promoting socio-spatial integration in segregated context of Shenzhen

NEIGHBOURHOOD RECONFIGURATION

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Colophon

Neighbourhood Reconfiguration:
promoting socio-spatial integration in the segregated context of Shenzhen

P4 Report

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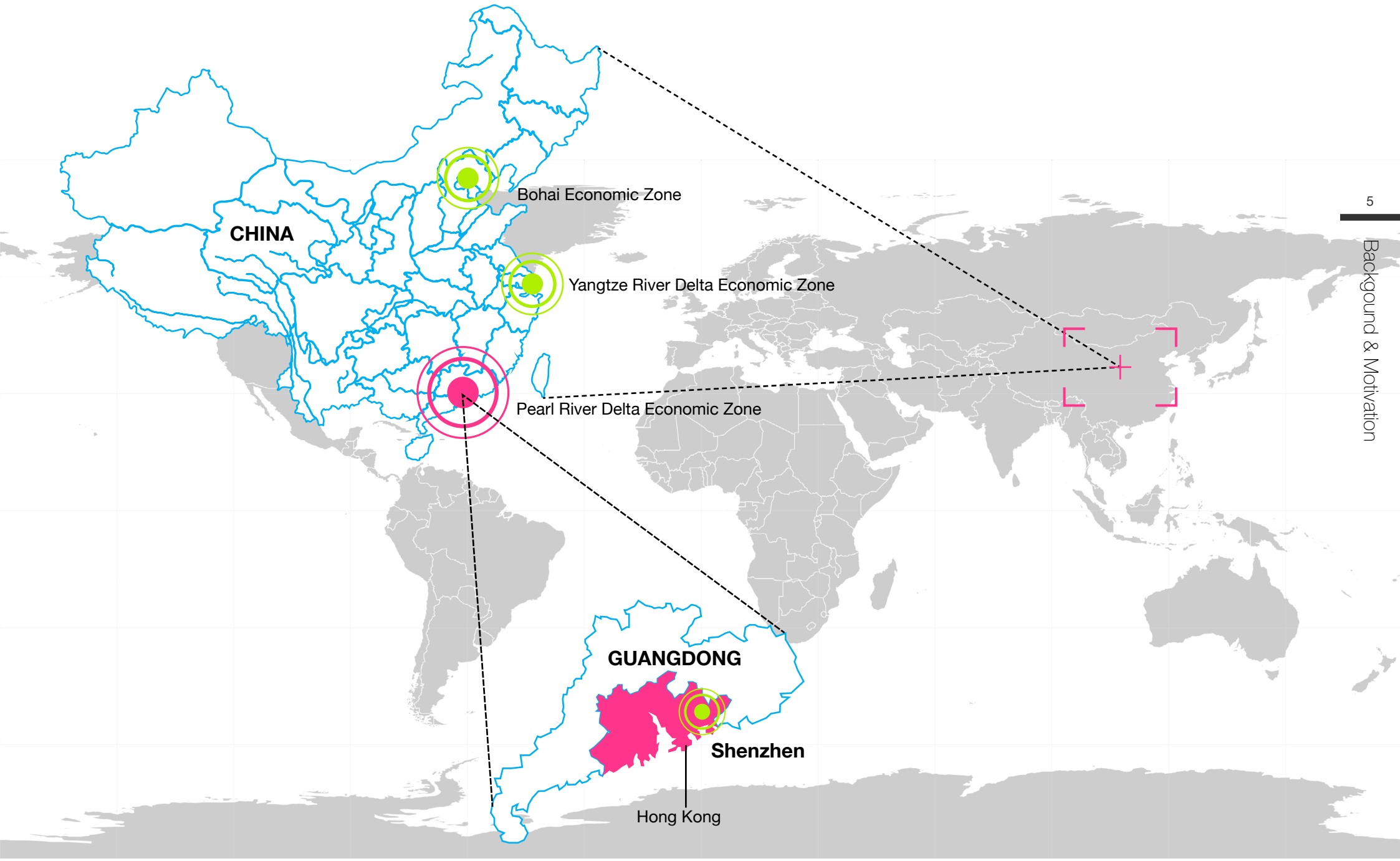
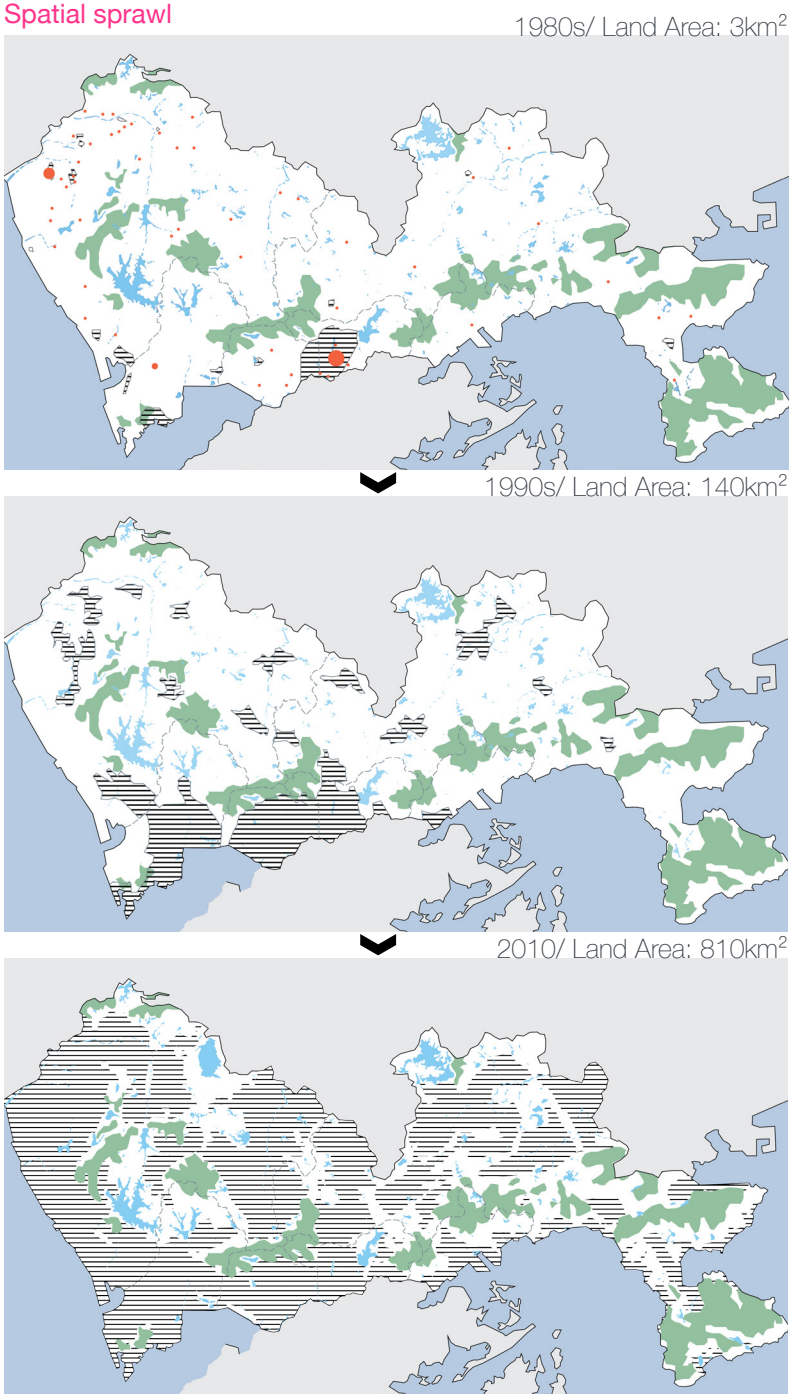

CHINA
Bohai Economic Zone
Yangtze River Delta Economic Zone
Pearl River Delta Economic Zone
GUANGDONG
Shenzhen
Hong Kong

As the first test city of Chinese ‘ Open and Reform’ policy, Shenzhen has always been considered as a miracle with regard to its urbanization speed. It is the major city in one of these three strong economic regions in China---Pearl river delta, and situated immediately north of Hong Kong Special Administrative Region.
There’s a special term called ‘Shenzhen speed’ in China to describe what’s happening there. As a matter of fact, there is no accident of what Shenzhen has achieved. With powerful national policy support and its unique geographical advantage, there’s no doubt why a small fishing village with only 23,000 inhabitants can turn into a metropolitan city accommodating more than 10 million population within only thirty years. Now as the most important political and economic centre in Pearl River Delta---one of three strong economic regions, Shenzhen has experienced tremendous transformation regarding social, spatial and economic aspects.

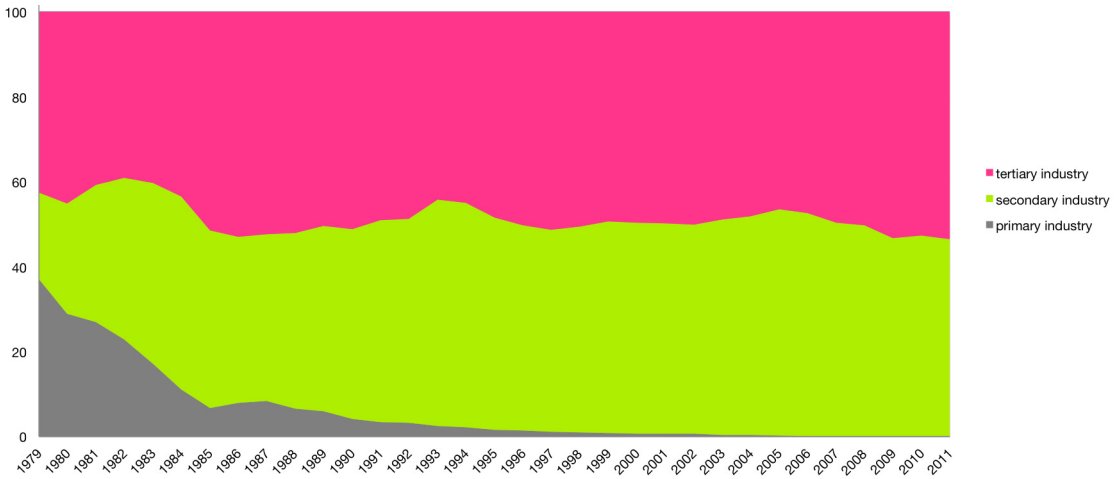
Shenzhen Before 1980s

Shenzhen Now

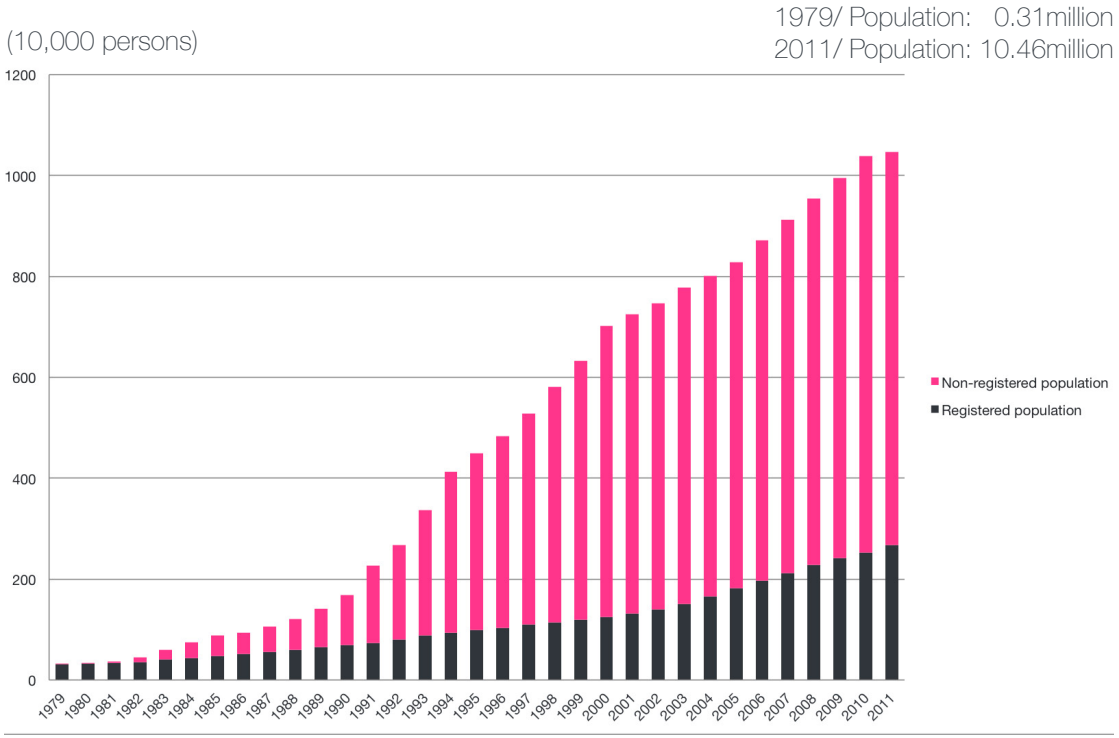
Spatial sprawl



Economic restructuring



Population growth

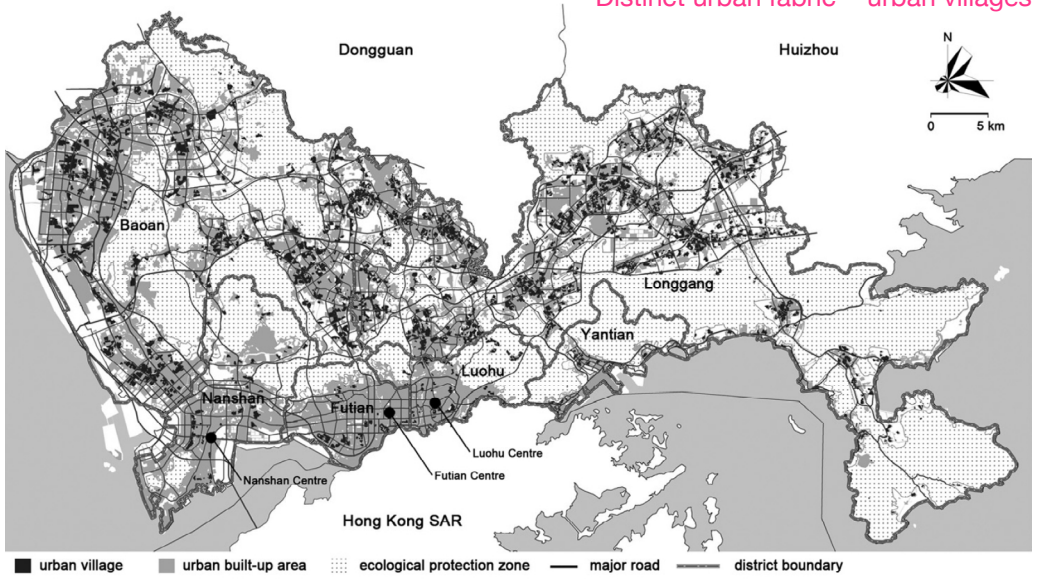


In 1980, Shenzhen became the first experimental city in socialist China to operate market economy. With the establishment of Special Economic Zone (SEZ), Shenzhen was able to manage its own economy to attract foreign capital, technology and skills in this specific area. Then the urban sprawl started to boom, which we can see from these maps (figure X). Originally, this small village was located near the Shenzhen-Hong Kong border, which now is the centre of Luohu district; until 2010, Shenzhen already occupies an area of 810 km²(Shenzhen statistical yearbook, 2012), taking over most available lands within its municipal boundary. The city boom can also be judged by its economic parameters: its GDP increased from RMB 200 million in 1978 to RMB 1150 billion in 2011. The economic growth has triggered a huge flow of migrant workers, which composes almost 75% of total population in Shenzhen now.

The spatial development of Shenzhen occurred mainly by encroaching on pre-existing rural lands (Hao, Sliuzas, & Geertman, 2011). At that time, because of the revenue limitation, instead of occupying all the rural land, only the fields can be expropriated at a low price were transformed by the government for urban expansion and the village settlement for peasants remained as residential quarters. This situation results in more and more 'urban villages' distributing all over the city area as 'islands'. These urban villages became a magnet for migrant workers due to its low rent and excellent location in response to the shortage of affordable housing in the city, but the environment in urban villages is often questionable and with limited public facility. In the meantime, expensive commodity enclaves with high quality condition are growing in the city that mainly occupied by higher-class groups. The segregation between different social groups distributed in disparate spaces keeps getting worse as urban villages and degrading work-unit compounds are gradually gentrified to become high-end buildings, forcing low-class groups to move further from city centre.

