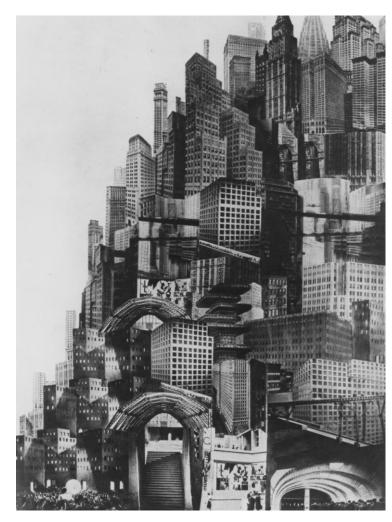
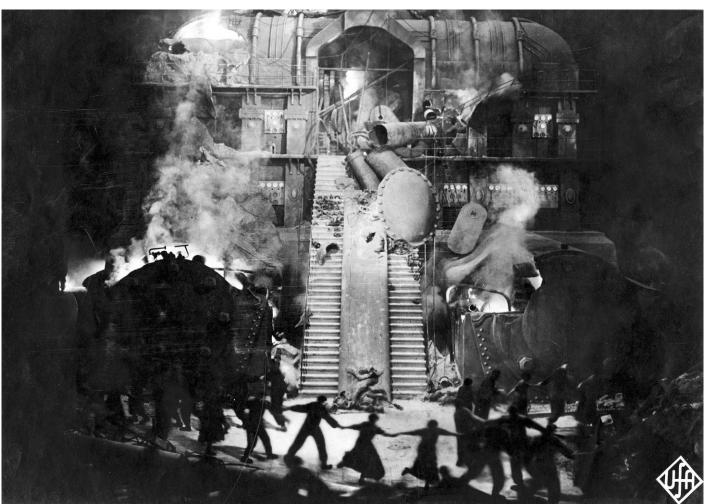


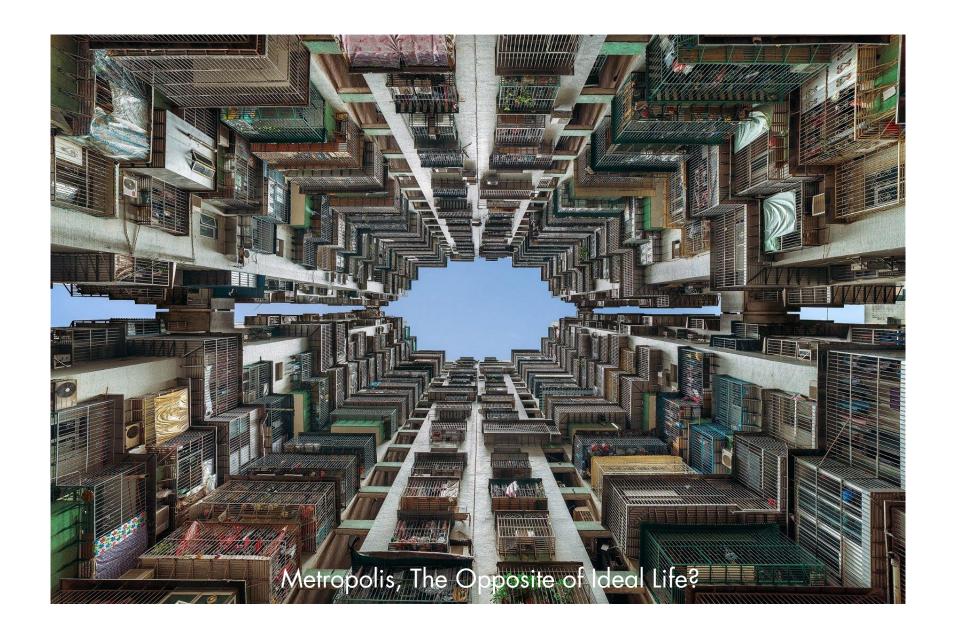
Revitalizing the Urban Life

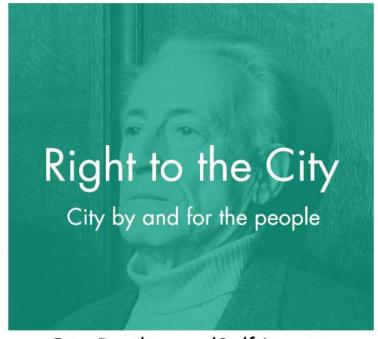
Design a three-dimensional public space system by combining top-down and bottom-up approaches through serious gaming in Mong Kok, Hong Kong, China





From the movie 'Metropolis'

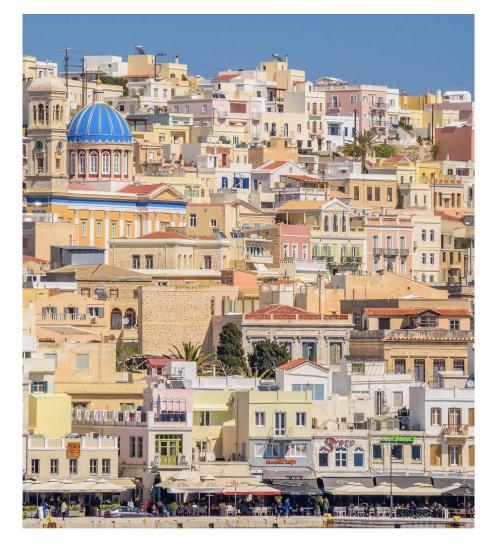




City Resilience/Self Iteration

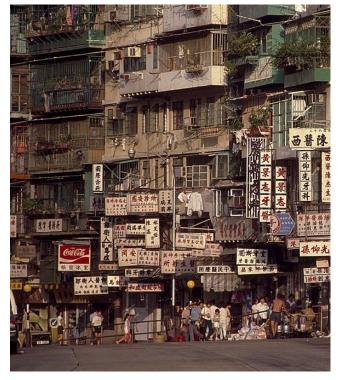
Balance of power

Informal Spaces—Logic Chaos

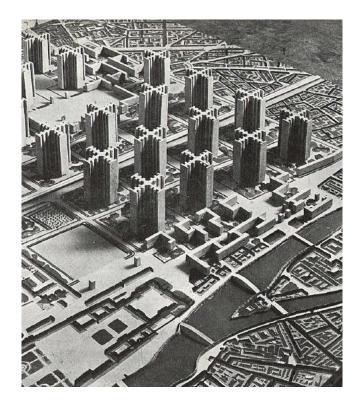


Syros, Greece

Medellín, Colombia



Bottom-up



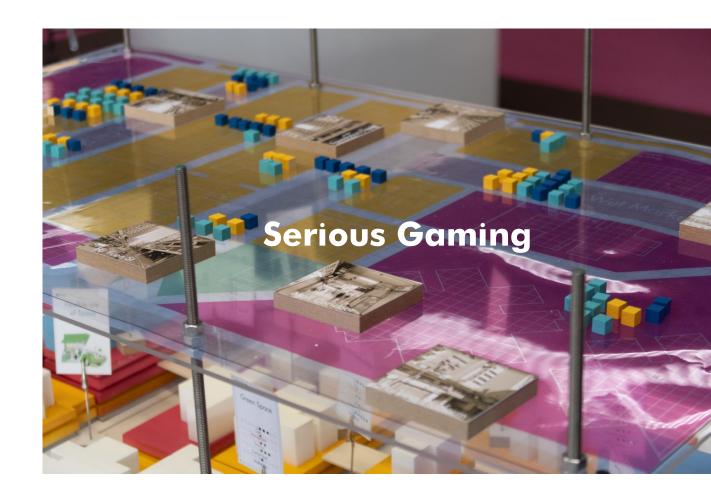
Top-down

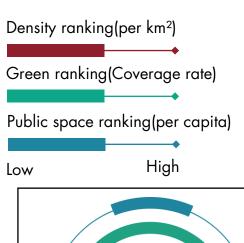
Barriers

Platform of Communication

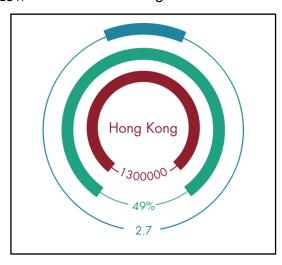
Mechanism of Negotiation

Knowledge of Space

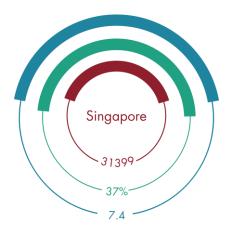


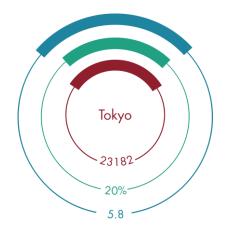


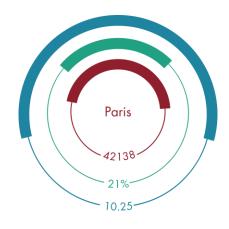
Density and public space data in mega-cities

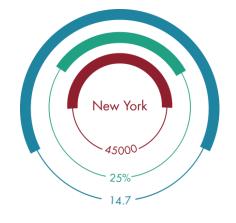




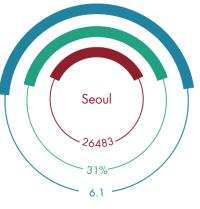






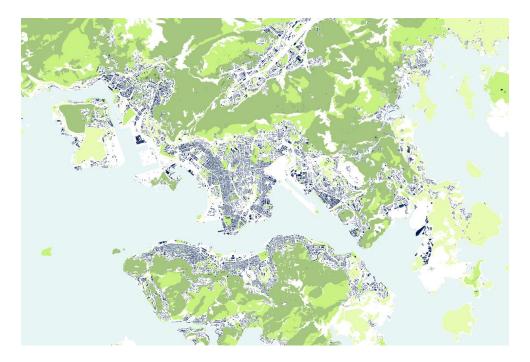






Data from HUGSI

Nature is separated from city





Hong Kong

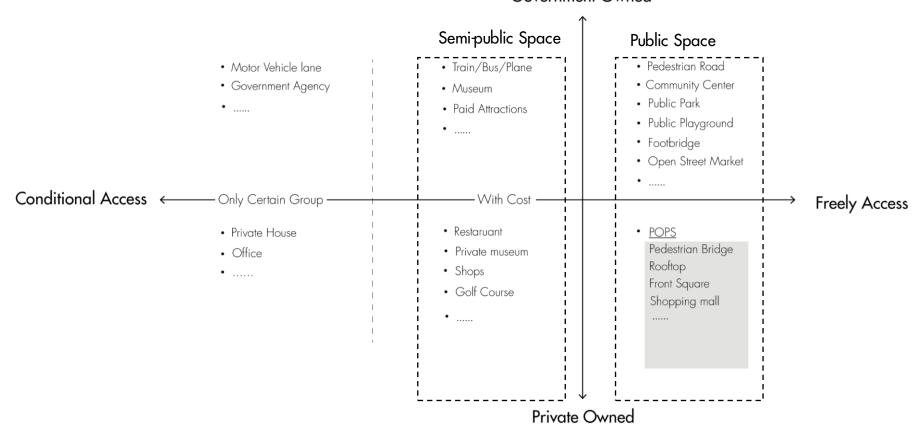


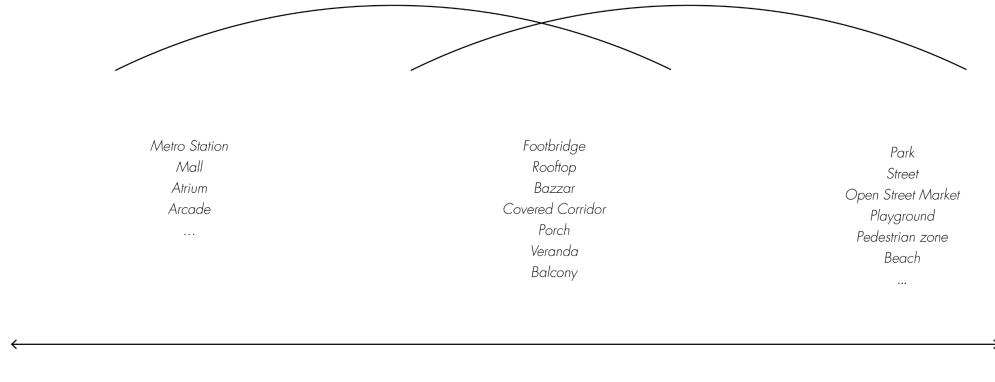






Government Owned





Specific Activity Orientation Under control Opening hour

Interior

Transitional Space

Exterior

Multiple Activities Affected by the weather



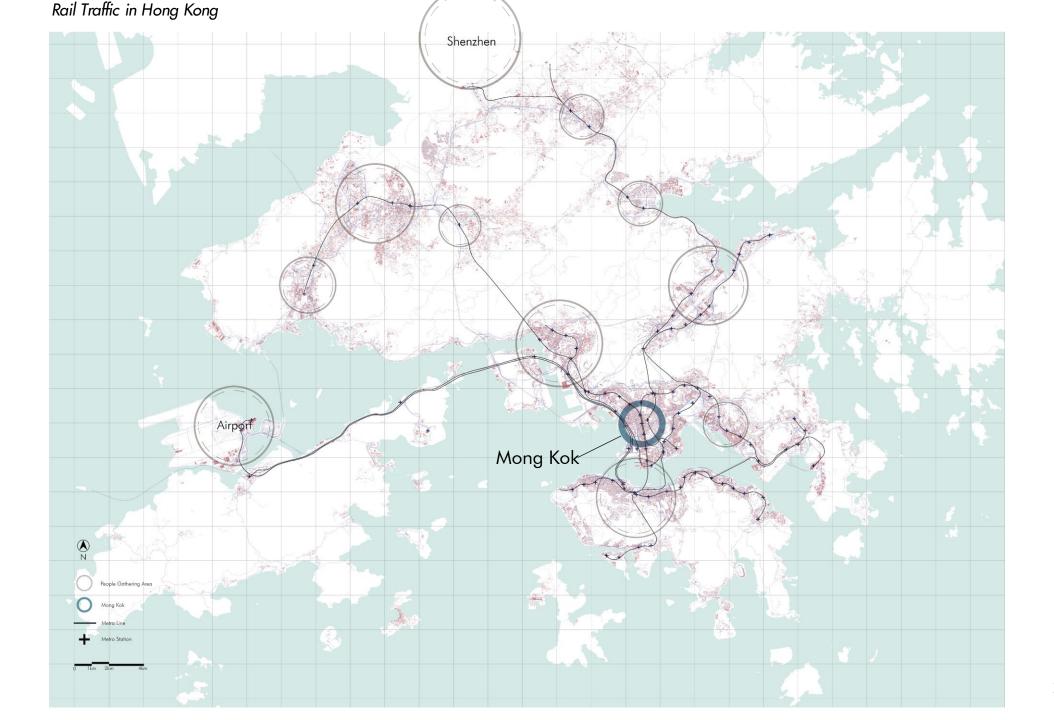
Mong Kok Street By Steveandjobs

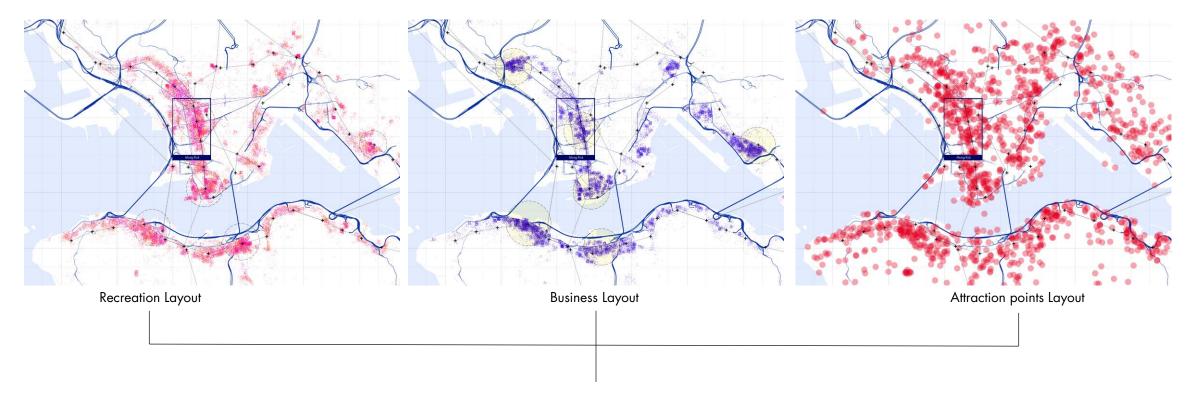
02

Site Analysis

Mong Kok, The Hurried and Bustling Center

"Pedestrians flow like a stream on the street, with shops displaying a variety of colors. The bustling atmosphere is mixed with salespeople's hawking. Walking among them, it feels like being pushed into a colorful and magical world, with excitement and thrill in the heart."





