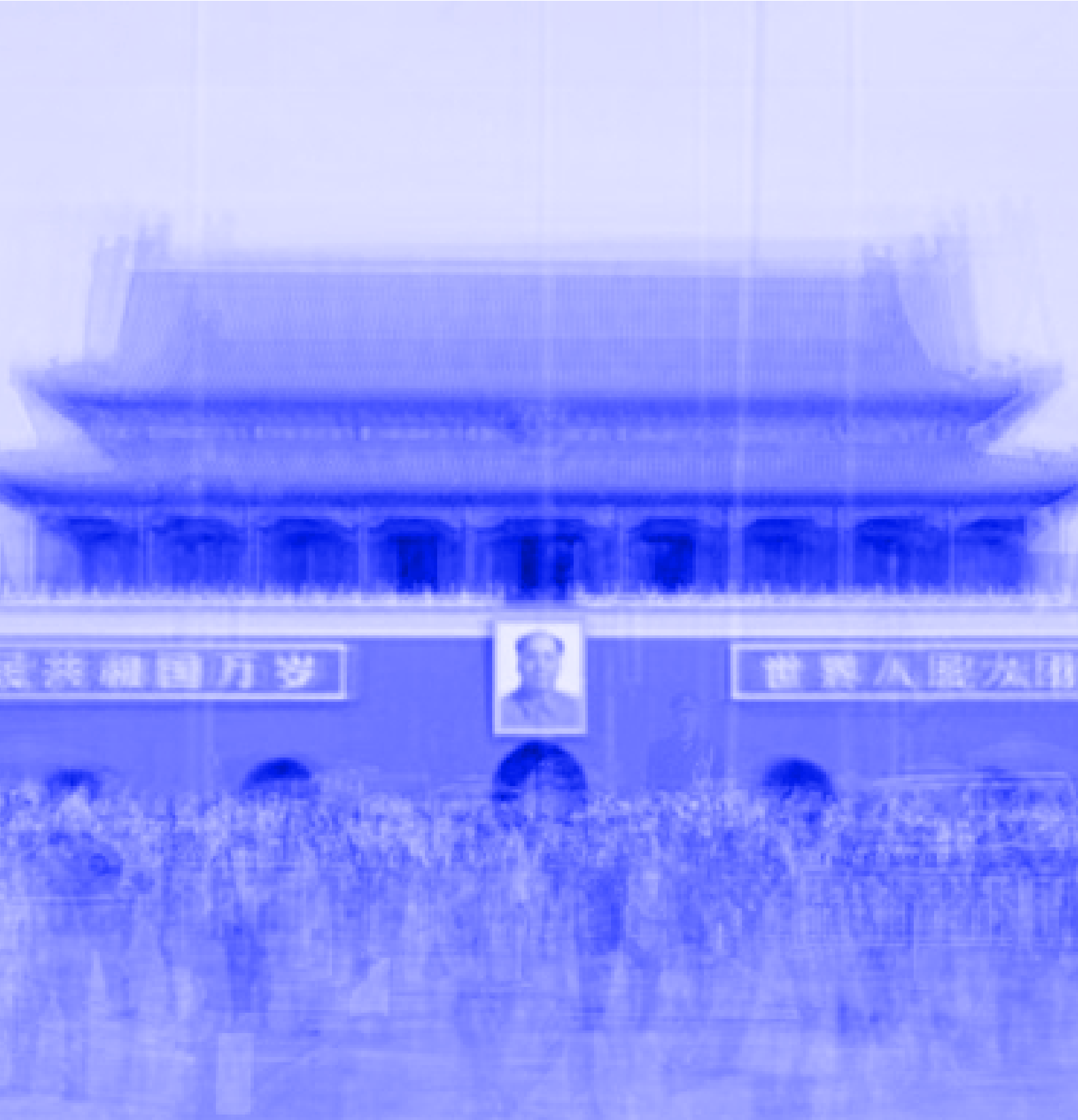

From Arrival City to Beijing

Co-transformation of Arrival City and Urban in an Open System

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Graduation lab: Comeplex Cities

Title:
From Arrival City to Beijing

Subtitle:
Co-transformation of Arrival City and Urban in an Open System

Graduation lab
Planning Complex Cities

Courses:
MSc 3 Urbanism
AR3U100 Graduation Lab: Urban Transformation and Sustainability
AR3U040 Graduation Orientation
AR3U023 Theories on Urban Planning and Design
AR3U013 Analytical Methods of Urban Planning and Design

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· Acknowledgement

The completion of this graduation project is a tortuous journey. At the beginning of the project, I was inspired by a book, a community across borders, hoping to do a graduation project with the theme of floating population. This is a subject that fills me with personal emotions and impulses, and as a result, I have been in trouble several times. In addition, the new coronavirus unexpected to everyone made my graduation project have to change direction halfway. In the end, this project was basically complete during this period of graduation design, but in many ways, its storyline is still open, and still leaves me with a lot of thinking.

I would like to express my gratitude like my first and second mentors. Teake gave me a lot of inspiration so that I can continue when this project is constantly weak. The most important thing is that in the course of this year, the design thinking he brought to me keeps me having fun with urban design. Lei helped me think about this project with a more rational and realistic perspective. The two teachers have very different methods of instruction, but together they have gradually enabled me to grasp my project . At the same time, thanks to my urbanism teacher, all the learning experience during my graduate study has allowed me to gain unprecedented knowledge and thinking of urban design, which helped me construct a basic method framework for graduation design.

I also want to thank my friends, who gave me encouragement and helped me review the project.

Finally, I want to thank my parents, unconditionally.

Fig: Urban village demolished in Beijing
Source: World Urbanization Prospects, the 2014 revision/United Nations
Retrieved from https://mapsontheweb.zoom-maps.com/image/165929643536

· Motivation

"China has experienced an unprecedented urbanization process in human history in recent years. Any urban designer or historian should remain humble and cautious in the face of this unprecedented historical merit. Such large-scale urbanization and population migration will inevitably be accompanied by pain. Our goal is to manage this transition process as much as possible, thereby reducing the cost and pain of immigration." (Shane,2015)

On November 18, 2017, a large-scale fire in a low-cost apartment in Daxing District, became the fuse for the Beijing government to launch a large-scale urban formalization campaign. The urban action targeted the "low-end population", a controversial term used in government documents to refer to low-income, low-educated, low-end employment population. A large number of floating population in Beijing has become the first target to evacuation.

The arrival cities where the floating population was located have been quickly rectified and eliminated, and the informal occupations on which some of the groups depended have also been evacuated. The contradiction between the floating population and urban policy quickly intensified during this period. Actually, in the past 30 years, such urban action happened in every important period of urban transformation, with the pain of marginalized groups. It is foreseeable that this process will continue to occur in the future.

Beijing is not just an example of this phenomenon, many Chinese megacities are also restricting the number of floating population. Beijing is representative and special, because its political context and the toughness of urban action make Beijing's strategy full of ethical controversy.

The high-speed urbanization process since China's reform and opening-up is a great initiative, large floating populations as the products and promoters of this process. The living conditions of this group need to be carefully treated and rethought because they participate in shaping the future of urbanization, and they are closely linked to the past and future of urbanization.

Based on the above context and considerations, this thesis hopes to reflect on the urban strategy from the perspective of urban sustainable development and the position of marginalized groups.

· Introduction

"The city has become a tool to achieve goals, political, cultural, economic or even environmental. Treating the city in this way means that we are constantly passing judgment on what the city should be, and who should be there, and what they should be doing, instead of trying to understand what the city actually is, who really lives there and what they are doing. This produces a dangerous process of idealization, denying whole areas, whole groups their place in the urban community, because they do not fit the picture." (Helleman, 2011).

The graduation project is about exploring alternative development paths for urban renewal in Beijing. The project reflects on the grand blueprint of Beijing planning that uses urban design as a tool for political and economic development, and chooses to examine the ongoing urban renewal actions in Beijing from the perspective of passive groups in urban planning.

The theory of the Open Cities is the basic knowledge of this thesis. According to the theory, the project explores the openness potential of the arrival city for itself and for the urban space of Beijing. The project uses this as a structural framework for an alternative development strategy, and attempts to build an urban renewal path from the the arrival city to Beijing.

· Content

CHAPTER I

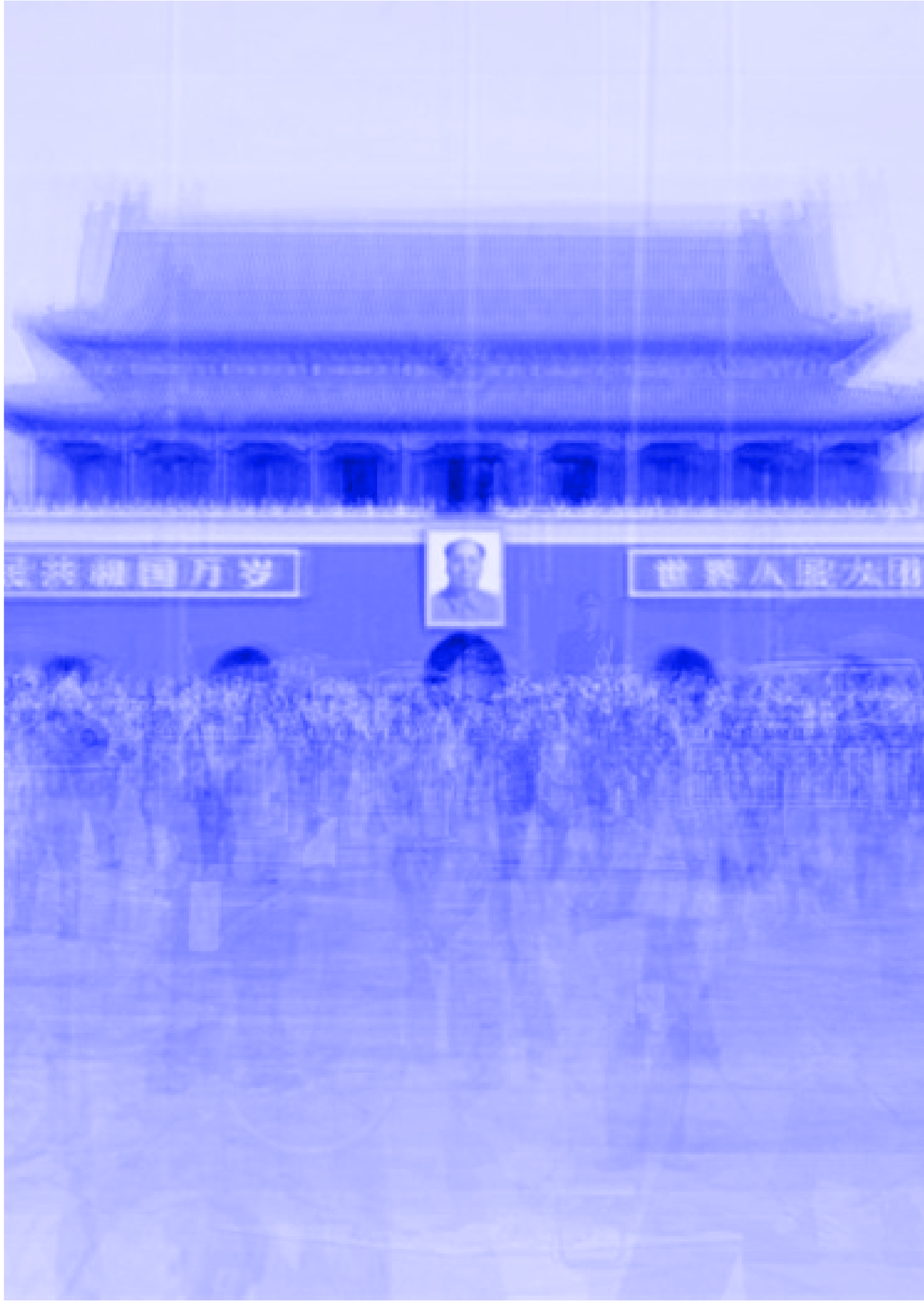
Context

1 Urbanization Context of Beijing

2 Urban Strategy of Beijing

3 Urban Excision behind Beijing Renewal

This chapter describes and refines the basic context of Beijing, where the project is located. As a typical megacity in China, and as the capital city of China, the renewal of political, economic and cultural needs is driving the rapid urban renewal in Beijing. The innovation of urban space constantly experiences the conflict between the existing urban content and the ideal image of the city.



1 Urbanization Context of Beijing

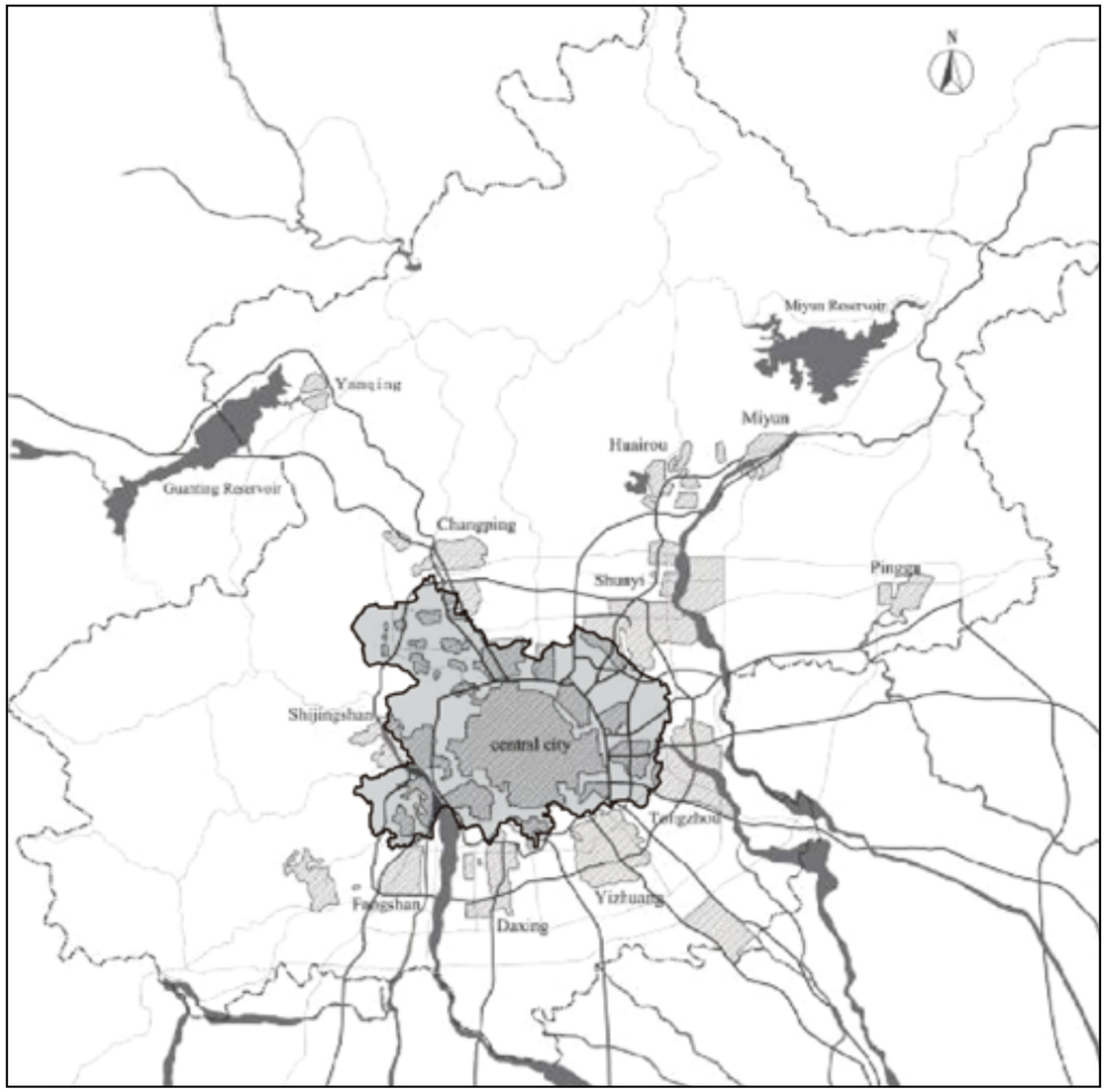


Fig.1.1-1: Center city in Greater Beijing
Source: Greater Beijing plan 2004-2020
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

Beijing is the capital city of China and one of the most super-urban cities in China. Greater Beijing has an area of 16,808 square kilometers and a population of over 20 million. The project is focused to study the six central districts of Beijing, that is, the central Beijing that we usually know. The area of central Beijing is less than one-tenth of that of big Beijing, but its population accounts for about 60% of big Beijing. The central Beijing is a highly urbanized space, which integrates complex political, economic, and cultural contexts.

1.1 Geographical context

A. Global urbanization process

Over the last six decades, the world has been witnessing rapid urbanization processes that changed the way population and resources are distributed. From 1950 to 2015, the population living in the city rose from 30% to 50% (United Nations, 2014). However, there are different levels of urbanization between regions and countries in the world. Developing countries in Asia are regions that are undergoing rapid urbanization. Due to underdeveloped socio-economic conditions, the rapid urbanization stage has caused many complex problems in cities.

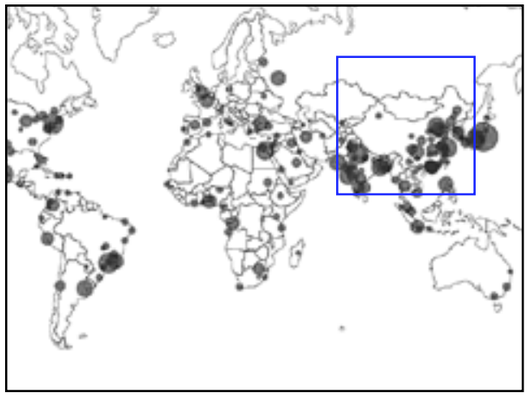


Fig.1.1-2:Uban agglomerations
Source: Data of United Nations World Urbanization Prospects 2014

B. Chinese urbanization

China's urbanization rate rose from 12.84% to 51.27% from 1953 to 2016, (National Bureau of Statistics, 2019). The speed of urbanization has increased rapidly since the reform and opening up, and has formed urban agglomerations such as the Pearl River Delta, the Yangtze River Delta, and the Bohai Rim. And, it is estimated that by 2020, China's urbanization level will reach about 60%. Urbanization rate increased from 30% to 60%. population. A large number of floating population in Beijing has become the first target to evacuation.

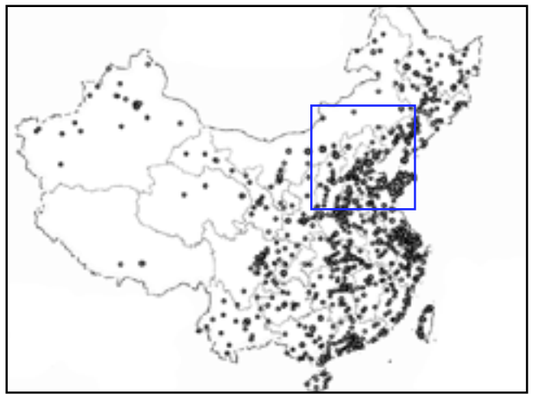


Fig.1.1-3: Urbanization situation in China
Source: National Bureau of Statistics

C. Beijing urbanization

Beijing and its urban agglomerations are one of the important areas of China's urbanization process. Beijing is the region with the largest urbanization and has become the center of the Beijing-Tianjin-Hebei urban agglomeration. Beijing has become one of the most urbanized cities in China by virtue of its political and economic foundation, reaching an urbanization rate of 86.5%.

In the long-term strategy, Beijing's urbanization content will gradually realize the transfer of the surrounding small cities to realize the coordinated development of Beijing, Tianjin and Hebei (Xiaoyi Wang, 2014).

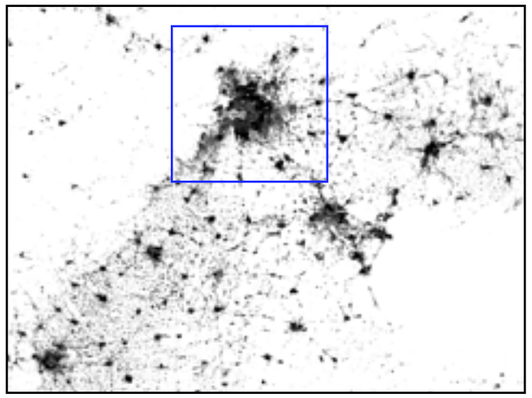


Fig.1.1-4: Urbanization situation in Beijing-Tianjin-Hebei Region
Source: National Bureau of Statistics

D. Central Beijing urbanization

The area targeted by this thesis is the central Beijing including six administrative districts. The central area of Beijing is about 1381 square kilometers, with a permanent population of about 12.09 million people (Administrative divisions of Beijing, 2017). This area contains not only the core functions of Beijing's capital, but also the functions of urban development that have been developed subsequently. Under the Beijing strategy, it has the most complex context of change.

At the moment, Beijing's planning hopes to curb the expansion of central Beijing and transfer some urban content to the surrounding secondary areas.

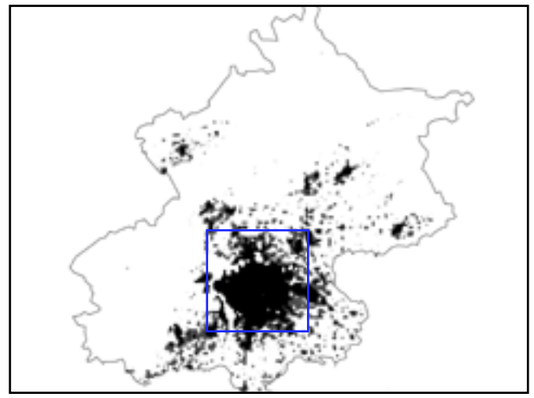


Fig.1.1-5: Urbanization in Greater Beijing
Source: Greater Beijing plan 2004-2020

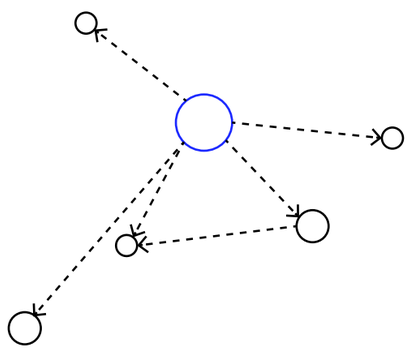


Fig.1.1-6: Urbanization trend in Beijing-Tianjin-Hebei Region
Source: author

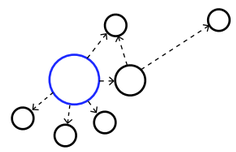


Fig.1.1-7: Urbanization trend in Greater Beijing
Source: author

1.2 Urbanization process

A. Urban expansion stage

Since the reform and opening up, the urban area of Beijing has continued to develop at a high speed every year on the basis of the original high level of urbanization (54.96%). This process is accompanied by the outward expansion and population growth of the Beijing construction area.

The urbanization of Beijing's urban area is a process of circular expansion of the central urban area to the surrounding areas. The gradually developed new urban expansion area as a city sub-center formed a new urban expansion pattern around 2010: the development of new urban clusters and the spatial discontinuity of the original urban center.
To some extent, this change in development pattern means that Beijing's urbanization model is gradually changing: Beijing has begun to suppress the expansion of the central urban area.

B. Counter-urbanization stage

Around 2015, Beijing's urbanization process slowed down significantly. According to Beijing's urban planning indicators, Beijing will strictly control the total amount of construction. central Beijing plans to reduce construction land by about one-tenth from 2015 to 2035. Beijing is becoming the first super-large city with reduced development in China(Dengqi, 2018).

For the first time since 2016, the total population of Beijing has declined. In the planning indicators, the central urban area is expected to continue to limit population growth. In 2015, the population of the central Beijing reached approximately 13 million. Government plans to reduce the population of 2 million by 2020, and control the population to 10.85 million by 2035 (Beijing Planning Bureau, 2016).

Such reduced development means that Beijing has entered a new stage of urbanization development: inwardly intensive use of land to update urban space and population composition.

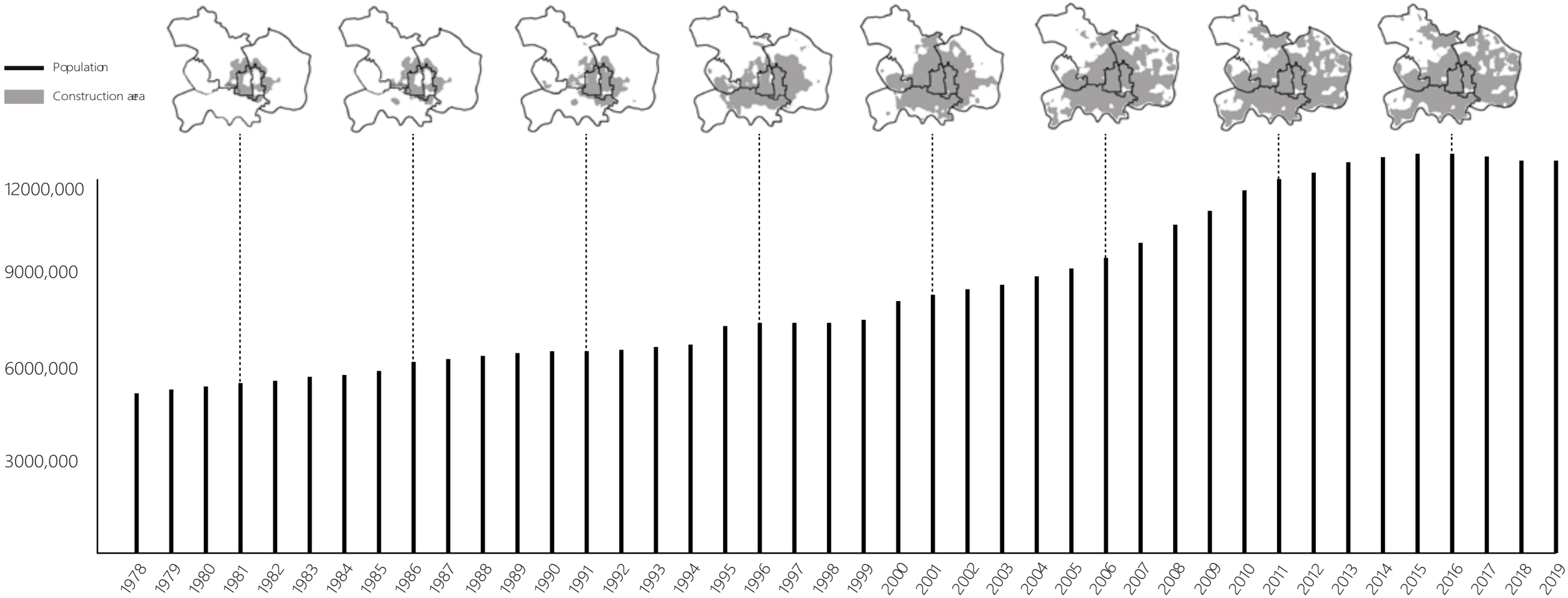


Fig.1.1-8: Beijing urbanization process
Source: National Bureau of Statistics, Masterplan of Beijing

2 Urban Strategy of Beijing

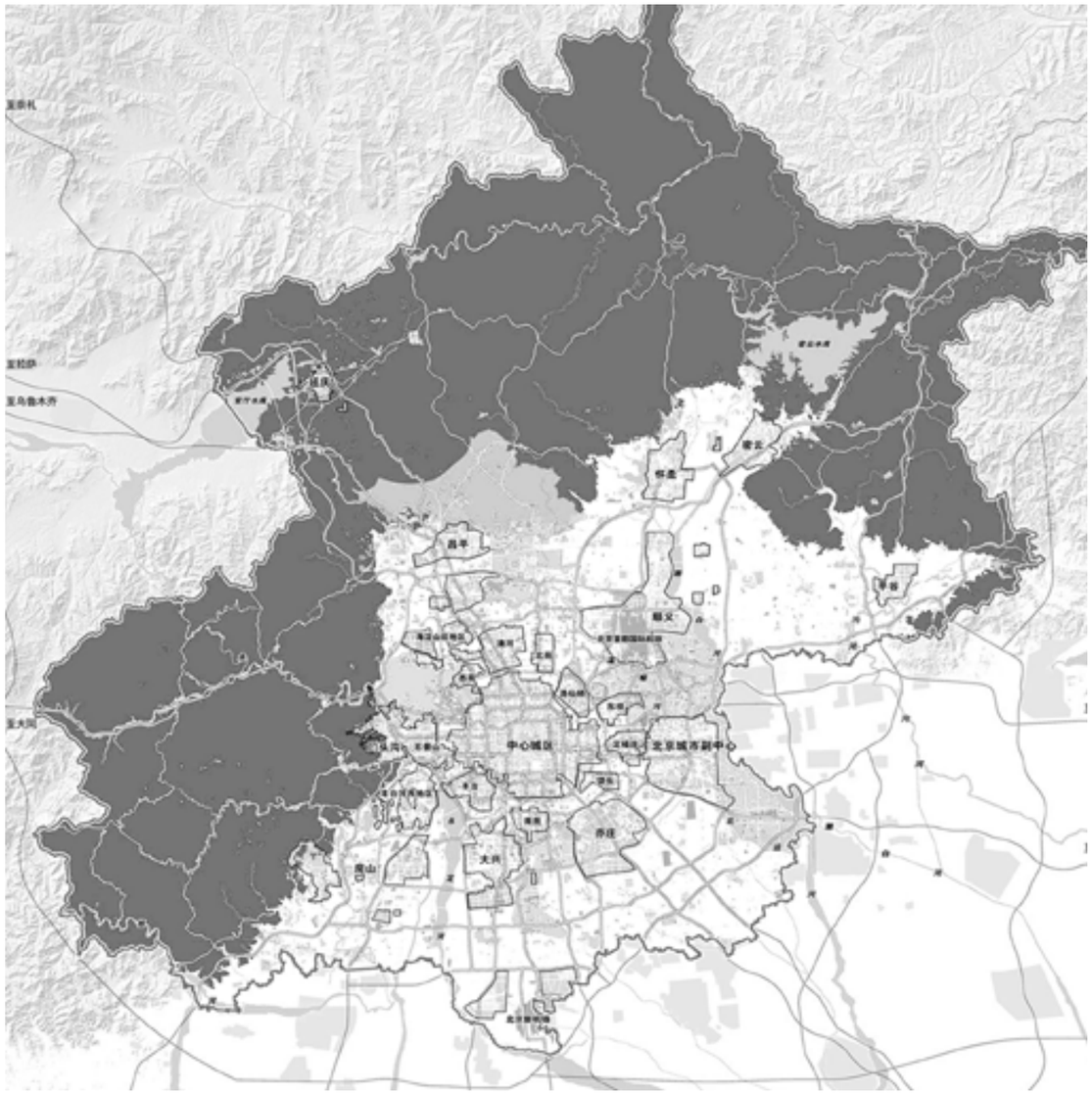


Fig.1.2-1: Masterplan of Greater Beijing
Source: Beijing Municipal Commission of Planning and Natural Resources
Retrieved from http://ghzrzyw.beijing.gov.cn/zhengwuxinxi/zxzt/bjcsztgh20162035/202001/t20200102_1554624.html

In 2017, Beijing released the city's master plan for the next two decades. In this plan, Beijing will vigorously adjust the city's functions and spatial layout, aiming to achieve a world-class livable city.

This goal will form the main line of the long-term Beijing development strategy. Under the requirements of this goal, a more specific urban strategy has recently been set up to develop the function of the capital and relieve the function of the non-capital.

2.1 Capital function

"All work in Beijing must adhere to the strategic positioning of the city as a national Political Center, Cultural Center, International Exchange Center, and Scientific and Technological Innovation center." (Beijing City Master Plan, 2017)

Beijing 's new plan clearly defines politics, culture, international contacts, and technological innovation as the most important function. In the planning goals, by 2035, Beijing will initially build a world-class harmonious and livable capital, the "big city disease" governance has achieved remarkable results, the capital's function has been optimized, and the city's comprehensive competitiveness has entered the forefront of the world. Therefore, in the planning, the center Beijing will insist on evacuating non-capital functions, and give priority to space for optimizing the functions of the capital. It works as the basic principle of Beijing's inward renewal of cities, Beijing's service guarantee capabilities, population, resource environment and urban spatial layout must all conform to the new urban positioning.

Non-captial function:
Jinping Xi(2015) pointed out: "as a capital with a population of 1.3 billion, it should not undertake and have insufficient capacity to undertake excessive functions." Non-capital functions refer to those urban functions that are inconsistent with the development of capital functions

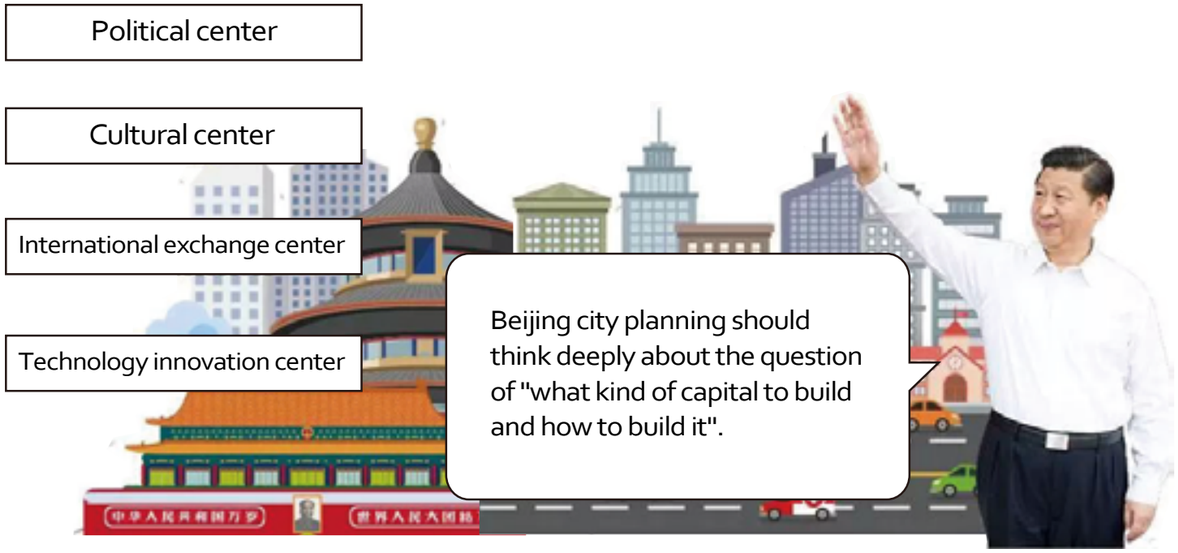


Fig.1.2-2: Beijing strategic positioning: 4 important functions of Beijing
Source: Beijing masterplan (2016-2035)
Retrieved from http://ghzrzyw.beijing.gov.cn/zhengwuxinxi/zxzt/bjcsztgh20162035/202001/t20200102_1554624.html

■ Whose blueprint?

However, to some extent, this ambitious goal of Beijing regards the city as a political, cultural, and economic value-added tool, while ignoring more bottom-up demands.

Beijing's new capital function is a concept that has a large gap with most of daily life. An interesting phenomenon is that after the introduction of Beijing's strategy, the hotspots of social media discussions have always focused on tiny issues of people's livelihood, such as the disappearing market. The construction projects in the new urban strategy form an intimate connection with the daily uncertainty of many people. And, the entry of some capital functions is banning and eliminating existing urban content which need by the citizens.

These minor problems are precisely the ruptures between Beijing's top-down planning and daily urban life.

When urban design responds to "What capital should Beijing be?" These trivial demands are being ignored.

Fig.1.2-3: Daily life image in Beijing
Source: Google image

2.2 Evacuation

A. Creative destruction

While building the function of the capital, the non-capital functions and supporting space were quickly evacuated in a short period of time. The most typical functions to be abolished are various types of markets, comprehensive medical institutions, manufacturing, logistics and storage facilities. These areas currently considered to be non-capital functions once existed as important life industries in Beijing, but they are now being eliminated because of the relative low added value they create.

The evacuation process is not only about the vacation of industrial buildings, but also related to demolishing supporting space and the departure of the employed population. This also means , from the spatial dimension to the demographic dimension, "low- end" urban has been denied by the urban planning.

Beijing's evactuation actions are implemented as a quick and mandatory strategy. Therefore, in recent years, many non-capital functional spaces in Beijing have been quickly demolished. The rapid destruction of old space and the rapid creation of new space are a break in the historical development of space. The new urban form will lose its dialogue with the historical typology because of this creative destruction (David, 2009). Under such circumstances, the new Beijing space attempts to create an over-completed form to fit with the project.

B. Homogeneous Beijing

Accompanying the evacuation action in Beijing, new content are developed. The new urban strategy has led to a relatively consistent tendency towards high-end space development. Therefore, urban planner and invester are developing urban space in capital logic and political logical with a more reasonable identity. As a result, urban space as a commodity and political tool is increasingly developed in the samiliar direction: produce the space to obtain the highest premium and eliminates political heterogeneity.

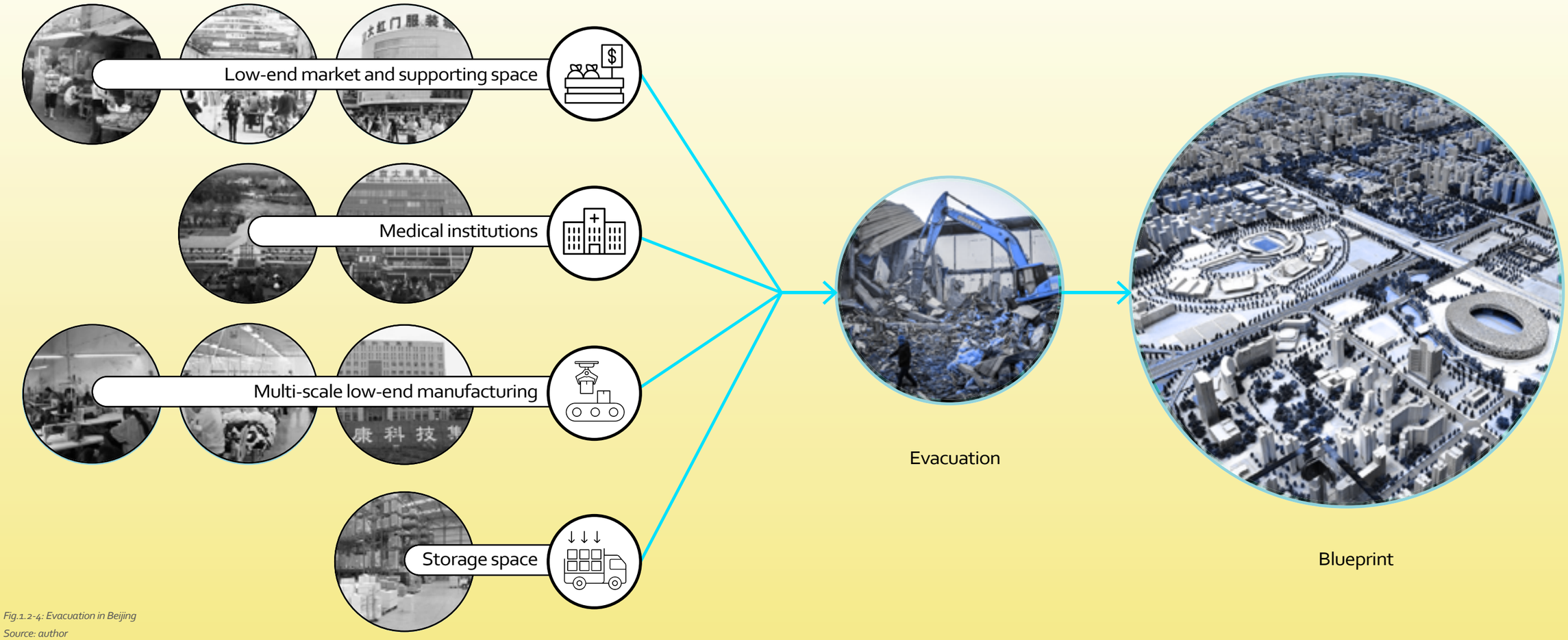


Fig.1.2-4: Evacuation in Beijing
Source: author

3 Urban Excision behind Beijing Renewal

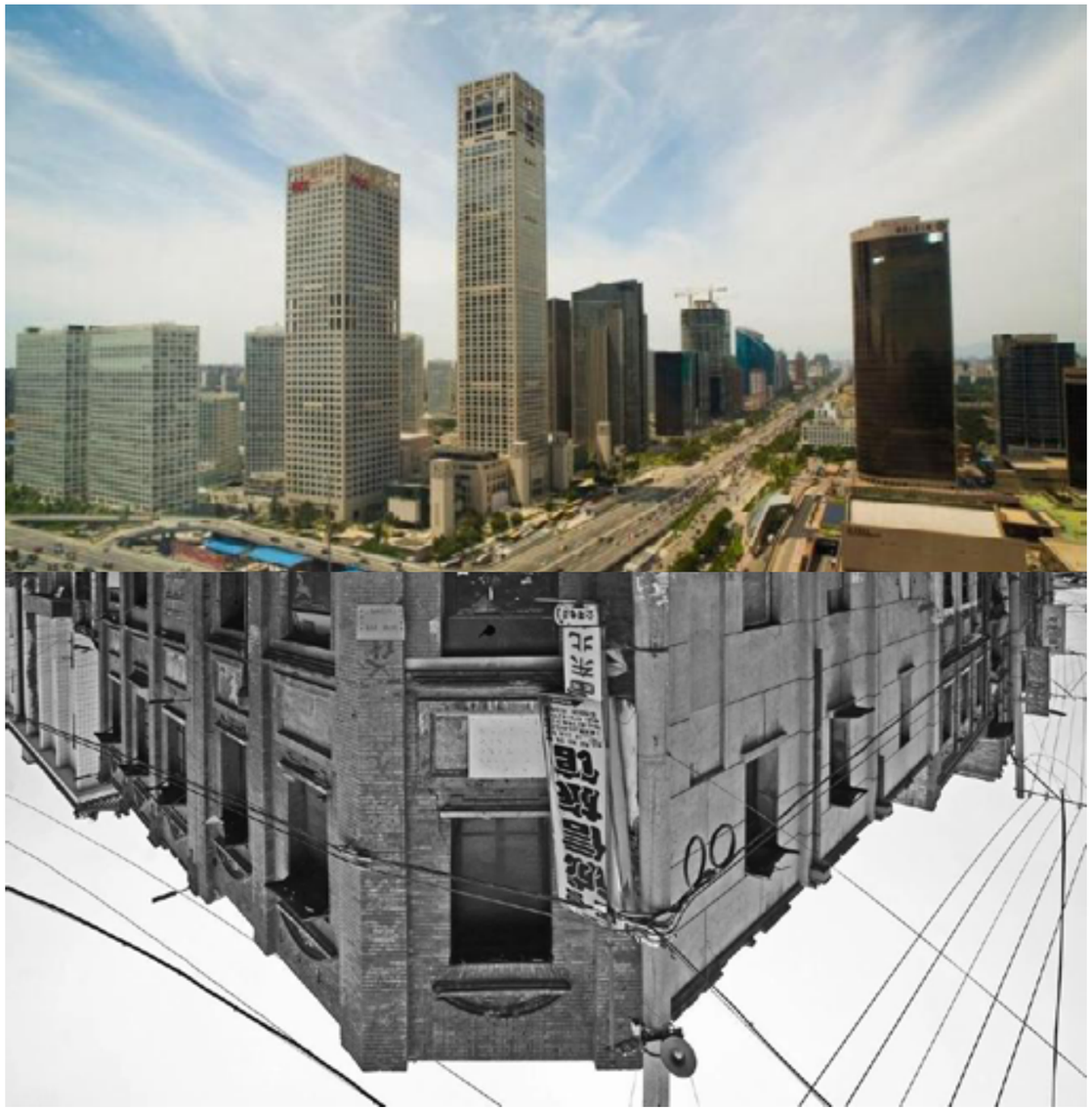


Fig: Center city in Greater Beijing
Source: Greater Beijing plan 2004-2020
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

The new stage of urban construction in Beijing aims to develop the capital function, which means the reduction and marginalization of many types of urban space.

The dissipated urban content has a clear direction in urban planning, showing the tendency of Beijing's planning direction to exclude some urban content.

3.1 'Low-end industry'

According to Beijing's evacuation strategy which mainly targets the low-end industry, the proportion of low-end industries is rapidly decreasing.Beijing's urban decision shows that restricting low-end industries is an inherent requirement of Beijing's renewal. On the one hand, it is necessary to provide usable space for more capital functions by loosening low-end industries. On the other hand, policy makers largely attribute the big city diseases (urban congestion and environmental problems) to the development of low-end industries.

Within two years of the introduction of the functional evacuation strategy, Beijing quickly completed the evacuation of more than 500 wholesale markets and low-end enterprises. A more specific data shows that from 2015 to the beginning of 2019, there were 400 large flower markets and vegetable markets in Beijing and urban areas (Qing, 2018).

The proportion of employment in the low-end service industry in New York reached 67.4% (US Bureau of Economic Analysis, 2011), and the proportion in Beijing was 53.5% (China Statistical Yearbook, 2011). Beijing's new solution to this industry will lower this proportion to a lower level.

Low-end industry:
The low-end industry is a frequently used vocabulary in government planning documents. Mainly refers to small catering, waste recycling, typical traditional service industries, commodity wholesale, retail, and other business forms are typical commerce and labor-intensive manufacturing.

