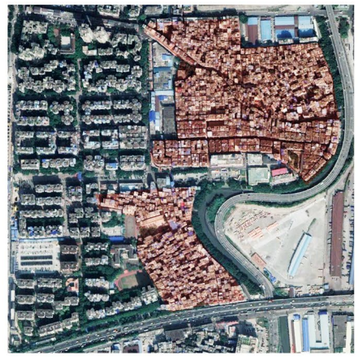


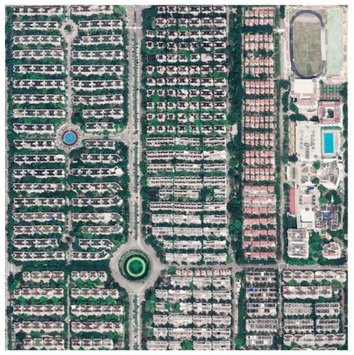
Urban Fabric

Modern Urbanization

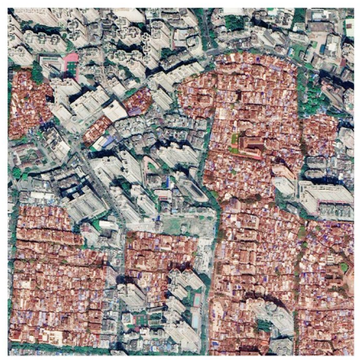


City Diversity





In Fact...



TWO WORLDS

Fascination

Experience in two different living environment

1. High-dense area
2. Messy, noisy, crowded
3. Lack of sunlight
4. Mix-use of public space

1. Comfortable living environment
2. Independent garden and management
3. Sufficient public space

Fascination

Experience in two different living environment

1. High-dense area
2. Messy, noisy, crowded
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4. Mix-use of public space

1. Comfortable living environment
2. Independent garden and management
3. Sufficient public space

Since I moved to Guangzhou 20 years ago to earn money, I have been living and working in the urban village. Although the environment is super messy, the rent price is cheap and I can put my work place in the public space along the street instead of paying extra money for renting a place.

Ms Chen
Augur
56 years old
Immigrant
Salary: 1.5k-2k yuan/ month
Activity: Dance, watch tv

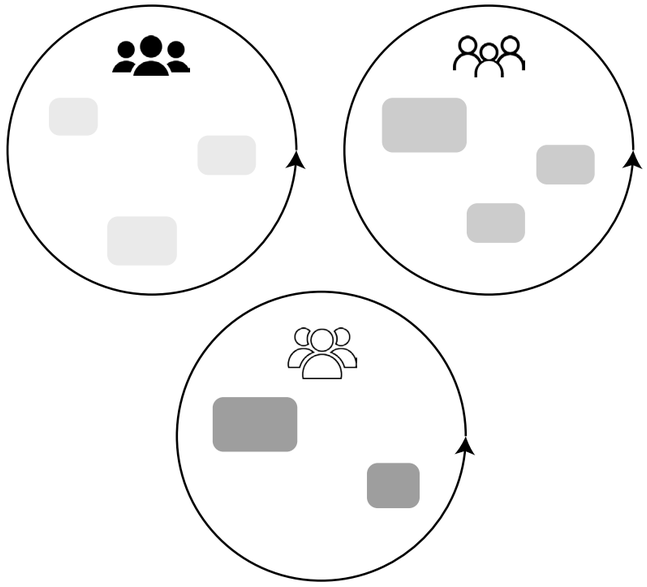
I was borned in Guangzhou and live with my whole family in the modern community. I enjoy the facilities provided by the community very much, including some fitness instruments, tennis court. I know that there is an urban village located just next to the community, but I have never been there before because I think it is not safe and noisy there.

Ms Li
Teacher
52 years old
Local
Salary: 8k-12k yuan/ month
Activity: Shopping, sport, gym

1. High-dense area
2. Messy, noisy, crowded
3. Lack of sunlight
4. Mix-use of public space

ENCLAVE

Residential spaces,
residents,
activities...



ENCLAVE

Residential spaces,
residents,
activities...

1. Comfortable living environment
2. Independent garden and management
3. Sufficient public space

SOCIO-SPATIAL SEGREGATION

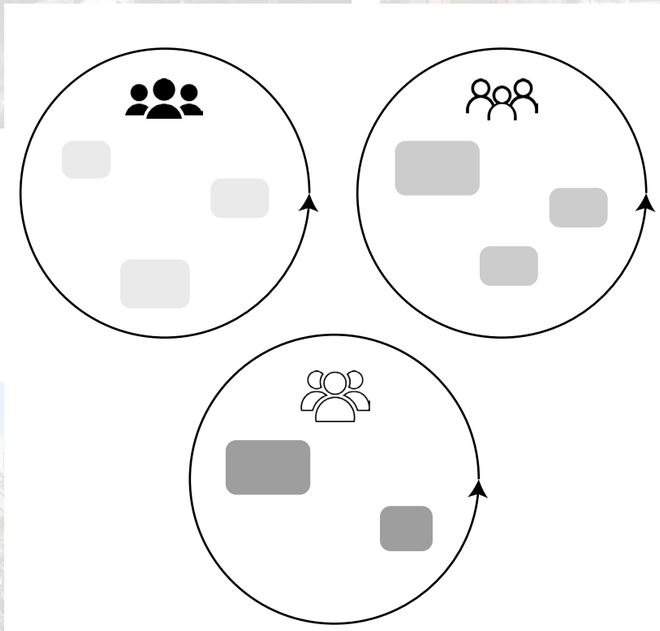
URBANIZATION

DIVERSITY OF NEIGHBORHOOD

1. High-dense area
2. Messy, noisy, crowded
3. Lack of sunlight
4. Mix-use of public space

ENCLAVE

Residential spaces, residents, activities...

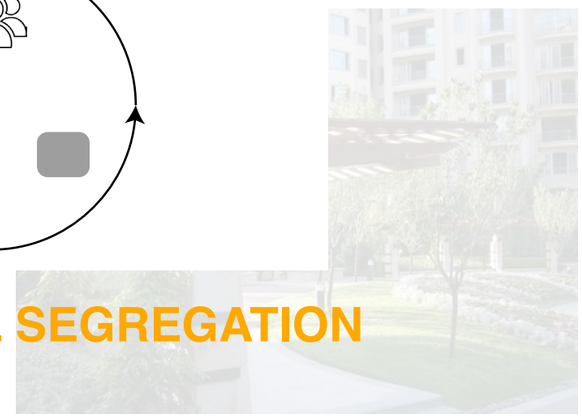


ENCLAVE

Residential spaces, residents, activities...

1. Comfortable living environment
2. Independent garden and management
3. Sufficient public space

SOCIO-SPATIAL SEGREGATION



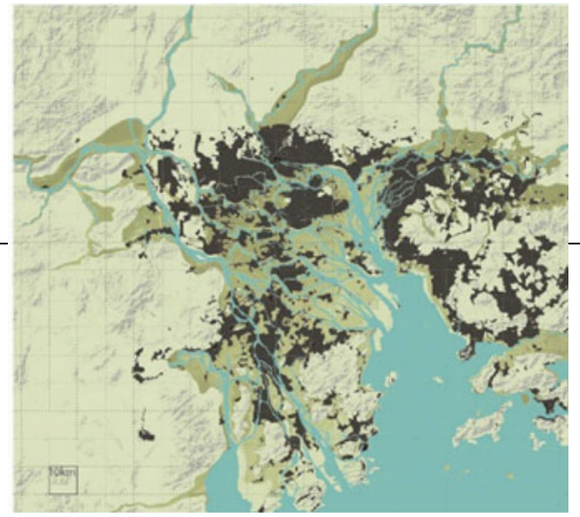
Urbanization

1950

Land Reclaimation

Decreasing Green and Blue Spaces

2019



(Source: Liang & Nijhuis, 2019)

Development of Settlement

rural villages

preservation

population growth

land reclaimation

population growth

more floors

future trend

population growth

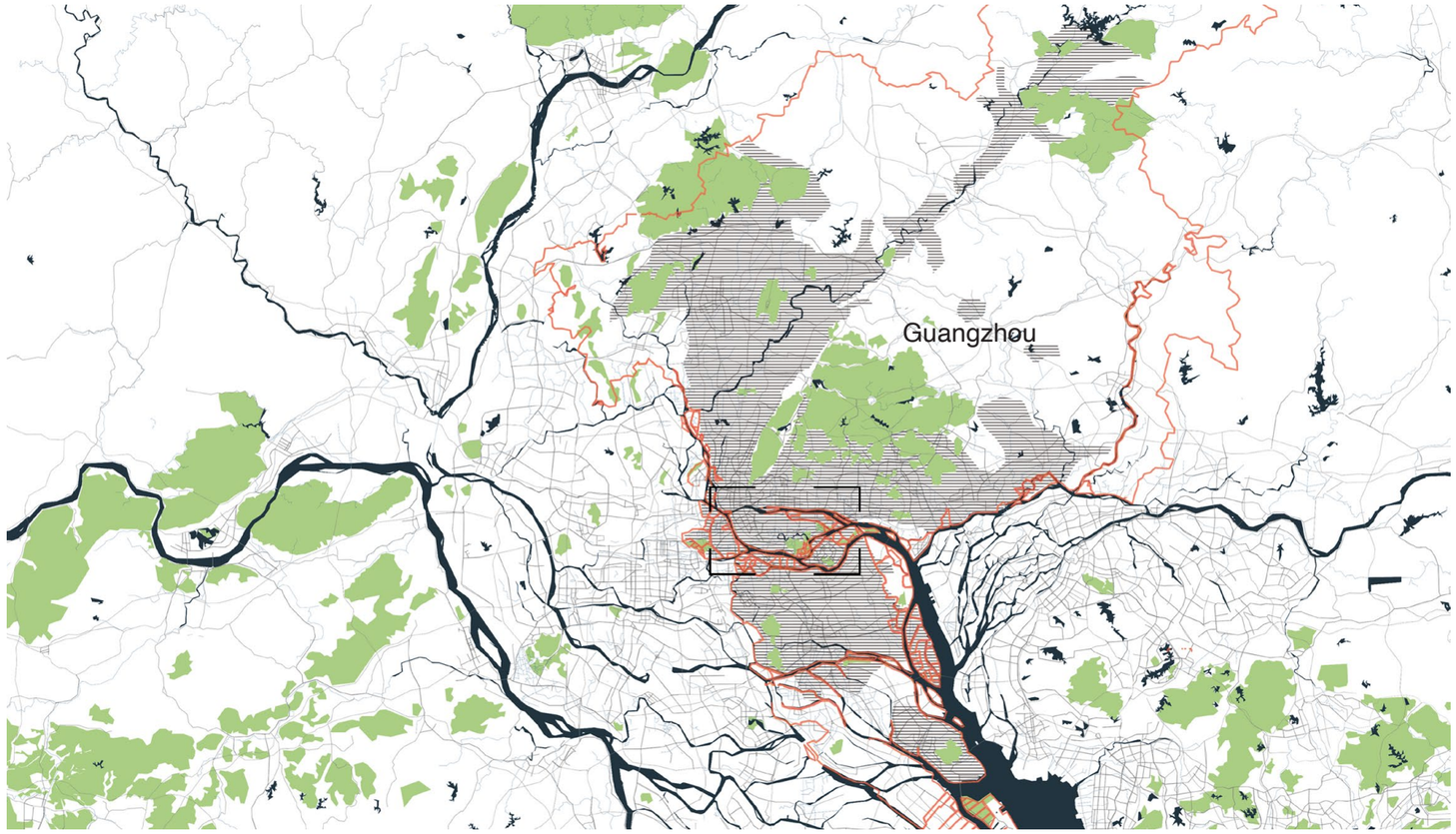
demolishement

arcade buildings

preservation

Diversity of Neighborhood

Chosen Site - Haizhu

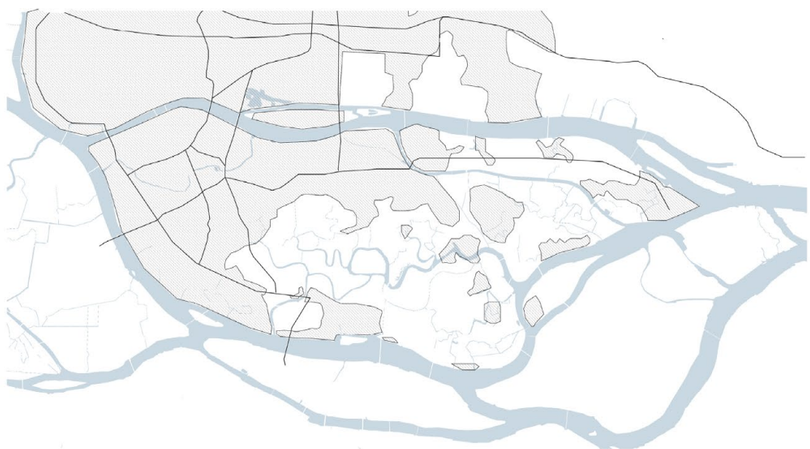


1949

On the edge of the city

Industry developed

1983



Real estate boomed

Immigrants moved in

2019

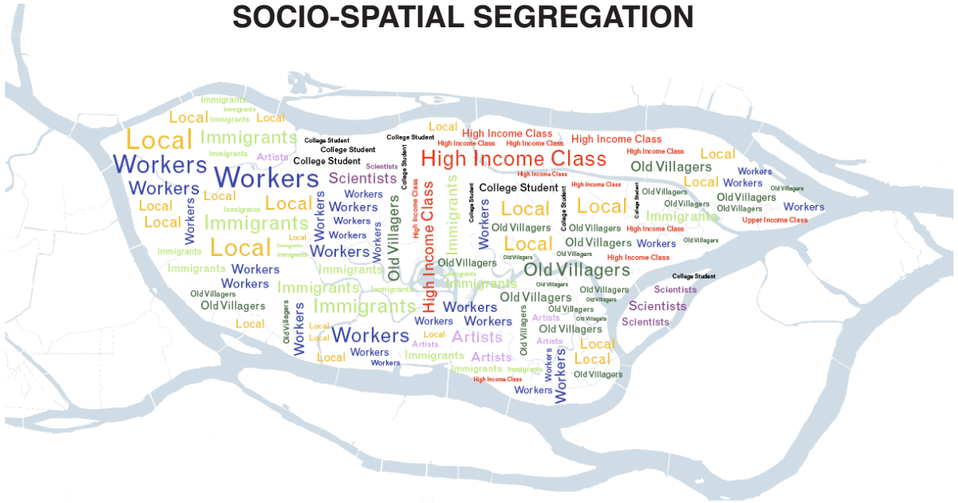
More macro public projects ongoing

Exhibition center finished
Transportation developed


1km

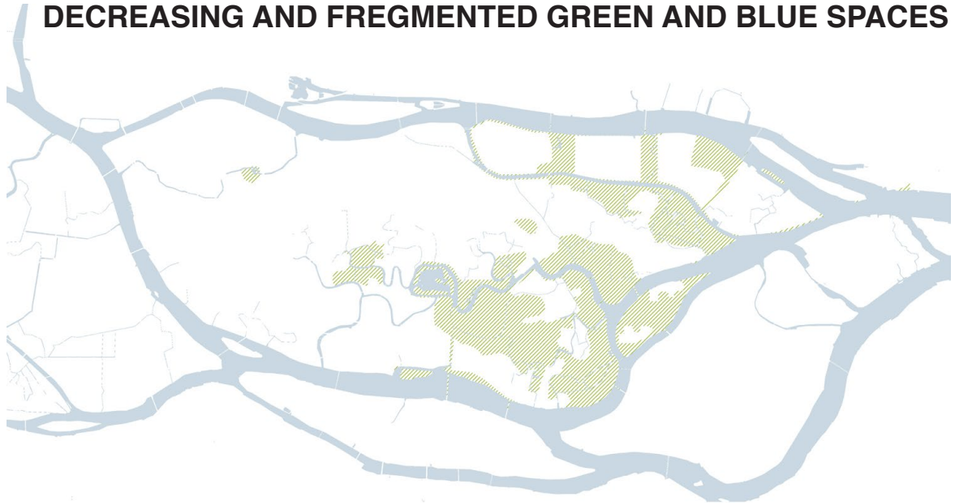
URBANIZATION

SOCIO-SPATIAL SEGREGATION



discrimination, unequal access to public facilities, social exclusion, etc.

DECREASING AND FREGMENTED GREEN AND BLUE SPACES

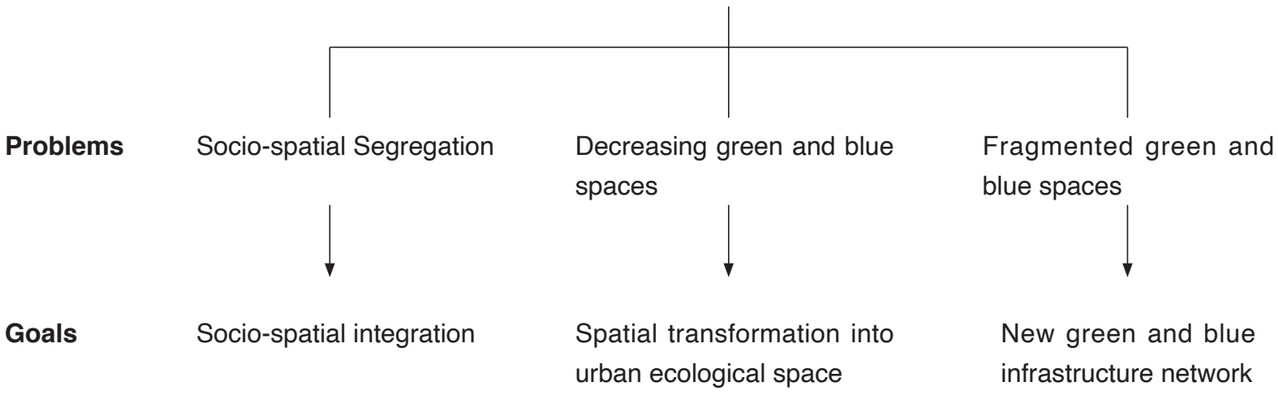


flooding, pollution, threat to natural habitats

How can we address the socio-spatial segregation & fragmentation of ecological space using urban-landscape strategies?

Objective & Research Questions

Create an integrated and comprehensive **socio-ecological network** in terms of **corridor and node at multiple scales** that can improve the **socio-spatial integration** and **reconnect the fragmented green and blue spaces** for Haizhu district.



SBQ1: What are the existing conditions of socio-spatial segregation in Haizhu district and what are the factors contributing to segregation?

SBQ2: What are the existing conditions of ecological fragmentation at different scales?

SBQ3: How to create the socio-ecological network based on the current conditions and resources?

SBQ4: What principles and strategies can be put forwarded to improve the socio-spatial integration and reconnect the fragmented green and blue spaces on different scales?

SBQ5: How can these principles be implemented in a specific complex area with social and ecological problems?

SBQ6: How to evaluate the result of socio-spatial network and design implementation at different scales?

SBQ7: What lessons can be learned of creating the social-ecological network to improve the integration?

UNDERSTANDING

The diversity of neighborhoods

Typology

Classification

Historical Village

Tradtional Community

Urban Village

Modern Community

Time

Built in 1800, locate in old city town, including old residential work units since 1900, has many traditional buildings (arcade-house), poor building quality, multi-storey

Tradtional Community

Built in 1400, has historic and cultural value, cultural reserve, located in agricultural area based on agricultural economy, low rise, waterside villages

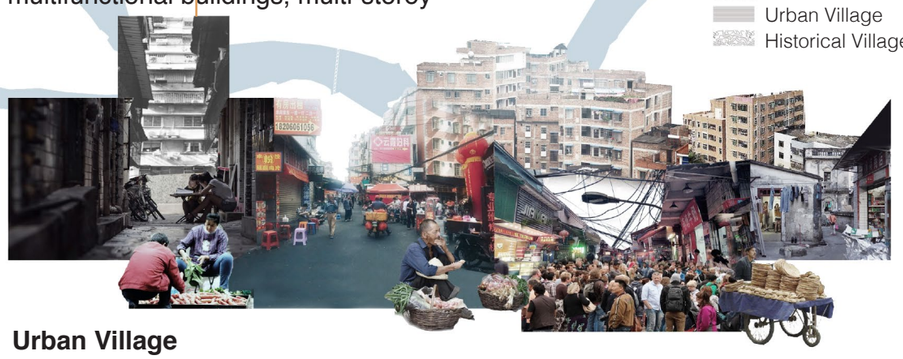
Historical Village

Modern Community

Built after 21st century, good building quality, high rise

Used to be farmer's residence, poor building quality, multifunctional buildings, multi-storey

Traditional Community
Modern Community
Urban Village
Historical Village



Urban Village

Spatial Configuration

Historical Village | Traditional Community | Urban Village | Modern Community

Satellite




Building




Transportation




Water




Open Space

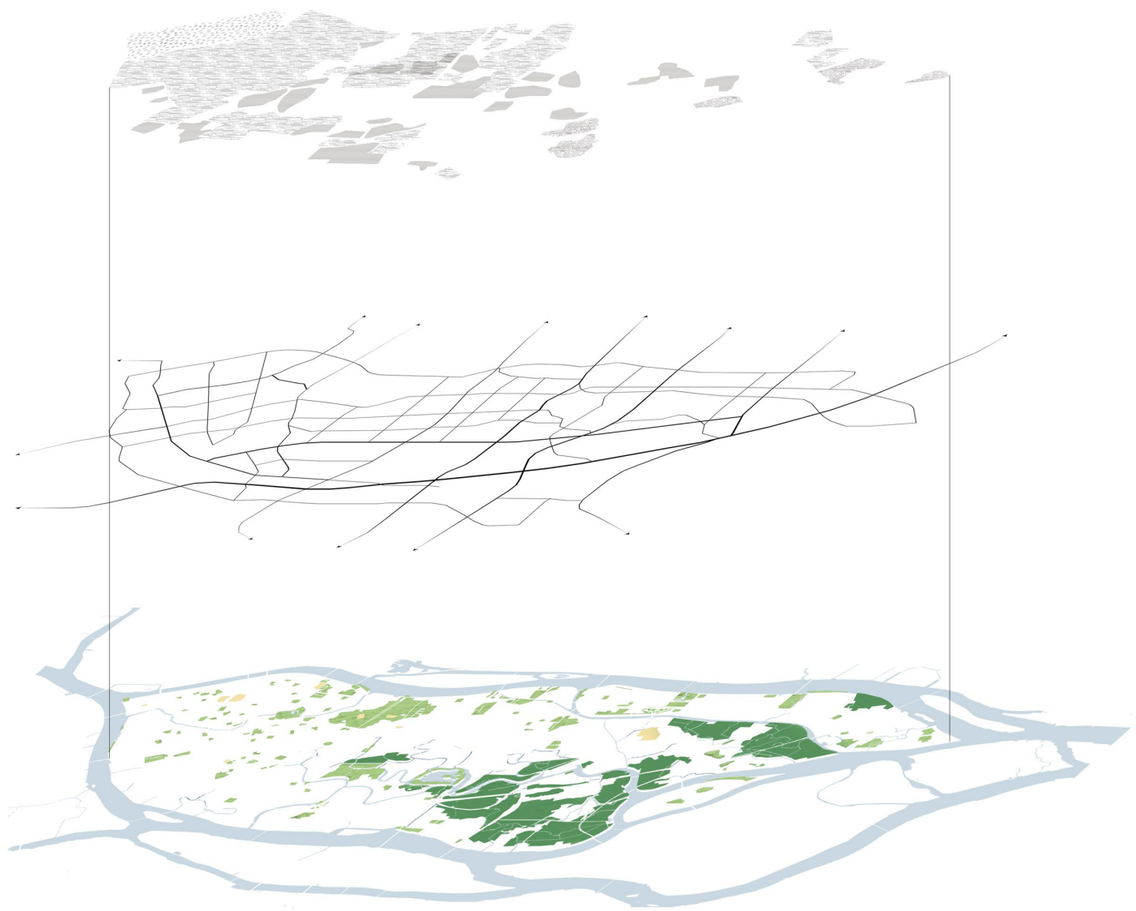



Spatial Configuration

	Historical Village	Traditional Community	Urban Village	Modern Community
Satellite				
Building				
Transportation				
Water				
Open Space				

ZOOM OUT

Layer Approach



Settlement Layer

understand the factors contributing to socio-spatial segregation in terms of urban patterns, activities.

M/S scale

Transport Layer

understand connection and accessibility of settlements

L/M scale

Landscape Layer

understand the existing territory and landscape features

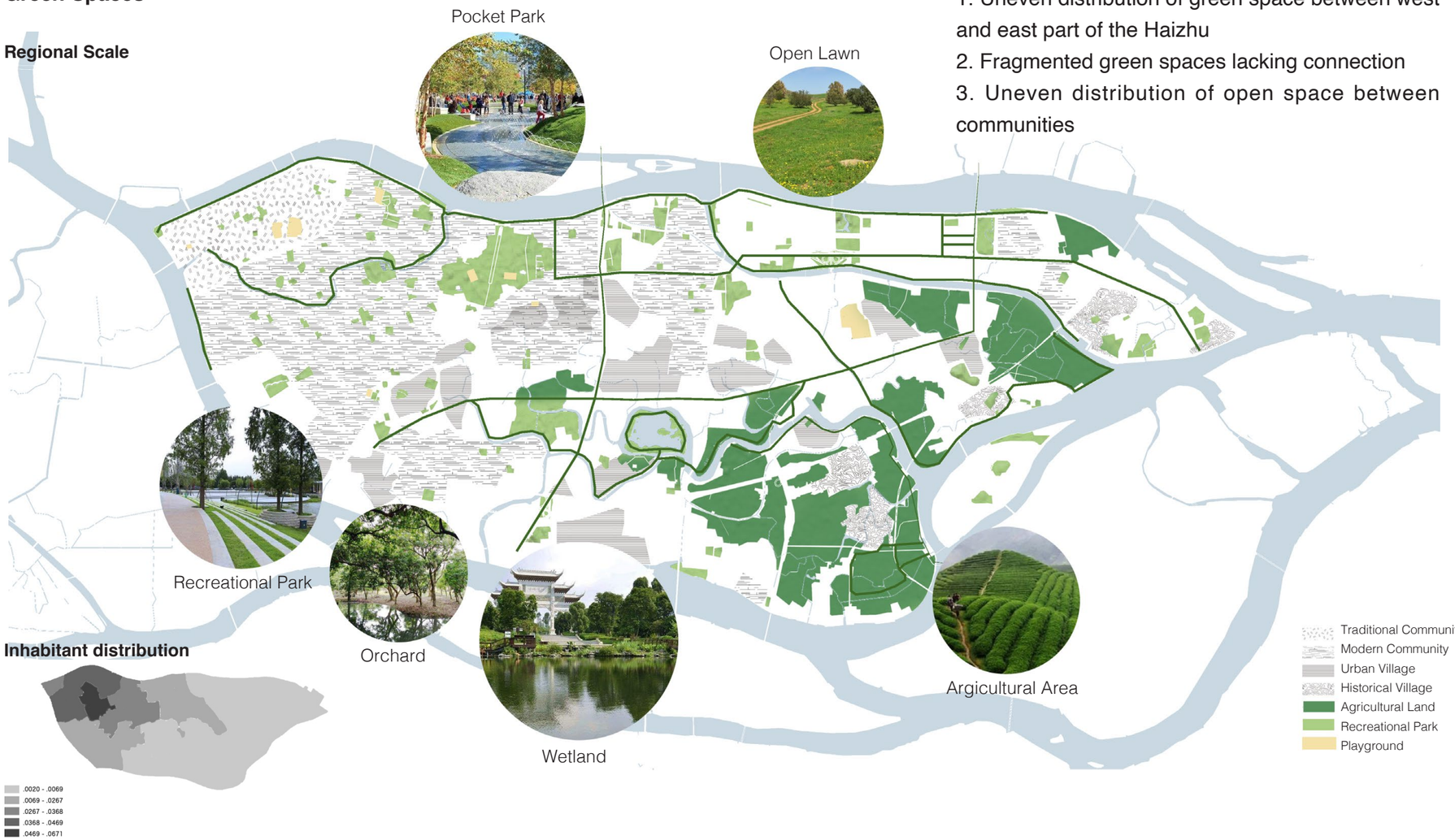
L/M scale

Identify Elements

Landscape Layer

Green Spaces

Regional Scale



Inhabitant distribution

Local Scale

Historical Village

Open space area / Total Area

34%

Traditional Community

Open space area / Total Area

19%

Urban Village

Open space area / Total Area

9%

Modern Community

Open space area / Total Area

36%

CHALLENGES

1. Uneven distribution of green space between west and east part of the Haizhu
2. Fragmented green spaces lacking connection
3. Uneven distribution of open space between communities

POTENTIALS

Landscape Layer

Blue Spaces

Regional Scale

Cruise on th canal

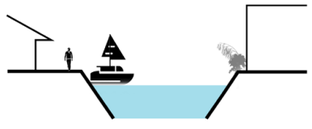
Living along canal

Water issues

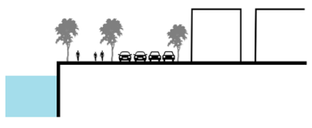
Traditional Community
Modern Community
Urban Village
Historical Village
River
Main Canal
Samll Canal

Local Scale

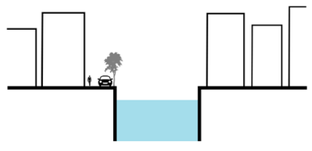
Historical Village



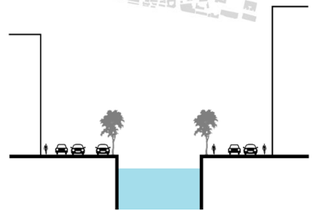
Traditional Community



Urban Village



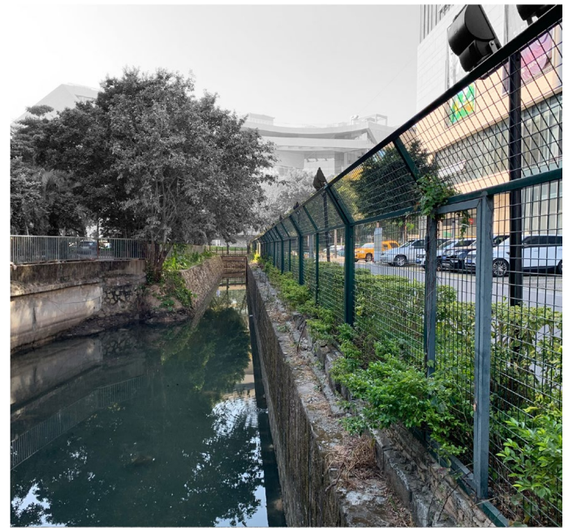
Modern Community



CHALLENGES

1. Truncated canals
2. Water flooding and pollution issues
3. Lack of recreational activities along water

POTENTIALS



Transport Layer

Regional Scale

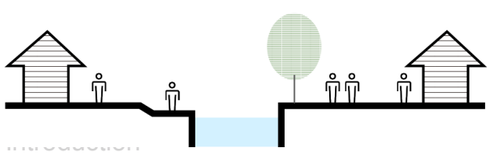
CHALLENGES

1. Lack of connectivity to historical village on the south-eastern part
2. Unconnected pedestrian and cycle path

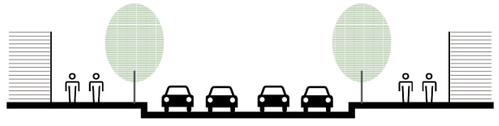
POTENTIALS

Local Scale

Historical Village

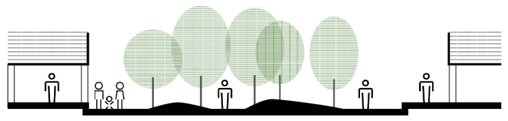


Traditional Community



Urban Village

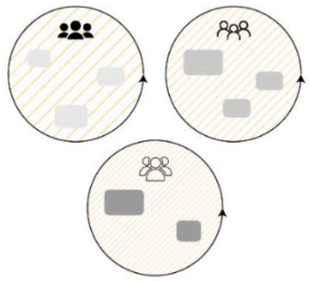
Modern Community



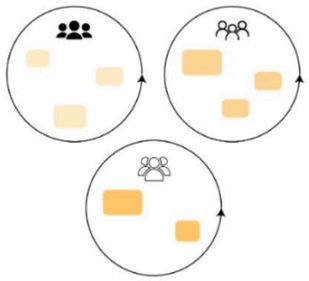
Settlement Layer

Local and Neighborhood Scale

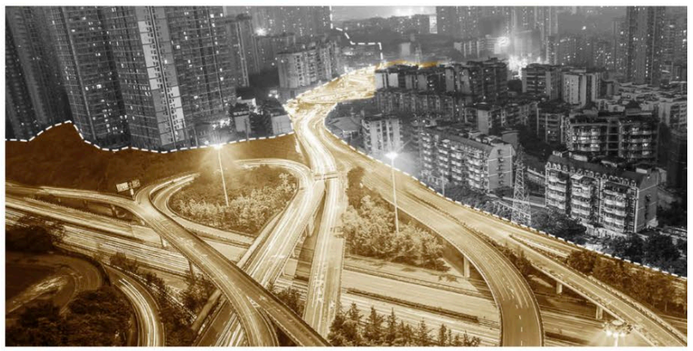
Residential Differentiation

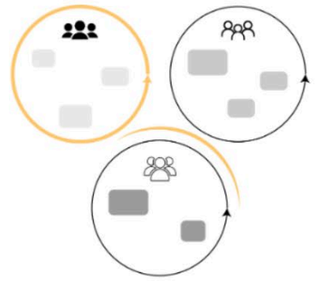


Spatial Distribution



Boundary





Settlement Layer

Residential Differentiation

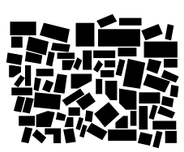
Historical Village

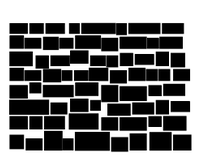
Traditional Community

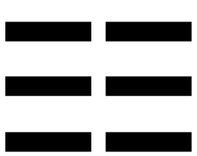
Urban Village

Modern Community

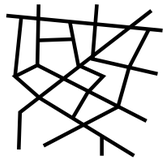
Housing Pattern

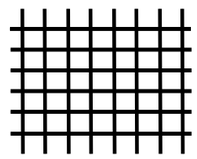


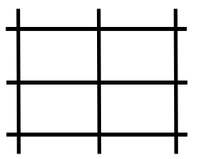




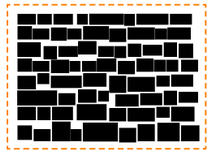
Road Pattern



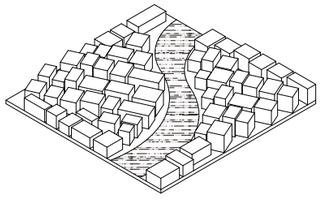


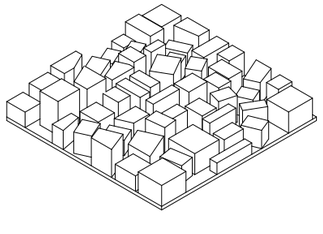


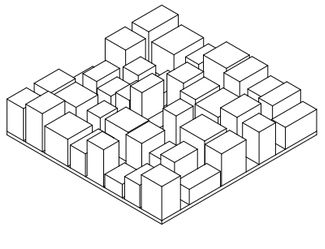
Context

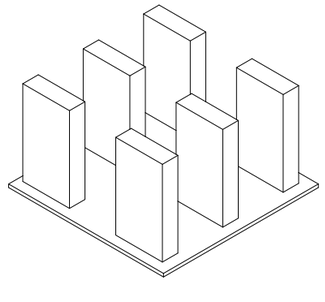


Spatial feature









Spatial Distribution

Historical Village (historical buildings with commercial value)

Traditional Community (community park)

Urban Village (public space in mix use)

Modern Community (independent garden)

Special spatial uses in each typology

(Source: author)

Settlement Layer

Spatial Distribution

Aging/villagers-dominated

Historical Village

Activities along the river

Outdoor gathering

Different kinds of cultural actvities
e.g. opera

Outdoor sitting

Aging, local residents

Traditional Community

Pocket garden with seats

Informal open market

Cultural actvities with stage

Waterfront leisure area

Historical buildings & attraction

Low-income/immigrants-dominated

Urban Village

Informal open market

Commercial street with informal occupying
street space

Outdoor actvities
e.g. mahjong

Informal street vendors

High-income/well-educated

Modern Community

High quality of facilities
e.g. gym facilities & sport courts

Sufficient resting area and informal retailing

Independent kindergarten

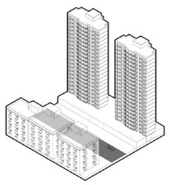
Independent swimming pool and
children's playground

POTENTIAL

Spatial uses and elements could be a pontential quality to promote integration.