Mong Kok——One of the city centers

Per Capita Open Space in Different Districts(m²)

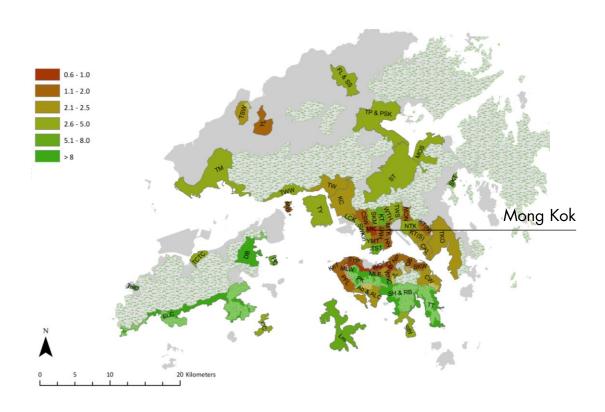
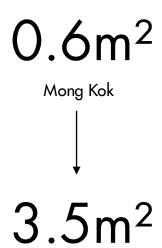
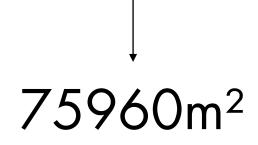


Chart from report of Unopened Space by Civic Exchange (2017)

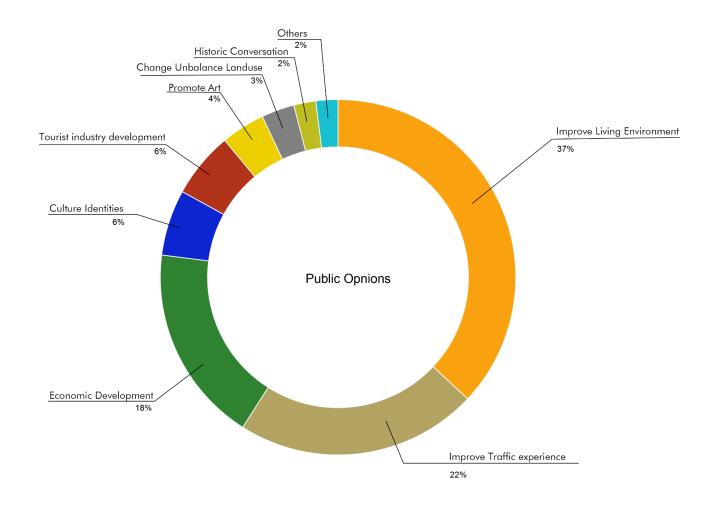


Towards a Planning Vision and Strategy Transcending 2030

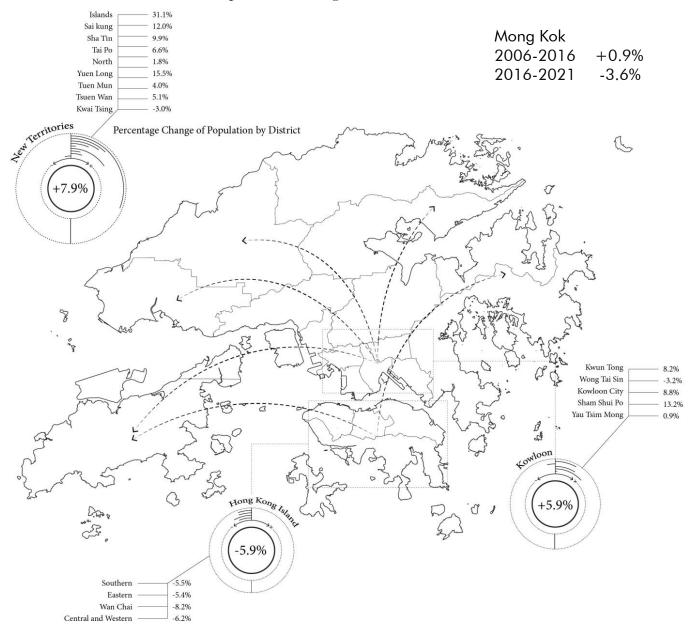


Those public spaces are required in the future

Public Opinions about Mong Kok



Population Change from 2006-2016



Transfer of private life





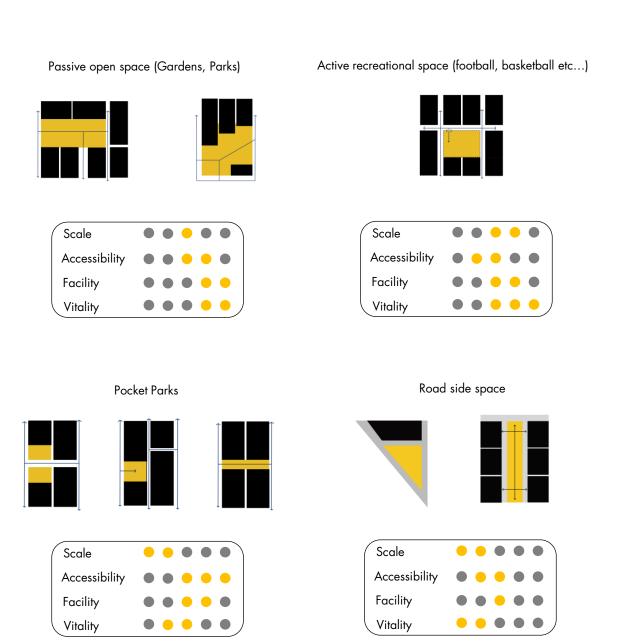
Mong Kok





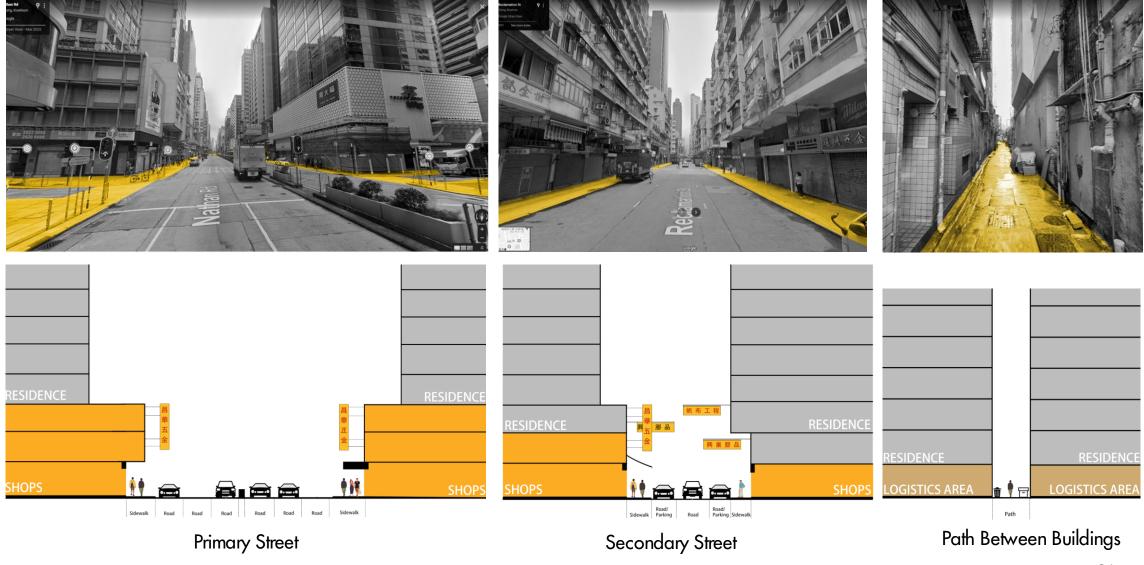
Metro Station

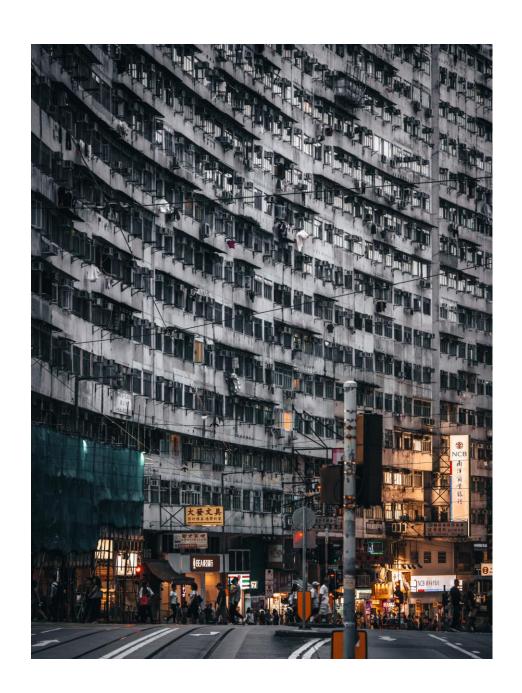
Green space





Walking Experience





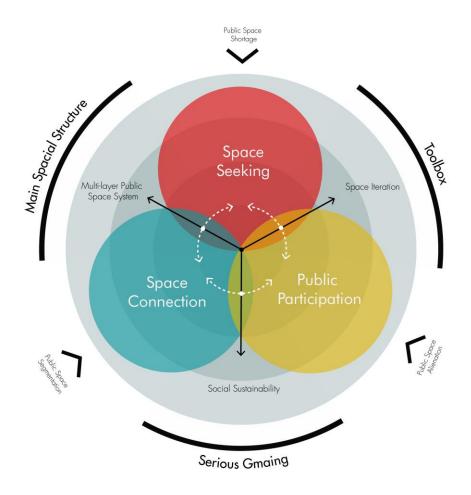
Problem Statement

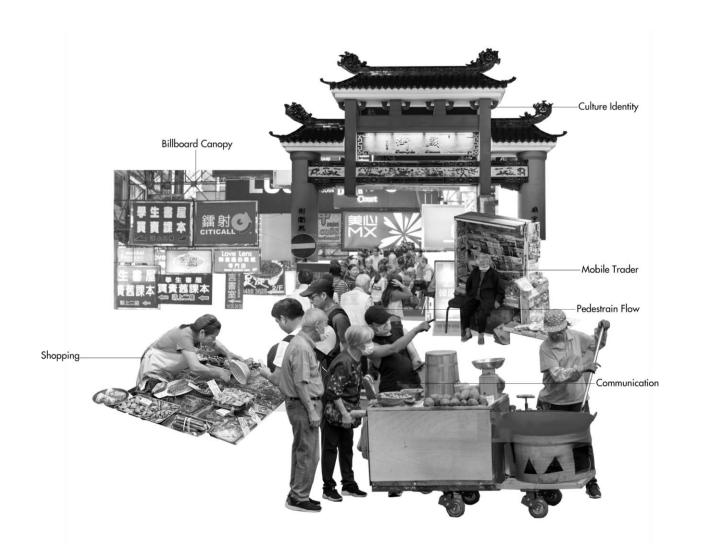
The lack of a Sufficient and Continuous public space system with public participation

The Alienation of urban life

Research Question

How to build a public space system with good quality, walkability and public participation to revitalize urban life?





Seeking Space
A tool box

Potential Areas



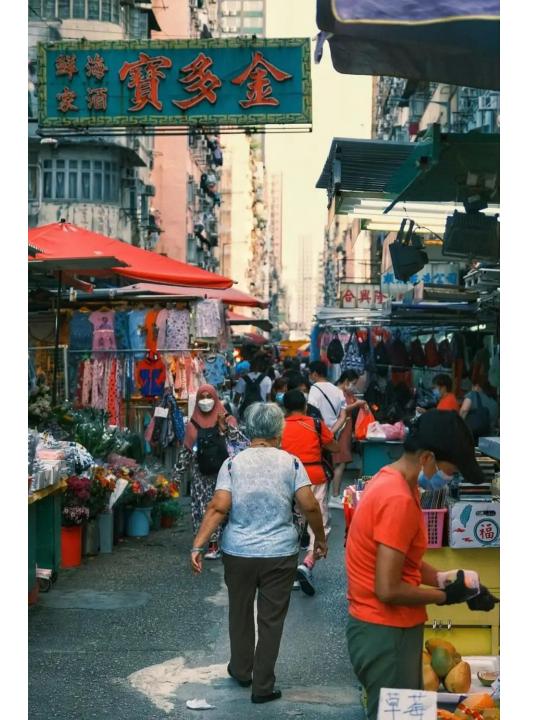
Open Street Market



Footbridge

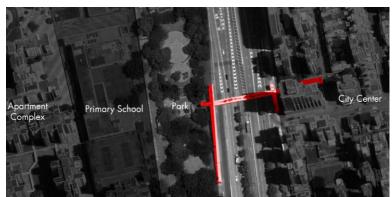


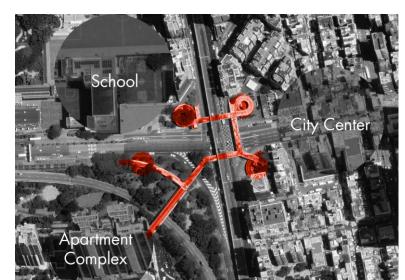
Building















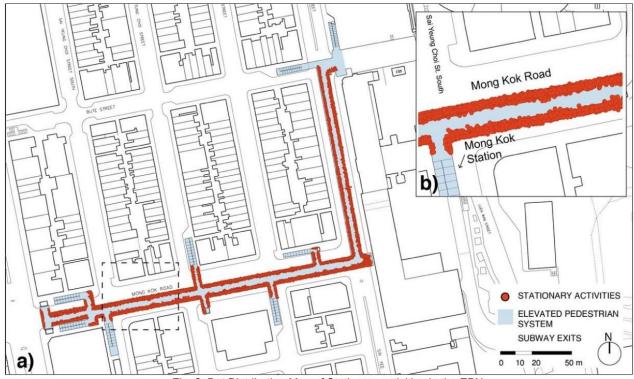
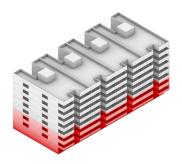


Fig. 2: Dot Distribution Map of Stationary activities in the EPN (Source: Caterina Villani and Cheng Yuk Ming)

Caterina Villani, Gianni Talamini: *Patterns of Stationary Activities in the Elevated Pedestrian Networks of HighDensity Asian Cities: The case of Mong Kok, Hong Kong (2019)*

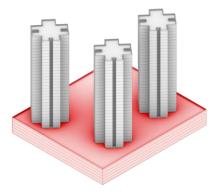
Buildings



Tong Laus (Chinese Tenement House)