Instead of making segregation problem worse and worse by increasing the gap between different social groups, my motivation of this project is how can low-class group be considered in current development process to live better, and what we can do as urban planners to facilitate and improve social and spatial equity and integration, by which alleviating negative effects caused by rapid urbanization and transformation.

Distinct urban fabric---urban villages



Total population in Shenzhen

Proportion of population living in urban villages

Proportion of floating population living in urban villages

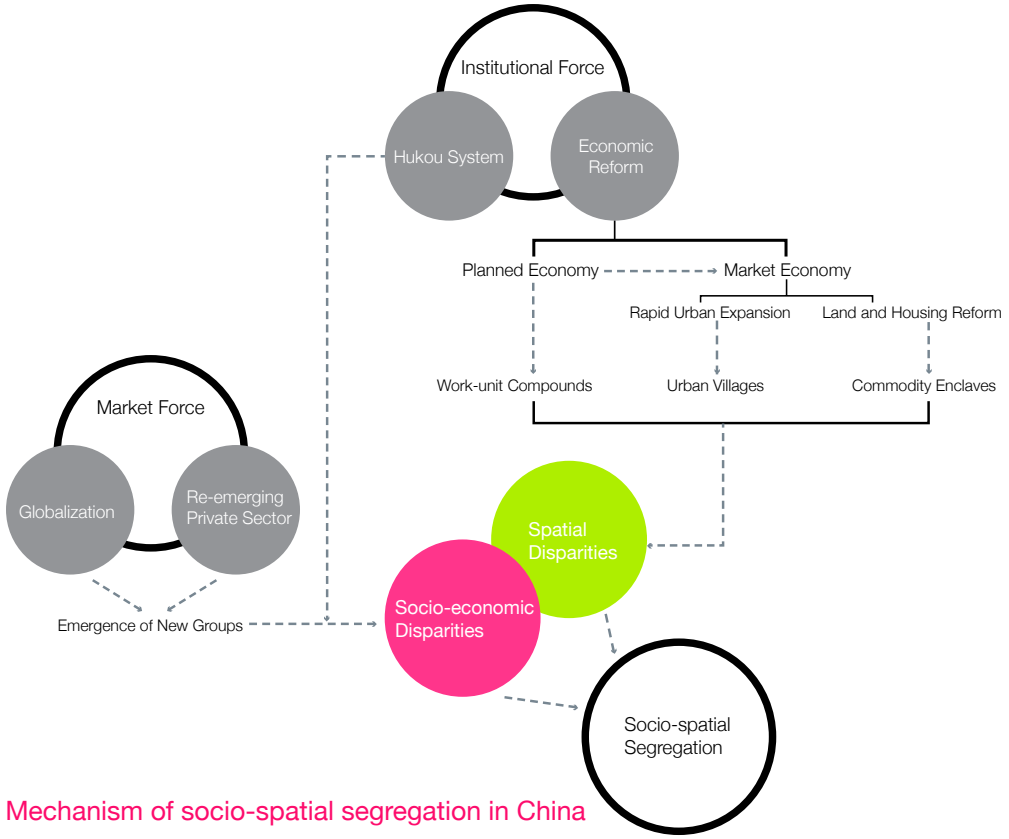
Part 2 Problem Diagnosis

2.1 Socio-spatial segregation in Shenzhen context

Not like the other big Chinese cities, Shenzhen didn't start its tremendous transformation until 1979. Before that, Shenzhen was a small and underdeveloped village. The period from 1949 to 1979 was an important period for socialist economy, during which large amount of work-unit compounds were built in most Chinese cities. The introduction of land reform was initiated in 1987, since when the real estate started to boom and brought a huge increase of commodity enclaves. Thus the construction time of work-unit compounds and commodity housing are supposed to be relatively separated in general Chinese context. But in the case of Shenzhen, the development during 1949 to 1979 was relatively slow. As its late urbanization and high speed of transformation, there's an overlapping construction time for these two types of housing, and work-unit compounds were built at a smaller scale with only residential function. The buffering time between different housing constructions thus is short, making the social and spatial disparities even obvious here.

Generally, there are two major drivers behind the issue of socio-spatial segregation----market force and institutional force. The market force involves the effect of globalization and emergence of private sectors. This leads to a great need of both high-educated and high-skilled elites and also large amount of low-educated rural migrants. In addition to that, the Hukou (registered) system (institutional force) distinguishes welfare enjoyed by rural population and urban population, making social disparities even sever in Shenzhen. In terms of institutional force, economic reform plays a vital role in this mechanism. In earlier period of socialist economy, 'planned economy' was dominant when large amount of work-unit compounds were built. Later on, market economy was implemented first in Shenzhen. The reform of land and privatization of housing triggered the boom of commodity enclaves and rapid urban expansion, so the amount of urban villages keeps growing dramatically. The differentiation of multiple housing areas leads to spatial disparities in city area. Finally, different social groups live in different housing areas depending on their economic position, formulating the problem of socio-spatial segregation.

In Shenzhen, the distribution of different housing types is closely related to its spatial development (see maps on the left). In 1980s, when Shenzhen just start its urbanization in planned economy period, work-unit compounds were mainly built in Luohu district and some in Sheko area; in 1990s, large amount of commodity enclaves started to boom after privatization of housing, mainly in districts

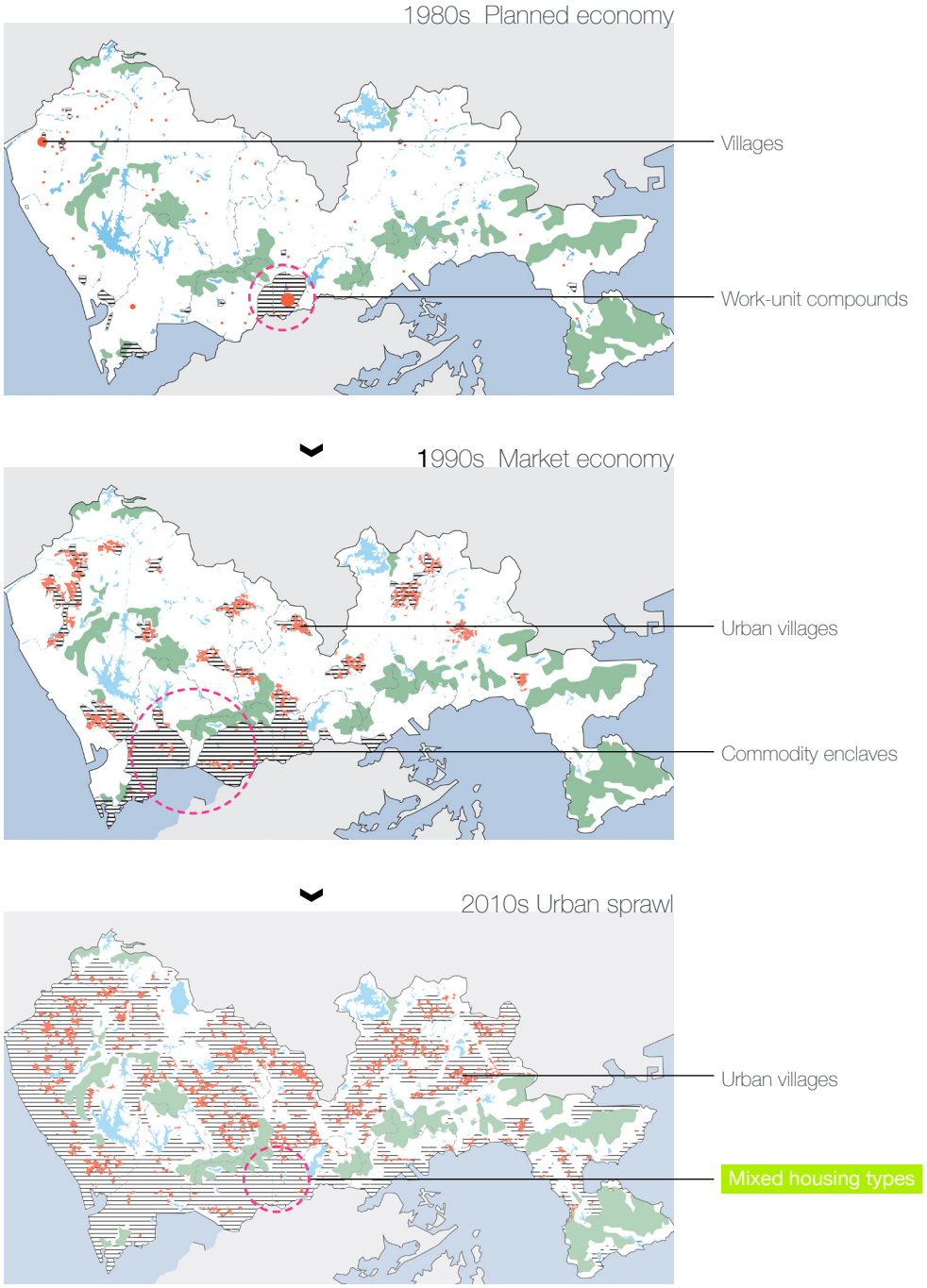


Mechanism of socio-spatial segregation in China

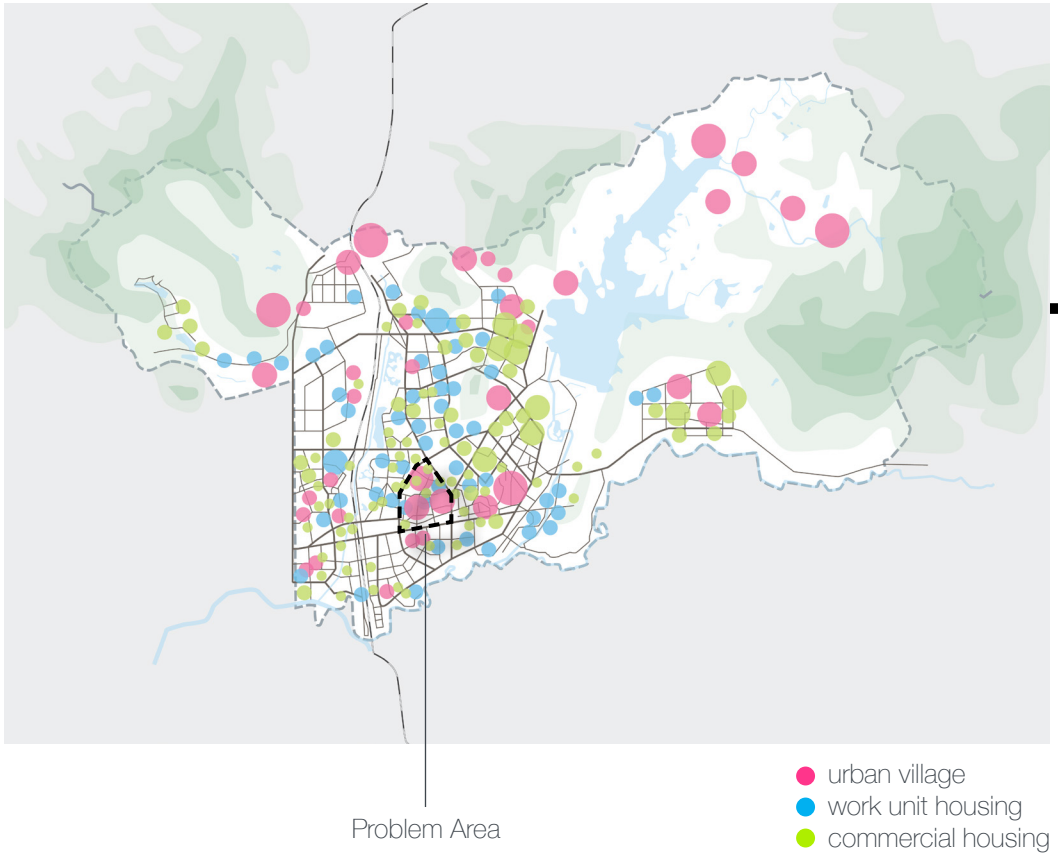
of Futian, Nanshan etc. Also small amount were built in old districts; until now, urbanized areas almost take over all available lands within city boundary along with many urban villages. This spatial distribution pattern of housing makes Luohu, the oldest district in Shenzhen and accommodation of mixed housing types, an interest site for further investigation.

Based on what discussed above, there are basically three different living patterns existing in Shenzhen: urban villages, work-unit compounds and commodity enclaves. When these patterns are marked in Luohu district (Figure X), we can see that the three housing types actually exist in almost every sub-district and neigh-