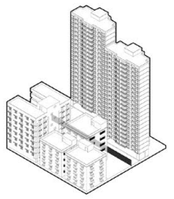
Settlement Layer

Boundary

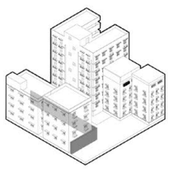


Road

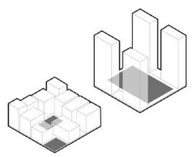
Water



Fence



Wall



Spatial Quality

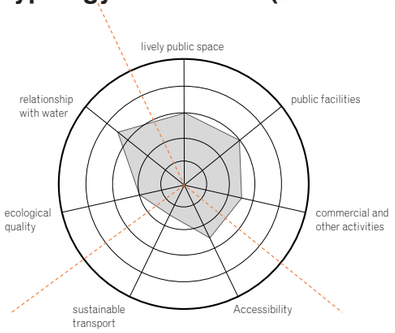
Physical boundary acts as linear feature to isolate spaces from both sides. Spatial boundary in terms of spatial qulaity restrians interaction.

CHALLENGES

Physcial boundaries and spatial boundaries

Settlement Layer

Typology Conclusion (Local scale)



Traditonal Community:

Lack of recreational public space

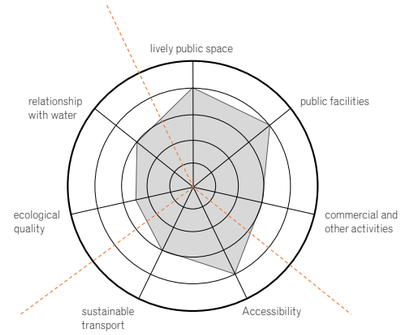
Insufficient public facilities

Lack of social commercial activities

Close to the main river

Historical value and identity

Liveable street life



Modern Community:

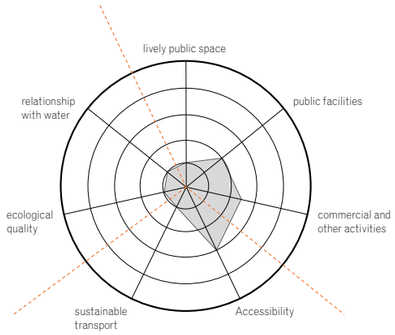
Enclosed community

Lack of relation with water

Sufficient open space

Comfortable environment

Sense of security



Urban Village

Lack of recreational public space

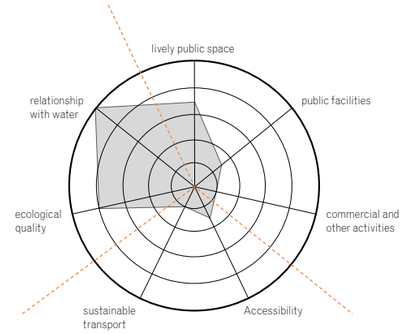
Mix-use of public space

Poor livinng environment

Lack of relation with water

Affordable living space

Good accessibility to urban functions



Historical Village:

Lack of recreational public space

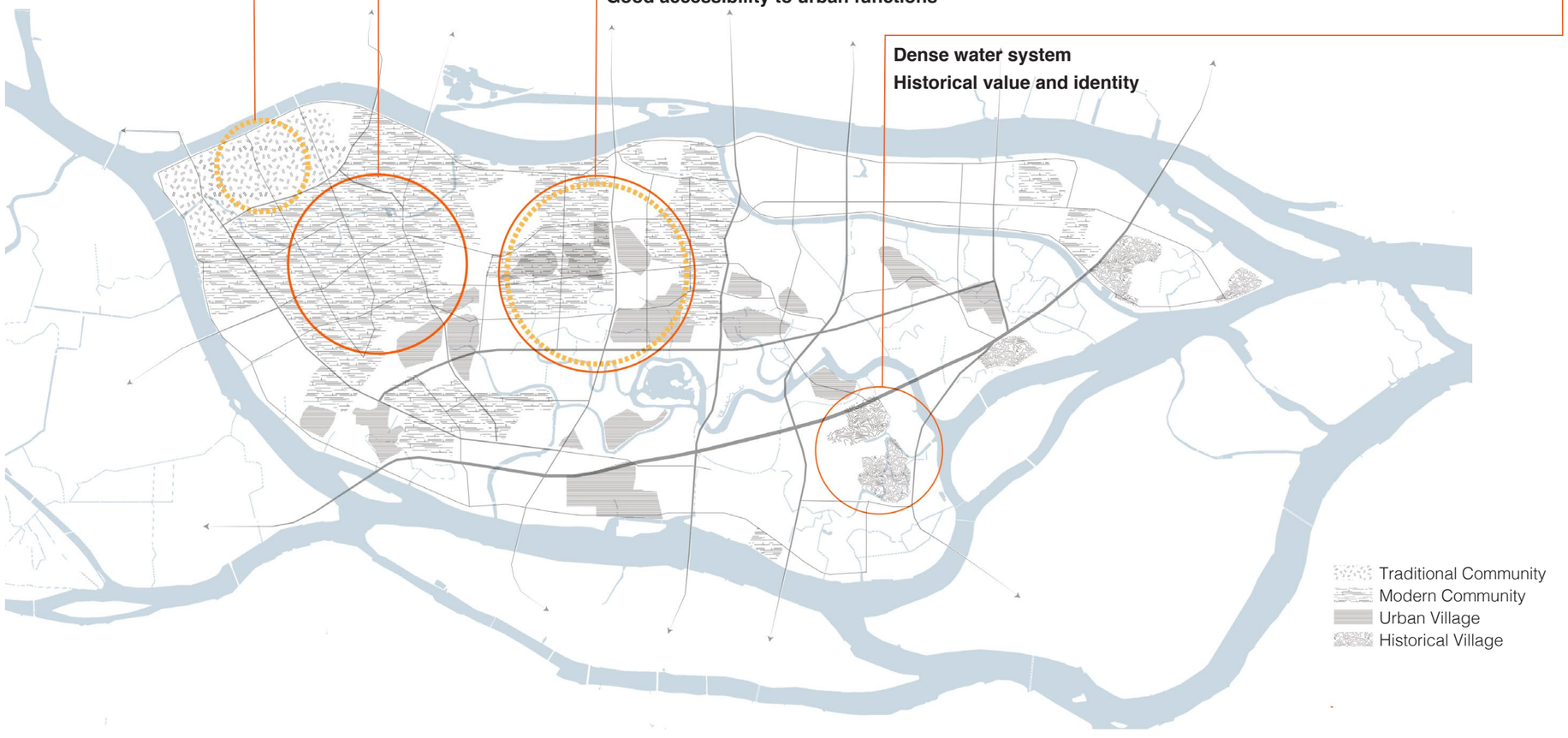
Unconvenient transportation

Insufficient public facilities

Lack of social commercial activities

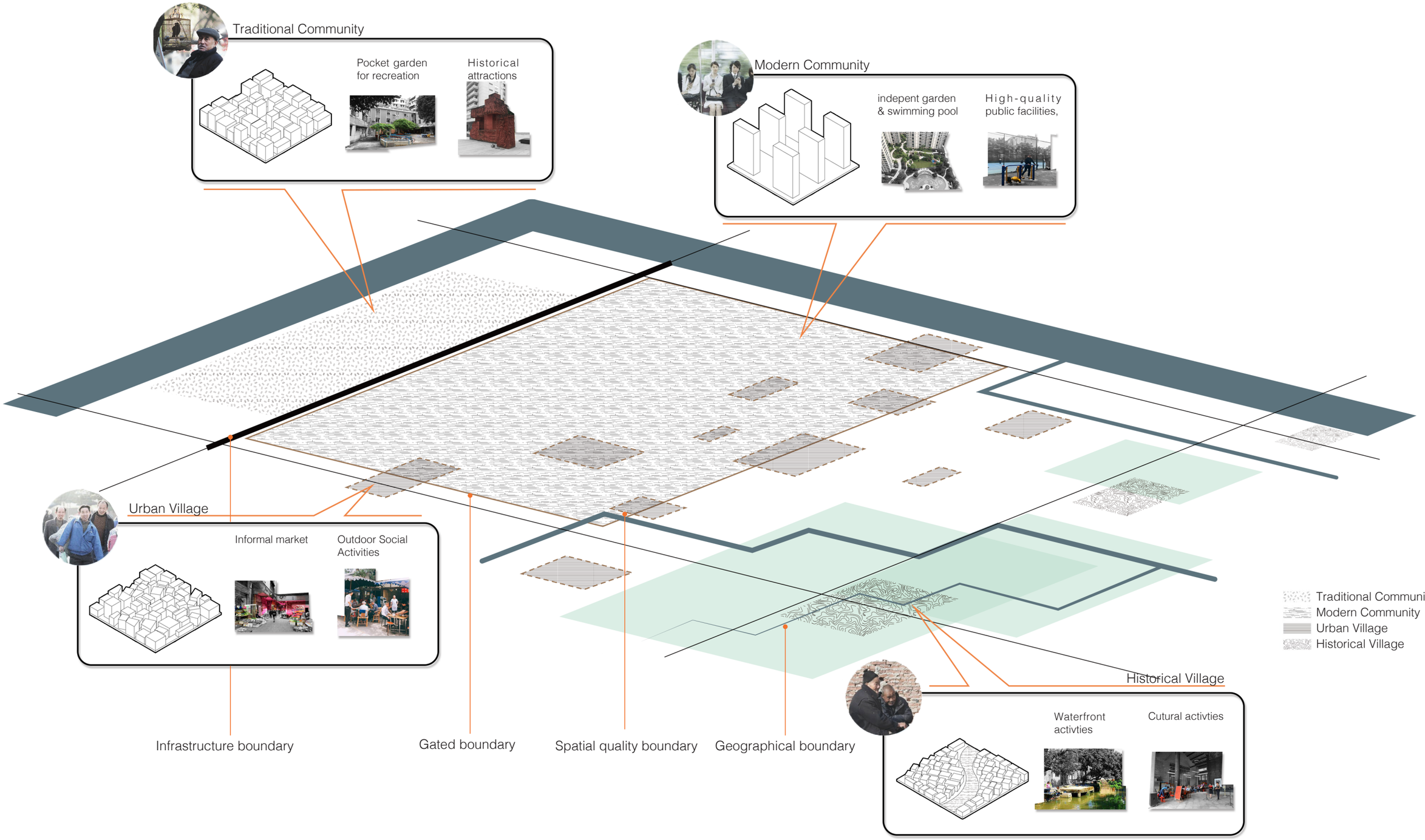
Dense water system

Historical value and identity



Settlement Conclusion

Regional Socio-Spatial Segregation

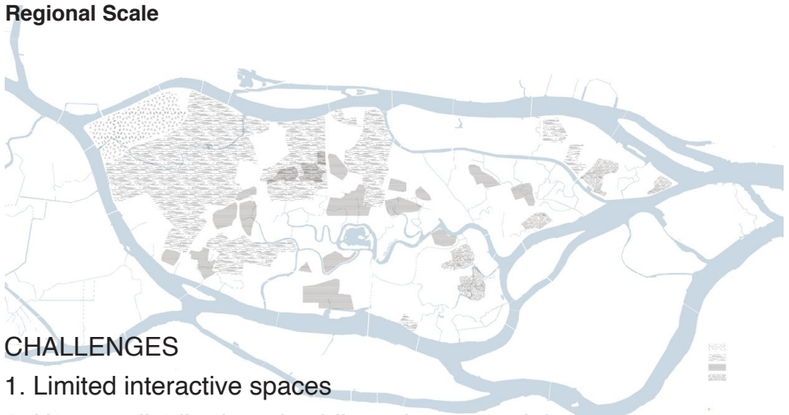


Conclusion

CHALLENGES

SETTLEMENT LAYER

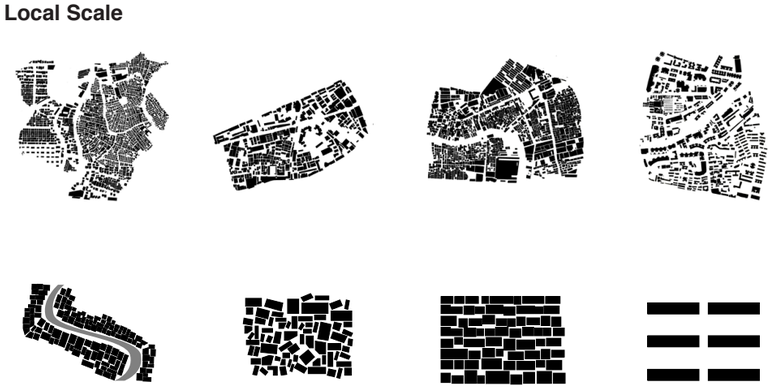
Regional Scale



CHALLENGES

1. Limited interactive spaces
2. Uneven distribution of public and commercial spaces
3. Different physical and spatial boundaries

Local Scale



Neighborhood Scale

Boundary

TRANSPORT LAYER

Regional Scale

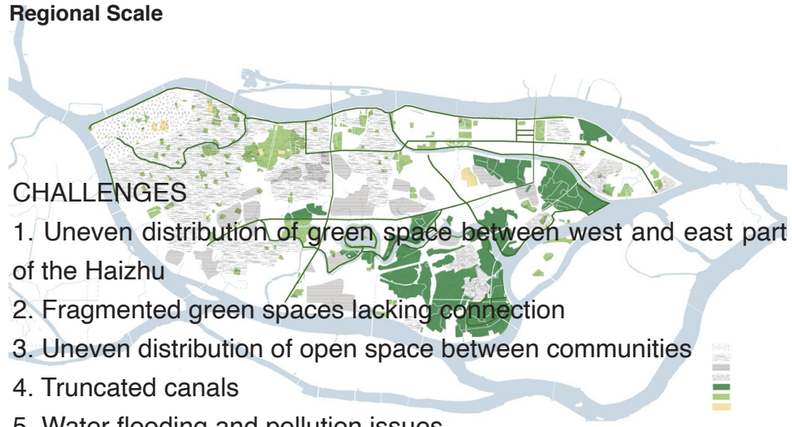
CHALLENGES

1. Lack of connectivity to historical village on the south-eastern part
2. Unconnected pedestrian and cycle path

Local Scale

LANDSCAPE LAYER

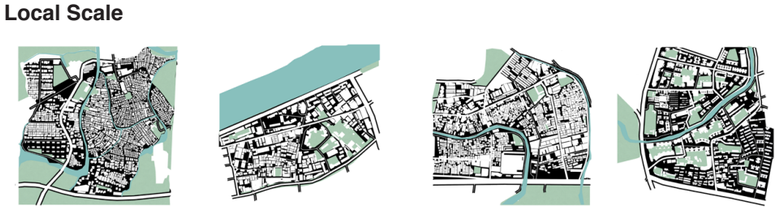
Regional Scale

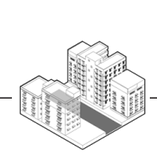


CHALLENGES

1. Uneven distribution of green space between west and east part of the Haizhu
2. Fragmented green spaces lacking connection
3. Uneven distribution of open space between communities
4. Truncated canals
5. Water flooding and pollution issues
6. Lack of recreational activities along water

Local Scale





POTENTIALS

SETTLEMENT LAYER

Regional Scale

COMMERCIAL STREET

PUBLIC SPACE

TRANSPORT LAYER

Regional Scale

SUSTAINABLE TRANSPORT

SLOW MOBILITY

LANDSCAPE LAYER

Regional Scale

GREENWAY

WATER

ECOLOGICAL PARK

PRINCIPLES & STRATEGIES

FRAMEWORK

SETTLEMENT LAYER | **TRANSPORT LAYER** | **LANDSCAPE LAYER**

DEMAND







Liveable community | Inclusive public space

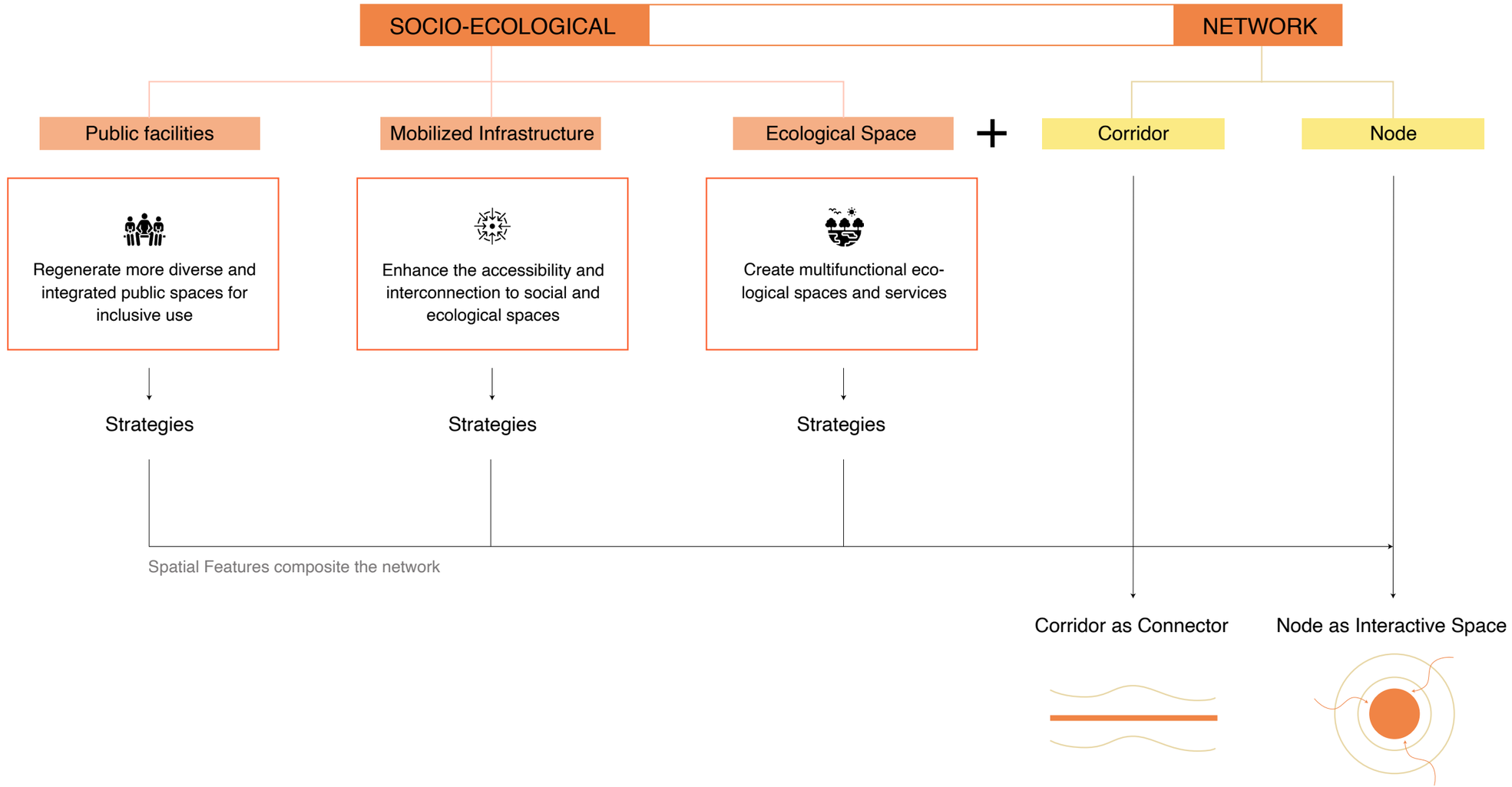
Diverse means of public transport | Continuous cycle path | Ecological corridor

More ecological spaces with recreational value | Multifunctional and resilient waterfront area

Public Facilities | **Mobilized Infrastructure** | **Ecological Spaces**

Socio-ecological Network

FRAMEWORK

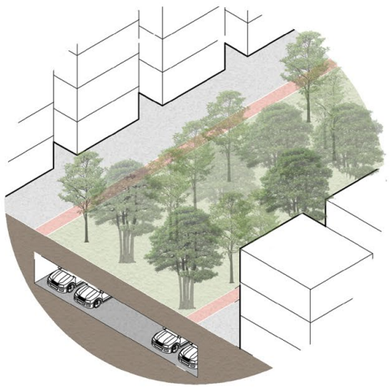

SOCIO-ECOLOGICAL
NETWORK
Public facilities
Mobilized Infrastructure
Ecological Space
+
Corridor
Node
Regenerate more diverse and integrated public spaces for inclusive use
Enhance the accessibility and interconnection to social and ecological spaces
Create multifunctional eco-logical spaces and services
Strategies
Strategies
Strategies
Spatial Features composite the network
Corridor as Connector
Node as Interactive Space

PRINCIPLES

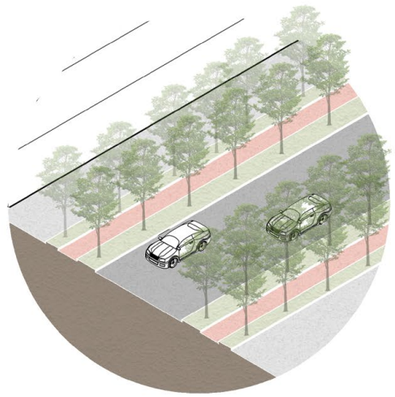
CORRDIOR AS CONNECTOR

NODES AS INTERACTIVE SPACE

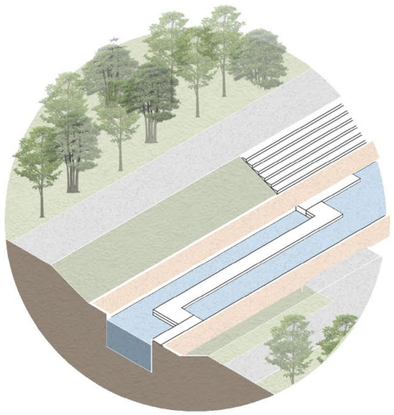
ECOLOGICAL



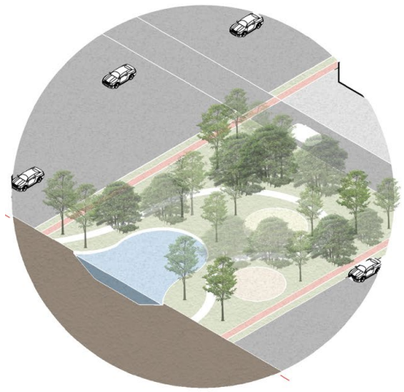
Ecological Corridor as Connector



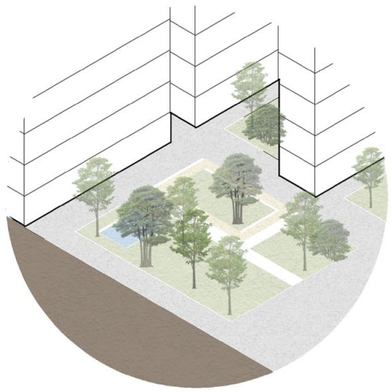
Continuous Greenway as Connector



Waterway as Connector (Multifunctional waterfront space)

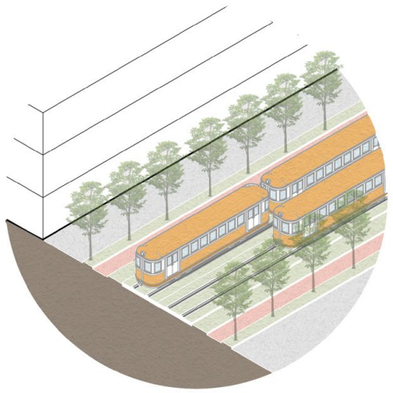


Recreational/ Ecological Parks as Interactive Space

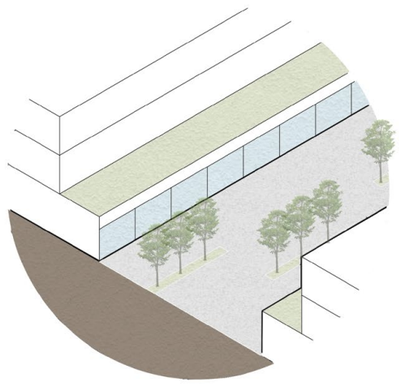


Community Public Gardens as Interactive Space

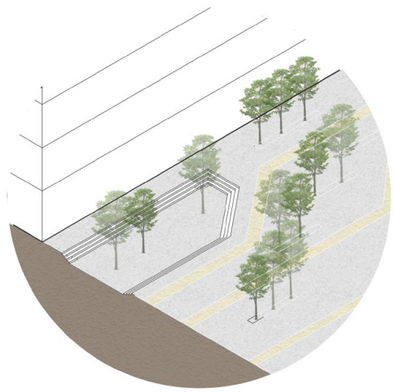
SOCIAL



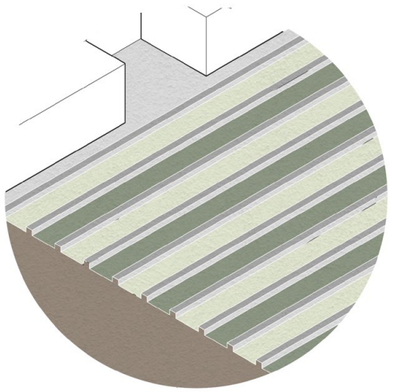
Sustainable Public Mobilty as Connector



Commercial Street as Connector

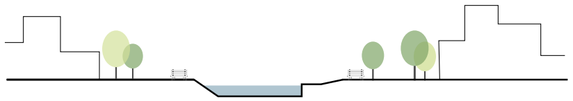


Commercial Hub as Interactive Space

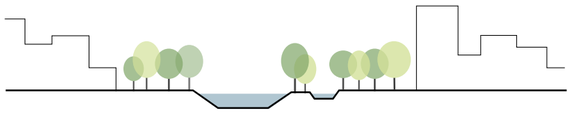


Activity Hub as Interactive Space (Urban farming, flea market etc.)