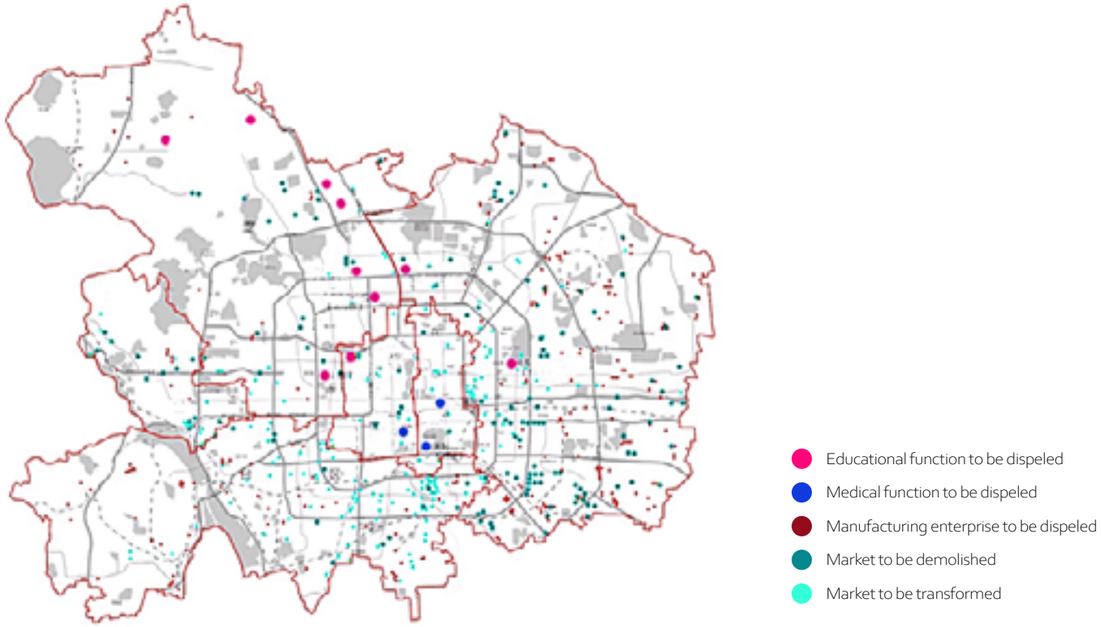


Fig: Low-end industry in Beijing
Source: Beijing promotes Beijing-Tianjin-Hebei coordinated development 2015-2017

Fig: Low-end industry in Beijing
Source: Beijing masterplan (2016-2035)
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

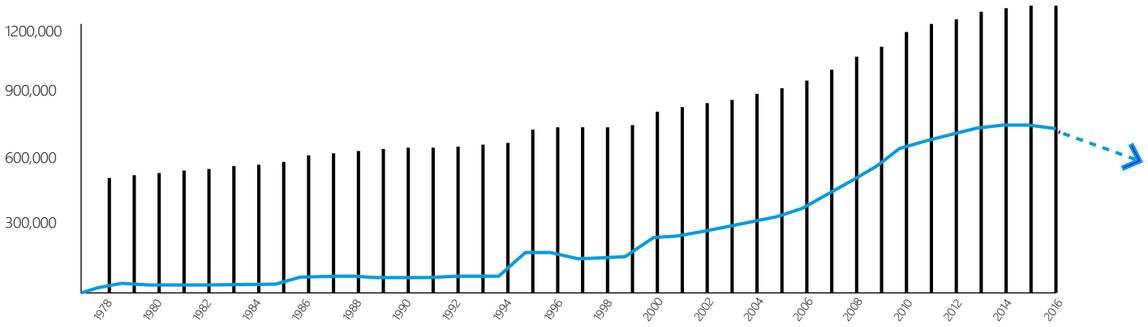


Fig: Beijing strategic positioning
Source: Beijing masterplan (2016-2035)
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

Fig: Beijing strategic positioning
Source: Beijing masterplan (2016-2035)
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

3.2 Floating population

There is no doubt that the disappearance of low-end industries and related spaces will change the living conditions of the groups in which they are employed and live. The people most obviously affected are the marginalized groups defined by Beijing government documents as ***Beijing Low-end Populations***. Most of the low-end population are actually ***floating population*** who lack resources and social security.

The population growth rate of Beijing over the years has been consistent with the growth rate of the floating population. The floating population also constitutes an important part of Beijing 's population growth. In recent years, the number of migrants and 60% of Beijing 's population has reached the center. However, the population control that the Beijing plan hopes to achieve is still hoped to be achieved through the control of floating population: evacuation of low-end floating population. Such actions have been gradually implemented through industry slackening and spatial transformation. At the same time, the Beijing government has reduced the number of urban migrants through adjustments to floating population management policies and housing conditions. The central Beijing area is expected to accelerate the evacuation of floating population from 2016 to 2020, reducing the number of floating population by 2 million.

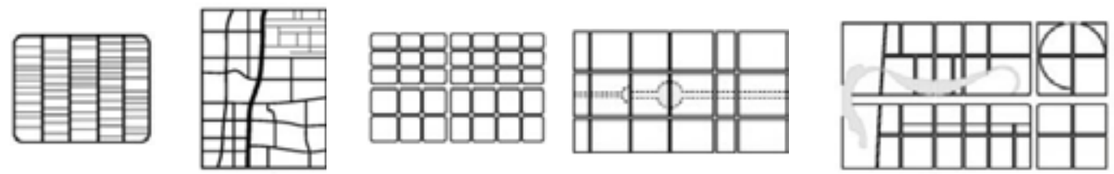


Fig: Beijing strategic positioning
Source: Beijing masterplan (2016-2035)
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

Beijing Low-end Population:
People living in Beijing with low income, low education, and engaged in low-end industries (Yuanju Liu, 2016), or "the floating population absorbed by small businesses and small stores".

Floating population:
In the context of China, floating population refers to domestic immigrants. Due to China's household registration system, a large number of immigrants do not permanently change their residence, so they are more often called migrants rather than immigrants.

3.3 Informal urban space

The reduction of low-end industries also means the transformation of the bearing industry space and supporting space. At the same time, the renewal of urban space attempts to use land intensively and increase its value in limited land. This means that a large number of areas defined by urban planning as backward spaces will be rapidly updated by urban planning. However, it is inevitable that the space development based on the value-added of land is easily led by the logic of capital. At present, many evacuated spaces have been redeveloped by developers, forming a similar urban landscape to the Beijing CBD area.

CHAPTER II

Problem Definition

1 Problem Feld

2 Problem Focus

3 Problem Analysis

This chapter mainly elaborates on the theoretical logic behind Beijing's urban planning to locate the problem areas of the project. And further positioning this urban problem to think in the space of the arrival city.

1 Problem Field

Fig: Beijing strategic positioning

Source: Beijing masterplan (2016-2035)

Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

Fig: Beijing strategic positioning

Source: Beijing masterplan (2016-2035)

Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

1.1 The Closed City

"The city has become a tool to achieve goals, political, cultural, economic or even environmental. Treating the city in this way means that we are constantly passing judgment on what the city should be, and who should be there, and what they should be doing, instead of trying to understand what the city actually is, who really lives there and what they are doing. This produces a dangerous process of idealization, denying whole areas, whole groups their place in the urban community, because they do not fit the picture." (Helleman, 2011).

Closed city is common problem in current urban planning. It stems from the difference between the ideal vision or goal of the professional who develops the city and real life. The general blueprint for the urban planning structure is to complete the construction of the city in a top-down manner. This planned city is divided into a closed system: the space is isolated, grouped and controlled. Such "closed" means over-determined, organized, balanced, clear and linear (Sennet, 2018). In this logic, urban planning is denying and ignoring people's non-linear daily life experience.

On the one hand, cities developed with closed city logic are subject to the desire for a balanced ideal state, such as the urban design of Brasilia. In this ideal equilibrium state, city managers and spatial planners are repelling the generation of heterogeneous elements. Heterogeneous spaces that are inconsistent with the urban structure envisioned in the urban blueprint are regarded as dangerous elements that can bring errors, conflicts, and uncertainty to the city (Shane, 2015). Therefore, the closed cities have selectively screened and classified the urban content in the space design. In a balanced and homogeneous city, part of the content of the city has been rejected, "the consequence of that ideal is to reject, to vomit out, experiences which stick out because they are contestatory or disorienting; things that" don't fit " are diminished in value "(Sennet, 2017). In other words, when planning the city as a closed system, the city is not accessible to everyone, nor is it possible for diverse daily life experiences to occur.

On the other hand, a closed city system is a system that shuts down in time. The urban planning in the closed logic is an over-determined space, and these spaces are declining much faster than other spaces that inherit the urban structure of the past. Excessive norms of form and function are turning modern cities into a fragile space. In the face of

1.2 Bejing × Closed City

According to the discussion in the previous chapter, Beijing's urban planning has a similar logic to Closed City. To some extent, we can recognize that the current Beijing and the planned Beijing are a typical Closed. As an research theory abou urban issue, th Closed City can provide us a critical perspective to study Beijing. This part of the text of the closed city logic in Beijing planning.

Top-down urban strategy

Beijing's top-down urban planning strategy clearly shows the government's political, cultural, and economic goals. Due to the complexity of Beijing's urbanization and the diversity of its population, there are potential differences between ideal goals and places and individuals. The new city strategy promotes the city's value-added for the city's improved city identity. However, for the group of daily life, the mandatory urban planning process is stripping the urban experience built up by daily life, and the urban space is being redefined by several symbolic goals.

Coherence city

Beijing's urban planning regards low-end industries and population as heterogeneous spaces that do not conform to the future blueprint. Policy makers will exclude these heterogeneous spaces as a prerequisite for urban renewal in Beijing. Therefore, Beijing 's strategy obviously deprives some vulnerable groups (the low-end population defined by the Beijing government) from entering the city (David, 2008). The city will also lose the diversity created by those heterogeneous spaces in a consistent plan.

Complete city

Beijing's urban renewal space is concentrated in low-end industrial space and the supporting backward urban areas. Under the capital logic, Beijing's space renewal strategy often adopts the destruction of the original site and develops project-type space with high intensity. Such new forms of space and the universal urban landscape in Beijing have caused the urban space to lose its dialogue with the past, and it is difficult to achieve easy transformation in the future. Its value is concentrated in the capital created today.

2 Problem Focus

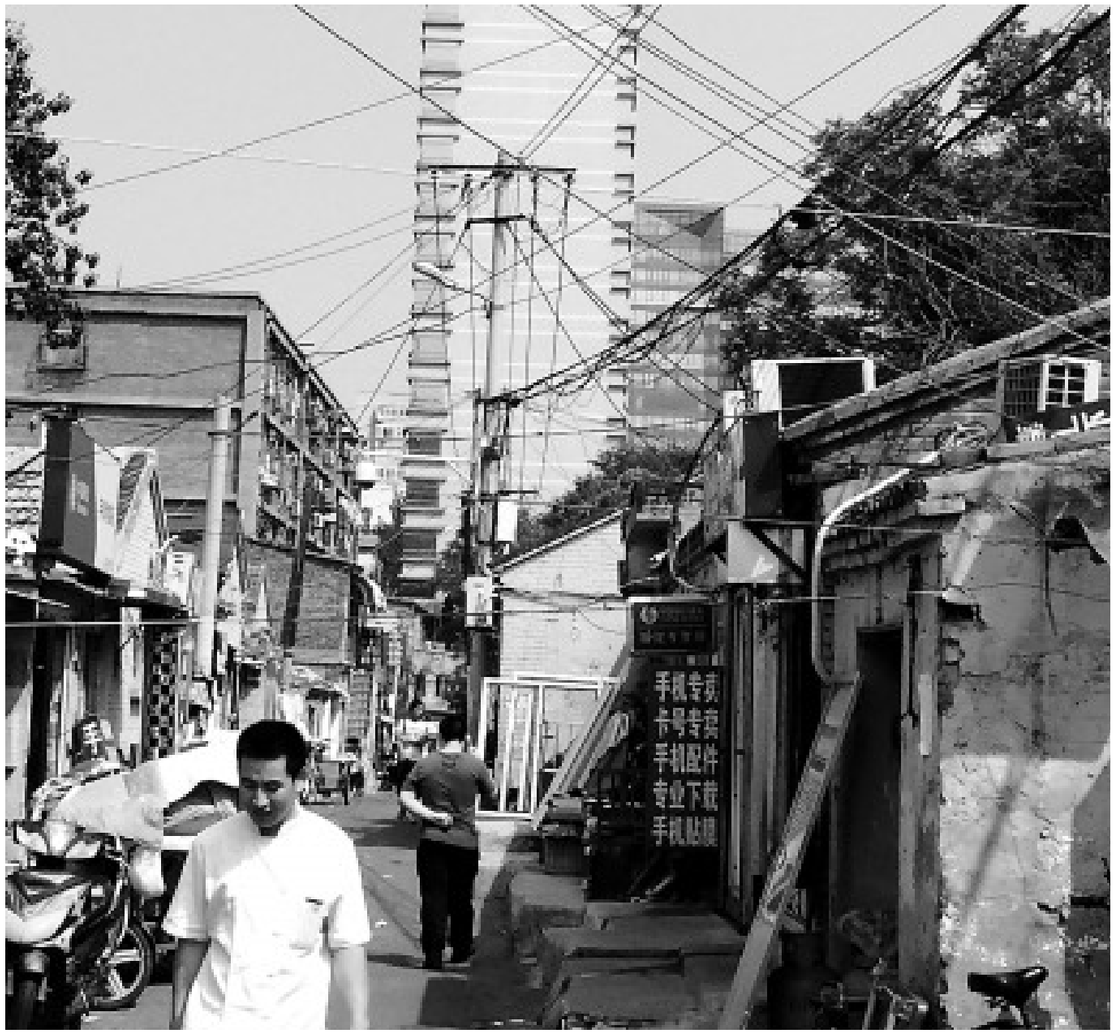


Fig: Center city in Greater Beijing
Source: Greater Beijing plan 2004-2020
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

2.1 Arrival city as the focused area

This project focuses on the most affected areas under the closed planning concept of Beijing: the arrival cities. Arrival cities is the informal living space of Beijing 's floating population. This space gathers the urban elements that Beijing wants to evacuate: low-end population mainly composed of floating population and villagers, various types of low-end industries,low quality building out of formal order. Therefore, in the process of Beijing's renewal, the arrival city, as a typical urban heterogeneous space, suffered strong conflicts and changes.

This article aims to reflect on the problems arising from the logic of the closed city planning in Beijing by studying the heterogeneous space that is the most typical city exclusion.

Fig.2.2-1: Image of Beijing blueprint
Source:qqmap street view

Fig.2.2-1: Image of Arrival cities
Source:qqmap street view

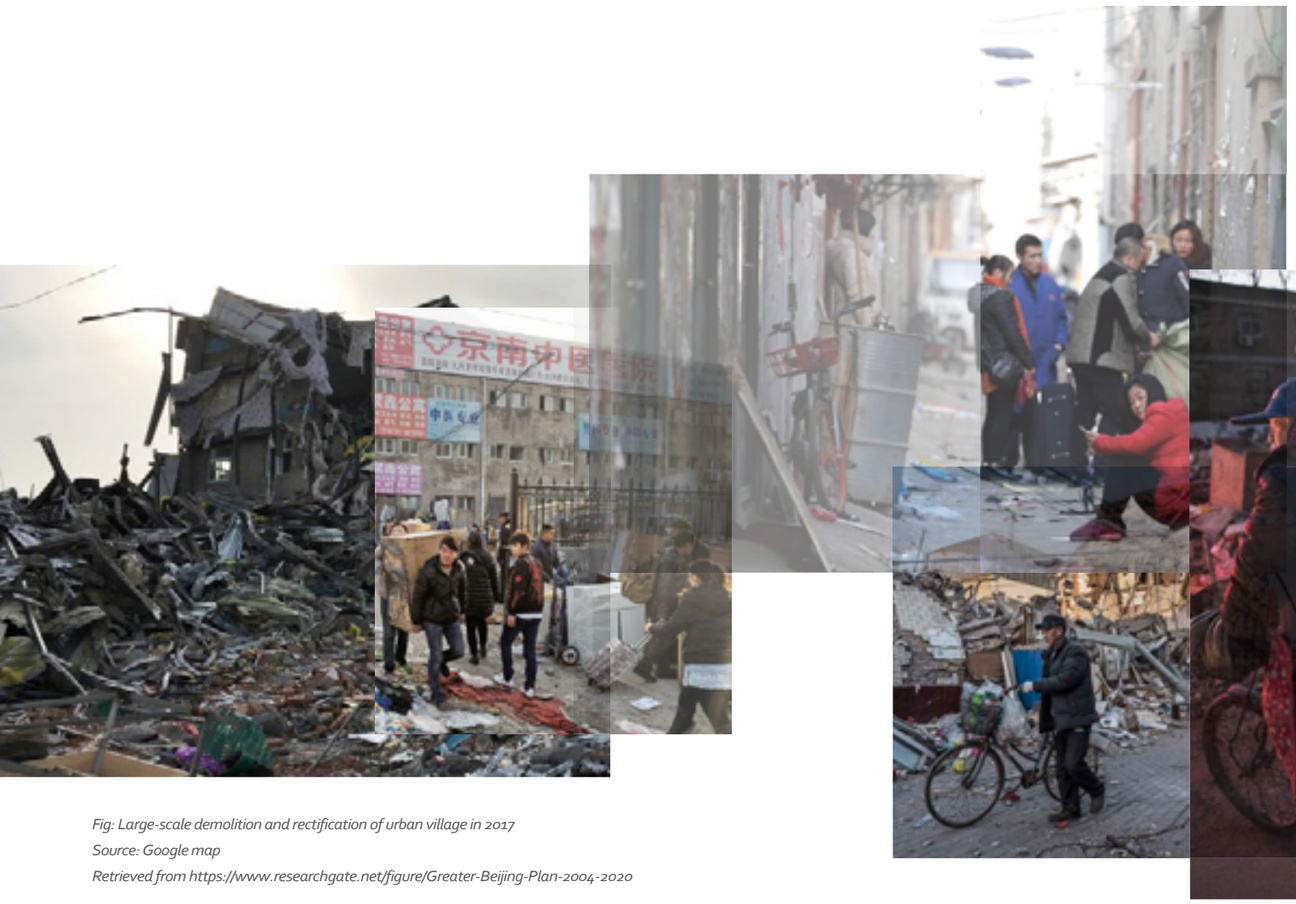


Fig: Large-scale demolition and rectification of urban village in 2017
Source: Google map
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

Because arrival cities concentrate a large number of migrant laborers engaged in low-end industries, Beijing's industrial evacuation strategy affects the decline of urban villages. However, in more cases, Beijing policy makers directly regard the development of arrival cities as an important means to achieve low-end industry and low-end population relief. This kind of direct intervention by the government has occurred in different forms in recent years, and some mandatory interventions have been controversial.

2.1 What is 'Arrival City'

A. Concept of arrival city

In the process of urbanization brought a large number of migrants who are transitioning to urban identities, and they formed affordable communities. These settlements are often criticized and excluded by cities and citizens due to poor living conditions and poor environmental conditions. But for migrants, such a poor space is their first step enter to the city.

Doug Sanders (2012) proposed an updated concept for this kind of space, "arrival city". He explained it over the dimension of space, time and the people: the arrival city is the space formed by the movement and settlement of the same immigrants through social relations, providing a transitional function in the migration process. In other words, it works as an immigration community network, plays a vital role in the survival and mobility of migrants.

More specifically, arrival cities provide informal market opportunities and employment opportunities for rural migrants; help the social integration of migrants and urban populations; as a link between rural and urban, urban fringe and urban center, promote the resource and information communicate with. It is a dynamic and open system.

Successful arrival cities will serve as a converter of sustainable urban population identity and a middle-class incubator (, and continue to provide transformation power to cities and vulnerable groups. Although, it often appears in the city as a

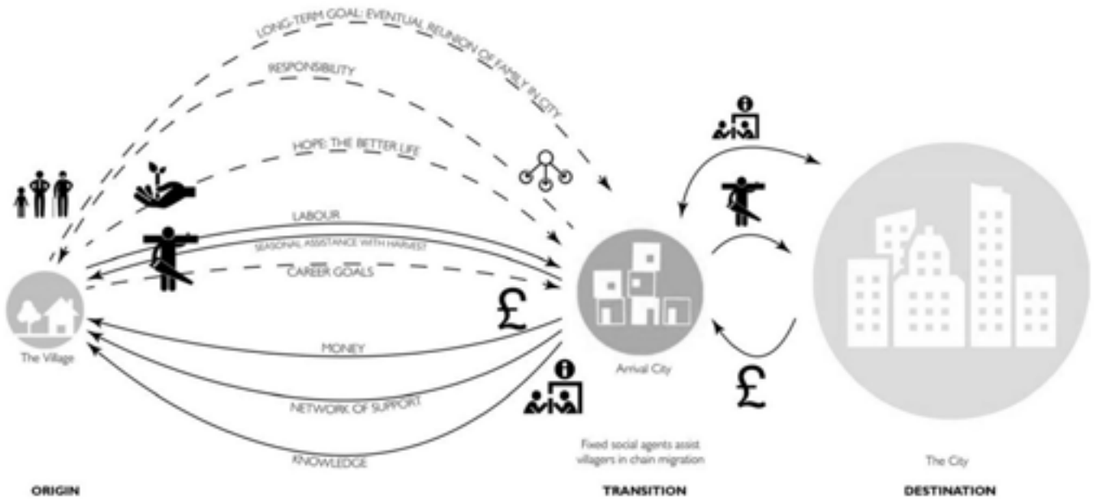


Fig: Center city in Greater Beijing
Source: Greater Beijing plan 2004-2020
Retrieved from https://www.researchgate.net/figure/Greater-Beijing-Plan-2004-2020

B. Arrival city in Beijing

Beijing's arrival cities basically appear as urban villages in the city, which is the product of the semi-urbanization process. Under the influence of the dualistic urban-rural economic and social contradiction in China, the rapid expansion of urban areas has brought rural land into management, but it has failed to achieve complete urbanization of rural space and population, nor has it been incorporated into urban community management. Therefore, the village in the city has formed a unique area that does not match the development of the city.

In this thesis, the urban village mainly refers to the administrative village in the planned urban area, which covers an area of about 18,000 hectares in Beijing(2019), with different land property rights from other regions: they belong to the village collective rather than the state.

Cities, villages, and floating population constitute the three main elements of a arrival city. The formation and development of arrival cities can be mainly seen as the result of the joint action of urban system, village system and floating population network system. The absence of urban system planning and management has greatly increased the possibility of spatial participation of villages and floating population. The village development system lost productive land in the land acquisition of urban planning, but the entry of the floating population gave the village development system a certain income compensation, and the village development system thus obtained new development opportunities. The floating population depends on the rural system to obtain an affordable life in the urban village and seeks development potential in the urban system.

Therefore, Beijing's foothold cities need to be regarded as a complex system composed of multiple subjects, and their interaction forms the basic pattern of foothold cities. Beijing's foothold city is a common choice space under the three demands of urban development, village transformation and floating population entering the city.

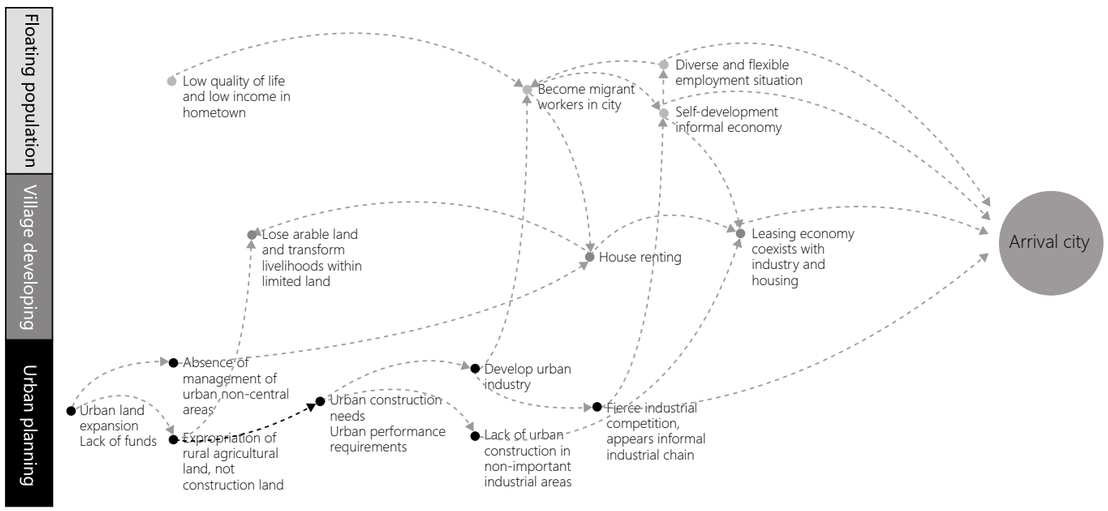


Fig: Center city in Greater Beijing
Source: Greater Beijing plan 2004-2020


Arrival city

2.1 How does the arrival city work： Case study Zhejiang village

A. History of Zhejiang Village

Since the 1990s, the cross-regional flow of China's rural population has grown rapidly. As a capital city, Beijing has become a central that attracts floating population. The floating population from Wenzhou, Zhejiang Province, gradually formed a concentrated area in Beijing.

During its largest period in 1995, Zhejiang Village attracted about 100,000 migrants and spread across 26 natural villages (Hansheng Wang, 1997), making it the largest arrival city in China. In addition, Zhejiang Village relied on the gradually expanding collective network to jointly develop the Beijing clothing wholesale industry, which has a profound impact on Beijing's space and industry.

Like most immigrant settlements, Zhejiang villages were driven by a small number of pioneers, and later, it led to the entry of migrants through ***chain migration***. Initially, the scale of the Zhejiang village was only about 1,000 people, they began to accumulate funds by relying on the informal street market. After that, with the development of the market, the garment industry gathered by Wenzhou people has a good development, attracting new migrant populations in the same township. Migrants together form a network for business purposes(Biao Xiang, 1998). People have refined the division of labor in collaboration and opened up the market, once reaching a situation where products occupy 90% of the Beijing market.

Zhejiang Village used to be an effective arrival city, helping a large number of early migrants to complete their identity transformation and promoting the development of urban industries. It was once used as a positive model for floating population, but be controled and delined by the government because of the the needs of the apparel industry upgrade in Beijing. The final evacuation of Zhejiang village will be completed in recent years due to the evacuation policy.

Migrant chain:
Rely on kinship or geography to maintain the process of migration activities.(Messdy, 1993), this concept is usually represented by the settlement of floating population in the same social context.

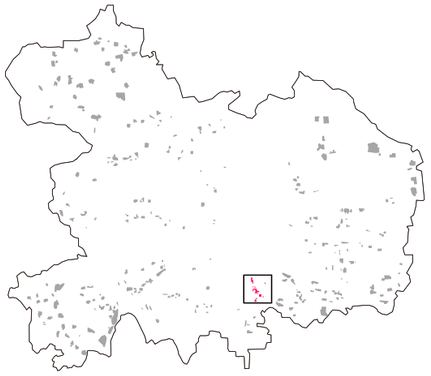


Fig: the change of Zhejiang Village
Source: Author

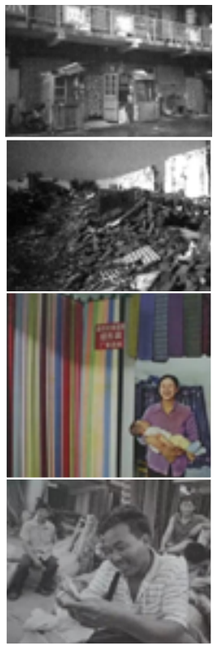
1,000 people

20,000 people

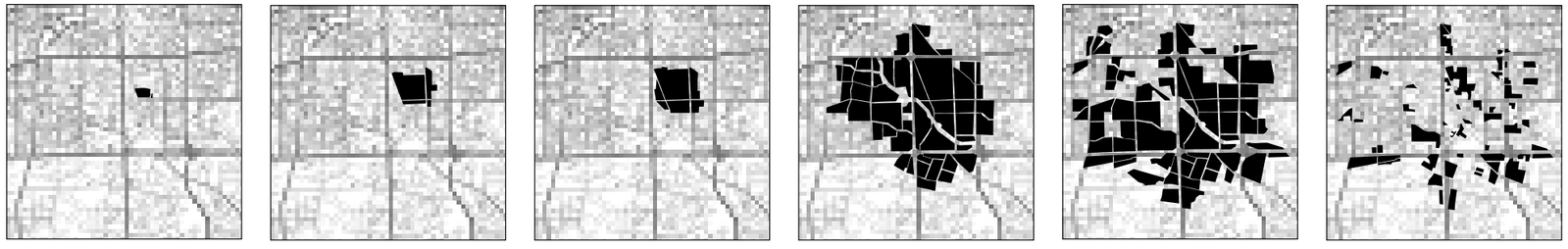
50,000 people

100,000 people

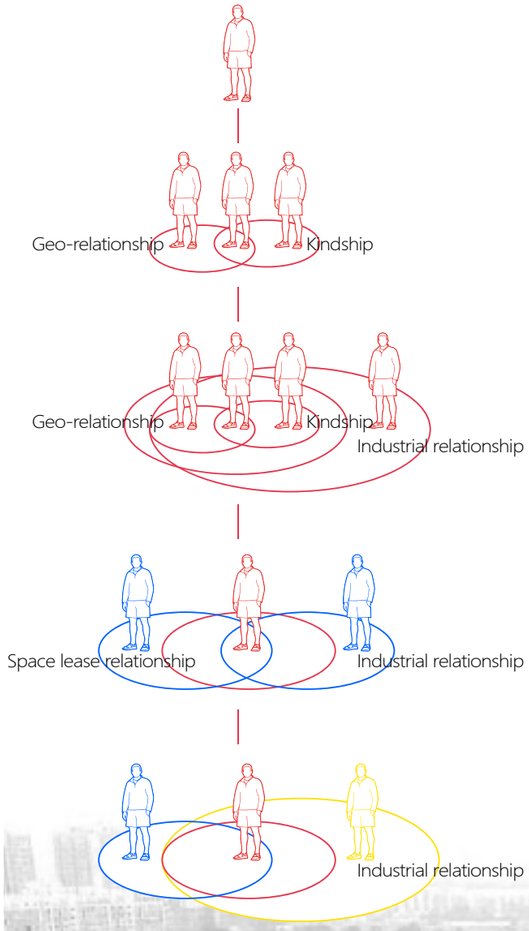
80,000 people



40,000 people



1984 1988 1990 1995 2000 2019



B. Collective collaboration

a. Between floating population

Due to the chain migration, the settlement of floating population is easy to form a collaborative network with geo-relations and relative relations as the main form of contact in order to share urban resources in strange cities. The initial and most important floating population relationship in Zhejiang Village is the close relative relationship and the same-township relationship.
With the development of the industry, the floating population in nearby communities will spontaneously form the division of industry according to the laws of the market and establish a cooperative relationship. Such an industrial collaboration network uses geography and relative relations as basic trust conditions, which reduces the cost of collective collaboration.

b. Between floating population and village collective

There is a social condition for collective cooperation among the floating population, and at the same time, the floating population and the village are also collaborating around the relationship of space lease. Space leasing is the starting point rather than the end point of two collaborations. The active industrial development of Zhejiang Village has effectively transformed a large amount of surplus village labor into the secondary industry. Villages receive sustained collective economic growth returns due to the development of floating population, which is a key factor for the two parties to achieve collaboration in Zhejiang villages. Village collectives may not even have a better cooperative relationship, but as a filtering zone to weaken the government's negative regulations on floating population, in the absence of government management.

c. Between floating population, village collective, government

Zhejiang Village used as a successful example to illustrate that the informal economy of the floating population can influence the market from the bottom up, and has the power to collaborate with the government. Zhejiang Village obtains space for industrial development in the city through spontaneous informal means, and gradually formalizes the industrial content. Based on the local industrial advantages created by the foothold cities, the government has reached cooperation with villages and migrants to jointly manage the regular sales of the industry. In the mid-1990s, they jointly achieved the development of Beijing's clothing industry.

Fig: the change of Zhejiang Village
Source: author

C. Value of arrival city

a. For floating population

There is no doubt that an effective arrival city has most obviously benefited the floating population living and transitioning among them. The once vibrant Zhejiang village is a successful development space, and the floating population can obtain opportunities for identity transformation through production. In addition, a strong bottom-up community creates a sense of belonging for the floating population and compensates them for the lack of social service facilities due to household registration restrictions. Although the space in the cities is relatively poor, it can meet the needs of the floating population in the economic and social dimensions.

b. For village

The village is in a passive state in the process of urbanization. The urbanization of the surrounding cultivated land has caused them to lose a lot of income, and their relatively low educational background makes it difficult for them to quickly integrate into the urban employment environment. The demolition compensation of cities after expropriation of urban villages cannot be a sustainable and effective compensation. However, a dynamic city can become a new space for villages to provide continuous income.

Of course, space rental income cannot be used as a long-term development tool, but it can be used as an opportunity for collective industry development.At the same time, the existence of arrival cities can help villages continue to maintain them as a collective in space life and economic activities, to buffer the trend of rapid dissolution of collectives in urbanization. To a certain extent, settled cities are not only a transition to the floating population, but also a transition from villagers to urban life.

a.For Beijing

Centralized urban structure of Beijing makes basic service facilities and diverse social and economic life highly concentrated in the central zone. Located in the fringe of the city, the arrival city adds the diversity of urban life to the fringe urban area with its highly mixed functions. This effect can be seen from the map.

The impact of the cities tonight is small, but as a dense point structure, it fills a large number of vacant areas in the city and is closely connected with the lives of citizens.

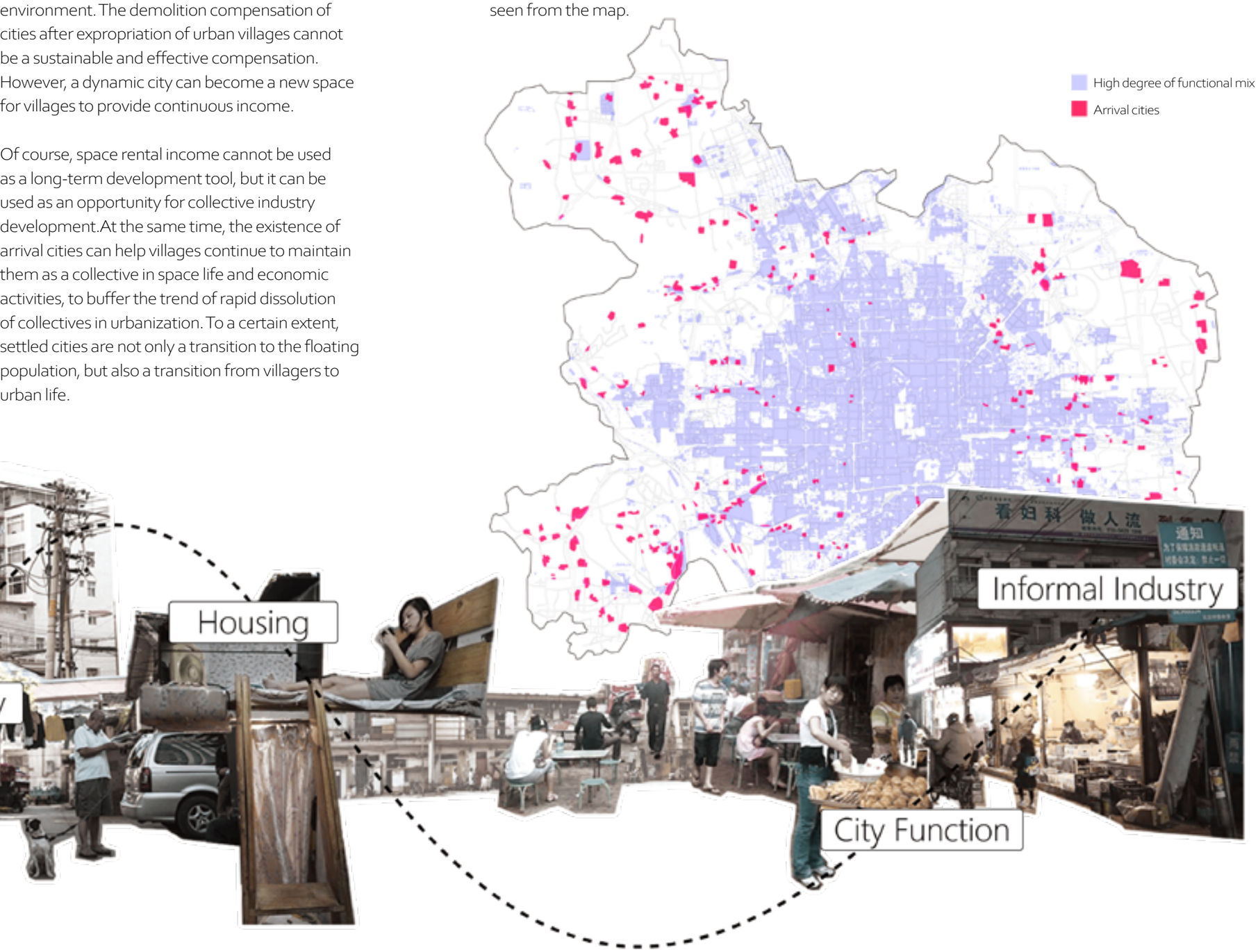


Fig: the urban function in arrival city
Source: Author

3 Problem Analysis

Fig: the change of arrival cities in Beijing, from 2002-2019
Source: Google map

3.1 Creative desrtuction in Beijing planning

Although arrival cities play an important role in the vulnerable groups and the diverse life of the city, due to the new stage of the government and the long-term planning logic, the space of foothold cities has been continuously destroyed to create new value-added space. The new space is the result of policy and capital screening, and this result is not related to the content and space of the cities. The foothold cities are rapidly disappearing, and the content carried inside is also being marginalized.

3.2 Failed arrival city

In the previous chapters, the interaction of urban planning systems, village systems, and floating populations in arrival cities have been explained. The mutual coordination of such multiple systems is precisely the reason why arrival cities are produced and developed. Informal collaborative relationships allow each system's needs to be met at different times. Even if the development of the city is changing, the village in the city has a certain adaptability in this kind of cooperation. We can imagine that arrival cities in such a relationship can continue to develop as a cooperative bond if the system can continue to keep the balance.

However, the reality is that current urban planning completely breaks the balance of this multi-system adaptation. City planners have fully intervened from top to bottom in arrival cities, and the other two systems have lost the way to upward feedback and affect the urban planning system.

This overview chart of historical development can show this tendency: when the government intervenes as a mentor, the village system and the floating population can only be passively affected. The final disappearance of the arrival cities separated these two vulnerable systems. Therefore, the vulnerable group lost the power of cooperation, and the individuals were more marginalized in the city.

3.3 Social injustice and Beijing solidification

A arrival city has the advantages of supplementing the diversity of life, creating transitional income, etc. for the disadvantaged groups, and is also beneficial to urban life. The disappearance of arrival cities is clearly damaging to disadvantaged groups: they are losing their right to enter the city. What about Beijing? The problem that Beijing will encounter is far more than the loss of urban space vitality.

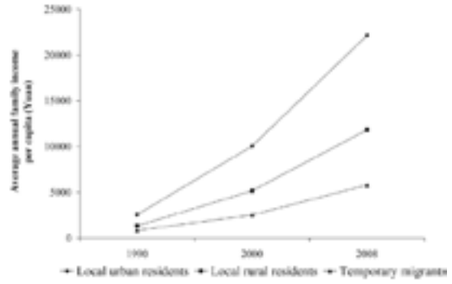


Fig: Difference of income in Beijing
Source:

The reduction of the living space of vulnerable groups is further expanding the division of social classes. Injust plans for arrival city are exacerbating this process. In addition to the solidification of the social structure, Beijing continues to use the ideal blueprint of the city to ban down established cities. There are huge hidden dangers in the transformation of cities in the longer future, just like many European post-war urban planning spaces that have become negative spaces.

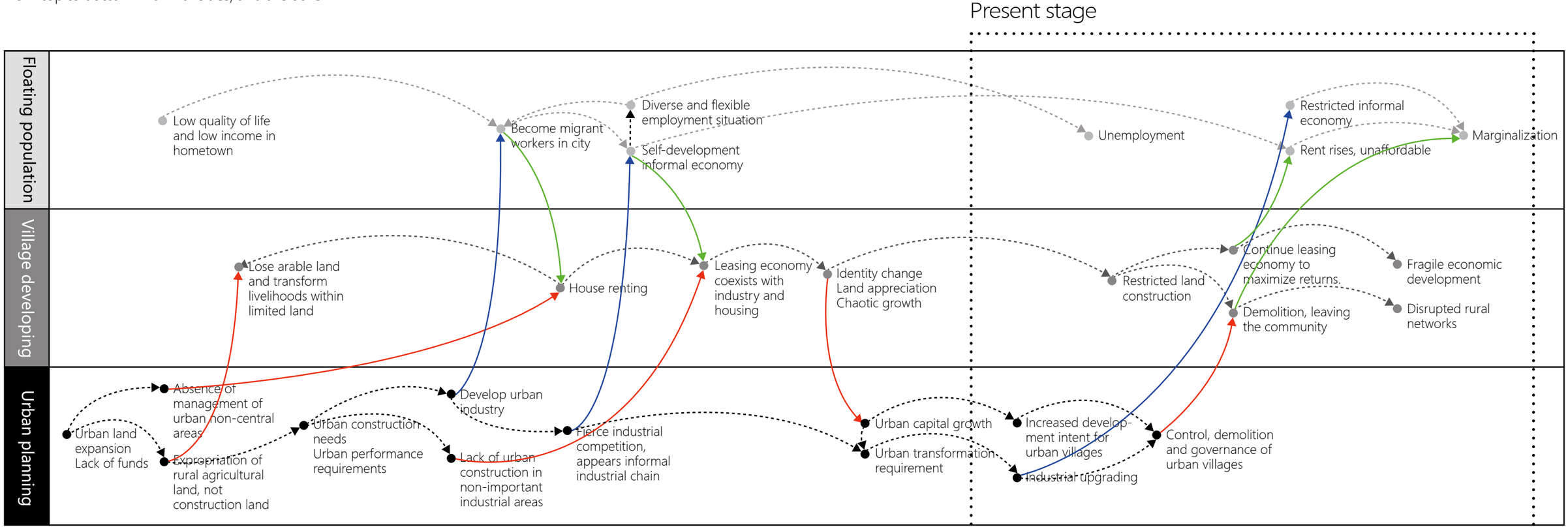


Fig: the history of arrival city in Beijing
Source: author

CHAPTER III

What if ?

The Open City

"The 'Closed City' can be designed and operated top-down. It is a city which belongs to the masters. The 'Open City' is a bottom-up place. It belongs to the people." (Sennet, 2018)

The Open City is a concept opposite to the closed city represented by Planned city. Today, urban planning divides the city into a closed system: isolation, grouping, and control. The concept of an Open City advocates a more open way of thinking to work in the city. In this way of thinking, Open City allow for errors, conflicts, and uncertainties, and citizens can freely and actively resolve their differences, rather than handing over the construction of the city to a perfect blueprint for top-down.

"The 'Closed City' can be designed and operated top-down. It is a city which belongs to the masters. The 'Open City' is a bottom-up place. It belongs to the people." Sennett emphasizes bottom-up development path is of value to people 's lives, and bottom-up participation is a basic condition for opening cities. At the same time, Sennett envisioned the development of this open path: to support and embrace the dynamic characteristics of the city through adaptability, experimentation, and consideration of the environment. Although no urban form can fully represent an Open City, Sennett offers several suggestions for urban design for the development of open cities: create porous edges between parts of the city, contriving incomplete forms in buildings, and planning for unresolved narratives of development. Here, the openness is further magnified into a variety of social interaction possibilities and adaptability to the future.

In summary, open cities have the opposite logic and quality as closed cities. Regarding the urban issues of Beijing discussed in this project, I have extracted two important qualities of open cities, one is inclusiveness and the other is adaptability.