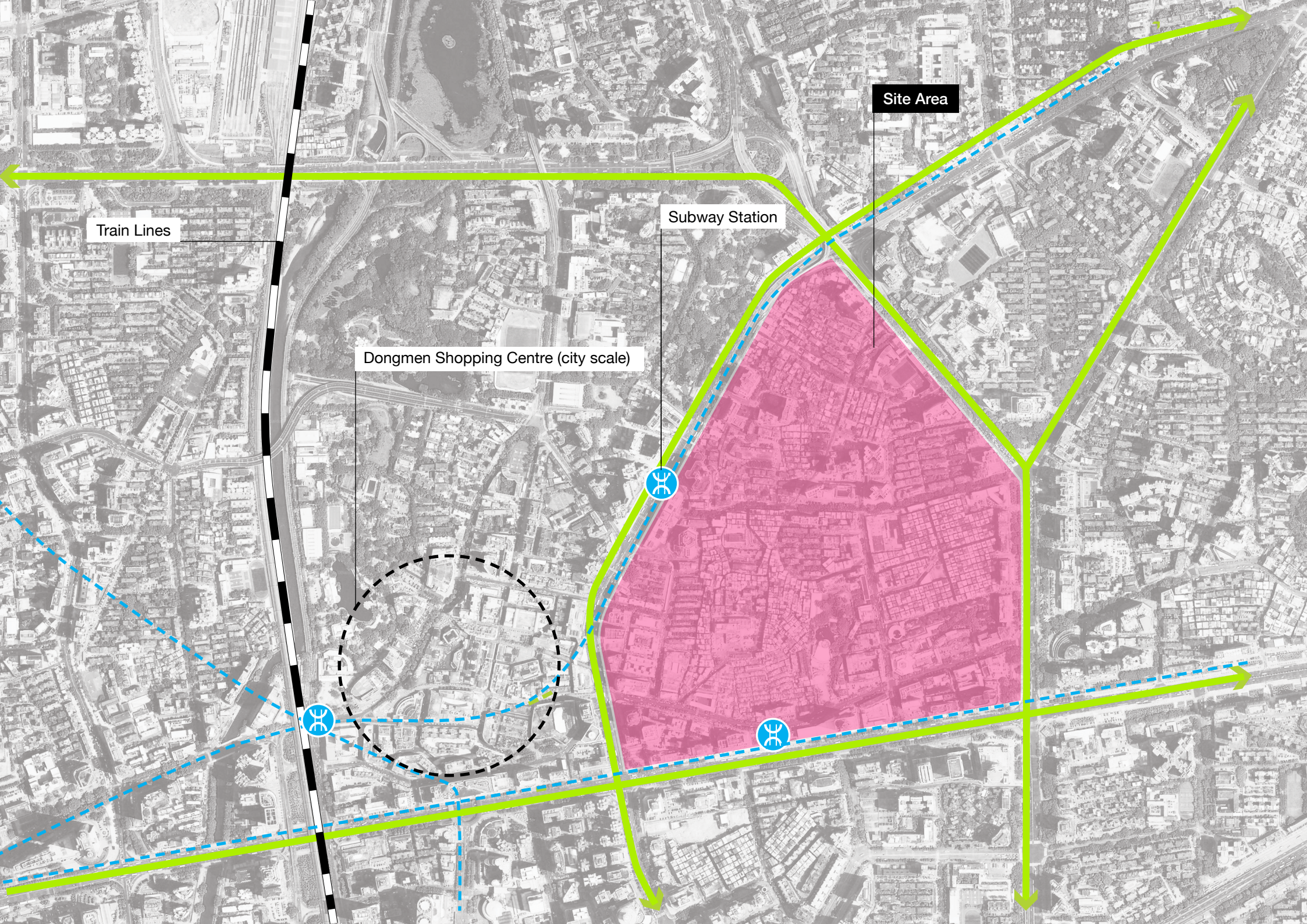
Housing distribution at Shenzhen scale



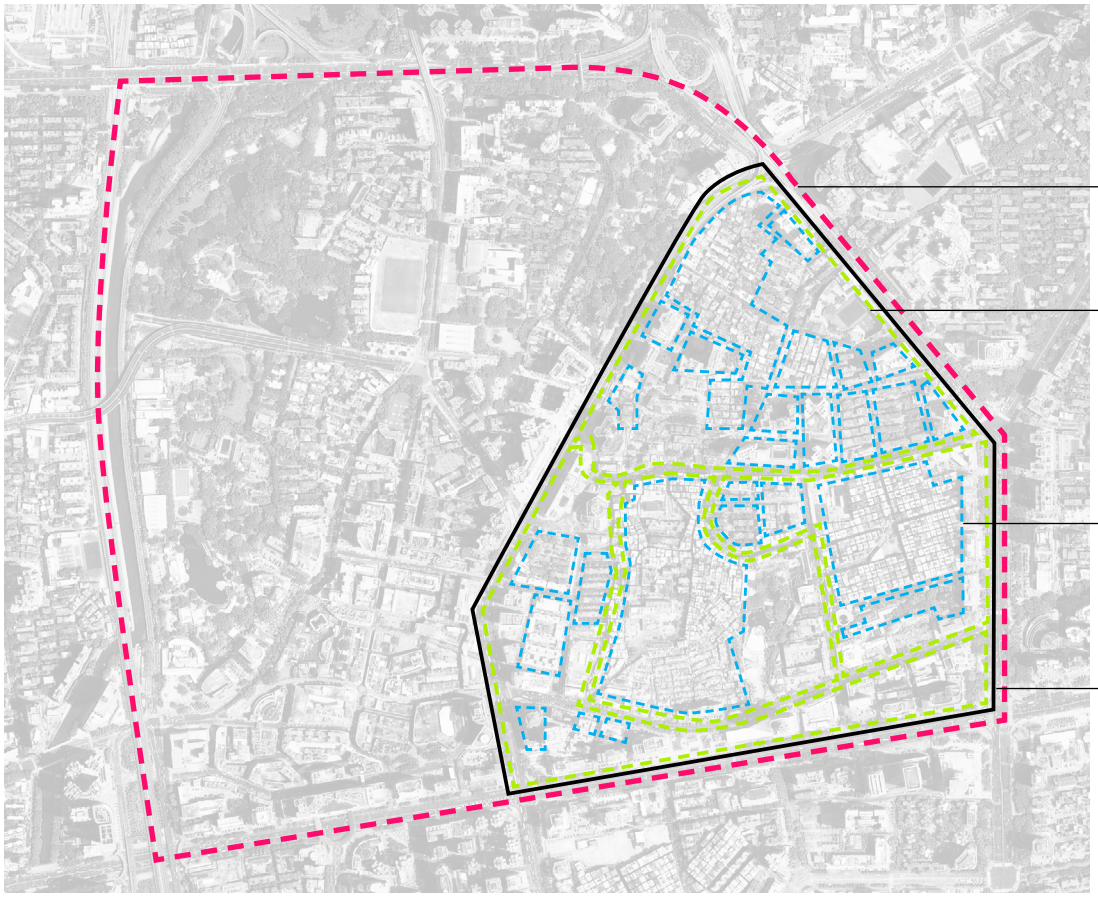
Housing distribution at district scale



bourhood, showing a homogeneous character at district scale.
Therefore, we take one neighbourhood (figure X) as site area, which is located in the densest area in Luohu, as a detail explanation of 'social-spatial segregation' issue. This neighbourhood scale is chosen based on its size (10-minute walking distance), density (high concentration of people), large surrounding infrastructure, and diversity of housing types.


Site Area
Train Lines
Subway Station
Dongmen Shopping Centre (city scale)

Management Boundary

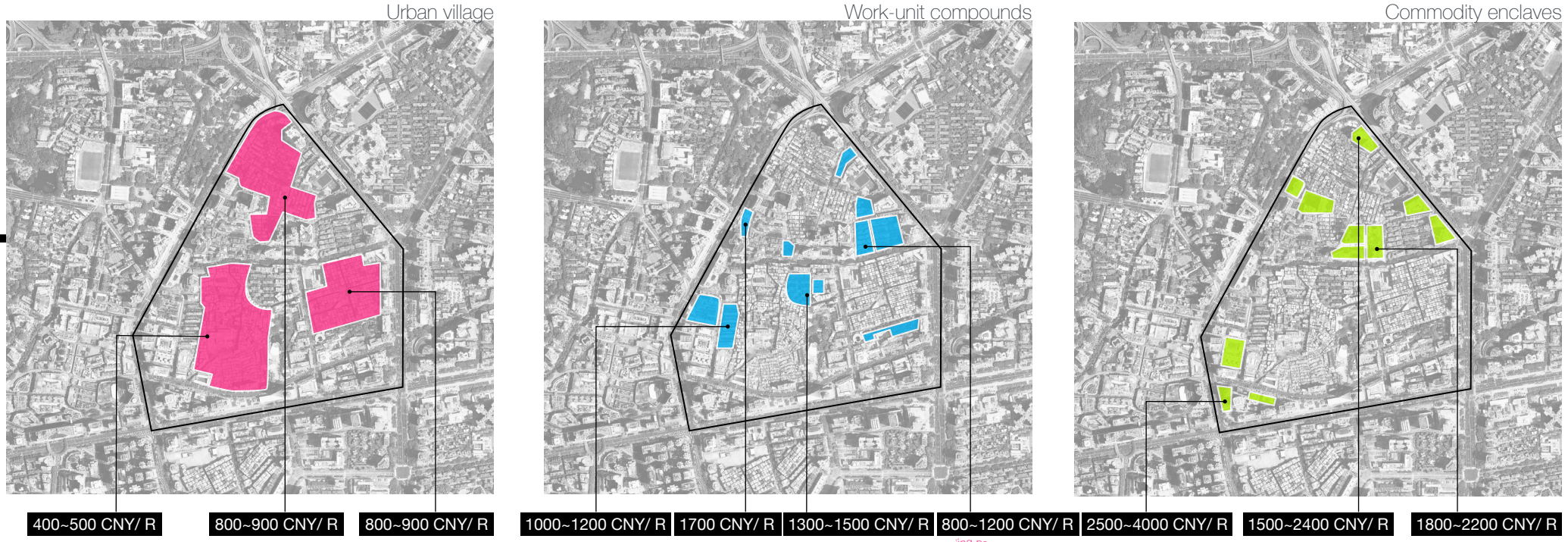


2.2 *Define problem area*

In order to interpret the social-spatial segregation thoroughly, several aspects can be seen as boundaries resulting in current situation:

2.2.1 Management boundary

Within this site area, there are four ‘Shequ’ (community) which are Luoling, Hurong, Hubei and Chengdong. These ‘shequ’ offices usually offer public services such as medical service, serving the elderly and disabled, and so on for residents who live in the same area. As can been seem from the map, the boundary of governance basically only involve similar housing types, which means similar social groups. Thus the supposed function of ‘community’---social interaction and cohesion, is not working properly to ease the segregation issue between different social groups. In addition to that, each housing type such as one urban village, one work-unit compound or one commodity enclave has its own governance system to operate. Urban villages are usually collective-owned, and managed by villagers themselves. As there are no ‘planning standards’ when urban villages were built, so the public facilities are usually limited and hard to implement later because of the restriction of physical environment; work-unit compounds are usually managed by the specific work-unit originally, but now most of them are lack of management or low-quality of maintenance; commodity enclaves have their own private manage companies to offer public services such as security guards, recreation facility and greenery. Thus, the governance modes actually differentiate the service and formulate an invisible boundary between different housing areas.

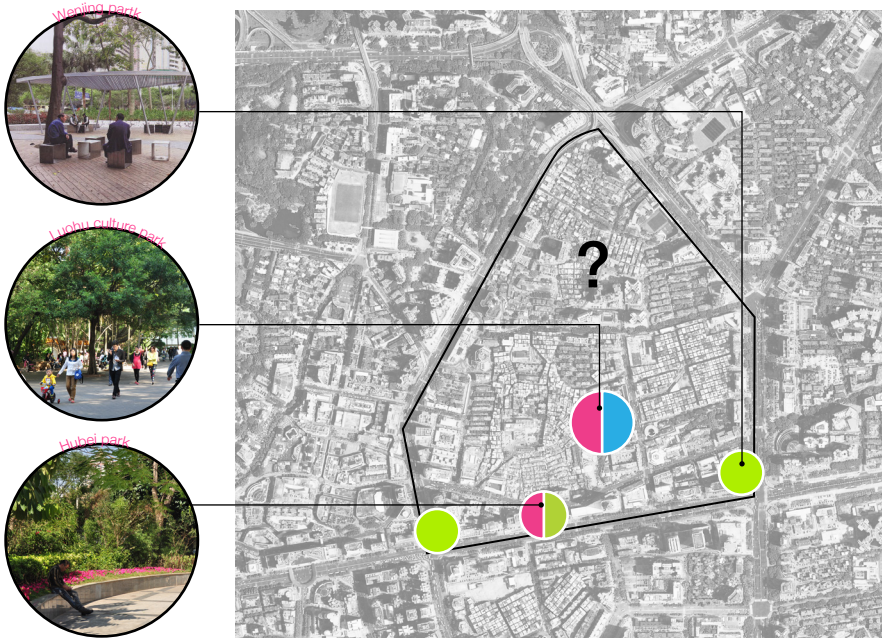


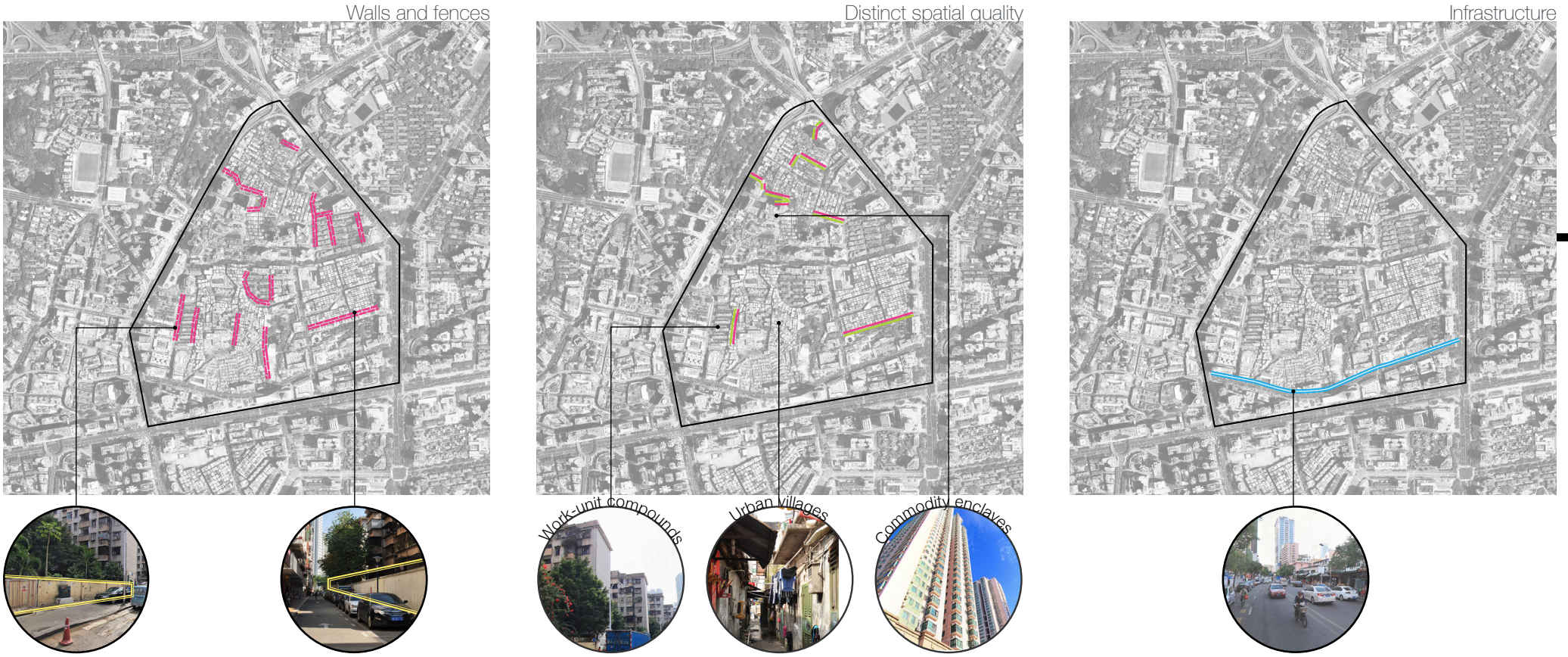
2.2.2 Social boundary

Based on the site investigation and online data, there's a distinct difference with regard to rental price among these three types of housing (see maps). In urban villages, the average price for a single room per month is no more than 1000CNY; in work-unit compounds, this price is around 1000~1500CNY; in commodity enclaves, this price is about 2000CNY, in some cases more than 2500CNY.

This disparity of price leads to the distribution of different social groups according to their economic position. Those with higher income can choose wherever they want (usually high quality of commodity enclaves), thus other low-paid workers have no choice but live in those urban villages and degrading work-unit compounds.

Lack of public space is another social boundary for integration. Within this neighbourhood, there are only one big park and three small street green spaces, which are segregated by a big infrastructure. Lots of optional activities are happening on streets like sitting and standing, where there isn't any facilities to support.





2.2.3 Physical boundary

The physical boundary can be seed in several different ways. First, there are walls, fences and security guards restricting people from other areas to go inside. This usually happens in every commodity enclaves and some work-unit compounds.

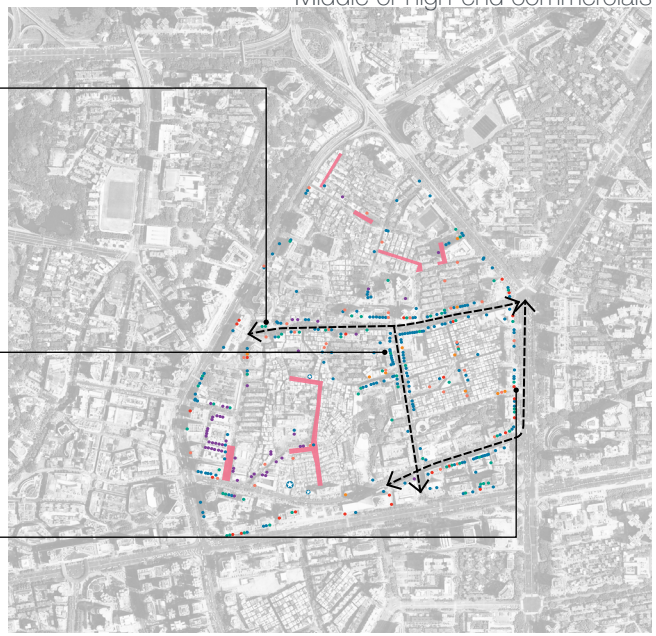
Second, the quality distinction of different housing types formulates another kind of physical boundary. Such as the building styles, vegetation and so on.

Another physical boundary is wide infrastructure. In this neighbourhood, one big road with four lanes forms a barrier between different housing areas and accessibility to social spaces.