Create multifunctional ecological spaces and services

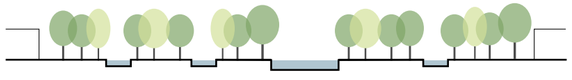


Resilient & multifunctional ecological corridors
e.g. riverfront



Diverse healthy ecological services for purification and storage

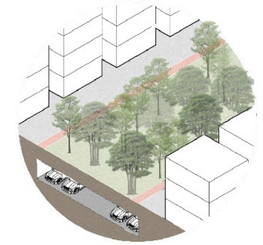
Abundant recreational and resilient public parks in the community

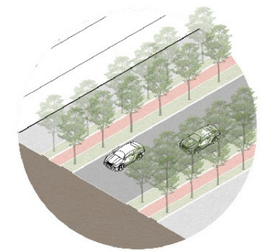


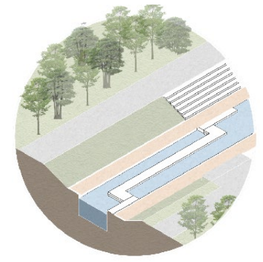
Improve the water management in the existing agricultural area and orchard

ECOLOGICAL SPACE

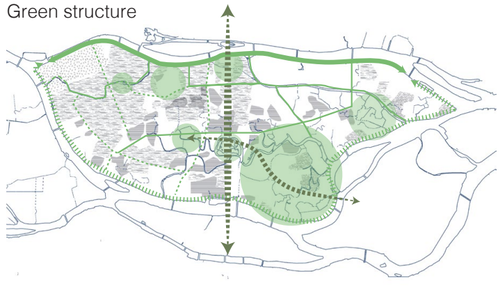
Corridor



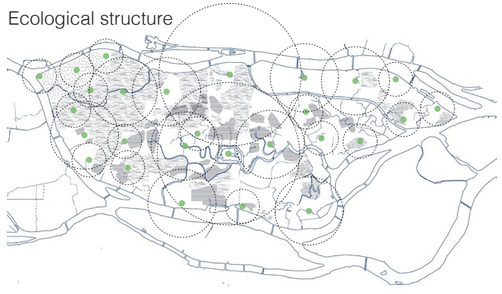




Green structure

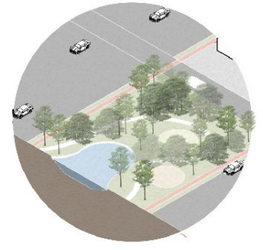


Ecological structure



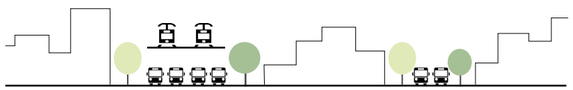
Blue structure

Node

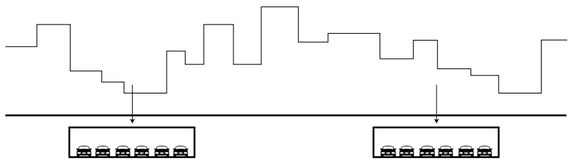


STRATEGIES

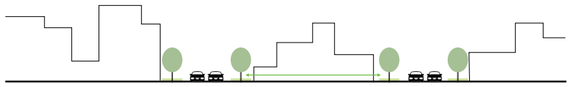
Enhance the accessibility and interconnection to different social and ecological spaces



Diverse means of public mobility to respond to the daily needs for transportation



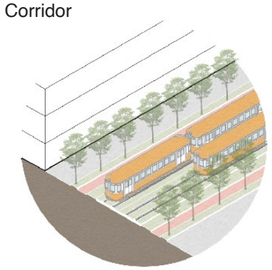
Sustainable mobility system to adapt to the fast development

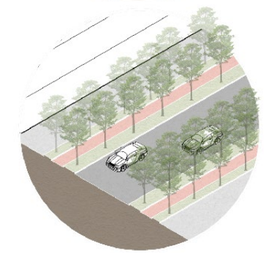


Continuous greenway as slow mobility

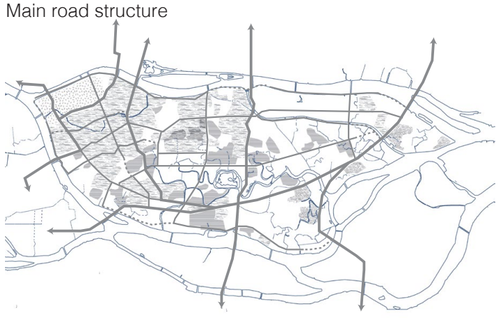
MOBLIZED INFRASTRUCTURE

Corridor



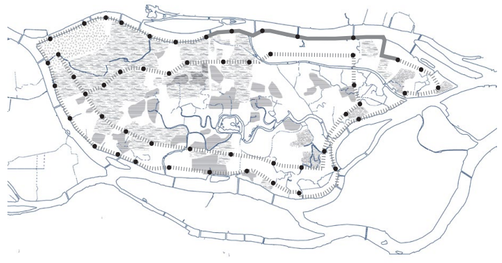


Main road structure



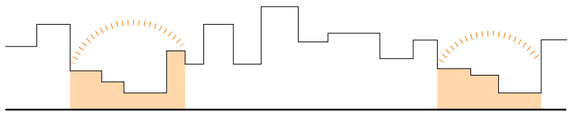
Slow mobility structure

Tram system

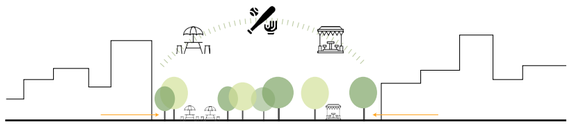


STRATEGIES

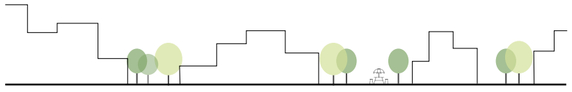
Regenerate more diverse and integrated public spaces for inclusive use



Several city hubs of urban functions as core zones for residents

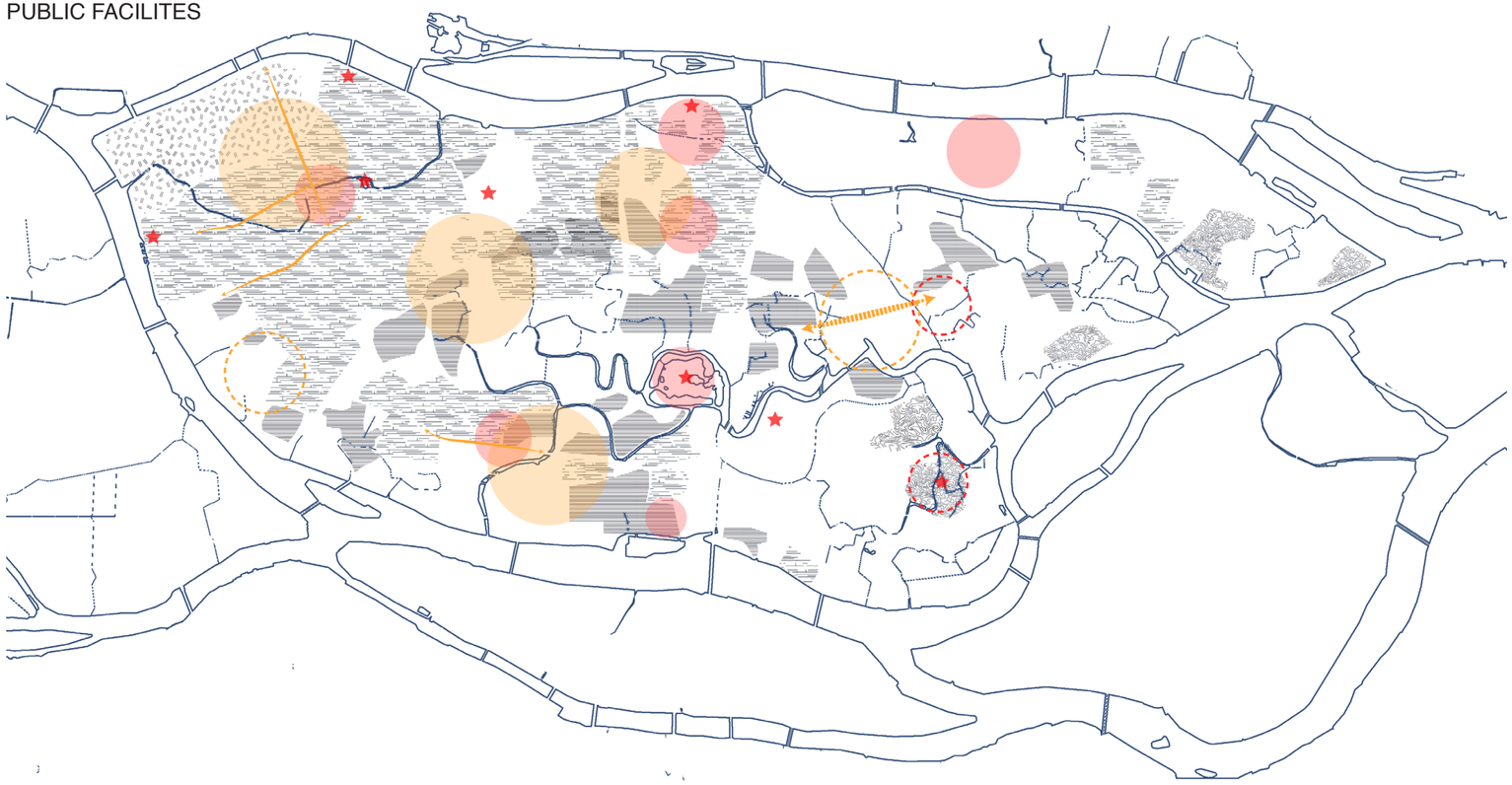


Diverse activities in public space for all levels of people

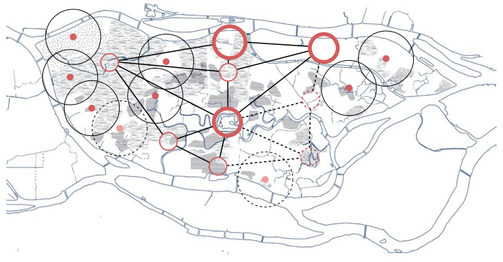


Sufficient public spaces in communities

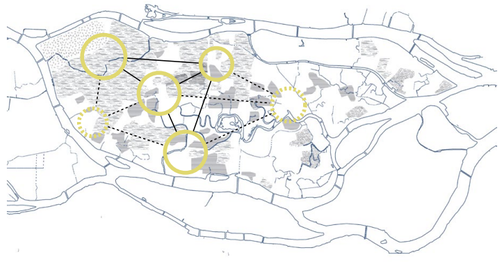
PUBLIC FACILITES



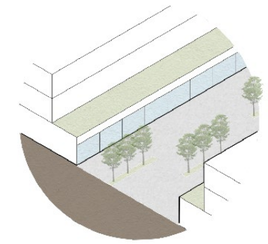
Public facility center structure



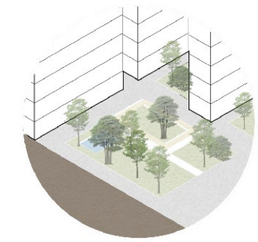
Commercial center structure

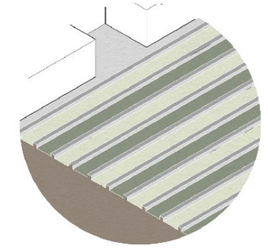


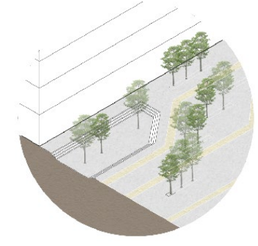
Corridor



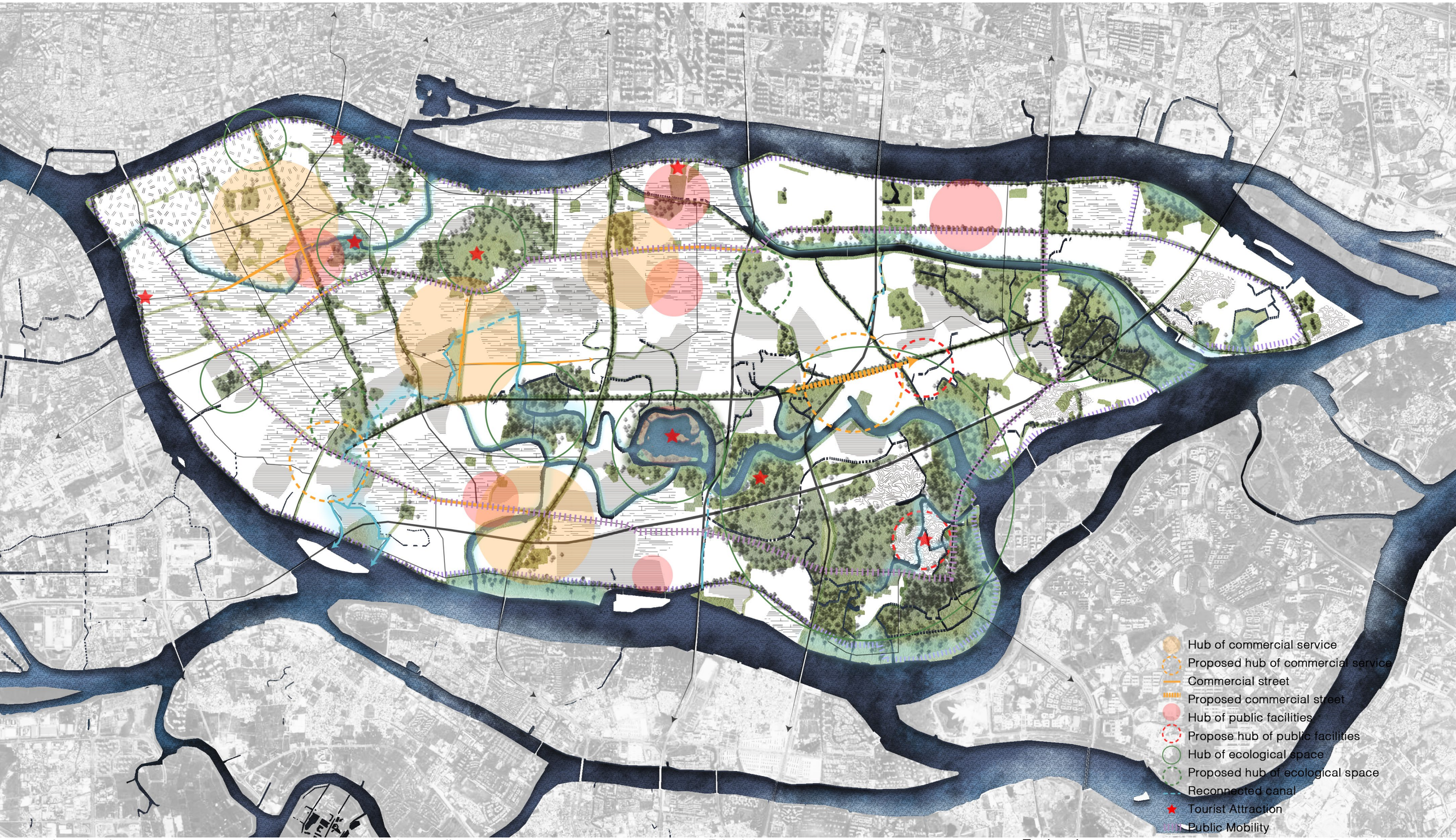
Node



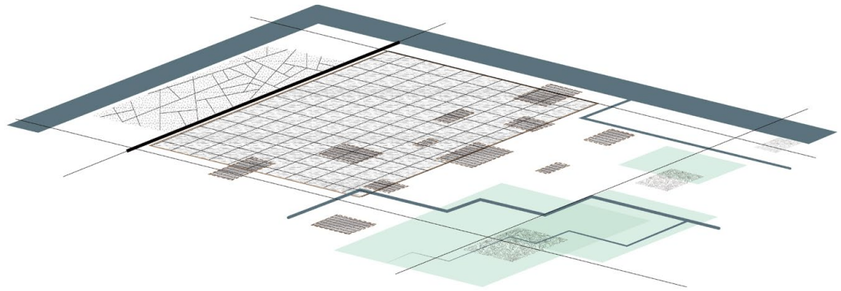




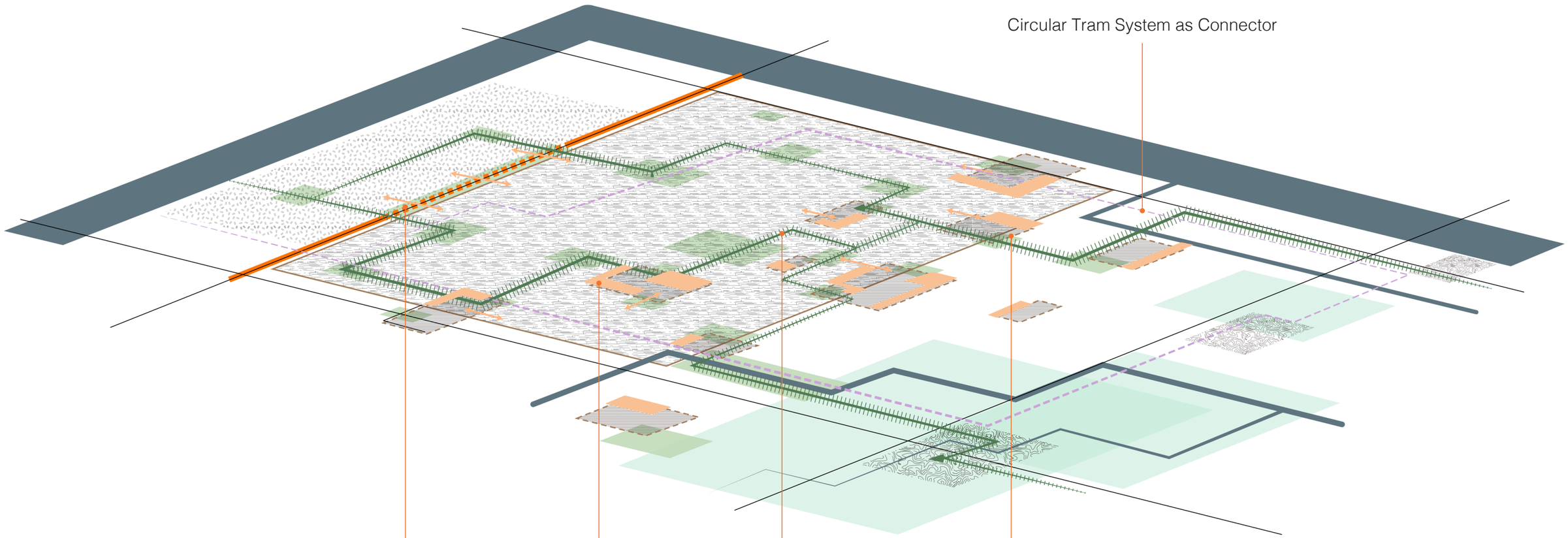
Strategic Network



Regional Socio-Spatial Segregation

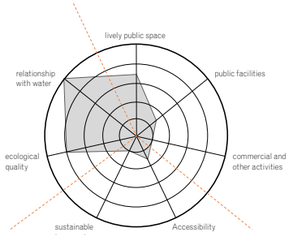


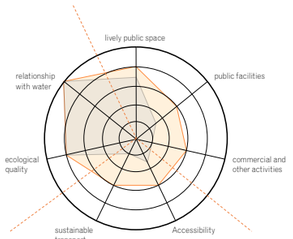
Regional Socio-Spatial Integration



Spatial quality improvement in community

Historical Village



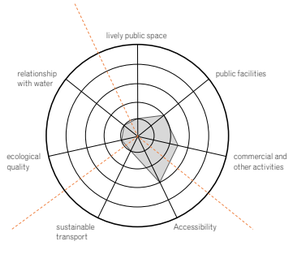


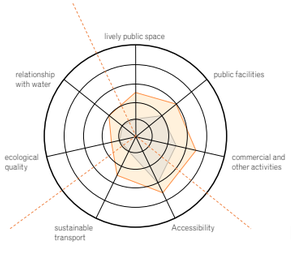
Public Facilities +++

Mobilized Infrastructure ++

Ecological Spaces

Urban Village



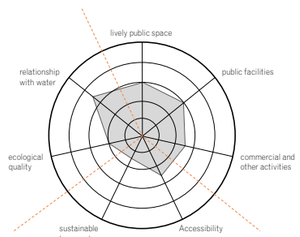


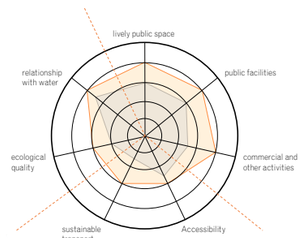
Public Facilities ++

Mobilized Infrastructure +

Ecological Spaces +

Tradional Community



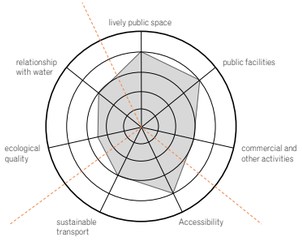


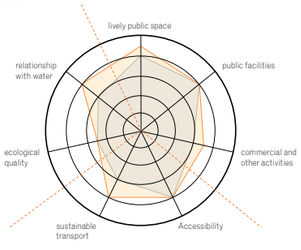
Public Facilities ++

Mobilized Infrastructure ++

Ecological Spaces +

Modern Community





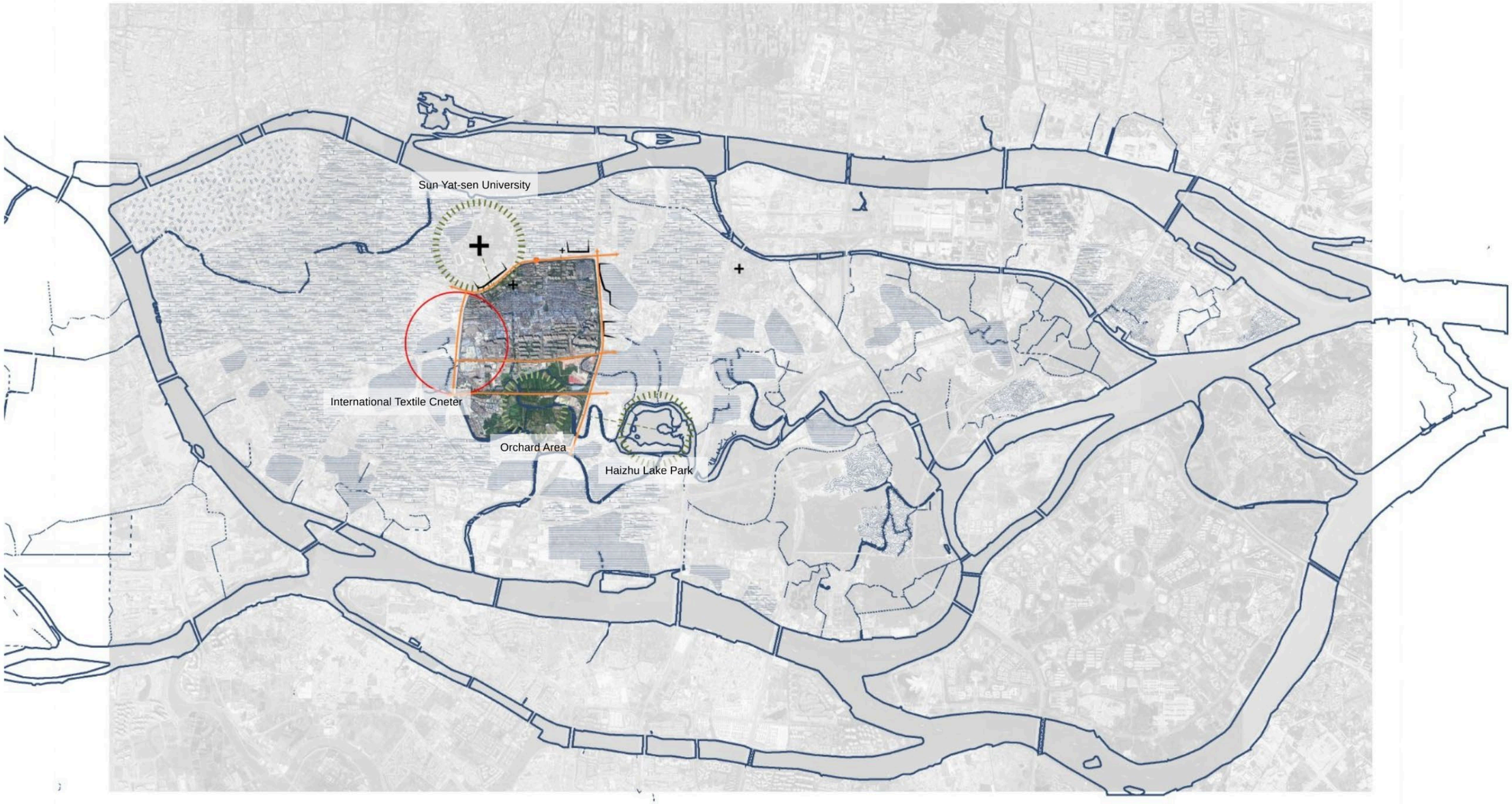
Public Facilities +

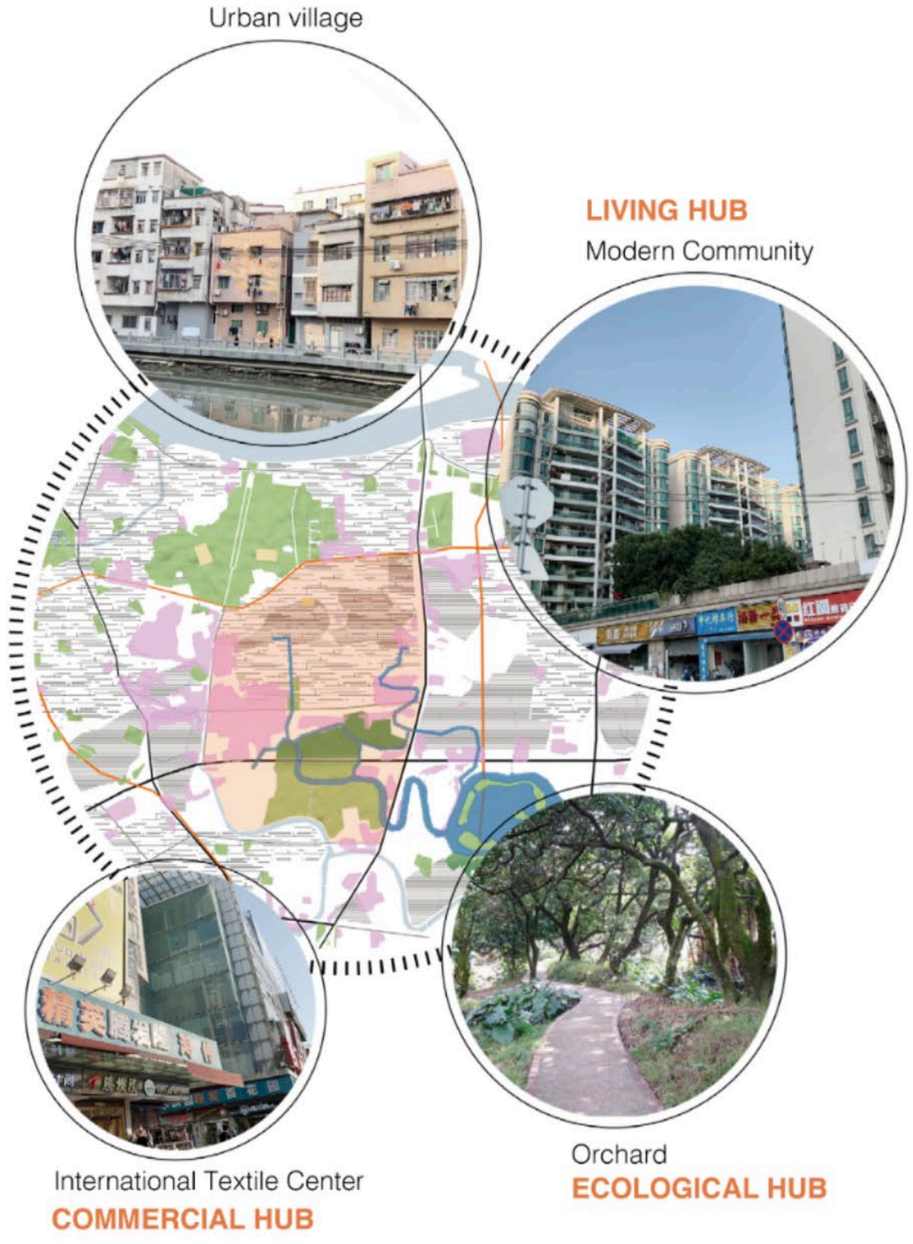
Mobilized Infrastructure

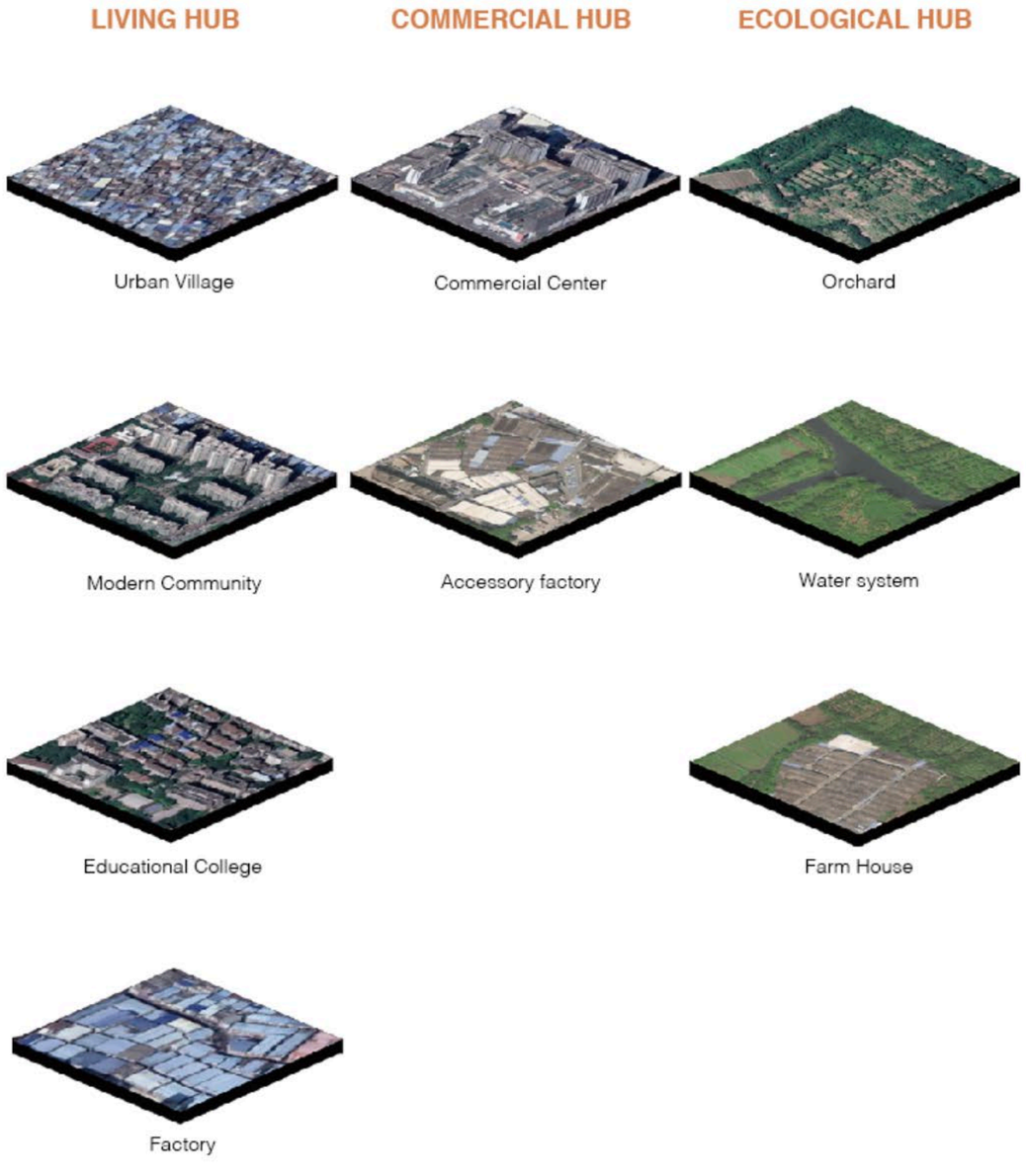
Ecological Spaces +

DESIGN EXPLORATION

Overview


Sun Yat-sen University
International Textile Cneter
Orchard Area
Haizhu Lake Park


Urban village
LIVING HUB
Modern Community
International Textile Center
COMMERCIAL HUB
Orchard
ECOLOGICAL HUB

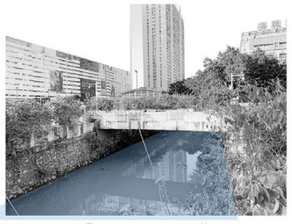

LIVING HUB
COMMERCIAL HUB
ECOLOGICAL HUB
Urban Village
Commercial Center
Orchard
Modern Community
Accessory factory
Water system
Educational College
Farm House
Factory

Problems Identified

ECOLOGICAL

Disconnection between ecological spaces and built environment

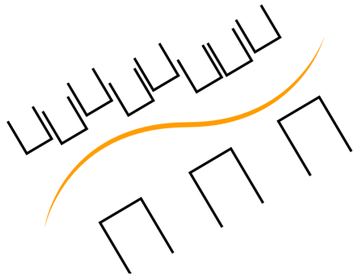
Lack of green spaces for ecological value



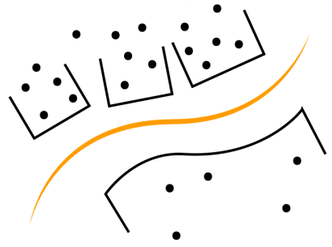
Poor water quality

Lack of sustainable techniques of space confronting climate change

SOCIAL



Lack of spatial and functional connection between urban village and modern community