Inclusivie city

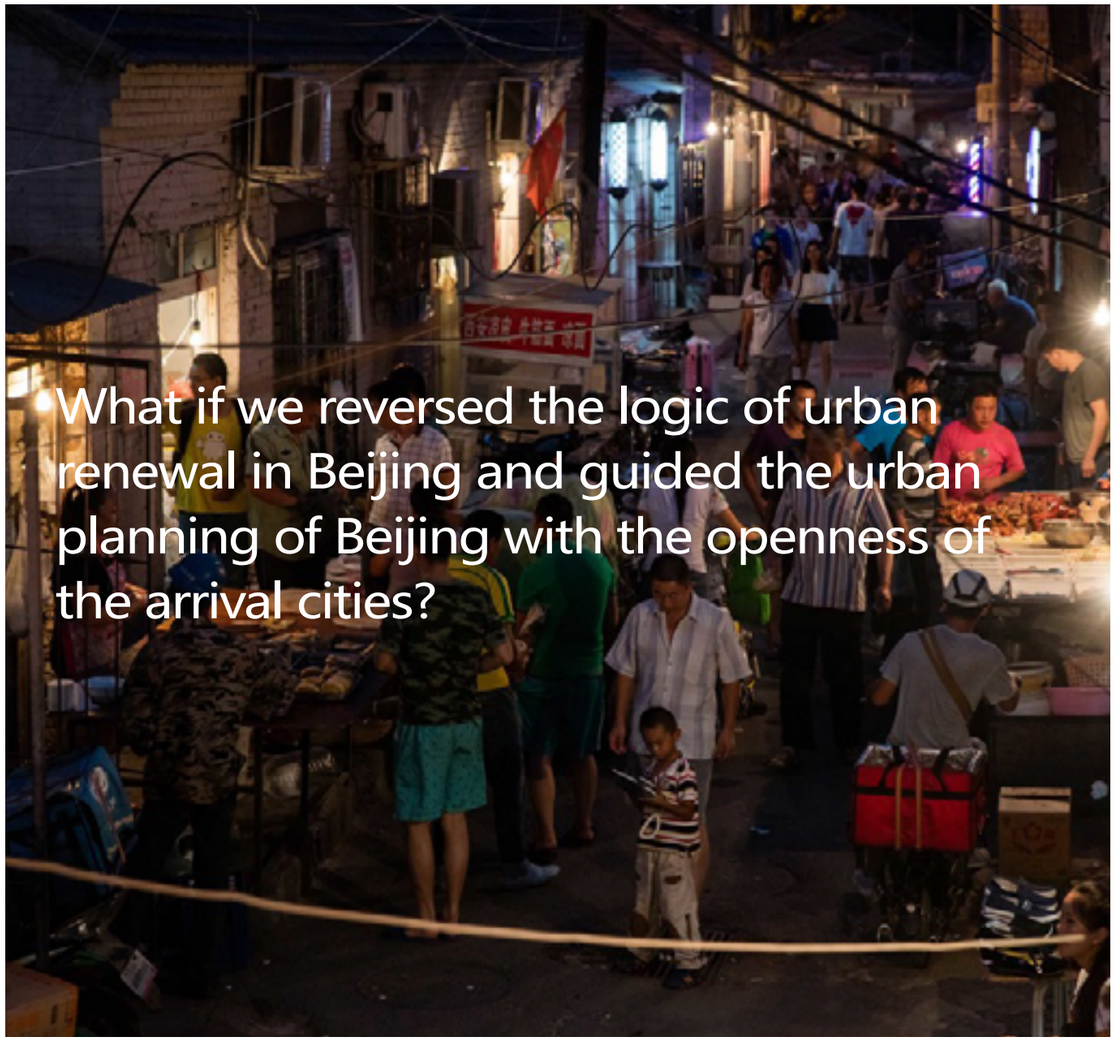
The city inclusive of diverse social groups, activities, industries and spatial forms, promoting different development possibilities from the bottom up.

The arrival city as the Open city

In a sense, urban heterogeneous spaces such arrival cities have the quality of an open urban system.

First of all, arrival city is an inclusive system, which is open to vulnerable groups and accommodates diverse groups. In addition, in the space of foothold cities, informal life and employment are allowed to take place. In arrival cities, the spatial users can change the space according to the needs of daily life, and a variety of urban activities have occurred here under the independent creation.

Secondly, arrival city is an adaptive system. The main function of the settled city is to provide a transitional space for the floating population to enter the city, and to promote the identity change of the floating population. Here, the movement and change of population are always happening. What is worthy of doctrine is that today's form of foothold cities is constantly changing from traditional rural areas. He has the ability to adapt actively in the coordination of floating population, villagers and cities.



The urban space can flexibly face the new scenarios of future development, and can be easily transformed into other spatial roles and continue to work in the city.

Adaptive city

CHAPTER IV

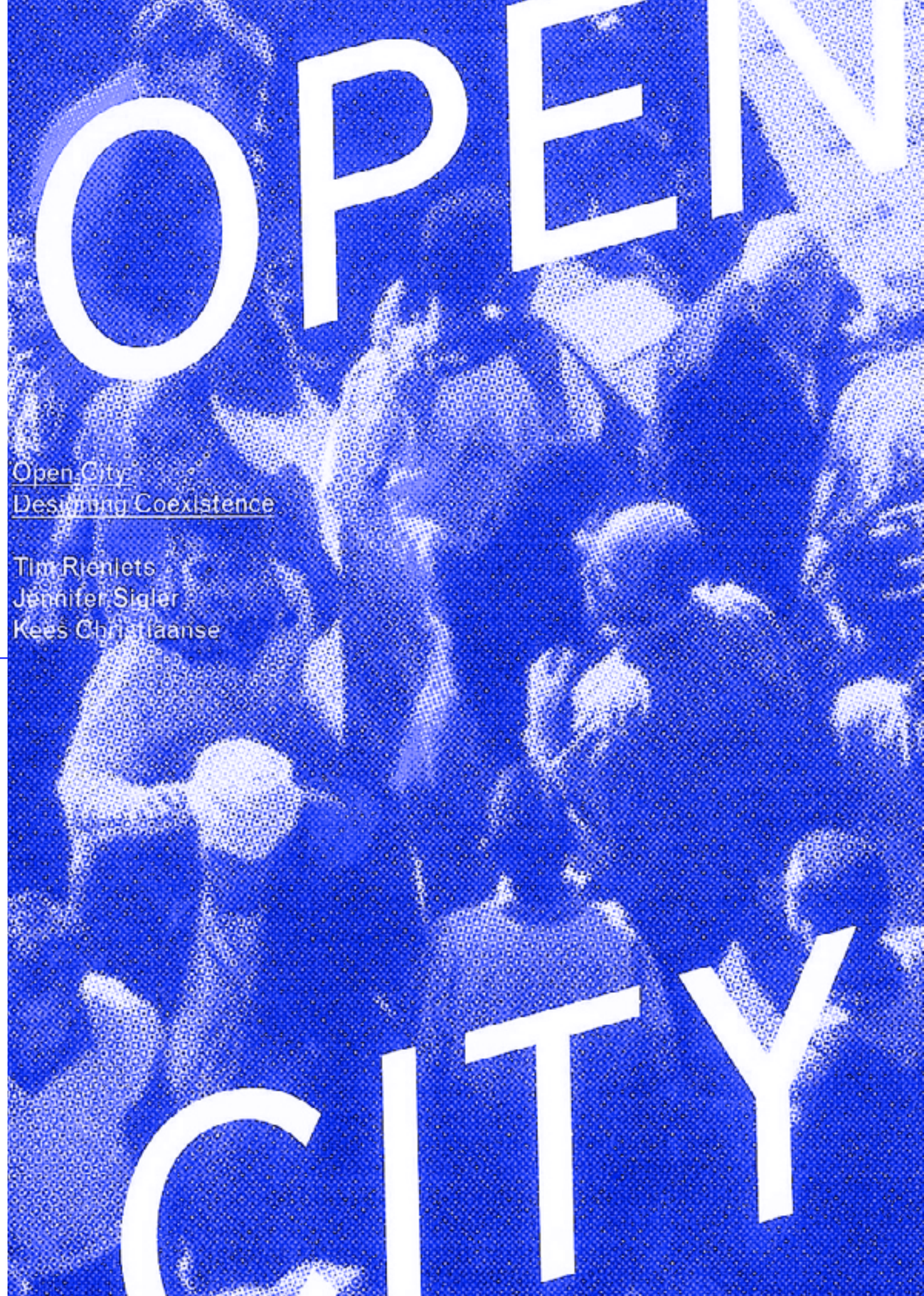
Methodology

1 Research structure‘what’

2 Theoretical Framework

3 Research structure ‘How’

4 Output



1 Research structure
'what'

1.1 Problem statement

At the current stage of urban inward renewal, Beijing prioritizes urban planning as a tool for political, cultural, and economic development. A standardized city vision drives Beijing planning to use creative destruction to unify the urban heterogeneous elements. Currently, Beijing regards the development of arrival city as an important means of excluding heterogeneous elements such as low-end industries, low-valued space and low-end population.

Based on the theory of the closed city and the experience of existing modern cities, Beijing 's over determined and coherence planning models from top-down to arrival city would bring a lack of inclusiveness and adaptability. On top of that, as a complex space composed of urban system, village system, and floating population network, the negative effects of planning will cause socioeconomic problems that span multiple system dimensions. In the urban system, the socio-spatial segregation and the economic-space fragility are further intensified; in the village system, the socio-economic identity of the village collective is marginalized; vulnerable groups represented by the floating population are losing city rights. However, the current Beijing urban planning that implements the closed city logic cannot compensate for these problems.

■ Problem analysis

A. The Closed City logic of Beijing planning

Beijing city implements a comprehensive top-down urban renewal. The action of unraveling the heterogeneous space aims to achieve the coherence of the city, and the creative destruction realize the excessive completion of the space. The planning actually faces a crisis of lack of inclusiveness and adaptability.

B. The invalid complex system of arrival city

Arrival city consists of the urban system, the village system and the floating population system. Beijing 's full top-down involvement in planning has broken the balance of multi-system cooperation and also excluded the spatial participation of village systems and floating population systems. The arrival cities lose their socio-economic value.

C. The closed City planning cause multiple system problem in arrival city

The demise of the value of arrival city and the further closure of the space means that the three system closely related to arrival city must be negatively affected. Over-complete and conherence of planning can lead to a crisis of vulnerability and exclusivity for multiple systems.

1.2 Research aim

In fact, due to the multi-system collaboration experience and the similar identity of the residential groups, the arrival city has potential collective power. The collectiveness of arrival city can create conditions for designing an Open City.

This research thesis aims to shape an open renewal process in Beijing through the collective collaboration between multi-system of arrival city, aeviating the marginalization of the vulnerable groups and promote the adaptive and inclusive development of Beijing.

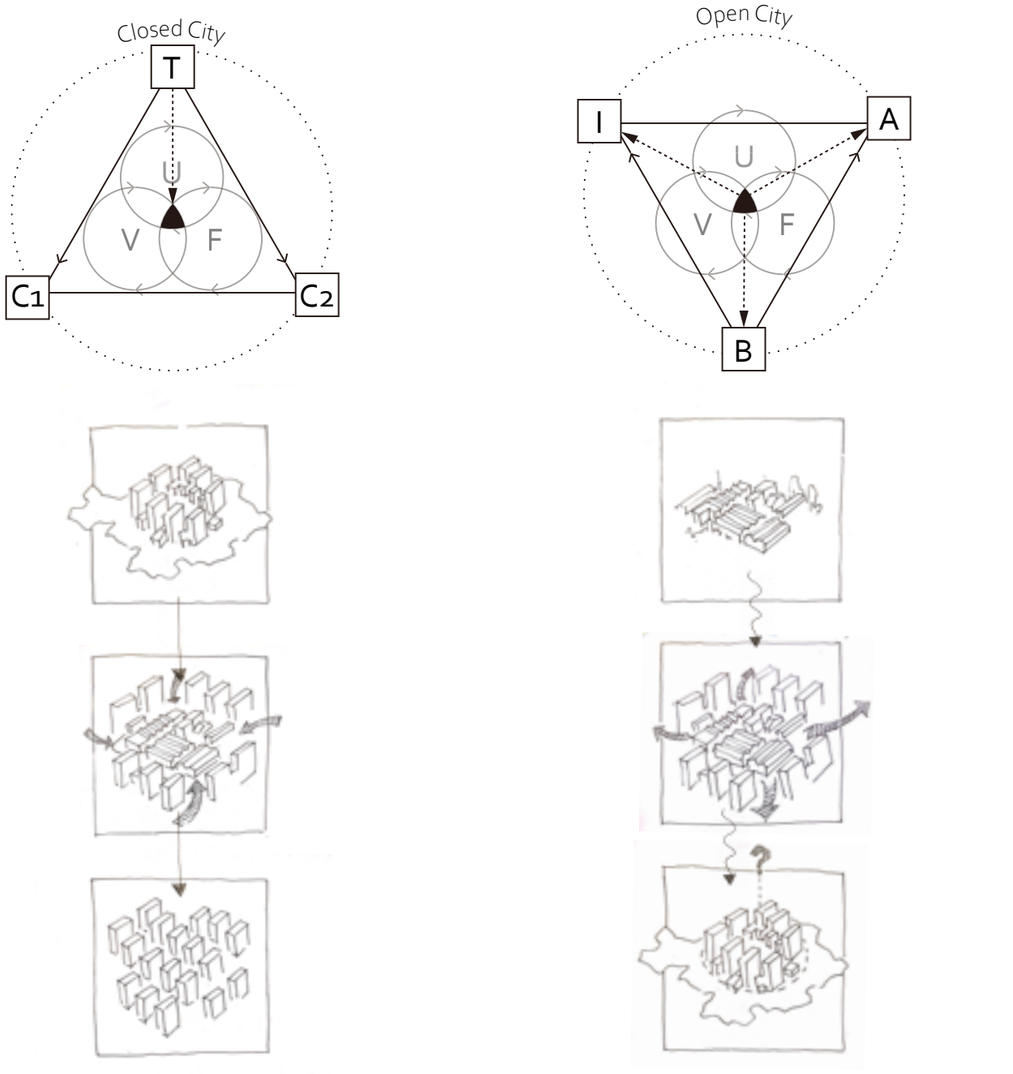


Fig: Illustration of research aim
Source: author

1.3 Strategic approach

The strategic method in this research is based on the co-production of space and used as the core method of specific development strategies, which develop form the concept of the open city and the complex reality of the arrival city.

The co-production of the socio-economic space is first based on the spontaneous potential of the arrival cities. And through joint production in different fields (actors, urban systems, planning system), transforming the spontaneous into a more effective cooperation model.

Co-production between actors activates the group's spontaneous in community construction. Co-production between multiple systems coordinates different planning demands. Co-production between top-down planning and bottom-up planning ensures the openness and feasibility of the development strategy.

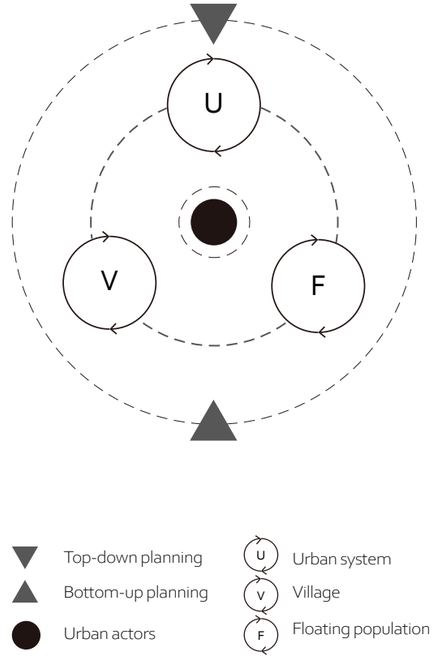


Fig: Illustration of concepual strategy
Source: author

1.4 Research question

How can the multi-system collaborative network regenerate arrival city in inclusive and adaptive way, activate the openness in closed Beijing space?

A. Pre-conditions

How does the Beijing renewal of Beijing affect the changes of the arrival city?

What are the internal motivations and limitations of development arrival city in Beijing?

B. Design intervention

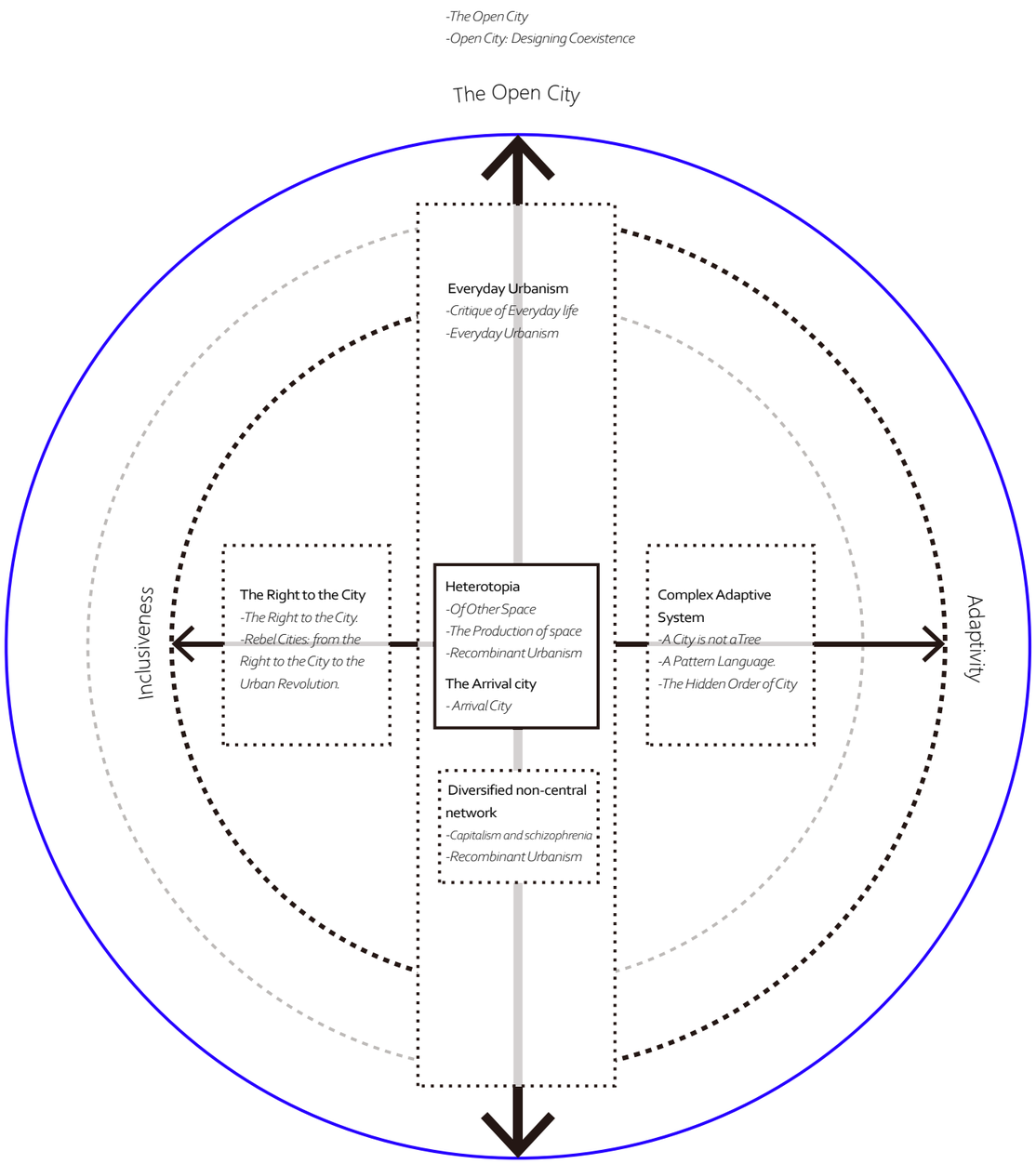
How can the development strategy of the arrival city guarantee the common appeal of multiple systems, and transform the design into the spatial structure of each subject system?

How the strategy can balance the spontaneous plan of the community and the intervention of the top-down urban plan in the space.

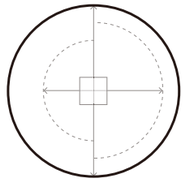
C. Evaluation:

How can the regeneration of arrival city be used to improve the inclusiveness and adaptability of Beijing?

2.1 Structure



2.2 Theory as conceptual basis



This part explains the Open City as the basic concept for research and design in this thesis, and provide a clear direction and basic framework for other research theories and design approach.

The Open City

Richard Sennett (2013). The Open City
Tim Rieniets, Jennifer Sigler, Kees Christiaanse (2009). Open City: Designing Coexistence

The Open City is a concept opposite to the closed city represented by Planned city. Today, urban planning divides the city into a closed system: isolation, grouping, and control. The concept of an Open City advocates a more open way of thinking to work in the city. In this way of thinking, Open City allow for errors, conflicts, and uncertainties, and citizens can freely and actively resolve their differences, rather than handing over the construction of the city to a perfect blueprint for top-down.

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Rieniets, Sigler and Christiaanse expand the thinking dimension of open cities through research in more fields. They proposed to use an interdisciplinary approach to think about the

significance of the openness of open cities in different contexts, such as different historical contexts and social systems. "The Open City would certainly require continuous efforts in many interrelated social and professional fields that reach beyond spatial design." It is also important that through their article, they express an extreme evaluation standard for modern open cities: whether the city is accessibility for everyone?

This article synthesizes the definition and interpretation of Open City, and extracts inclusiveness and adaptability as the basic qualities of the project to develop the openness in Beijing, and implement the bottom-up approach in the design method.

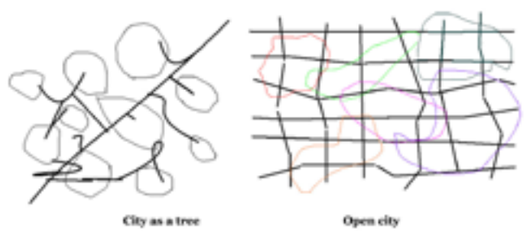
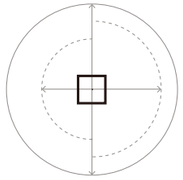


Fig: Diagrams City as a Tree and Open city
Source: Kees Christiaanse, 2007

2.3 Theory of site specificity



This part explores the particularity of of spatial objects in project. The focus space in the project can be regarded as a heterotopia in a general urban model, and the theory of arrival city is a more detailed explanation of the research object based on heterotopia theory.

A. Heterotopia

Michel Foucault (1986). Of Other Space.
Henri Lefebvre (1991). The Production of space.
David Grahame Shane (2005). Recombinant Urbanism.

The concept of heterotopia originated from Michel Foucault, it as the utopia that exists as a real. David Grahame Shane applied this thinking to urban space and incorporated it into the urban model. Shane noted that heterogeneous space as a kind of "ex situ" element, which is contrary to the common preferences of urban systems, and expresses the exclusion of the general urban actors. At the same time, it carries of rheological phenomena in urban space, carries the difference in intentions, needs, and changes that have occurred since the beginning of space production.

Shane extended the basic concept of heterotopia to discuss the rationality of its existence: each urban system would maintain some very unique places contrary to dominant logic, which is necessary for keeping the sustainability of the dominant logic. Because these places would in some ways reverse the regular norms, accommodating those "apostate". Shane explained that through counter-stand qualities, heterogenous space can help cities to eliminate and isolate subversive elements while stimulate the transformation of urban models. In the research, it should be noted that heterogeneous space is not a closed, introverted, isolated system, but that is connected with other elements in the urban system and is dynamically changing.
Lefebvre gave a more positive revolutionary meaning to heterogeneous space: Heterogeneous space is a possibility social space in which "heterogeneity" not only reasonably exists, but also has a clear revolutionary trajectory basis.

David Harvey believes that people have been indirectly recreating themselves in the process of building cities. Therefore, in his opinion, the right to the city is not only the right of individuals or groups to understand the people's understanding of the existing city resources, but also a right to transform the city according to people's wishes.

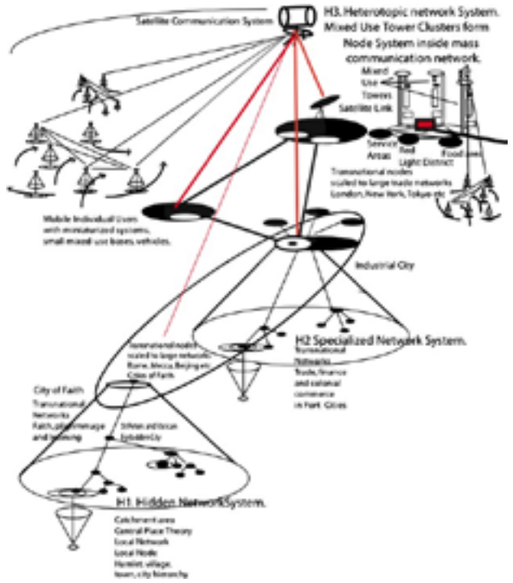


Fig: Diagrams Heterotopia
Source: David Grahame Shane , 2005

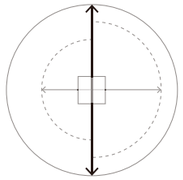
B. Arrival city

Doug Saunders(2012). Arrival City: how the largest migration in history is reshaping our world.
Biao Xiang (2005).Transcending Boundaries Zhejiangcun: the Story of a Migrant Village in Beijing.

Saunders explained the arrival city over the dimension of space, time and the people: the space is formed by the movement and settlement of the same immigrants through social relations, providing a transitional function in the migration process. In other words, it works as an immigration community network, plays a vital role in the survival and mobility of migrants. Therefore, this concept rethinks the poor immigrant communities, regards their openness, dynamics, complexity ad the basis of cognition.

The characteristics of arrival city are basically consistent with the heterotopia model: arrival space contrary to the general order of urban system, the inherent motivation of the space stems from the different needs of the subject, and the space works for the transformation. It should be recognized as open space that embraces "the other people" inward and influence the city outwards. The arrival city has never been a self-circulating, self-sustaining and isolated community.

2.3 Core theoretical guidance



This part is based on the quality of open cities, Everyday Urbanism, and diversified non-central network models as the principle strategy for designing open cities.

A. Everyday Urbanism

Henri Lefebvre (1991). Critique of Everyday life.
Margaret Crawford (1999). Everyday Urbanism.

According to Lefebvre, the deepest and most direct integration of the outside world and the social world is our daily life. "Only the integration of social relations in daily life can be reflected in a complete form. In the theory of daily life, he believes that social space is a highly individualized and localized concept, and modern urban planning is only a right-building" Spatial Representation ". The daily life planned and manufactured by the state machinery and the bureaucrats needs to be restructured and criticized.When society fights for the rights to the city, the flexible process of daily life can cope with institutional changes from economics and politics, and has the power of liberation and revolution.

Everyday urbanism borrows Lefebvre's concept of daily life, advocates putting urban residents and their daily experiences at the center of the design, encouraging more ethnographic urban research, and emphasizing specific, concrete realities. Crawford advocates daily urbanism as an open work to protect and tolerate more activities than to control urban life. Therefore, the realization of everyday urbanism does not lie in the possibility of pursuing a perfect ideal city, but emphasizes the grasp of the reality of daily life.
It is worth noting that everyday urbanism promotes not a single bottom-up urban strategy. A well-functioning urban design needs to increase the empathy of space users from the bottom up, as well as top-down expertise and official actions.

B. Diversified non-central network

Gilles Deleuze(1987). Capitalism and schizophrenia.
David Grahame Shane (2005). Recombinant Urbanism.

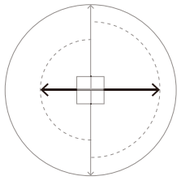
Deleuze believes that rhizome is a diversified, non-centric network structure that can replace the hierarchical tree structure of modernism. Rhizome wants to be a metaphor, which vividly describes an adaptive and flexible network structure, which is different from the centralism, standardization, and hierarchical characteristics of the traditional tree structure. This network structure has a non-centric, irregular, and diversified form. It contains a variety of substances and people, and uses different forms to meet the needs of various living environments.

Shane believes that this tuber model can enable multiple heterogeneous elements to be linked into a systematic spatial structure, and is a feasible model in postmodern urban design that accommodates heterogeneous spaces. On the one hand, it can accommodate the active arrangement of top-down diversity of actors, and on the other hand, it also accommodates the bottom-up participation of independent consumers with basic rights.

Tuber structure has the general characteristics of heterogeneous symbiosis, multi-line narrative, multi-network and dynamic openness. It requires the mixing of diverse spaces and the fuzzy transformation of space; it proposes to pay attention to the multi-dimensional expression of the relationship between spaces in urban design; he contributes to the influence and feedback laws of individual space and surrounding environment. In the heterogeneous urban model built by Shane, tuber structure can help achieve the connection and transformation of heterogeneous spaces with these characteristics.

Fig: Daliy life on the street
Source:Google picture

2.4 Supplementary theoretical guidance



The theoretical content of this part is used to assist and optimize the specific quality of the Open City. Strengthening the inclusive quality of the theoretical structure to open cities through the City Rights; Guiding the adaptive development of arrival city through the theory of Complex Adaptive System.

A.The right to the city

Henri Lefebvre (1968). The Right to the City.
Harvey David (2012). Rebel Cities: from the Right to the City to the Urban Revolution.

One of the prerequisite theoretical foundations of the power of the city is that capitalism dominates the logic of urban development, so the planning and design of cities cannot truly realize the ideals and needs of the masses. The unequal rights and social relations that arise in urban life are manifested through urban space, putting people in an unequal distribution of social resources.

Lefebvre's urban rights entailed a broad sense of citizenship. He believes that the demand for urban rights comes from everyone who experiences urban space, and emphasizes those marginalized groups that are excluded from rights. Broad groups should do their best to change the status of geographical inequality, obtain more social power and resources, and diversify the right to the city in order to recover more rights.

David Harvey believes that people have been indirectly recreating themselves in the process of building cities. Therefore, in his opinion, the right to the city is not only the right of individuals or groups to understand the people's understanding of the existing city resources, but also a right to transform the city according to people's wishes.

In the theory of the right to the city, space not only reflects social relations, but also profoundly affects social relations. Therefore, changing the social phenomena of injustice and inequality must change the space. Everyone experiencing urban space should be empowered to claim, name, and renew in the distribution and creation of urban space.

A. Complex Adaptive System

Christopher Alexander (1965). A City is not a Tree.
Christopher Alexander (1977). A Pattern Language.
Chuncheng Liu (2017). The Hidden Order of City: Complex Adaptive System Theory in Urban Studies.

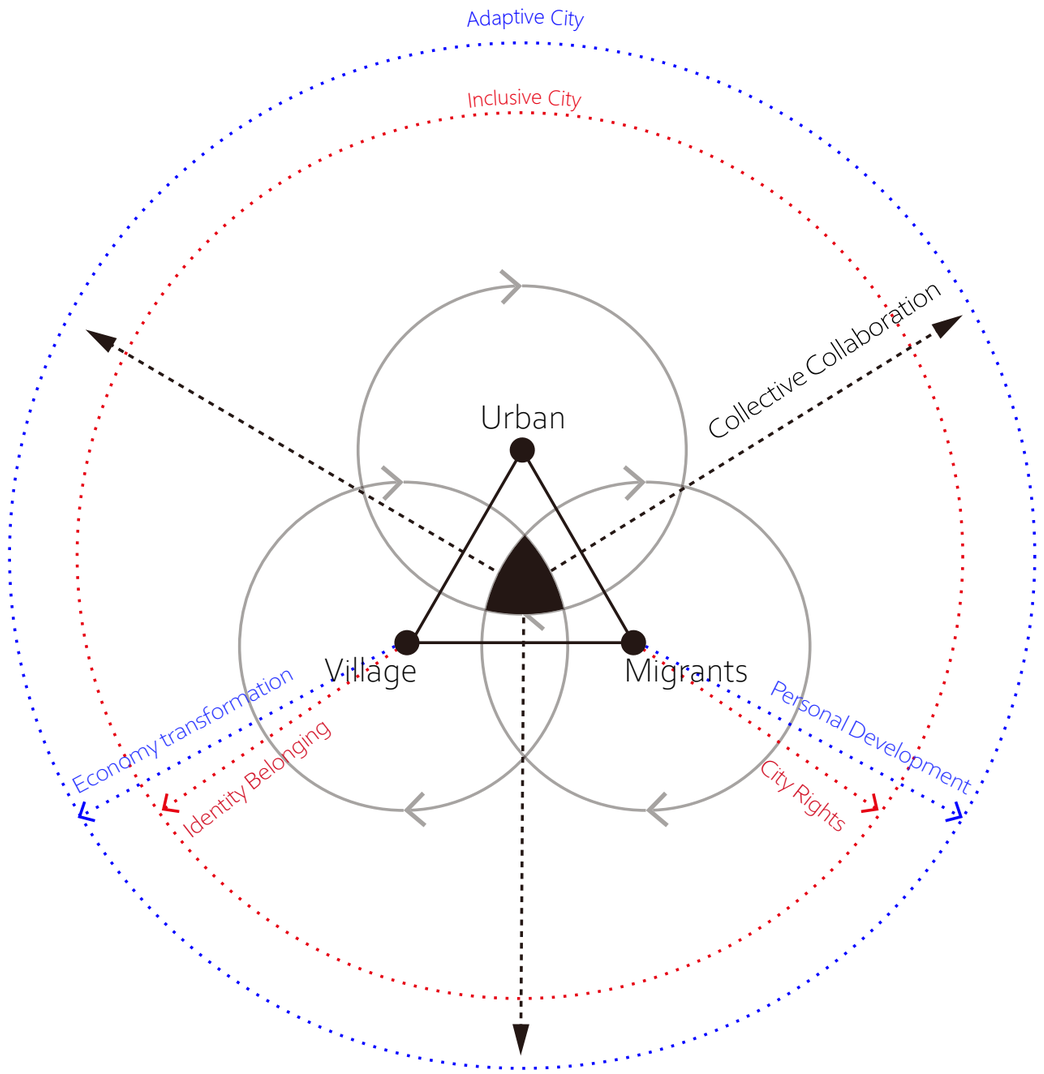
Alexander believes that the city should be regarded as a complex system, and discusses that the city is not a simplified, one-on-one tree shape, but an overlapping network form. Alexander tried to reduce a large number of daily activities in the city into a formula that can reflect the universal connection network. He believed that these small-scale local activities continued to accumulate and eventually changed the shape of the city on a large scale. In other words, he believes that in the complex structure of the city, the large urban structure originates from the individual behavior of different actors. Each individual actor lives in a cell and associates with surrounding people according to set codes. He referred to these bottom-up local open decision networks as semilattices, and questioned top-down closed hierarchical decision-making systems.

This preliminary framework provides a possibility model for the demands of urban actors' participation in the theory of the right to the city. And respond to anti-rights and capital monopoly planning in the theory of daily life critique.

3 Research structure

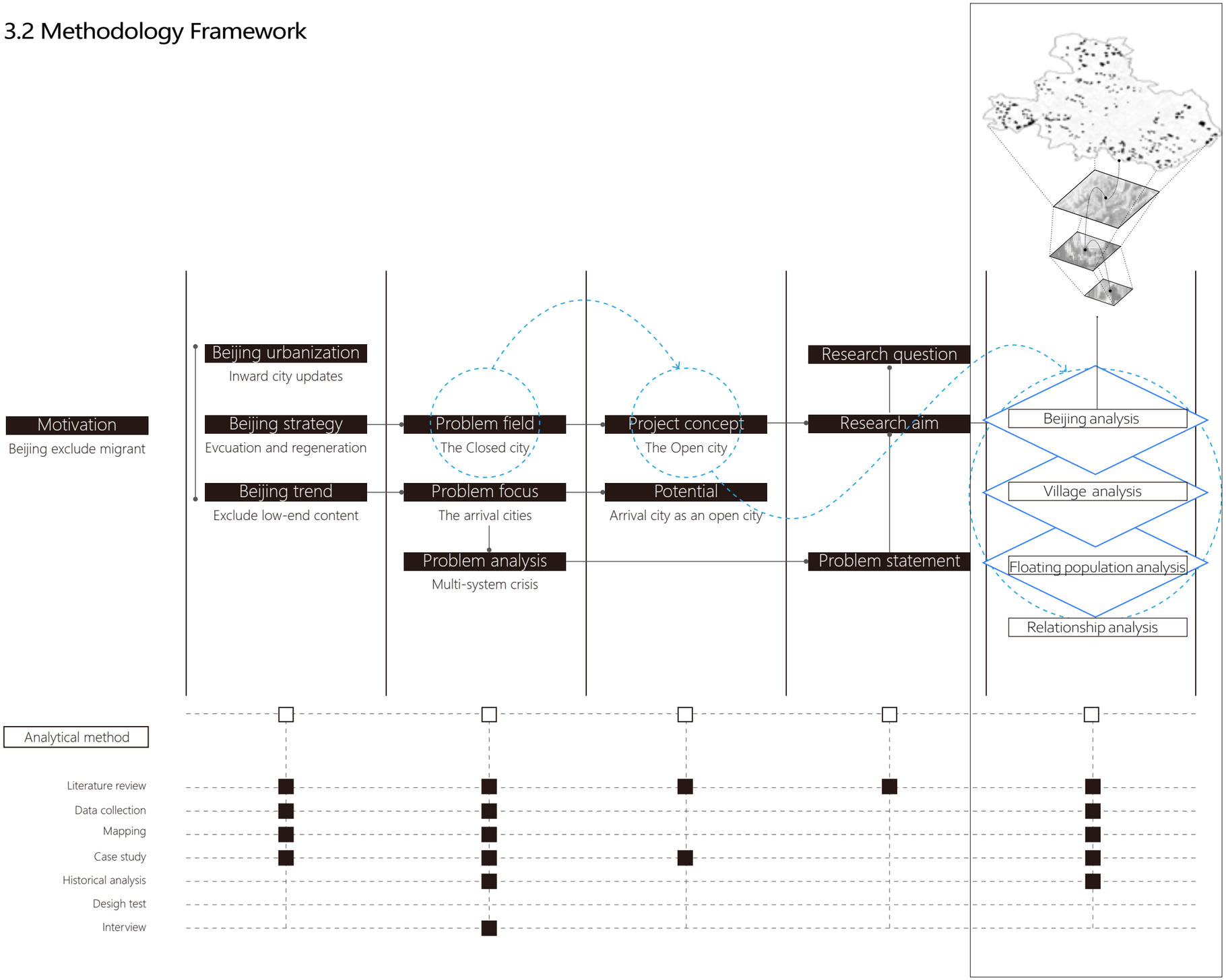
'How'

3.1 Conceptual framework



In order to achieve the research aim, the concept of the project is Restore, coordinate, and strengthen collective collaboration network between urban planning system, village system and floating population system as the new development path of the arrival cities.
The activation of bottom collective participation acts on the collaboration network, jointly developing arrival cities with the concept of an open city, enabling villages and floating population to gain economic and social identity development, and affecting Beijing as a more open urban system.

3.2 Methodology Framework



Analytical Framework

The analysis framework of the project also depends on the theoretical support. Through the urban complexity system theory that fits the open city theory, the arrival cities are disassembled into three systems: urban planning system, village development system and floating population system. Therefore, the analysis section of this project respects the theoretical research and divides the analysis of arrival cities into Beijing city analysis, village analysis and floating population analysis. These three elements cover the city scale, block scale, and people scale.

The method framework of this project mainly uses Deductive logic. Starting from the analysis of the current situation in Beijing, the project uses the theoretical perspective of the Closed City to locate the urban contradictions in Beijing. Subsequently, the Open City theory was used as the initial concept of the project. Under the analysis of the Open City theory, explore the new development possibilities of Beijing and Beijing's foothold cities.

4 Out put

The output of this research will be divided into three products.

A. Strategic framework
To provide an alternative planning framework for Beijing's urban renewal process with the goal of being a city of anchor. The scale of the planning framework ranges from the moving spatial scale of the floating population to the scale of the Beijing city.

B. Design test
A design experiment demonstrates the possible design under the planning framework.

C. Policy suggestion
Provide complementary policy recommendations for alternative planning frameworks.

CHAPTER V

Analysis

The part is mainly based on the complex adaptative system of the arrival city as the analysis framework, which analyzes the closed space structure at the Beijing scale, the typology at the village scale, and the survival status of the floating population.

1 Beijing Analysis

1.1 Theoretical framework for Beijing analysis

The content of this part aims to analyze the closedness of Beijing from the physical space. In the analysis in the previous chapter, the article illustrates the exclusion of heterogeneous low-end population, low-end industries, and low-end space caused by Beijing's strategy, thus forming a socially and economically closed city. So how to evaluate Beijing's closedness spatially?

There is no one model for an "open city' or definetly present an "closed city", but some elements of urban space will cause its openness or closedness. The study of the openness of Beijing in this chapter is based on Sennett's academic research.

Sennett's (2017) research shows that porous borders and incompleteness urban forms can improve the openness of cities. On the contrary, this chapter uses the analysis of Beijing's borders and typology to identify the closed area of Beijing: with impermeable borders and over-completed typology.

Such negative space is specifically manifested in its life as isolation from other urban spaces, lack of diversity of life, and at the same time it is difficult to change in the next stage due to the solidification of form. By focusing on this type of negative space, it is possible to identify the most valuable development cities for this project

Fig: Lecture of Sennett
Source:http://urbanspringtime.blogspot.

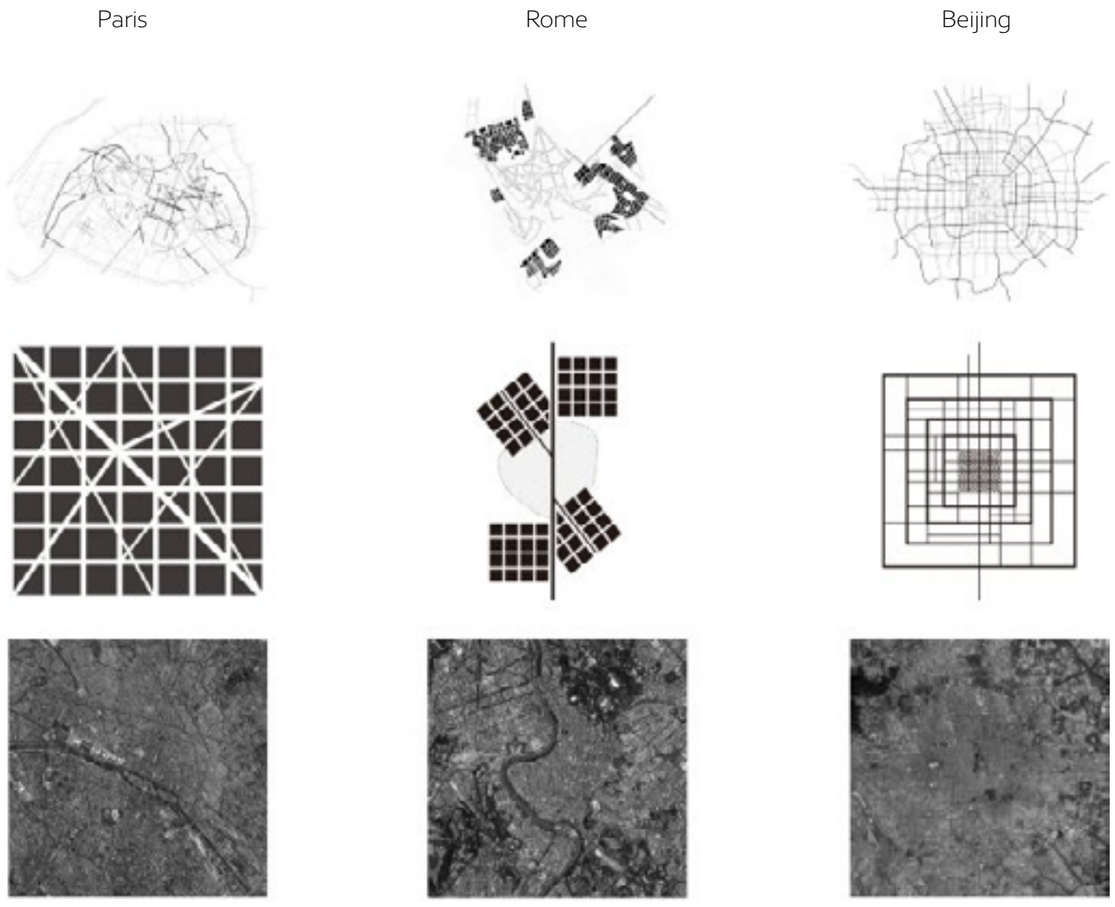


Fig: Typology of Paris, Rpme and Beijing
Source:http://urbanspringtime.blogspot.

1.2 Impermeable border

Beijing's urban form is a concentric expansiond model, and it has a surprisingly large scale. Compared to the urban structure of Paris and Rome, Beijing's urban spatial form has no obvious nodes and links. "In Beijing, spatial hierachy function as the mechanism, withe the old city as the core and a clear organization of maxi grid".

Therefore, the urban development of Beijing is very easy to form a clear spatial hierarchy around the central urban area. And this is indeed the case: the huge difference in land prices next to each ring road in Beijing also illustrates this point. The central urban area of Beijing has concentrated a large amount of social and economic activities, and has continuously adjusted its structure for a long time. The fringe areas carry more infrastructure functions that serve all of Beijing. It is divided into divided spaces by a large-scale transportation network, and due to the lack of development and density, it shows a single function. Therefore, we can roughly understand that the marginal areas of Beijing should have more obvious impervious borders than the central areas.

According to Richard 's research and the urban segregation in Beijing 's reality. This part of the assessment of Beijing 's border permeability is divided into two aspects, one is the traffic boundary, and the other is the functional boundary.

A. Transportation border

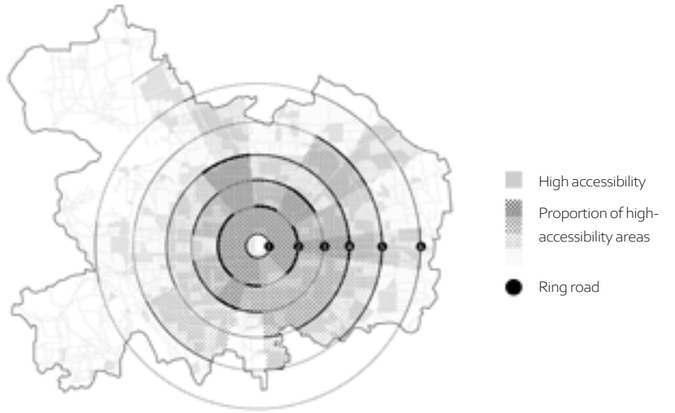


Fig: spatial accessibility
Source:author; Retrieved from https://geohey.com/portal/bcl

Spatial accessibility

Space accessibility is how easy we are to reach this space. This accessibility map is based on Beijing's road network, and it shows which places in the urban structure of the Beijing road network plan can be easily reached for the whole Beijing, and which are isolated because they are difficult to reach.