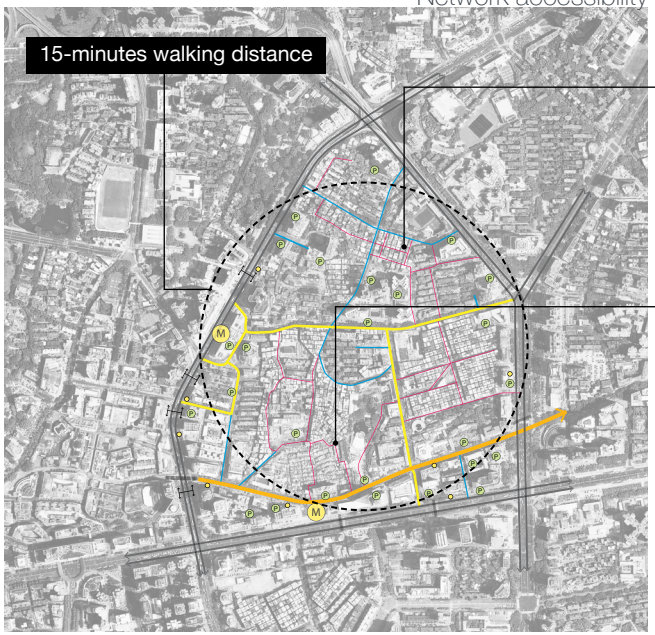
Low-end informal markets

- Restaurants
- Supermarkets
- Medical service
- Recreation
- Wholesale
- Service
- Informal markets
- Temple

Middle or high-end commercials



Network accessibility



- Main street
- Secondary road
- Branch road
- Main pedestrian routes
- Parking
- Metro station
- Bus station
- Pedestrian bridge
- Pedestrian crossing

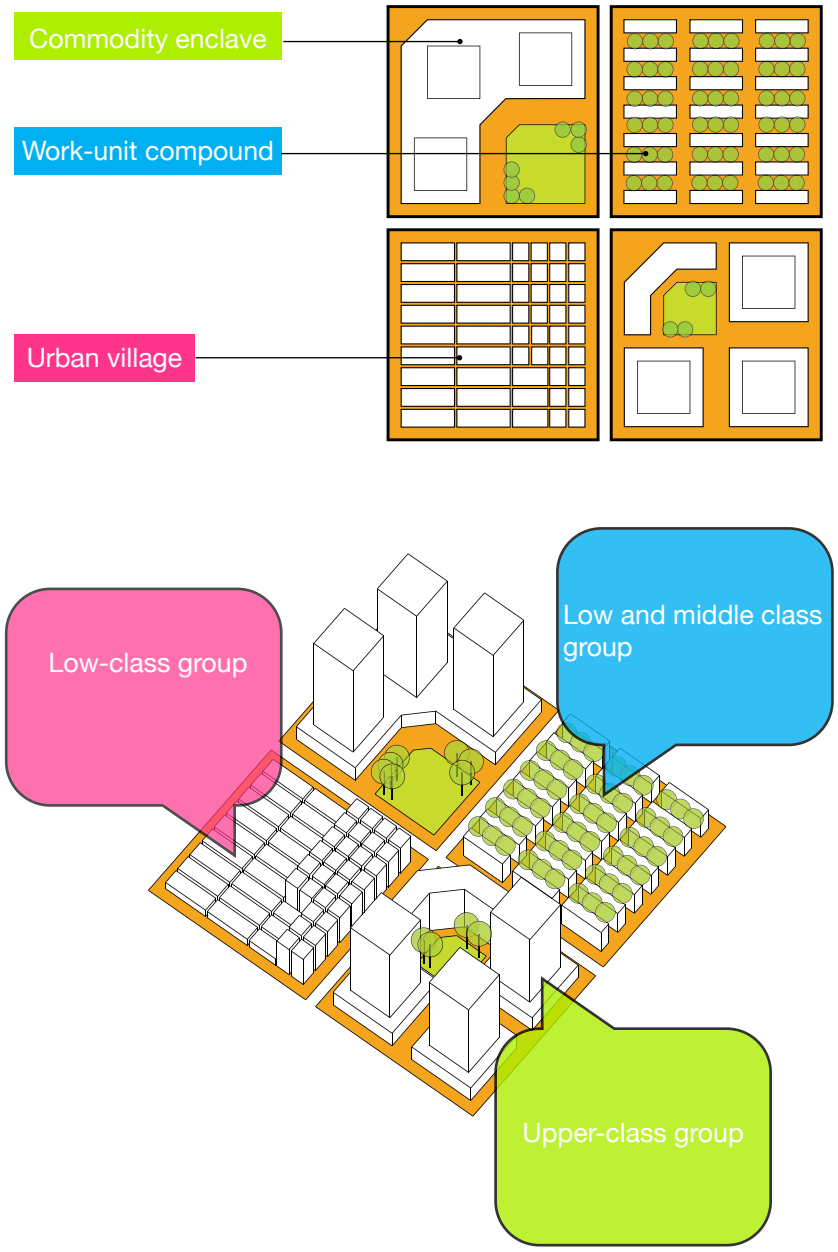
2.2.4 Functional boundary

Functional boundary indicates the discontinuities of mobility and flows (Breitung, 2011). In site area, it can be seen as the discontinuity of transport network and trading resource. Inside urban villages, roads usually are 1~2 meters wide, or less than 1 meter in some cases. Which means they can only be accessed by pedestrians, other transportation modes like cars are not available. Also there's no buffering space between private and public in urban villages, so you can find lots of things happening on street, maybe someone is washing and the other is selling home-made food next to each other.

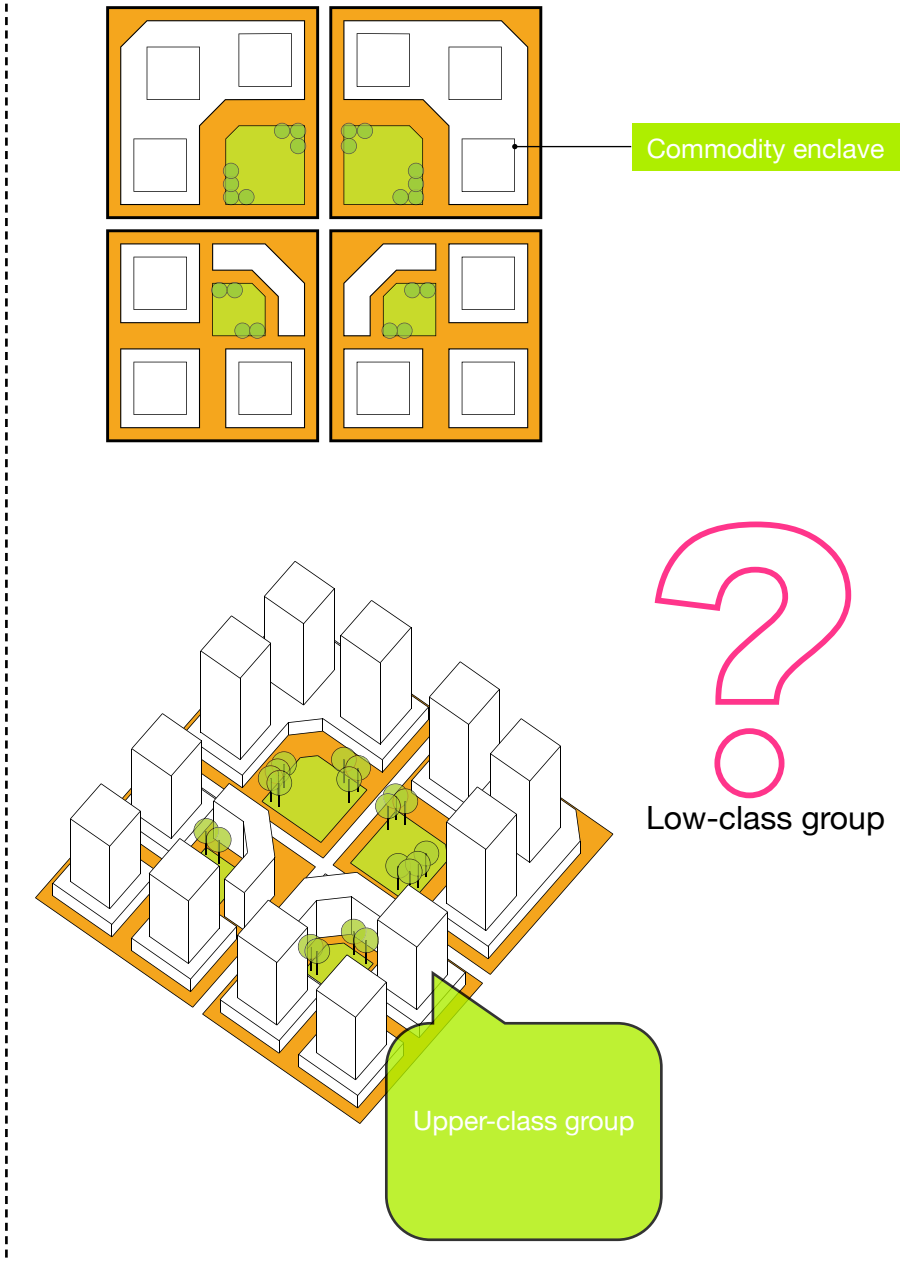
Another aspect of functional boundary is the form of daily supplies. From the land use and program map, we can see that most normal commercials like restaurants and supermarkets are located on main and secondary streets. While inside urban villages, there's another form of commercials---informal markets, which are temporally set up along main pedestrian routes, offering cheap goods for residents there. Thus, these different kinds of markets serve different social groups in different areas.

Thus the problem here can be defined as:
‘Within the context of Shenzhen, there are mainly three different types of housing: urban villages, work-unit compounds and commodity enclaves. Depending on residents’ economic position, each kind of housing is concentrated by different social groups. Those who live in urban villages and degrading work-unit compounds are low-class in the society, and gradually being segregated both socially and spatially due to multiple boundaries.’

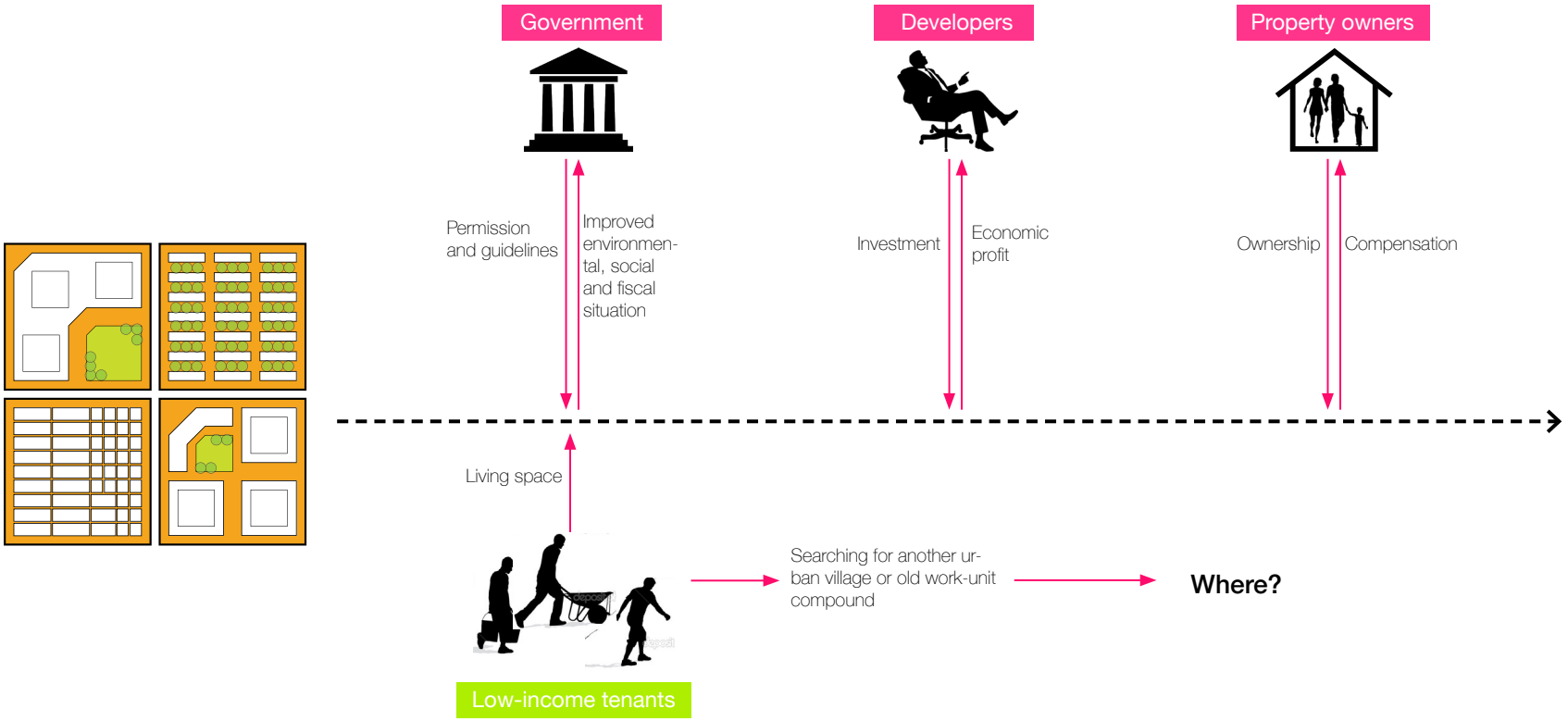
Current situation



Trends



Regeneration process



2.3 Socio-spatial trends

Apart from these boundaries described above, the trends under current regeneration model also contribute to socio-spatial segregation in Shenzhen. There are three typical housing types in site area---urban villages, work-unit compounds and commodity enclaves. Each housing type accommodate particular social group. Generally, urban villages and work-unit compounds are the focus of urban regeneration process due to the degrading environment. These spaces are always transformed to high-end buildings such as commodity enclaves or big shopping malls, which only accommodate up-class groups.

During this process, common stakeholders like local government who provide certain permits and guidelines, developers who invest and property owners who transfer their ownership, can all get profit from it. While those low-income tenants who actually live here, can get nothing but give up their living space. Always, they have to search for another urban village or degrading work-unit compounds nearby. Eventually, these 'affordable housing' will disappear according to current transformation model, so where can these people go and live?

2.4 Problem statement

Under the background of rapid and enormous urbanization and transformation in Shenzhen, socio-spatial segregation starts to emerge due to the increasing social and spatial disparities. Low-income migrants live in urban villages and degrading work-unit compounds without adequate public facilities, while high-income groups concentrate in commodity enclaves with gardens and private clubs, which cannot be accessed by outsiders. The lack of interaction among different social groups can be seen as a result of multiple boundaries---management, social, physical and functional boundaries. The growing social and spatial inequity may limit one's access to information and resources, cause increasing discrimination of under class groups, and eventually incomplete participation in society (Musterd, 2005). In order to improve the low-quality urban environment, these areas are becoming the focus of urban regeneration area for government. But the current regeneration process results in similar high-end building plots, which are no longer affordable for low-income groups. They have to move further from the city centre searching for other cheap places to live, making the segregation issue even severer.

2.5 Relevance

2.5.1 Academic relevance

The study of urban segregation is almost a century old. The origin of research into urban segregation lies on the social inequity in urban society. Urban segregation is a concept used to indicate the separation between different social groups in an urban environment (Feitosa et al., 2007). When it reflects on spatial perspective, it results unequal distribution of population groups across space (Madrazo and Van Kempen, 2012). Other similar terms such as 'polarized cities', 'dual cities' (Mollenkopf and Castells, 1991; Marcuse, 1989; Marcuse, 2000), 'fragmented cities', 'partitioned cities' (Marcuse and Van Kempen, 2000, 2002), are all intended to describe the segregated phenomenon in cities.

Within the context of China, there's also a substantial body of research on social-spatial inequality and differentiation in cities (e.g. Gu and Shen, 2003; Li and Wu, 2006; Hao, Sliuzas, & Geertman, 2011). Most of them are concentrating on city scale; this project will focus on neighbourhood scale and try to ease this problem from a spatial perspective by formulating a system of design principles. This will contribute to the body of segregation research by offering more options to current regeneration process.