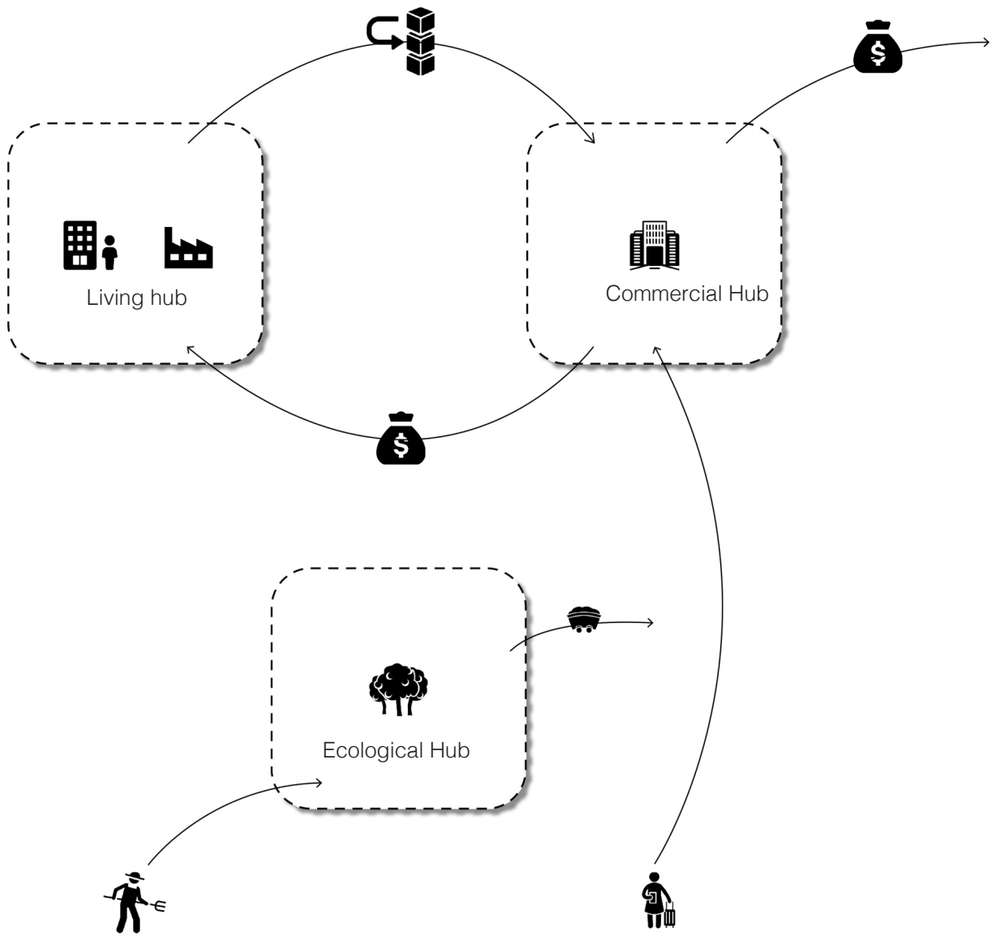
limited interaction between immgrants and local residents in the living hub

The connection between communities is blocked by certain boundaries

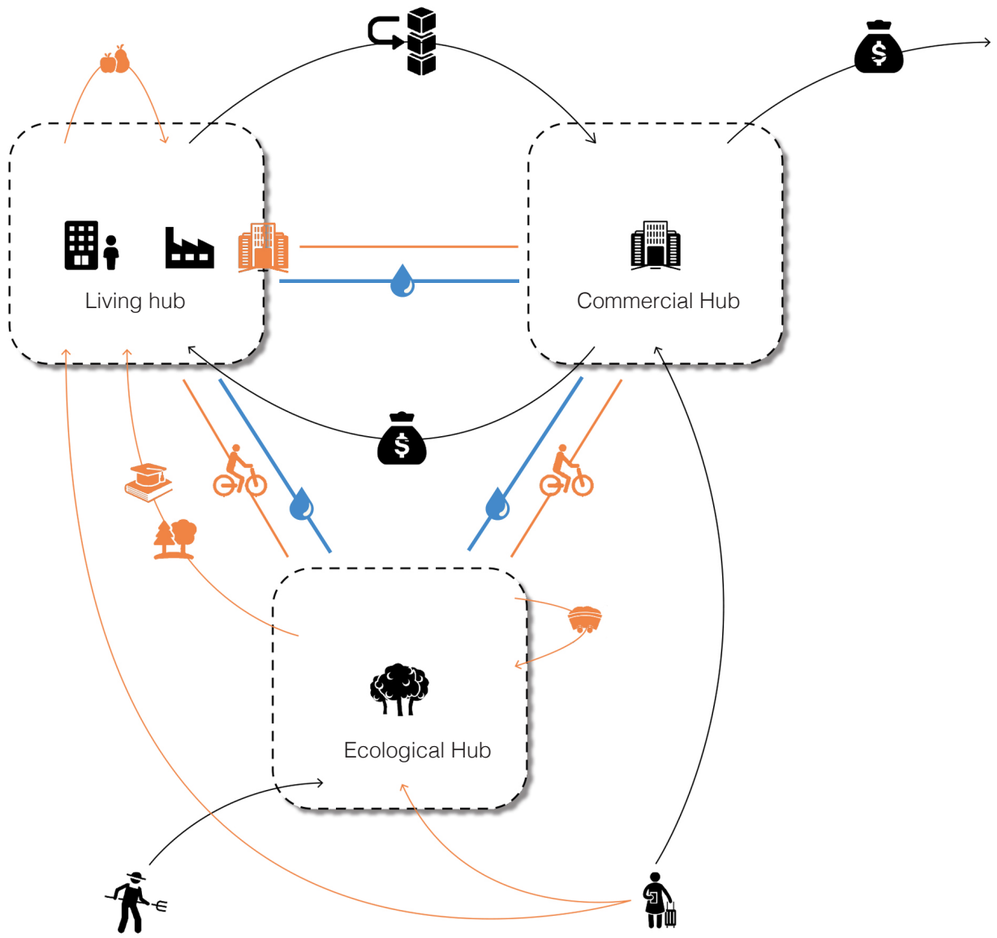
Lack of public space where residents can contact with each other

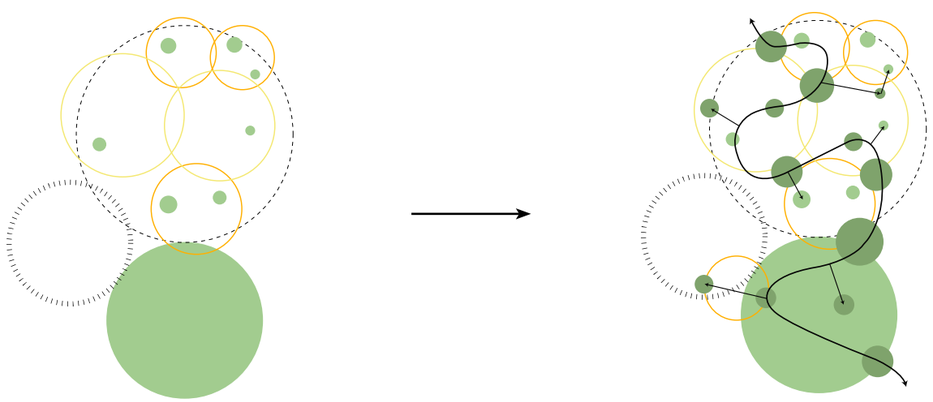
Lack of activities along the waterfront area

EXISTING



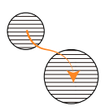
PROPOSING





INTEGRATE THE THREE HUBS AND INCREASE INTERACTION BY INTRODUCING CORRIDOR AND NODE AS SOCIAL ECOLOGICAL NETWORK

CORRIDOR AS CONNECTOR



CONNECT

Elements

Infrastructure
-Waterway
-Roads
Greenway
Different experience routes

Improve interconnection and accessibility to social and ecological spaces

NODE AS INTERACTIVE SPACE

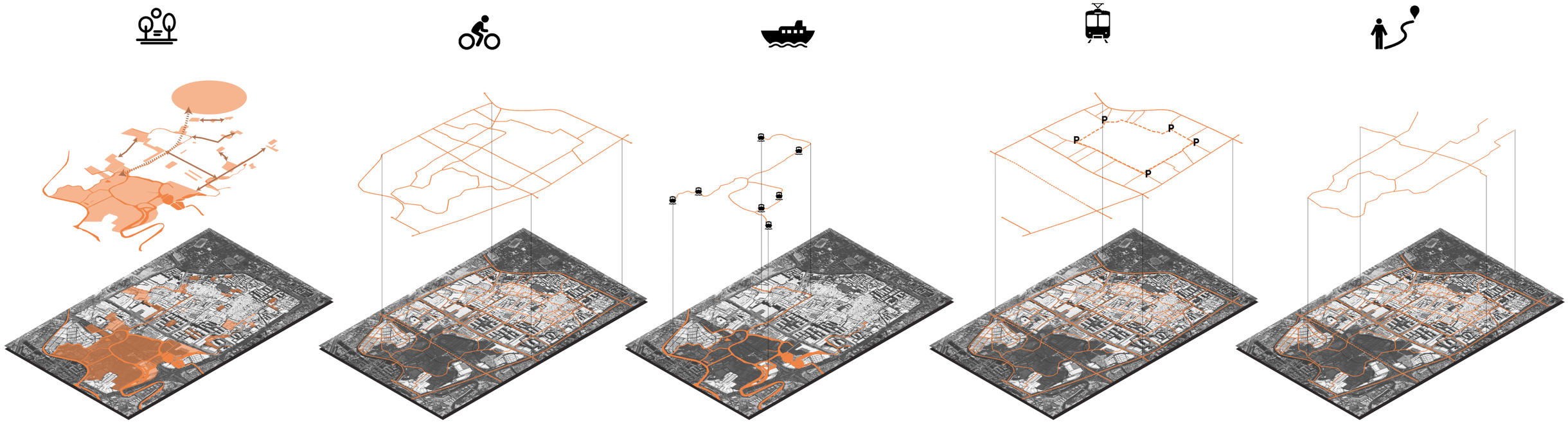
ACTIVATE

Elements

Large Open Space
-Commercial Space
-Ecological Space
-Recreational Space
Pocket Space in Community

Make use of the existing vacant areas to regenerate new public activities and vitalize the communities

CONNECT



ECOLOGICAL CONNECTION

GREENWAY

CRUISE

SLOW TRAM

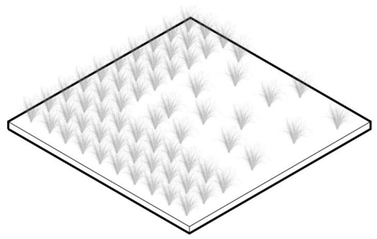
EXPERIENCE ROUTES

Design Strategies

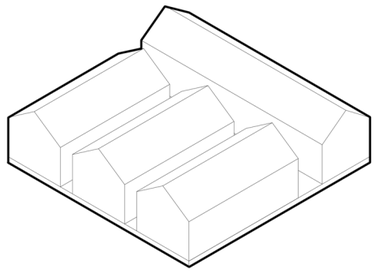
Ecological Value

ACTIVATE

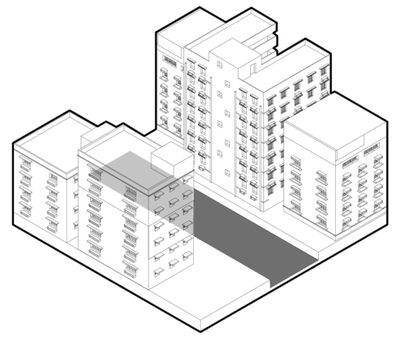
Before



Vacant land/ Parking lot

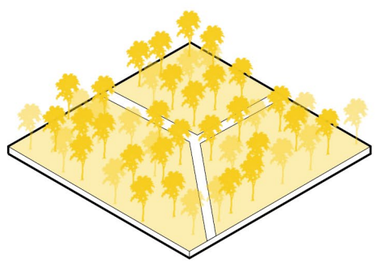


Abandoned Factories

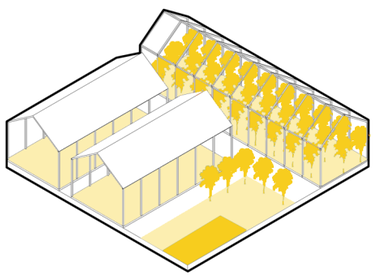


Water

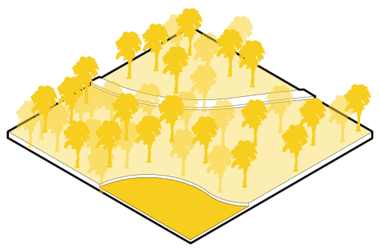
After



Transform into ecological / recreational space



Keep the existing structure
Transform factories into new functions as urban farming, cafe, etc.



Transform into ecological / recreational space

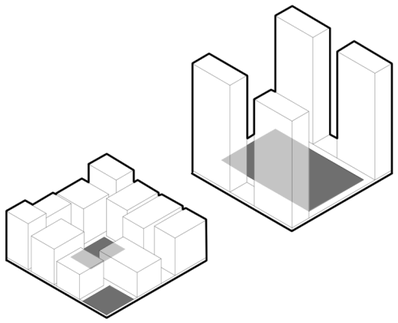
Create multifuncational waterfront area
Walking bridge for connection

Design Strategies

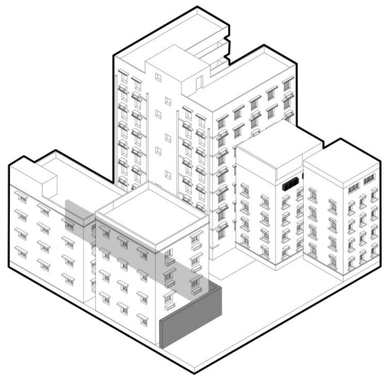
Social Value

ACTIVATE

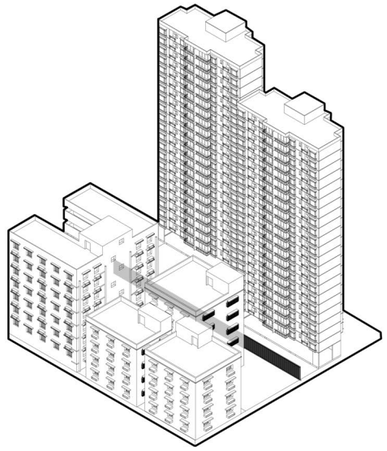
Before



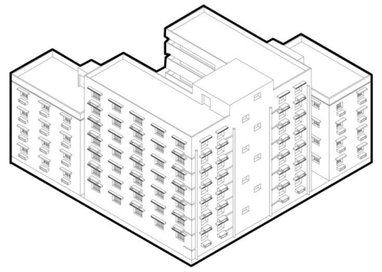
Quality of space



Wall

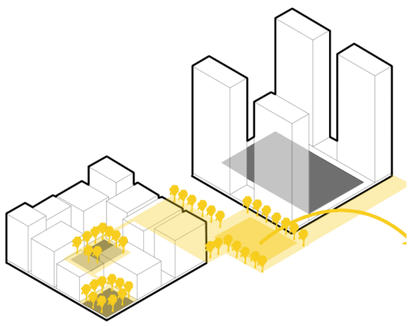


Fence

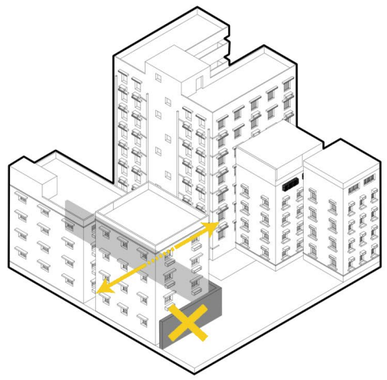


Building in bad quality

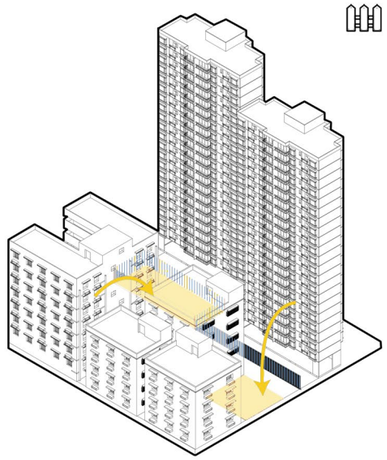
After



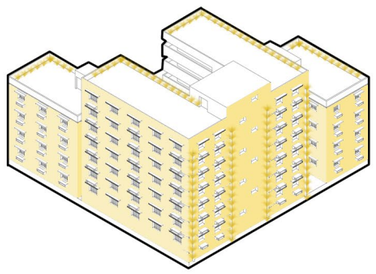
Renew public space with
multiple uses & functions



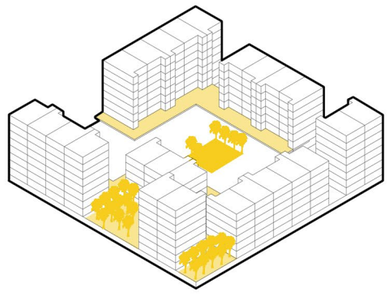
Remove the wall
Improve the connection



Relocate the fence
Open certain area for public

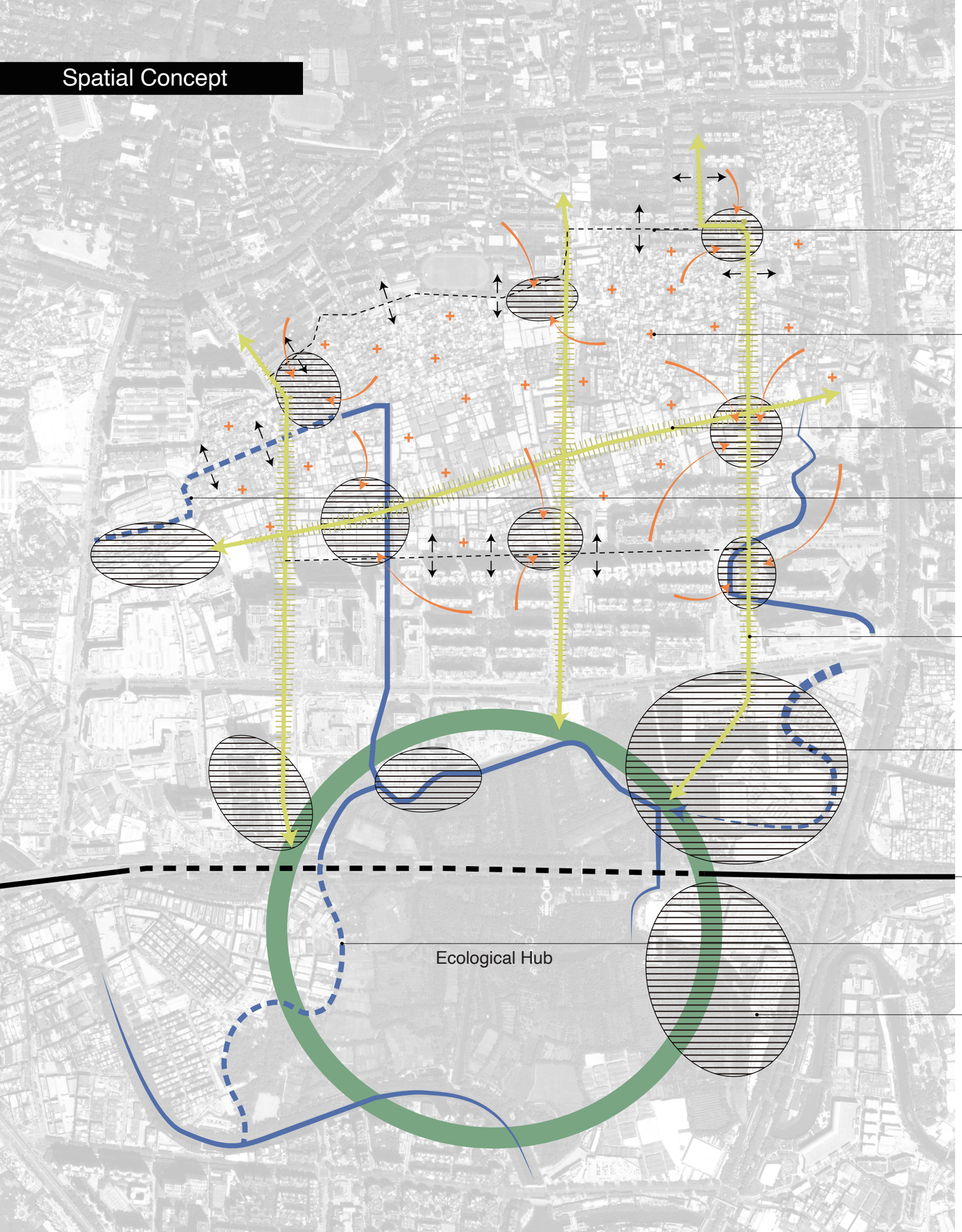


Renew the facade & rooftop



Create new building typology
as open community

Spatial Concept



Improve the integration and decrease the nagtive effect of boundary between the modern community and urban village

Create open public space inside the urban village for sharing, communitcating, sports, etc.

Connect commercial and living hub

Extend the existing canal and create livable waterfront space

Integrate ecological value from the ecological hub to the living hub and build up interconnection

Purify the water from the living hub and activate the site as a recreational park where residents can have social activities and the ecological value can be strengthened and realized

Remove the road and create connection between ecological spaces between both sides

Extend canal for better water management in the ecological hub

Create more room for the water, reactivate the space with floodable islands and floating housing for future sustainable development

Master Plan

1. purification park
2. retention ponds
3. pedestrian path
4. flower field
5. playground
6. waterfront space
7. open community
8. urban farming
9. community park
10. pocket park
11. water square
12. waterfront park
13. commercial building
14. floating houses
15. public space
16. flooding plain
17. urban plaza