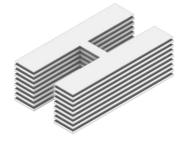
Tower with Podium



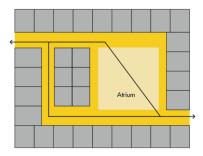
Towers with Podium

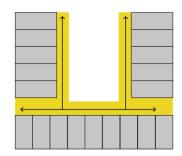


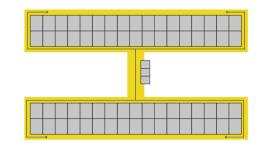
Mansion



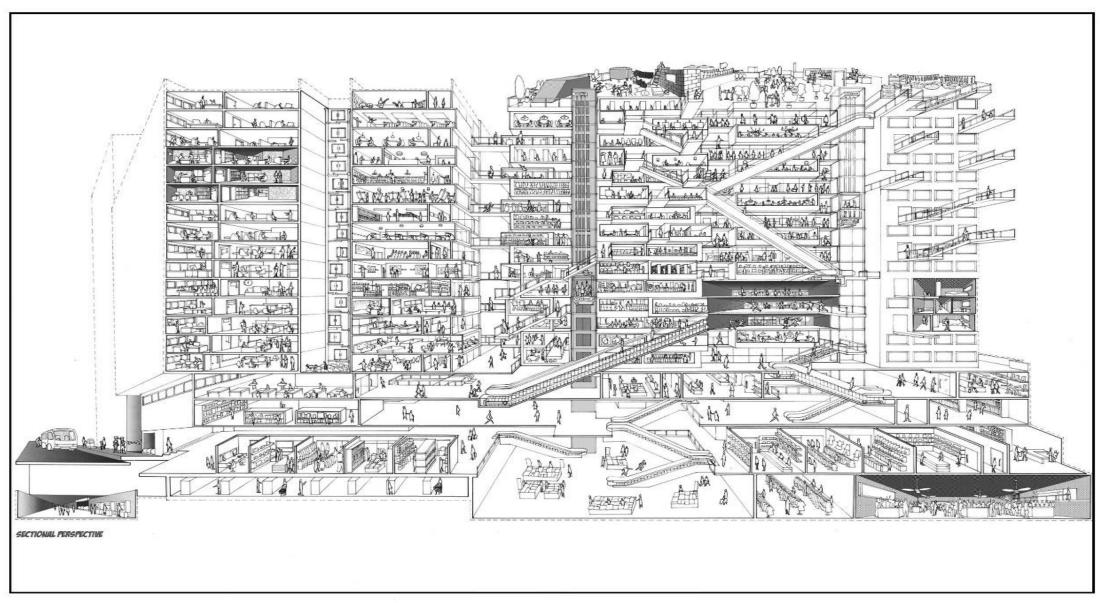
Early Public House





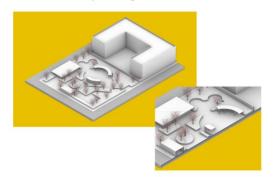


Section of Chungking Mansions

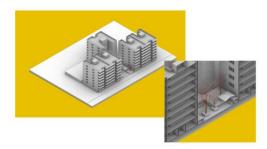


Exterior Spaces

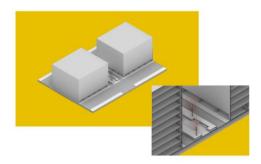
Passive Space City Lounge



Pocket Park Diverse Bubble



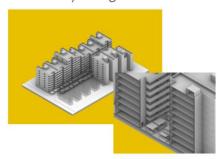
Roadside Space The Harbour



Activated Recreational Space The Stage



Open Street Market
City Lounge

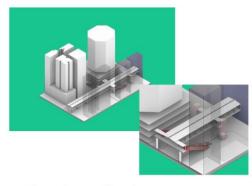


Mall Front Square
The transition space



Transitional Spaces

Foot Bridge The Artery

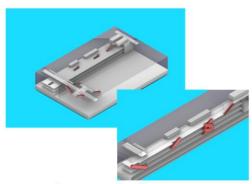


Foundation/Rooftop The Second Ground



Interior Spaces

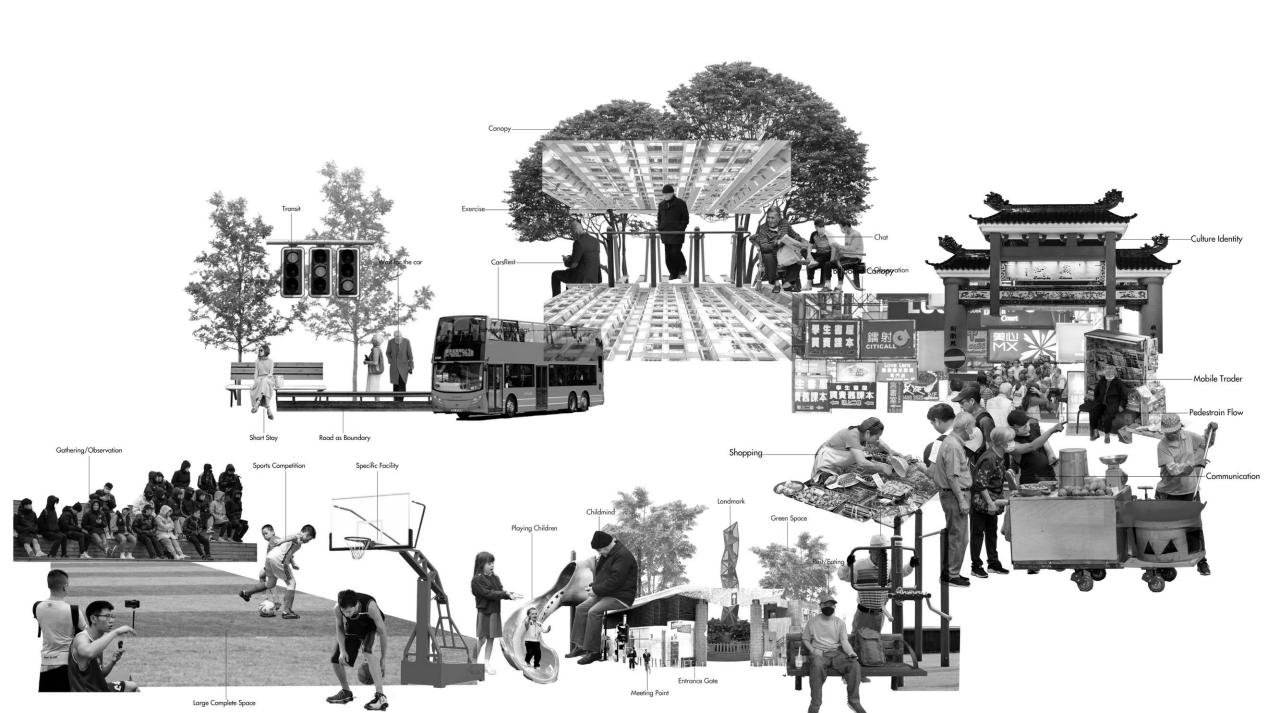
Metro Station The Initial Point



Shopping Mall Folded public playground



Corridor

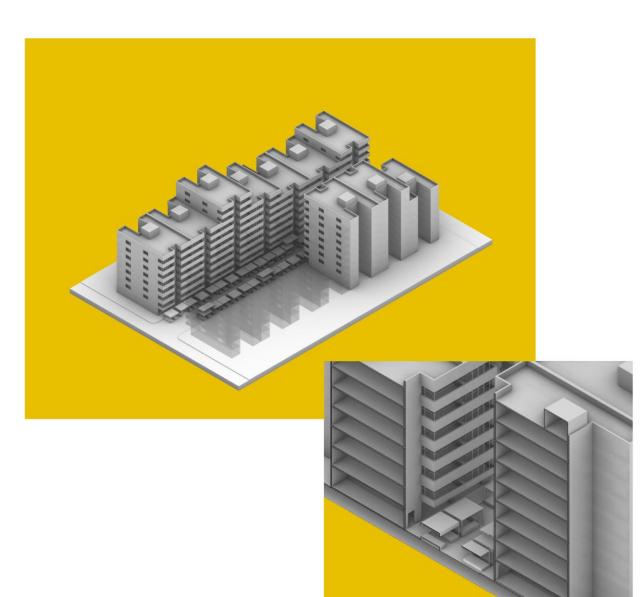


Open Street Market





- Introducing various types of small public spaces
- Designing market layout to guide pedestrian flow
- Establishing pedestrian-only zones
- Flexibly using space
- Changing pavement design
- Enhancing connections between different street areas
- Transforming architectural spaces as part of the market



Improve Spacial Quality Increase Walkability

Kids Friendly Impove Facilities Weather Shelter Seating Space Rain Garden Hard Ground Plaza Flexible use of Space Space Performance Space



•••••

Flexible

Urban Furniture

•••••

Green Space

•••••

Recreation Service

Exercise

Equipment

Pavement Design

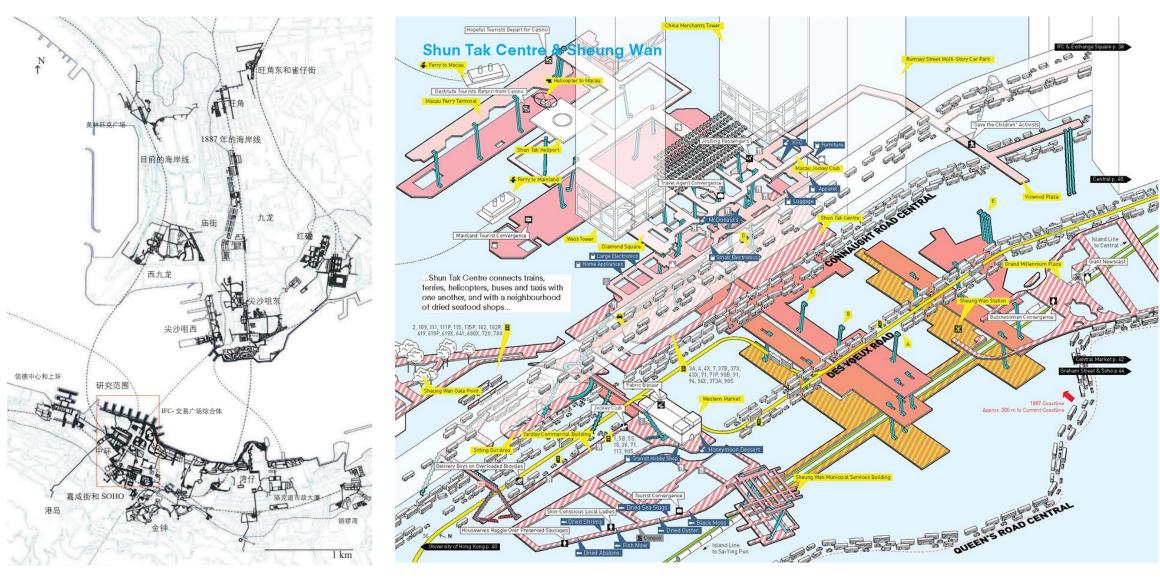




04Network Construction

The structure of the three-dimensional public space system

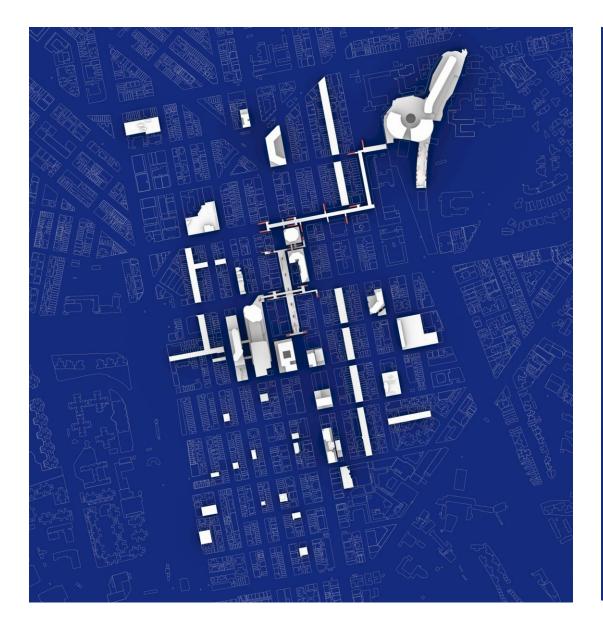
Hong Kong Pedestrian Circulation Network

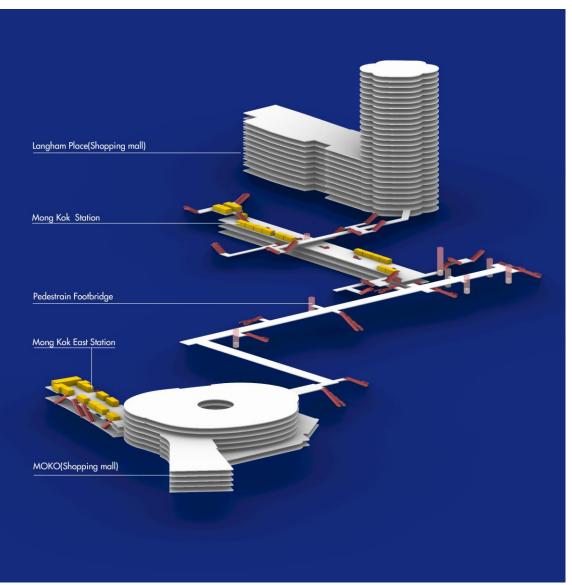


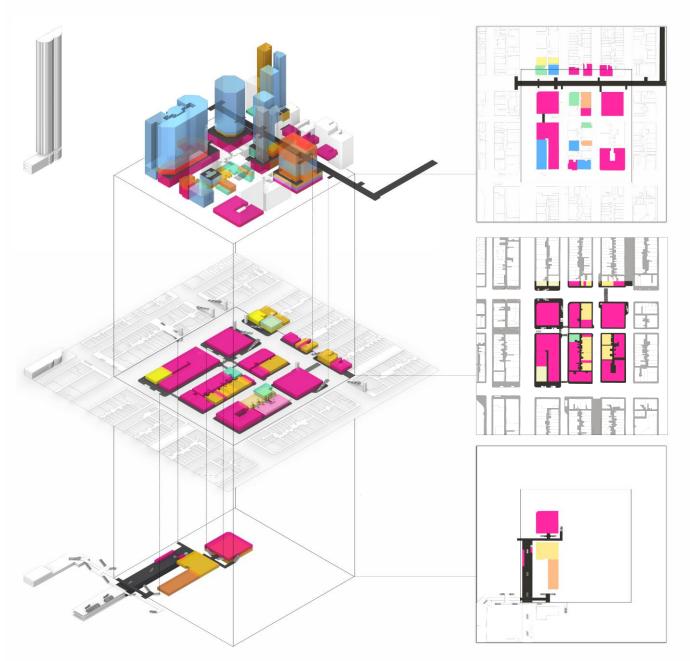
Pedestrian Circulation Networks in Hong Kong

Research on the Elevated Pedestrian System Influenced by Urban Institution in Central, Hong Kong Cities without Ground (2013)

Current connection



















Mong Kok



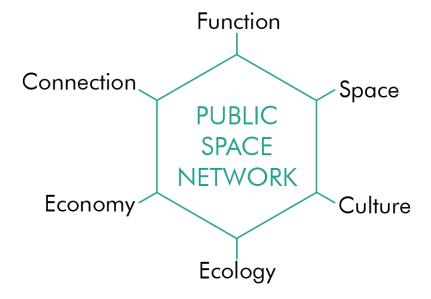
A city center



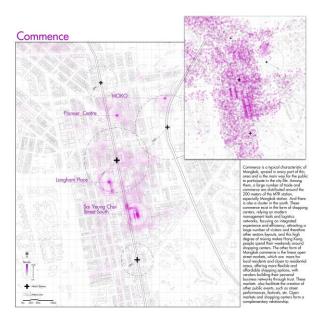
A transportation hub

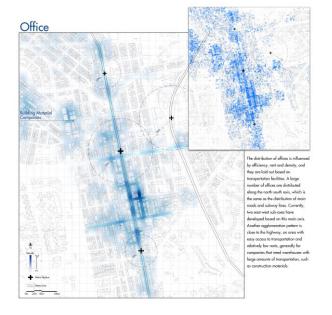


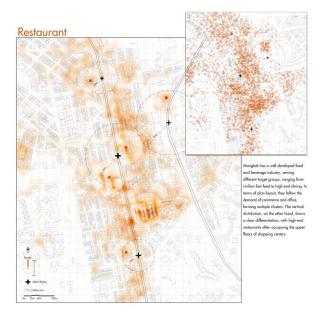
A cultural area

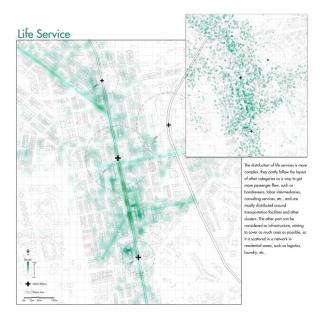


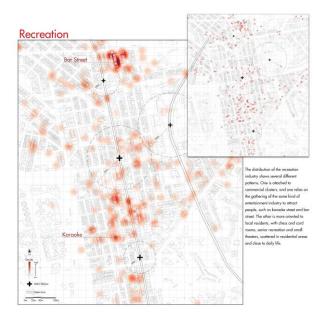
Function









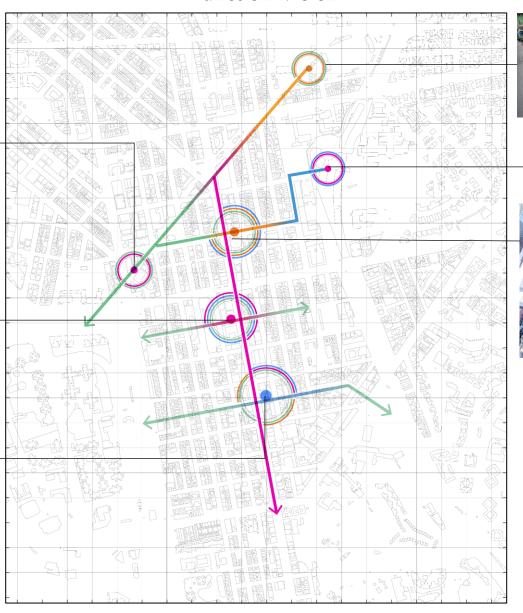


Function Vision

















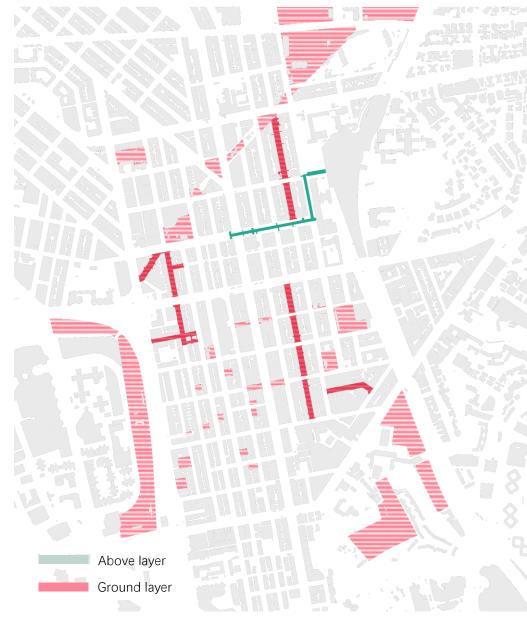
A north-south axis dominates the development of the area, distributing the three main clusters of the area.