2.5.2 Social relevance

The social consequence of urban segregation relates to lots of negative effects caused by it. People living in different parts of a city often get unequal access to basic public services (Feitosa et al., 2007), which means living in certain spaces often suffer from poor quality of infrastructure, housing, public space and higher exposure to violence etc. (Bolt et al. 2009). Furthermore, the segregation may limit one's access to information, resources and opportunities to contact with other groups, then leads to intense prejudice and discrimination and incomplete participation in society, such as labour market participation and others like education, politics and culture (Musterd, 2005). In the case of Shenzhen, migrant workers who live in urban villages and degrading work-unit compounds are always neglected during the process of urban regeneration. Because they just simply rent the cheap housing without any right and ownership, and profit-oriented development don't have to consider the needs from them. They usually intend to build high-end buildings towards up-class groups, which will certainly leads to a more homogeneous space only for them. In this project, the challenge is to fulfil the needs of environment upgrading and facilitate interaction between different social groups based on current social structure at the same time.

2.6 Project Aims & Research Question

2.6.1 Project aim

According to the problem of socio-spatial segregation described above, the main aim of this project thus is to maintain the current social structure, facilitate interaction between different social groups and balance the interests of all stakeholders through neighbourhood reconfiguration.

2.6.2 Research question

Thus the main research question is:
How to develop a reconfiguration method for public space of a socio-spatial segregated neighbourhood, in order to make it attractive for residents of all classes both socially and spatially?

In order to address this, several sub-questions need to be answered first:

1. What's the definition of socio-spatial segregation in global context?
2. What're driver forces behind the issue and how they lead to current situation in local context?
3. What's the historical development of neighbourhood in China and how socio-spatial bonding evolves?
4. What spatial principles are suitable to stimulate neighbourhood integration and how can they be implemented based on current context?
5. How to deal with multiple boundaries through spatial intervention?
6. How to deal with interests of different stakeholders involved in this project?

Part 3 Methodology & Schedule

Background & Motivation

Rapid urbanization + Emerge of urban villages

↓

Socio-spatial disparities

Problem Diagnosis

Context Analysis

↓

Mechanism of socio-spatial segregation

+

Housing type distribution in Shenzhen scale

+

Problem area

Boundary Analysis

↓

Management boundarry

Social boundary

Physical boundary

Functional boundary

Problem Statement

Under the background of rapid and enormous urbanization and transformation in Shenzhen, socio-spatial segregation starts to emerge due to the increasing social and spatial disparities. The lack of interaction among different social groups can be seen as a result of multiple boundaries---management, social, physical and functional boundaries.But the current regeneration process results in similar high-end building plots, which are no longer affordable for low-income groups. They have to move further from the city centre searching for other cheap places to live, making the segregation issue even severer.

Project Aim

Maintain the current social structure, facilitate interaction between different social groups and balance the interests of all stakeholders through neighbourhood reconfiguration.

Main Research Question

How to develop a reconfiguration method for public space of a socio-spatial segregated neighbourhood, in order to make it attractive for residents of all classes both socially and spatially?

Theoretical Framework

Definition of socio-spatial segregation + Neighbourhood development in China + New Urbanism ---creating enduring neighbourhood

1.What's the definition and mechanism of socio-spatial segregation in global context?

2. What's the historical development of neighbourhood in China and how socio-spatial bonding evolves?

3. What spatial principles are suitable to stimulate neighbourhood integration and how can they be implemented based on current context?

4. How to deal with multiple boundaries through spatial intervention?

5. How to deal with interests of different stakeholders involved in this project?

Toolbox

Layer-strategy

Interest-balance model

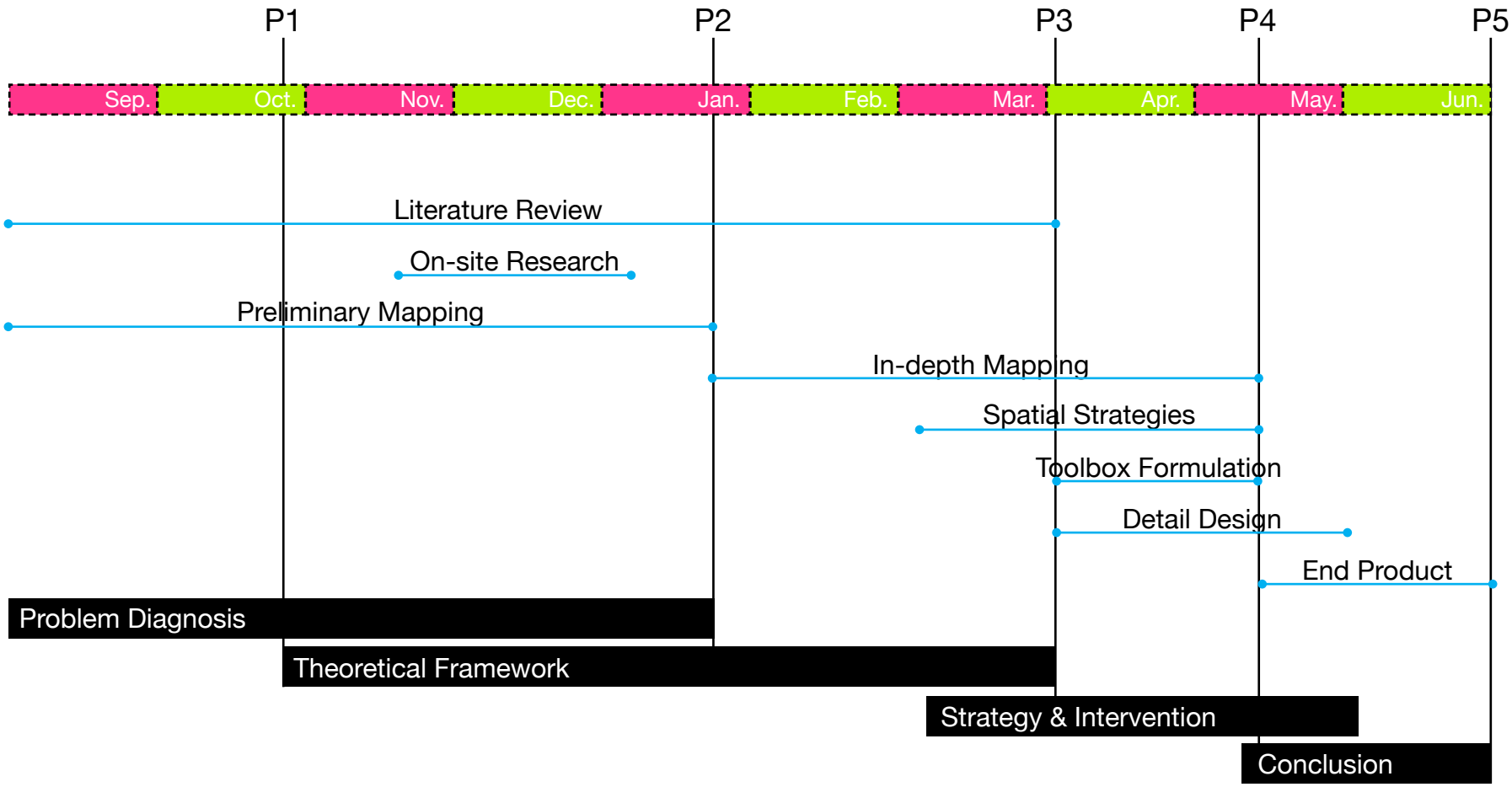
Space syntax
Boundary mapping

Stakeholder analysis

Neighbourhood Reconfiguration

Evaluation

Test design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Preliminary Mapping
In-depth Mapping
Spatial Strategies
Toolbox Formulation
Detail Design
End Product
Problem Diagnosis
Theoretical Framework
Strategy & Intervention
Conclusion

Part 4 Theoretical Framework

4.1 Socio-spatial segregation

4.1.1 Definition

Cities under globalization and internationalization are experiencing enormous changes and transformations. There's an increasing socio-spatial differentiation of urban space whether in free market economies or welfare states (Clark, 1986; Johnston et al., 2001; Murie & Musterd, 1996; Sykora, 1999; Van Kempen & Ozuekren, 1998; Wessel, 2000).

Urban segregation is a concept used to indicate the separation between different social groups in an urban environment (Feitosa et al., 2007). When it reflects on spatial perspective, it results unequal distribution of population groups across space (Madrazo and Van Kempen, 2012). Other similar terms such as 'polarized cities', 'dual cities' (Mollenkopf and Castells, 1991; Marcuse, 1989; Marcuse, 2000), 'fragmented cities', 'partitioned cities' (Marcuse and Van Kempen, 2000, 2002), are all intended to describe the segregated phenomenon in cities.

The study of urban segregation is almost a century old. The origin of research into urban segregation lies on the social inequity in urban society. It is well known that scholars of Chicago School paid an initial attention to describe the pattern of urban segregation systematically (e.g. Park et al., 1925/ 1974). As an improvement of that, approaches like deductive analysis (e.g. Shevky and Bell, 1955) and inductive analysis (e.g. Murdie, 1969) are all trying to involve possible influence factors to explain the problem.

The relevance of this topic is lots of negative effects caused by it. People living in different parts of a city often get unequal access to basic public services (Feitosa et al., 2007), which means living in certain spaces often suffer from poor quality of infrastructure, housing, public space and higher exposure to violence etc. (Bolt et al. 2009). Furthermore, the segregation may limit one's access to information, resources and opportunities to contact with other groups, then leads to intense prejudice and discrimination and incomplete participation in society, such as labour market participation and others like education, politics and culture (Musterd, 2005).

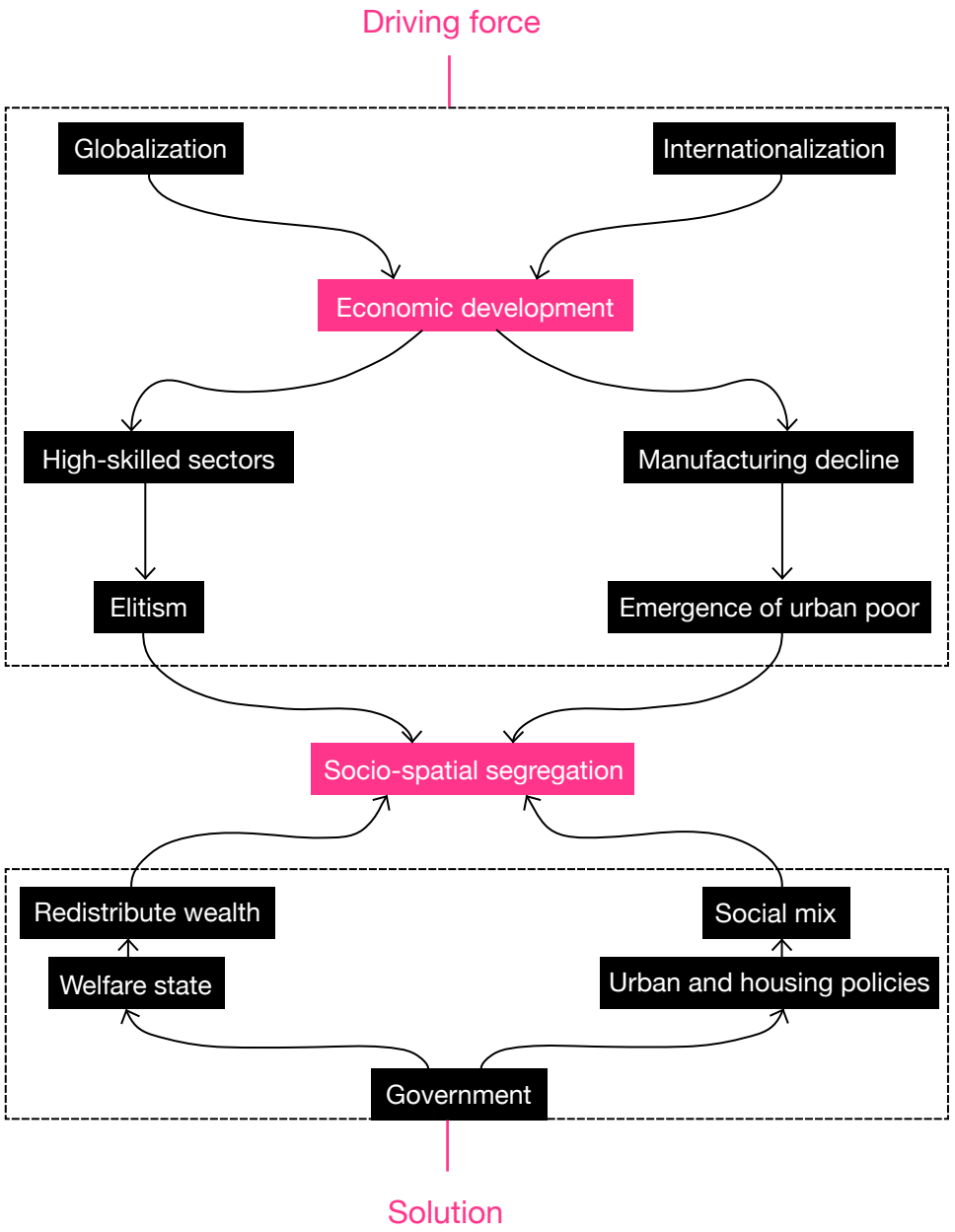
4.1.2 Driving forces

Processes of globalization and internationalization can be held responsible for urban spatial segregation (e.g. Sassen, 1991; Marcuse and Van Kempen, 2000). The global mobility of goods, capital, and people often stimulate a city or a country's economic development, and this would not always lead to positive effects for those at the bottom of society (Wacquant, 1996). In western cities, post-fordist economic restructuring and globalization have been identified as the main drivers of social and spatial polarization (Kesteloot, 1995; Kempen, 1994; Walks, 2001; Wessel, 2000; Jordan & Redley, 1994). The decline of manufacturing and the increase of high-skilled sectors together triggered the emergence of new urban poor, followed by the growing inequity of income and occupation. As a result of that, the city becomes segregated both socially and spatially.

There're several approaches indicating to find drivers behind the problem of segregation:
The institutional approach often involve central state and local government as major factors determining patterns of segregation, because relative urban policies implemented by them are important in determining the location of housing supply (Madrazo & Kempen, 2012). Another factor I believe can also be included here is those key players of institutions with money (like private developers). Together with central and local government, their roles can be crucial to influence the land market in the distribution of different socioeconomic groups (Mills and Hamilton, 1994).

Another well recognized approach is behaviour approach, which remind urban researchers that individual preferences should be considered to a certain extent. This approach was criticized as little attention had been given to the constraints people face in a housing system (Hamnett and Randolph, 1988; Murie et al., 1976). Still, I believe lots of factors should be taken into account in this perspective, because constraints are not the only factor influence where people live. The urban segregation is also influenced by urban personality, attachment, identity, differentiation, perceptions of disorder and so on (Ruiz-Tagle, 2012), which relate to the making of public space; Madanipour (1996) pointed out that all of the following individual and group factors affect the perception of people's surroundings: socio-economic status, ethnicity and race, gender and age, time of residence, and the mode of transportation used.

All the drivers and influential factors mentioned above can all be considered when trying to identify urban segregation, and should be adjusted according to a local condition.



4.1.3 Relevant solution

In order to diminish the increasing differentiation and fragmentation among multiple social groups, the general response of government is at large scale, through welfare state to redistribute wealth; at local scale, implementing urban and housing policies (e.g. social mix, urban renewal) to promote social interaction and end the concentration of poor (Bolt et al, 2009).