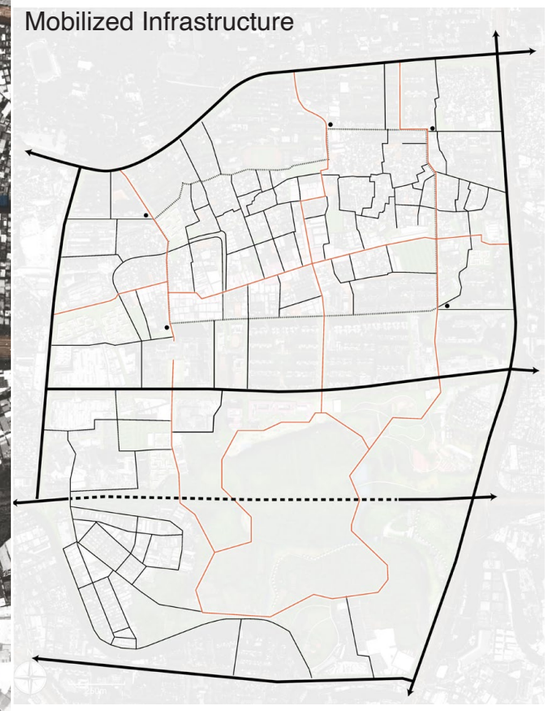
N

250m

Water System

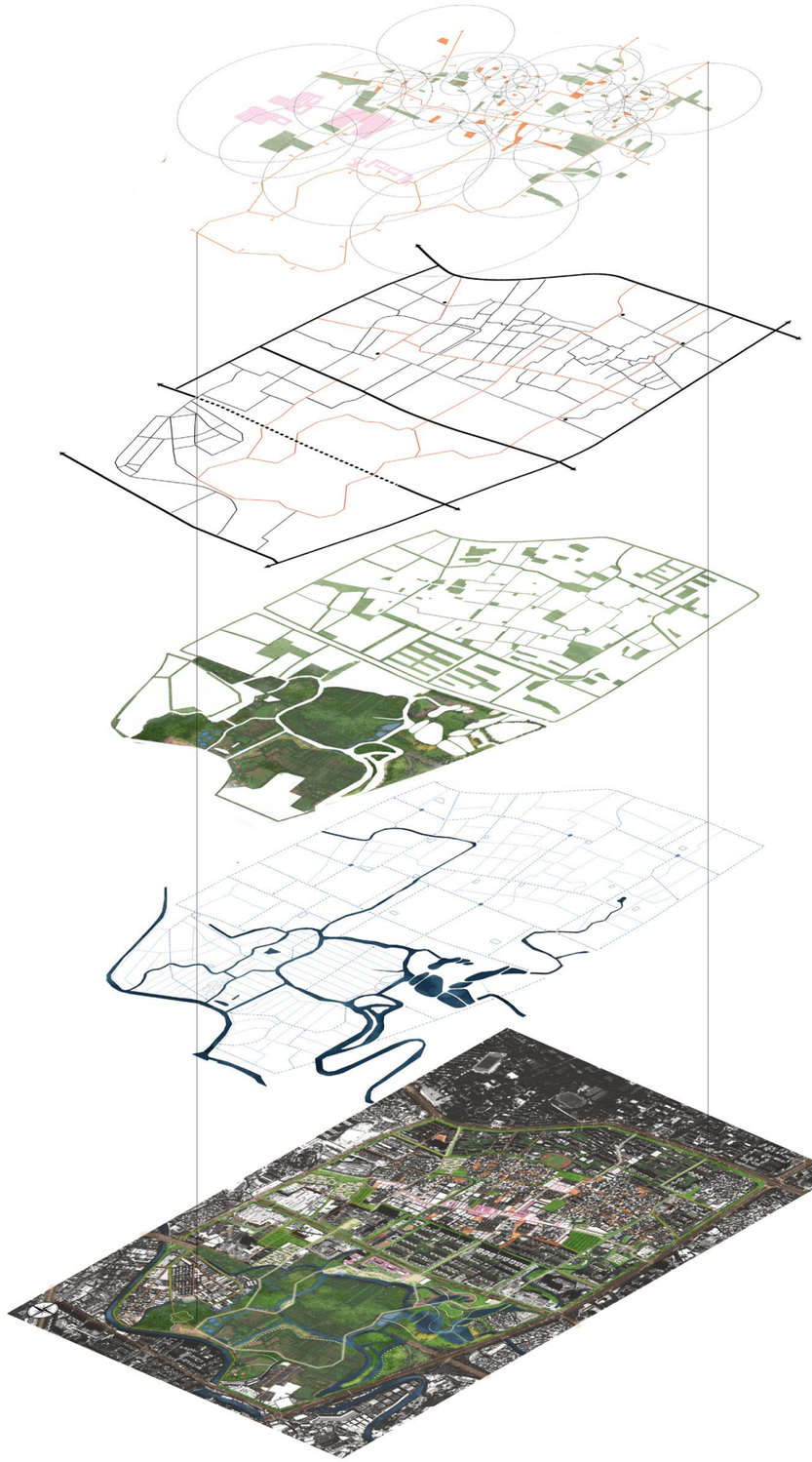
Green Network

Mobilized Infrastructure

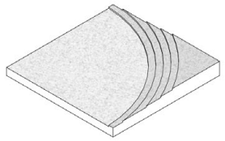


Public Facilities

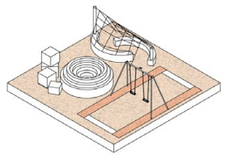
Toolbox



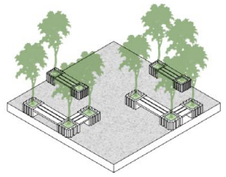
Public Facilities



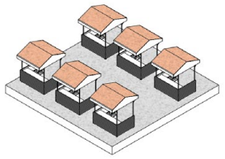
open square



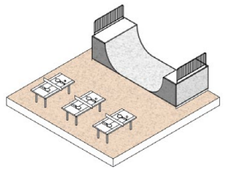
kid's playground



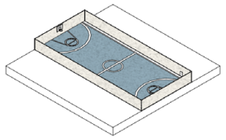
outdoor seating



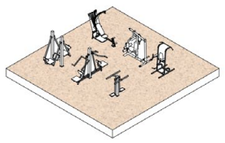
informal settlement



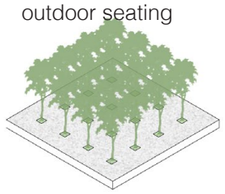
outdoor gaming



sport

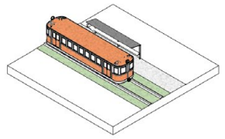


outdoor exercises

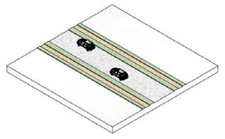


gardening

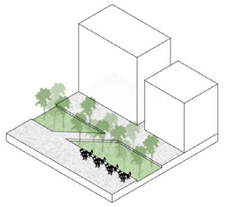
Mobilized Infrastructure



slow tram



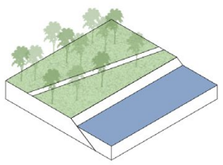
greenway



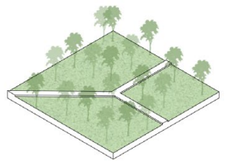
experience route

Ecological Space

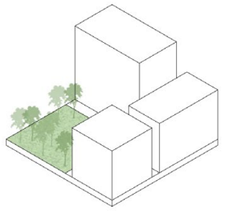
Green Space



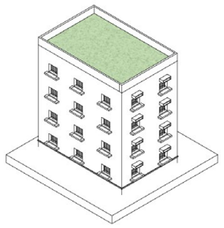
waterfront park



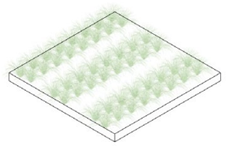
community park



pocket park



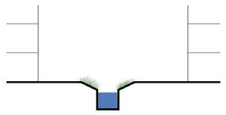
green roof



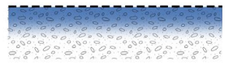
urban farming

Blue Space

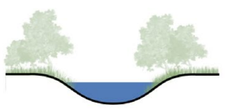
water square



singel

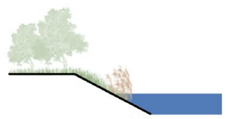


permeable pavement



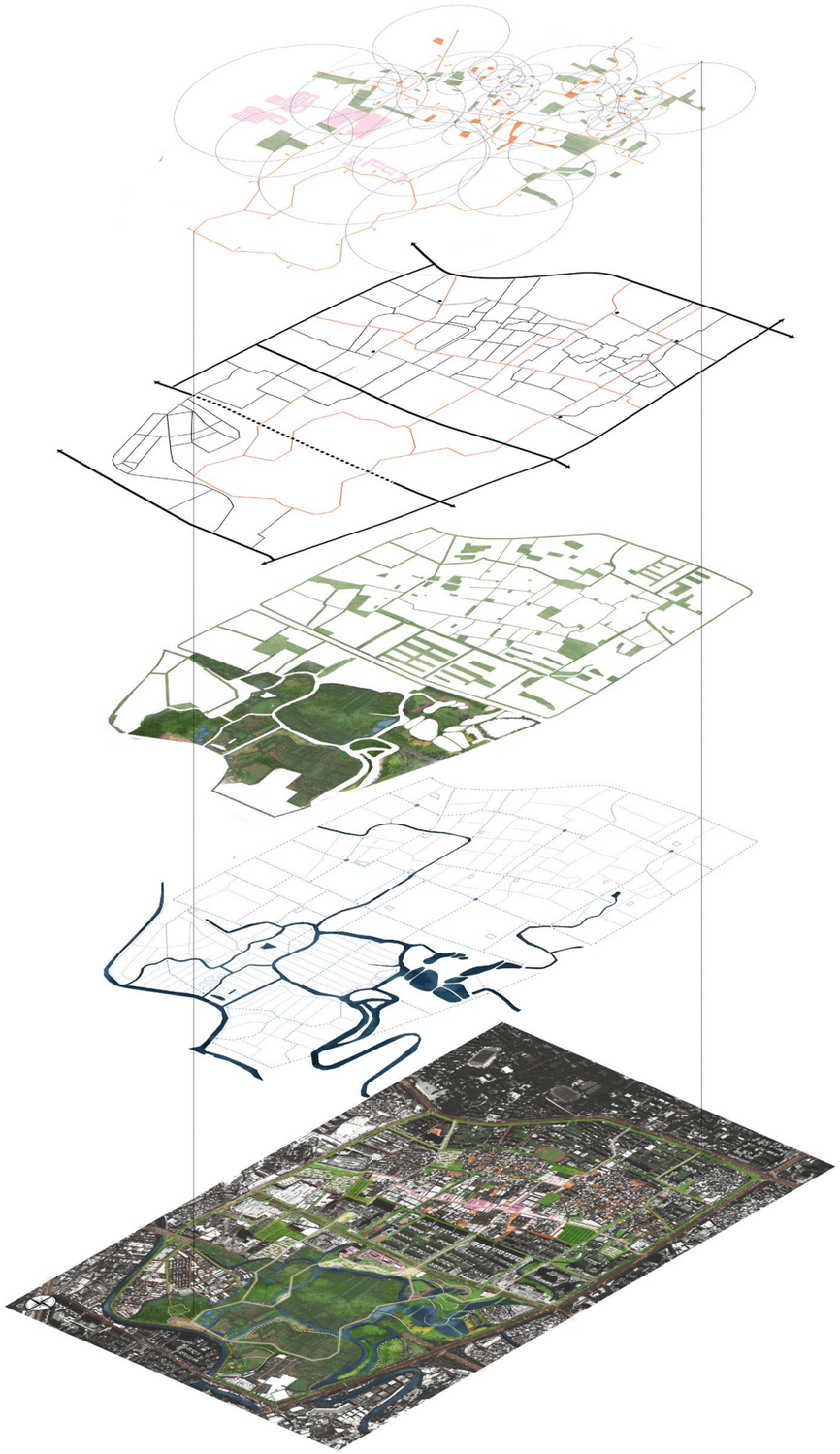
retention basin

water storage

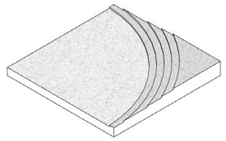


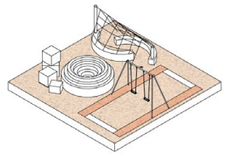
soft edge

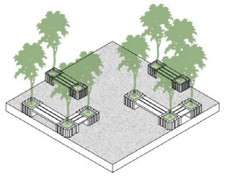
Toolbox

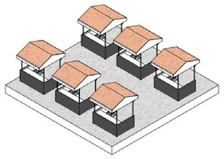


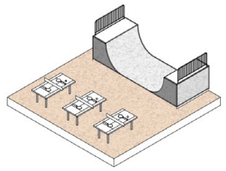
Public Facilities

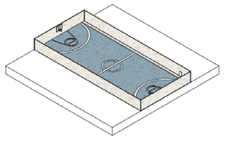

open square

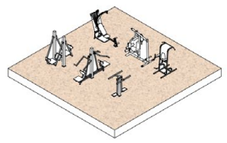

kid's playground

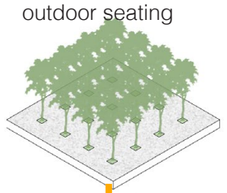

outdoor seating


informal settlement

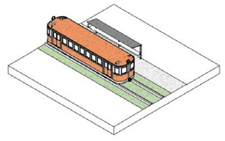

outdoor gaming

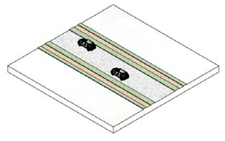

sport

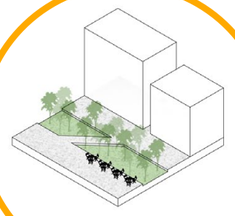

outdoor exercises


gardening

Mobilized Infrastructure

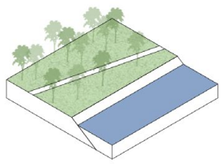

slow tram

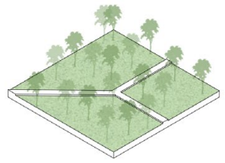

greenway

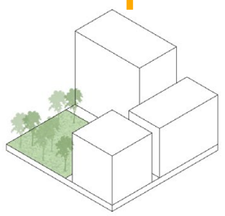

experience route

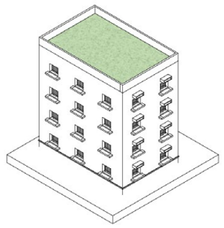
act as a corridor

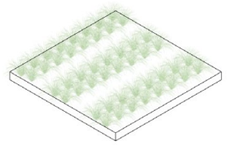
Ecological Space
Green Space


waterfront park


community park

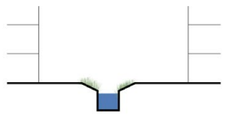

pocket park

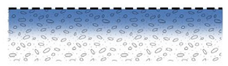

green roof

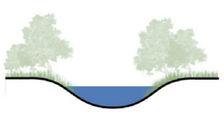

urban farming

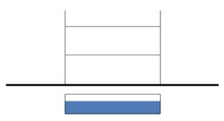
Blue Space

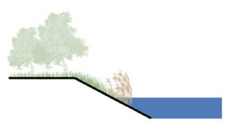

water square


singel

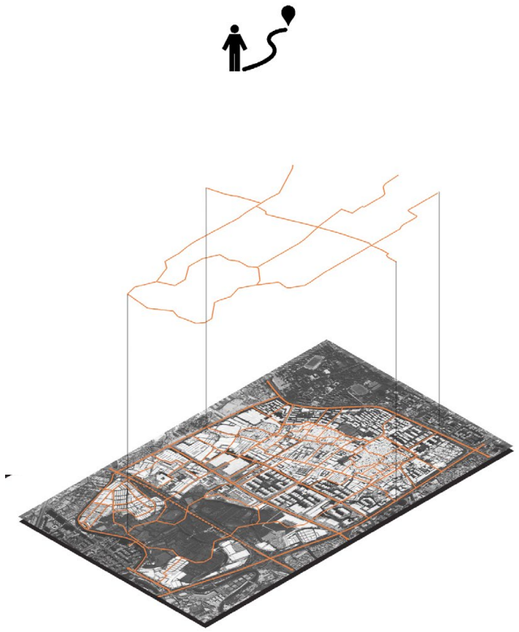

permeable pavement


retention basin

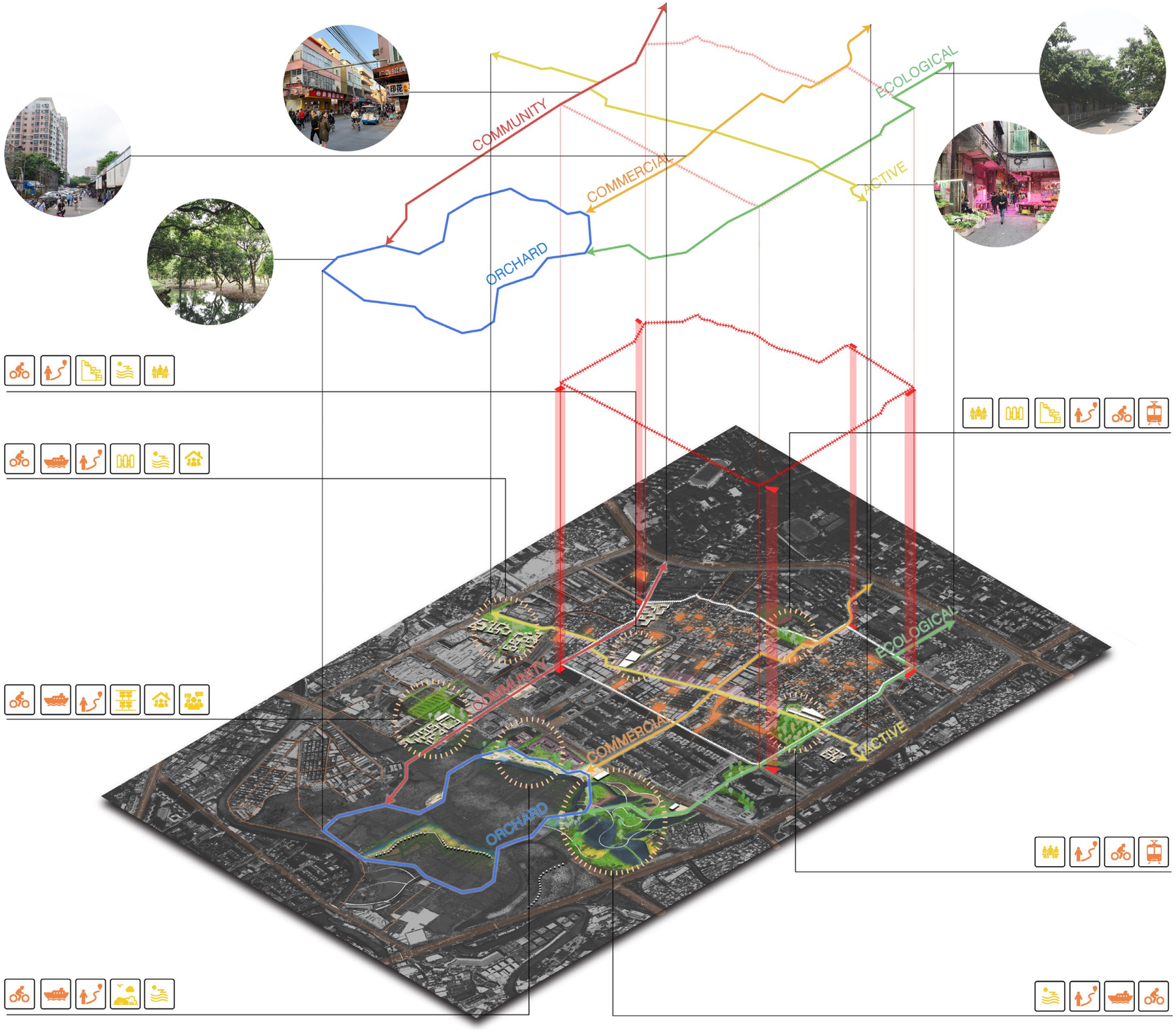

water storage


soft edge

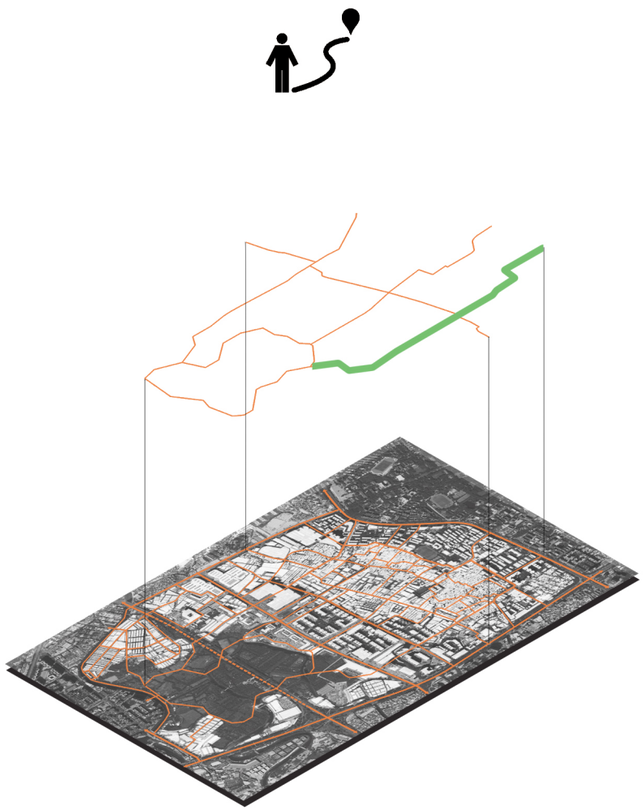
Socio-Ecological Network



EXPERIENCE ROUTES



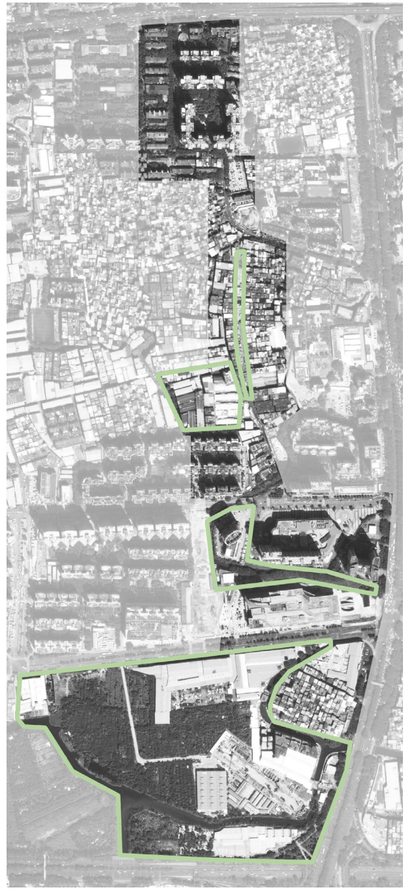
Experience Route



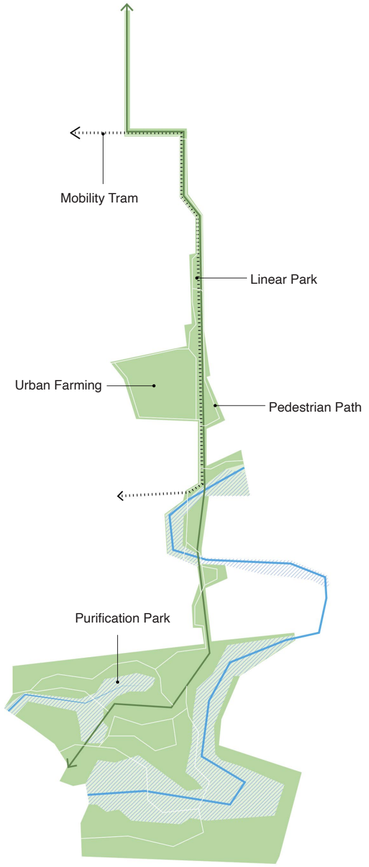
ECOLOGICAL ROUTE

Design Intervention

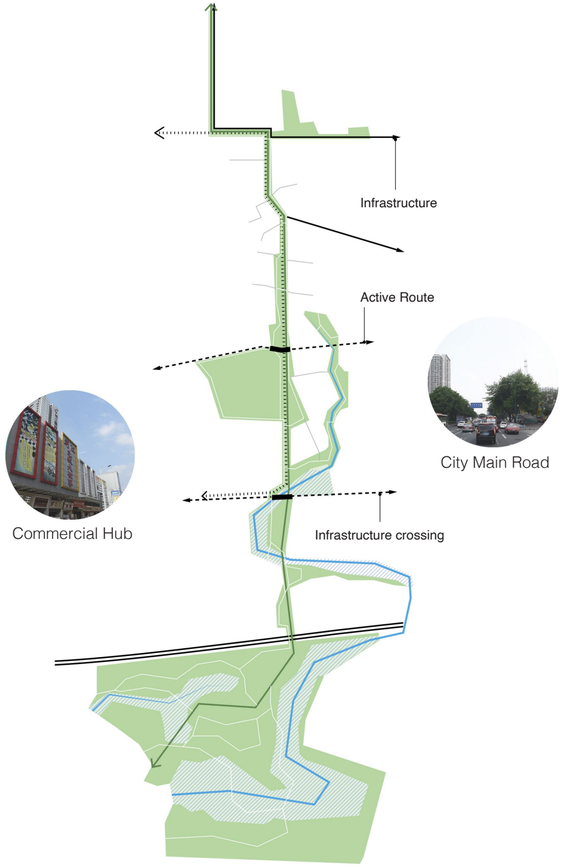
Ecologcial Route



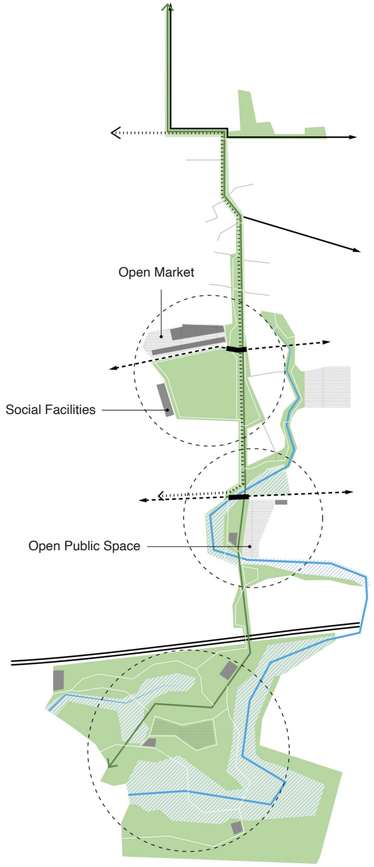
Ecological Corridor



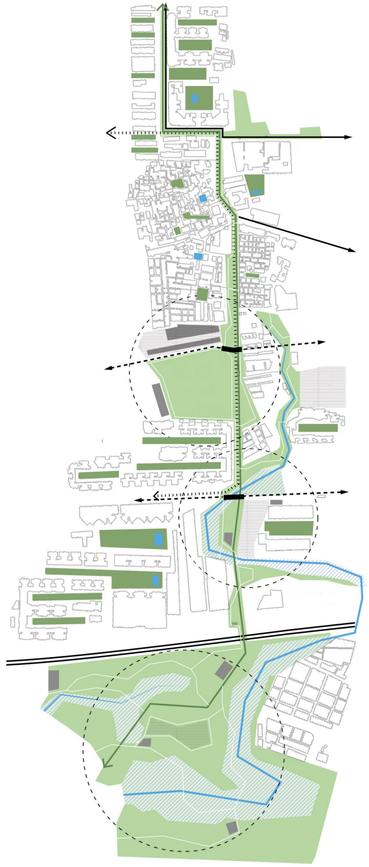
Ecological Corridor + Transversal Corridor



Corridor System + Nodal System



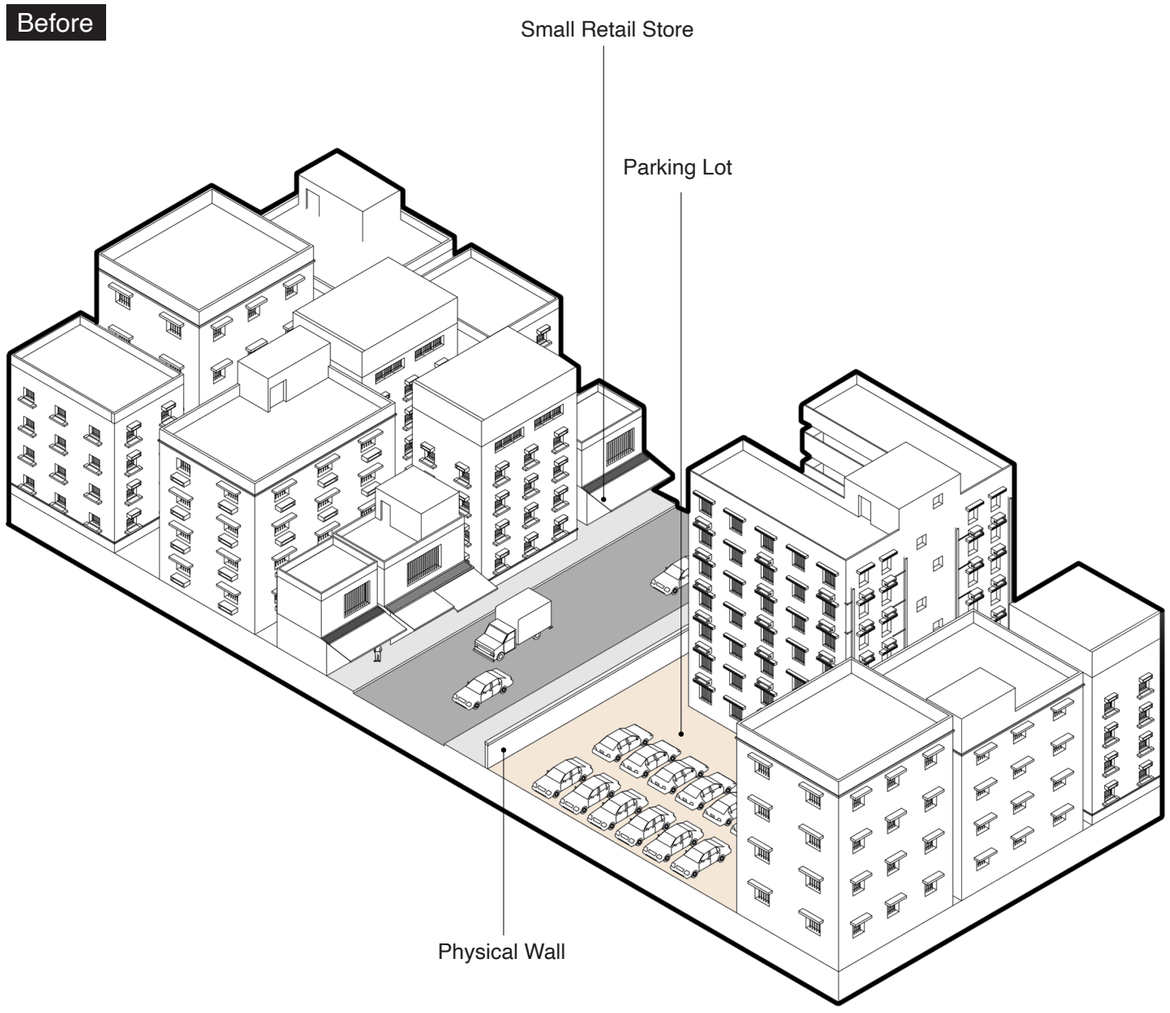
Corridor System + Nodal System + Context



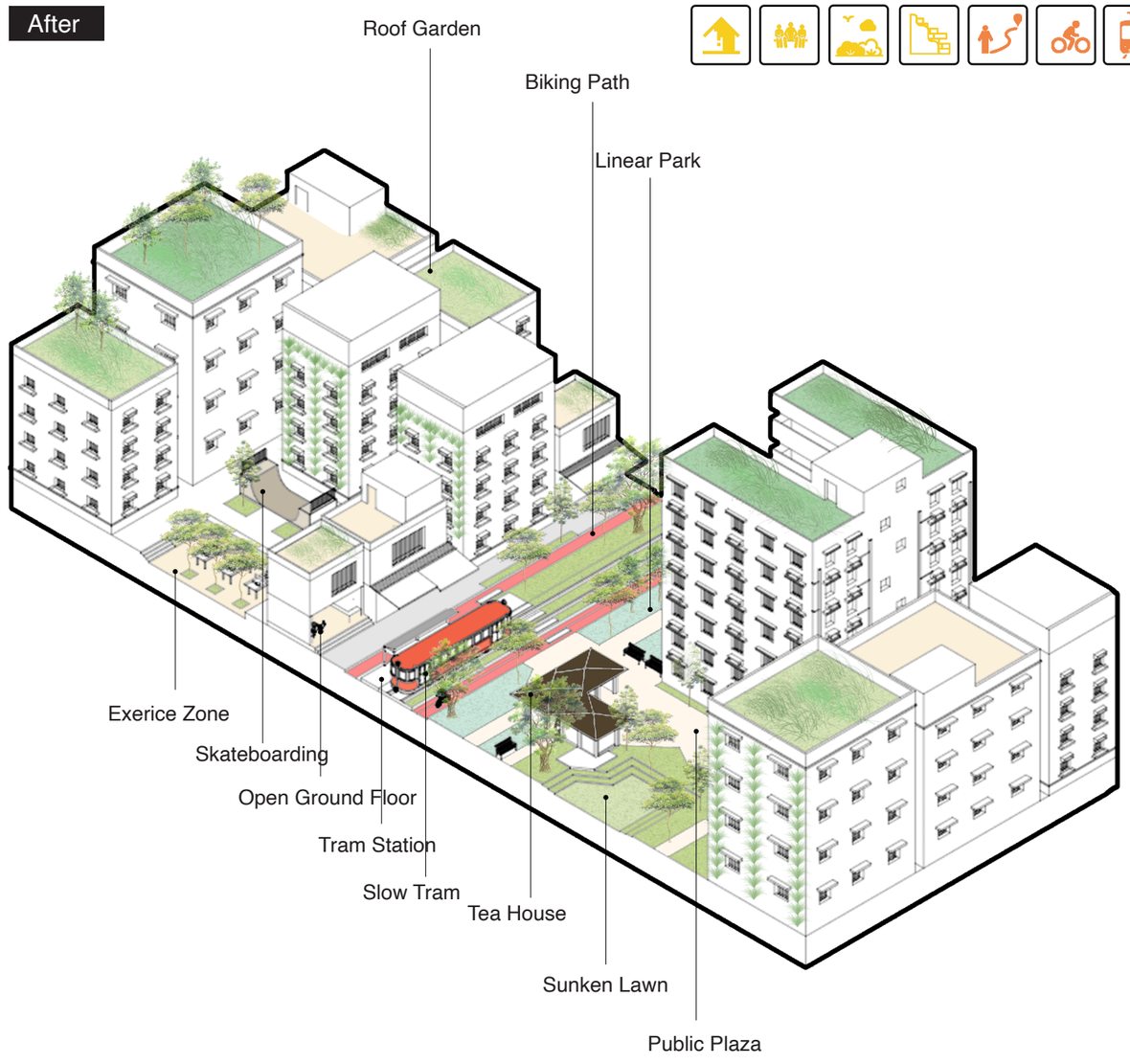
Design Intervention

Ecologcial Route

Before



After



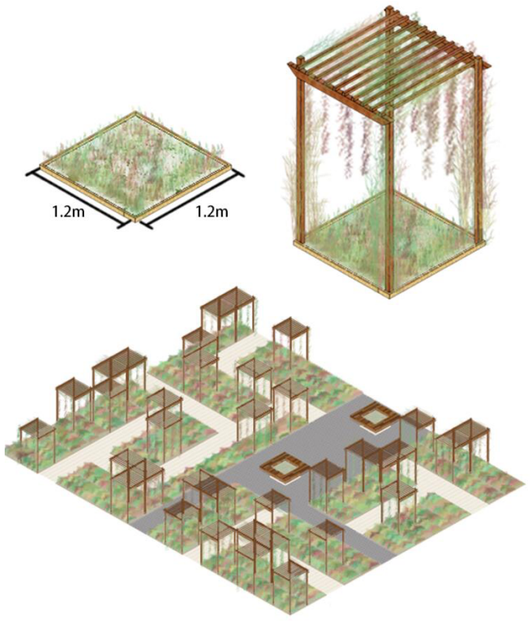
Design Intervention

Ecologcial Route

Community Garden

Urban Farming Area

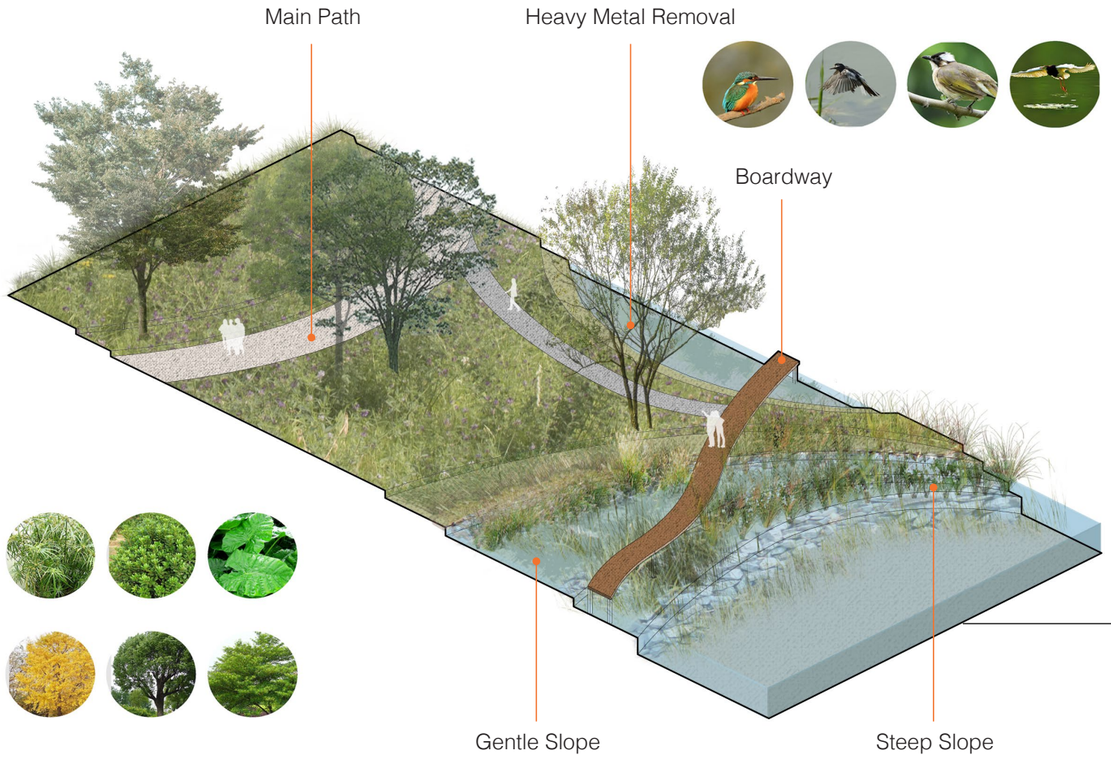
Modular urban farming area



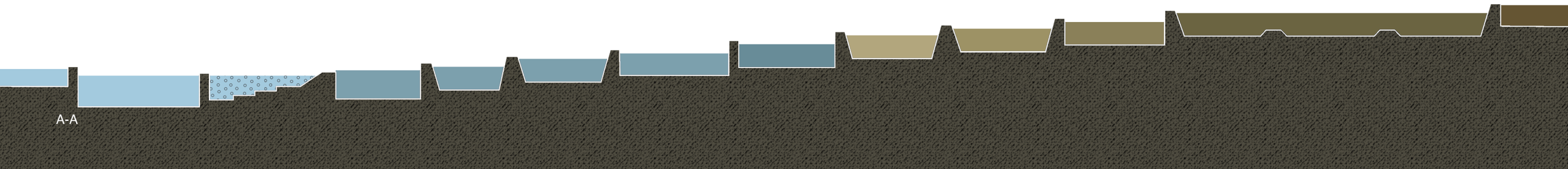
Design Intervention

Ecologcial Route

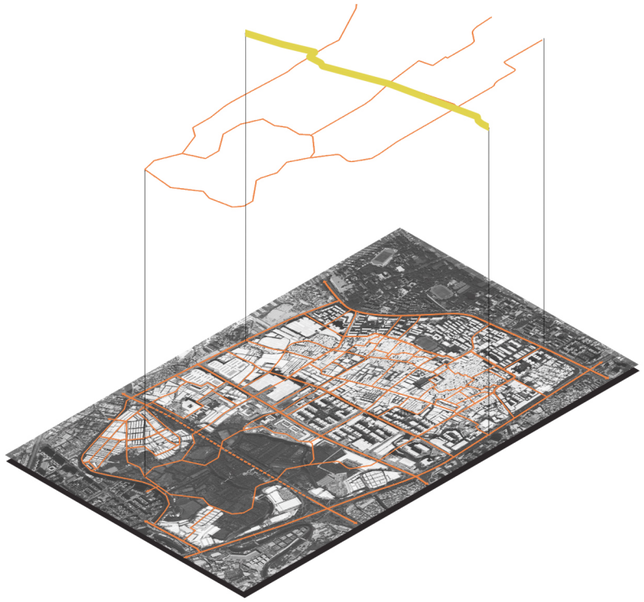
Purification Park



Clean Water Impoundent | Sand Filter | Water Stablization | Biological Purification | Nutrient Removal | Bio-Purification | Heavy Metal Removal | Subsurface Filtration | Bio-Purification