Four sub-axes extend east to west, providing a transition from commercial to residential.

Fuzzy Boundary Create Shortcuts Add Entrances Flexible use of Space Performance Space Organize Activity

The tool box is used to optimize current spaces and seek more public space

Current public open space



Connecting Pedestrian Pathways

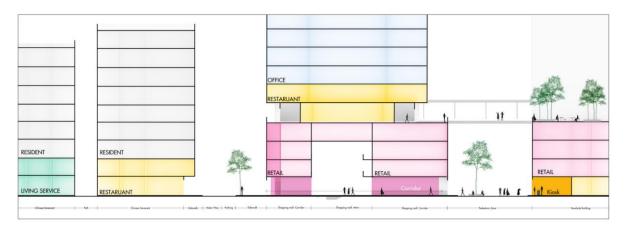
Open Pocket Parks





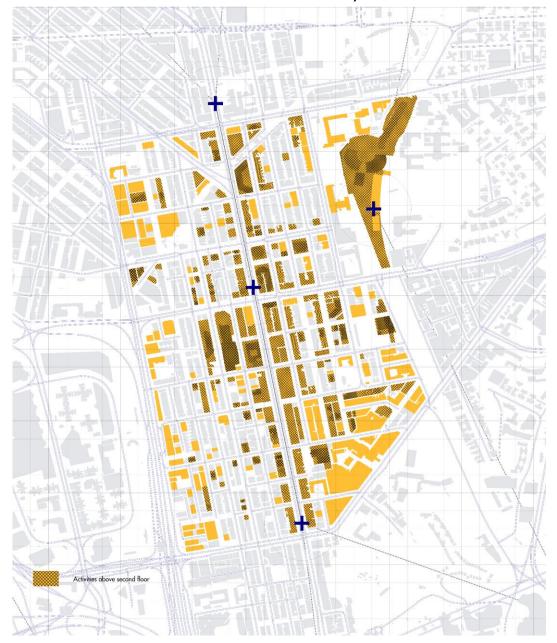








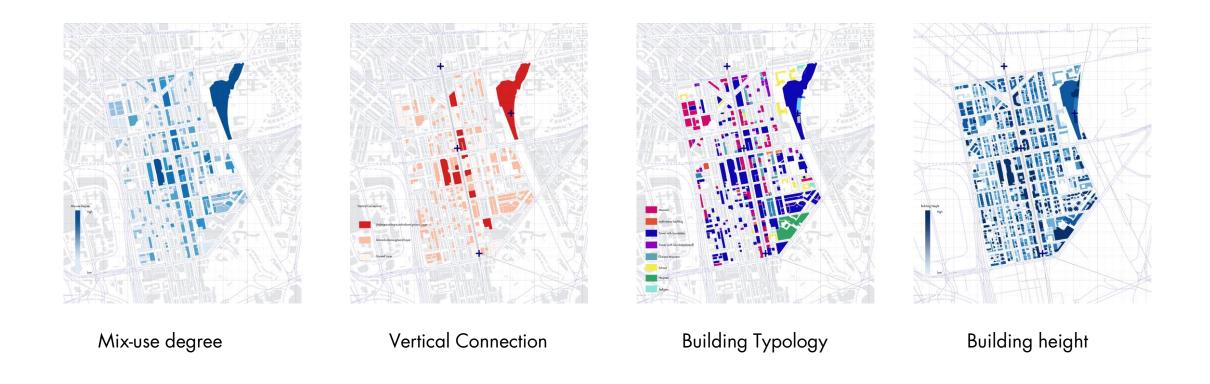
Activities on above layer

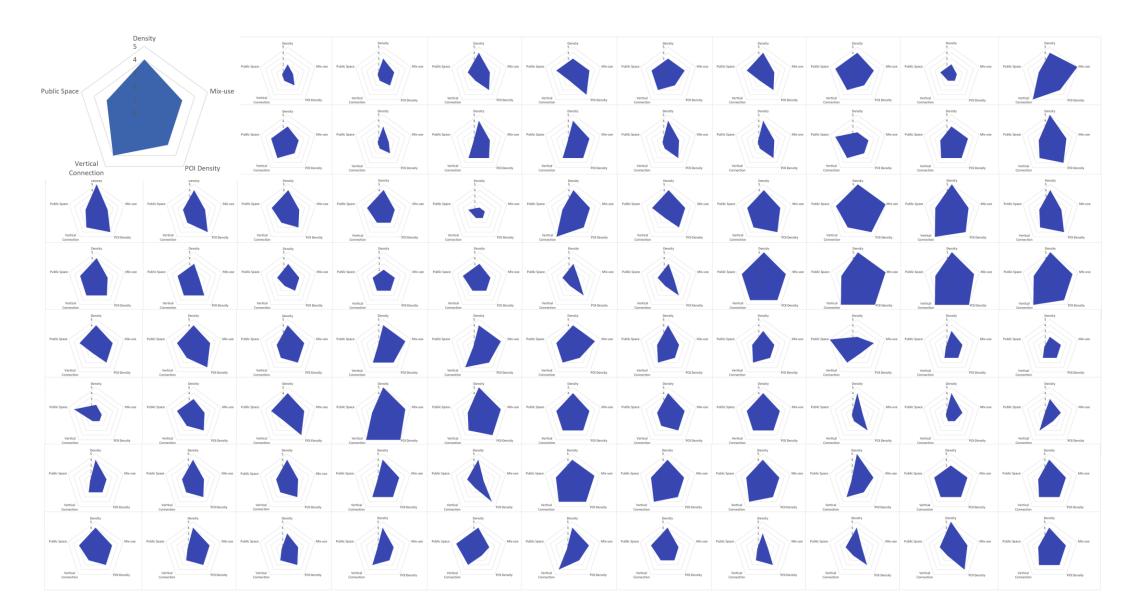






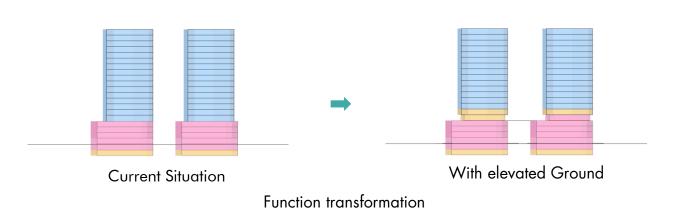


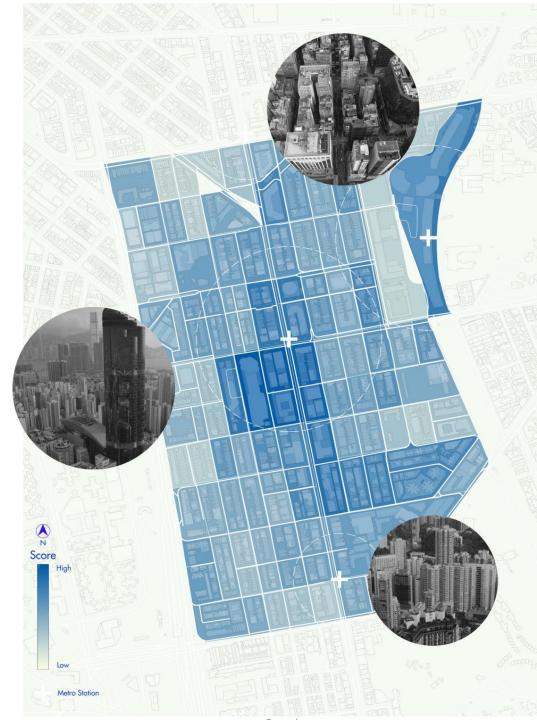




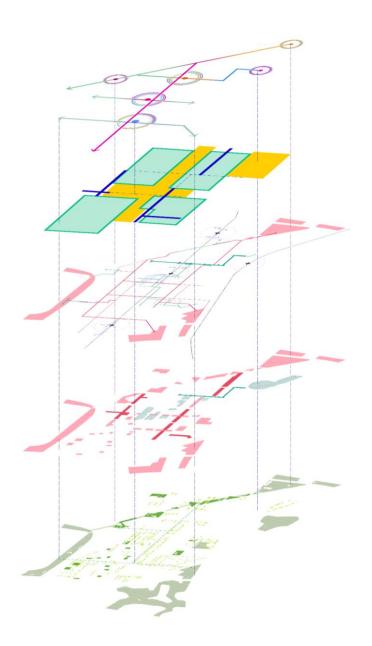
Vertical Development Potential Evaluation

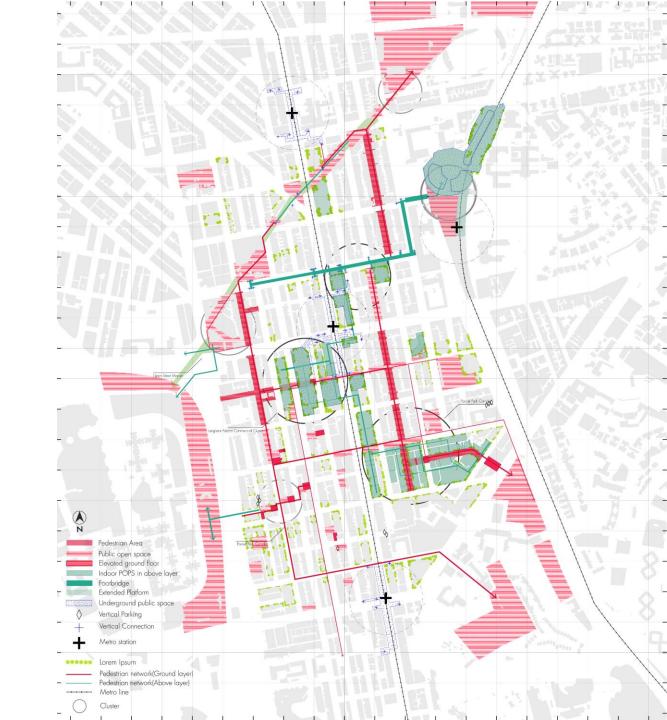






A 3D Public Space System Network

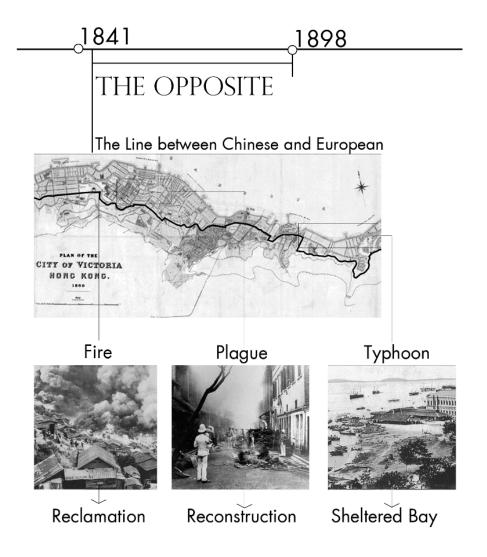


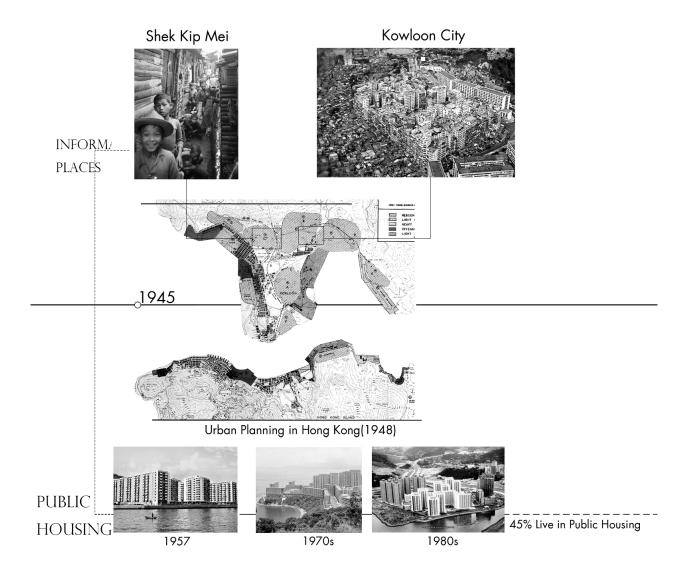




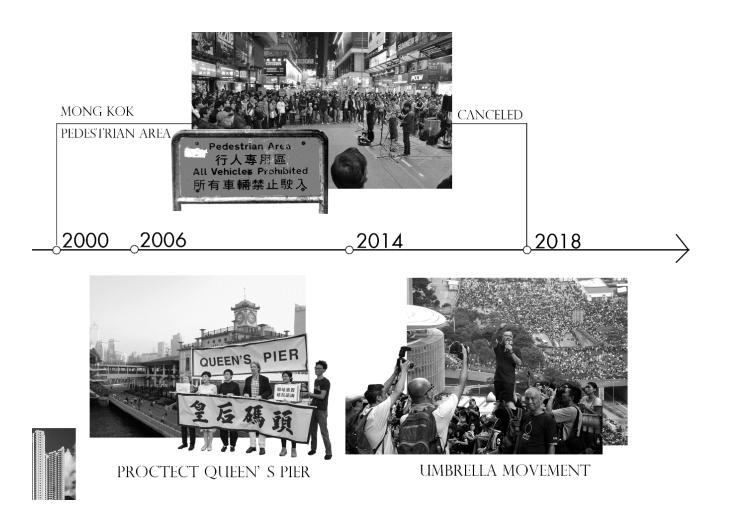
Involve the Public
A board game

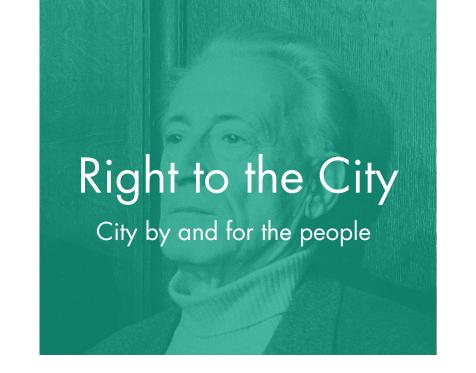
Passive Response to Natural Events



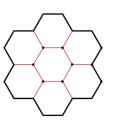


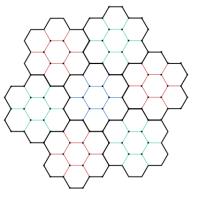
Rising of Public Consciousness







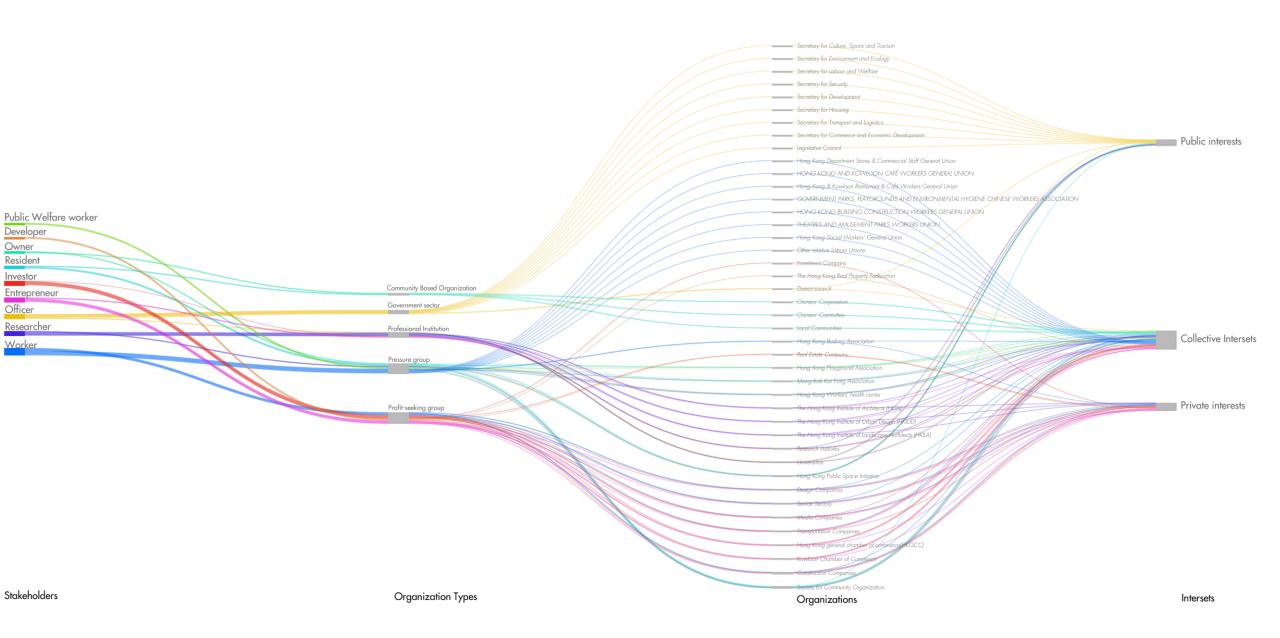




Individual

Collective

Union



Investor









Identity

Investors put money into an entity such as a business for a financial return. The main goal of any investor is to minimize risk and maximize return.