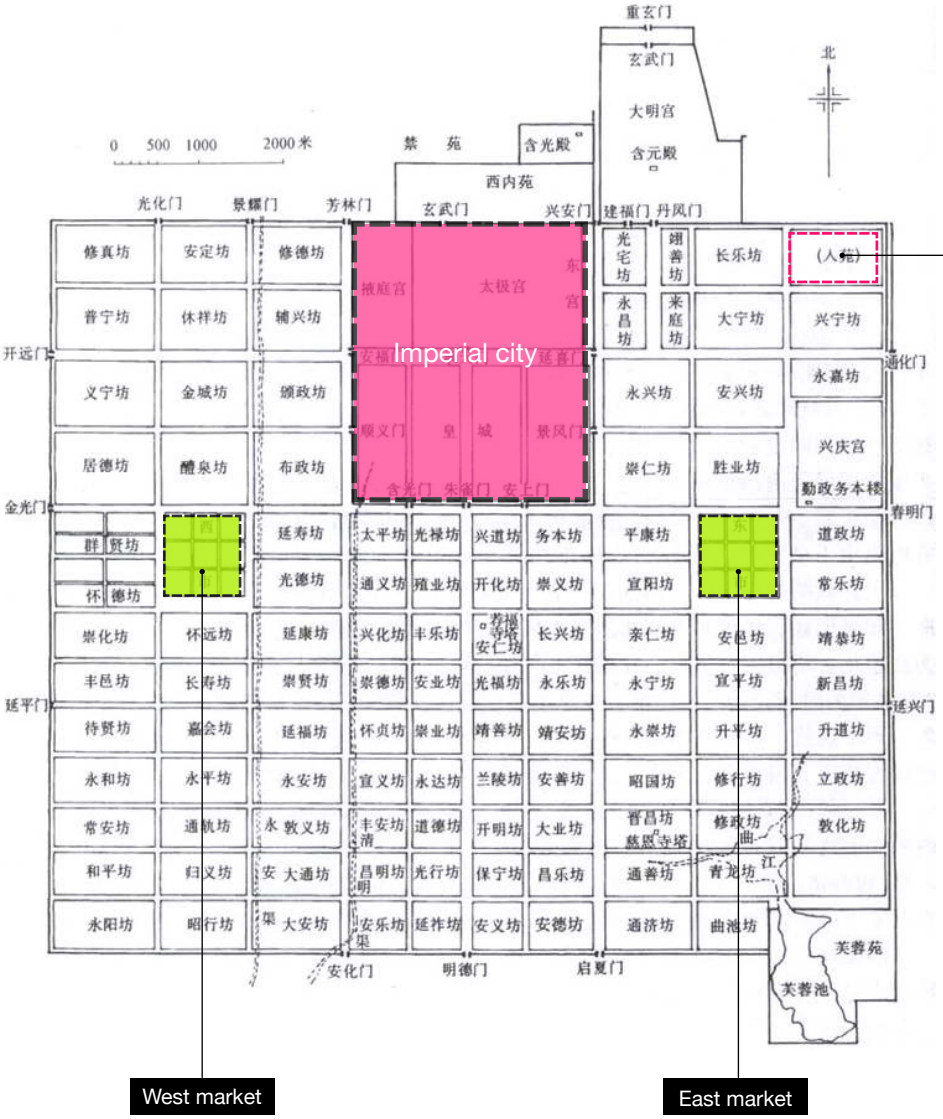
The urban and housing policies are increasingly focused on creating socially mixed areas. So social mix has become a major strategy of political agenda in most western countries, Australia and the United States (Bolt, Philips, & Van Kempen, 2010; Van Gent, Musterd & Ostendorf, 2009, Lelévrier, 2013). Other strategies like urban competitiveness, regeneration and urban renaissance are all relevant to deal with global economic change and industrial decline, which are major factors causing urban segregation (see e.g. Van Kempen & Murie, 2009). In the Netherlands for example, the public policies of urban renewal and restructuring are aiming to improve and end the concentration of poor and low-income neighbourhoods (Bolt et al, 2009).

The lack of social bonds and interaction, the increase of social conflict between different social groups has been revealed in lots of segregation-related studies (Atkinson & Kintrea, 2000; Graham, Manley, Hiscock, Boyle, & Doherty, 2009; Wood, 2003). Thus the objective of social mix strategy is supposed to encourage a profitable interaction between the inhabitants of disadvantaged neighbourhoods and the new social groups coming from outside the area (Lelévrier, 2013). As Van Kempen and Bolt (2012) argued, there are different dimensions in creating socially mixed communities: stimulate a housing career, improve the quality of public services, and facilitate possible social contact and social mobility. The new role for community is to identify the elements that can contribute to build a cohesive urban society (Mugnano & Palvarini, 2013), so residents living in the same neighbourhood could develop a sense of belonging to the place and a feeling of being part of a community with a common identity (Livingston, Bailey, & Kearns, 2008).

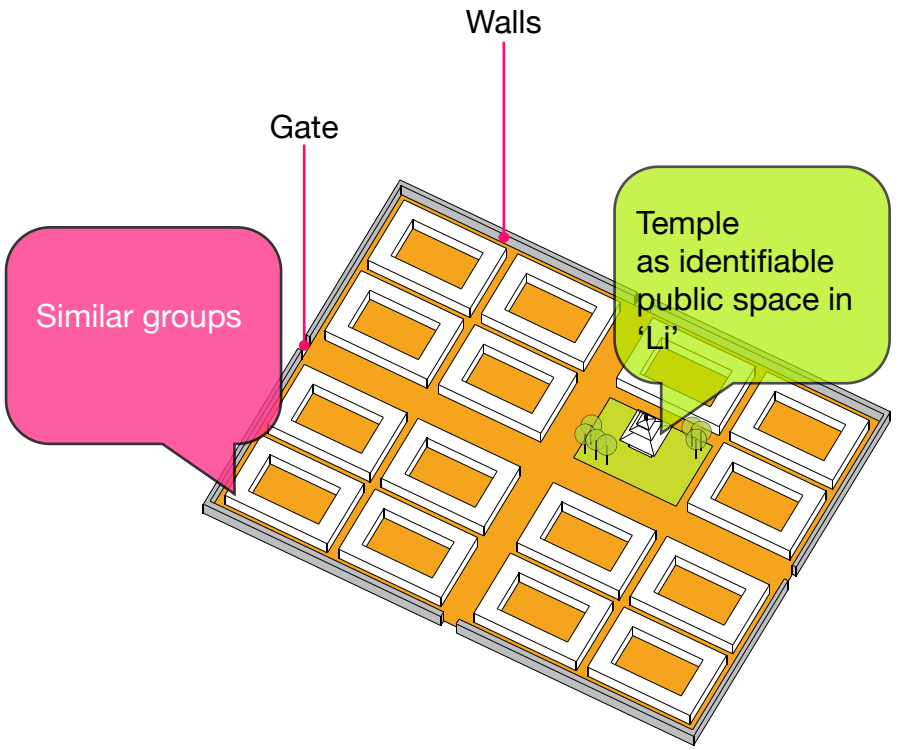
Although social mix is a well-known policy to solve the problem, its effectiveness has been criticized a lot (Cole & Goodchild, 2001; Dekker & Bolt, 2005). Because simply mix different social groups together are not always promoting cohesion, it can also involve problems and tensions. Because spatial proximity does not reduce social distance (Chamboredon & Lemaire, 1970). The interaction between different groups still limited, although they live closer.

Compared to the mechanism in Shenzhen context, we can see that drivers behind this segregation issue are similar. But the negative effect caused by the strategy ‘social mix’ shows that it’s not enough to promote integration only by improving spatial connection. Social connection should be considered together with spatial design.

Chang'an city in Tang dynasty



'Li' neighbourhood



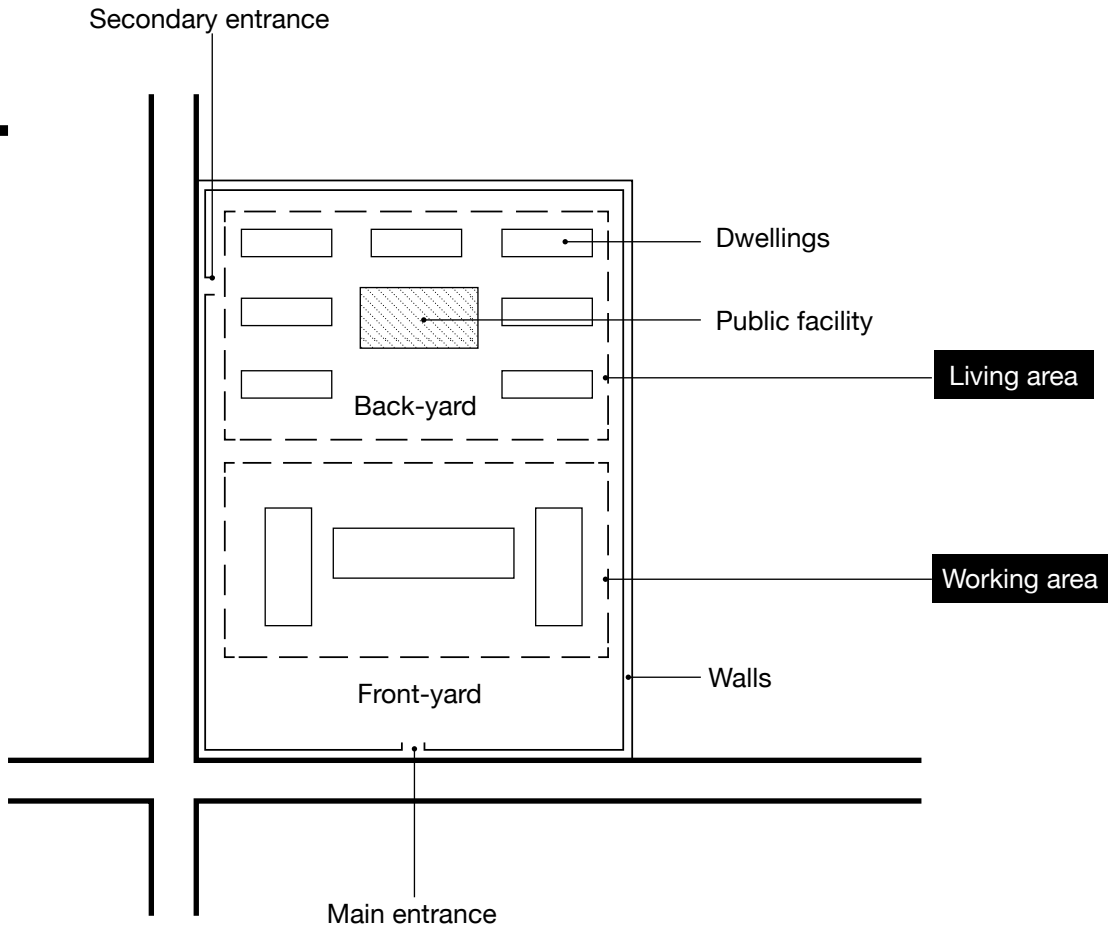
4.2 Neighbourhood development in China

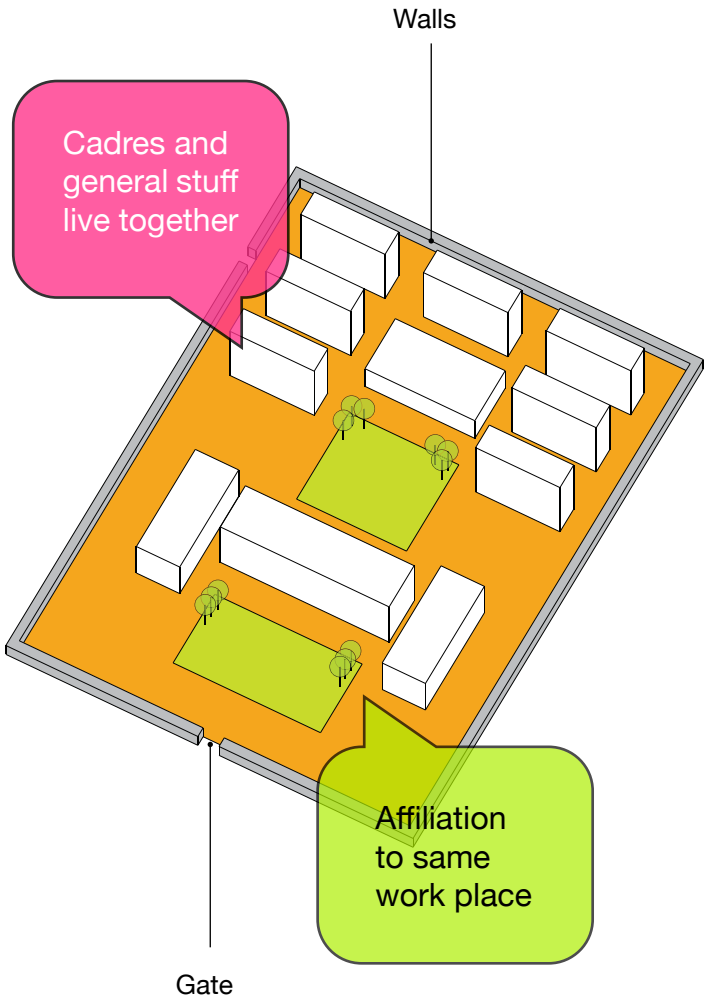
4.2.1 Pre-socialist era (before 1949)

Before digging into the local context of segregation in Shenzhen, its necessary to understand how the spatial pattern of Chinese cities changes as the closed residential form played an important role during the long history. The most typical pattern in China is Chang'an city in Tang dynasty (figure X). At that time, there was a very restrict hierarchy system depends on power position. The royal family, which was the dominant class back then, had their own 'imperial city', which cannot be accessed by ordinary people. The 'imperial city' undoubtedly represented the centre of a city. The other high-class people were distributed around the imperial city, occupying these pieces of land with better location in the city. Apart from that, there was also a 'system of Lvli (neighbourhood)' to separate the general public into small units, so it would be easier for the government to control and manage. Each 'li' had walls and doors around it to restrict the mobility of residents during nights and special period, and households were not allowed to open their doors toward streets, only inside the 'li' neighbourhood. The city had two specific independent market spaces built for trading, also with walls and doors for government to manage (figure X), so residence and commercial function were totally separated. Besides that, there's usually a temple inside each neighbourhood, which can be seen as public space for residents. Within this context, the segregation was between the ruling class and public, plus a pure spatial segregation among similar general public. At that time, public life was limited due to low-density street network, little contact surface between housing and public space, weak accessibility of street and public realm, and also low vitality of commercial activity (Liu, Zhou & Chen, 2007). Still, residents have a mutual place belonging and identity (temple) at neighbourhood scale back then.

Since the Northern Song dynasty, the spatial pattern started to break down due to the contradiction between economic development and spatial restriction. The walls and gates were gradually destroyed, and households were allowed to open doors toward streets and set up commercial activities such as restaurants and retails. Then the street life started to wake up, so did the economic development. Thus the more open spatial pattern of 'street and alley' replaced the closed and introverted 'Lvli' system, combing commercials with residential function. Until now, this kind of space can still be found but gradually being destroyed under the pressure of urban regeneration.