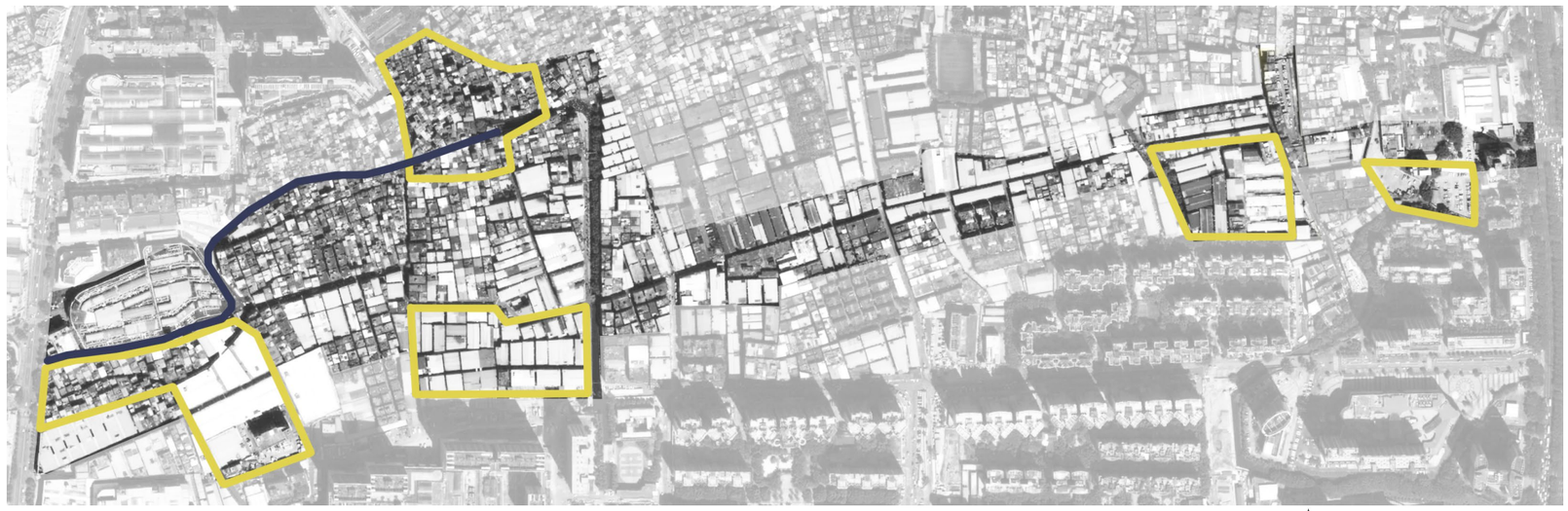
Experience Route



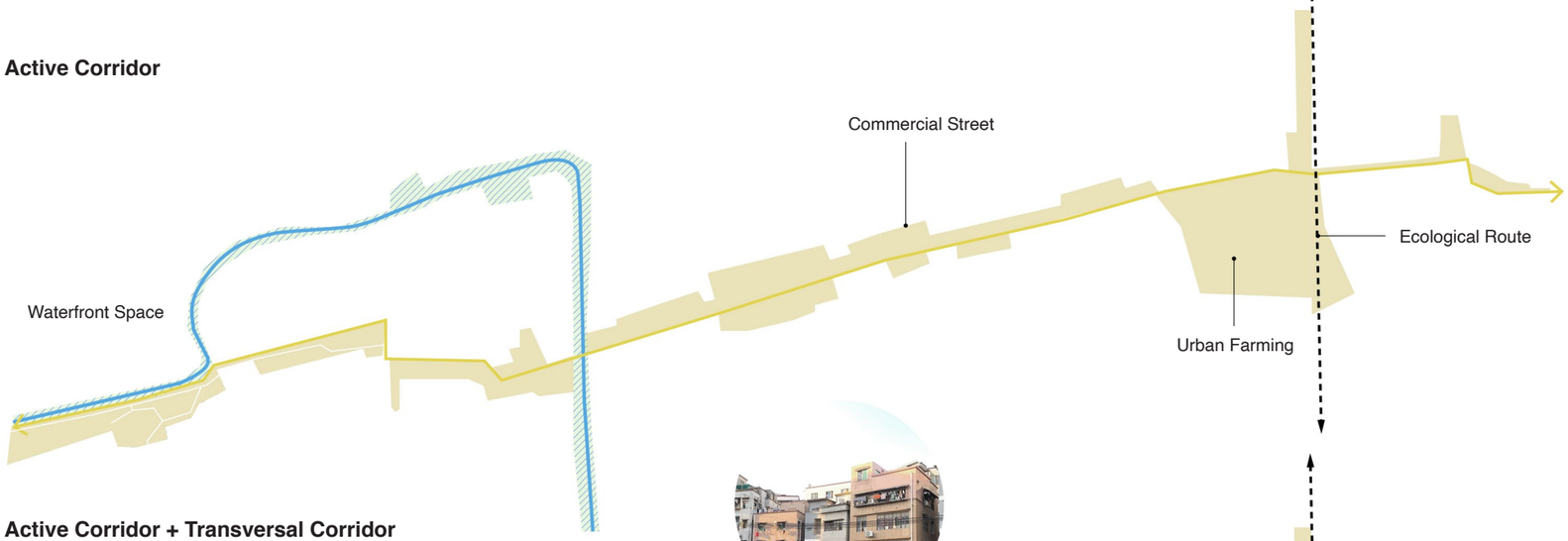
ACTIVE ROUTE

Design Intervention

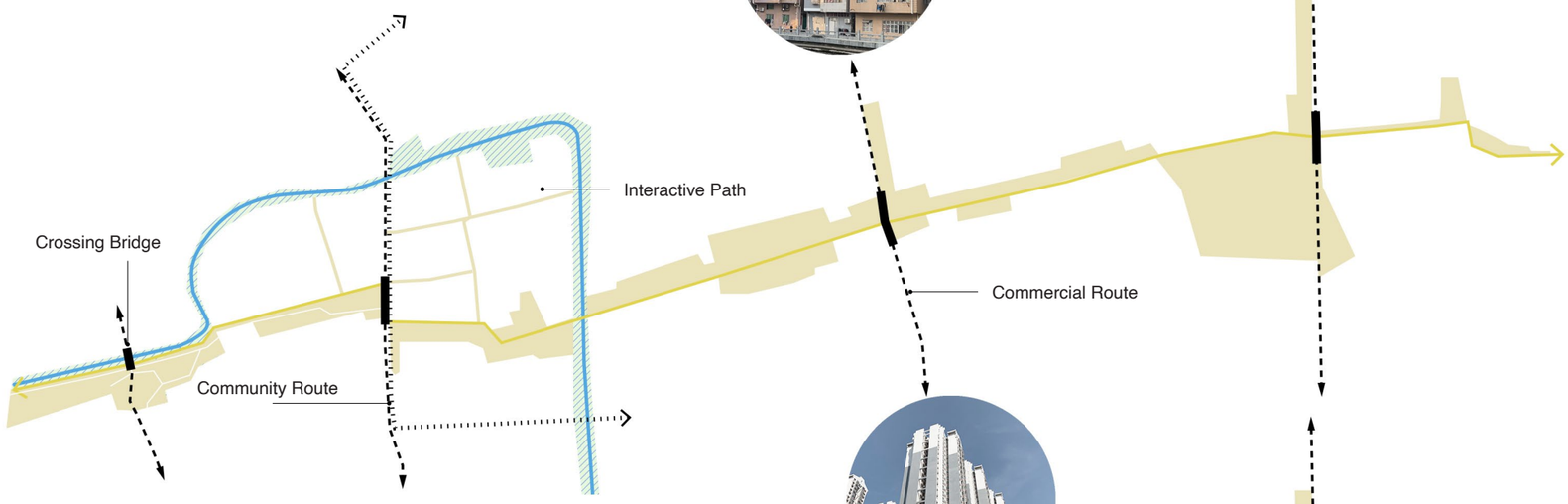
Active Route



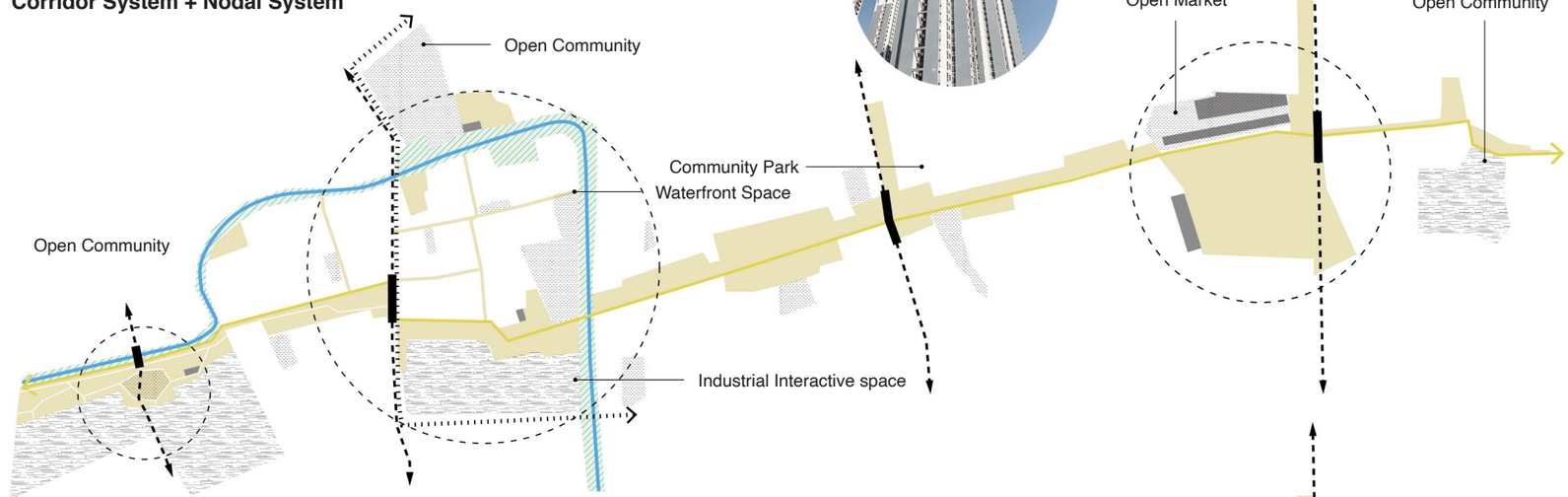
Active Corridor



Active Corridor + Transversal Corridor



Corridor System + Nodal System



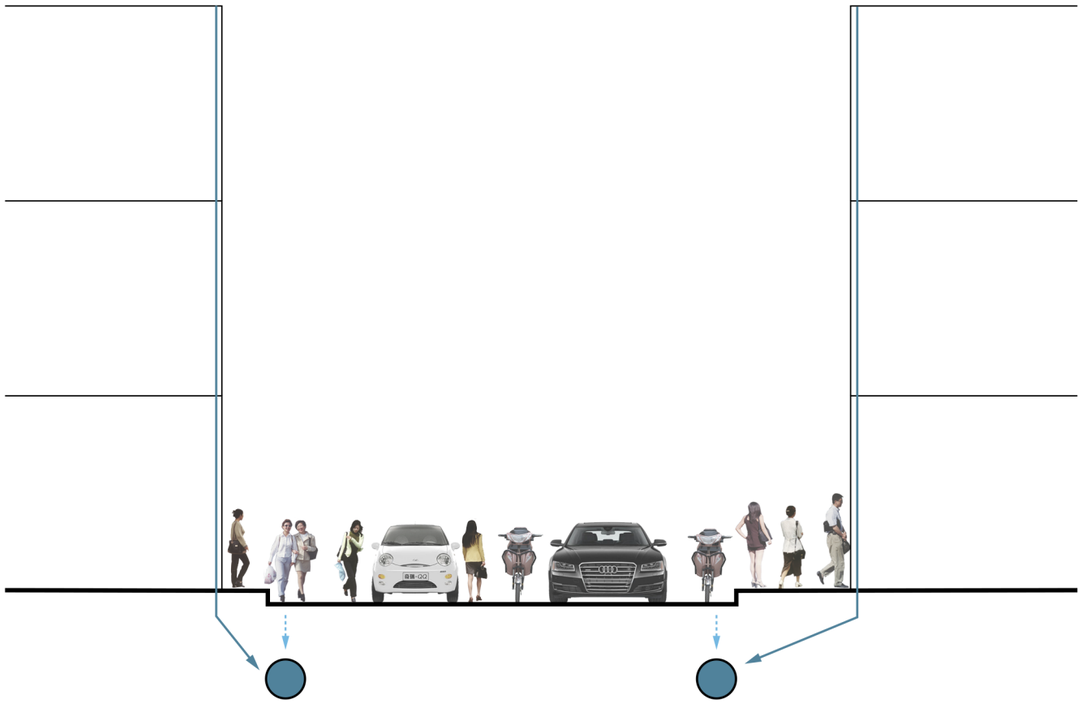
Corridor System + Nodal System

+ Context

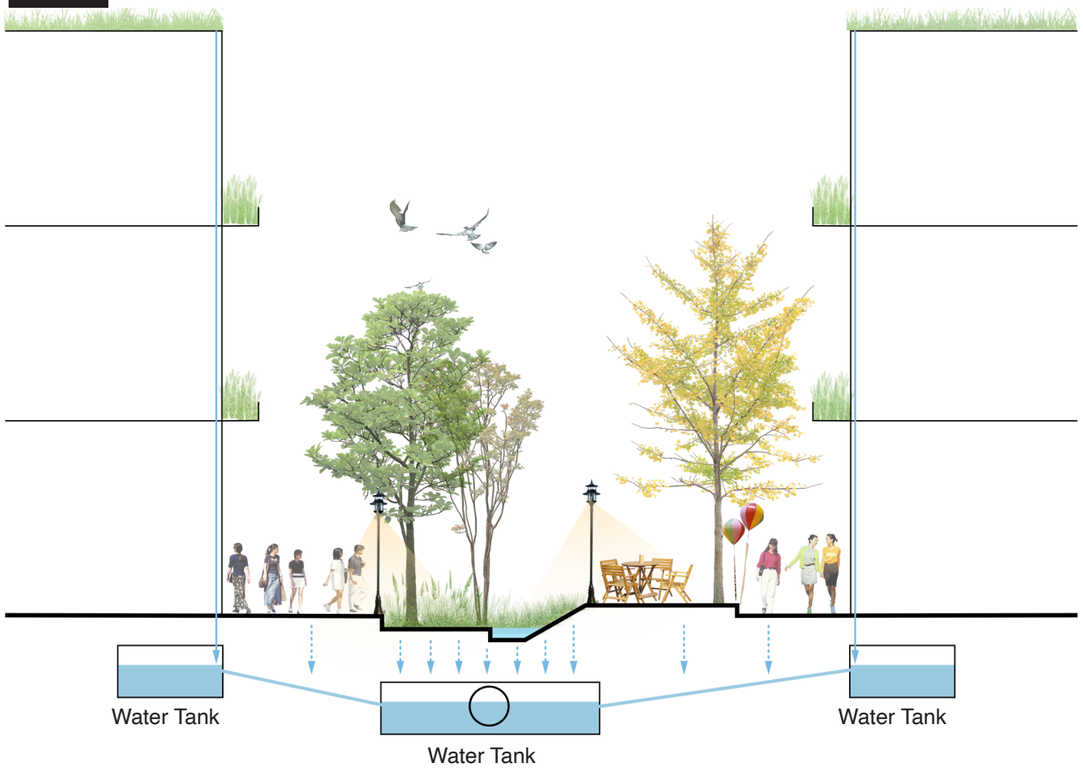
Design Intervention

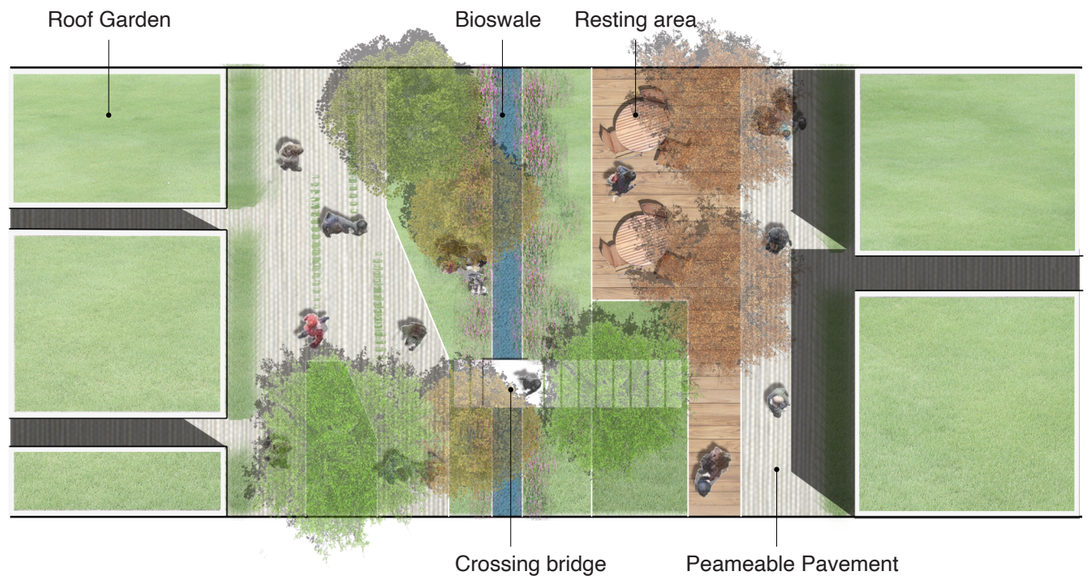
Active Route

Before



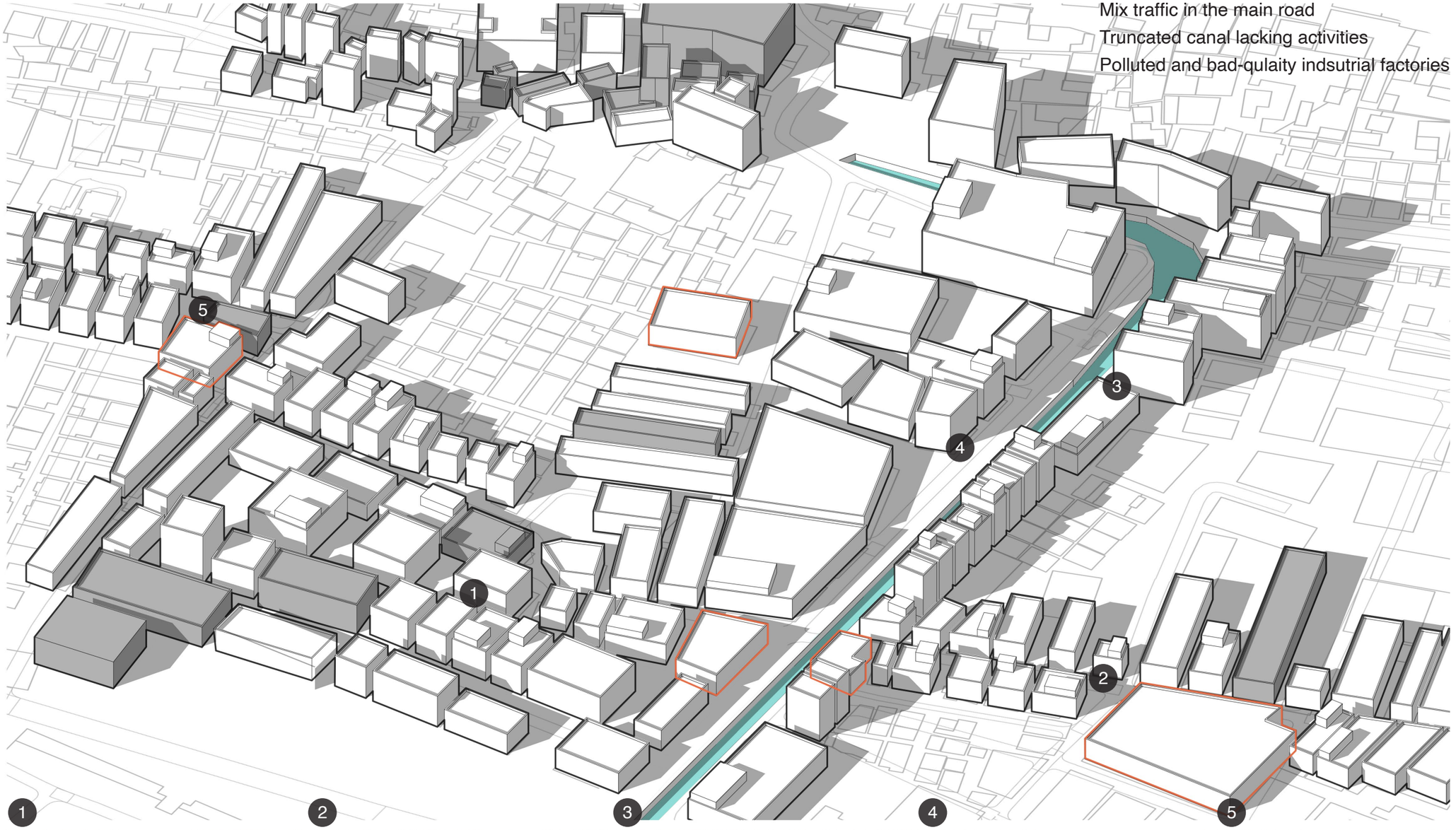
After

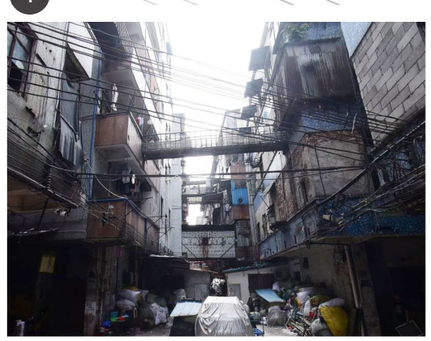




Design Intervention

Active Route

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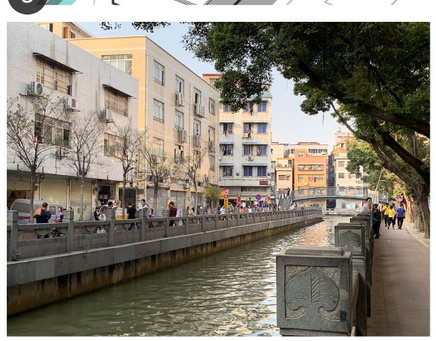
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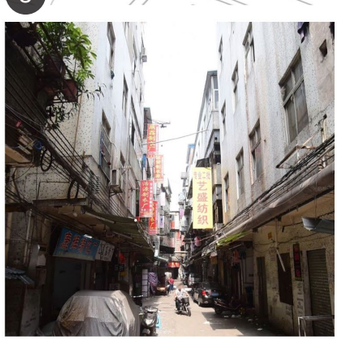
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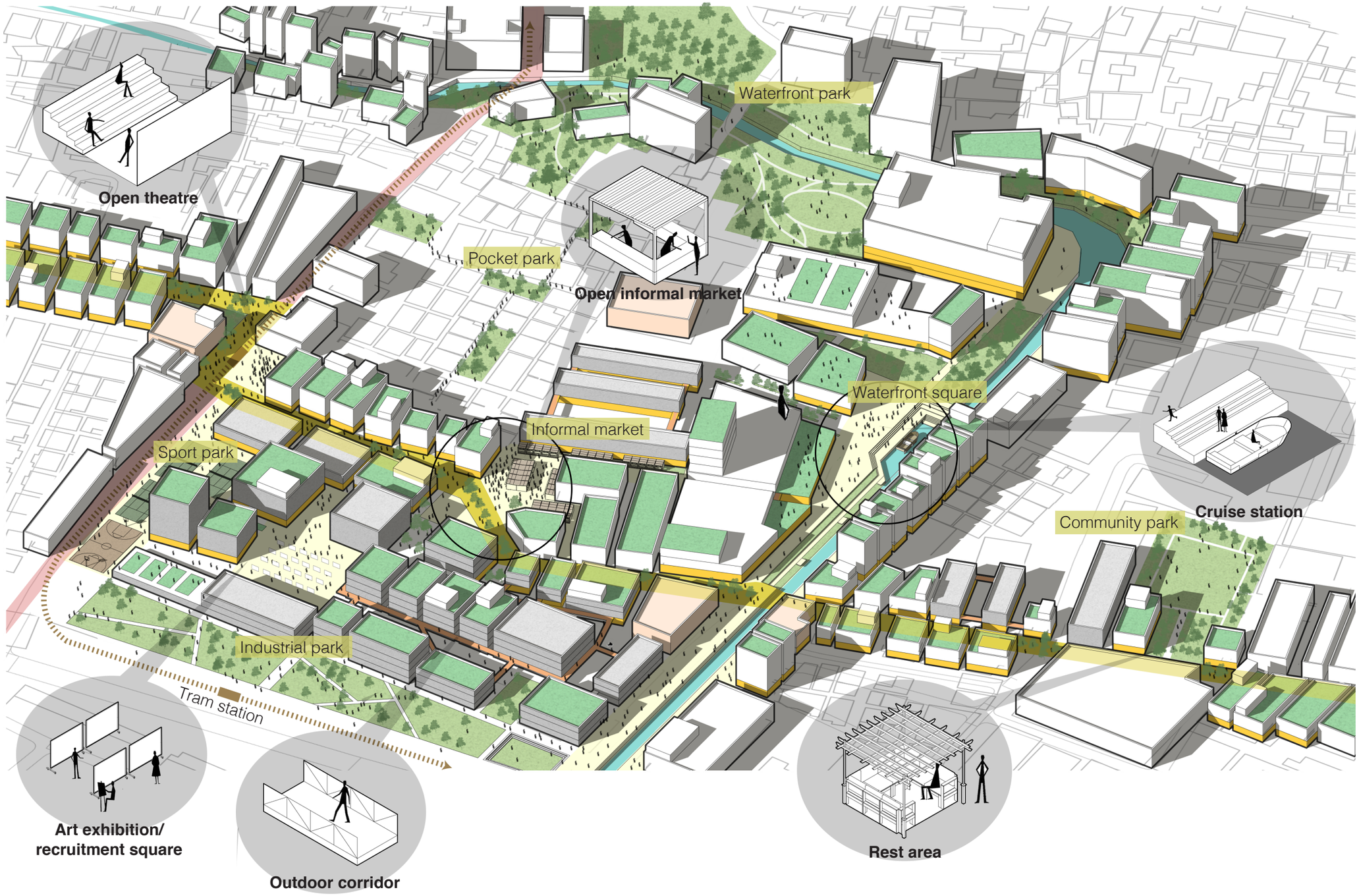
Design Intervention