Area with impermeable transportation border

The areas where the traffic boundary lacks permeability are undoubtedly concentrated in the edge of Beijing, and the problem on the west side of Beijing is even more serious. The development of the new urban area outside the fifth ring road of Beijing has also weakened the problem of traffic isolation in some areas. But the zone in the cracks of the new city is still an area with obvious traffic boundary effects.

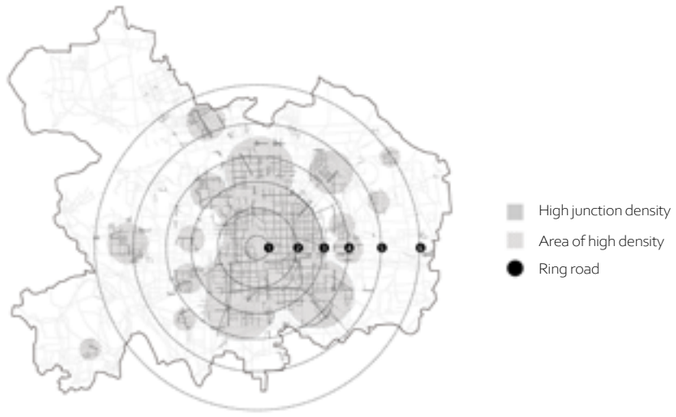


Fig: Density of road junction
Source:author; Retrieved from https://geohey.com/portal/bcl

Density of road junction

The mapping of this data type aims to analyze the walking adaptability of Beijing urban space. The denser the junction, the shorter the block and the more street connections. This is undoubtedly a better walkable space in Beijing on a large scale.

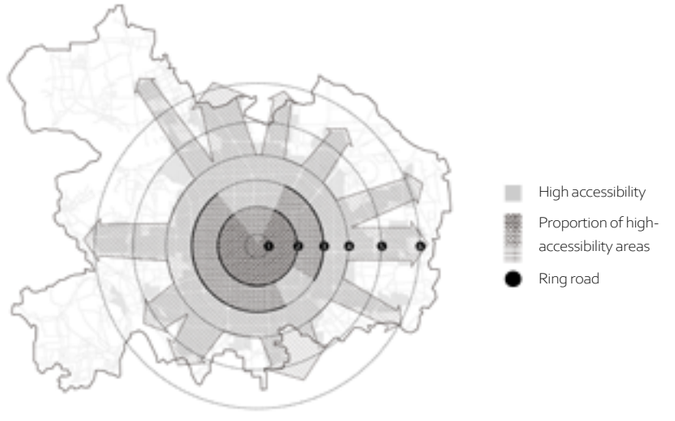


Fig: Public transportation accessibility
Source:author; Retrieved from https://geohey.com/portal/bcl

Public transportation accessibility

The accessibility of public transportation constitutes different conveniences for transportation in different areas. Being in a high-accessibility area means that it is easier for people to use transportation to cross different

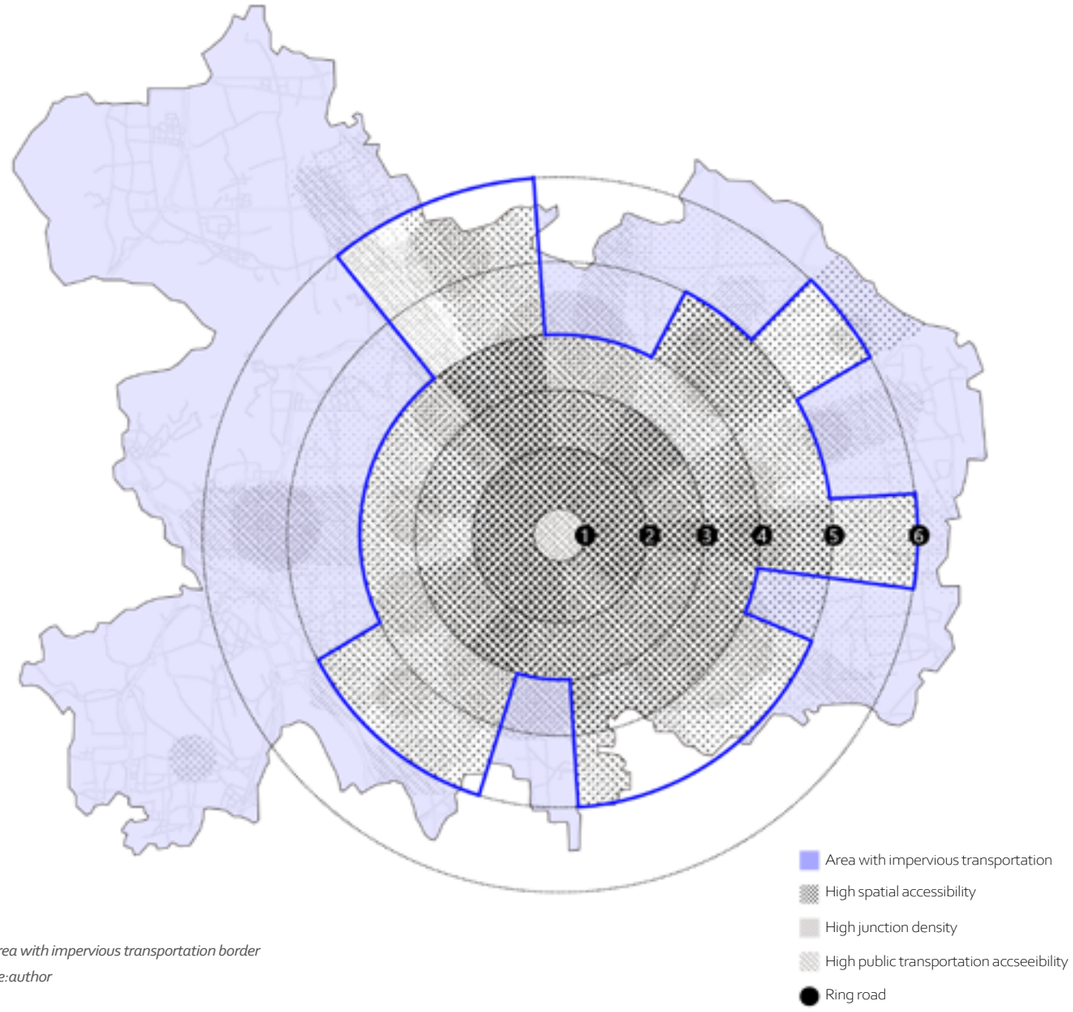


Fig: Area with impervious transportation border
Source:author

A. Functional border

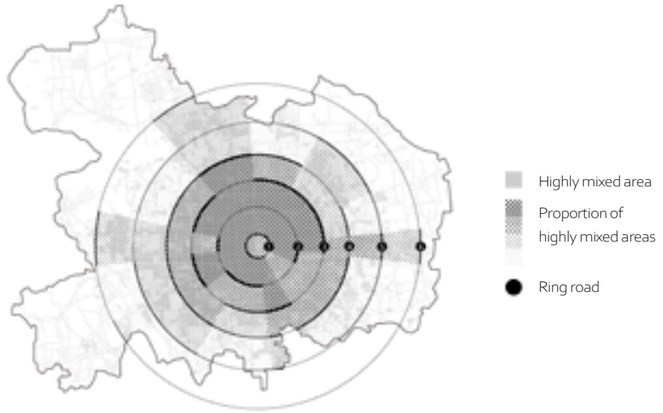


Fig: Mixing degree of function
Source:author; Retrieved from https://geohey.com/portal/bcl

Mixing degree of function

The degree of functional mixing expresses the diversity of the types of functions carried by each block. Such diversity constitutes a rough area of Beijing's permeable functional boundary.

Area with impermeable functional border

Areas lacking functional permeability are also concentrated in the marginal areas of Beijing. The function of the block in these areas is relatively single, and there is generally no function of providing residence and employment at the same time, and there is no public place as a space for urban interaction.

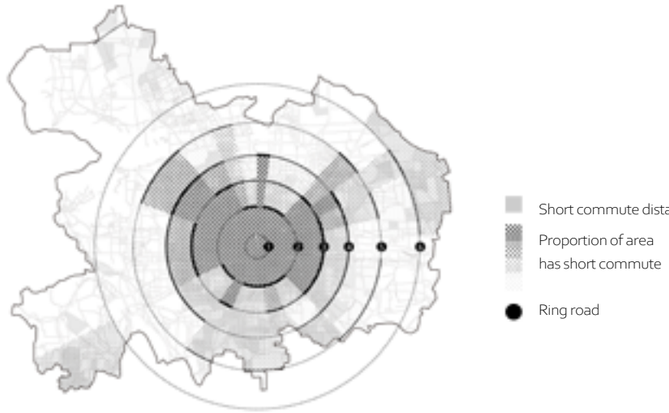


Fig:Commute distance
Source:author; Retrieved from https://geohey.com/portal/bcl

Commute distance

In the large-scale area of Beijing, separation of residence and working space is a common problem, which also constitutes the separation of functions that people most obviously feel in daily life. The area with a short commuting distance per capita means that the space in which they are located has a high mix of residential and employment functions.

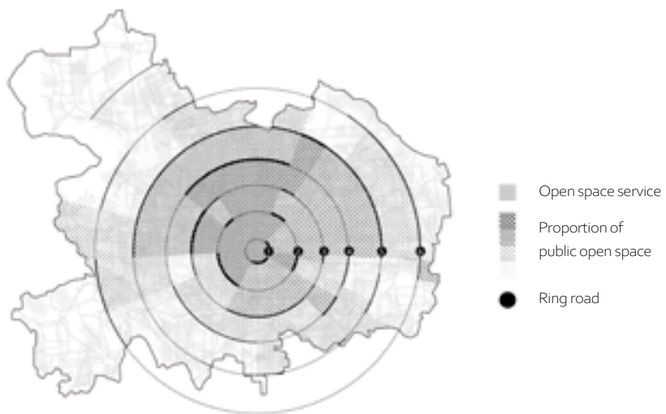


Fig: Area serviced by open space (1000m)
Source:author; Retrieved from https://geohey.com/portal/bcl

Area serviced by open space

As a place for spontaneous activities, the public space provides the possibility of diverse functions, and also provides a opportunity for penetration in urban functionally isolated areas. Areas with sufficient public space have a higher possibility of functional penetration.

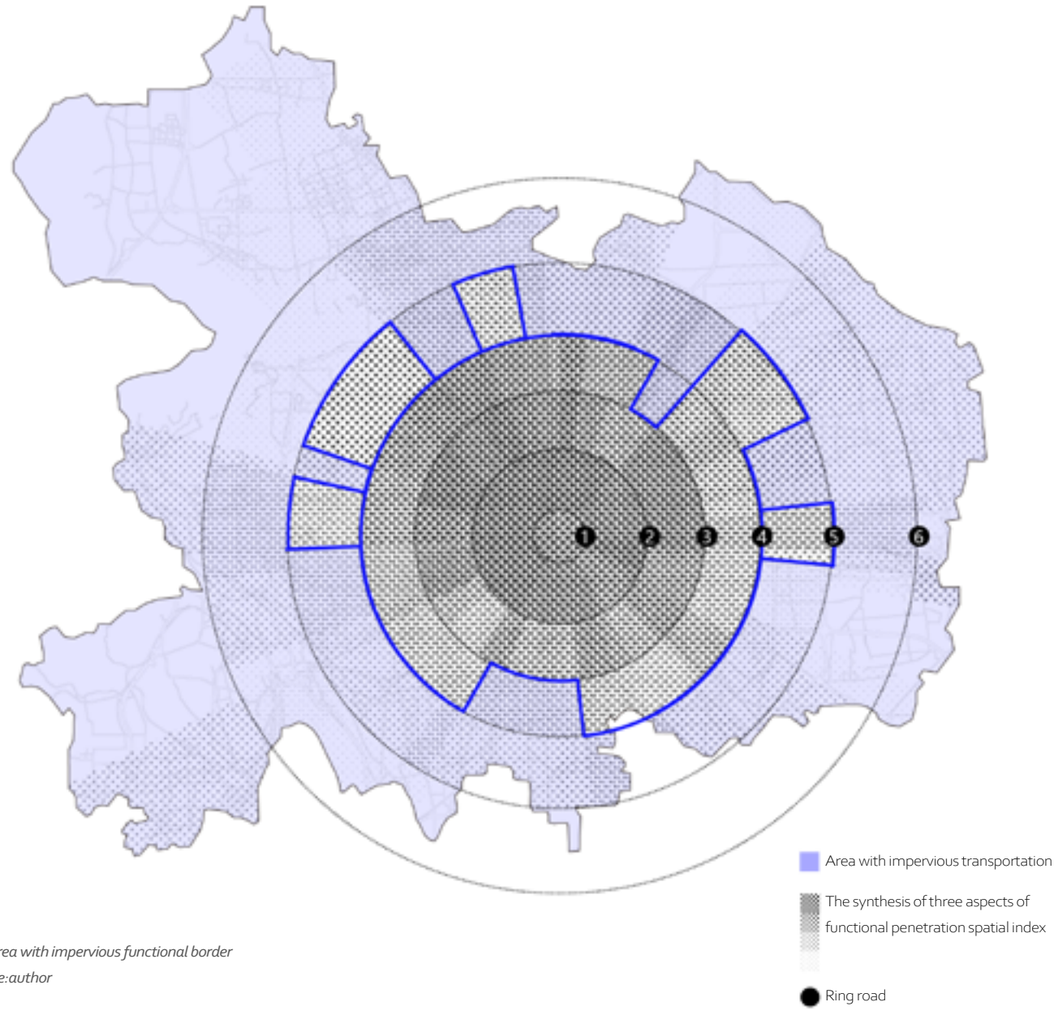
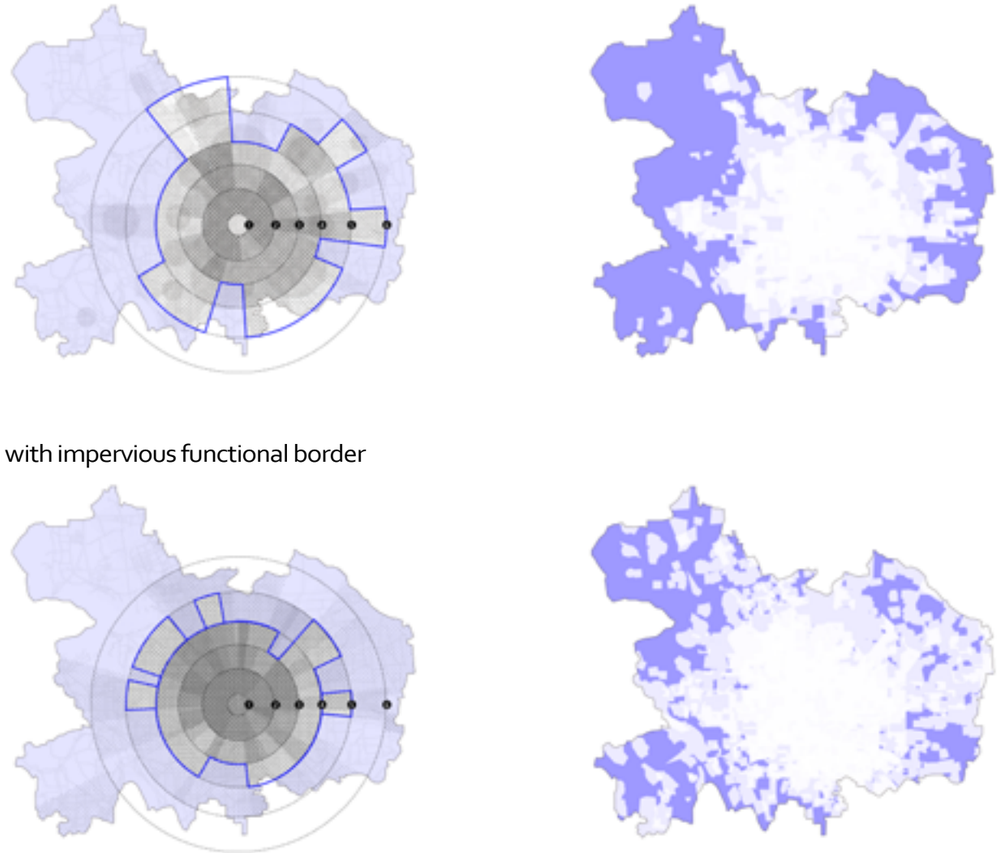


Fig: Area with impervious functional border
Source:author

Area with impervious transportation border



Area with impervious functional border

C. Conclusion of impermeable border

Based on the analysis of traffic boundaries and functional boundaries, some areas are highly closed, because they encounter the isolation of inconvenient traffic, and they are also isolated from urban life due to a single function.

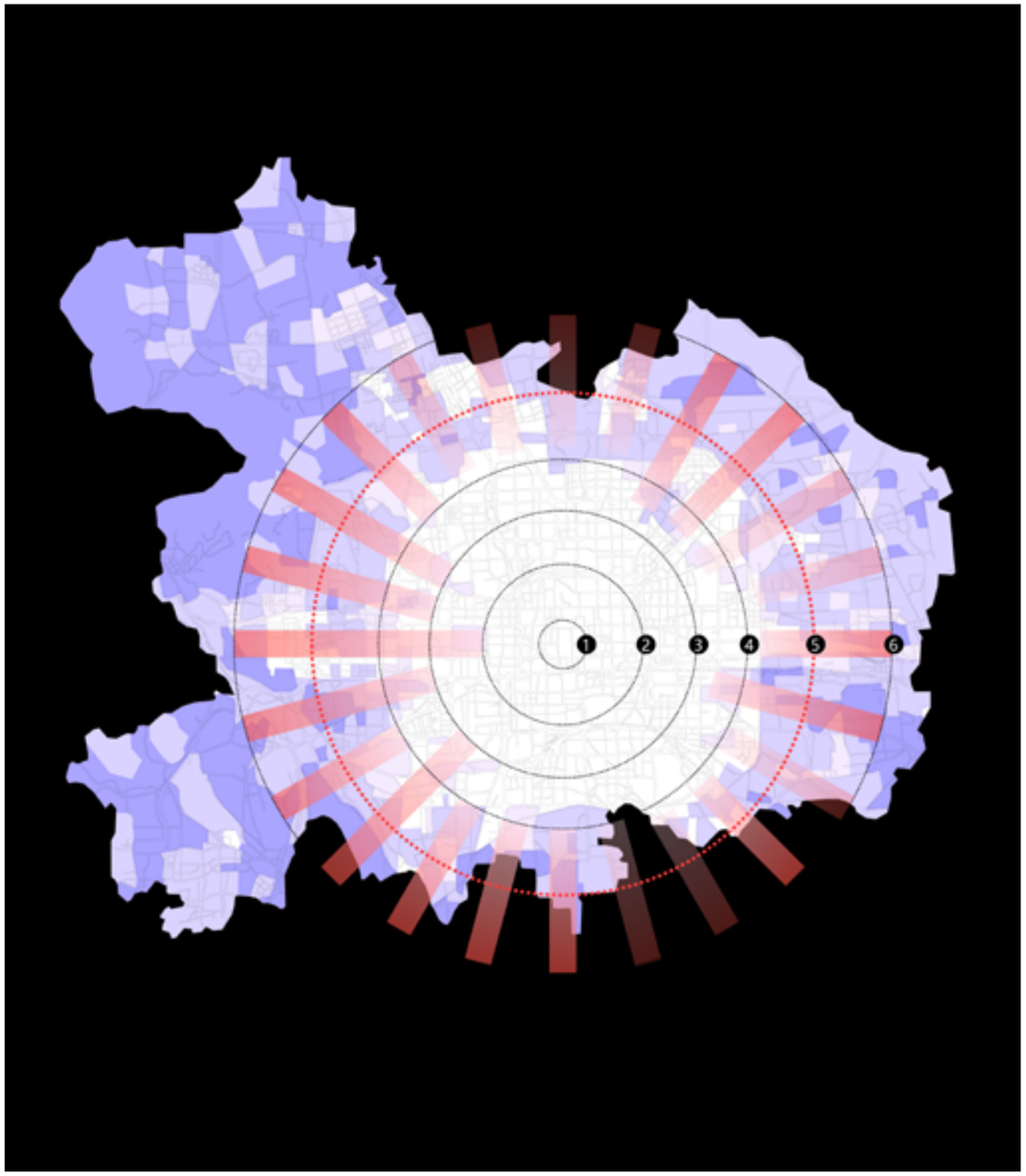


Fig: Area with impervious functional border
Source:author

In areas outside Beijing 's Fourth Ring Road, there is basically a problem of impermeable traffic and functions. Among them, the problem in the west of Beijing is more serious. The construction paths of several new urban areas have alleviated the border closure of some edge areas to a certain extent, but their improvement space is linear, which still causes the closure of areas between linear paths.

Paris

Rome

Beijing

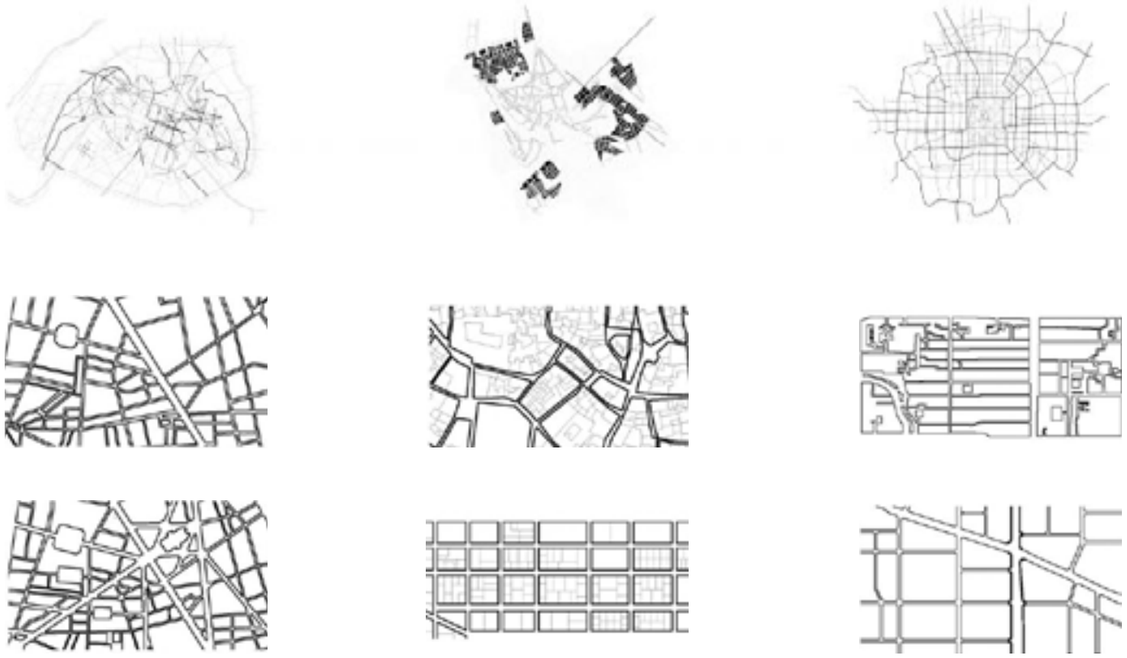


Fig: Lecture of Sennett
Source:http://urbanspringtime.blogspot.

1.3 Over-complete form

Beijing's urban planning is gradually rebuilding the shape of the city. By comparing with other city cases, Beijing has shown a special planning trend: expanding the morphological scale of the city. Although the cases of various cities have actually standardized the urban form, there is a huge difference between Beijing's standardization and the original urban texture. Newly established areas in Beijing have also generally updated Beijing in this manner.

A large number of large-scale blocks serve the construction of modern city projects, abandoning the inheritance of urban forms. The logic of the over-completed closed city planning in Beijing is very clearly expressed in the form of the city.

An over-completed urban form very clearly serves a first-class project, and it is difficult for mixed, non-linear, top-down urban life to occur in this type of space. More importantly, the over-completed urban form will face future vulnerabilities. On the one hand, the over-completed urban form gave birth to over-completed buildings, and the short service life of the building will not be able to adapt to the development of the city for a long time; on the other hand, the particularity of architecture and fabrichas caused difficulties in function conversion.

This part would analyze Beijing's over-completed form, including architectural form and urban fabric. It also includes an analysis of urban planning, because the context of planning determines whether the urban space needs to adapt in the future.

A. Building adaptivity

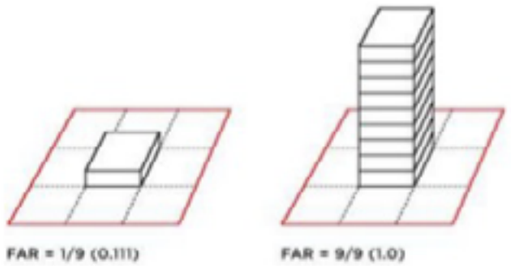


Fig:Definition of FAR
Source:Google

The adaptability of the architectural form mainly depends on the analysis of Beijing's FAR to find fragile buildings. In the study, Far = 3 was used as the critical point of the research evaluation building, which can basically represent the high-rise building area of Beijing.

The average life span of high-rise buildings in China is less than 30 years, and will face severe space conversion problems in the future. At the same time, high-rise buildings are often a relatively independent system and design, and it is difficult to undertake new content. Therefore, the large area of high-rise buildings is considered as a relatively fragile urban space in the analysis, lacking the tolerance of space activities and adaptability to future needs.

Many development areas in Beijing and buildings full of excessive FAR, controlling the occurrence of this phenomenon has become a consideration of Beijing planning. Beijing declared in 2017 that it must strictly control building height.

Area with a lot of over-completed buildings

The construction of high-rise buildings is largely concentrated in the central area of the Fourth Ring Road, mainly in areas such as the CBD. However, the development of the new urban area has brought a similar architectural model. The construction of high-volume-ratio buildings in the new city is not a point-like spread, but a high-intensity construction along the main roads between the main city and the center of the new city. As a result, Beijing 's outbound traffic routes also show significant over-construction.

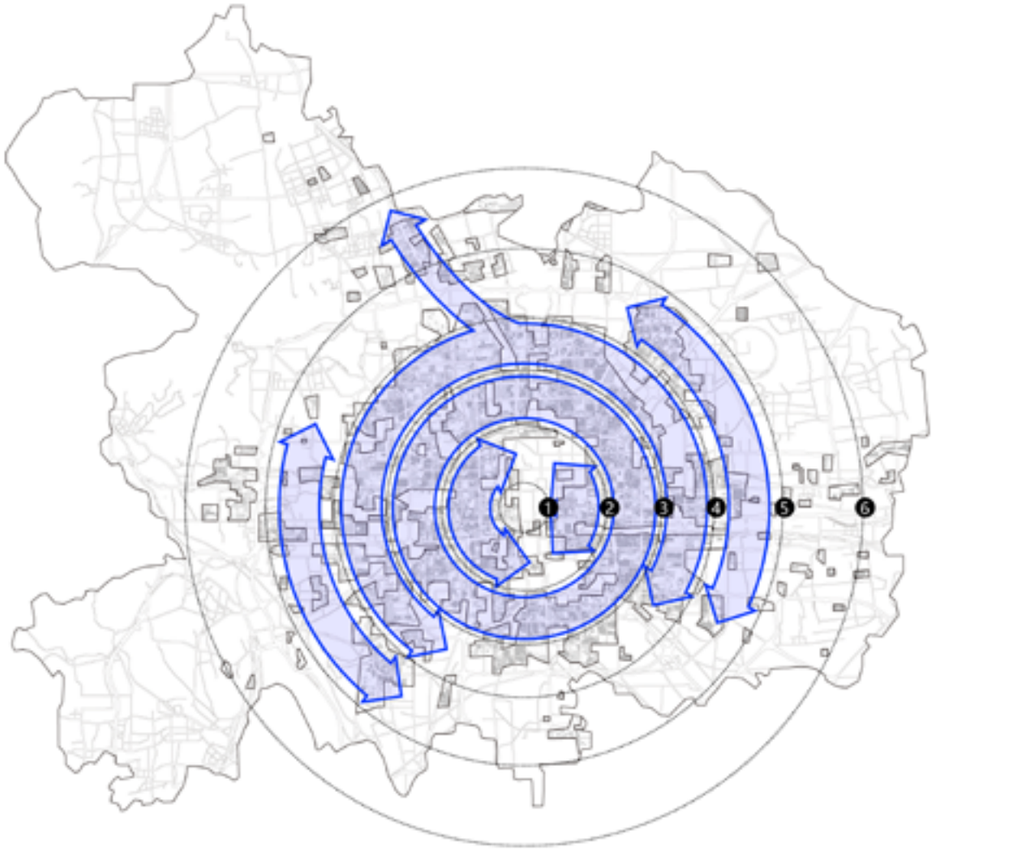
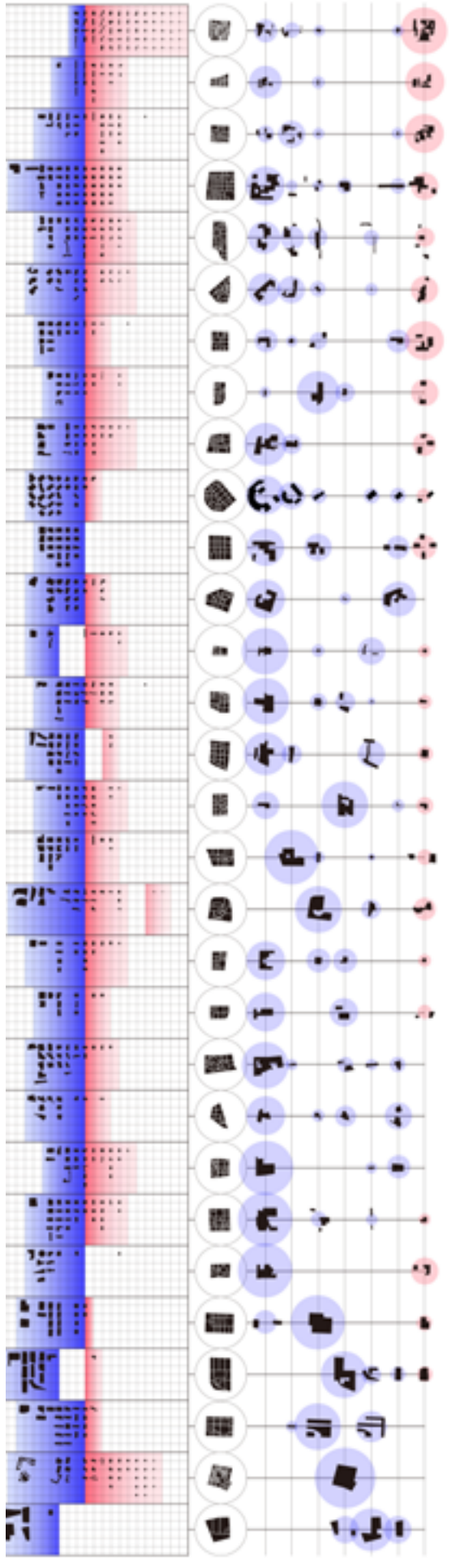


Fig: Area with impervious functional border
Source:author



B. Fabric adaptivity

The urban fabric of Beijing is complex and diverse, which is caused by a combination of old and new cities, land division, and government land acquisition. Therefore, it is difficult for the project research to evaluate Beijing's texture uniformly.

In order to make a basic survey of Beijing's urban texture, this study extracted 30 super blocks, which contain representative forms of Beijing, and are homogeneously distributed in different areas of Beijing. The analysis will focus on their morphological scale and function.

The definition of adaptive texture in research and analysis is morphological diversity and mixed function. Spaces with diverse forms on a small scale are easy to replace and change without affecting the surrounding environment. The lower the correlation between space and a single function, the more likely it is to realize a variety of space activities and adaptability.

Typical non-adaptive texture

Area with over-completed fabric

According to evaluation, the middle zone of Beijing city (near the Third Ring Road and the Fourth Ring Road) has a large number of over-finished textures. They are the products of large-scale modernization construction in the initial stage of Beijing urbanization, and are also the medium- and large-scale high-end projects in the new stage. The result of planning. Both the CBD area and the industrial park plan the fabric in closed and ideal system; and in the construction of new cities, following the urban texture dominated by automobiles, single large-scale fabric is formed.

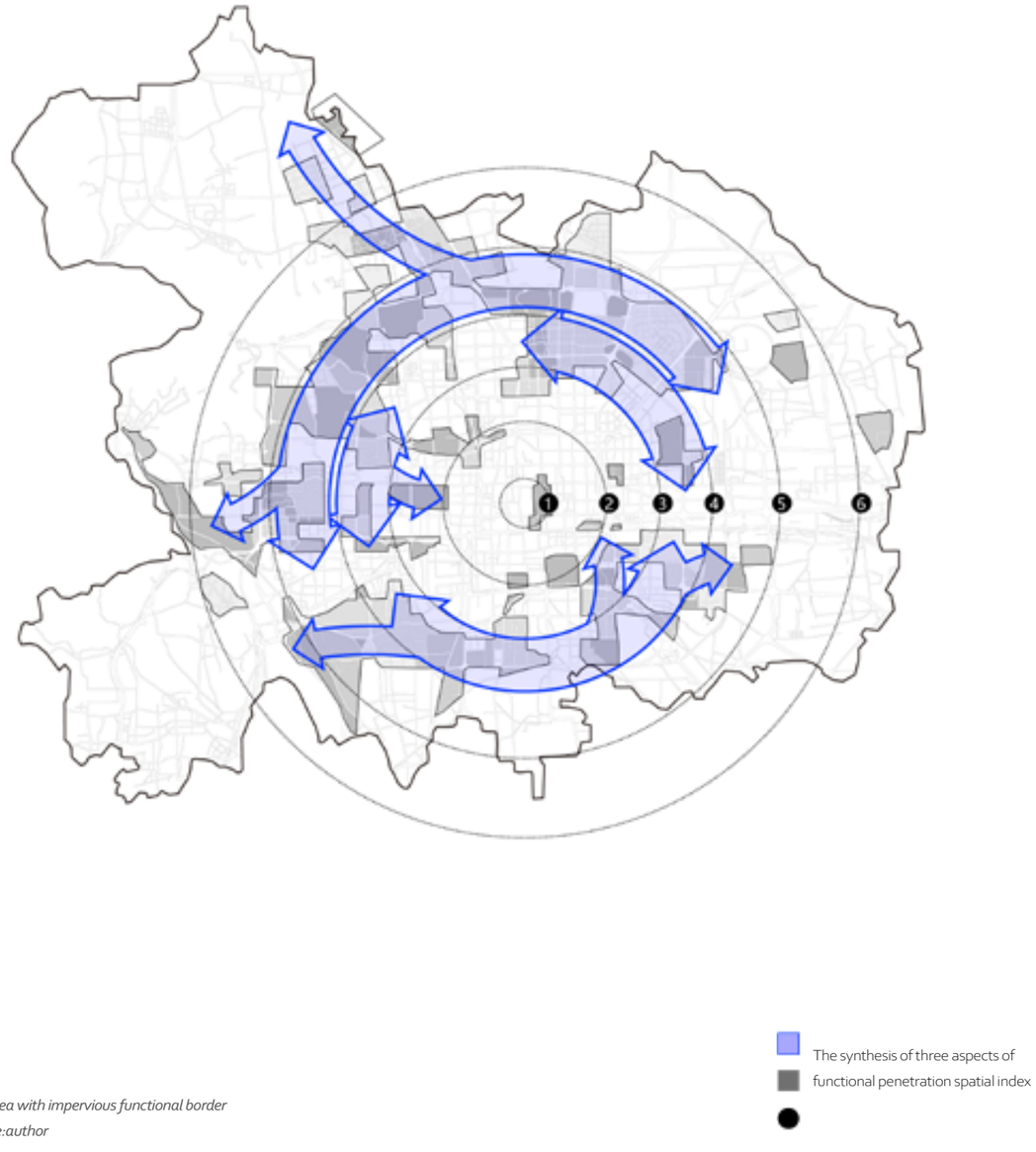


Fig: Area with impervious functional border
Source:author

C. Beijing planning

Areas not undertaking construction change

In the government document, planners have regular the protected area in Beijing, including ecological reserve and the ancient city centre. We can regard this part of the area as a space without pressure to change.

Fig: Areas not undertaking construction change
Source:author; Retrieved from https://geohey.com/portal/bcl

Focused construction area

The focused construction area is the area where Beijing's urban planning plans to carry out ideal Beijing space construction under the premise of restricting urban expansion. These areas will be vulnerable to the challenges of urban renewal in the future.

Fig:Commute distance
Source:author; Retrieved from https://geohey.com/portal/bcl

Key planning area

According to the Beijing planning, major changes in Beijing space will focus on important evacuation areas and new subway network construction areas. Therefore, combining these two elements, mapping out the areas that will undergo changes in the context of Beijing's planning.

Fig: Area serviced by open space (1000m)
Source:author; Retrieved from https://geohey.com/portal/bcl

Areas with strong transformation needs

In the next planning stage (at least in the next 15 years), Beijing's urban renewal and construction will be concentrated in the area around the Third Ring Road, and the two important expressway passing zones in the east and west directions will also undergo major urban renewal.

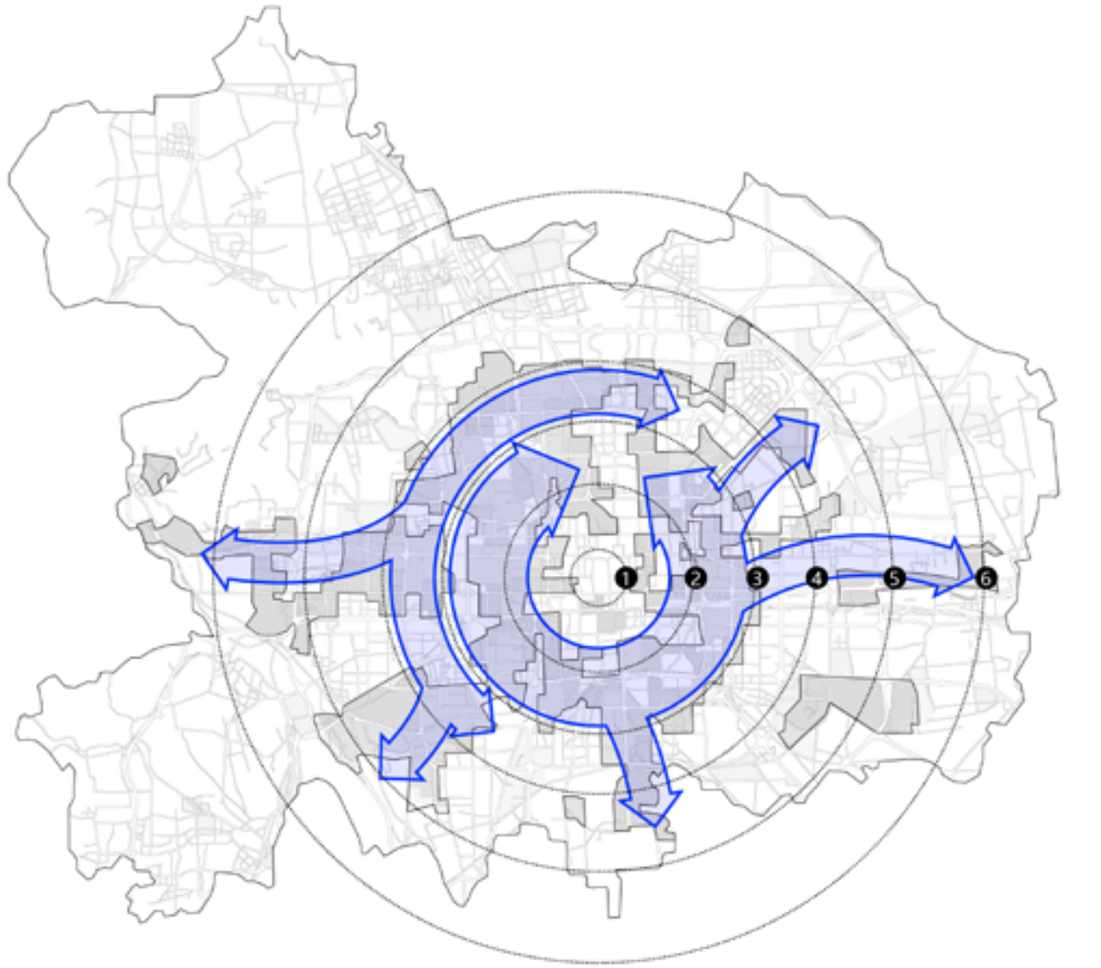
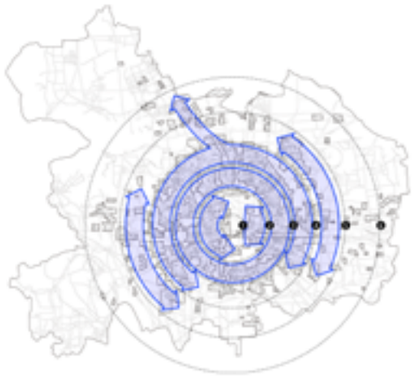
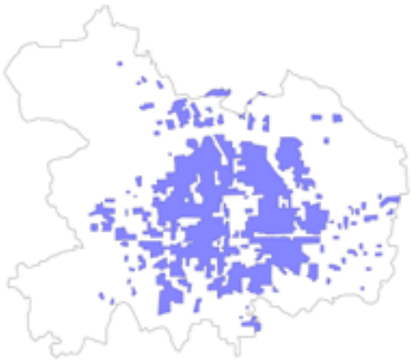


Fig: Area with impervious functional border
Source:author

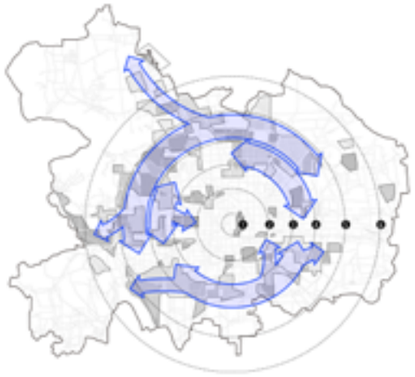
D. Conclusion of over-complete form

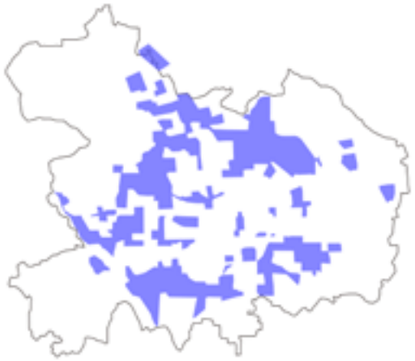
Area with a lot of over-completed buildings



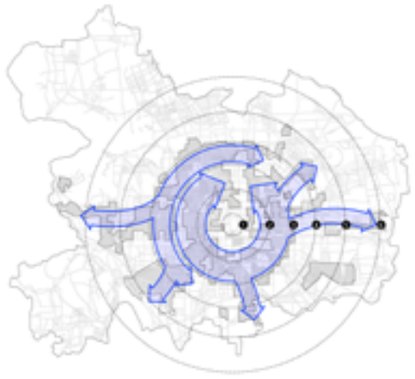


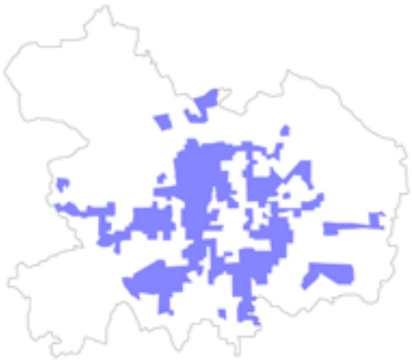
Area with over-completed fabric





Areas with strong transformation needs





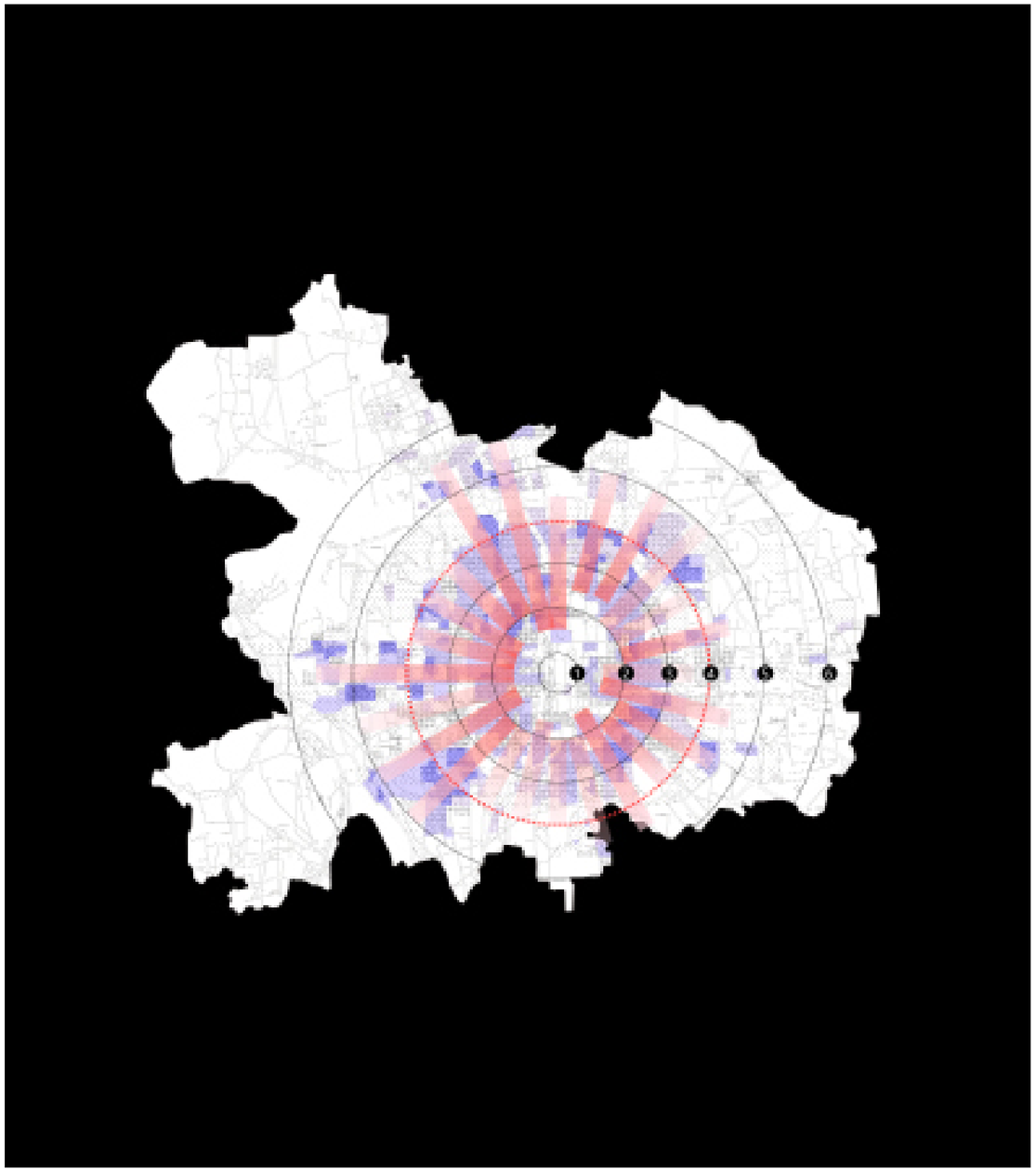


Fig: Area with over-complete form
Source:author

The urban negative space analyzed in this part has a different structure from the boundary analysis in the previous part. The analysis shows that in the middle of the city and even in the center, the urban space is facing greater pressure to change. Firstly, the urban space under the influence of capital logic and political logic has an over-completed form; secondly, the urban planning requires these spaces to be transformed.