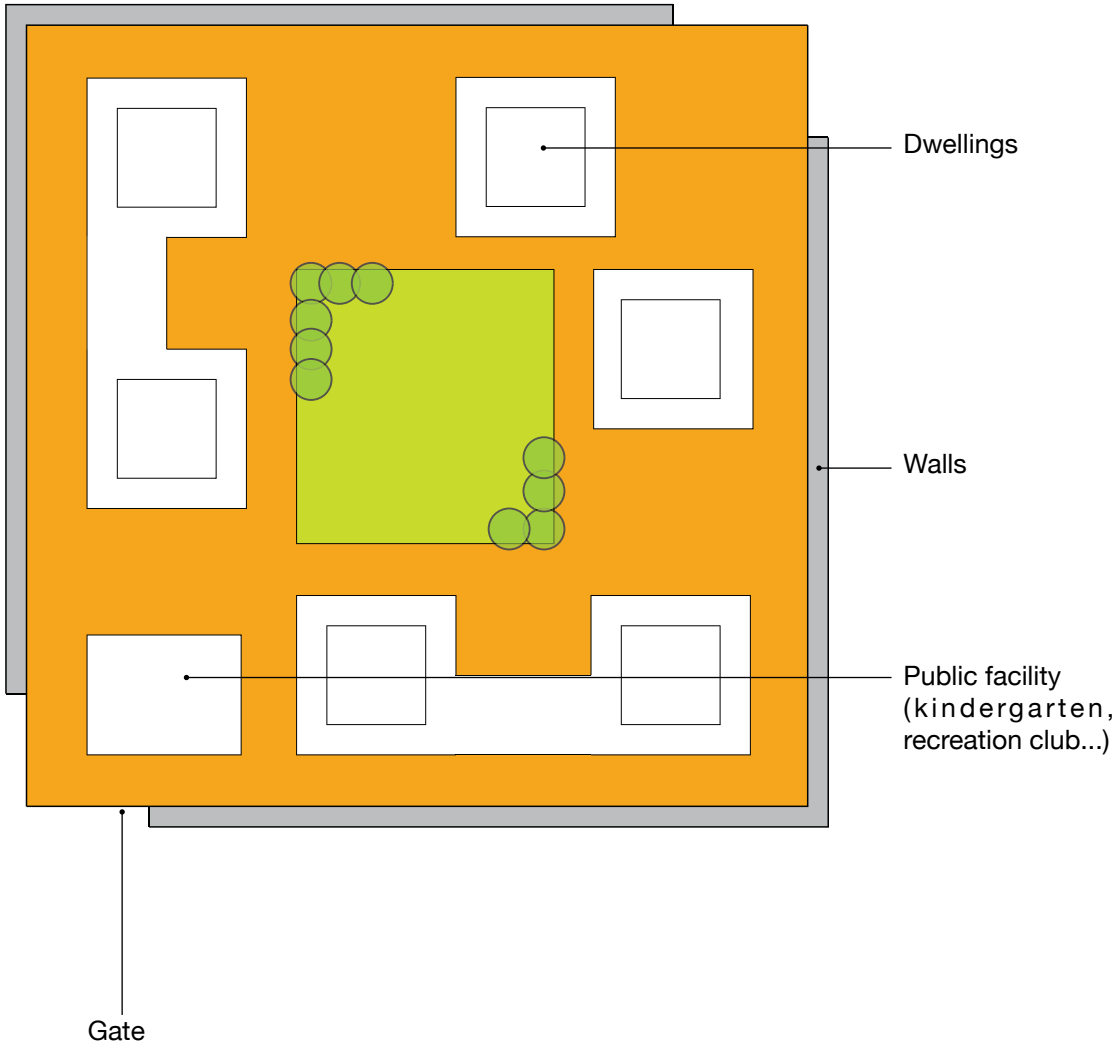
The typical spatial model of work-unit compounds
Source: Zhang, Chai & Zhou, 2009

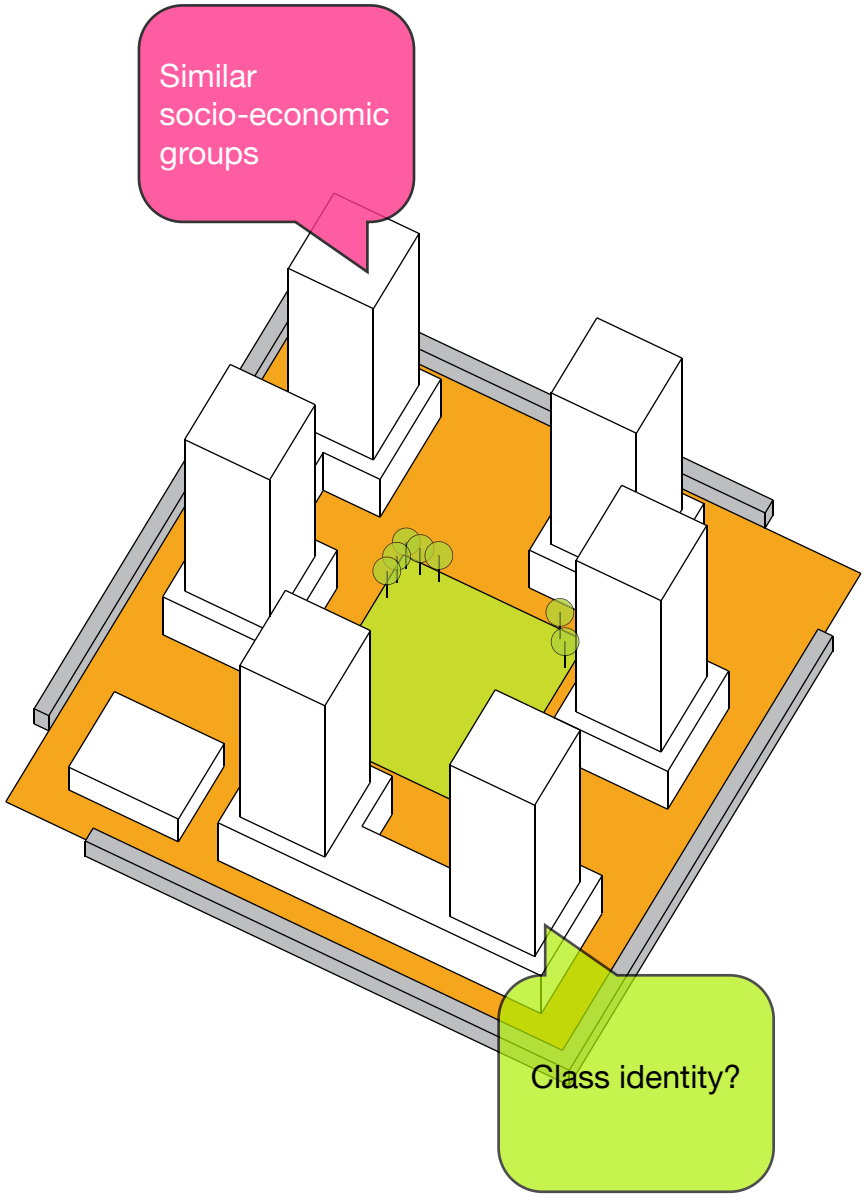


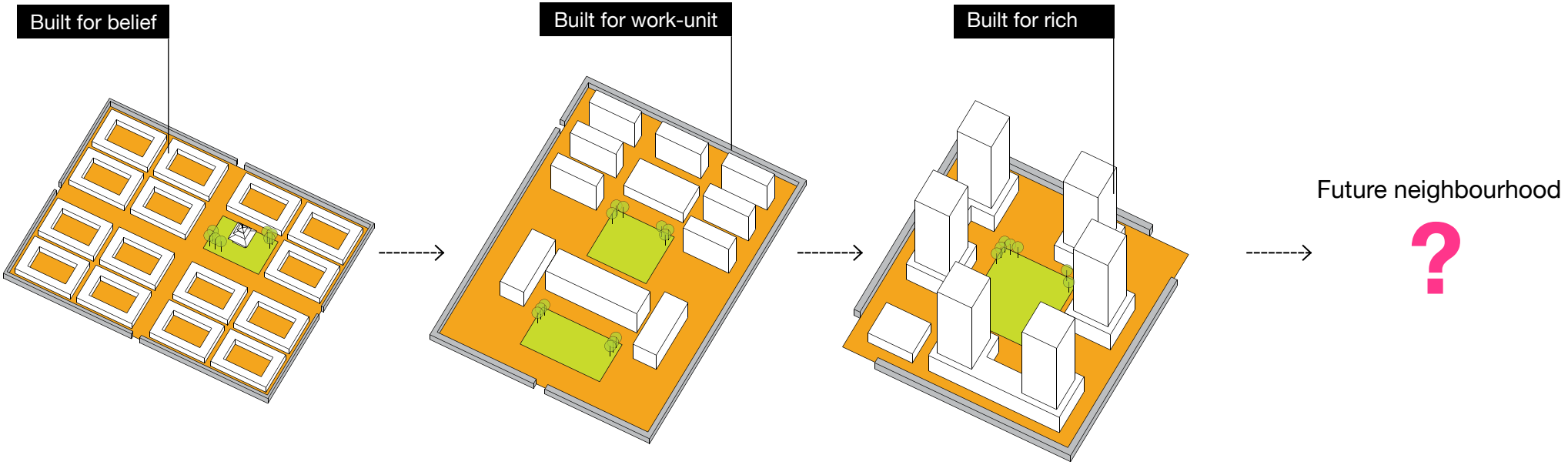


4.2.2 Planned economy era (1949-1987)

Another typical spatial pattern in Chinese cities is work-unit compounds. In 1949, the Communist Party came to power. The ideal of socialist emphasized the importance of social equity and evenness, thus the system of work-unit compound was established based on minimizing the distance to workplace from residential area. The compound is usually surrounded by walls and gates, and secured by the guards employed by the work-unit. Residents there are affiliated to the workplace, and can find almost everything they need for daily use inside the compound because of the integration of different functions. This model was considered as efficient because of inadequate infrastructure in the city and it's easier for information collection and monitor at that time (Wu, 2004). As both cadres and general staff lived in the same area, forming homogeneous self-contained enclaves, the interaction between people was intensive due to their affiliation to the same workplace. Thus the extent of socio-spatial difference was minimized (Li & Wu, 2005), but most public life was concentrated inside compounds, forming another introverted space.


Dwellings
Walls
Public facility
(kindergarten,
recreation club...)
Gate


Similar
socio-economic
groups
Class identity?



4.2.3 Market economy era (1987-now)

Starting in 1979, market reform and open-door policy brought new changes for urban development. The government started to relieve the burden of housing to residents themselves with the introduction of privatization. Together with the boom of real estate since 1987, residents have more freedom to choose where to live. The new commodity enclaves are built according to current standards, such as, building height, FAR, public facilities and so on. For safety and other reasons, these enclaves are surrounded by walls and gates too, making inside public space semi-private only for residents who live here. Those with higher income and affordability gradually move out to new commodity housing with higher environmental quality, while the others can't afford are left in old housing areas. Eventually, a new urban structure was formulated: upper class with high income are living in commodity housing such as gated communities, while lower-class who cannot afford expensive housing are still concentrating on low quality neighbourhoods such as urban villages, and degrading work-unit compounds with low-income migrant workers.

Another distinct spatial pattern is urban villages, which emerged in many big cities during tremendous urbanization period. The lands of urban villages are usually collective owned and distributed to each village household. Villagers try to occupy every corner to build for renting and there are limited standards for them to follow to achieve certain living quality. So when they are gradually surrounded by the city, these villages still remain their village identity, but on the other hand, offering opportunities for migrant workers.

From the analysis of neighbourhood evolvement, we can see that the social bonds are gradually vanishing, which raises the question of what is the social bonds in future neighbourhood?

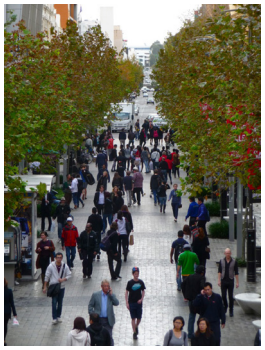
4.3 New Urbanism-creating enduring neighbourhoods

4.3.1 Definition and objective

New Urbanism is a dynamic urban design revolution, which started in United States in early 1980s. They propose a vision of the future that combines the best of the past with the realities and modern conveniences today (Katz, P., Scully, V. J. & Bressi, T. W. 1994). They intend to address issues such as disinvestment in central cities, the spread of placeless sprawl, increasing separation by race and income, environmental deterioration, loss of agricultural lands and wilderness, and the erosion of society's built heritage as one interrelated community-building challenge (Charter of the New Urbanism, 2001). As they say, 'We stand for the restoration of existing urban centers and towns within coherent metropolitan regions, the reconfiguration of sprawling suburbs into communities of real neighborhoods and diverse districts, the conservation of natural environments, and the preservation of our built legacy.'

4.3.2 Principles of New Urbanism for neighbourhoods

Their principles involve large scale as region to small scale as block and buildings. Here are relevant principles about neighbourhoods:
1) The neighbourhood, the district, and the corridor are the essential elements of development and redevelopment in the metropolis. They form identifiable areas that encourage citizens to take responsibility for their maintenance and evolution.
2) Neighborhoods should be compact, pedestrian friendly, and mixed-use. Districts generally emphasize a special single use, and should follow the principles of neighborhood design when possible. Corridors are regional connectors of neighborhoods and districts; they range from boulevards and rail lines to rivers and parkways.
3) Many activities of daily living should occur within walking distance, allowing independence to those who do not drive, especially the elderly and the young. Interconnected networks of streets should be designed to encourage walking, reduce the number and length of automobile trips, and conserve energy.
4) Within neighborhoods, a broad range of housing types and price levels can bring people of diverse ages, races, and incomes into daily interaction, strengthening the personal and civic bonds essential to an authentic community.
5) Transit corridors, when properly planned and coordinated, can help organize metropolitan structure and revitalize urban centers. In contrast, highway corridors should not displace investment from existing centers.
6) Appropriate building densities and land uses should be within walking distance of transit stops, permitting public transit to become a viable alternative to the automobile.




7) Concentrations of civic, institutional, and commercial activity should be embedded in neighborhoods and districts, not isolated in remote, single-use complexes. Schools should be sized and located to enable children to walk or bicycle to them.
8) The economic health and harmonious evolution of neighborhoods, districts, and corridors can be improved through graphic urban design codes that serve as predictable guides for change.
9) A range of parks, from tot-lots and village greens to ball fields and community gardens, should be distributed within neighborhoods. Conservation areas and open lands should be used to define and connect different neighbour¬hoods and districts.

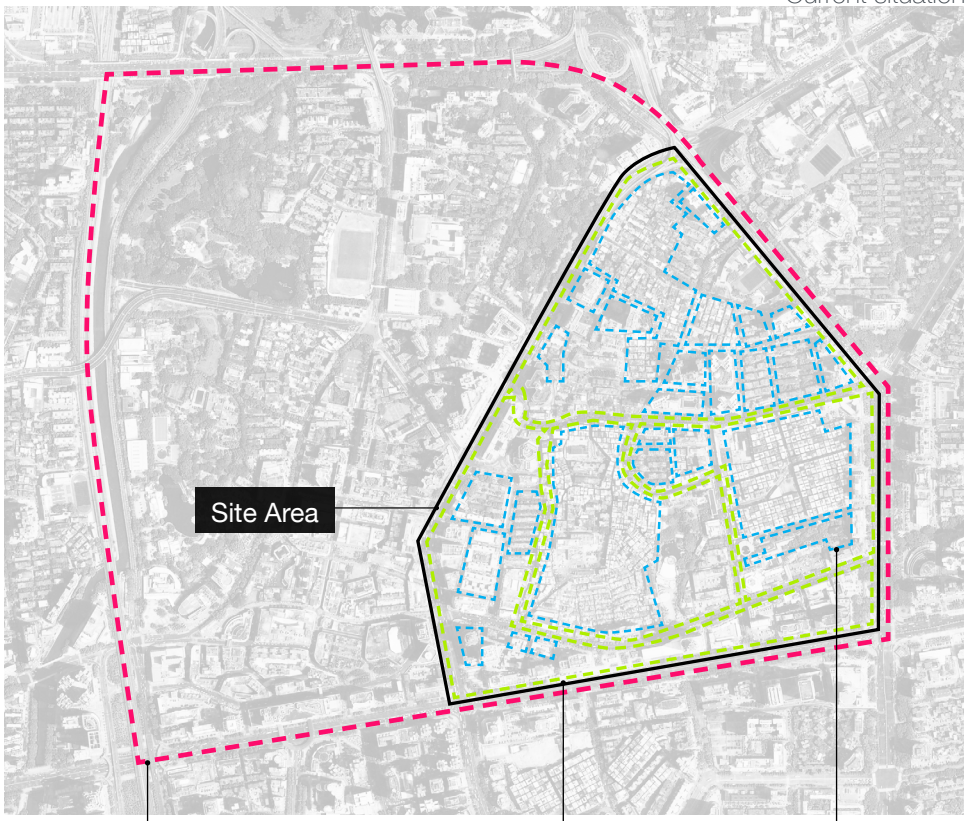
4.3.3 Evaluation

According to these universal guidelines for neighbourhoods and the problem statement from local context, I believe several essential principles should be fulfilled or improved in order to achieve the project aim: 'maintain the current social structure and facilitate their integration with others in both social and spatial perspective at neighbourhood scale.'
---Walkability
Walkability indicates that the size of a neighbourhood is within walking distance, so residents can get access to daily functions such as working, shopping, and service by foot. In addition to that, the street network inside neighbourhood should be designed pedestrian friendly, encouraging walking instead of automobiles.
---Connectivity
Neighbourhoods should be well connected to district at big scale to organize metropolitan structure and revitalize urban centres. In local scale, street network, especially pedestrian network, should be interconnected and continuous together with public spaces and functions like parks or squares, commercial activities etc.
---Diversity
Diversity can involve mixed use such as shops, dwellings, and offices within neighbourhood, blocks and buildings. In the case of site area, mixed use of shops like supermarkets, restaurants and informal market like the ones inside urban villages can be arranged together to attract multiple social groups. Thus, the mixed housing types should be remained to maintain current diverse social structure, which is another sense of diversity.
---Quality urban design
Suitable urban design is also important for neighbourhood. Not only fulfil basic functions for multiple groups, but creating a sense of place for pleasant public space to make it more attractive for all. Thus, these principles showed above could all be improved better with beauty and aesthetics.