Capacity

Investors are one of the main sources of capital. Capital support is available when the proposal meets the profit expectations of the investors.

Entrepreneur









Identity

Entrepreneurs are someone who have idears and who work to create products or services that people will buy, as well as an organization to support that effort.

Capacity

Entrepreneurs run many services which supporting the urban life. Good entrepreneurs are able to attract crowds. They are also usually the organizers of various city

Researcher











Identity

ŝ

Researchers are experts and possess knowledge and technology. They are oriented towards an academic perspective rather than economic interests.

Capacity

Researchers have the knowledge and expertise to be able to propose a variety of strategies for the city and to be able to evaluate different strategies

Resident













Identity

A resident is someone who lives in a place. They prefer good living enviornment, high quality public space and also high accessiability to their working places.

Capacity

Residents are the core members of the community organization. They can make appeals, participate directly in the management of the space, or raise funds to transform the community

Public welfare worker









Identity

Public welfare workers care about the interests of society and vulnerable groups.

Capacity

Public welfare workers have a supervisory role in policy and can be part of the urban space management team. They actively participate in political activities to practice public welfare.

Developer





Identity

Developers buy land and build houses, offices, shops, or factories on it, or buy existing buildings and retrofits them to meet market demand.

Capacity

Owners of many properties and lands, also have the capital to support proposals. The focus of the decision is on whether it can bring profits or whether it will benefit market-

Worker











Identity

A worker is someone who gets paid to work for a person or company. They want more job opportunities and better working condi-

Capacity

Workers, who are numerous, are one of the main users of public space. Through workers union, they are able to participate in politi-cal activities and present their demands for

Officer















1

Identity

(S)

Officers are the managers of the city and own capital. They care about the whole city, including economy, people's livelihood, culture, environment, etc.

Capacity

Officers have the most power to enact policies and decrees, and the capital to fund its actions. As managers of city, they need to balance the interests of all parties.

Owner





Identity









An owner is someone who owns properties. Majority of them are long-term residents. Some owners will rent their house for profit.

Capacity

Owner are the core members of the community . They can make appeals, participate directly in the management of the space, or raise funds to transform the community. They also have rights to renovate their properties.

Rules



Goals

Four different groups have different game objectives, which are set based on the reality and dictate the players' guidelines in the game.



Currency

Based on reality, each team has different financial resources and management capabilities, which are essential elements for exercising strategies. Players with fewer bargaining chips are encouraged to negotiate with other players for cooperation. The setting of the bargaining chip value controls the game's duration, and strict restrictions promote the frequency of negotiation and cooperation among players.



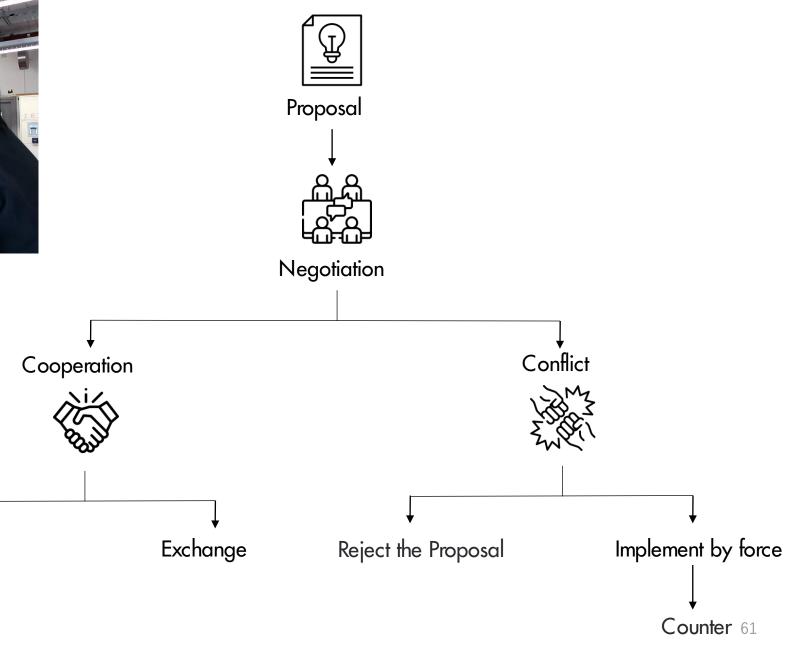
Strategy Cards

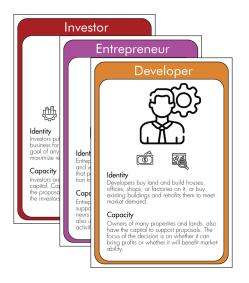
Strategies can be implemented if the required management points are reached

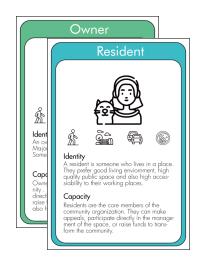
Different roles have different levels of management

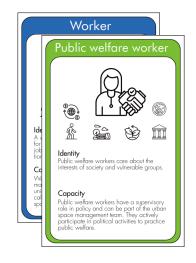
Mutual Benefit

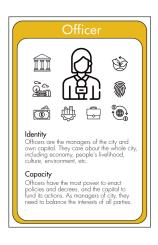
Actions













Profit-Seeking Group

Aim: Invest as much as you can to make money

Money:14 Management:8 Community Based Organization

Aim: Create an environment based on their demands

Money:8 Management:8 Pressure Group

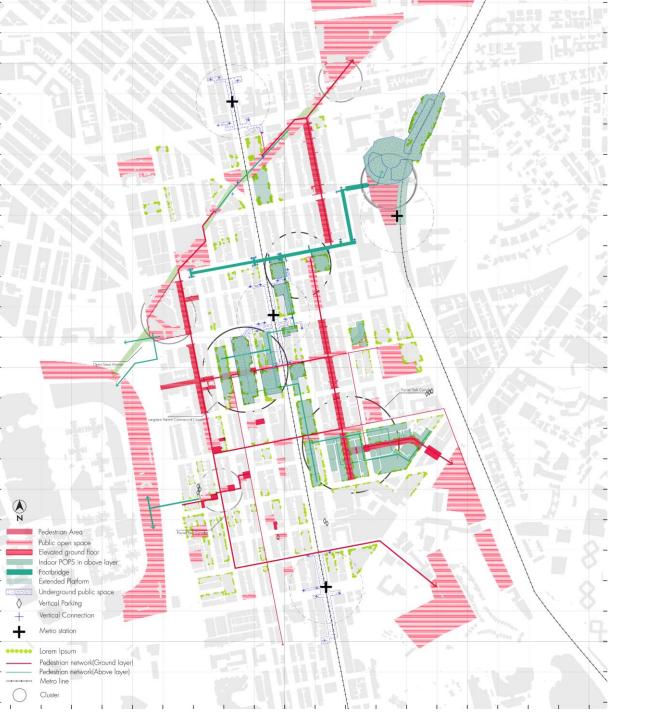
Aim: Create an environment based on their demands

Money:8 Management:8 **Government Sector**

Aim: Achieve the vision, or amendment it.

Money:20 Management:16 Professional

Aim: Give advices to actions

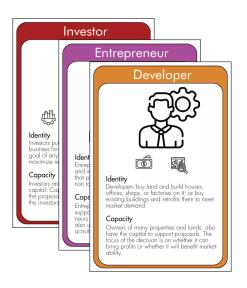




Government Sector

Aim: Achieve the vision, or amendment it.

Money:20 Management:16

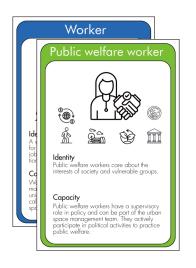


Profit-Seeking Group

Aim: Invest as much as you can to make money

Money:14 Management:8





Community Based Organization

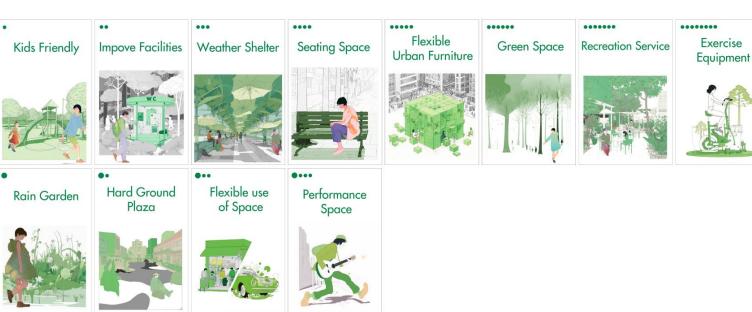
Aim: Create an environment based on their demands

Pressure Group

Aim: Create an environment based on their demands

Money:8 Management:8 Money:8 Management:8

Improve Spacial Quality Increase Walkability





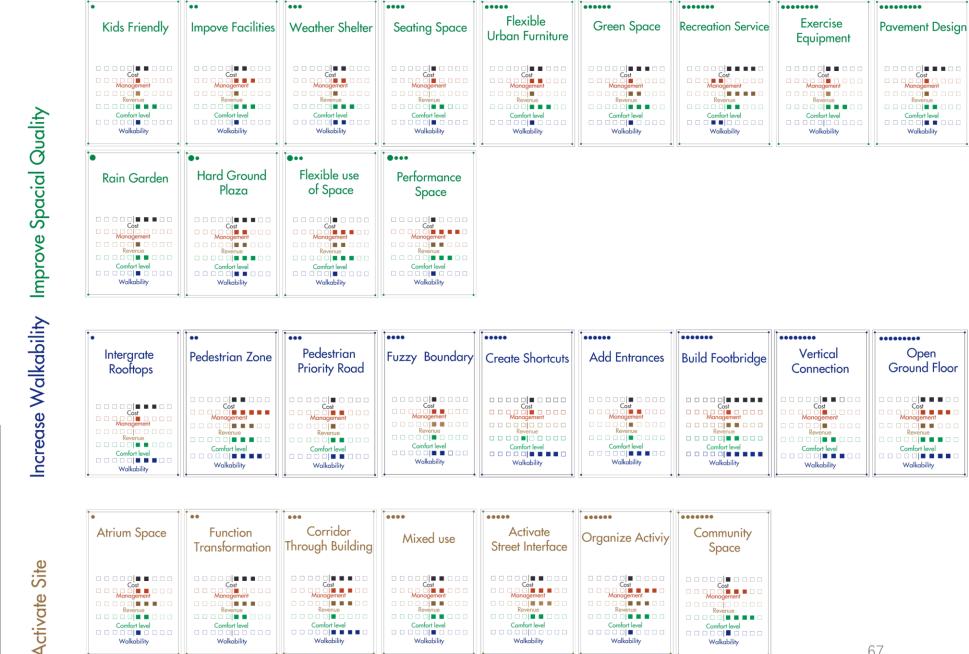
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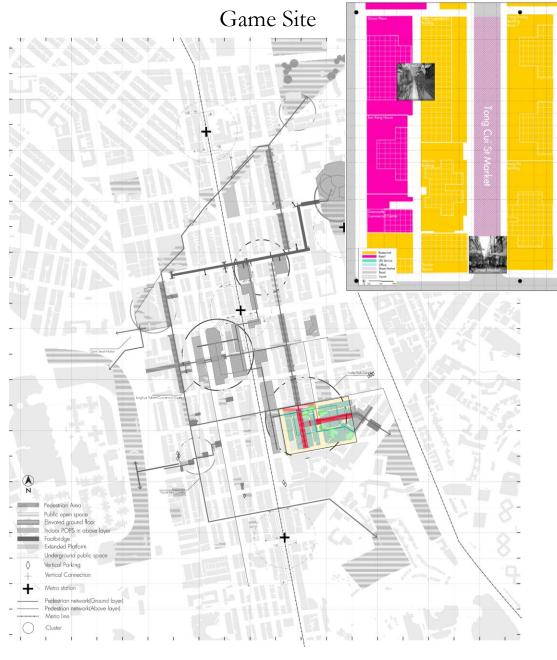
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Open