1.4 Conclusion: closed space

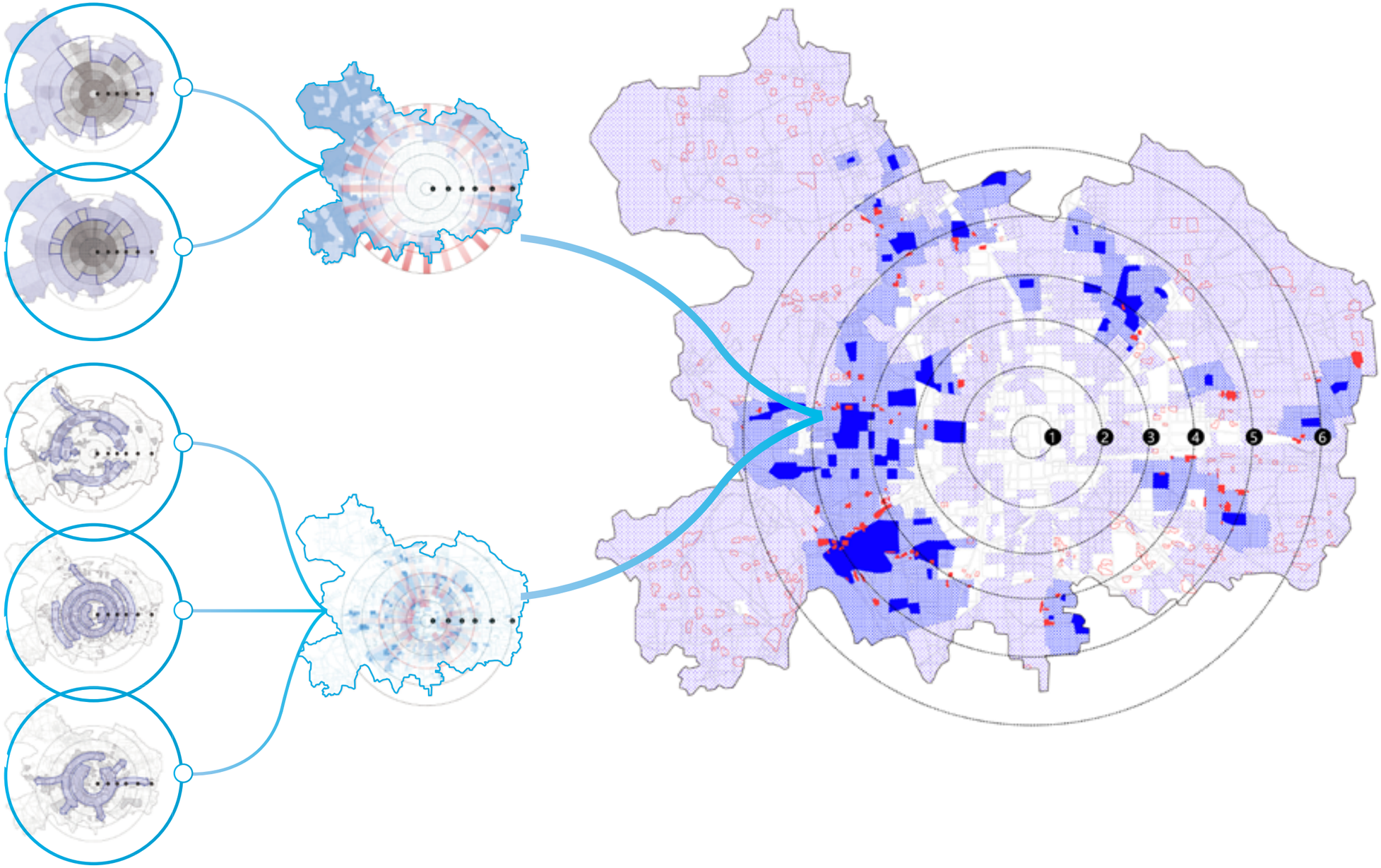


Fig: closed space and potential arrival city
Source:author

Based on the analysis of Beijing's boundary permeability and the adaptability of Beijing's form, a negative area with spatial closure problems in Beijing is obtained. These areas lack the occurrence of diverse life, lack the connection with the surrounding city life, and it is difficult to transform their form in the face of the vision of Beijing planning.

The focus of this project is the circular negative space in the central area of Beijing. The arrival city studyed in this research also chose the important urban village located around the negative space. Therefore, the target arrival cities have important strategic significance in the Beijing area: their development is related to this negative area becoming an inclusive and adaptive space.

Arrival cities
Focused arrival cities
Severely closed space

2 Village Developing system analysis

2.1 Arrival city in the form of urban village

The spatial form of the arrival city is completely different from the external formal space. Their building scale are much smaller than the streets planned in the city, and they have an obvious relationship with the past village texture.

Different from the external urban space, in the area of a arrival city, public life streets often appear in the interior; and the urban street area in the distance of Beijing will usually prevent its edge from being a public street.

Due to the expropriation of land in early urban development, a large number of cities have lost their complete form. This boundary is the result of being cut and developed, and has a clear sense of boundary with the outside.

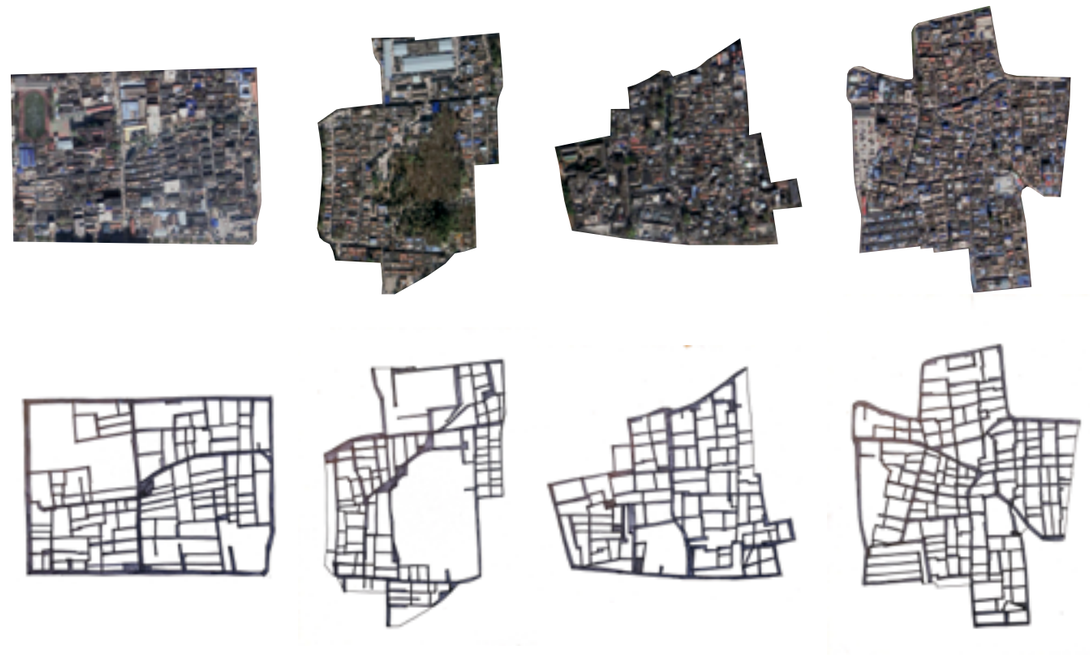


Fig: Typology of arrival cities
Source: author

2.1 Typology of the urban village

Social scale

The special form of the arrival city has valuable value in people's daily life. The common foothold cities in Beijing are all blocks less than 500 * 500m, which is a suitable social scale. And in this scale, people can produce a clear concept of community collective. In the village inside the city, small-scale streets also refine the urban space. The distance between the nodes of the streets is generally within 150m, and various walking paths are prone to occur.

Landscape scale

By comparing the arable land landscape of Beijing and the shape of the footed city, there is the correlation between them. The texture of the arrival city develops the landscape of self-cultivated land. Although it has changed a lot during the long development process, it still maintains a basic structure.

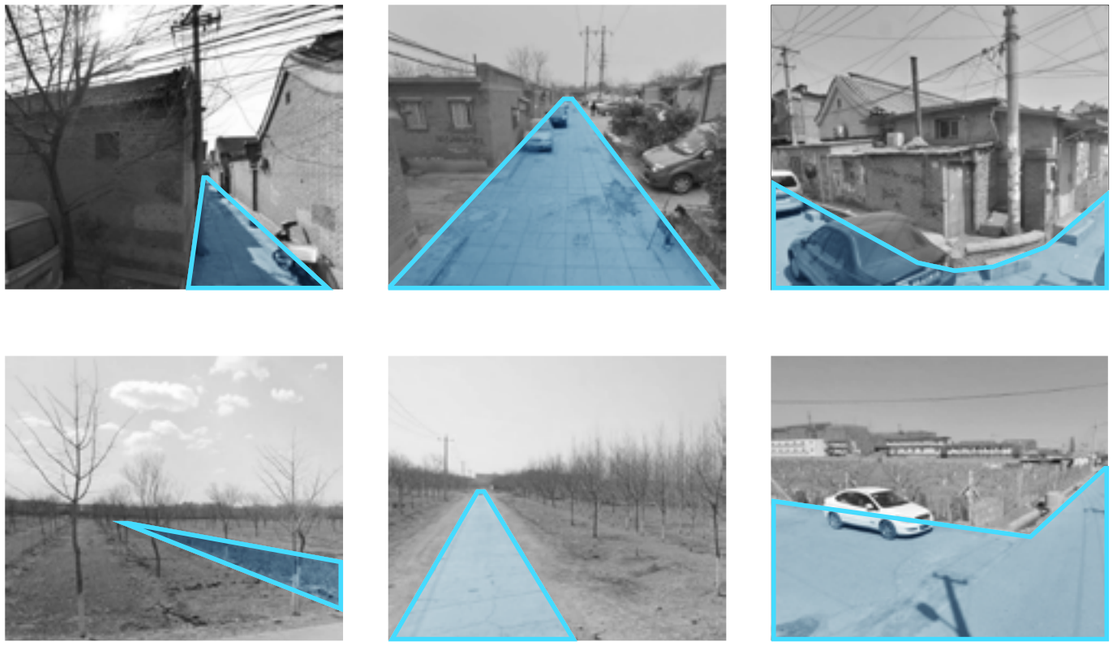
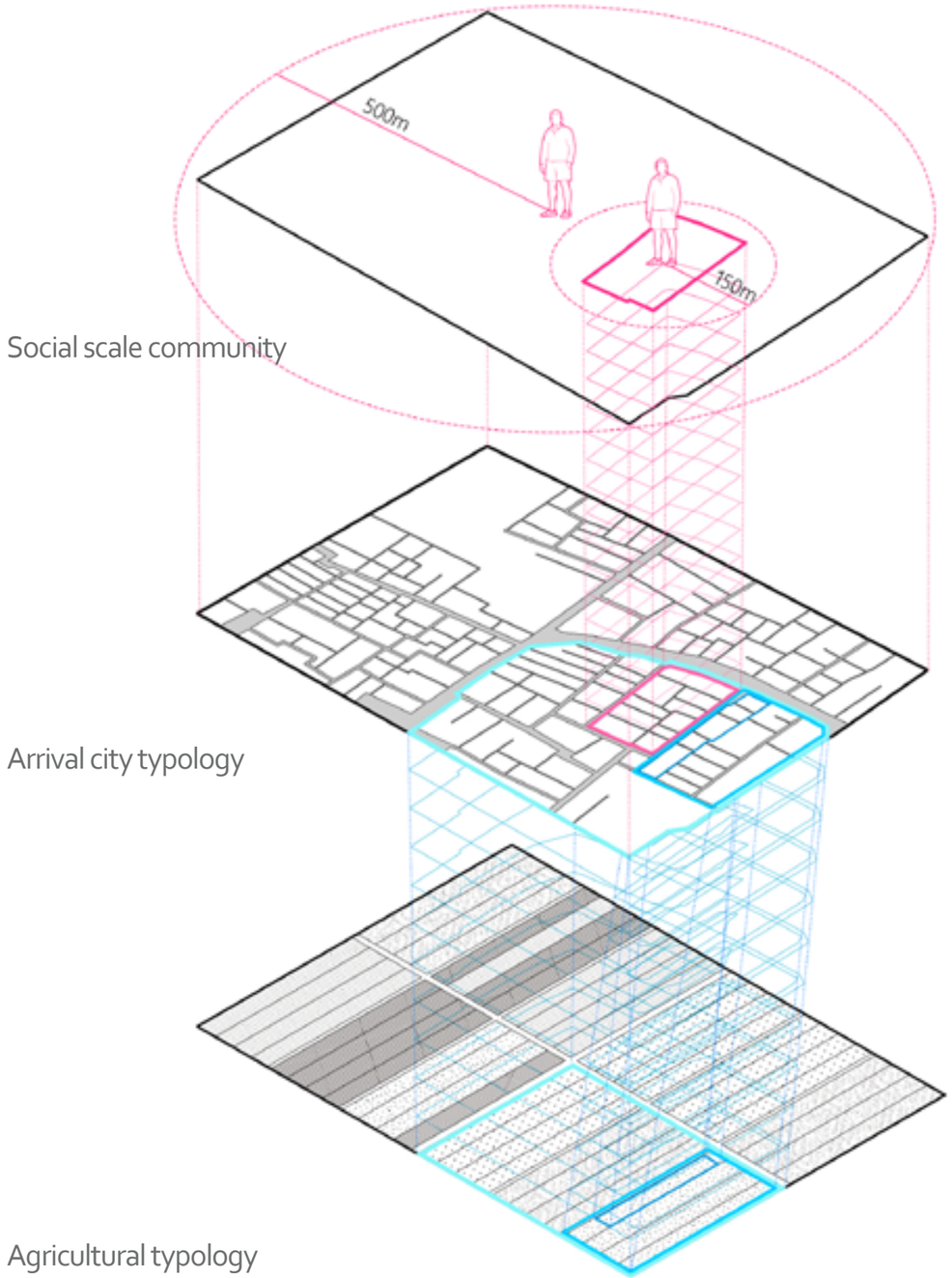


Fig: Typology related to the landscape
Source: qqmap street view



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2.2 Public space network

Public space network inside the arrival city

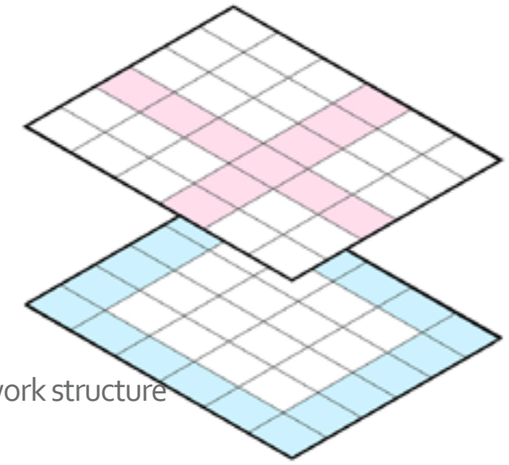
The public space network of the arrival city is developed on the fabric of the original village.The main service object of the public space of the settled city is the user of the internal space. Therefore, its public space is concentrated inside the urban village. These public spaces have high accessibility to the residents in the village, but are more secretive to outside residents.At the same time, the scale of internal public spaces is often small, carrying a large number of spontaneous social activities.

Fig: Public space in the the arrival city
Source: qqmap street view

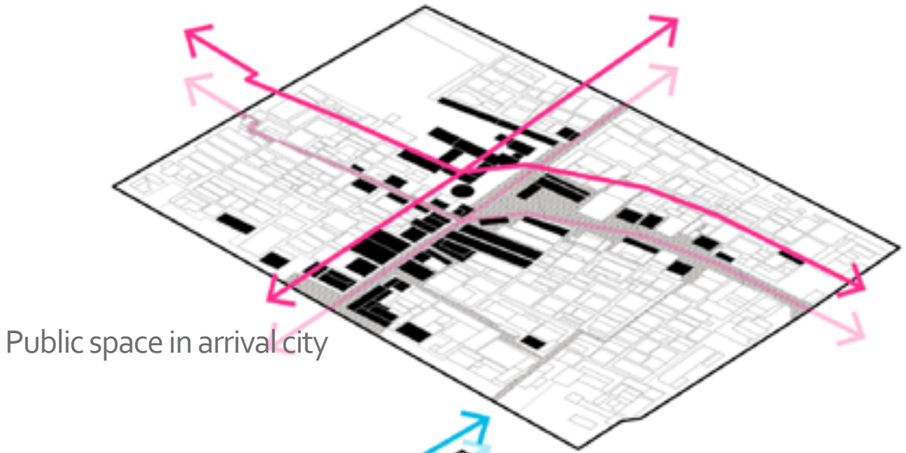
Public space space network outside the arrival city

In formal urban blocks, the public space network is often concentrated on the outer edge of the block. Because the inner space of the regular block is usually used as a private or semi-private community. In Beijing, especially in the closed Beijing urban space structure, these street public spaces are often accompanied by large-scale traffic isolation.

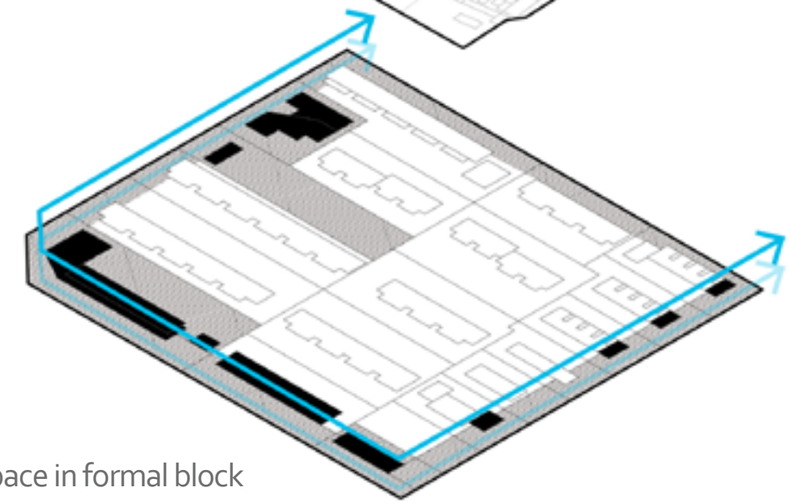
Fig: Public space in the formal block
Source: qqmap street view



Public space network structure



Public space in arrival city



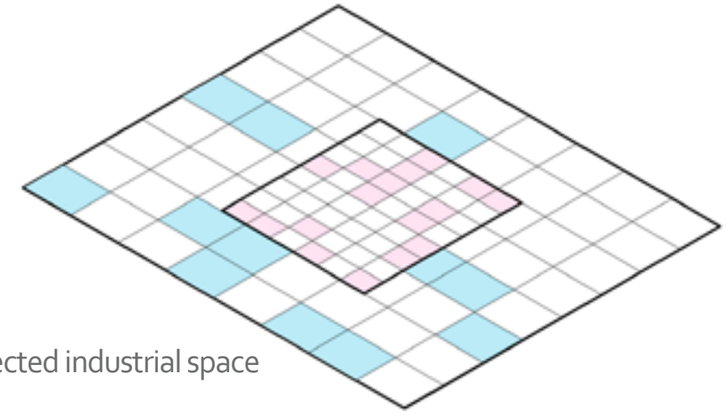
Public space in formal block

2.3 Industrial space

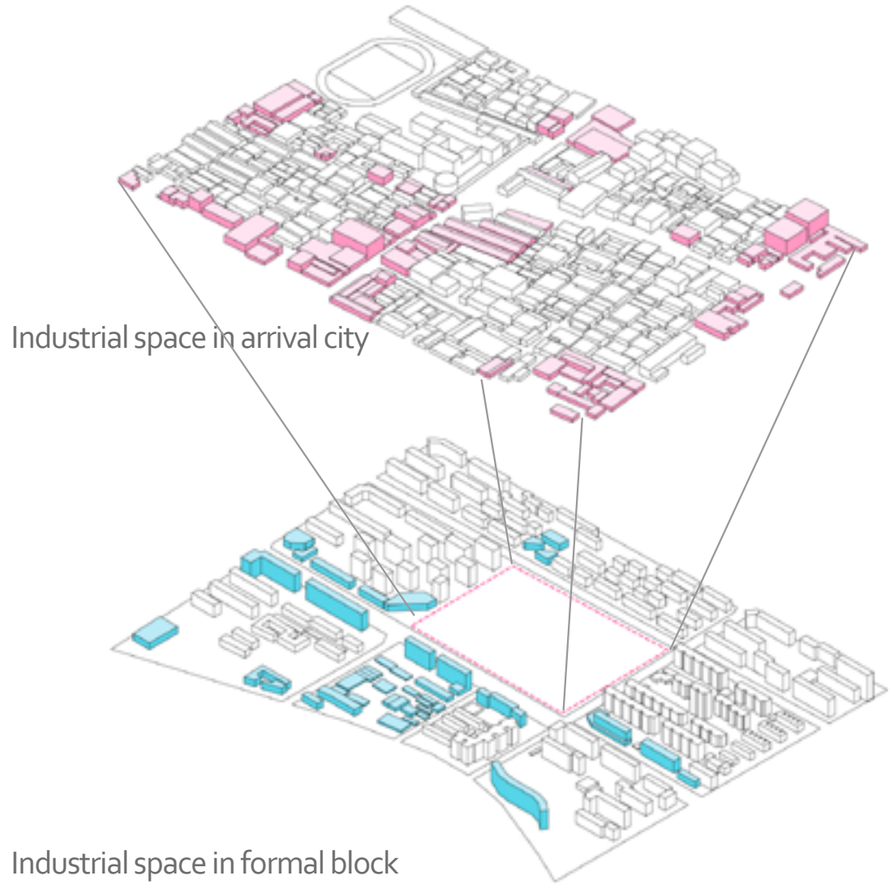
Due to the typology and the public life network of the arrival city, the industrial space is concentrated in the center streets and fringe areas in a small-scale form. Therefore, scattered informal industries account for the vast majority. The industrial space in the formal urban space is larger, concentrated on the edge of the block, or occupying the entire block. There is a clear difference in the industrial space between the arrival city and the regular block, making it difficult to form a continuous industrial chain.

Fig: industrial space in the the arrival city
Source: qqmap street view

Fig: Industrial space outside the the arrival city
Source: qqmap street view



Disconnected industrial space



Industrial space in arrival city

Industrial space in formal block

3 Floating population system analysis

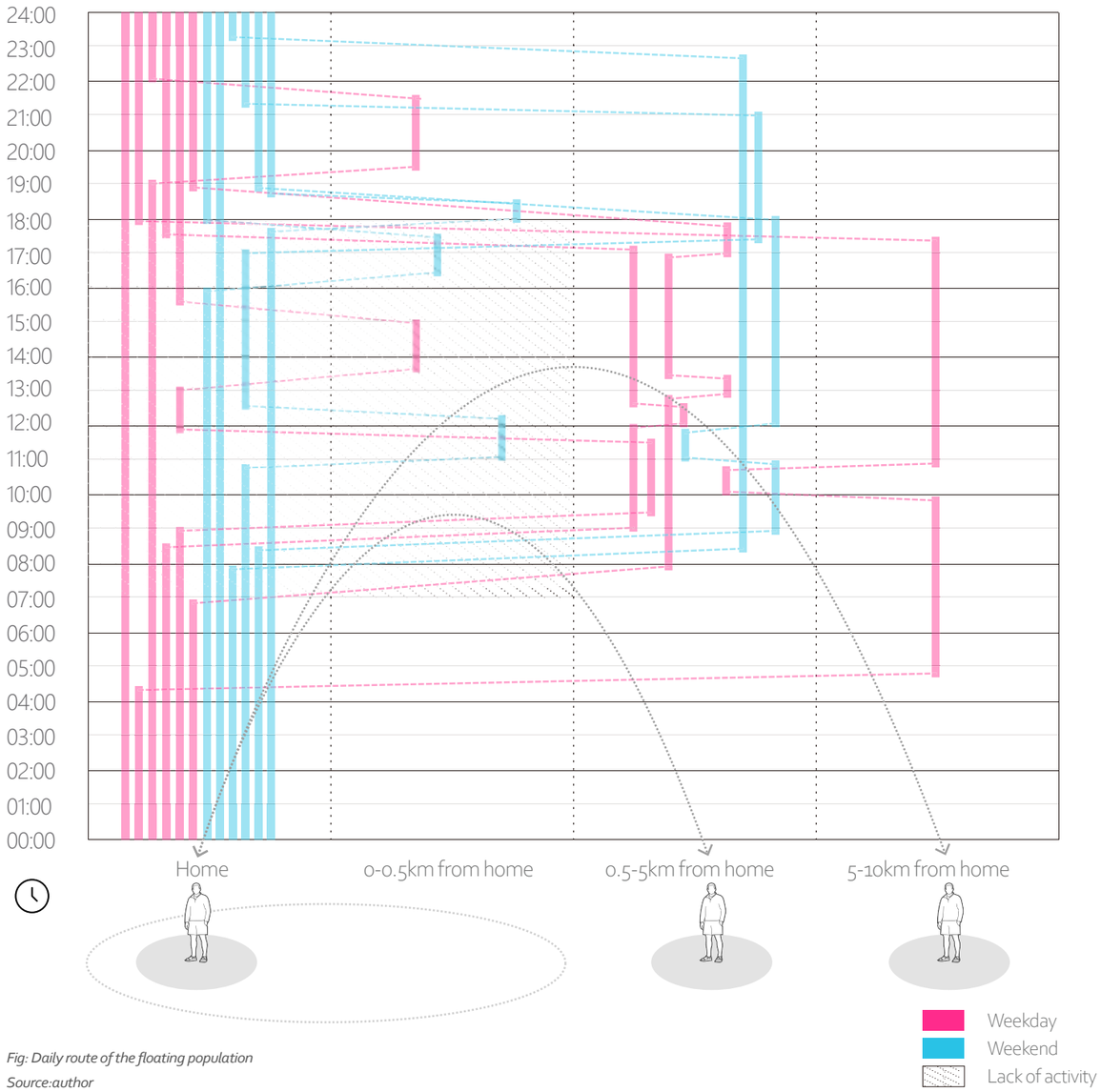


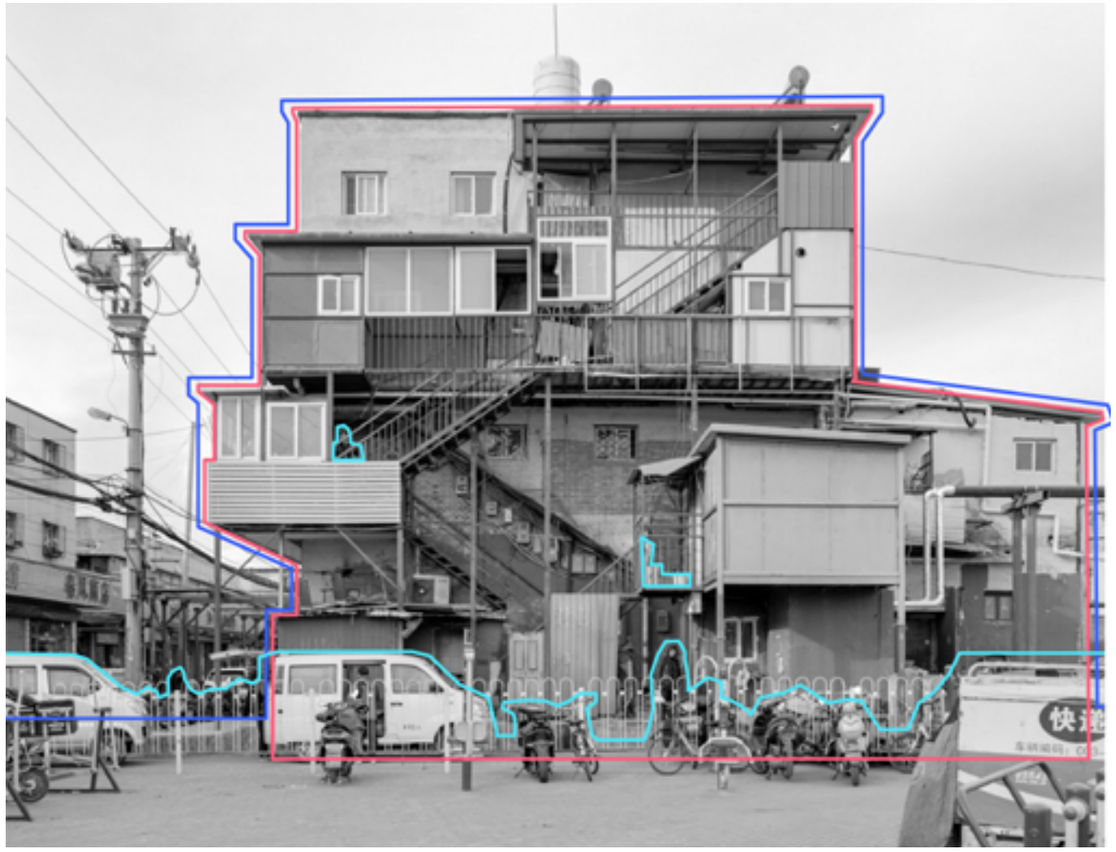
Fig: Daily route of the floating population
Source:author

3.1 The route of the floating population in daily life

According to the collation of a large number of Beijing floating population data by scholars, different types of floating population in Beijing show similar daily life footprints: most of the floating population work areas are far from the cities where they live, and daily life consumes a lot of time for space The leap. As a result, most of the floating population lost a variety of social life time.
At the same time, the path of most floating population is lacking within 500 meters. This shows that the social life time and space of floating population in urban villages are very scarce.

3.2 Spatial participation of floating population

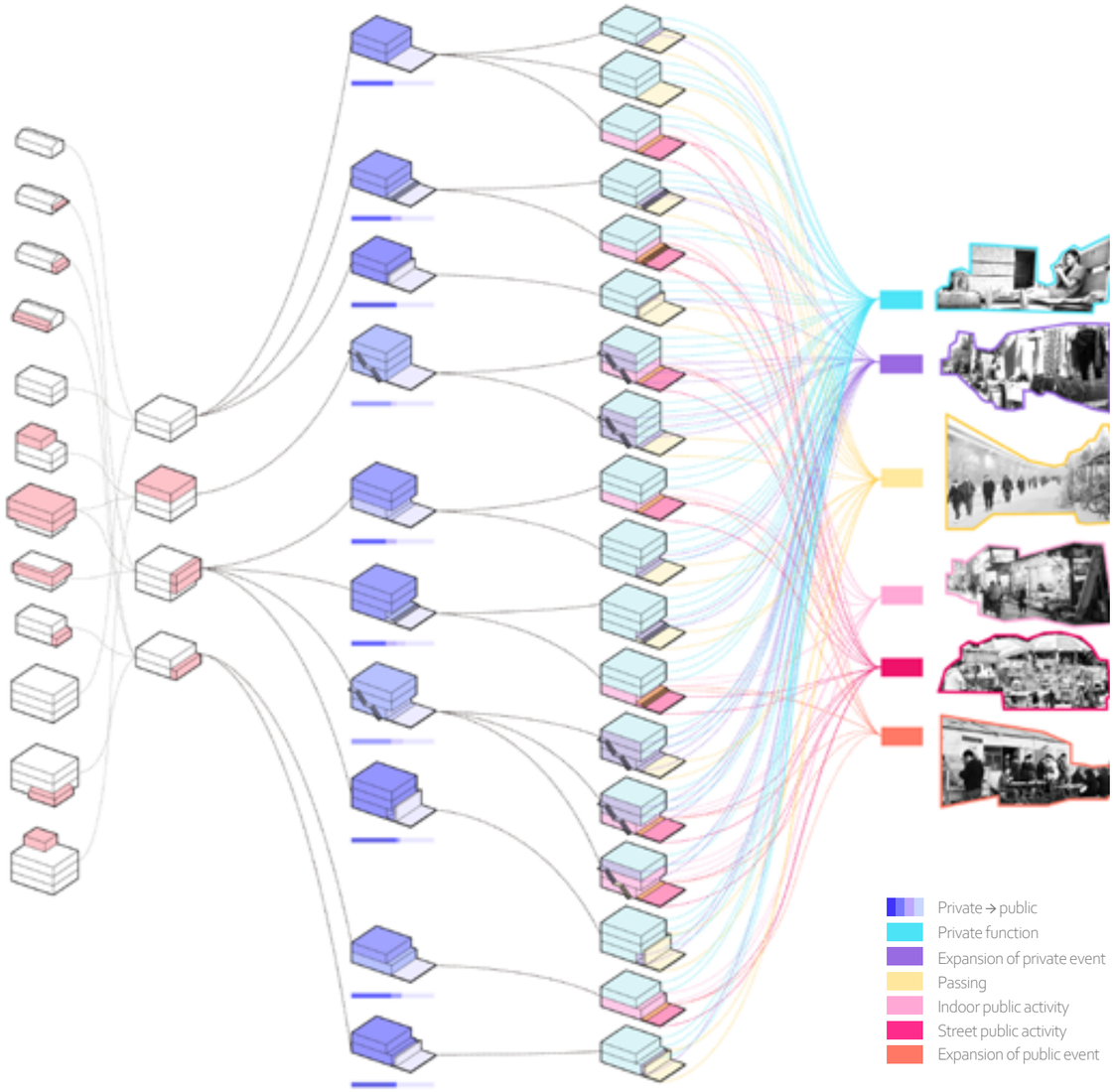
In order to meet the basic needs of life in a limited space, the floating population and the villagers will recreate the space and become a common phenomenon in the urban village. In this part of the analysis, I divide the spatial creation behaviors dominated by floating population into three types: First, the occupation of physical space is usually achieved through the informal expansion of houses; Second, the creation of new public-private boundaries through building attachments , Such as steps, external stairs, eaves expansion, etc .; three, to fill the space through activities, transform the function of the space, for example, people on the main street will operate an open market, on quiet streets, people are used to drying there Clothes, transform the street into a private space.



Physical space occupation
Public-private border creation
Activities in space

Based on several case studies, the analysis yields a conceptual model of the floating population creating space.

The transformation of the physical space of the house by the floating population is mainly achieved by increasing the height, increasing the floor area, and increasing the hanging area of the high-rise. Steps, walls, external stairs, etc. are important tools that people use to transform the public-private boundary. For example, in order to convert the house into a public rental house, the stairs of the building are usually built outside. Different public-private boundaries create conditions for different activities. Basically, the floating population is committed to the development of vague public-private boundaries, and giving them the freedom to create such spaces helps public activities take place.



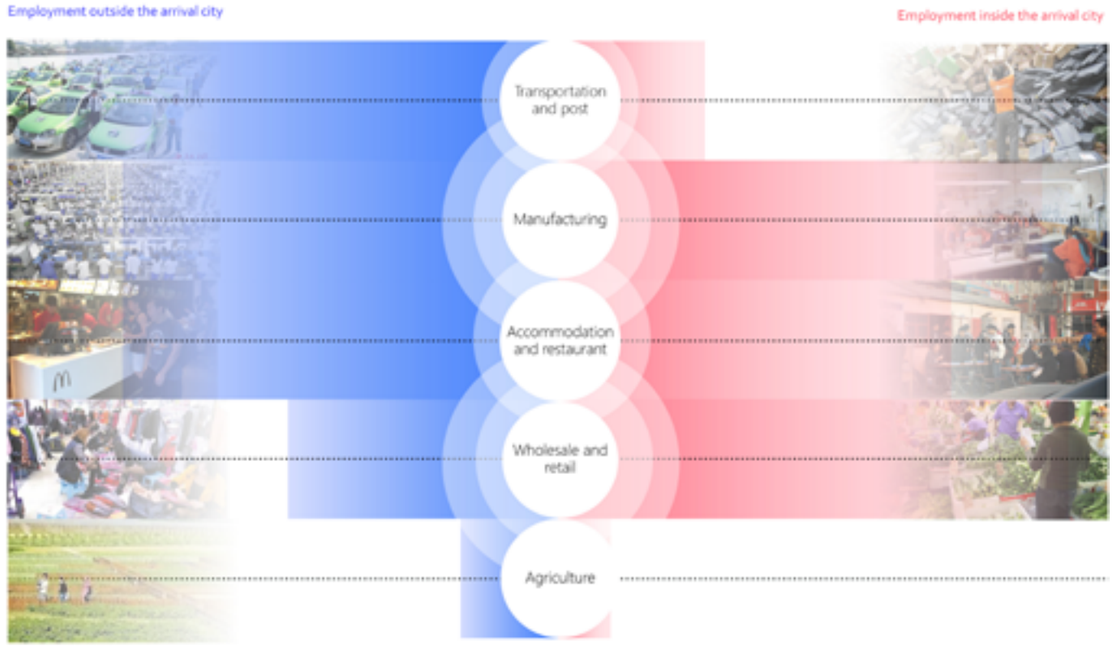


Fig: Employment of the floating population
Source: author

Floating population employment

Due to the low level of education compared to urban citizens and the lack of social resources, a large number of migrants are employed in transportation, manufacturing, wholesale and retail, and join the service industry of restaurants and hotels. This series of service-oriented industries and labor-intensive industries matches the education of floating population in Beijing. At the same time, because a large number of migrants come from rural areas, they have a certain background in the green industry.

These industries that match the floating population are also divided into informal industries that take place inside the arrival cities and formal industries outside the arrival cities. Among them, transportation, manufacturing, and service industries are mainly employed outside. At the same time, a large number of manufacturing and service industries have entered lower-end cities. The implementation of the industrial chain of urban villages and cities can be recognized as follows: after a type of industry diversifies its industrial chain, urban villages can undertake the low-end industrial part.

At present, several industries with a large concentration of floating population in Beijing are reducing their jobs due to the loosening of the industry, and the employment situation of the floating population is in trouble.Meanwhile, informal industries within urban villages that form a complete industrial chain with external employment are also being hit.

Looking for alternative employment channels is the most urgent task for the floating population to survive and develop in Beijing.

4 Relationship between Systems

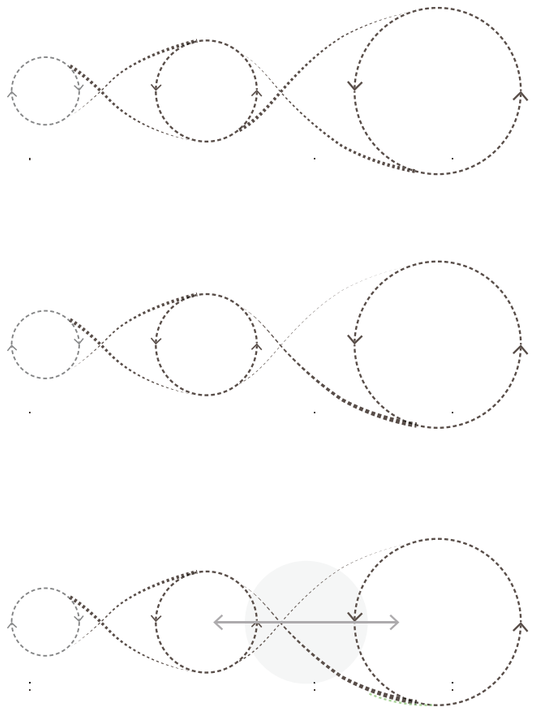


Fig:Potential relationship
Source: author

4.1 Potential relationship

The joint operation of the floating population system, the village development system and the urban planning system is the basic condition for the existence and function of arrival cities and the foundation for maintaining the openness of arrival cities. However, the current urban planning is cutting off the effect of floating population and villages on cities, and the cities that have settled are therefore ineffective.

Beijing's tendency to open collaboration has receded because Beijing's policymakers believe that the product of such collaboration is contrary to Beijing's blueprint.

This negative situation actually provides a new idea for this project. How to rebuild the common collaborative relationship between systems? There must also be a potential connection between floating populations, villages, and cities. This connection is an important part of Beijing's blueprint for urban planning. And the re-cooperation of these three systems can build on this new connection.

4.2 Related spatial structure

By superimposing the arrival cities of Beijing's enclosed space and various blueprints of Beijing, at least three potential connections can be drawn.

Beijing's closed urban structure is closely linked to the urban ring road infrastructure, the green belt planning space, and the new industrial space. These structures are the result of closed planning logic and also affect the closedness of the space.

In this project, the green belt is selected as the main related structure of the city's enclosed space. Through the analysis and design of the green ring as the transitional structure, it serves as a demonstration of other urban structures.