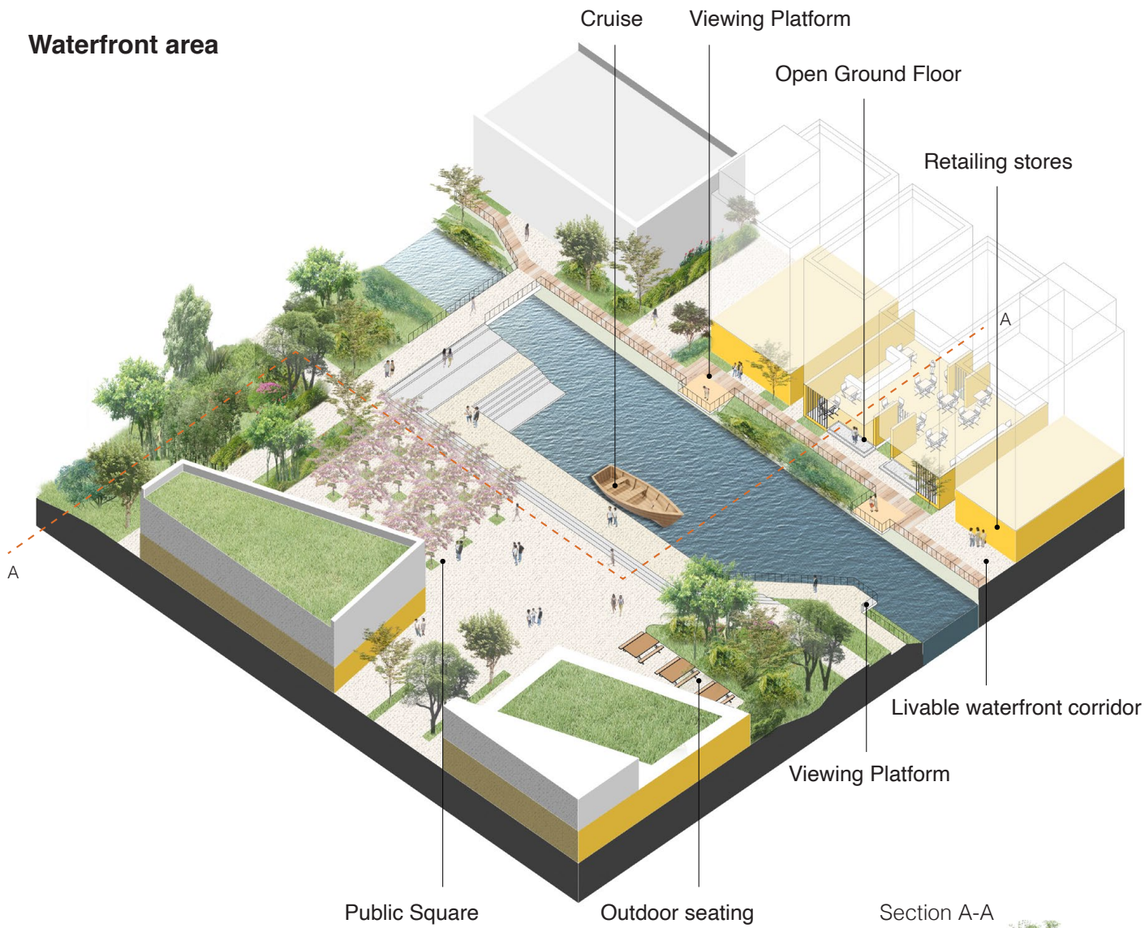
Active Route

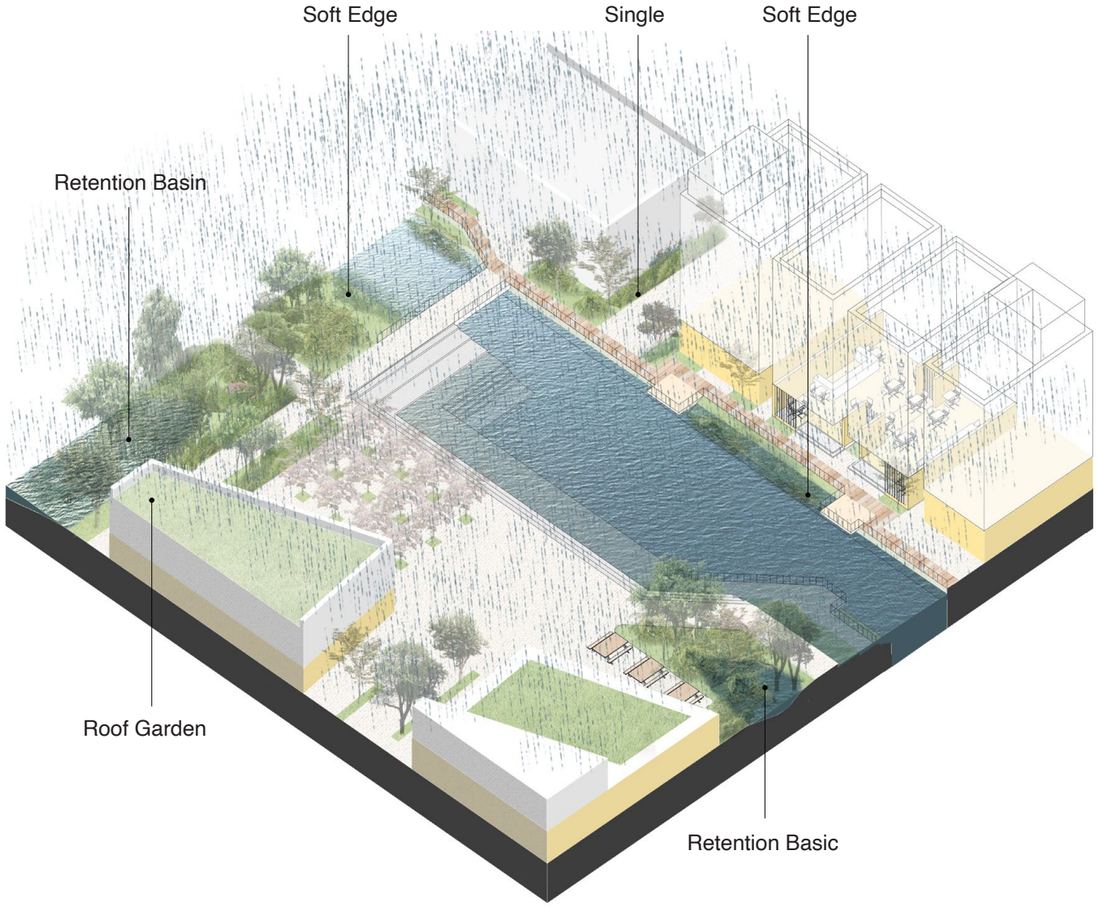


Design Intervention

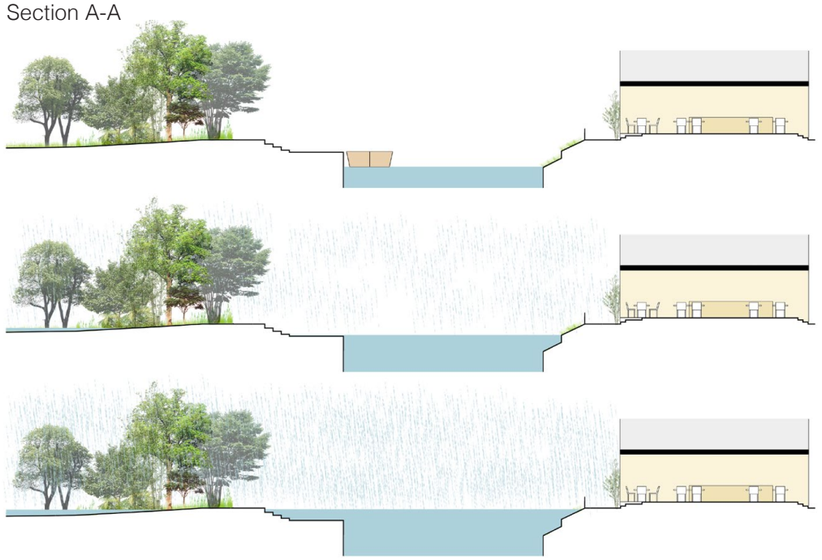
Active Route

Waterfront area





Section A-A



Design Intervention

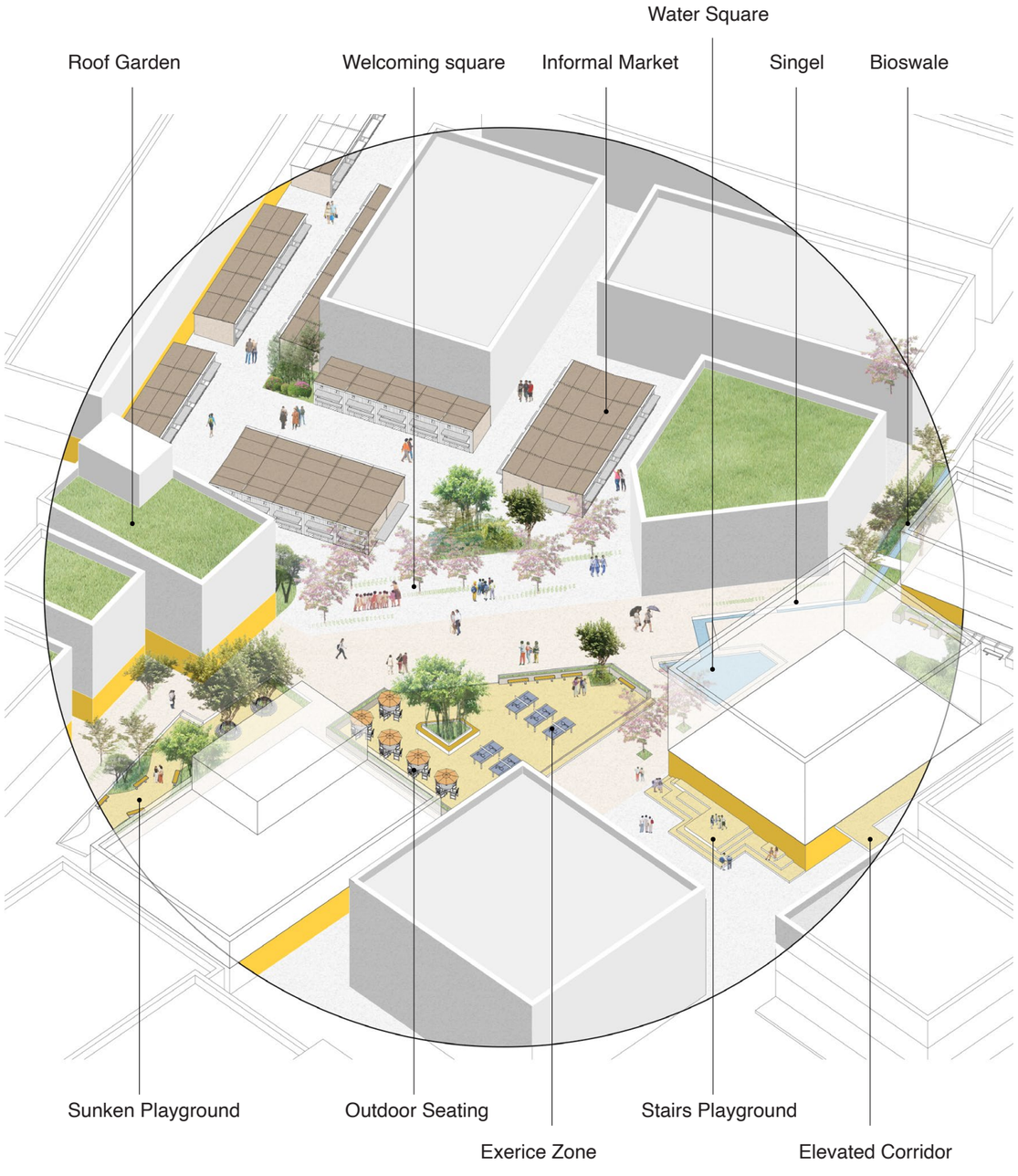
Active Route

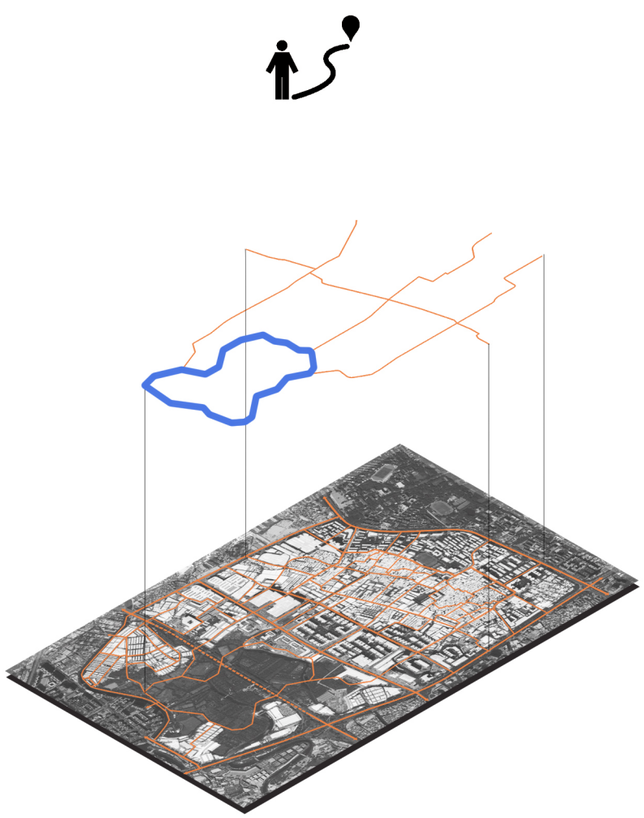
Waterfront area

Design Intervention

Active Route

Informal market

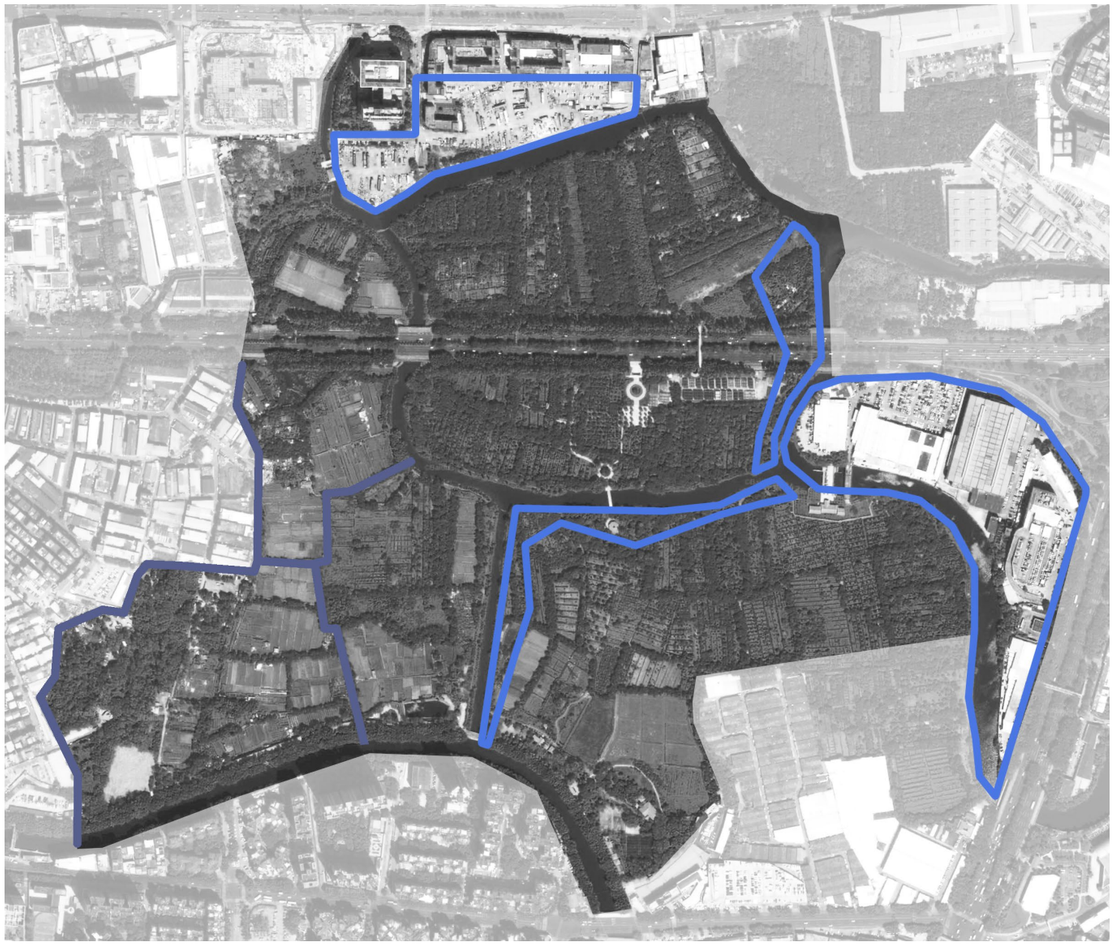




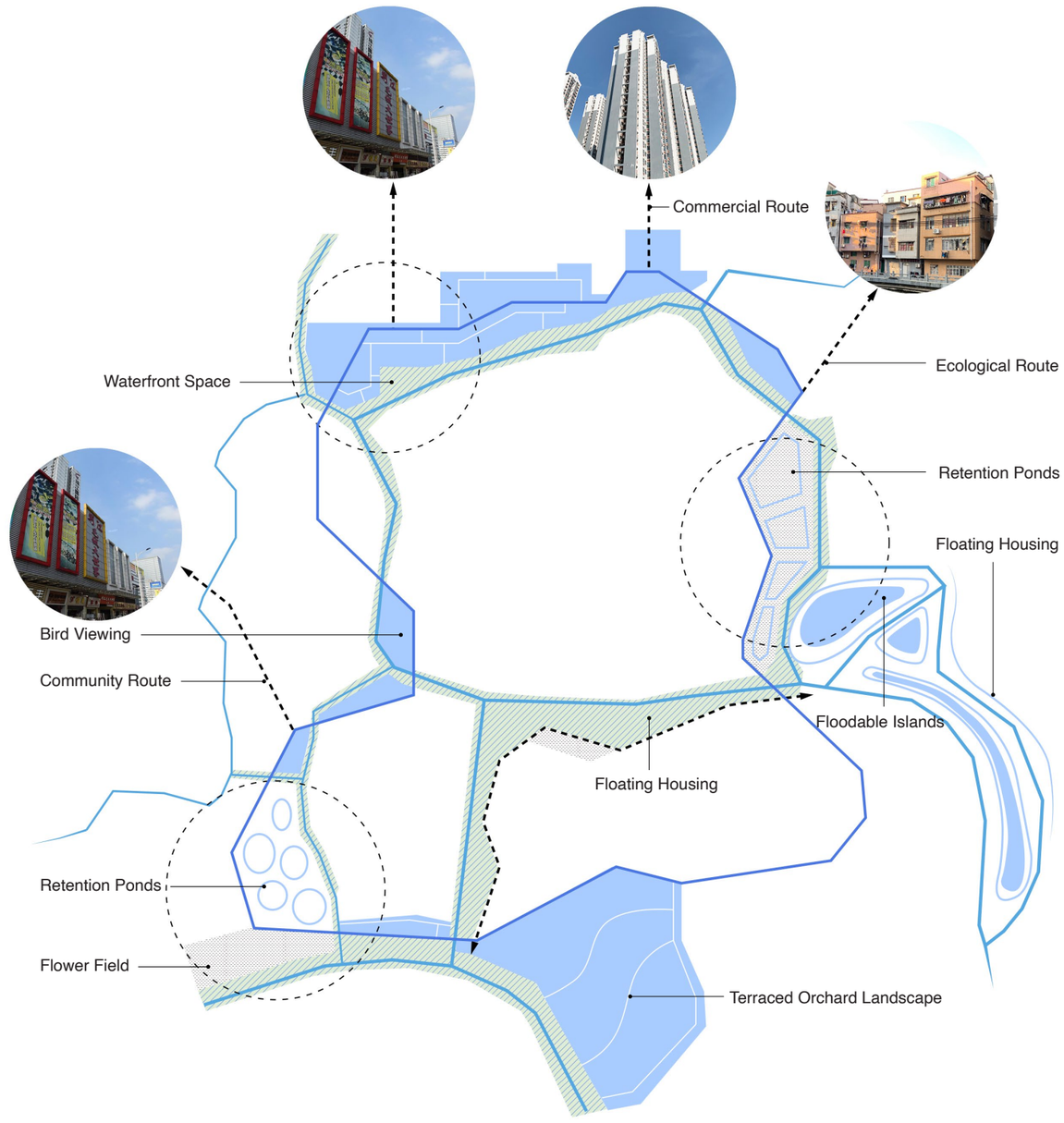
ORCHARD ROUTE

Design Intervention

Orchard Route



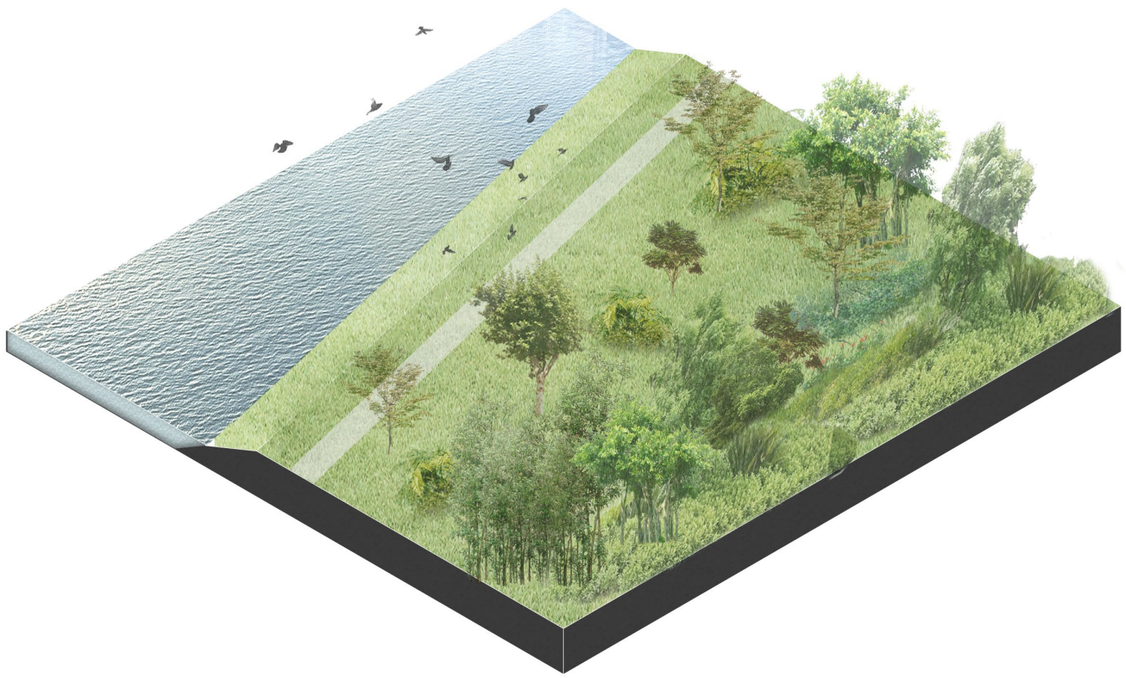
Corridor System + Nodal System



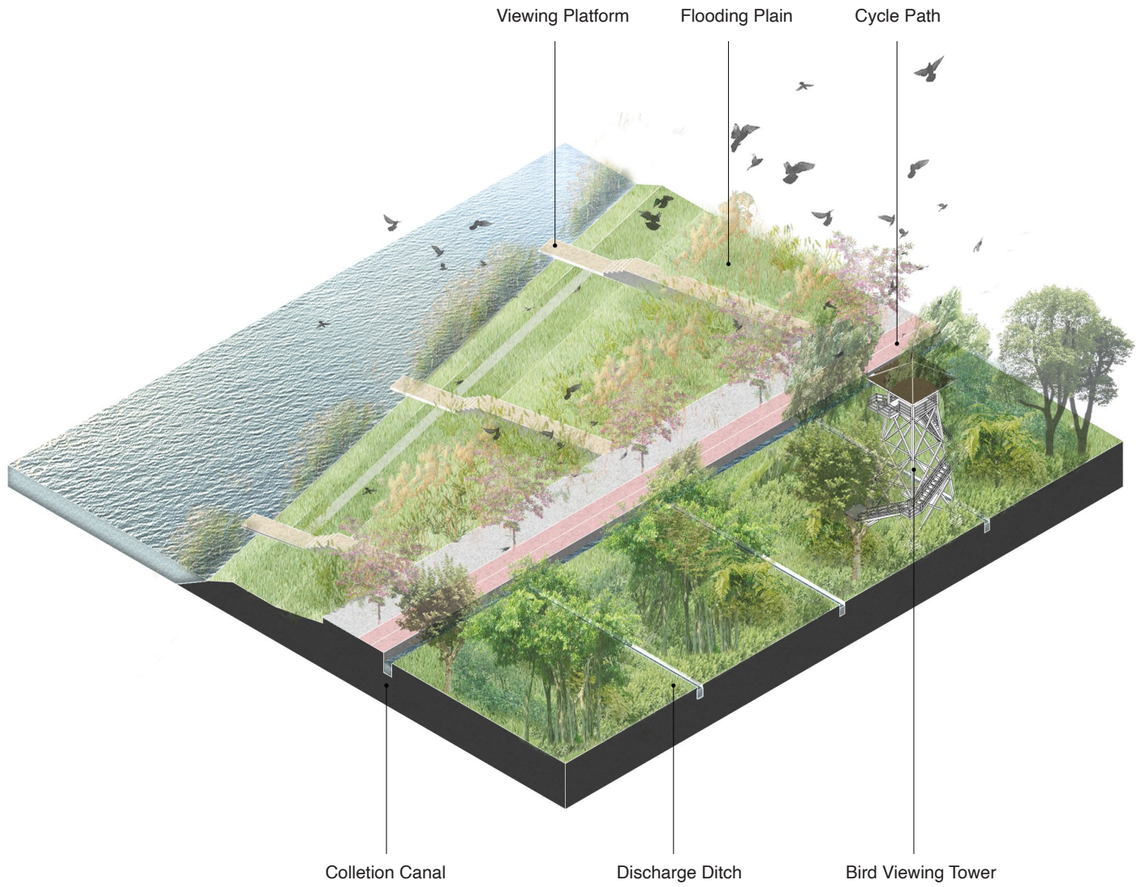
Design Intervention

Orchard Route

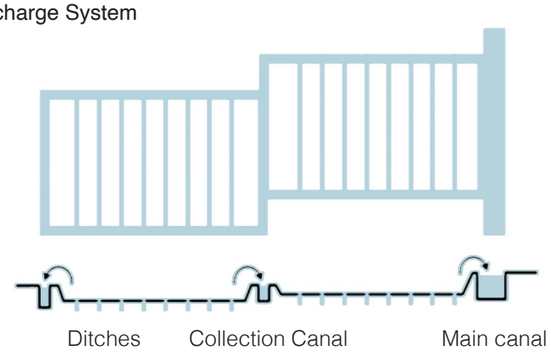
Before



After



Discharge System



Design Intervention

Orchard Route

Retention Pond


Nandina domestica


Phragmites communis


Cyperus alternifolius


Pittosporum tobira


Alocasia macrorrhiza


Taxodium distichum

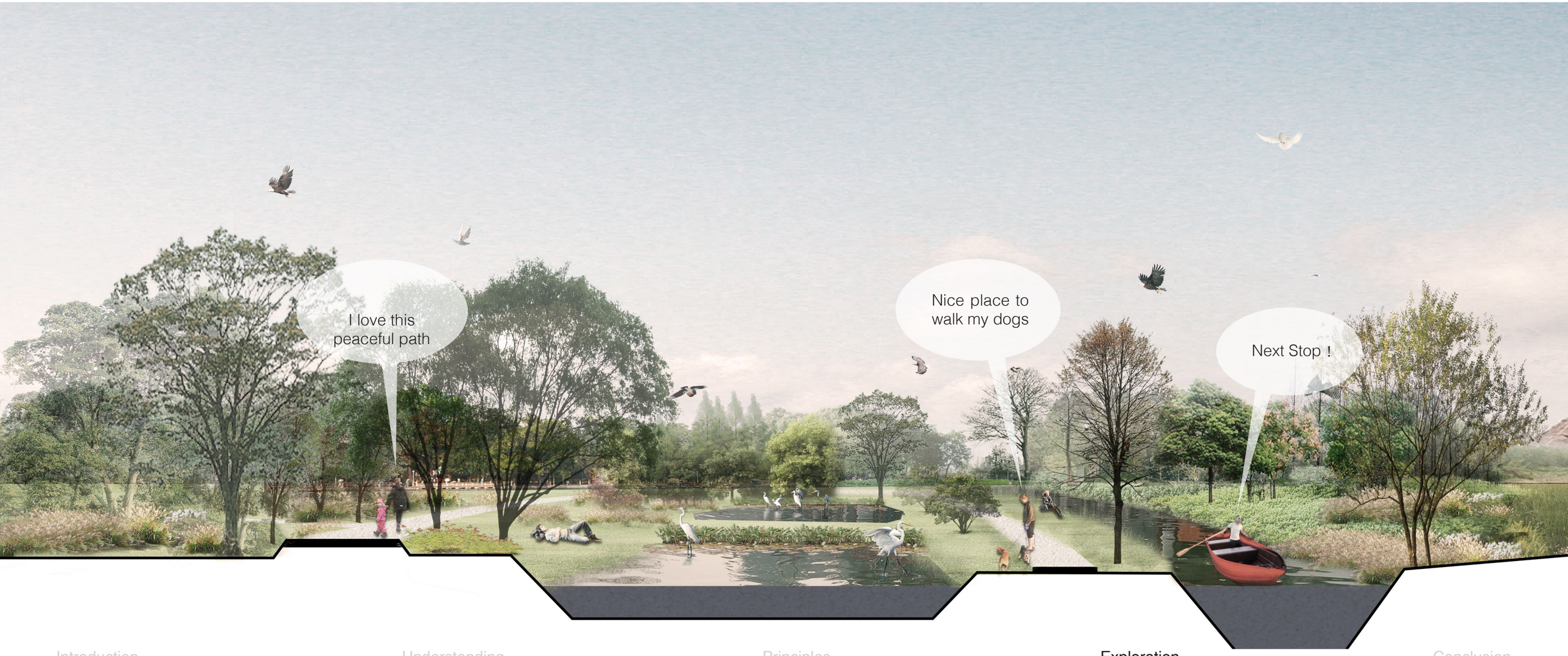

Salix babylonica


Sabina chinensis


Ginkgo biloba


Cinnamomum camphora

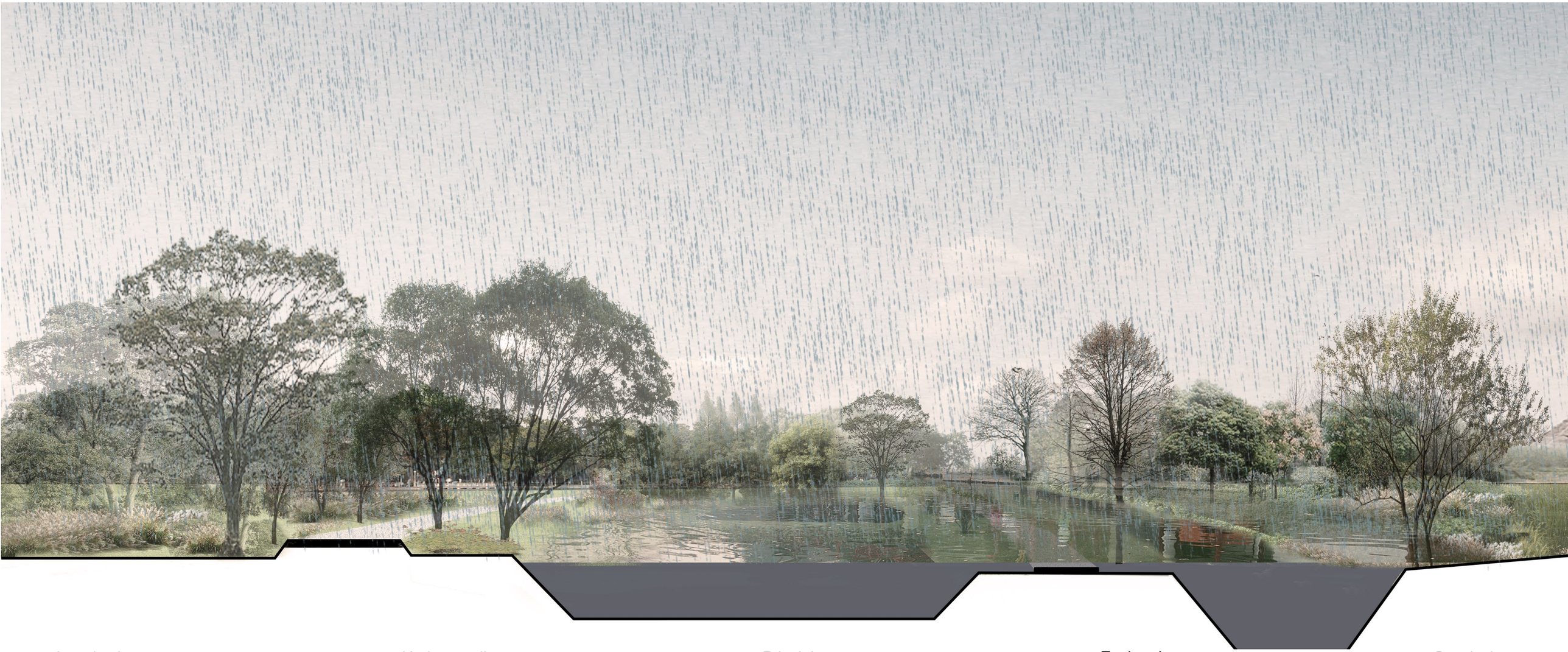

Elaeocarpus hainanensis



Retention Pond

Dry Season

Rain Season

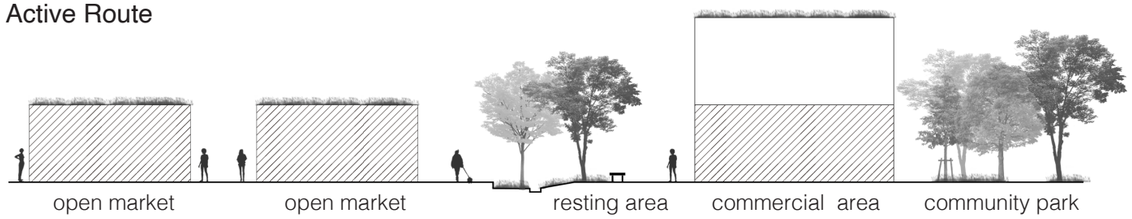


Design Intervention

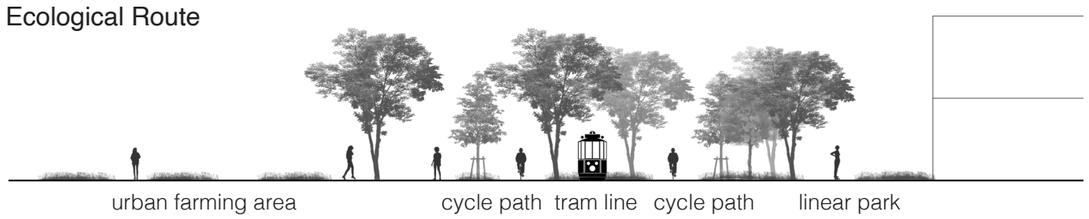
Orchard Route

Conclusion

Active Route

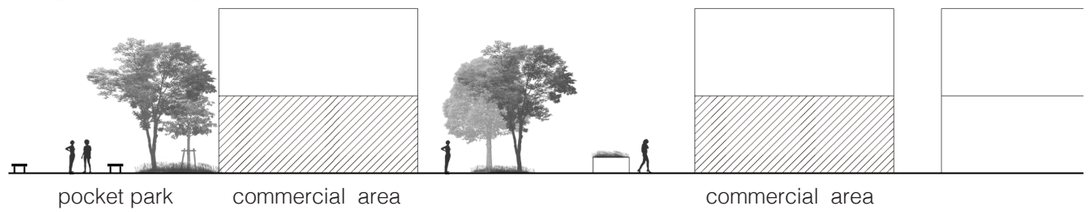


Ecological Route

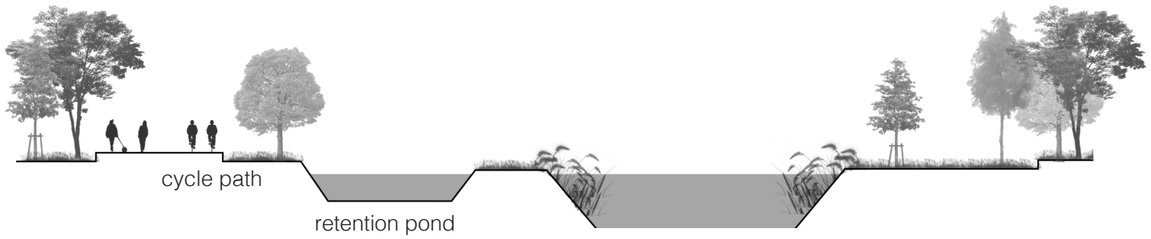


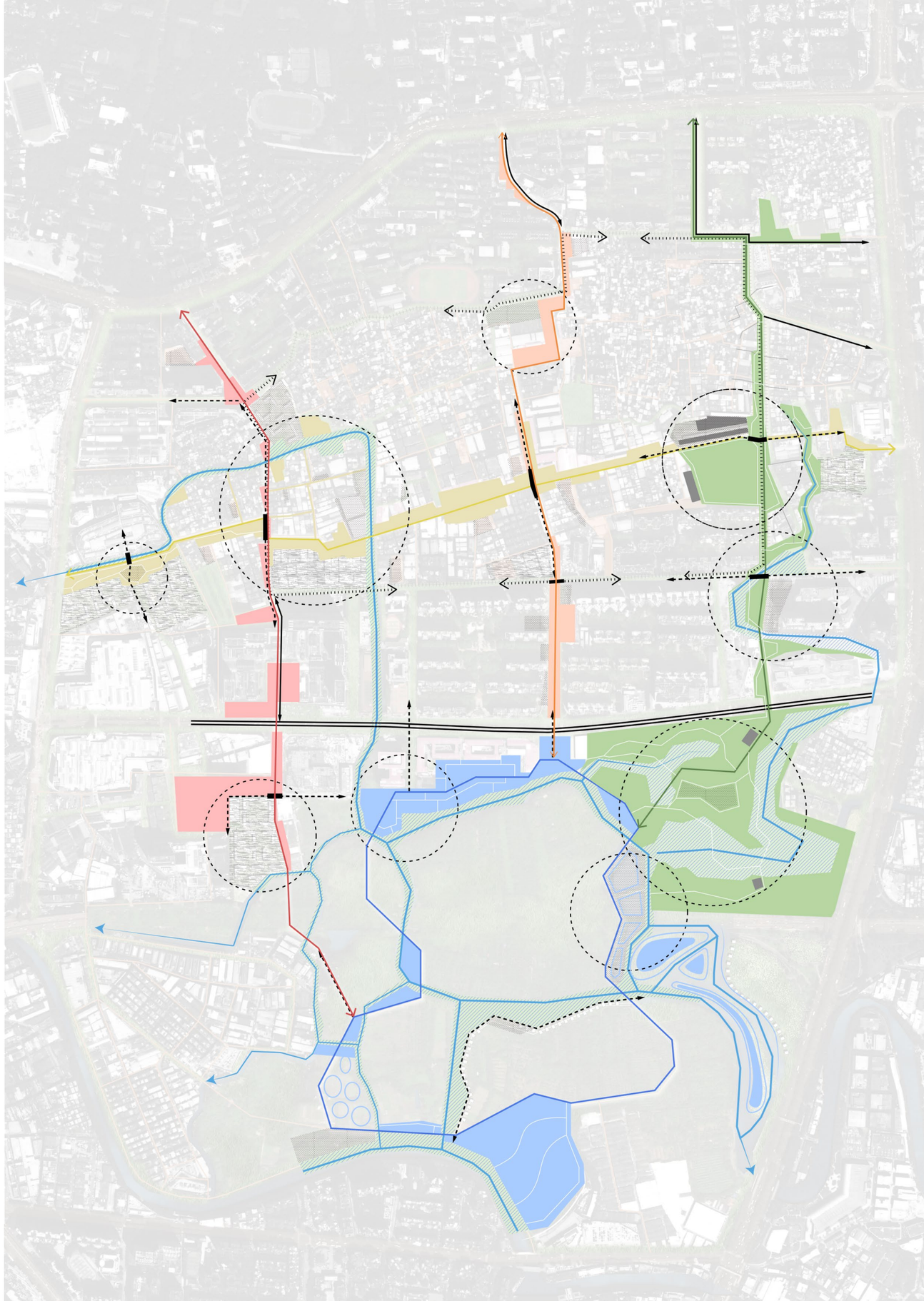
Community Route

Commercial Route

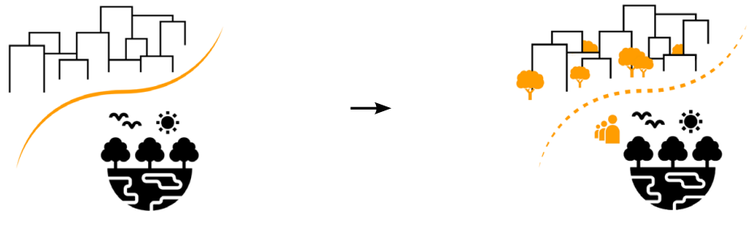


Orchard Route





ECOLOGICAL INTEGRATION

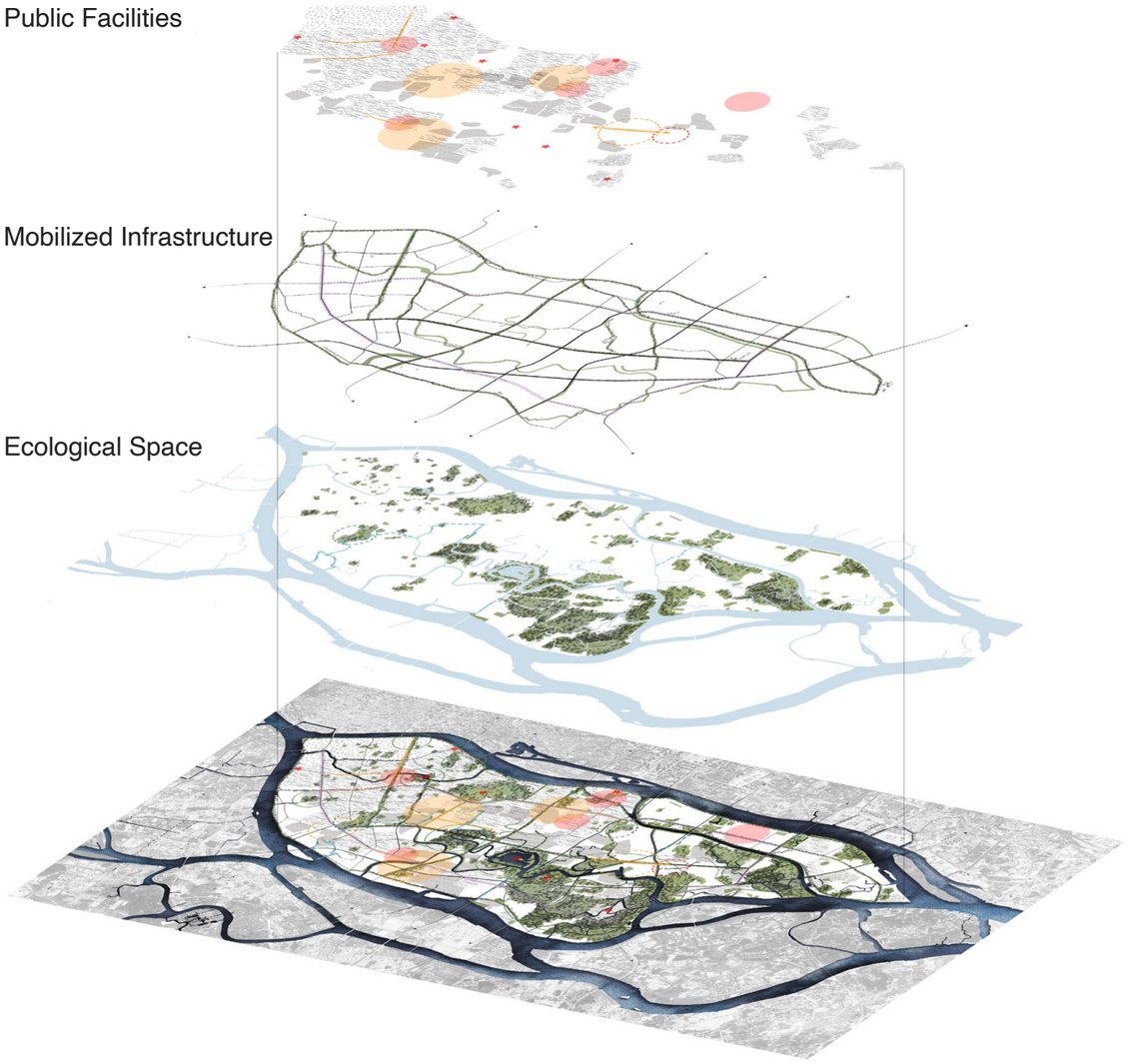


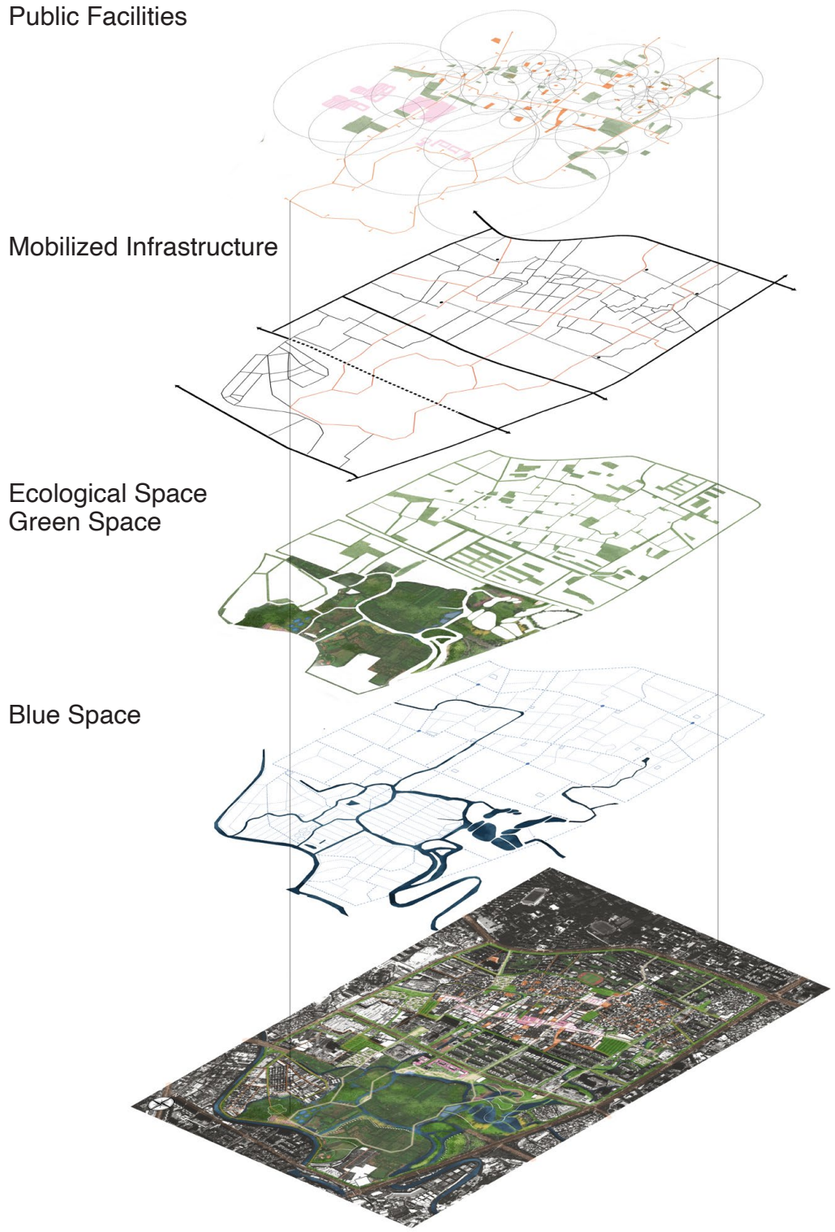
SOCIO-SPATIAL INTEGRATION

CONCLUSION & REFLECTION

Conclusion

Objective: Create an integrated and comprehensive **socio-ecological network** in terms of corridor and node at multiple scales that can improve the socio-spatial integration and reconnect the fragmented green and blue spaces for Haizhu district.





Conclusion

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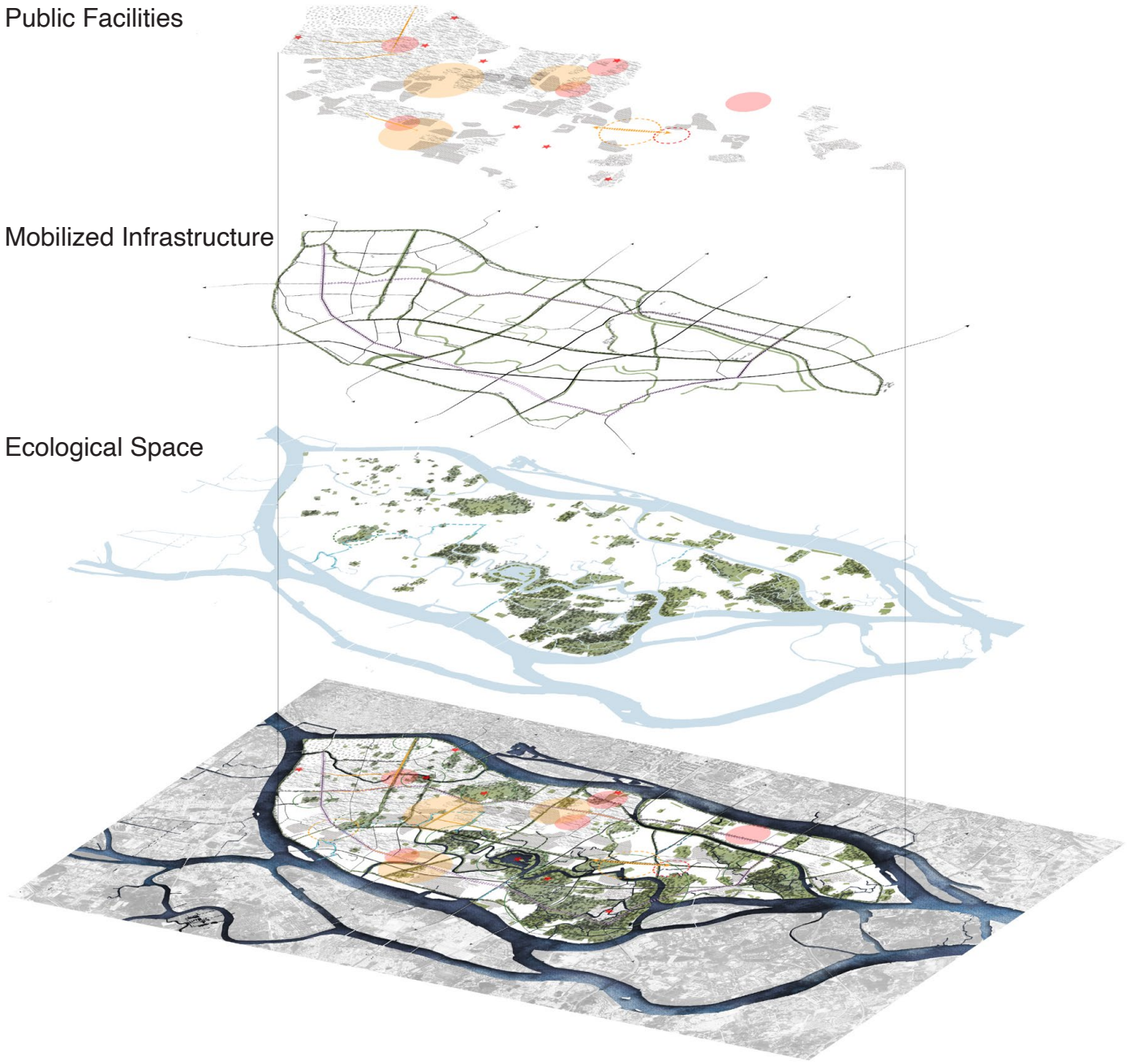
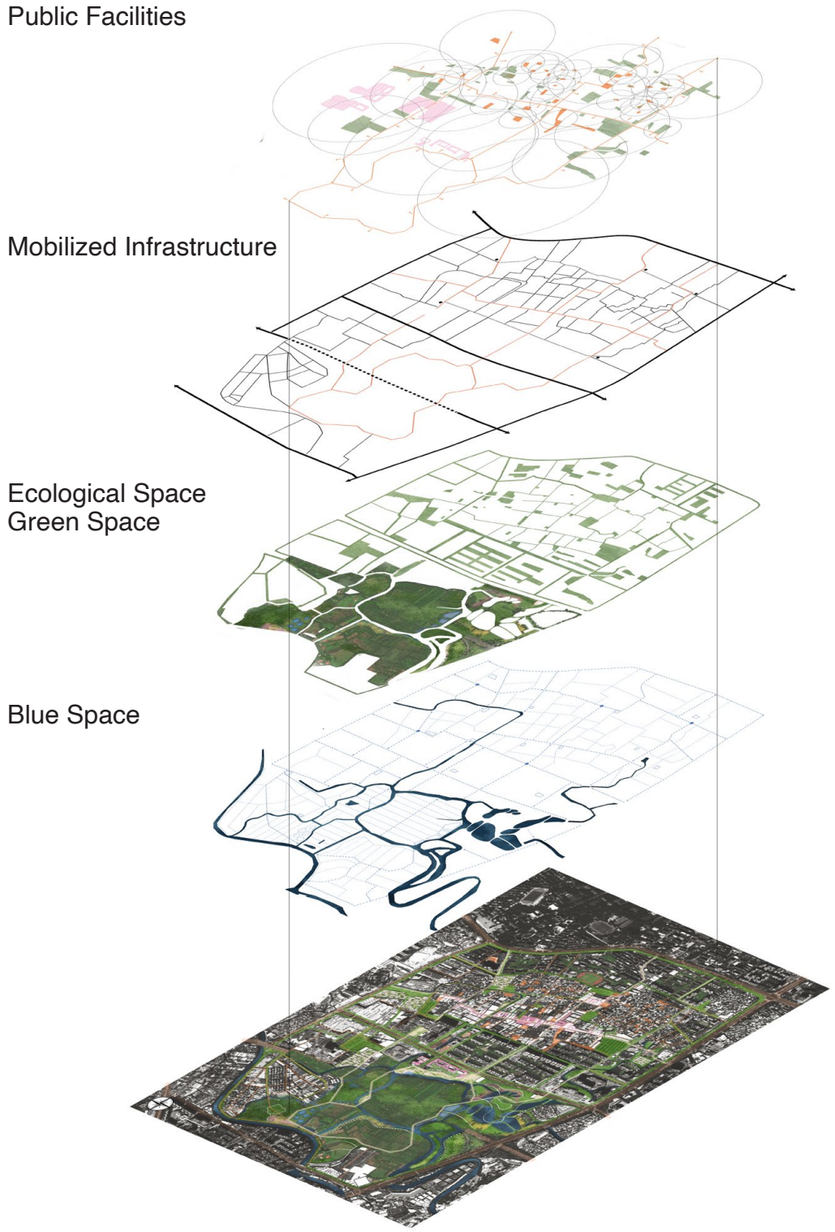




Restore ecological in urban area

Resilient towards flooding issues

Improve connectivitiy and accessibility between different neighborhoos

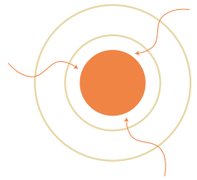
Provide more social and ecological space for interaction in community

Conclusion

Objective: Create an integrated and comprehensive socio-ecological network in terms of **corridor and node at multiple scales** that can improve the socio-spatial integration and reconnect the fragmented green and blue spaces for Haizhu district.

Corridor as Connector

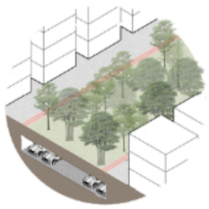
Node as Interactive Space



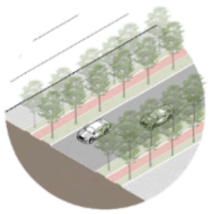
Detailed Application

Social and ecological connection

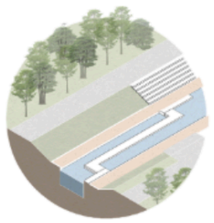
CORRDIOR AS CONNECTOR



Ecological Corridor as Connector

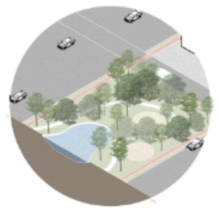


Continuous Greenway as Connector

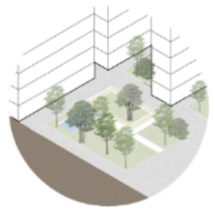