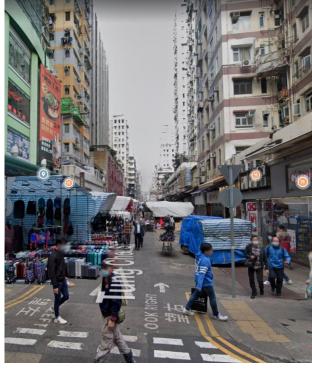
Ground Floor

Pavement Design



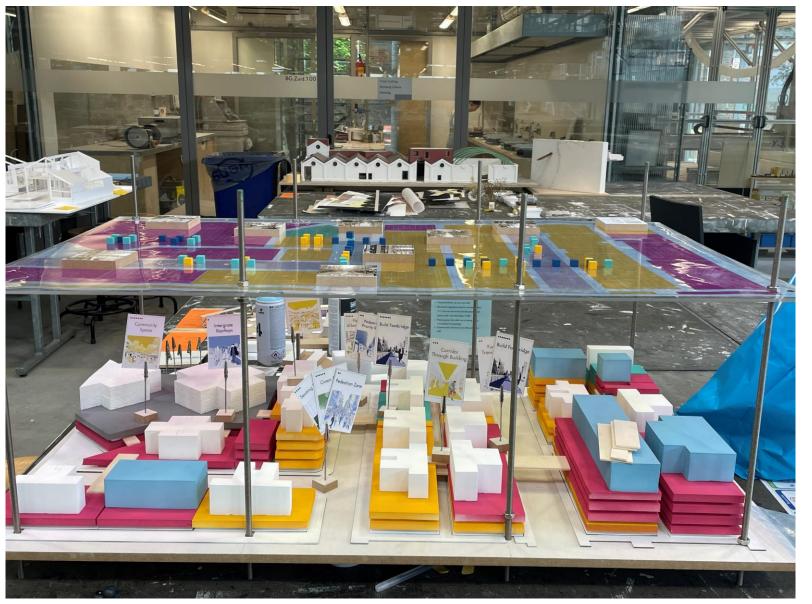








Game Board

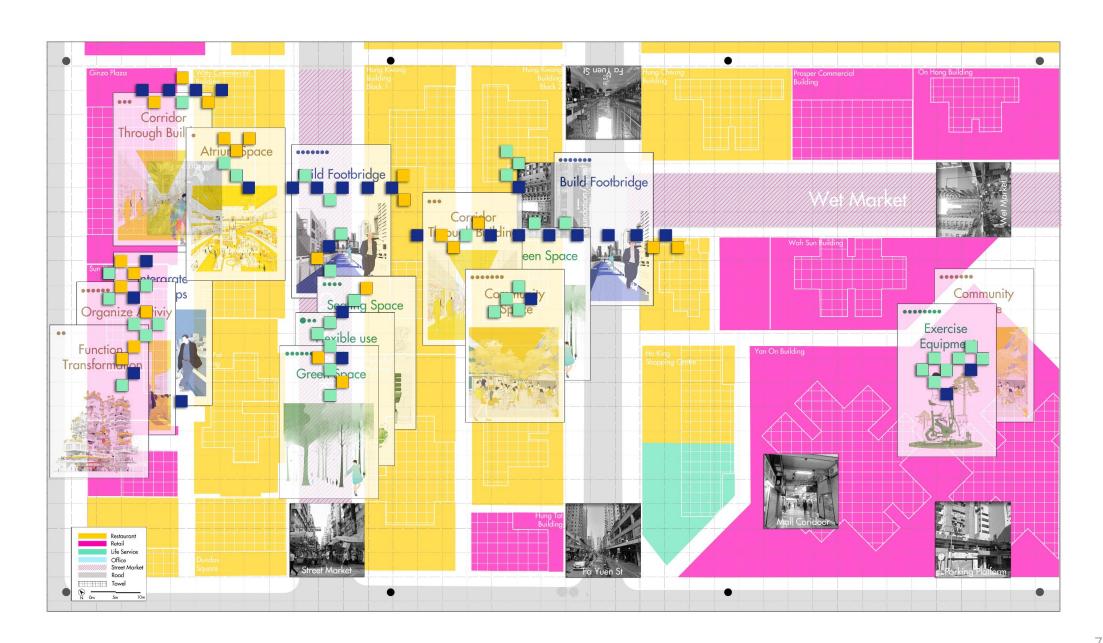


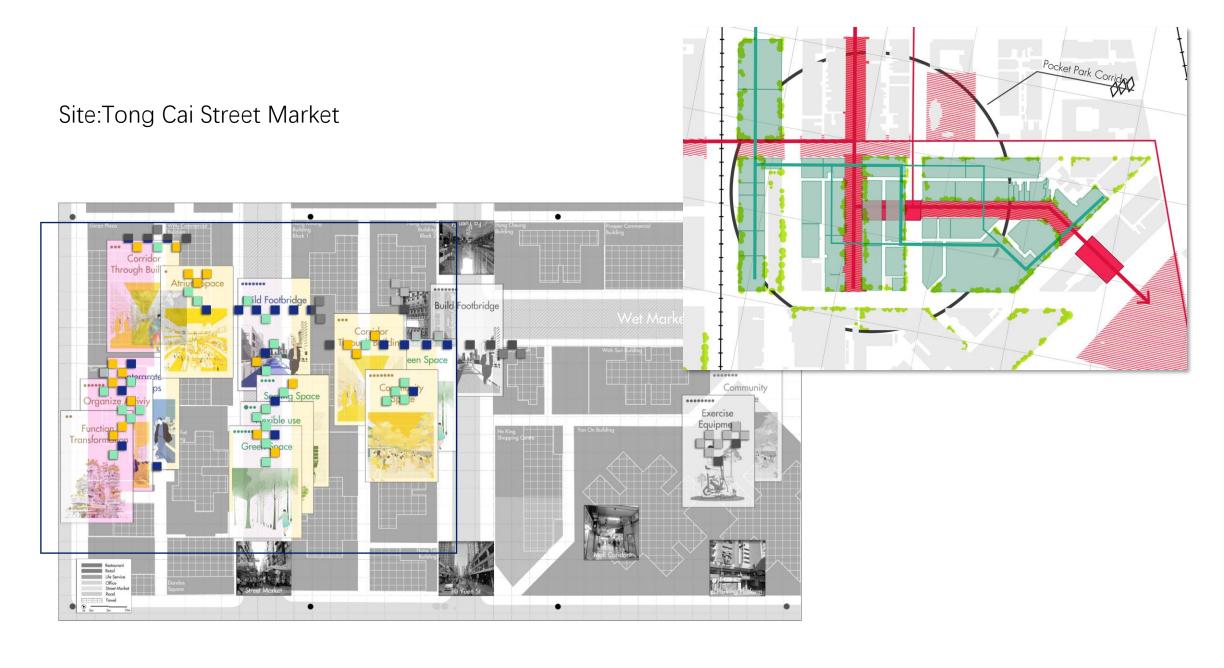


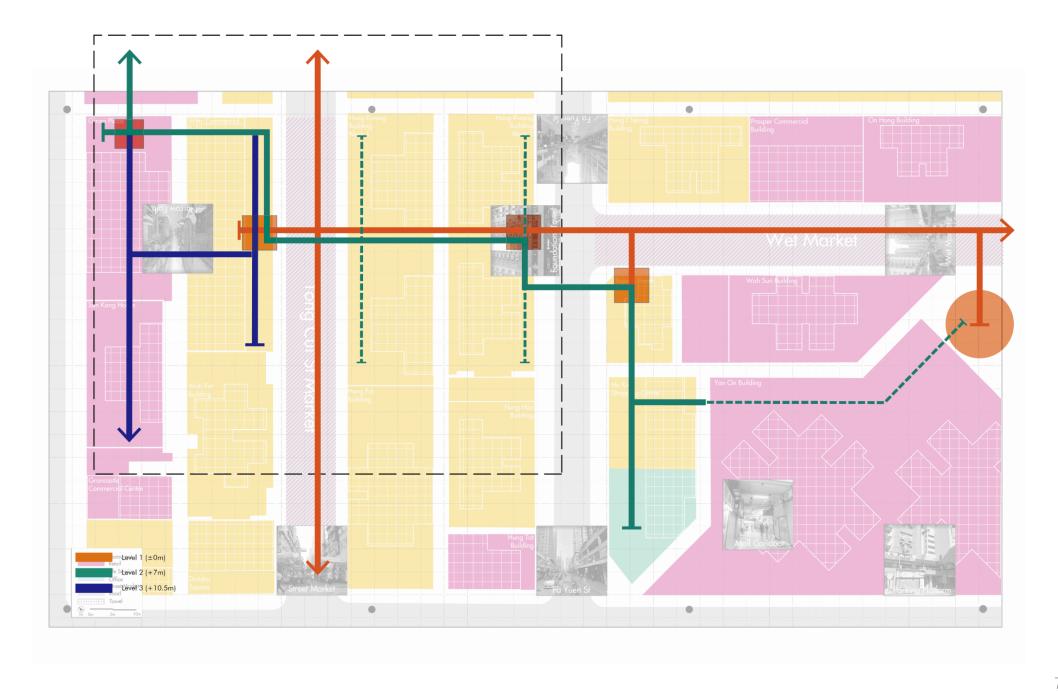














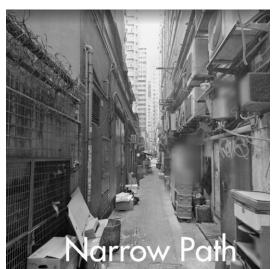
06 Space Design

















ADJUST THE MARKET LAYOUT





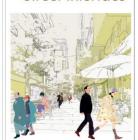
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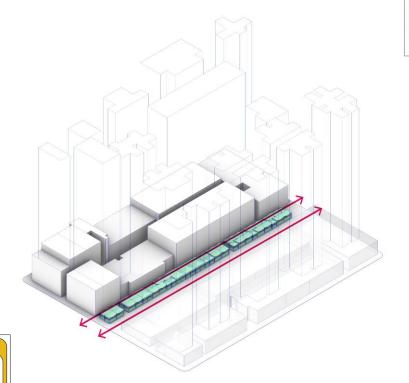


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Entrepreneur





Enterpreneurs are someone who have idears and who work to create products or services that people will buy, as well as an organization to support that effort.

Entrepreneurs run many services which supporting the urban life. Good entrepreneurs are able to attract crowds. They are also usually the organizers of various city activities.







Identity









Officers are the managers of the city and own capital. They care about the whole city, including economy, people's livelihood, culture, environment, etc.

Residents are the core members of the community organization. They can make appeals, participate directly in the manage-ment of the space, or raise funds to trans-form the community.

Officers have the most power to enact policies and decrees, and the capital to fund its actions. As managers of city, they need to balance the interests of all parties.















CORRIDOR THROUGH BUILDING



Entrepreneur









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Resident









A resident is someone who lives in a place. They prefer good living enviornment, high quality public space and also high acces-siability to their working places.

Capacity Residents are the core members of the community organization. They can make appeals, participate directly in the management of the space, or raise funds to transform the community.

Owners of many properties and lands, also have the capital to support proposals. The focus of the decision is on whether it can bring profits or whether it will benefit marketability.









Capacity



ORGANISE THE ABOVE-GROUND LAYER'S SPACE



Build Footbridge



Intergrate Rooftops



Community Space

.....



Corridor Through Building













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An owner is someone who owns properties.
Majority of them are long-term residents.
Some owners will rent their house for profit.

Owner are the core members of the commu-nity. They can make appeals, participate directly in the management of the space, or raise funds to transform the community. They also have rights to renovate their properties.









Developers buy land and build houses, offices, shops, or factories on it, or buy existing buildings and retrofits them to meet market demand.

Capacity Owners of many properties and lands, also have the capital to support proposals. The focus of the decision is on whether it can bring profits or whether it will benefit marketability.

Resident

Worker









A worker is someone who gets paid to work for a person or company. They want more job opportunities and better working condi-

Workers, who are numerous, are one of the main users of public space. Through workers union, they are able to participate in political activities and present their demands for

Entrepreneur











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ENHENCE VERTICAL CONNECTION



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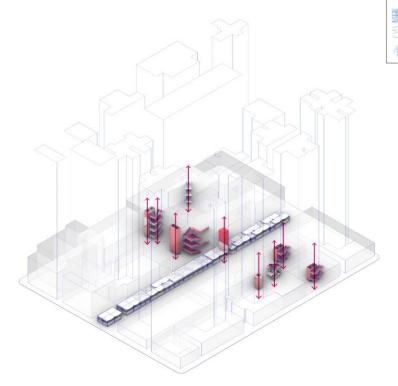




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Add a platform/Create Canopy



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Green Space

.....

Seating Space

....







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Insert small spaces/Improve daylighting





Green Space

.....

Seating Space

....



Entrepreneur











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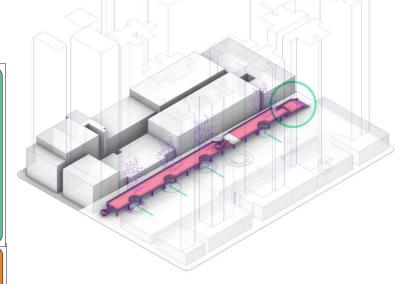


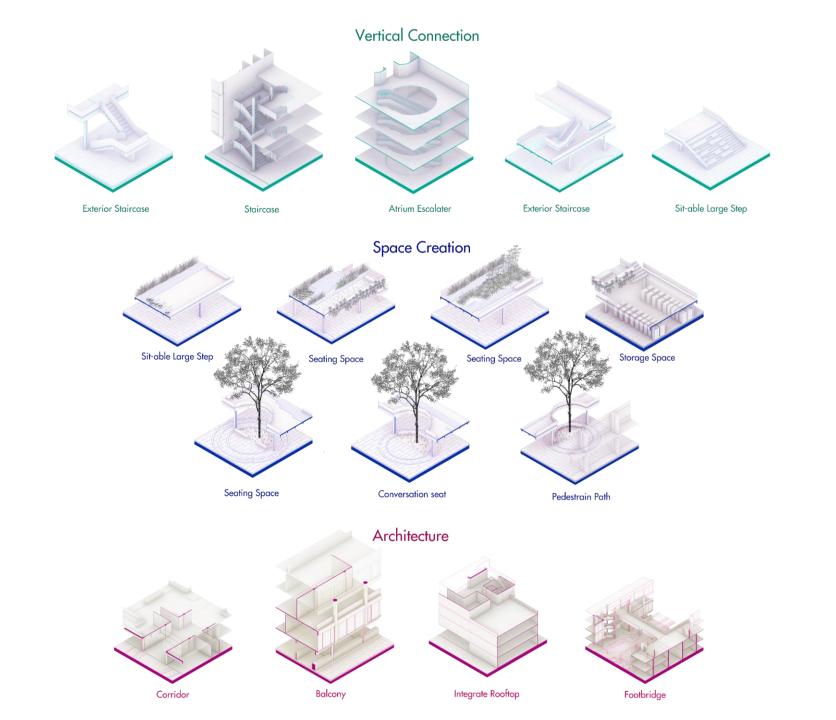


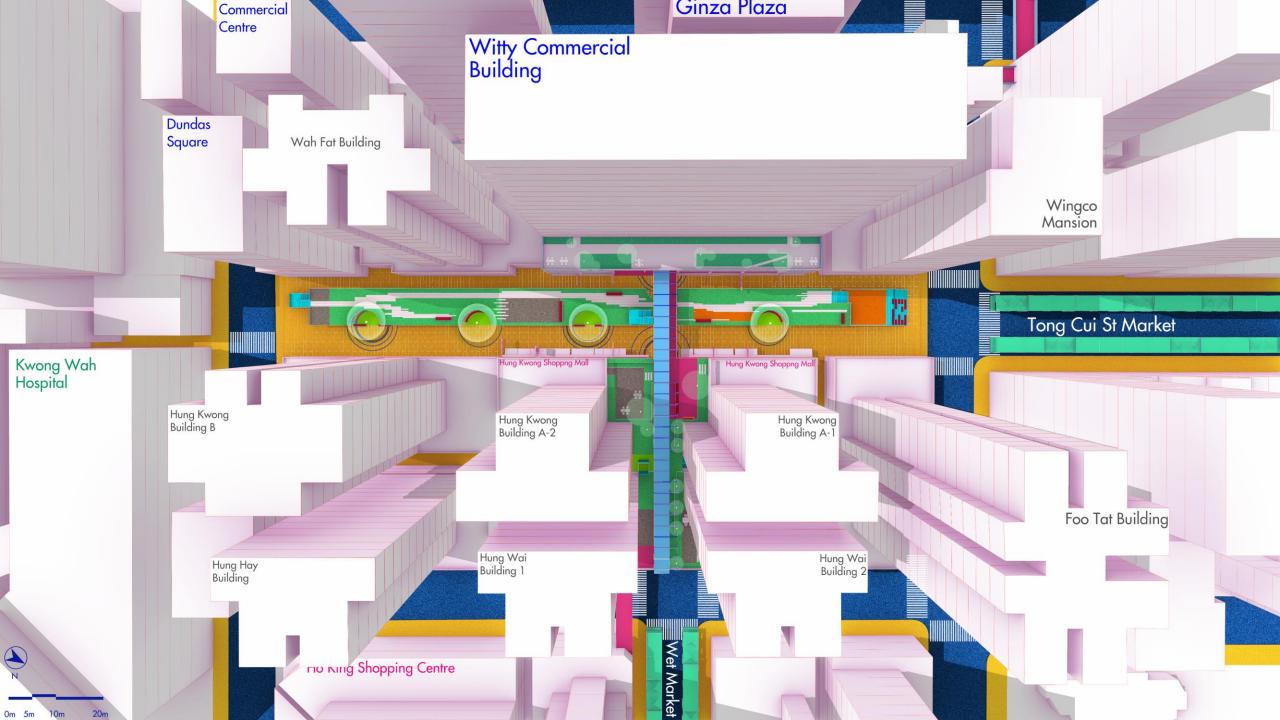
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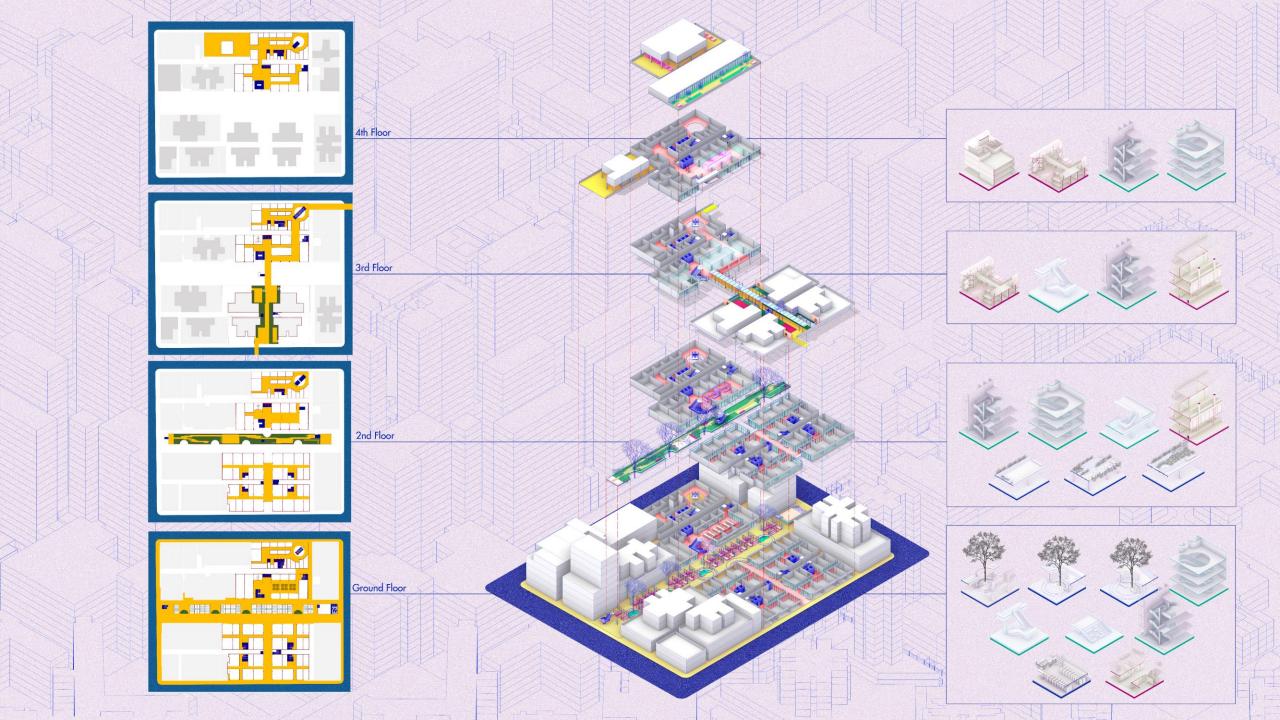
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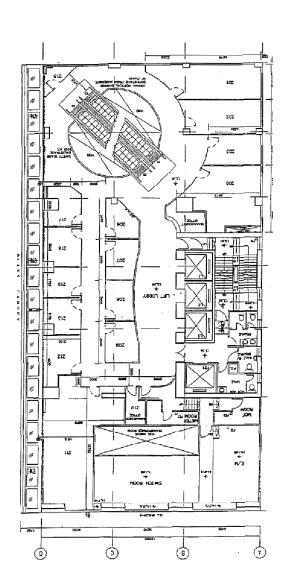
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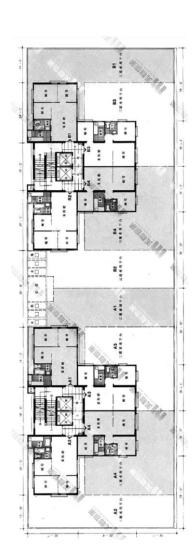