Fig:closed space and infrastructure
Source: author

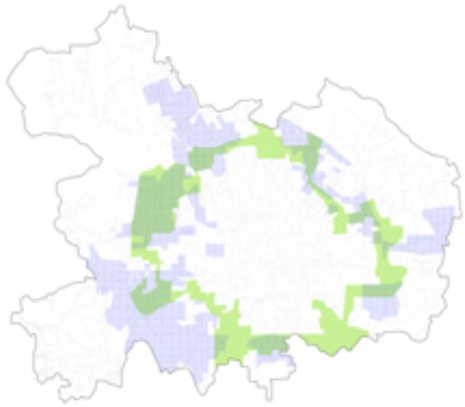


Fig:closed space and green belt
Source: author

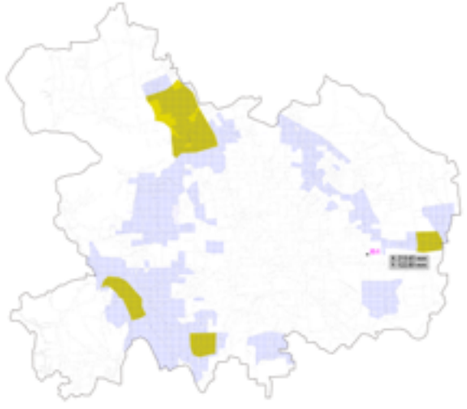
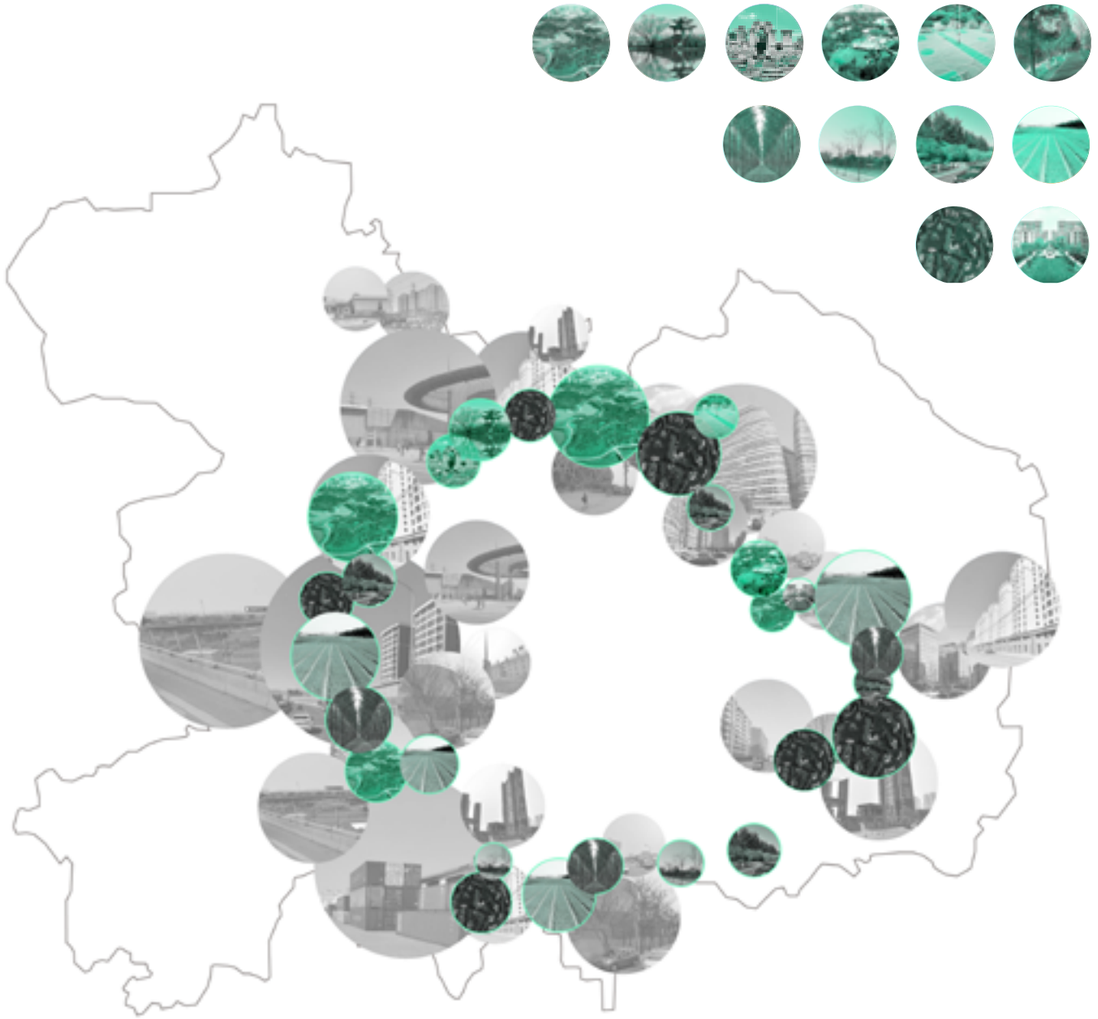


Fig:closed space and new industrial park
Source: author



4.3 Land property as the hidden connection

After determining the green belt as a new link between the three systems, the project's analysis needs to find the correlation of these four elements. The land property right happens to be the key to concatenate these elements. This connection will also form the basis of project cooperation.

A. Land property-village system
In terms of land property rights, Beijing city still retains a large amount of collective land, mainly attributed to village collectives. The vast majority of the urban planning green area also belongs to the village collective.

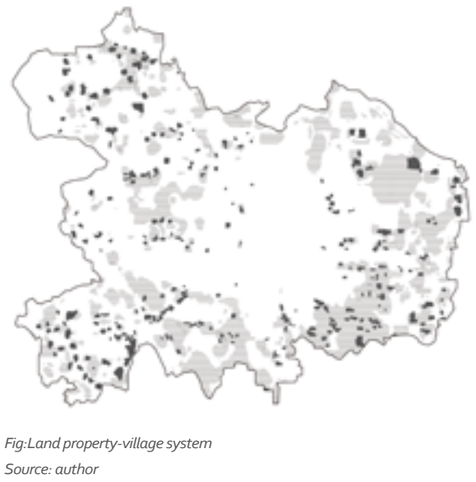


Fig:Land property-village system
Source: author

B. Land property-floating population system
The density of the floating population shows a close relationship with collective land. Large areas of collective land provide lower cost living conditions and become an area where migrants are concentrated.water bodies. As an important element in the green belt space, the development of the canal tends to involve the government's land acquisition.

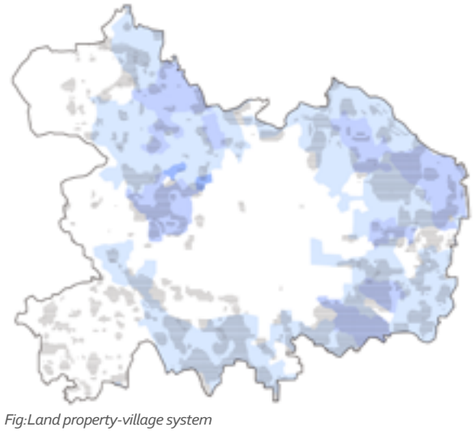


Fig:Land property-village system
Source: author

C.Land property-urban developing system
The central area of urban construction and the collection of collective land have been completed. In the fringe areas of the city, a large amount of collective land surrounds Beijing. However, most of the urban canal construction area has completed the nationalization of land, even in the fringe.

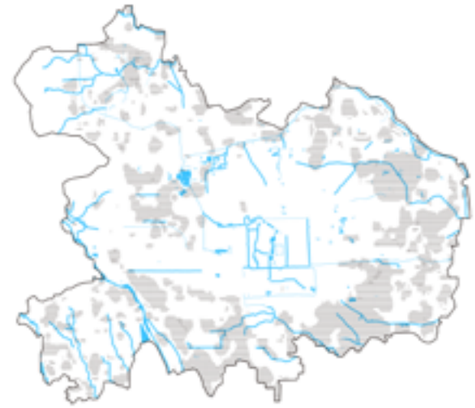


Fig:Land property-urban developing system
Source: author

C. Land property-green belt
In the past, the development and construction of cities required expansion of space. Therefore, land was requisitioned from the village collectives, and the green areas were occupied, so the villages became urban village. And now, the village still in the green belt are facing the urban strategy of demolition, because the government has to develop and construct the green land. This is a very interesting and opposite relationship. The government's policy has always placed these two elements on opposite sides.

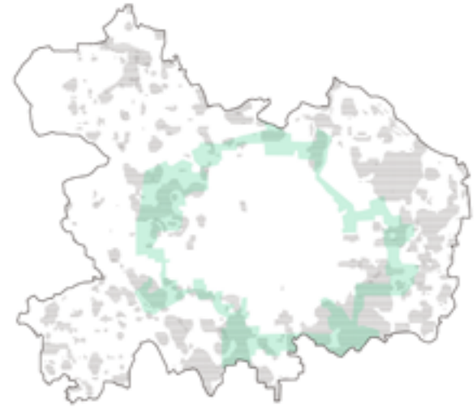
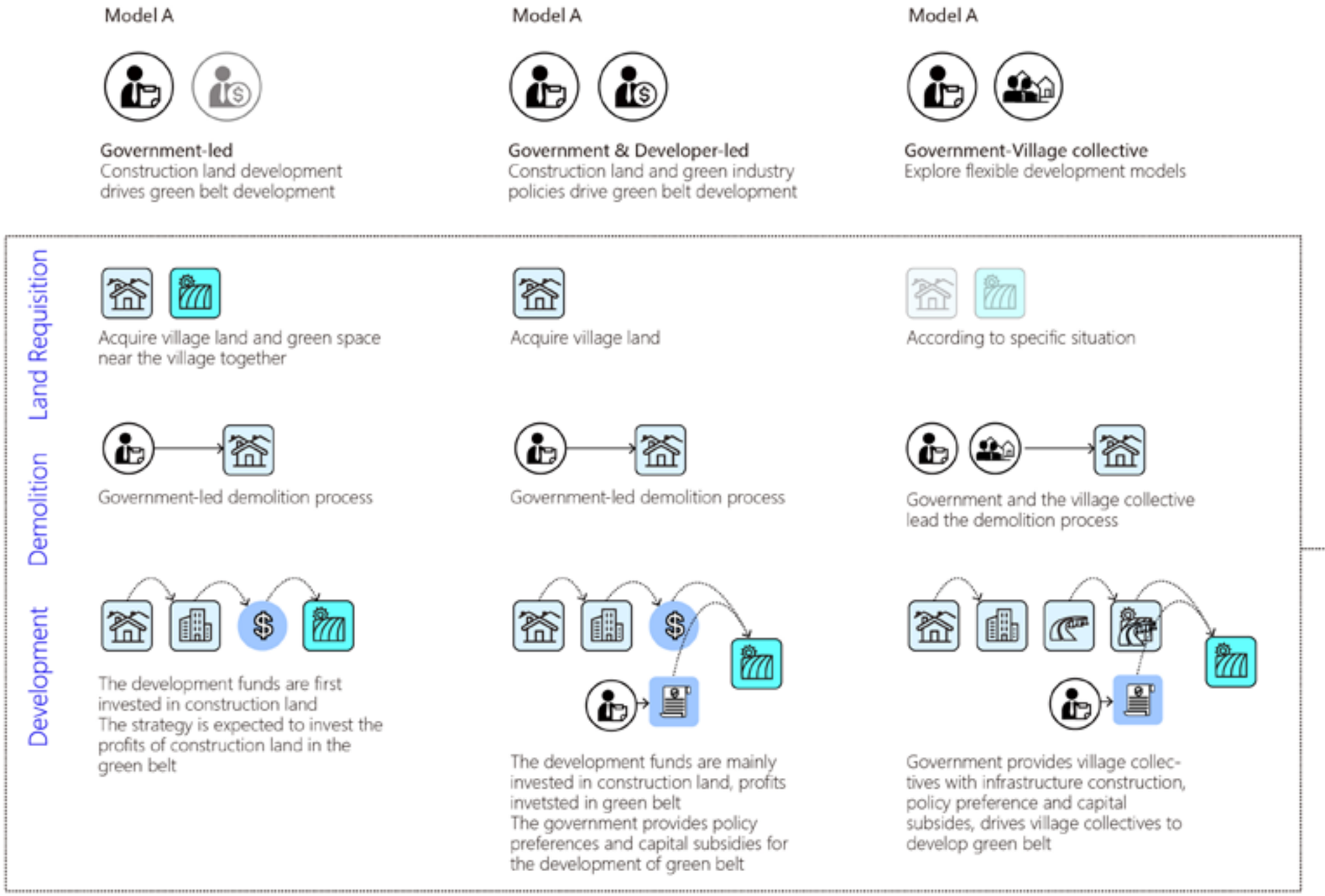
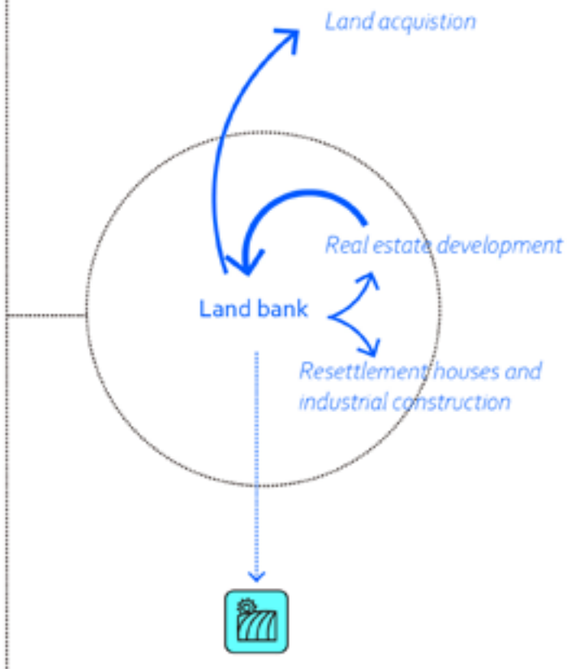


Fig:Land property-urban developing system
Source: author

4.2 Policy for green model

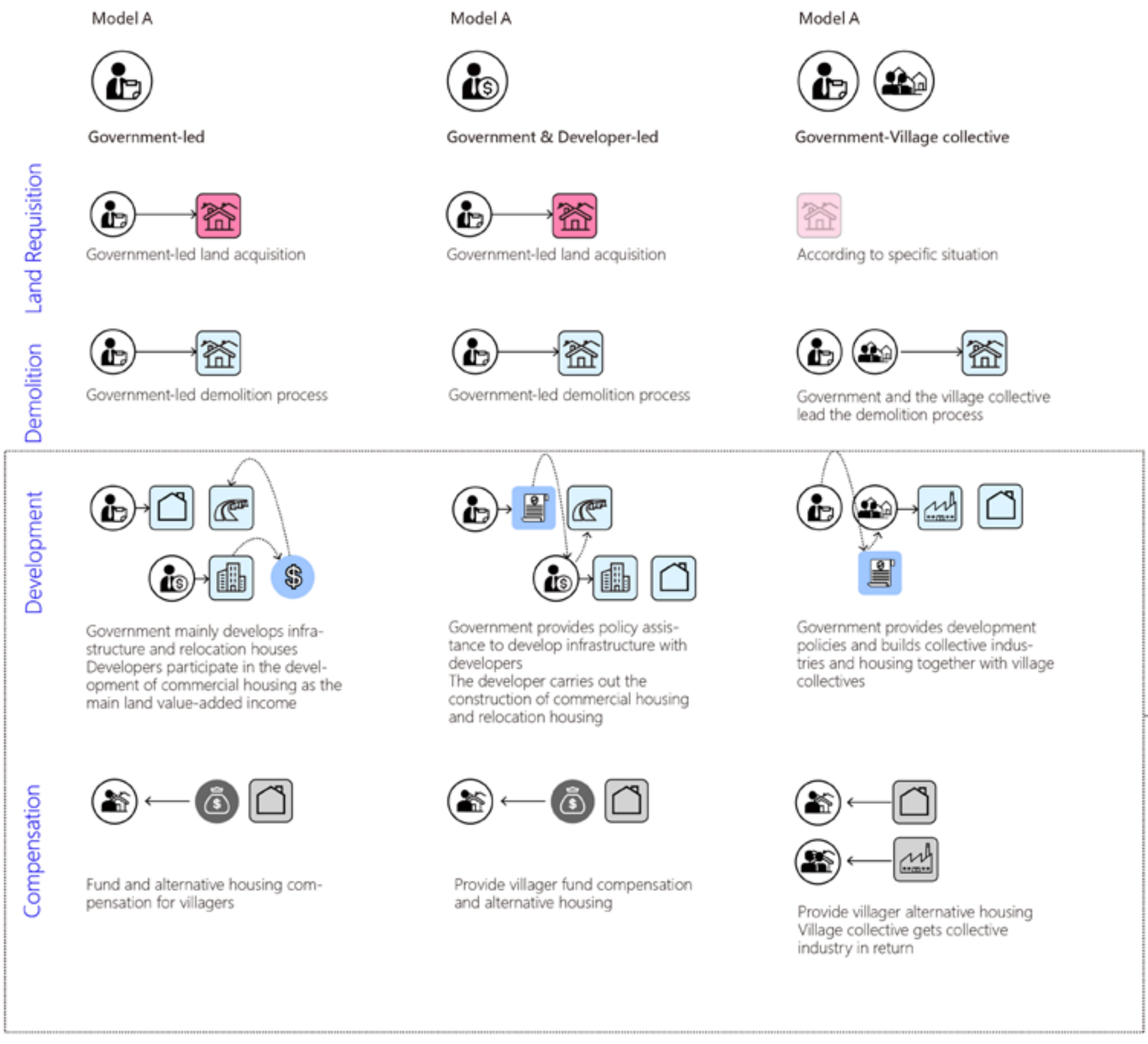
The development model of the green belt area in Beijing urban planning is mainly divided into three types: one is to requisition construction land and green land together to allow the development of construction land to drive the construction of green land; the second is to requisition construction land and give village subsidies to maintain green land; The government and the village jointly develop green spaces. However, these three models have not played a good role in green space construction.

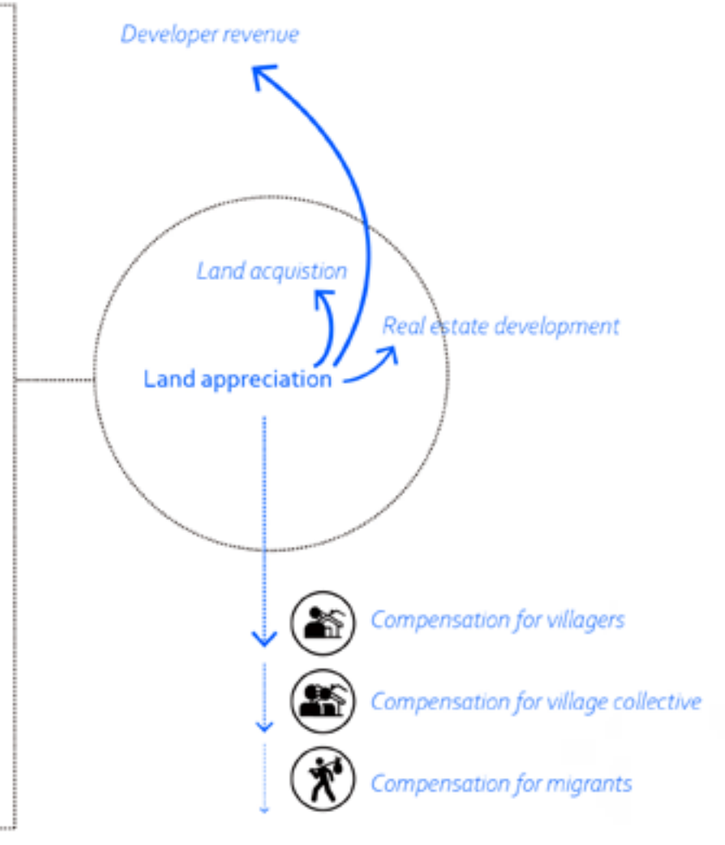




The main reason for this is that their own funds cannot flow into the Green Belt area effectively. In the first two government-led programs, the government's process of acquiring land and storing land cost a lot of money, so that the later opening construction must seek to maximize the benefits, which often leads to the construction of closed cities around the green space. Then, after the developers have developed the construction land, they usually take away the land premium and invest the capital in the development of green land.

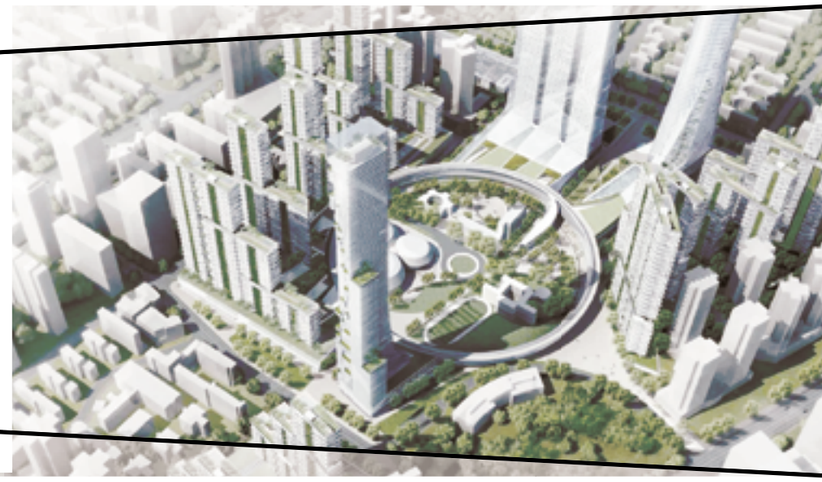
4.2 Policy for arrival cities





The development model of arrival cities in Beijing is mainly manifested in these three models: government-led model, developer-led model and village collective-led model. The government-led model is the most widespread.

Urban village development models generally have problems in compensation. Limited funds were invested in the space where the land added value, and the added value of the space was taken away by the developer. Urban planning cannot fully satisfy the villagers' requirements for sustainable employment and residence. More importantly, the compensation measures of urban planning always ignore the interests of floating population.



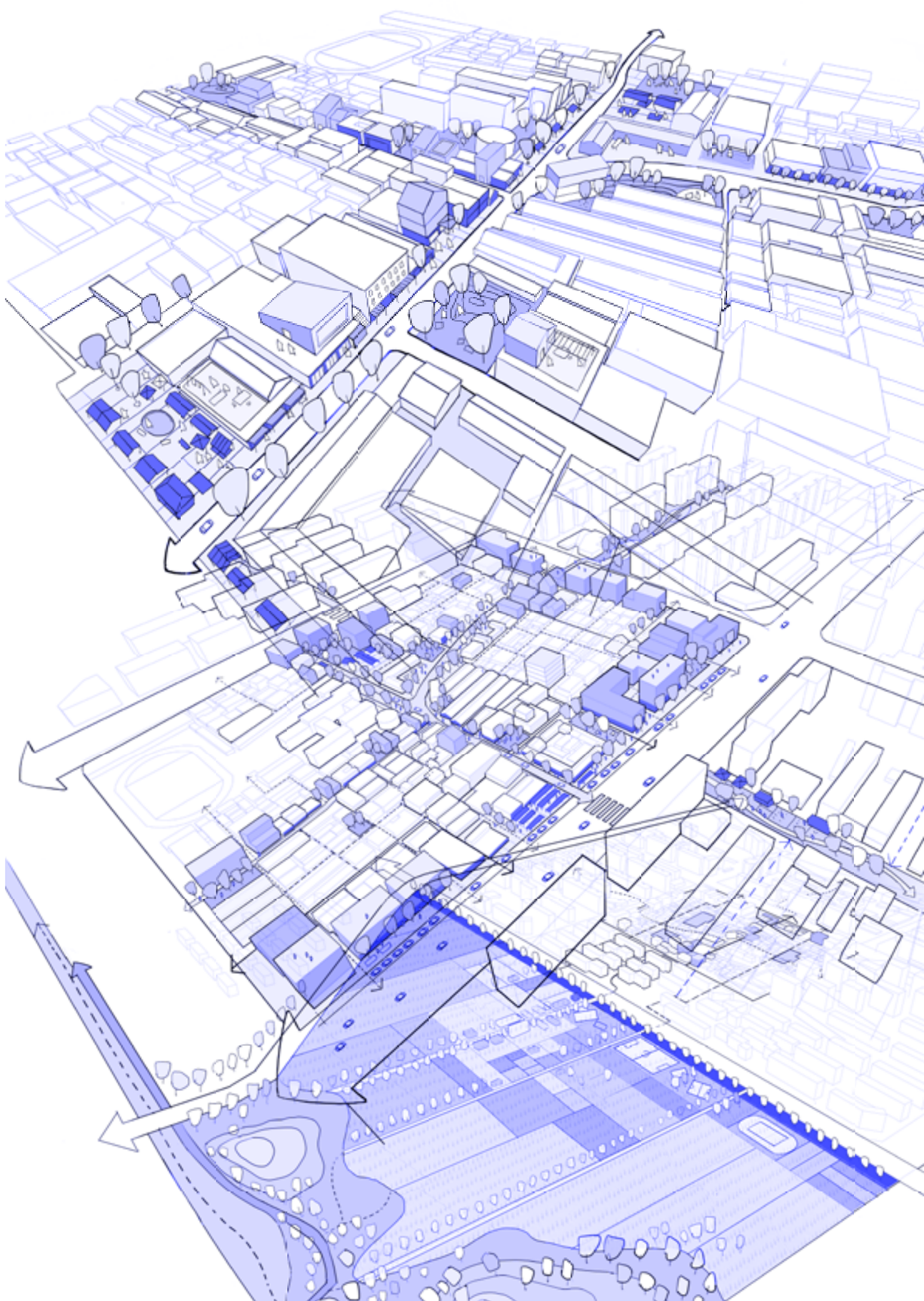
There are large-scale enclosed spaces in Beijing in urban planning, and urban spaces lack adaptability and inclusiveness. The foothold city in this enclosed space has the strategic potential and significance for development.

In the target space, the urban planning system has the need to open the urban space and realize the urban blueprint; the village needs to find a way to connect with the city in a special identity and form; the floating population is eager to integrate basic living conditions and social life. The joint resolution of these demands depends on the establishment of a new open collaboration model. And Beijing's urban green belt has become an important link to build new connections.

CHAPTER VI

Strategy

As the main output of this project, this chapter elaborates the framework of the strategy, and provides reference design experiments and supporting policy strategies. The feasibility of the project is also discussed and reflected in the last part of the chapter.



1 Goal and Vision

1.1 Goals

The strategy of this project would continue to take advantage of the complex adaptive system of arrival cities, using the relationship between urban planning, village developing and floating population network as the opportunity to achieve the common appeal of multi-system. At the same time, the green belt is considered in the system to strengthen the connection between the village system and the floating population system and the urban development system.

These four elements for building cooperation are embodied in the strategy as Beijing's closed urban space, green belt, urban village and floating population activity space.The four scale spaces include needs of economic industry and social public. Combining their specific needs with the ideal direction of achieving inclusiveness and openness constitutes the specific goals of this project at every scale.

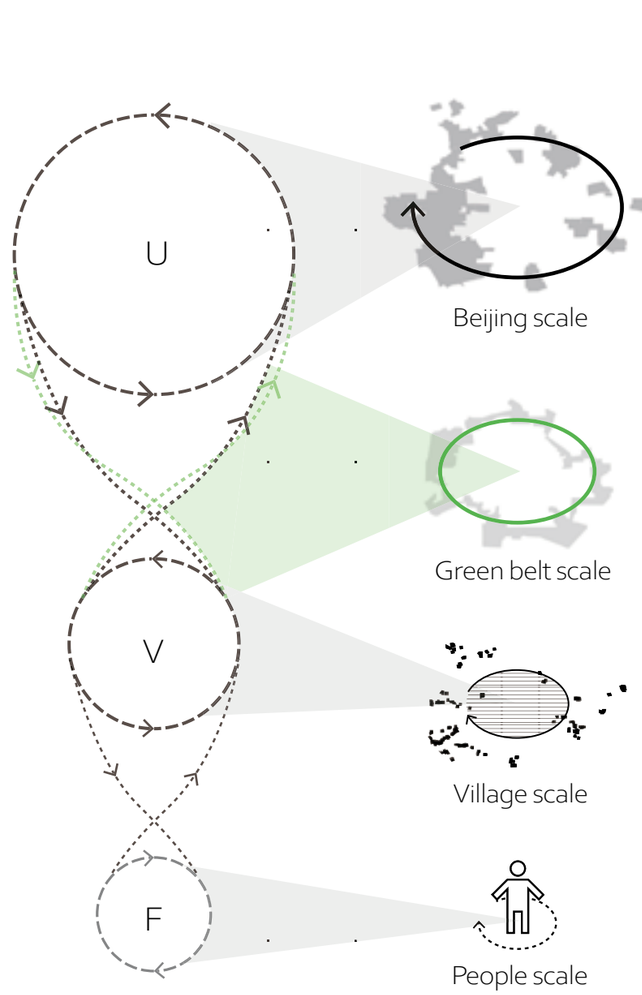


Fig.6.1-1: Spatial framework the the goals
Source: author

○ Social space inclusive
● Economic space adaptive

Goal 1: Urban development

○ Activate public space network in closed space
● Update the city indusrty in flexible way

Goal 2: Release green belt

○ Activate the public potential of the green belt
● Ensure long-term sustainability of green space

Goal 3: Village transformation

○ Promote the public identity in the city space
● Achieve the sustainable development of collective economy

Goal 4: City rights for people

○ Solve employment and living issue
● Obtain possibility of personal development

1.2 Vision

The project's vision is to build an alternative Beijing renewal process: Beijing's closed urban spaces are open and downward compatible; the Green Belt has the opportunity to flourish and become the link between Beijing's formal and informal spaces; The belt space is transformed; the floating population expands the living space in Beijing through the link between the village in the city and the green belt. Each system has opened itself to a certain extent and formed a close relationship with other systems.

Fig.6.1-2: Vision
Source: author

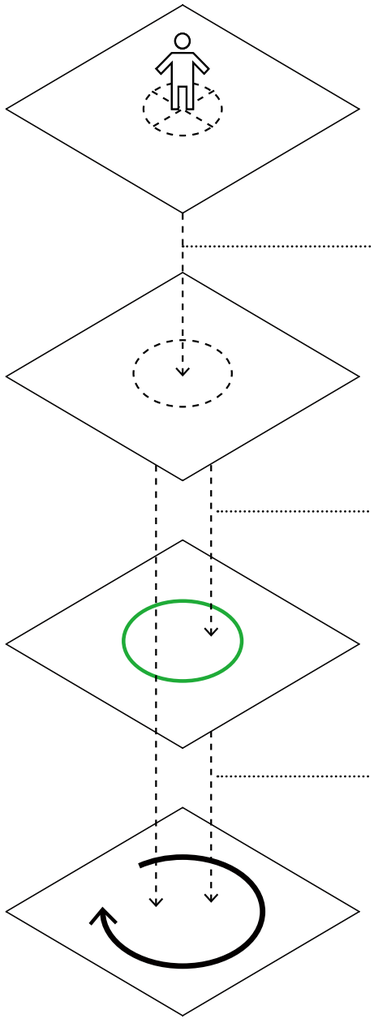
2 Principle

2.1 Spatial framework of principe

- Progressive multi-scale intervention

The project is divided into four-space types from small scale to large scale: floating population activity space, arrival city space, green belt, and related urban area, and closed space in Beijing. The spatial intervention strategy of the project is gradually involved, starting with the smallest scale design, using staged planning goals to stimulated the collective participation.

After ensuring and evaluating the effectiveness of small-scale strategies, enter the next stage of large-scale intervention. This strategy is to use limited development resources in a more reasonable way, and the gradual progress from small scale to large-scale development can allow trial and error and adjustment of the project. At the same time, the purpose of designing from a small scale is to ensure that bottom-up collective participation in the design strategy can effectively participate in urban design.



Floating popultion activity space

- Activate collectiveness and site characteristics.
- Prepare the space for the next stage development of the arrival city by adjusting, repairing and optimizing the spatial structure.

Arrival city area

- Prepare the environment and capital for the next stage of development.

Green belt and related urban area

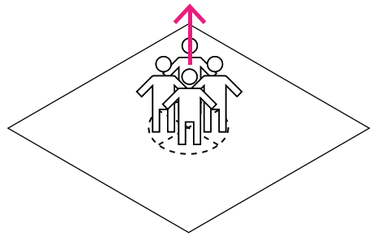
Provide an effective spatial framework for the formation of urban scale strategy.

Closed space in Beijing

2.2 Principle for inclusive public life

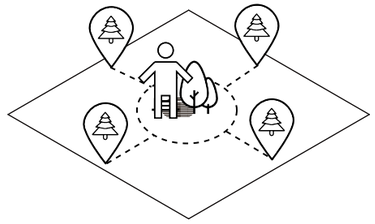
- Co-produce public space

In order to achieve inclusive urban environment construction on multiple scales, the strategy advocates the collaboration of different systems to produce a common public space that crosses the boundaries of the system. This principle hopes to continue to inspire the potential of such collective cooperation, different urban systems represented by different scales are based on consideration of the social life needs of the subject, to jointly create a diverse urban public life network. The creation of a public space aims to provide disadvantaged groups with opportunities for social life integration, and at the same time to supplement the way and space of public interaction for the city.



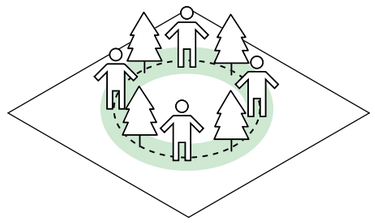
Floating population
Village collective

Enhance internal public vitality of the arrival city



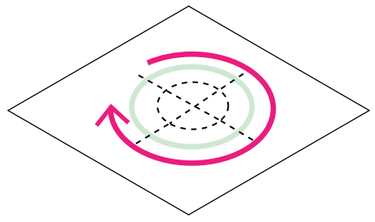
Village collective
Surrounding neighborhood community
Floating population

Integrate the public space network of the arrival city with surrounding neighborhood



Village collective
Government
Floating population

Activate the publicity of green belt area



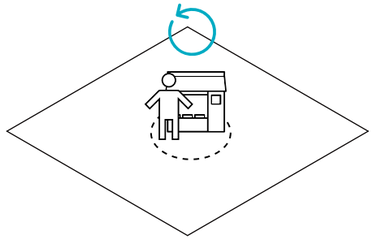
Floating population
Village collective
Neighborhood community
Government

Develop public space network with green belt as the main public goods in closed structure

2.3 Principle for adaptive industry

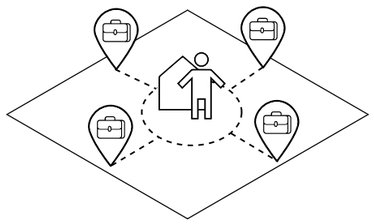
- Diversify urban industry

The strategy of industrial development encourages the diversification of industries to achieve long-term industrial adaptability and create the right to urban life for more social groups. This principle is based on a new understanding of the informal "low-end industry", and it is regarded as an important industrial content that constitutes daily life and a tool for giving urban industries more adaptability. The project's strategy aims to achieve an alternative Beijing industrial structure: while realizing the high-end industries expected by Beijing, accept more types of industries.



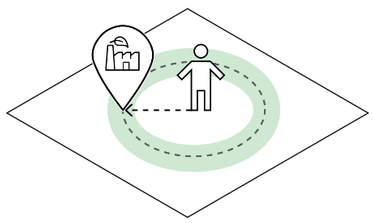
Consumer facilities and informal industry

Update mixed commercial street/ center



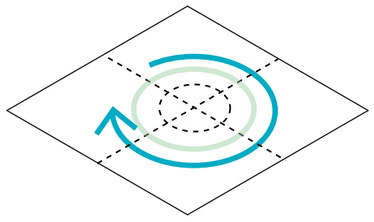
Mixed industry

Strengthen the connection between arrival city and surrounding industry pattern



Green industry and supporting industry

Develop mixed industry related to green belt



Mixed Industry

Develop mixed work-life block in closed structure based on green industry and industry cluster around arrival city

3 Design Strategy

3.1 Framework of design strategy

The design principle divides the development process into different scales and different stages. It should be noted that the smaller the scale in the principle, the more potential for bottom-up planning. Therefore, such a design structure needs to be alert to the conflict between top-down planning and bottom-up participation, and at the same time limit the negation of each stage to the previous stage driven by the interests of its own space.

In order to avoid the multi-scale and progressive design falling into the same development process as Figure 1: the larger-scale design blueprint covers the results of the previous stage, resulting in design contradictions. This chapter focuses on the key design strategy of the project: controlling the spatial structure of principles. As shown in Figure 2, the concept of design strategy is to control the spatial structure of the design for each stage and scale and realize the connection from small scale to large scale, informal participation, and formal planning through effective spatial structure links. Of course, such spatial structure control does not mean that at every stage of development, the existing design remains unchanged. The strategy advocates that at each new stage, different structures should be changed according to new environmental developments, but different subjects still maintain the largest spatial participation rights to the spatial scope to which they belong.

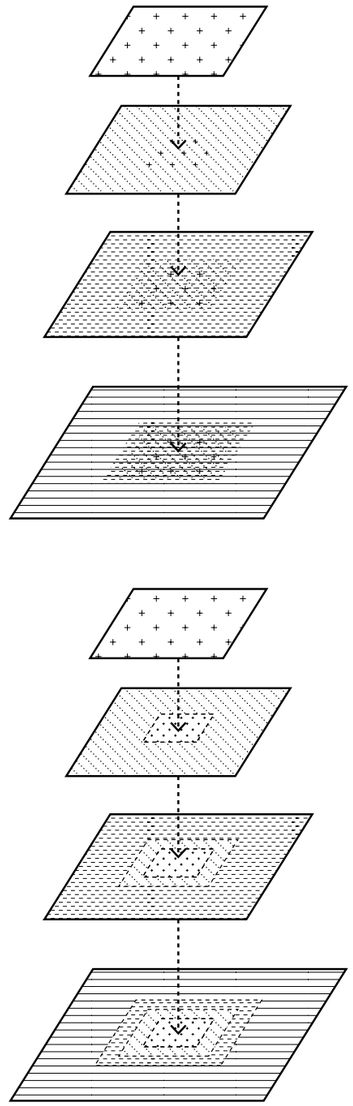


Fig.6.3-1: Concept of the design strategy
Source: author

3.2 Spatial structure of the Principle

■ Site test

In order to test the most effective spatial structure for each scale of development goals, this part selected four site spaces (between the closed urban structures in Beijing, which are closely related to the green space), and analysis them from the floating population scale to large-scale. Finally, through these four typical cases, summarize the effective spatial structure to realize the principle in deifferent scales.

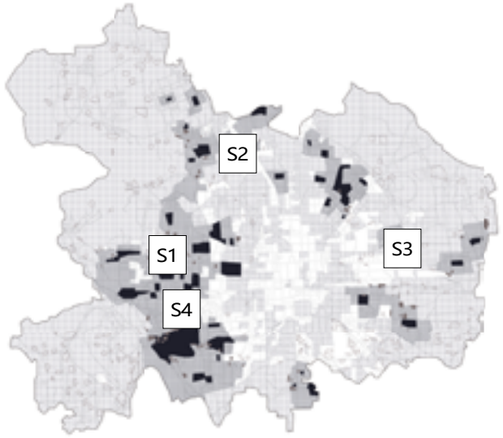
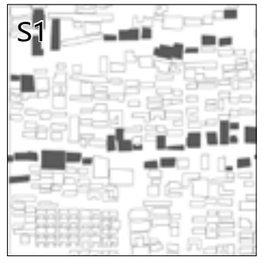
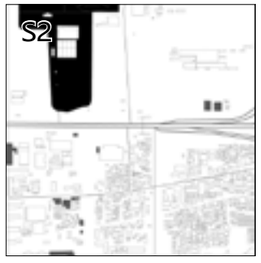


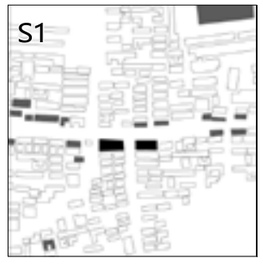
Fig.6.3-2: Location of the test site
Source: author

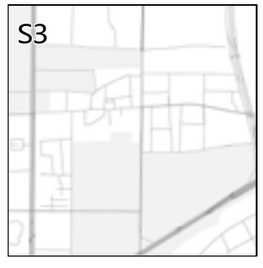
Fig.6.3-4: Map of the test sites
Source: Google map

Fig.6.3-5: Map of the test sites in floating population activity scale, village scale, green belt scale and city scale
Source: Author





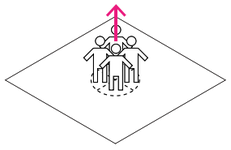
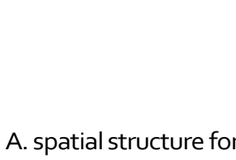
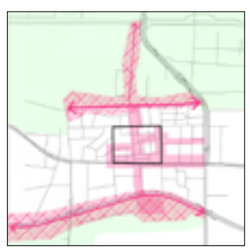
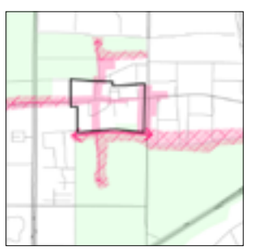
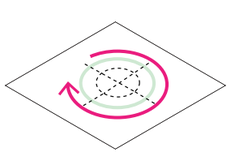
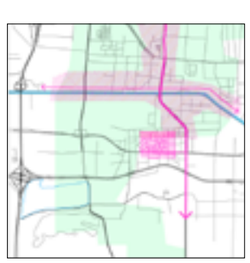
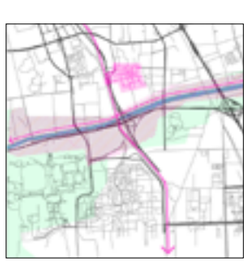




A. spatial structure for Co-produce public space

At different scales, the sites have similar structures that can respond to the requirement of producing public space. The effective structure of public space is mainly based on several aspects such as the life experience of the floating population in the arrival city, the form of current public space, and the public space needs of closed cities. Highly accessible linear structure that can link potential public space resources is considered an effective space in this experiment.

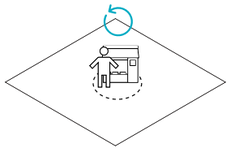
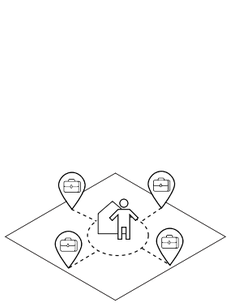
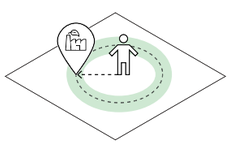
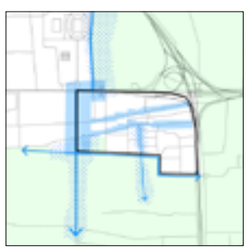
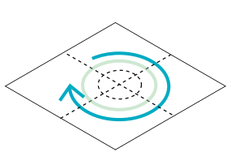
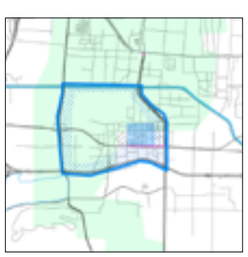
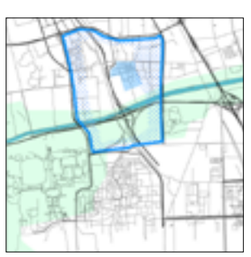
Fig.6.3-6: Test the potential structure for Principle 1
Source: Author

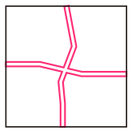
Scale	Principle	Potential structure		Site 1	Site 2	Site 3	Site 4
	Enhance internal public vitality of the arrival city	Internal street of arrival city					
	Integrate the public space network of the arrival city with surrounding neighborhood	a. Border road of arrival city b. Internal road of surrounding neighborhood linked to arrival city street					
	Activate the publicity of green belt area	a. Border between green and arrival city b. Internal street in arrival city expand to green belt					
	Develop public space network with green belt as the main public goods in closed structure	a. Main road connect to green b. Green corridor along canal NB: the green space around canal mainly belong to the state					

A. spatial structure for Diversify urban industry

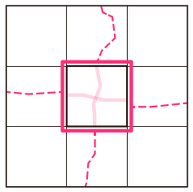
The potential spatial structure of the principle of diversified industry is mainly based on the possibility of industrial cluster development. Different types of industries rely on different location elements to form clusters. For example, the underlying structure of informal commercial streets is the internal streets of urban villages that are already highly mixed. The high-end industrial space may be developed in places linked to external business spaces and transportation routes. Therefore, according to different industrial development principles and geographical environment, different scales show the potential of different industrial clusters.

Fig.6.3-7: Test the potential structure for Principle 2
Source: Author

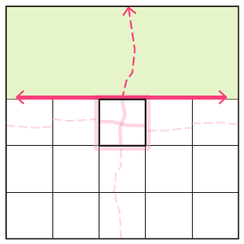
Scale	Principle	Potential structure		Site 1	Site 2	Site 3	Site 4
	Update mixed commercial street/ center	Internal street of arrival city					
	Strengthen the connection between arrival city and surrounding industry pattern	a. Border between green and arrival city b. Internal street in arrival city expand to green belt					
	Develop mixed industry related to green belt	a. Border between green and arrival city b. Internal street in arrival city expand to green belt					
	Develop mixed work-life block in closed space based on green industry and industry cluster around arrival city	Main road border					



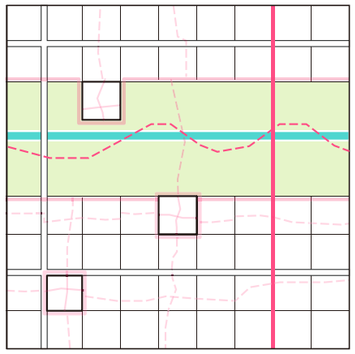
Internal street
of arrival city



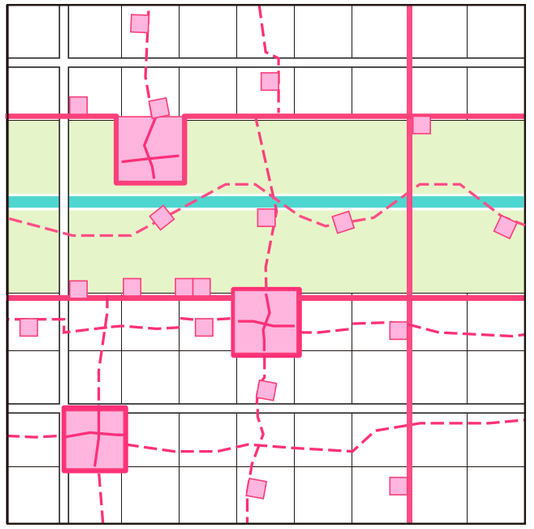
a. Border road of arrival city
b. Internal road of sur-
rounding neighborhood
linked to arrival city street



a. Border between green and
arrival city
b. Internal street in arrival city
expand to green belt



a. Main road connect to green belt
b. Green corridor along canal



Alternative public network in the closed space of Beijing

■ Abstraction of spatial structure

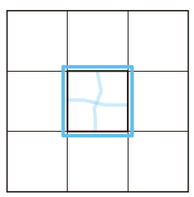
A. spatial structure for co-produce public space

Based on the potential networks of different scales and different system subjects to develop public spaces, a conceptual Beijing alternative city network will play a role in the design.