Waterway as Connector (Multifunctional waterfront space)

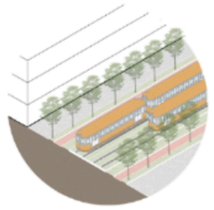
NODES AS INTERACTIVE SPACE



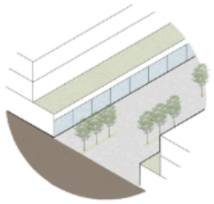
Recreational/ Ecological Parks as Interactive Space



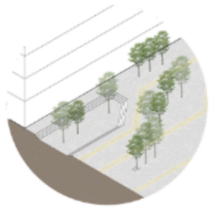
Community Public Gardens as Interactive Space



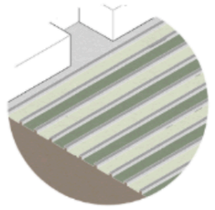
Sustainable Public Mobilty as Connector



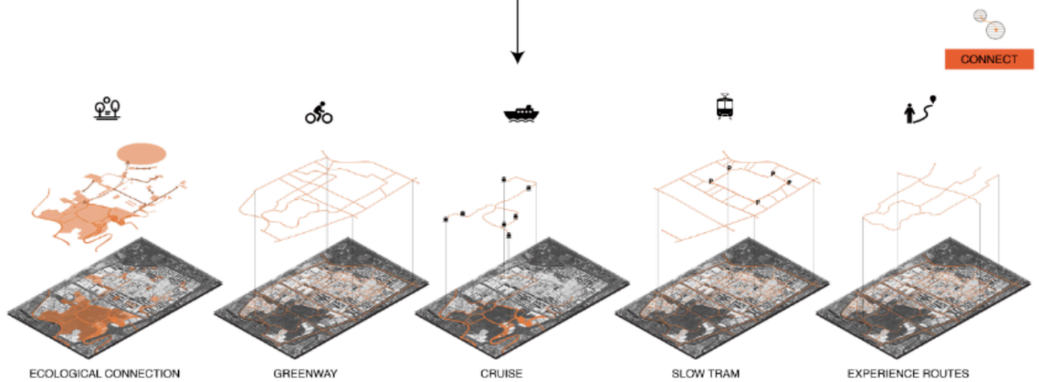
Commercial Street as Connector



Commercial Hub as Interactive Space



Activity Hub as Interactive Space (Urban farming, flea market etc.)



Improvement of mix spatial qualities in communities

Social Value

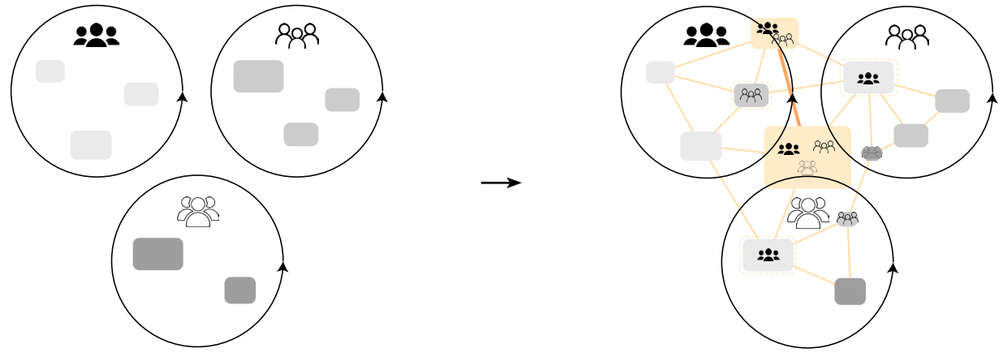
Ecological Value

Detailed Application

Conclusion

Objective: Create an integrated and comprehensive socio-ecological network in terms of corridor and node at multiple scales that can improve the **socio-spatial integration and reconnect the fragmented green and blue spaces** for Haizhu district.

Integration at Local Scale



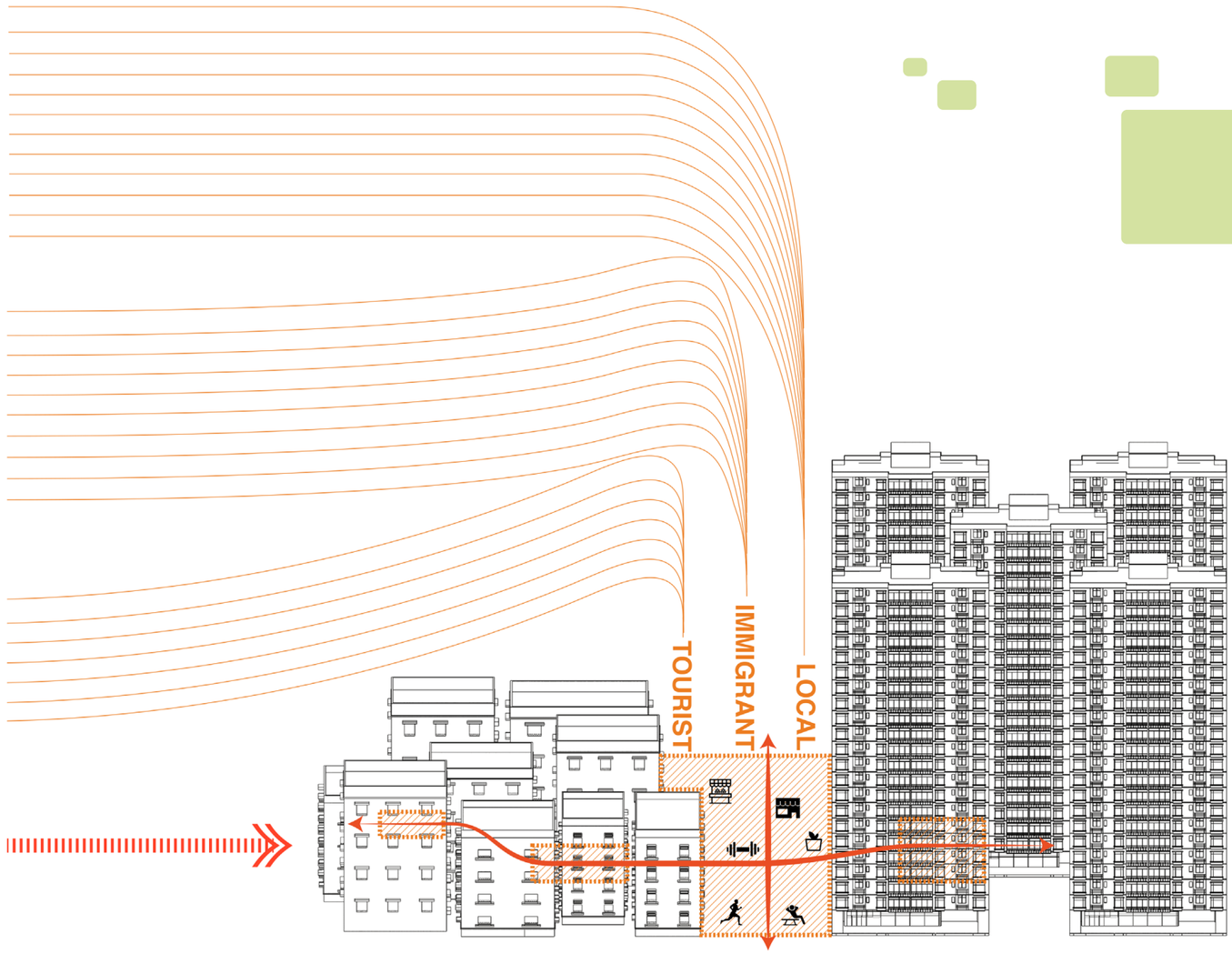
Integration at Neighborhood Scale

Modern Community
High-income immigrants & Local people
Dance
Chat
Sit
Read
Shopping
Exhibition
Art
Eat
Sport
Entertained facilities
...

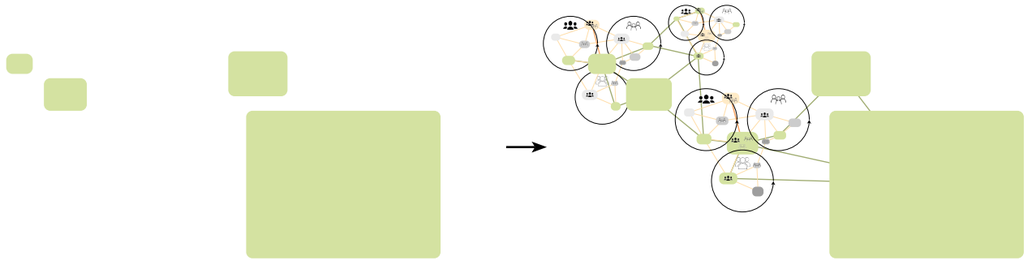
Urban Village
Low-income immigrants & Local villagers
Work
Chat
Sit
Catering
Shopping
Eat
Chess, Majhong
Fitness facilities
...

Tourist
Shopping
Sightseeing
Eat
Rest
Exhibition
art
...

Events
Open market
Workshop
Sport activities
Recruitment day
...



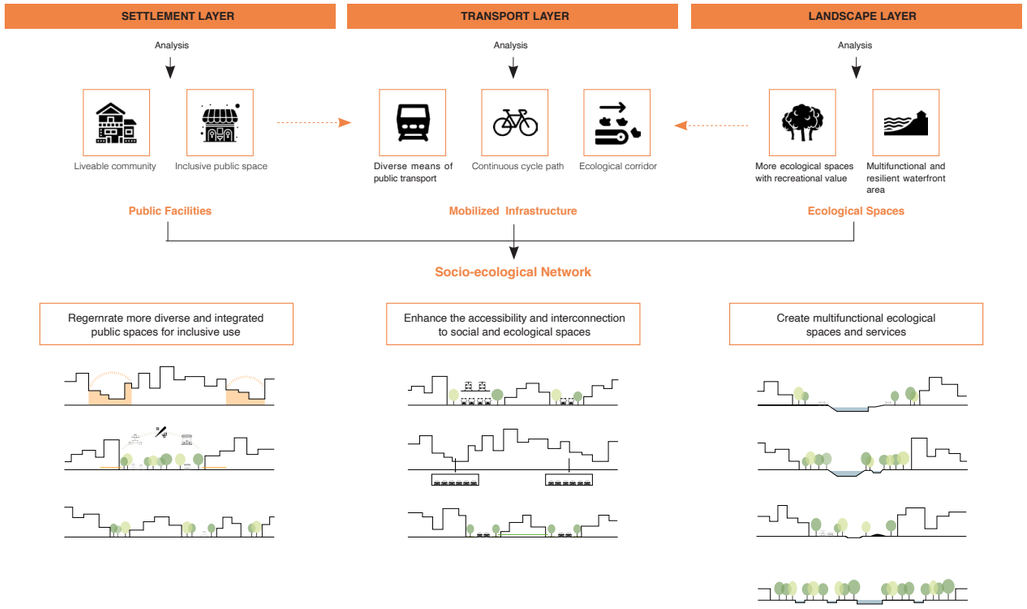
Integration at Regional Scale



Reflection

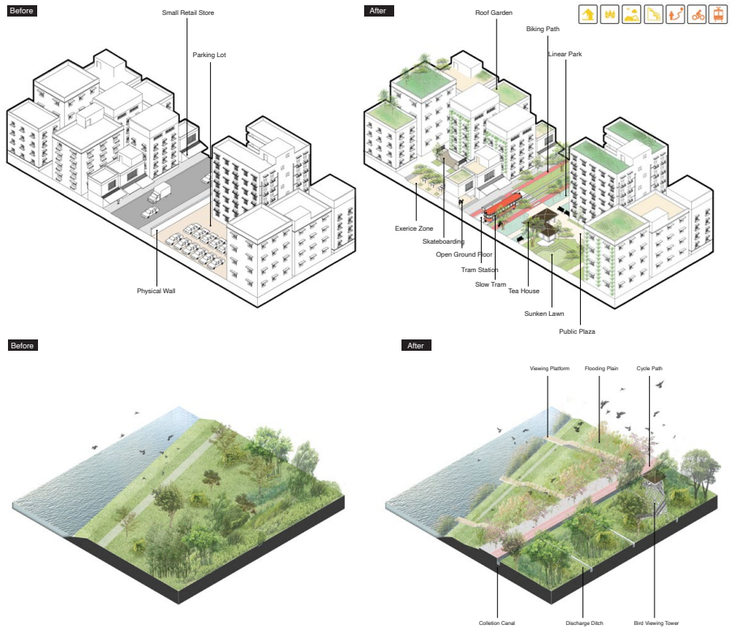
Research sets up a framework to lead the design explorations, providing tools and potential elements and information to support and realize the design.

The framework of the research is made up of three layers, settlement, transport and landscape, where the three characters of the network are created for building up a new comprehensive socio-ecological structure.



Further design explorations help to explain the research result with interventions that facilitate the objective under the framework.

The framework of the socio-ecological network is applied on local scale with specific elaboration based on the principles with corridors and nodes concerning about the social and ecological value related back to the problem field.

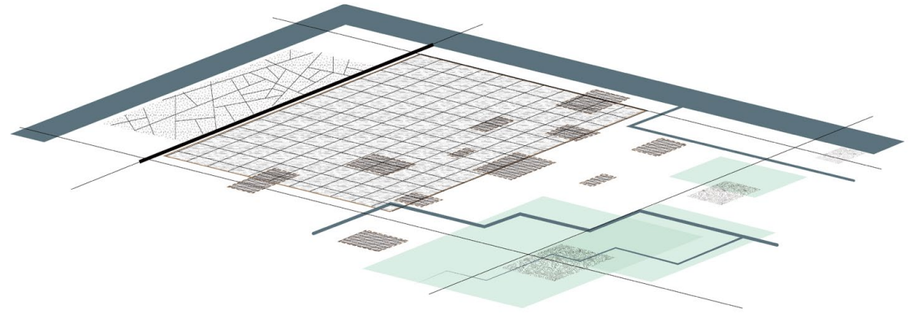


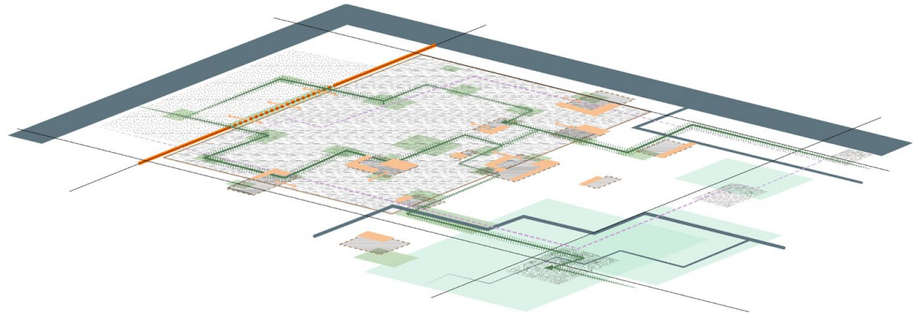
Limitation & Difficulties

-Limited pratical implementation in a dense urban area due to the strict policy
-Complicated stakeholder's system, especially in urban village
-Essential inclusion of other displines, urban planning, sociology, engineering etc.

Lessons learned

-Multiscalar working method
-Synthetic of landscape and urban environment
-Landscape as a complex system of different layers with dynamics
-Collaboration of social and ecological functions (flows & cycles)
-Mix spatial uses and experience of individuals towards socio-spatial integration





THANK YOU FOR LISTENING!