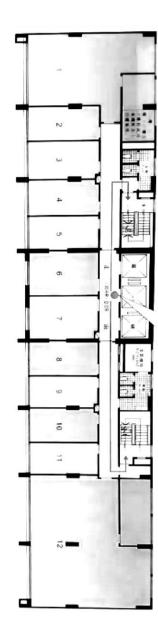


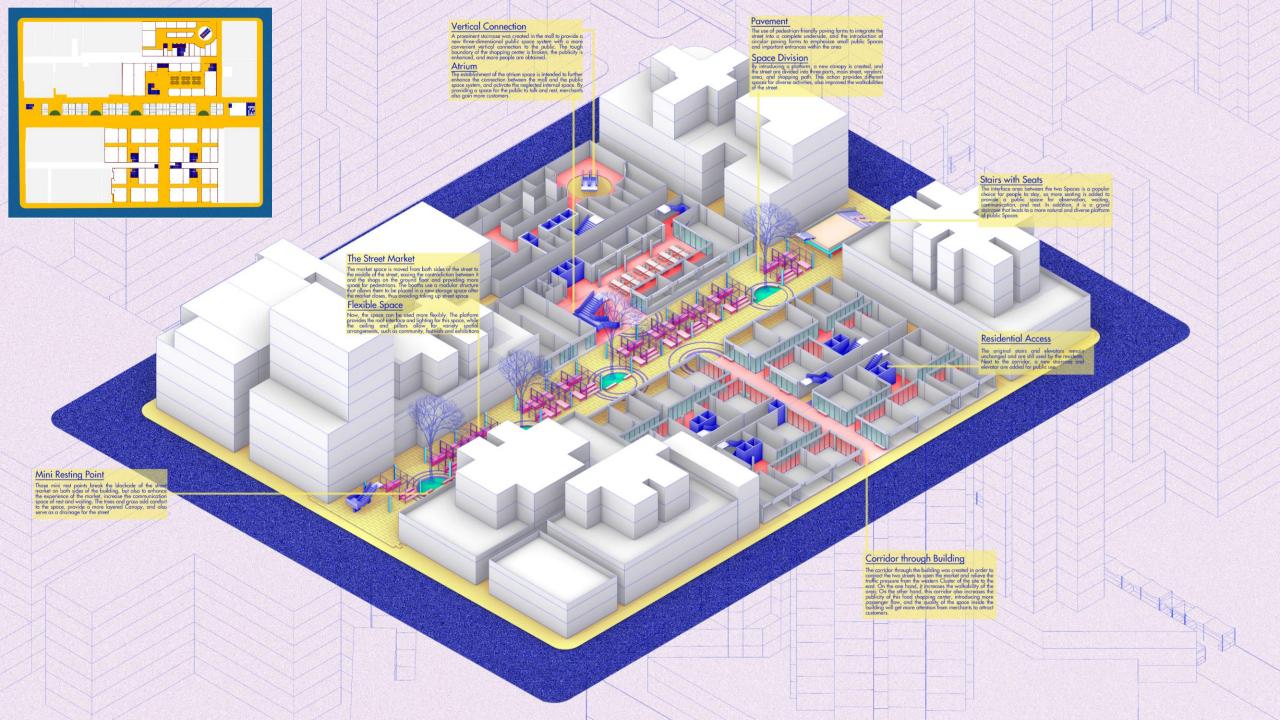


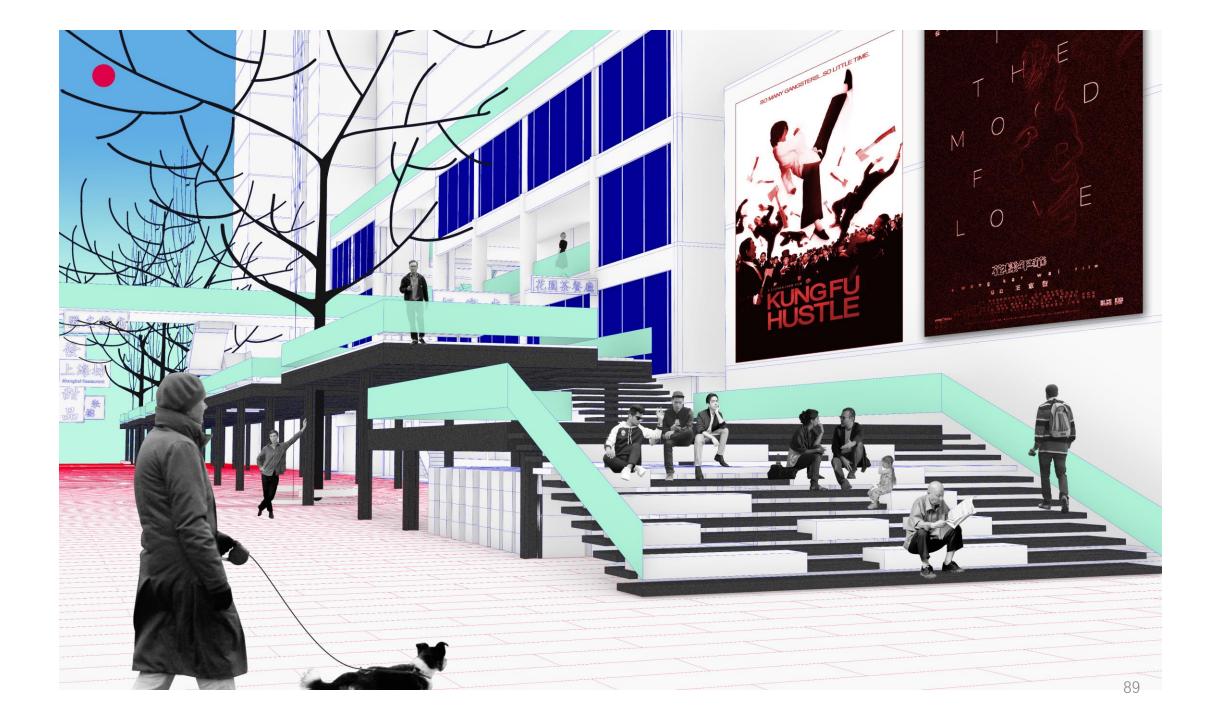


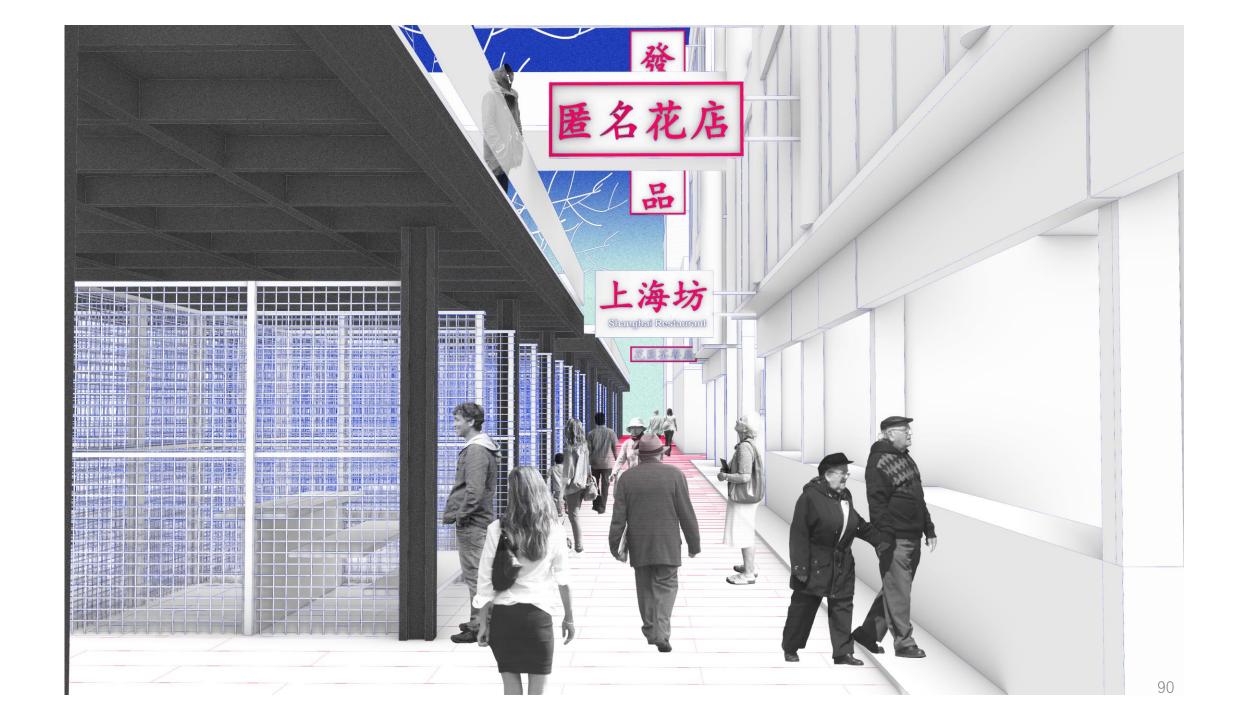












Integrate Interior Spaces

The establishment of the upper level transportation system connects the existing independent Spaces within the building and provides a more efficient way to move. This strategy connects the shopping mall with the food floor so that the two complement each other. The upper floors also get more foot traffic, which will lead to a redistribution of the functional layout inside

Footbridge

A footbridge with a roof is built to connect the building Spaces on both sides of the street and become part of the transportation system on the above ground. Seats are provided on the bridge floor to welcome pedestrians to stay, while also creating a richer visual exchange

Vertical Connection

A prominent staircase was created in the mall to provide a new three-dimensional public space system with a more convenient vertical connection to the public. The tough boundary of the shopping center is broken, the publicity is enhanced, and more people

The Platform

To face the demands of more public space, a platform is introduced. It creates a floating green area in the street, also produces a canopy for the ground. The platform. The platform connects the ground level with the above-ground level and has a high visual appeal to guide people to use it.

Diverse Mini Spaces

By using different combination of plants and pavements, the platform is divided into five mini spaces, which own diverse atmospheres to suit different demands. The seasonal changes of plants deepen the connection between memory and this





From public to community

In negotiations, residents agreed to release the roof space for public use in exchange for helping to build community space. As a result, public space is restricted to the vicinity of the passageway, and several Spaces for rest and communication are provided. Thanks to the new connection, residents will also use the roof space more frequently, thus making the roof more potential to become a community space, increase the cohesion of the community, and provide more space for residents to move

Several holes were cut in the platform to improve the lighting on the ground and to introduce Jacarandas to create space. These trees are used to divide the space of the platform, while also breaking up the linear layout of the ground market and providing space for rest. During the flowering season, jacaranda will create a beautiful street scene

Residents/Public

After transforming the base of the building into a network of connected public Spaces, new staircases and elevators were added for public use, avoiding the disruption of the paths dedicated to residents

Break Boundary

Connecting the two adjacent buildings, the second floor becomes a whole. This also allows the view through the building's obstruction to reach both streets, thereby reducing the internal closure of the building. This also provides a window into the building's inner space from the exterior.

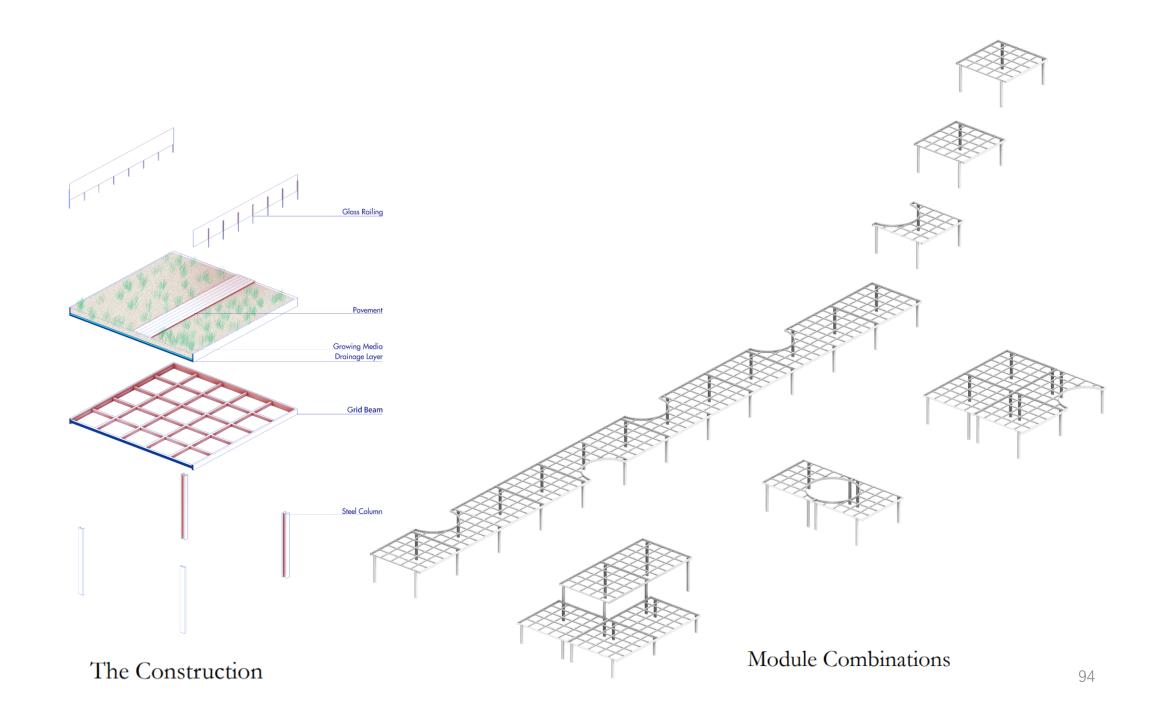


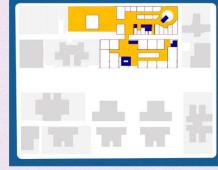






In the Day In the Night In the Festival





The Third Floor

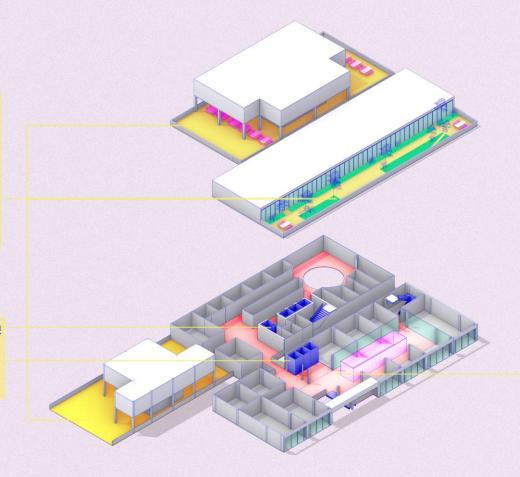
Rooftop Spaces

The roof space will be better integrated with the surrounding interior of the building, and parts of the space will be opened up and converted into transitional Spaces for use. The leisure space of the office, as well as the restaurant and cafe located in the fundation part can also be spread into this floor, so as to provide a more comfortable leisure environment for workers. The introduction of plants creates a microclimate for the roof space, improving the air quality in the city, as well as providing additional insulation and reducing cooling source consumption.