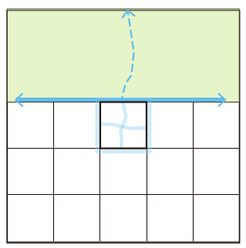
The obvious feature of the alternative public network is to set the arrival cities as an important public space node, and develop new public streets that are derived from the internal street of the arrival cities to the urban area. This network form adopts the opposite approach to the Beijing block: Beijing 's regular blocks develop public functions outside the block, but the lack of large-scale roads and public functions makes it difficult for this formal public domain to play a role. The concept of the project hopes to develop the inner vital streets of the arrival city, expand the publicity outwards, and promote the development of informal life networks in large areas. At the same time, green space has also been activated due to the the new network, and has become a public product serving a larger city.

Internal street
of arrival city

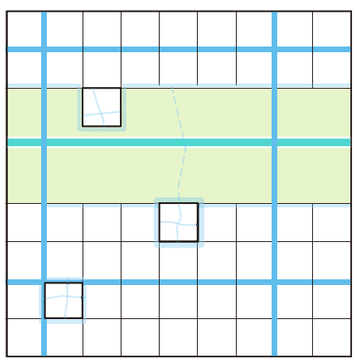
a. Border between green
and arrival city
b. Internal street in arrival
city expand to green belt



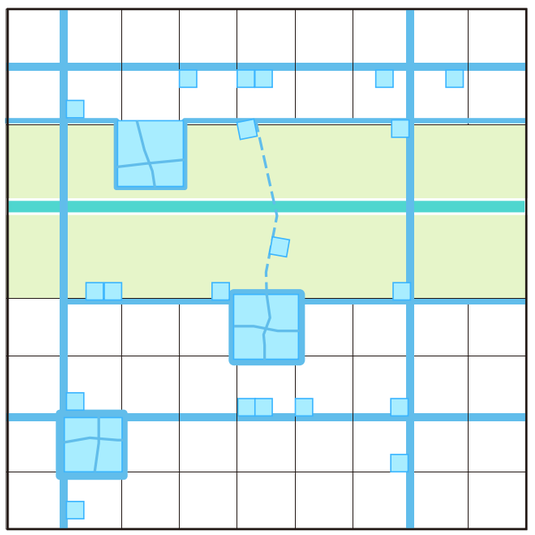
a. Border between green and
arrival city
b. Internal street in arrival city
expand to green belt



Main road infrastructure



Alternative industry network in the closed space of Beijing



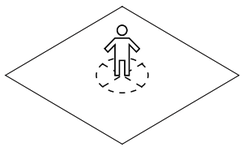
B. spatial structure for diversify urban industry

The development network of diverse industries mainly occurs in the border zone: the border between the arrival city and the formal community, the border of the green belt, and the highway border of the super block. This structure complies with the location requirements of the original industry for transportation, and at the same time, the diversification of the border industry helps to eliminate the border. The arrival cities and green areas have become the carrying space for small industries or special green industries.

The overall concept of industrial development is that industrial aggregation and mixing occur within the super block, which not only undertakes the development requirements of the Beijing plan, but also accommodates diverse industries in different structures.

Fig.6.3-8: Abstraction of spatial structure
Source: Author

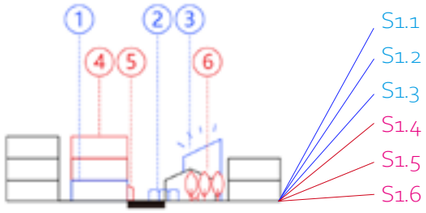
3.3 Design strategy



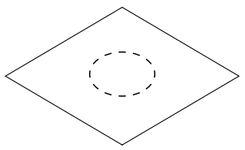
- Enhance internal public vitality
- Update mixed commercial street/ center

S1

Internal street of arrival city



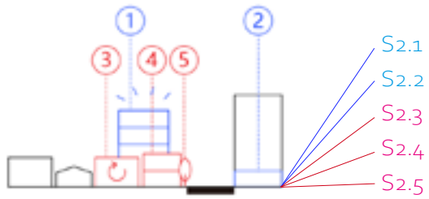
S1.1 Update consumption facilities
S1.2 Encourage and regulate informal street markets
S1.3 Encourage the entry of new industries workshop
S1.4 Construct community public buildings
S1.5 Provide people the right of place-making on street
S1.6 Transform negative spaces into restorative public space



- Integrate the public space of arrival city with surrounding neighborhood
- Strengthen the connection between arrival city and surrounding industry pattern

S2

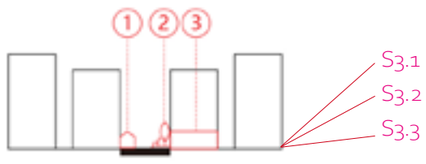
Border between arrival city and surrounding neighborhood



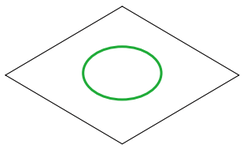
S2.1 Develop new industry at the edge of arrival city
S2.2 Tansformation of first floor into mix industry
S2.3 Update buildings as an auxiliary space for new industries
S2.4 Building the public space
S2.5 Improve the walking environment

S3

Internal road of neighborhood linked to arrival city street



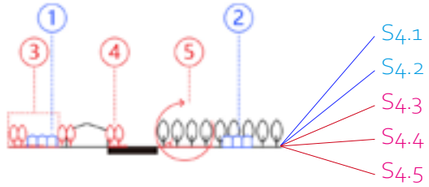
S3.1 Increase public facilities
S3.2 Produce open public space
S3.3 Open first floor into public function



- Activate the publicity of green belt area
- Develop mixed industry related to green belt

S4

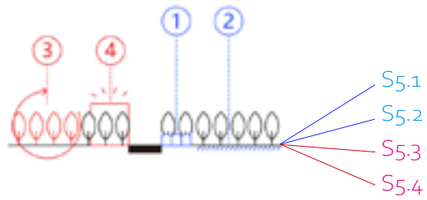
Border between green and arrival city



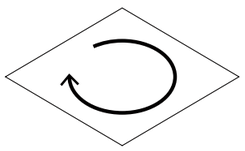
S4.1 Update mixed industrial space
S4.2 Place flexible green industrial space
S4.3 Community participation in greenbelt restoration
S4.4 Weakening the boundary effect between green and arrival city
S4.5 Transform green in to public function

S5

Internal street in arrival city expand to green belt



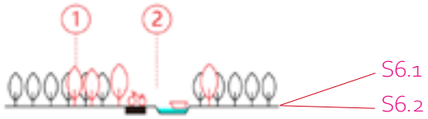
S5.1 Place flexible green industrial space
S5.2 Transform part of green belt into productive land
S5.3 Transform green in to public function
S5.4 Develop public building in limition



- Develop public space network with green belt as the main public goods in closed structure
- Develop mixed work-life block in closed structure based on green industry and industry cluster around arrival city

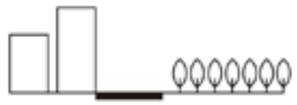
S6

Green corridor along canal

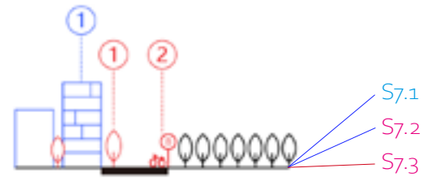


S6.1 Improve the construction of city parks
S6.2 Diversified transportation network of green corridors

S7



Main road



S7.1 Development of multi-functional industries in marginal areas
S7.2 Enhance green quality gradient form green belt
S7.3 Transportation network connection

Scale | Principle | Developing structure | Design strategy

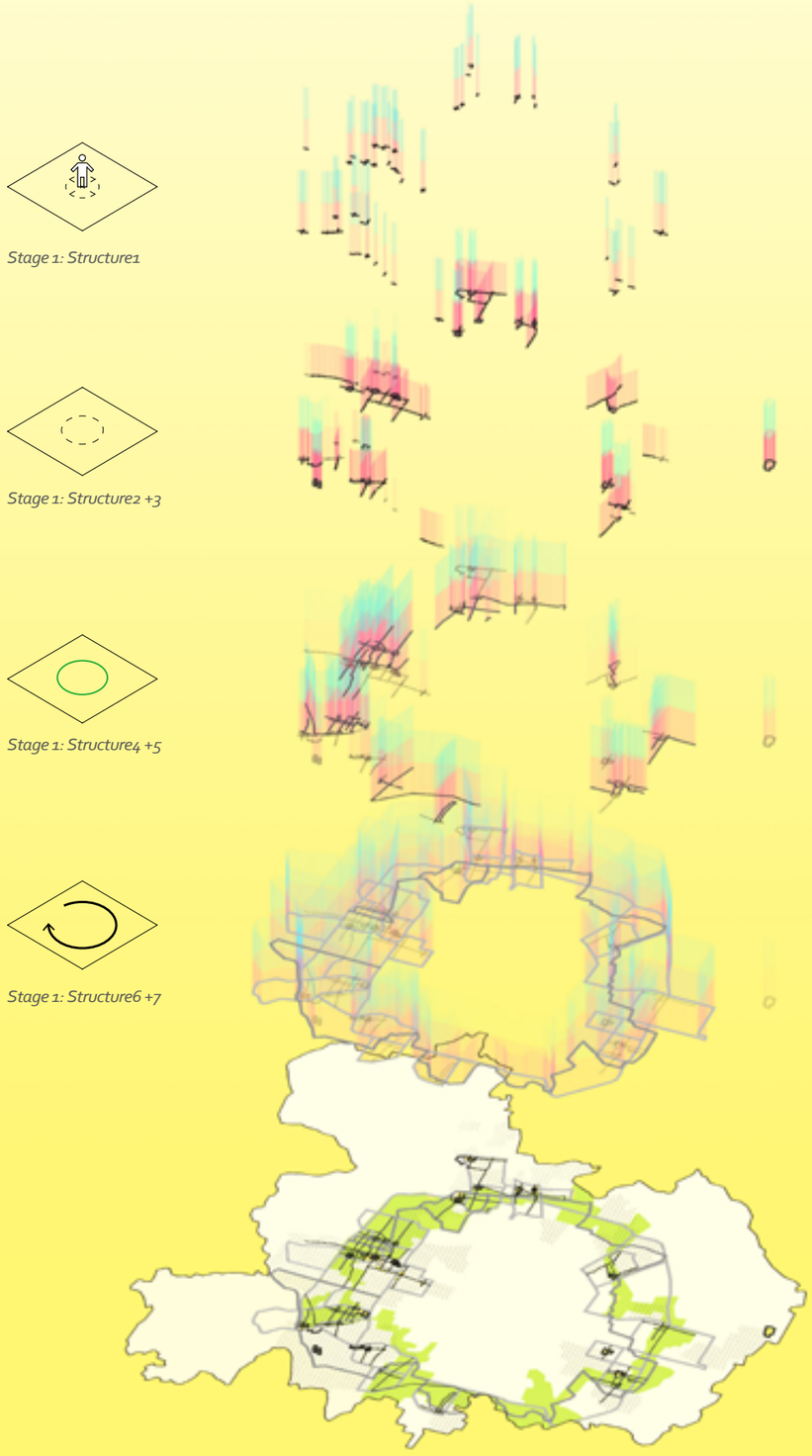


Fig.6.3-9: Framework of design strategy
Source: Author

The design strategy and the specific space structure are combined as the space and criterion basis of the project strategy. From a macro perspective, the design strategy has formed a strategic network in the negative space of Beijing.

This spatial network gradually links the development of the arrival cities to the structure of urban planning. At the same time, the arrival cities has also become an important node in the renewal strategy of Beijing's closed space zone, connected by the strategic spatial structure surrounding the green belt.

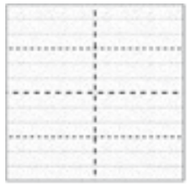
- Spatial structure line
- Principle: Diversify urban industry
- Principle: Co-produce public space
- Green belt
- Closed Beijing space

4 Design guideline

■ Structure1: Internal street of arrival city

The spatial development of this structure is based on ensuring the informality of the space, and it is recommended that the city's road planning be involved. The spatial control of informal spaces and planned roads are included in the consideration of street scale, aiming to develop the spontaneous vitality of streets and improve the resilience of future spatial transformation.

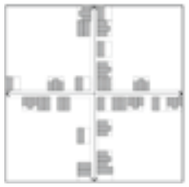
Development parttern



Use and continue the morphological connection between the cultivated landscape and the village in the city as the basis of the morphological development.

The pattern follows the relationship between form and landscape on the scale, and keeps the construction on a smaller scale.

The form of the building is diversified in a limited scale.



Linear expansion of the pattern along the street.

Spatial typology

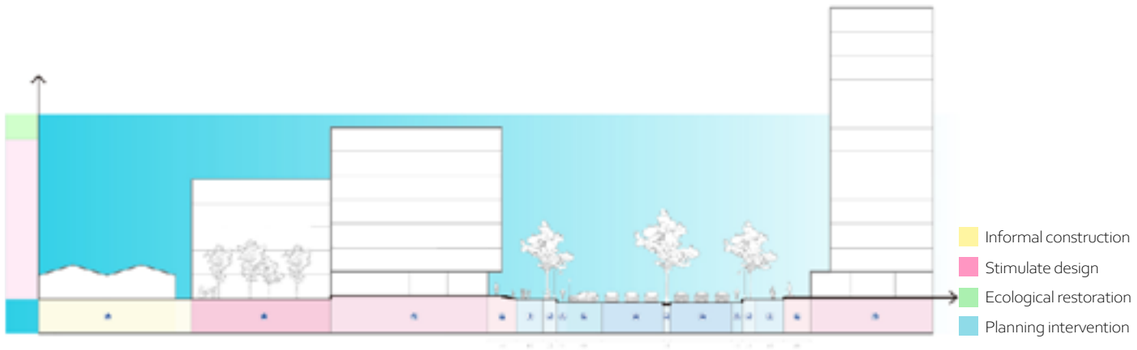
Use the annex of the building and the opening of the building to enrich the facade.

Unfinished building form provides users with more flexibility and diversity.

Realize flexible densify by superimposing the space on the original building.

Transform building into public space through the external steps.

■ Structure2: Border between arrival city and surrounding neighborhood



The spatial development of this structure is mainly through promoting the activation of space by design. This area is a large-scale open area within the village in the city. New buildings and public areas need to be designed to give them inclusiveness and adaptability.

Development parttern

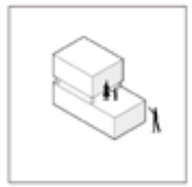
The existing urban village fabric and external community fabric are used as the basis for morphological development. The new pattern needs to be a transitional space between these two spaces.

The scale of the pattern neutralizes the scale gap between the inner and outer spaces of the village in the city

The form of the building is diversified in a limited scale.

Linear expansion of the pattern along the street.

Spatial typology



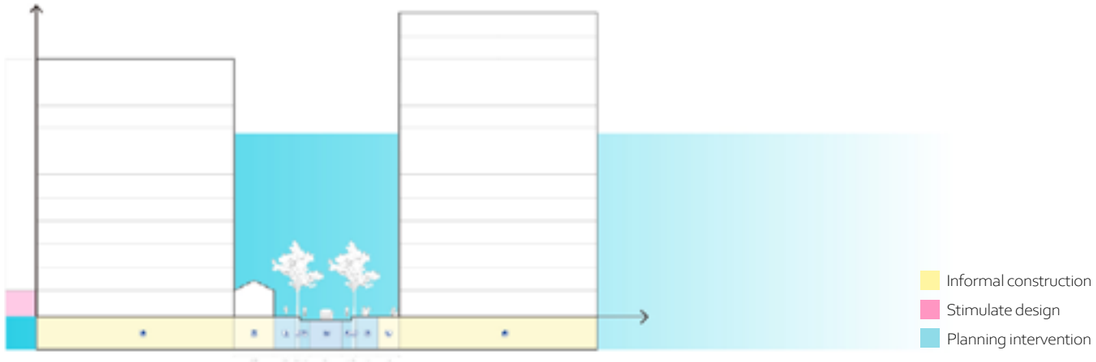
Overlay multiple functions on the building.

Enclosure of buildings creates public spaces.

Convert the original industrial space.

Green roof of building
Open space on the first floor of the building.

■ Structure3: Internal road of neighborhood linked to arrival city street



The degree of spatial transformation of the structure is relatively limited, mainly to ensure the informality of the streets to promote community interaction activities.

Development parttern

The fabric of the community and the street scale serve as the main basis for pattern.

The scale of the street limits the scale of the pattern.

The form of the building is diversified in a limited scale.

Linear expansion of the pattern along the street.

Spatial typology

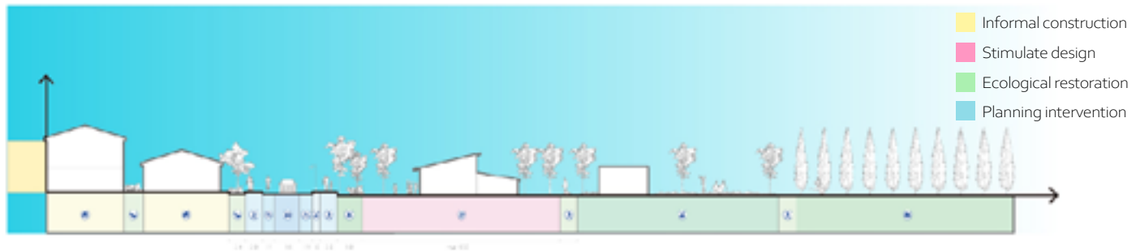
Open building facade.

Temporary buildings as the main form of new functions.

Community garden.

Entertaining landscape space.

■ Structure4: Border between green and arrival city



The spatial development of the structure is closely related to the green space. From arrival cities to green spaces, promote informal community green space development, urban planning road intervention, and design and development of green land as the main public space. More importantly, we must pay attention to the control of the development scale on this structure to ensure the capacity of the green space.

Development parttern

Use and continue the morphological connection between the cultivated landscape and the village in the city as the basis of the morphological development.

The scale of the pattern follows a relatively large landscape model, so as to intervene in more diverse industrial spaces.

The form of the building is diversified in a limited scale.

The form of the building is diversified in a limited scale.

Spatial typology

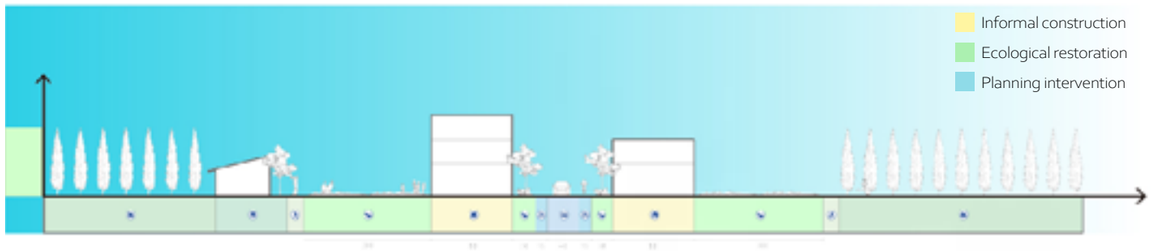
Flexible green building unit for diverse green industry.

Green roof of building
Open space on the first floor of the building.

Enclosure of buildings creates community garden.

Green filling around the original building.

■ Structure5: Internal street in arrival city expand to green belt



The development of the structure focuses on the ecological restoration of the green space, but also the main structural roads should be given informal space and planning space. Green space ecological restoration space, the area near the road can be transformed into a diversified green industry, and low-density industrial space construction takes place.

Development parttern

Use and continue the morphological connection between the cultivated landscape and the village in the city as the basis of the morphological development.

The scale of the pattern follows a relatively large landscape model, so as to intervene in more diverse industrial spaces.

The form of the building is diversified in a limited scale, under the requirement of low density.

The form of the building is diversified in a limited scale.

Spatial typology

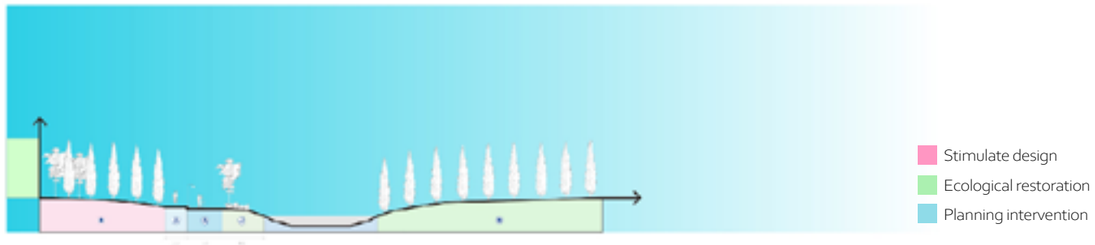
Open productive green space.

Temporary buildings as the important form of new functions.

Flexible green building unit for diverse green industry.

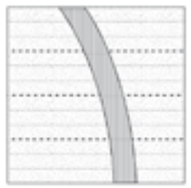
Unfinished building form provides users with more flexibility and diversity.

■ Structure6: Green corridor along canal



The construction of the canal green corridor on the one hand guarantees the principles of ecological restoration, and on the other hand promotes the design intervention and develops the canal space into an effective urban public place.

Development parttern



The development form of the landscape space follows the conditions of the canal and green space to develop flexibly

Large-scale pattern based on canal and cultivated landscape

Flexible landscape design

The landscape develops along the canal

Spatial typology

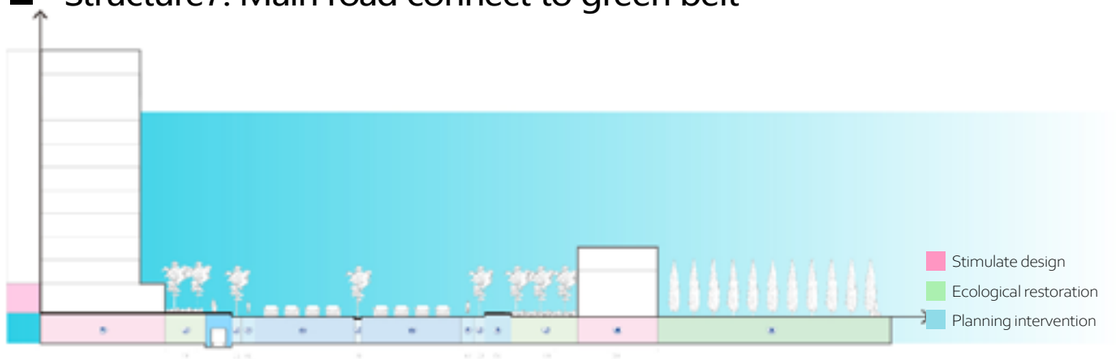
Green space with rest and entertainment.

Ecological Canal Bank Space.

Green passing space.

Green space with protection and production functions.

■ Structure7: Main road connect to green belt



The construction of the structure should realize the transition from green space to urban closed space through the design of stimulated space and the control of ecological restoration space. A part of the green space enters the construction area, and the new flexible industrial space can be settled on the edge of the green space.

Development parttern

The landspcape typology and external community fabric are used as the basis for morphological development. The new pattern needs to be a transitional space between these two spaces.

The scale of the pattern neutralizes the scale gap between the inner and outer spaces of the village in the city

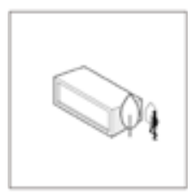
The form of the building is diversified in a limited scale.

Linear expansion of the pattern along the street.

Spatial typology

Community garden.

Green space with protection and production functions.



Industrial space with low floor area ratio.

Green roof of building
Open space on the first floor of the building.

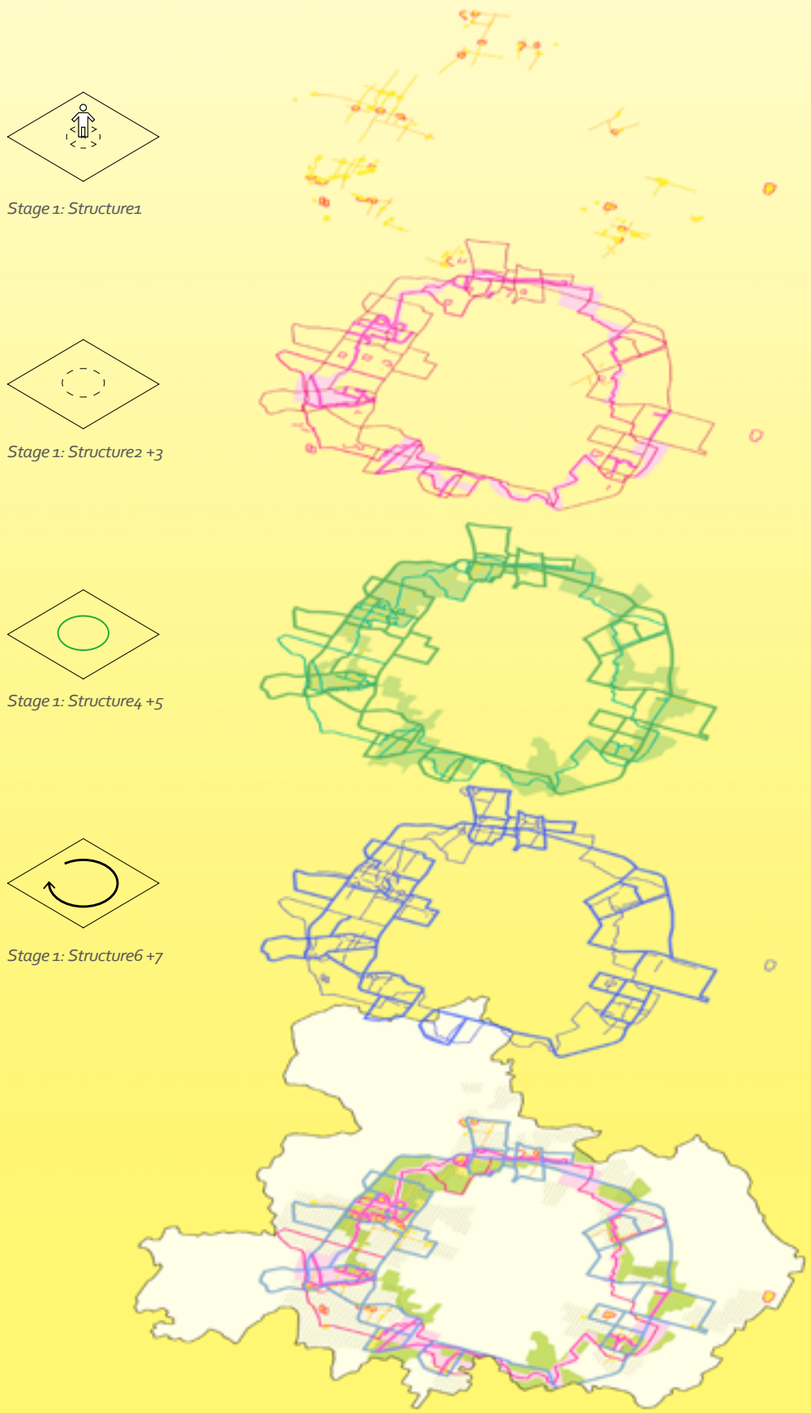


Fig.6.3-9: Framework of design guideline
Source: Author

The design guidelines provide a specific planning model for the strategy. This section mainly explains how to intervene in these spatial structures based on the design strategy.

According to the development requirements of different scales and different systems, the design guideline divides the spatial structure of the strategy into spaces that need to ensure informality, spaces for design stimulation, spaces for ecological restoration, and spaces for unified planning intervention. These four modes of spatial intervention affect and co-occur in a spatial structure.

The project aims to ensure the inclusive and adaptive development of each structure through such design guidance: it can not only develop a variety of social activities and production activities, but also have the spatial conditions for flexible transformation and integration with the urban planning blueprint.

It should be noted that the design guidelines here are not intended as a rigid rule, but as a model with a certain universality. The specific planning and design needs to take into account different intervention methods in different spatial ranges of each structure.

- Informal construction
- Stimulate design
- Ecological restoration
- Planning intervention

4 Design Test

4.1 Site situation

The test site chose Tiancun, which is located in the middle of the fourth Ring Road and the fifth Ring Road in Beijing, and also on the high-speed traffic road on the west side of Beijing.

This urban village compressed by urban planning, and currently only one block of 600 meters * 600 meters is left. The central street of the village in the city was used as a vegetable market and became the most lively place in this area,not only serve residents in the urban village, but also serve many passing citizens. There are a large number of collective houses renovated with old buildings and temporary shanty houses. Some functional buildings have become vacant.

Fig.6.4-1: Collage of the site
Source: qqmap street view

4.2 Stage1

A.
Sort out the street space along the development structure to prepare for the later street development.

B.
Improve the space for commercial activities, develop the informal market in regular area, activate the streets to become a special market.

C.
Improve the public service functions of the central space, improve the quality of public spaces along the street, and introduce new industrial studios.

Fig.6.4-1: Step of the design
Source: author

Update open market

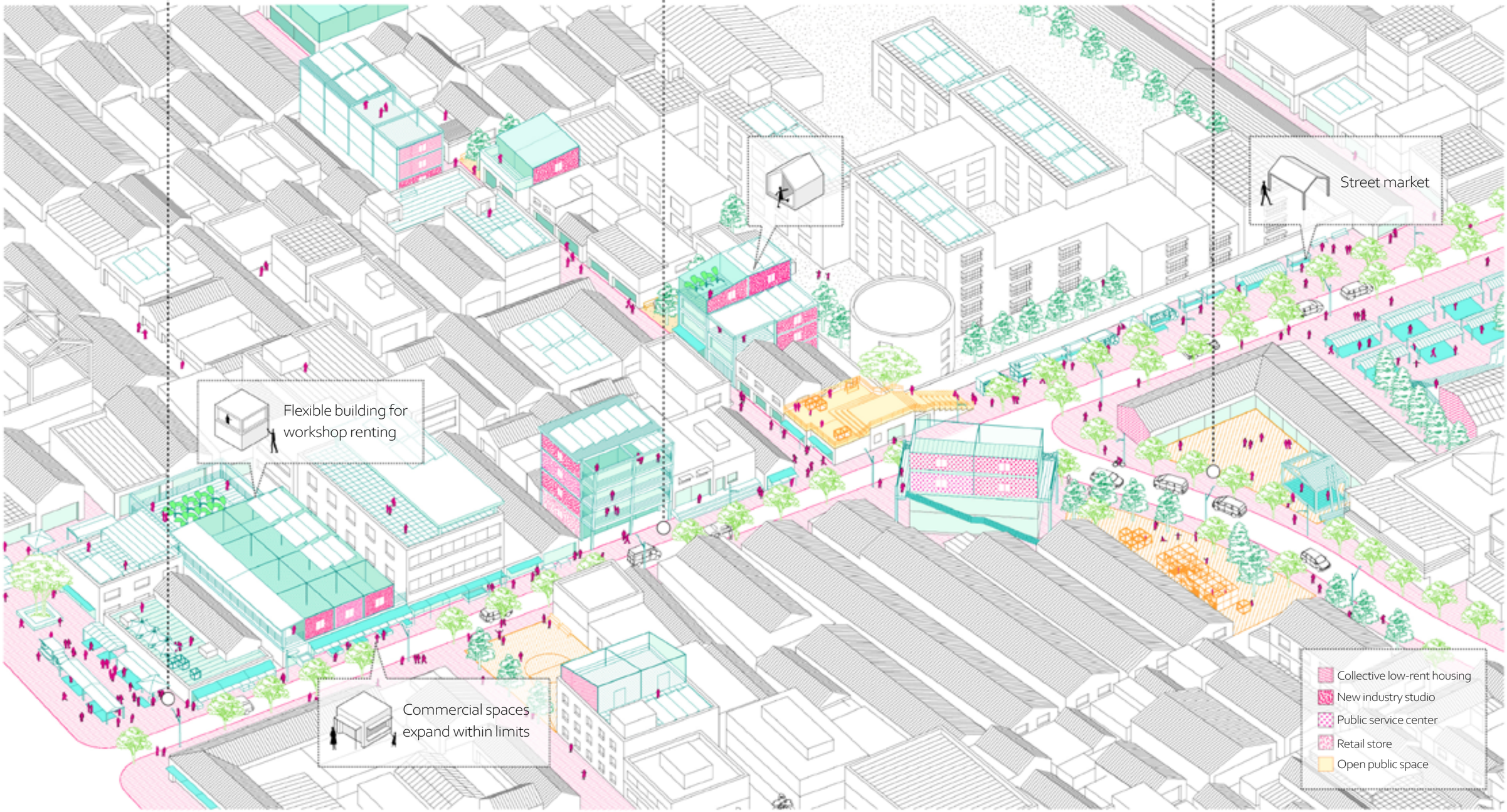
S1.1 Update consumption facilities
S1.2 Encourage and regulate informal street markets
S1.5 Provide people the right of place-making on street

New commercial street

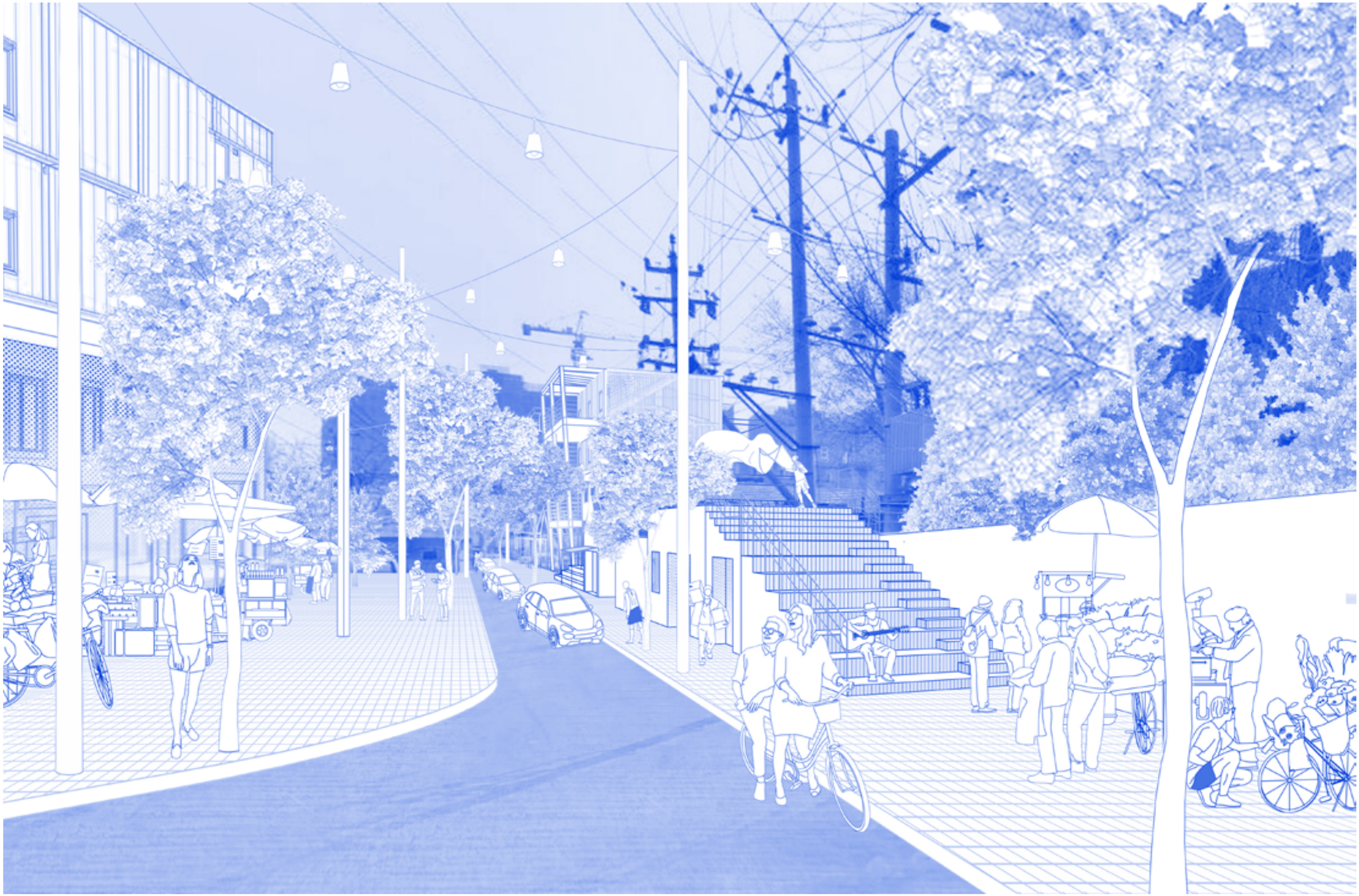
S1.1 Update consumption facilities
S1.3 Encourage the entry of new industries workshop
S1.5 Provide people the right of place-making on street
S1.6 Transform negative spaces into restorative green parks

Activate community center

S1.4 Construct community public buildings
S1.6 Transform negative spaces into restorative green parks



This site is the location of the village's community office, and the old buildings around it have become vacant. Most of the road space is occupied by cars. The design is expected to rebuild this place into a vibrant community center through the improvement of the street environment.



4.2 Stage2

A.
Acquire land in accordance with structure 2 for industrial and housing development. Sort out the surrounding space.

B.
Develop diverse industrial belts and create public spaces along the structure2.

C.
Develop informal social activity space on structure 3, forming a link with the edge of the village in the city.

Fig.6.4-1: Step of the design
Source: author

Commercial street

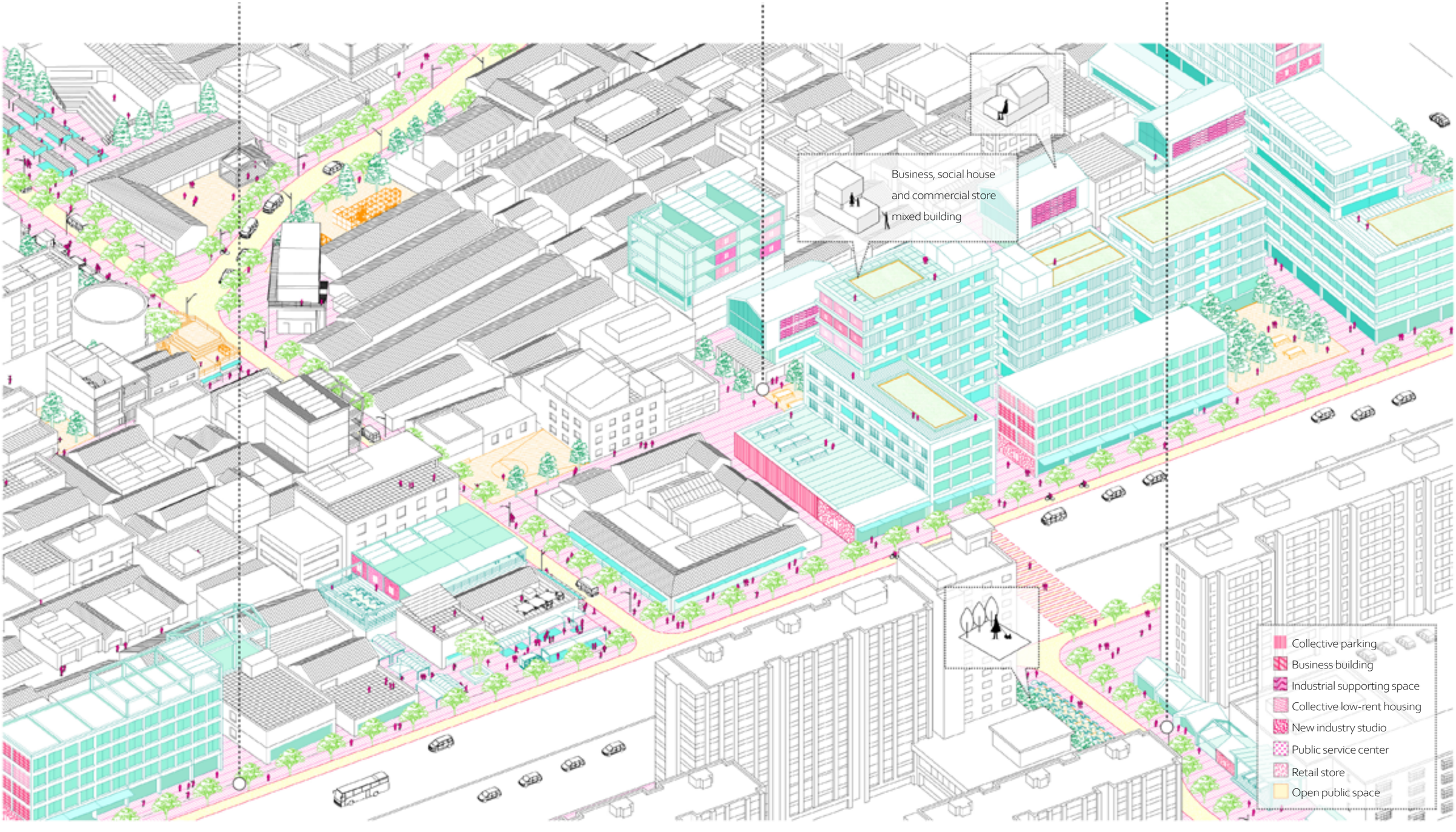
S2.2 Tansformation of first floor into mix industry
S2.5 Improve the walking environment

Mixed industry cluster

S2.1 Develop new industry at the edge of arrival city
S2.2 Tansformation of first floor into mix industry
S2.3 Update buildings as an auxiliary space for new industries
S2.5 Improve the walking environment

Community central street

S3.1 Increase public facilities
S3.2 Produce open public space



This is the main entrance to the village in the city, with a large flow of people. People on the fringes operate open-air markets within the walls. Social activities are unlikely to occur on the isolated streets.

4.2 Stage3

A.
Transform the green space at the edge of the road into a green public space, construction of social housing along structure 5.

B.
Develop green industries focusing on leisure agriculture. Use community gardens to replace low-quality spaces on the edge of villages in the city.

C.
Develop large-scale productive green spaces and protective green spaces. Establish the connection between the green industry in the cultivated land and the village market in the city.

Fig.6.4-1: Step of the design
Source: author

Commercial street

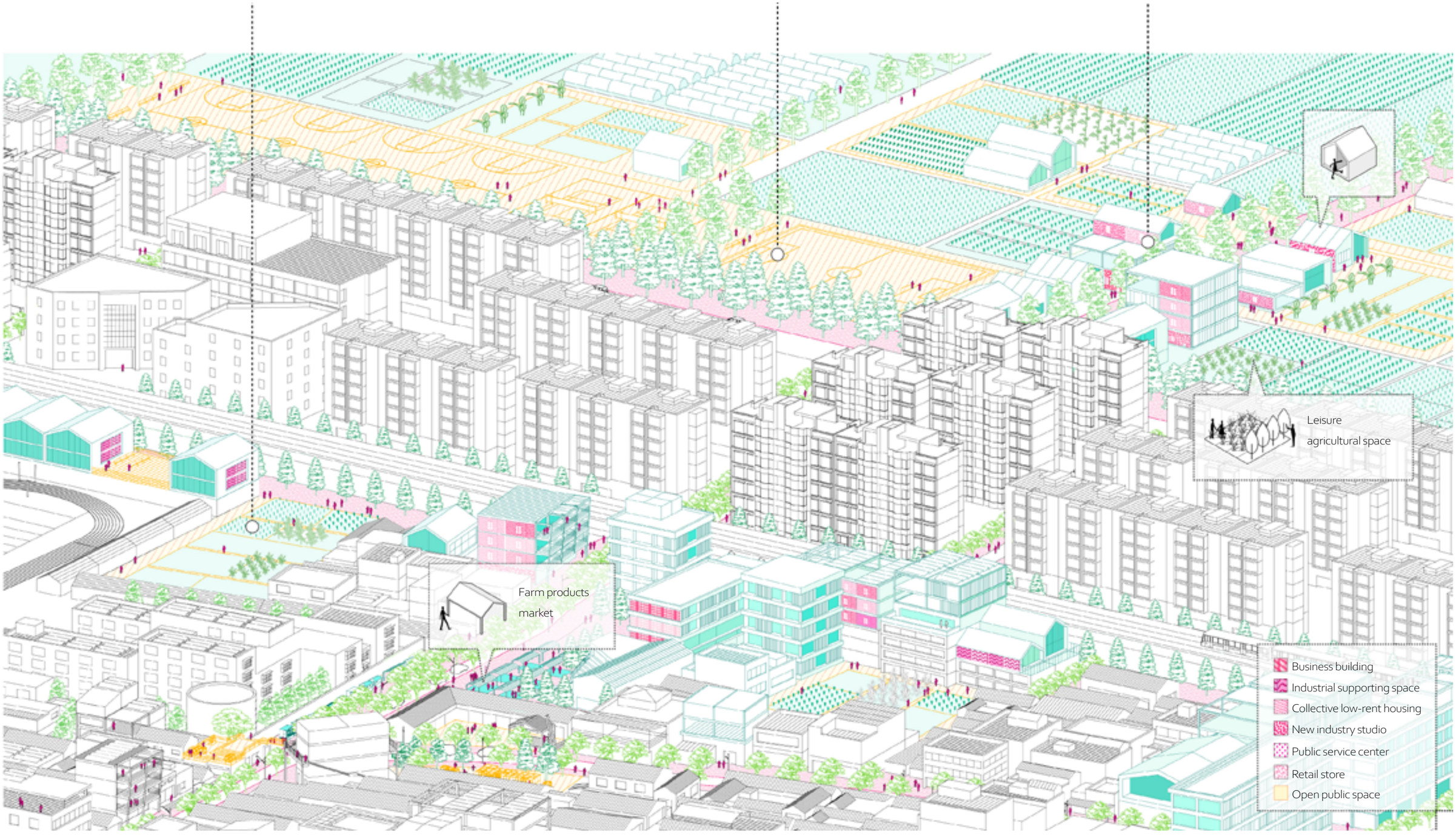
S4.3 Community participation in greenbelt restoration

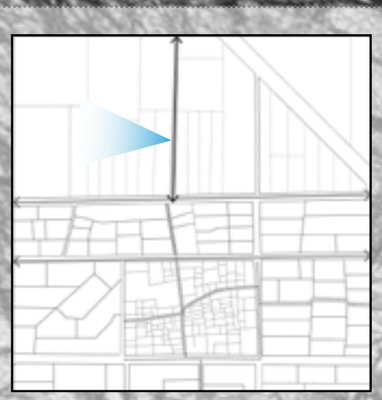
Sports center

S4.2 Place flexible green industrial space
S4.5 Transform green in to public function

New arrival city cluster

S4.2 Place flexible green industrial space
S4.5 Transform green in to public function
S5.4 Develop public building in limition
S4.3 Community participation in greenbelt restoration





This is the central road of the Green Belt area. The planned green space around the area has not been opened and is used as a temporary parking lot. Both sides of the road are blocked by fences and cannot reach the green space.