The integration and improvement of the roof space not only creates more public space, but also increases the value of the building.

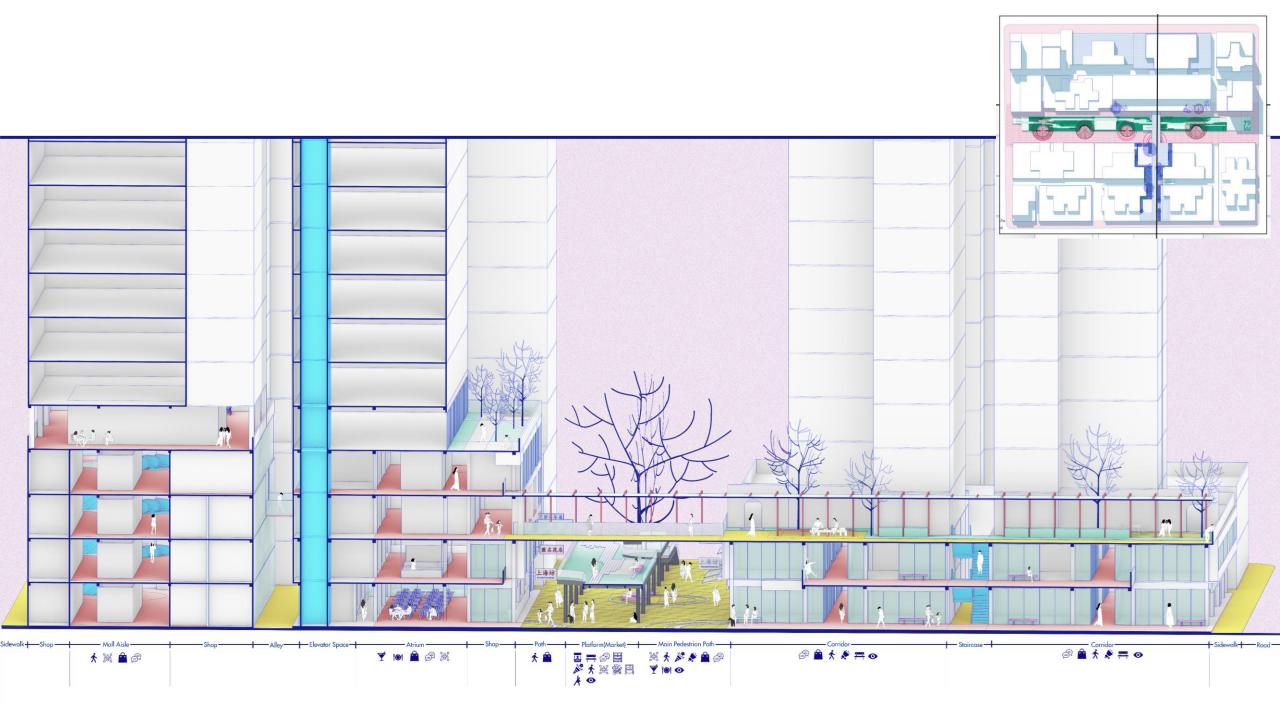
Retain Original Transportation Core

The new spatial system builds on the old building layout and is arranged around the existing vertical transportation core. Because the high-rise of the building is an office building, the elevator is originally mixed with the users of the base, so there is no need to consider the difference between residential and public

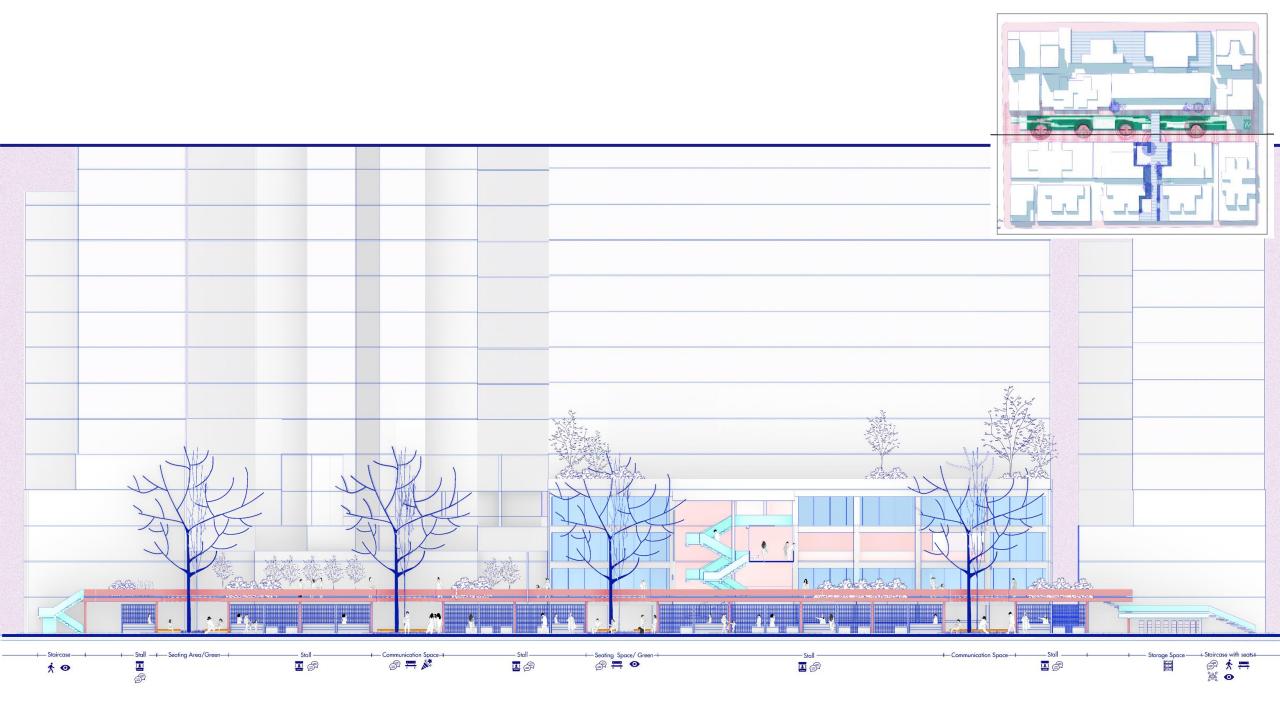


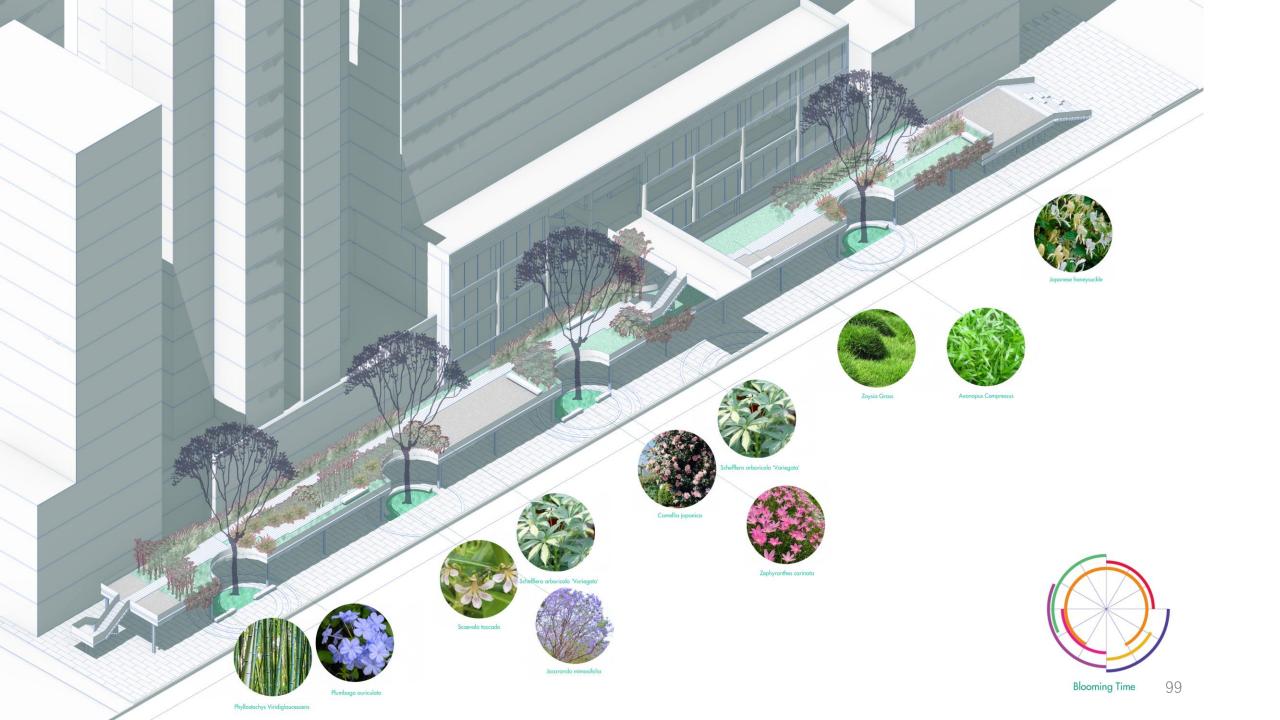
Integrate Interial Spaces

Similarly, the interior Spaces on the third floor of the two buildings have been integrated to better serve the workers in the towers, providing them with a more convenient service and experience. The new route also provides workers with a convenient way to take a break in public Spaces.

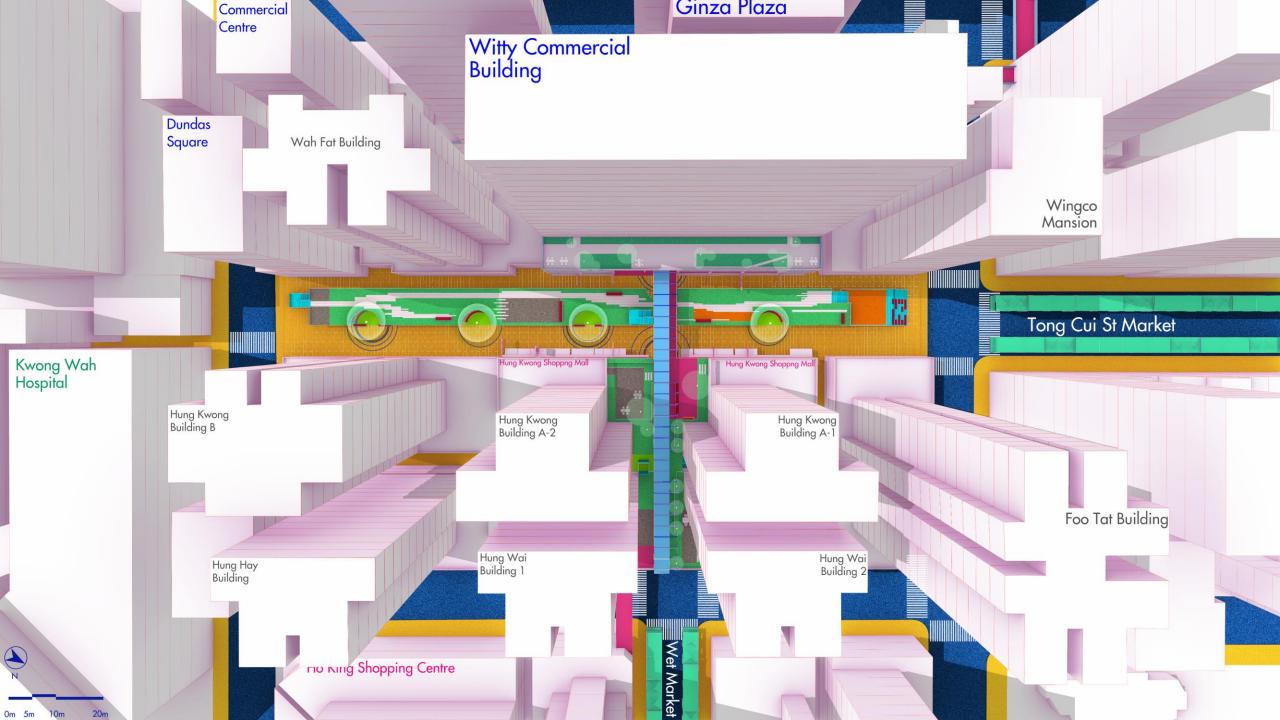








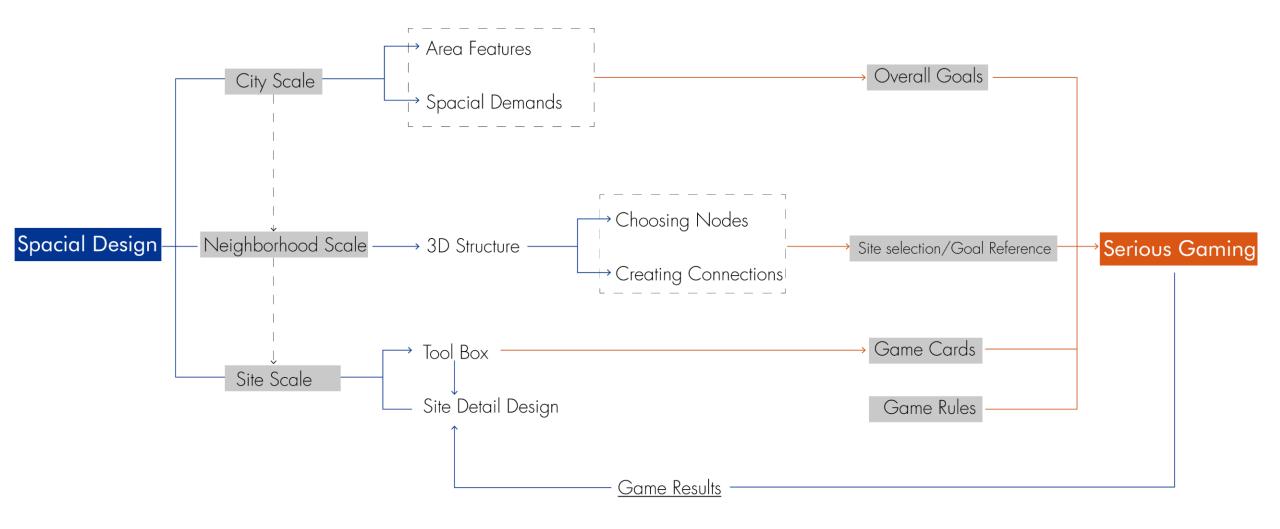






Revitalizing the Urban Life

Design a three-dimensional public space system by combing top-down and bottom-up approaches through serious gaming in Mong Kok, Hong Kong, China



PROJECT

To show an approach
Subjective attributions
Design follows the game result

GAP

REALITY

Use as a public participation and education tool
Objectively determine attribute values
Involve real stakeholders
Repeated play, comprehensive consideration of the results

Good features:

Promote transpositional consideration, and identify potential conflicts

Frequent interaction

Game process is interesting

Models are easy to interact with

Better understand the logic of urban space

Suggestion from players

Predict the conflict between different roles, and prepare targeted strategy.

Sit more limitation to Government role, now this role is too friendly to others

Adjustment and segmentation of roles, to make roles' goal more clear. (But will also make the game more complex)

Revenue mechanism: Revenue distribution and reuse (in the early version, the game do have it, but it make the game become too complex)

Some of the Strategy cards are too similar

Arguments about the attributions.

How to involve public participation?

How to promote communication among stakeholders and balance their interests?

How to bridge the gap between top-down and bottom-up approaches?

Serious Gaming

To help citizens understand their living environment, and to help different groups understand each other's demands.

To use the process and results of the game to clarify and better balance the demands of stakeholders.

To combine top-down urban planning with bottom-up urban design

Conclusion

A discussion about top-down and bottom-up

Through serious gaming to give the public more power

A trend of Vertical development and flexible use of space

A possibility of achieving the right to the city