4.2 Stage4

A.
Develop informal urban networks together with established cities in surrounding communities. The government develops the Canal Park as an important node.

B.
Build transportation links on a larger scale and develop diverse industrial spaces along the main transportation routes.

C.
Form a public green space and public transportation in a closed urban structure

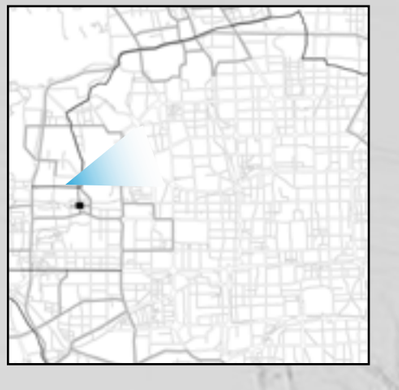
Fig.6.4-1: Step of the design
Source: author

Canal park

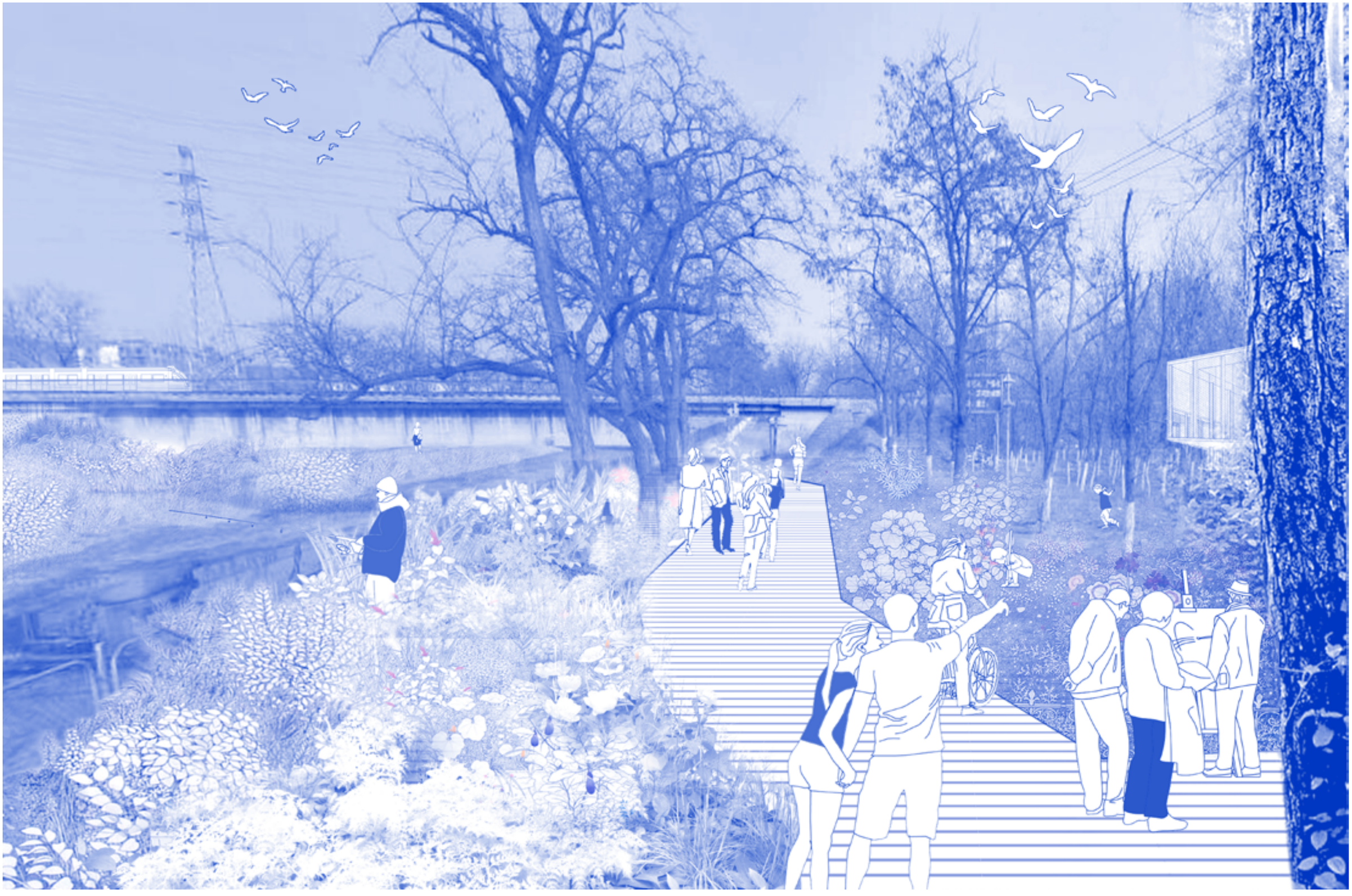
S6.1 Improve the construction of city parks
S6.2 Diversified transportation methods of green corridors

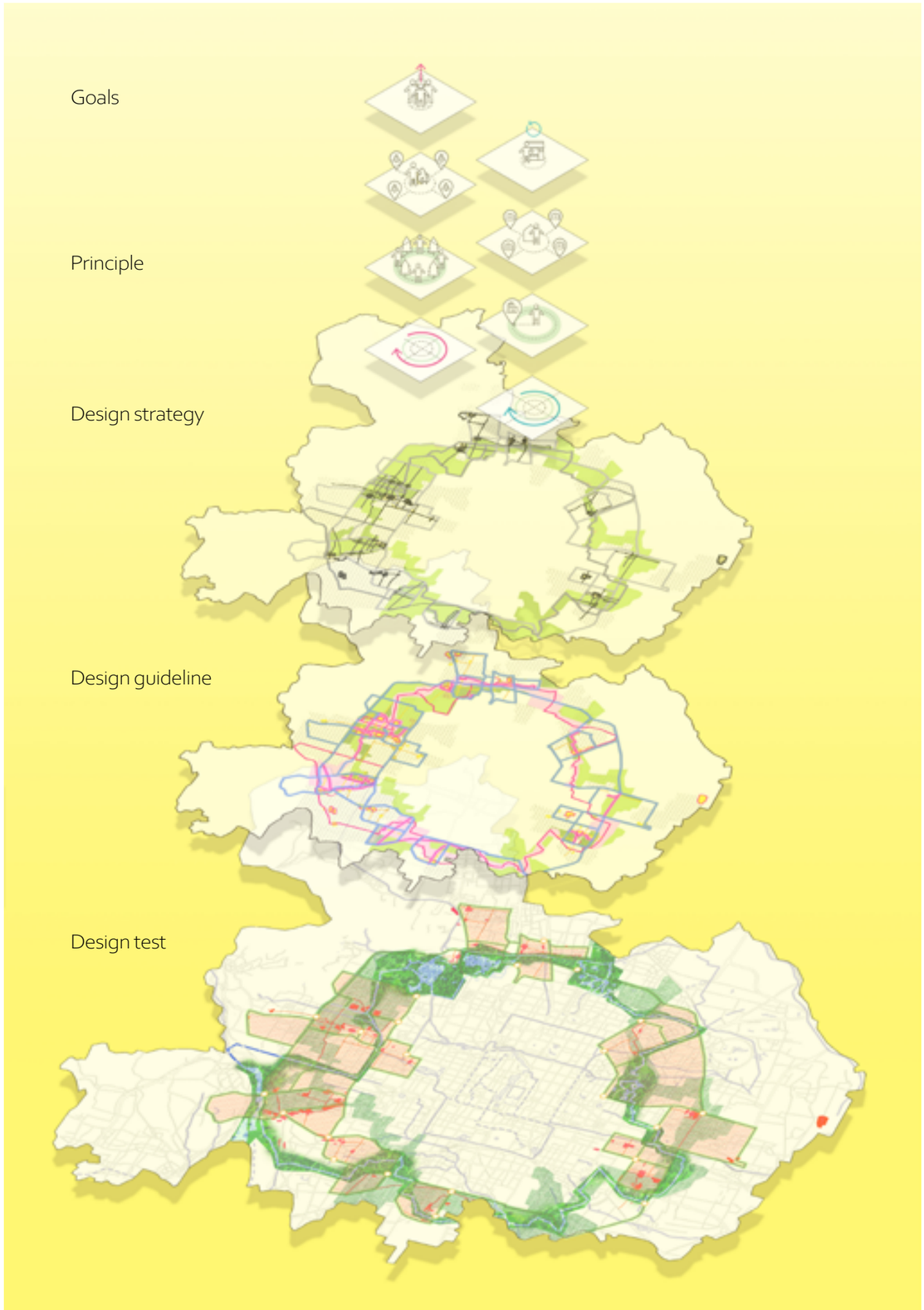
New industry cluster

S7.1 Development of multi-functional industries in marginal areas
S7.2 Enhance green quality gradient form green belt



The site is located around the canal. On the side of the canal is a newly planted protective forest. The river bank was blocked. The road is built, so few people set foot on it.





In this chapter, the design is an experiment on strategic architecture. Up to the present position, starting from the goal, this project has constructed design principles, design strategies with spatial structure, and design guidelines. These three parts can basically help provide the basis for the design process.

The design of this part is only a possible picture of the site in the logic of this project. Under the guidance of this strategic framework, design still has greater freedom. This is indeed the quality that this strategic framework hopes to have.

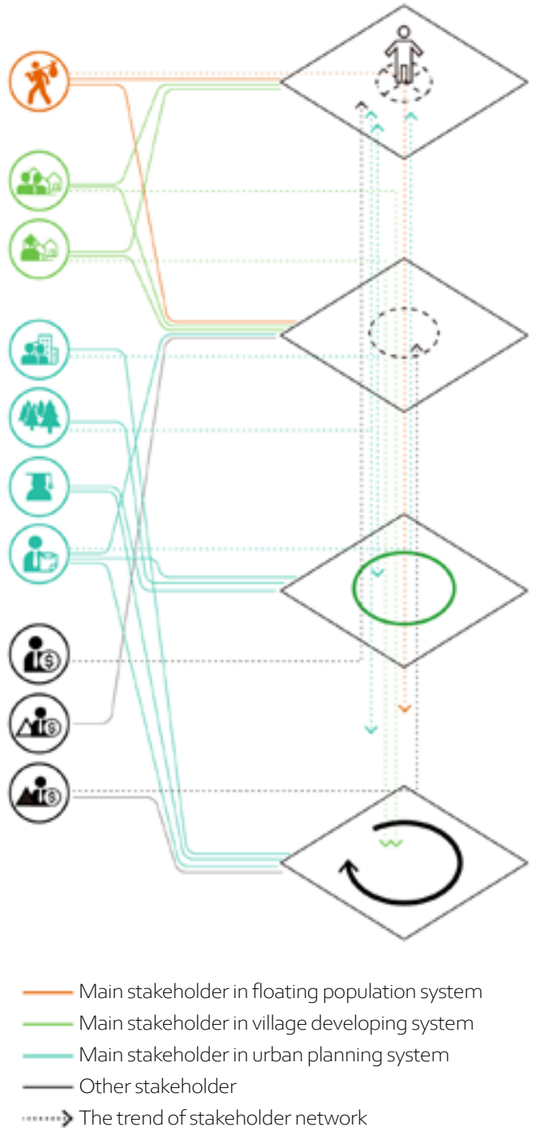
But at the same time, the design experiment showed the shortcomings of this framework: the project's strategy mainly affects the physical space, which is not enough to ensure the inclusiveness of social life and the adaptability of economic development. Because there are two main bodies behind these two goals: population and funds. Therefore, the experimental design is based on the flow of population and capital following the optimized spatial structure, but it does not have a practical guarantee.
Effective design also needs to be protected by policies and systems to meet the demands of the population and investment required by the design.

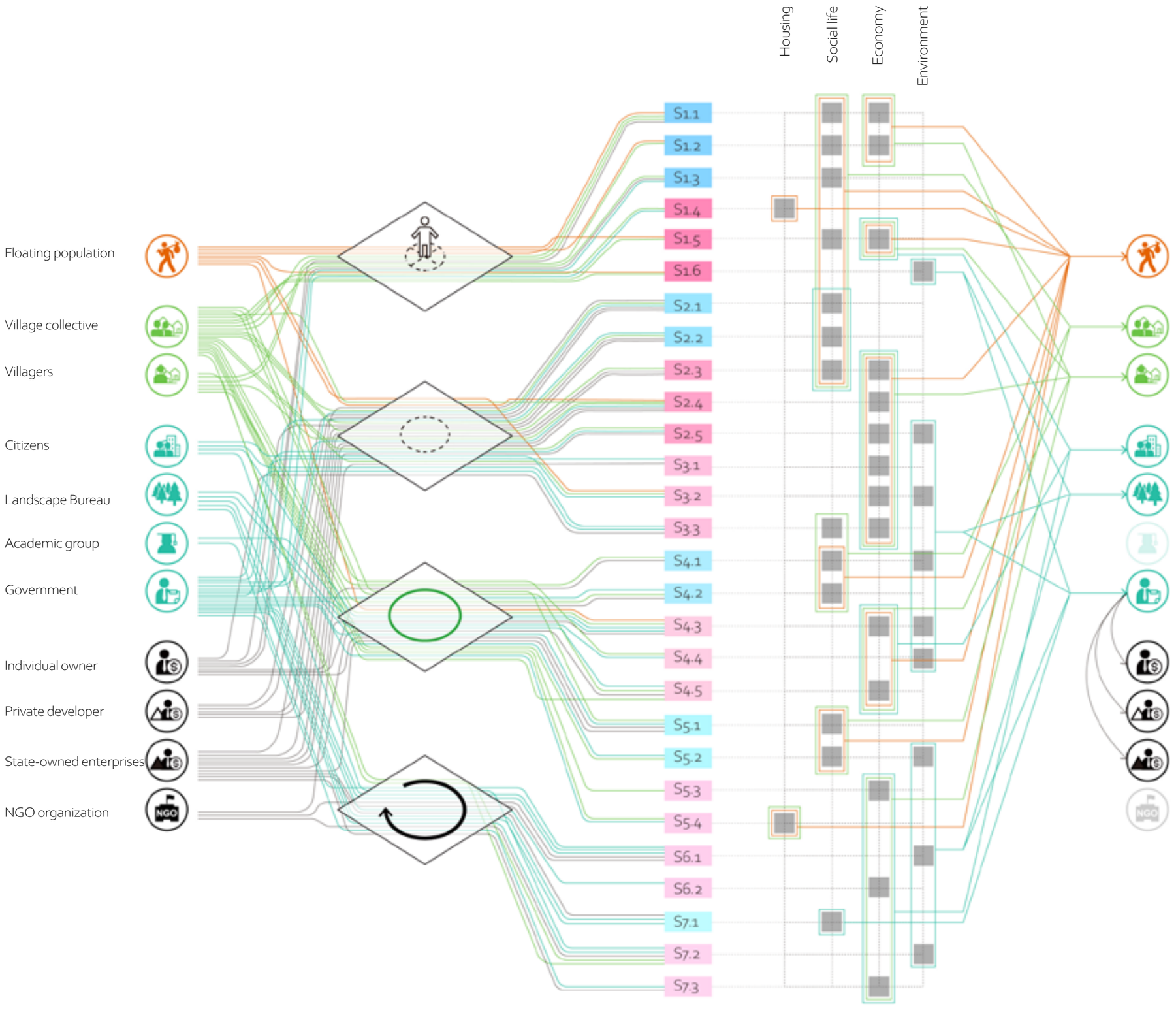
6. Implementation Strategy

5.1 Stakeholder network

Stakeholders have different interests and powers in the four planning scales. In this project, stakeholders are divided into four types according to their level of interest and participation. They are the main stakeholders of the floating population system, the main stakeholders of the village development system, and the main stakeholders of the urban planning system. And other participants as external forces.

In the original spatial development situation, the spatial participation of the main stakeholders of the floating population system and the village system is very limited, and it cannot have the right to participate in the spatial development of other scales. This project hopes to achieve close cross-system collaboration in the project's stakeholder network and achieve planning strategies through the participation of stakeholders.





The new stakeholder network realizes the distribution of new spatial participation rights through design strategies. Strategies with different development needs are jointly completed by stakeholders of different systems, and cross-system joint development is achieved on the whole.

In anticipation, the spatial rights of floating population, village collectives, and villagers will be improved, and to a certain extent, they can participate in the construction of green belts and urban scales. Stakeholders of the urban planning system can also penetrate downward in this concept and participate in small-scale development cooperation.

Each design strategy will bring special benefits on the scale of the strategy, in terms of housing, social life, economy and environment. Through the evaluation of benefits, different stakeholders can get different contents in the plan, such as the floating population can get housing opportunities and employment opportunities, improved social life. The economic and environmental benefits created by the strategy can be used as feedback to the government. In the relatively unbalanced group in the network of benefit feedback, the government grants them other development privileges to achieve a relatively balanced network of stakeholders.

5.2 Land development policy

The policy advocates green belts and foothold cities to jointly implement new development models to avoid the invalid development results brought about by the old models again. This policy comprehensively considers the land property relationship between the Green Belt and the foothold city, as well as the shortcomings of capital loss in the previous development model, and is a recommended policy.

A. Integrated development of urban villages and green belts

-Drive the development of green spaces with the development of arrival cities. In the past, the open model of green space must first acquire land property rights from the village collective and redevelop the land reserve. A large amount of capital was consumed in the early stage, so that the development of green land in the later stage depends on the promotion of construction land. Experience has proved the failure of this strategy, so the new strategy turned to the village collective to directly develop and construct the green belt.

-Use green belt development benefits as compensation for arrival cities. Beijing 's development in arrival city cannot meet the employment dilemma after the village collective loses the their space, and completely ignores another main group: the floating population. The new strategy shifts to using green land to provide various compensations for village collectives and migrants. Compensation is mainly manifested in the construction subsidies for green industries, relaxed green space construction policies, and the development of multi-party cooperative low-cost housing in green spaces to meet the development needs of the floating population and villagers.

B. Replace the land bank model with cooperative development

In the past development model, whether it is for urban village development or green space development, the government basically requisitioned the land first and placed the land in the land reserve to prepare for the listing and opening of the land. Such a process inevitably causes land to be used as a commodity to maximize the development of economic benefits, exacerbating the closed pattern of Beijing's cities.

-Refine the land acquisition structure. Land expropriation in arrival cities can be treated more meticulously rather than in a comprehensive way. In the strategy, the government was suggested to take public infrastructure as the main target, and other spaces should be jointly developed through cooperation.

-Transform the realization of construction goals into concrete development guidance. The government can guide the development through restrictions and a compensation mechanism for later compensation, instead of formalizing the space through land acquisition.

C. Periodic assessment

The design strategy of this project is divided into multiple stages and multiple scales. Each new development stage means to undertake further updates on the development results of the previous step. The combination of green space planning and urban village planning makes the development strategy of multiple stages and multiple scales more complicated. Such a process needs to be tested and evaluated.

This toolkit recommends that at each stage of the start-up phase, a collective assessment of the site development is first implemented, and the next development plan is specified together to avoid wrong estimates of the carrying capacity of urban villages and green spaces.

5.3 Policy assistance for design intervention

The design strategy needs policy assistance to realize the guarantee of population flow. The policy is mainly to develop new forms of social housing to allow migrants and low-income people to obtain alternative housing.

Collective property house as new social housing

The development of the project is accompanied by the transformation of the old building space, which will cause the reduction of informal rental buildings and the rise of land prices. This will inevitably lead to a large loss of resident population, and the collective cooperation force including floating population can no longer be exerted. Therefore, in the process of updating the arrival city, a new housing model is needed, and the final form of urban transformation in the future also depends on the new housing model.

The policy recommends transforming informal leasing into formal leasing, allow small property rights to enter the rental market.

The realization of the design needs to ensure the diversity of the types of industries that will stay in the future. Therefore, stakeholders involved in the development need certain policy guidance and constraints.

Diversification strategies for investment groups

The development of the project requires the main stakeholders to control the proportion of investors according to the future development strategy. At the same time, the village collective and the government should adopt flexible strategies to enrich the channels for investors to enter.

Type1 Government + village collective (S2)

In the second stage, part of the acquired land is jointly invested by the government and the village collective to construct affordable housing. After the development is completed, the government returns this part of the land to the village collective and gives the village the ***village property***. Fifteen years later, the property is given ***full property rights***. This period guarantees the form of low-cost social housing for houses within this period.spaces are preserved to prepare for the city-level government-led canal park development.

Type2 Developer + village collective (S2)

In the second stage of land development, developers were required to achieve a certain percentage of affordable housing construction during the development process. Housing is also given village property at the initial stage, and only rental is allowed. The developer and the village collective live the right to operate together, and after 10-15 years, the housing is given full property rights, and the developer and the village collective jointly benefit from the commercial housing.

Type3 Village collective (S3)

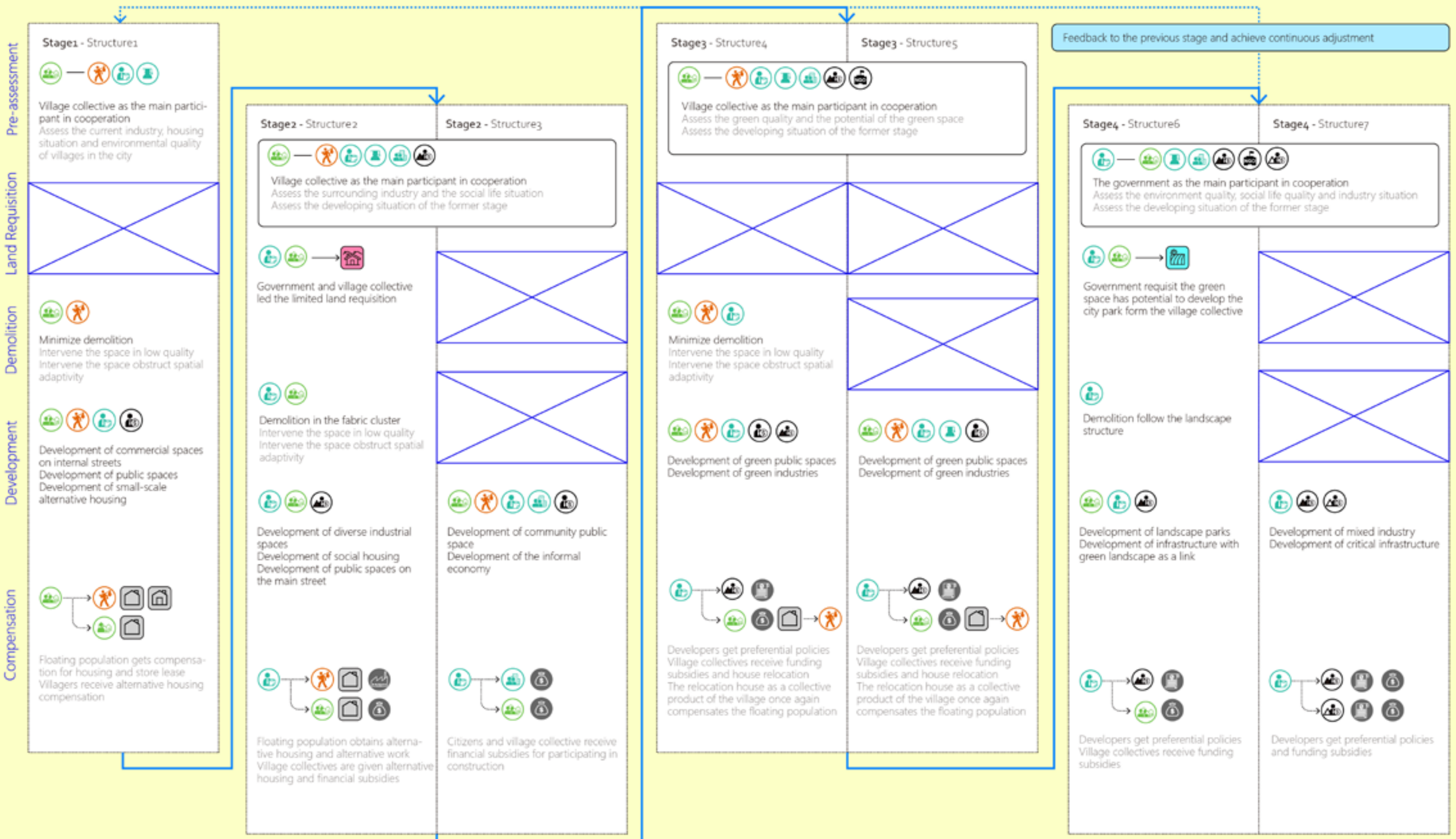
This type of housing is developed by the village collective. After the infrastructure is qualified, it is granted to enter the affordable housing market, and the government grants rental subsidies.

State-owned enterprises, private enterprises, joint-stock enterprises, individual investors, etc. need to maintain a certain percentage. During the development of such projects, it is recommended to increase the proportion of state-owned enterprises

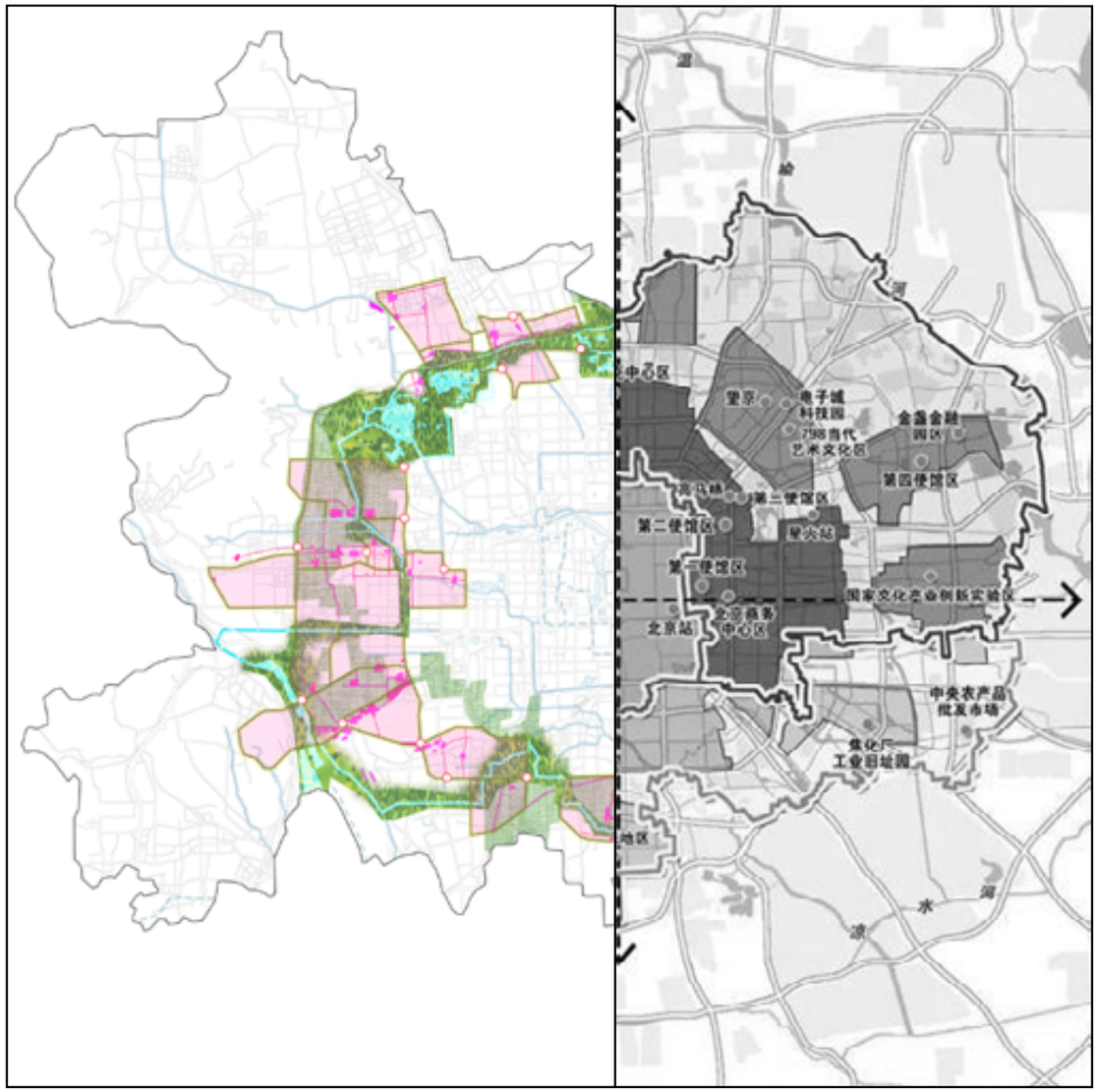
Village collectives can use various methods such as leasing and agency operations to enrich the entry of individual investors and develop diversified industry types

5.4 Development model

Combining the above policy recommendations and the network of stakeholders, this chapter provides a simple development model for the project. In this model, the process of land acquisition is avoided as much as possible, and stakeholders from different systems participate in the development.



6 Evaluation



The idea of the project is based on a logic contrary to Beijing's closed city planning. This project has a certain utopian nature, but the final effect of the project is in line with Beijing's development direction. To a certain extent, it has practical significance and can be used as an alternative concept for urban renewal in Beijing.

6.1 Alternative development path

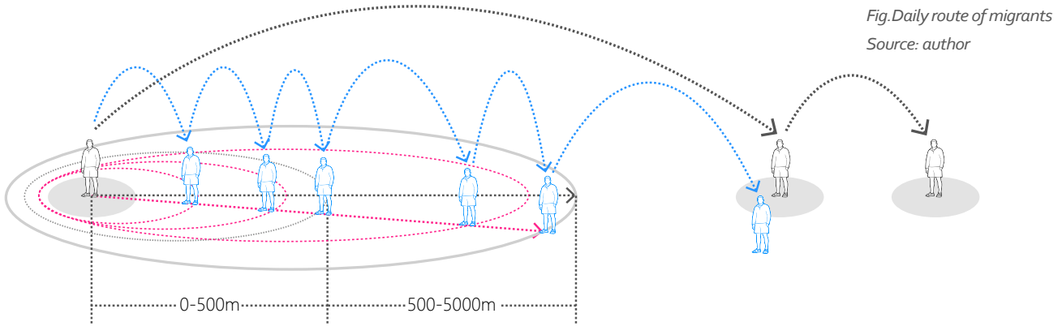


Fig.Daily route of migrants
Source: author

Floating population: The living and employment status of the floating population has changed. The diversification of industries from the arrival city to the surrounding area has liberated the floating population from the long commute distance. At the same time, due to the development of the social public space network, the floating population gains more social and public life experience.

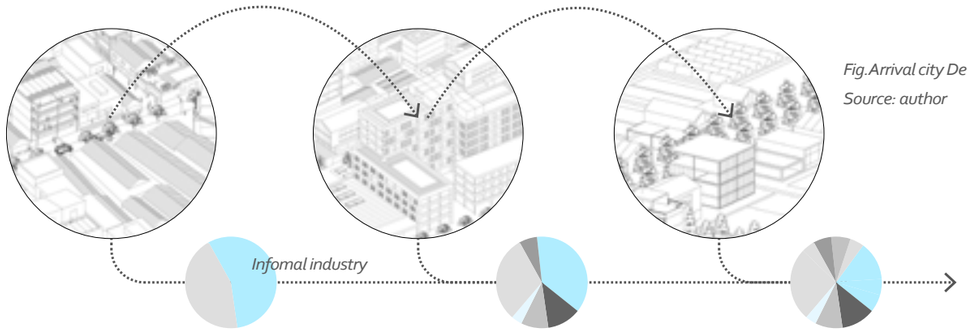


Fig.Arrival city Development model
Source: author

Arrival city: Arrival cities are developed in stages, gradually transforming low-quality construction spaces and forming an adaptive cluster form. Arrival cities, as the development area of the informal economy, absorb more types of industries while accommodating the informal economy.

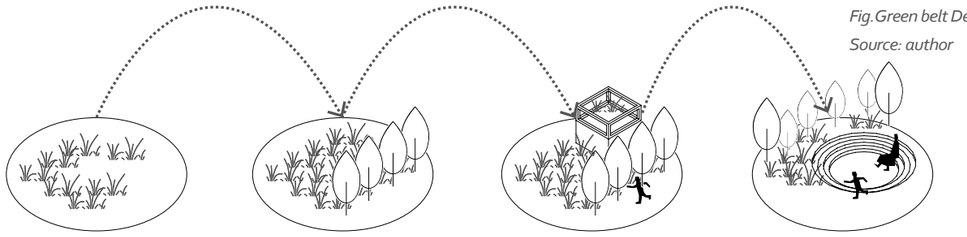


Fig.Green belt Development model
Source: author

Green belt: The green belt has lived the opportunity for the common development of publicity and productiveness. In the direction of the project, the green belt is gradually transformed into green industrial space and public products.in the later stage depends on the promotion of construction land. Experience has

6.2 Project response to Beijing strategy

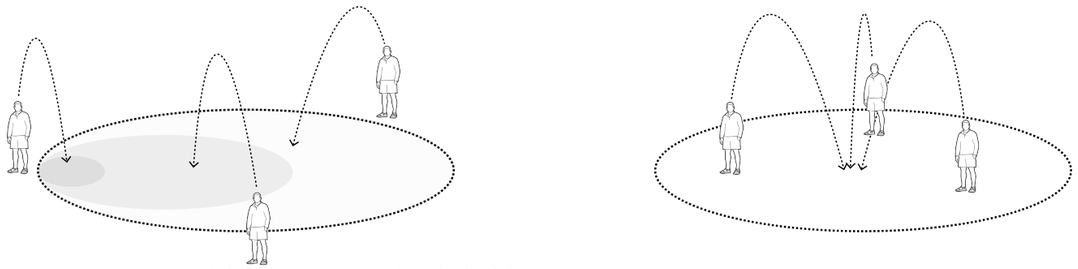
A. This project did not reduce the number of floating population in a short time. But on the one hand, by creating life circles in urban fringe areas to change the life path of the floating population, to a certain extent, it alleviates traffic congestion and other major urban diseases. On the other hand, due to the development strategy, the types of industries in the relevant spaces of the cities that have settled have guaranteed informal industries to a certain extent, but they have also gradually realized a diversified mix of industries. With the development of urban agglomerations in the Beijing-Tianjin-Hebei region, other cities The development of labor-intensive industries will naturally take away the floating population. The purpose of this project is not to violate the population control requirements in the Beijing plan, but to give the floating population transitional space and choice rights.

B.In the project, the arrival cities have achieved spatial transformation. Although this process is relatively slow and inconsistent, the spatial transformation model of the settled city maintains the openness of the dialogue and has the adaptability of continuous updating in the future.

C.In the framework of the project, the arrival city has become an accommodation place for informal industries, serving as a buffer zone for Beijing's evacuation.

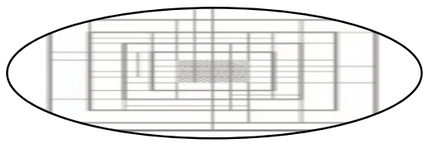
D. The development model of the green industry actively responds to Beijing's planning vision, and can effectively reduce the capital investment and time consumption of the Beijing government in green belt development.

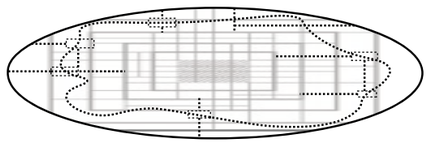
6.3 The openness in the Bejing's development



Joint participation of different types of stakeholders

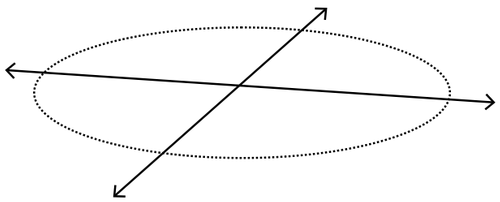
From the original unbalanced, non-cooperative stakeholder participation model, to a common participation model in the development and construction process. The process has become more inclusive.

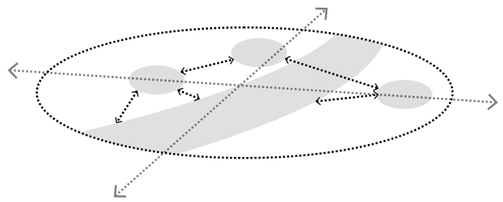




Symbiosis of formal and informal spaces

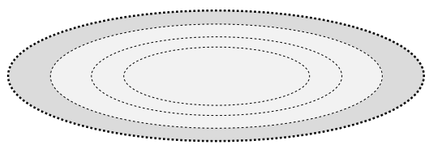
The project gradually develop the informal network together with the original formal network. The informal part inclusive more diverse urban content and become the buffer zone for the formal planning.





Restoring the city's closed space with a public space network

The arrival cities, infomal street and the green space together form the public space network, work as the public good in the closed urban space.



Diversified industrial space realizes the transitional development of industry

From a single industrial upgrade model to a mixed industrial upgrade model. As an important part of the mixed industry, the informal economy and low-end industries are upgraded in mixed development, rather than being completely replaced.

6.4 The feasibility of the strategy

The possibility of improving the flexibility of land property rights:

Beijing is currently experimenting with collectively-owned land for the construction of shared property parcels. At present, Beijing has provided an experimental channel for collective land use to enter the commercial housing market. The flexibility of land property rights may be further improved in future explorations, and collective land may also have higher value. Then the village village's right to speak in development has the potential to improve.

New exploration attempts for green belt development and urban village development:

The Green Belt project has been slow for a long time. Recently, Beijing has adopted various development models. At present, Beijing is experimenting with the development model of 'one village, one policy', hoping to promote village development and carry out the green belt project. There are many successful cases.

Hege Village: Hege Village is a case of developing a village from the bottom up. Its development path is to first use its own location advantages (close to the art district and green belt) to develop a diversified space rental industry. Then, Hege Village continued to use the environmental advantages of funds to achieve the transformation of the village's collective economy and also drive The implementation of the surrounding green belt greening project.

Although in terms of development conditions, Hege Village has a greater geographical advantage than most villages in the city, but it provides a feasible model for independent transformation for arrival cities.

CHAPTER VII

Reflection

1.1 Open research process

This thesis set out to explore the potential of Beijing to become an open city which based on the alternative strategy of arrival cities. In this project, the process is a variable journey with many changes in the research direction. Therefore, most of the time I keep keeping the project undertaking theoretical research, analysis and design experiments, and keeping the method framework open.

In this thesis, research work forms the main body and logic of the project. The Open City theory guided the analysis of urban issues at the beginning of the project, and combined the open city theory with a complex city adaptation system to build an analytical framework. Due to the absence of field trips, the proportion of theoretical research has once again increased in this project. This project therefore turned to a more general analysis and design process.

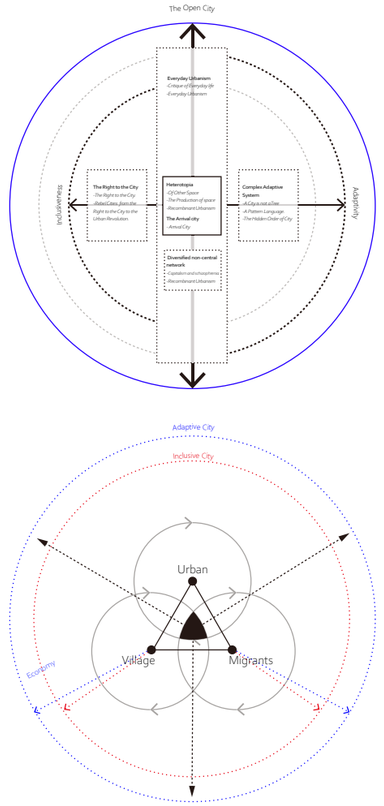


Fig.Conceptual framework and theoretical framework
Source: author

1.2 Output

The output of the project is mainly expressed as a development strategy framework.

The strategy framework does not provide a final design result. Design is mainly used as an experimental tool in the output. It has room for trial and error, and the strategy can be adjusted according to the design experiment. The project's strategy provides a method and open answer.
At the same time, because the design framework is a staged design plan, the new design stage will also be fed back to the previous design stage. The design of the project is very dynamic.

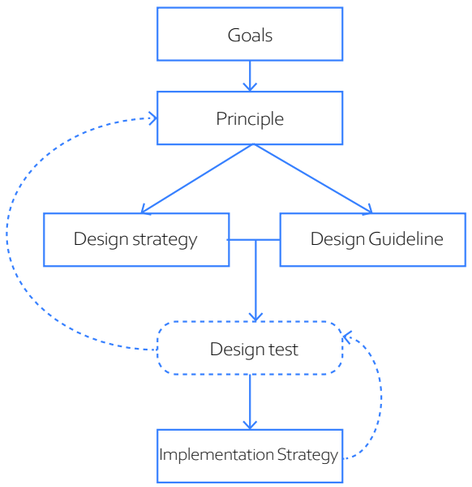


Fig.Framework of the output
Source: author

1.3 The universal meaning

In this project, through the layer-by-layer analysis of the analysis process, the green belt was finally selected as the link of the new collaborative system. Undoubtedly, the planning strategy given in this analysis has a strong target space. So, what lessons can the development of other urban cities draw from this project?

In fact, the green belt chosen for this project is just one of the related urban structures. The strategic city of Arrival is also related to basic design and industrial parks. From a universal perspective, the green ring represents the potential location advantages of the arrival city. Arrival cities in other cities can also discover such special location conditions, and this condition can become a bargaining chip for the construction of cooperation between the weak space and the government.

More importantly, this project builds a multi-scale analysis framework for arrival city and provides a strategic model for building multi-dimensional collaborative development of arrival city. This idea can be applied to the arrival city in other Chinese cities and has a certain universality.

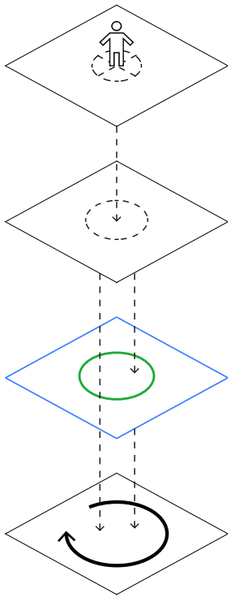


Fig.strategy framework
Source: author

1.4 The universal meaning

This project is based on a logic that is contrary to Beijing's planning considerations and therefore has a certain utopian character.

But what I need to defend for this project is that the project does not violate Beijing's overall planning tendencies, but chooses different paths and implementations. The development path represented by the project is gentle, inclusive and adaptable. The project pursues gradual changes in space, industry, and population life in a phased framework. At the same time, the project is suitable as a buffer zone for Beijing planning in Beijing's development strategy.

Some of the successful development of villages or villages in the edge of Beijing from the bottom up provide certain feasibility for the project. This feasibility will also change with changes in Beijing's land property rights policy and green space development policy.

1.5 Relevance

A. Societal relevance

Beijing 's current planning model is constantly developing the city into an advanced closed system with a unified planning language. In this context, urban renewal would accompany with the exclusion of vulnerable spaces, groups, and industries, the solidification of urban classes and social injustice would intensify in the future. This project aims to develop the potential for the bottom-up power of urban villages and the value of daily practice of marginalized groups, in order to find an alternative positive development environment for vulnerable groups in Beijing. This project attempts to explore urban rights for more diverse social population who neglected by Beijing urban planning.

B. Scientific relevance

This project is aimed at the application and discussion of open city theory. Although the open city theory is a research-oriented concept, the project starts from this theory and combines with other relevant theories to give this city theory more and more specific perspectives.

In addition to the dominant theory of open cities, the overall concept of this project is to think about the city model of heterogeneous space. This study looks at the specific arrival city from the perspective of analyzing and thinking about the heterogeneous space, and explores the possibility of integrating the formal heterogeneity and urban consistency of the formal cities in the context of a specific large Chinese city.

1.6 Related to studio

This graduation project is conducted in the complex cities studio. The complex cities focus on the complex situation of city transformation under the globalization context. The urban transformation in China is a typical research topic in studio, which highly consistent with my thesis and provide me more comprehensive view to consider Beijing situation.

And as well, the complex cities advocates the interdisciplinary method in research and design. Using the perspective of political, historical and geographical knowledge in research and also considering how the design can works in those multi-dimensional. Fits within the scope of studio, the arrival cities in my project needs to be explained in multi-dimensional analysis to explore the benefits to Beijing. What is more, the implement of my project at the strategic needs to be achieved through government tools, space design, and the balance of different stakeholders, in interdisciplinary considerations.

CHAPTER VIII

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