Part 5 Strategy & Intervention

Manegement boundary

Current situation

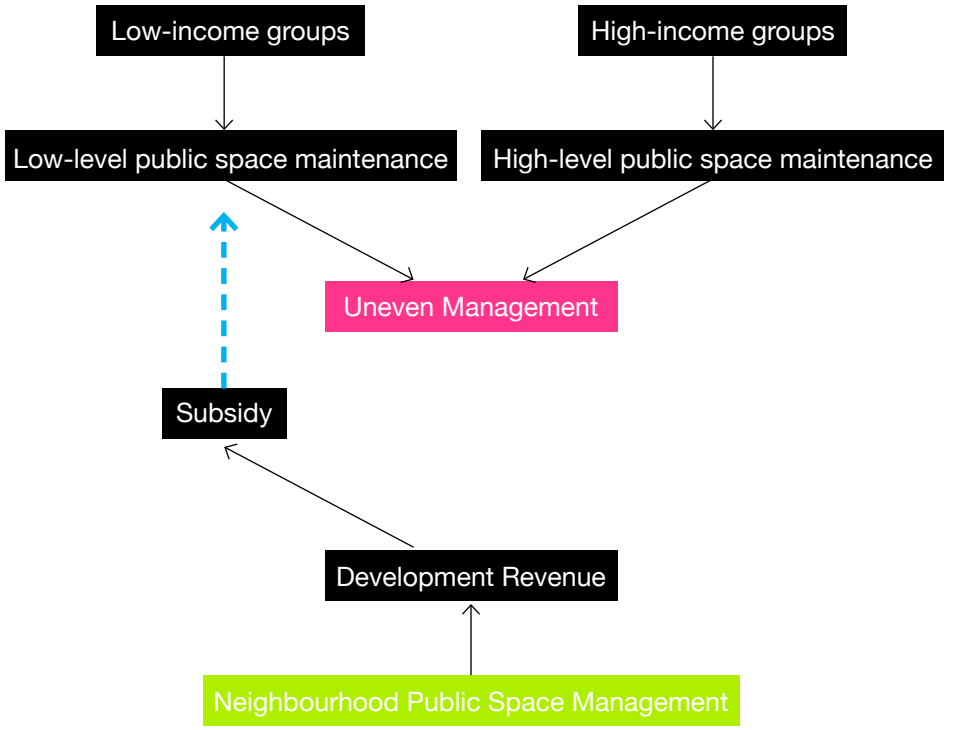


Dongmen Sub-district Government

Community management

Property Management Company

Balance Strategy



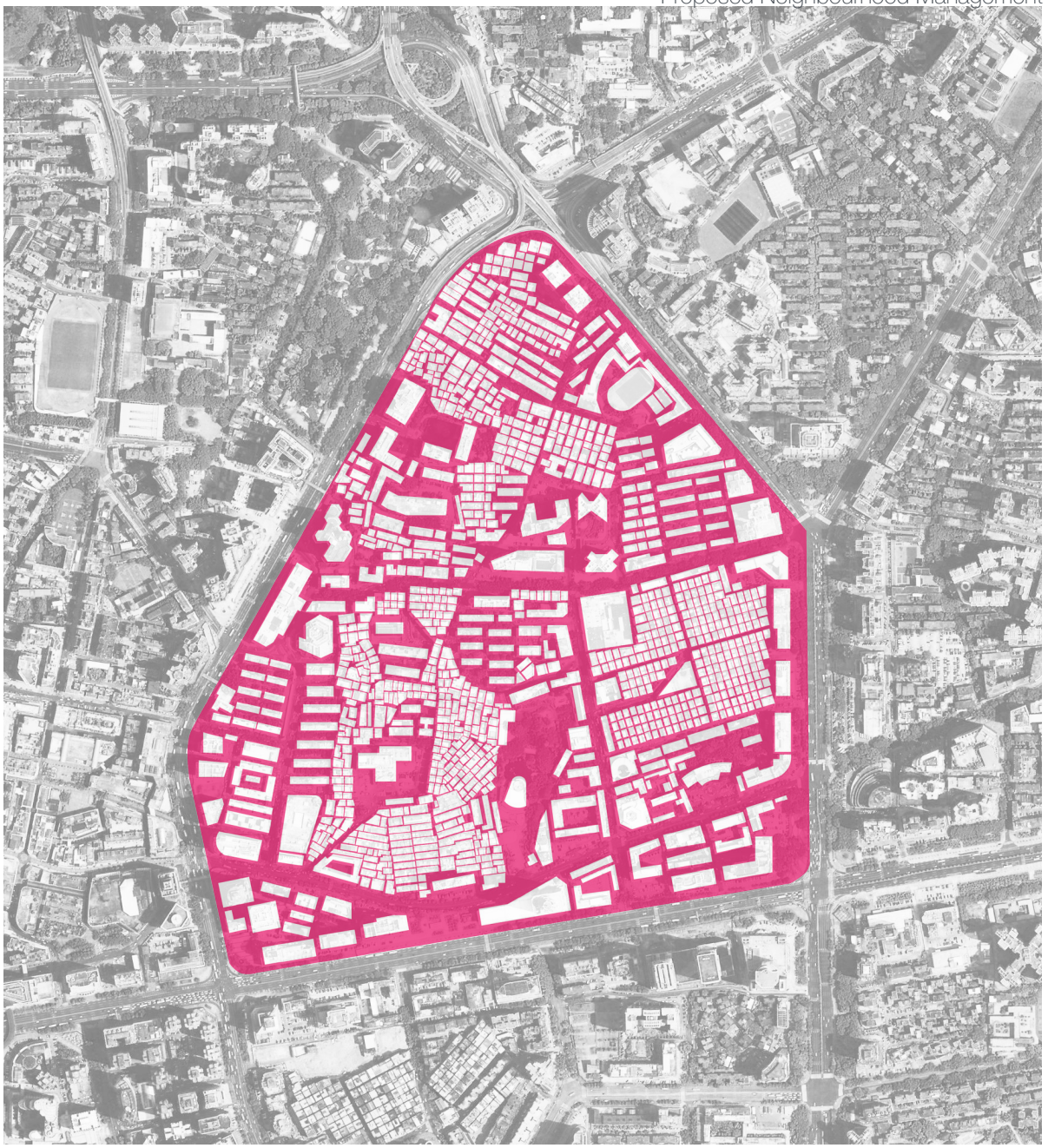
5.1 Layer-strategy

5.1.1 Neighourhood management

In order to deal with fragmented management in site area, which leads to unequal public service and facilities, a ‘neighbourhood management system’ is proposed here to replace four different community controls. Thus, public space within this neighbourhood can be improved and managed as a whole, diminishing negative effect caused by complex negotiation between multiple communities and property management companies.

Management boundary

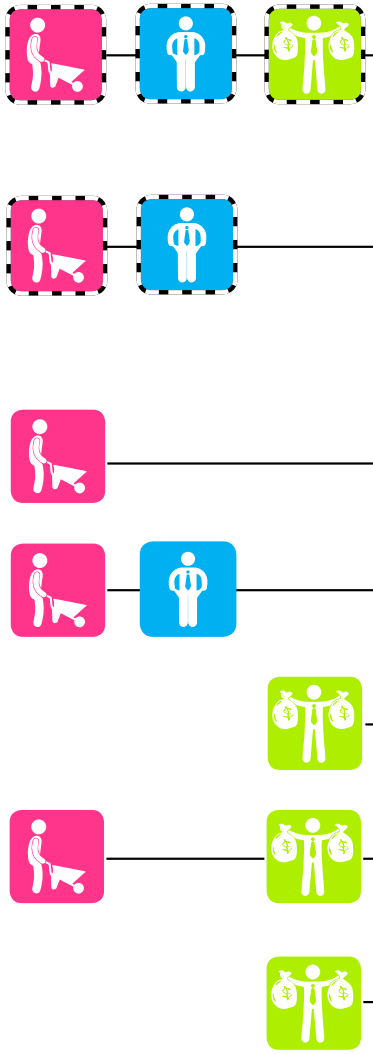
Proposed Neighbourhood Management



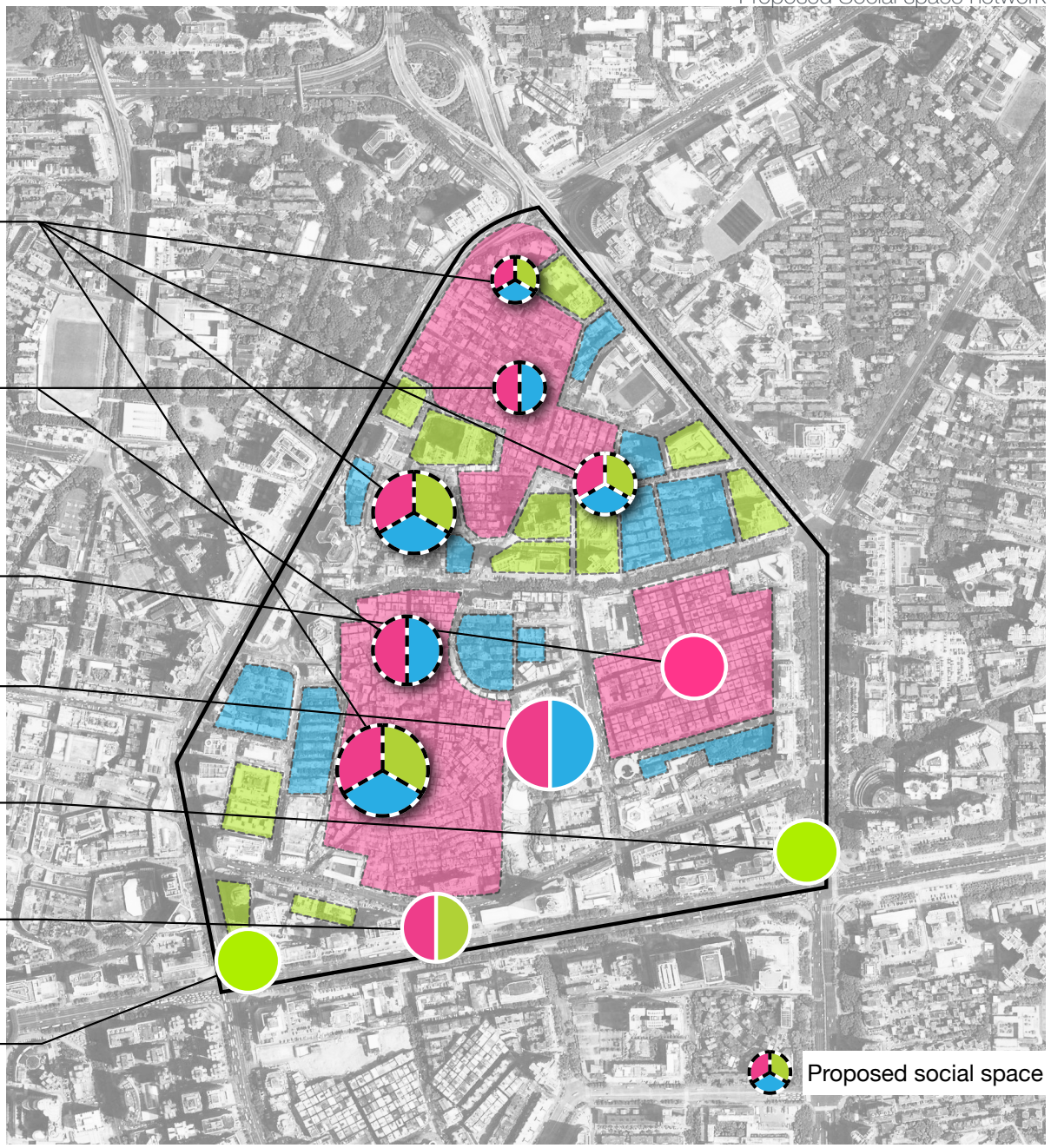
5.1.2 Social space network

Current living spaces for different social groups are constrained in fragmented compounds, and public space for all is limited. The map on the right shows current social space such as park, green space and sports center. The groups who use these spaces are also mapped, from which we can see that most of them are used by certain groups, and places for all is not enough.

In order to stimulate social cohesion and maintain current social structure, a social space network is proposed to offer more proper places in small scale for all social groups, and improve connection in between without influencing mixed social structure.

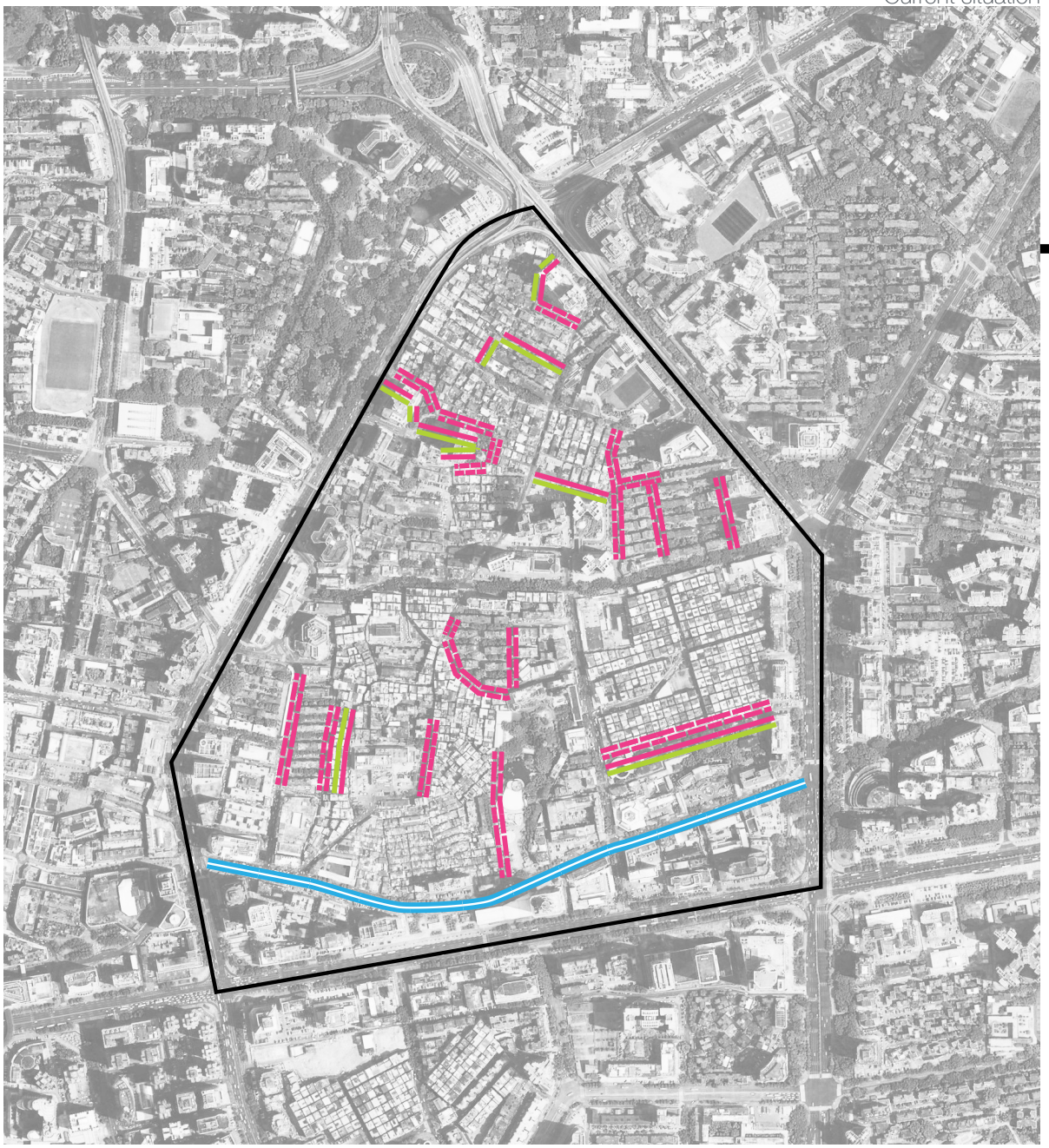


Proposed Social space network



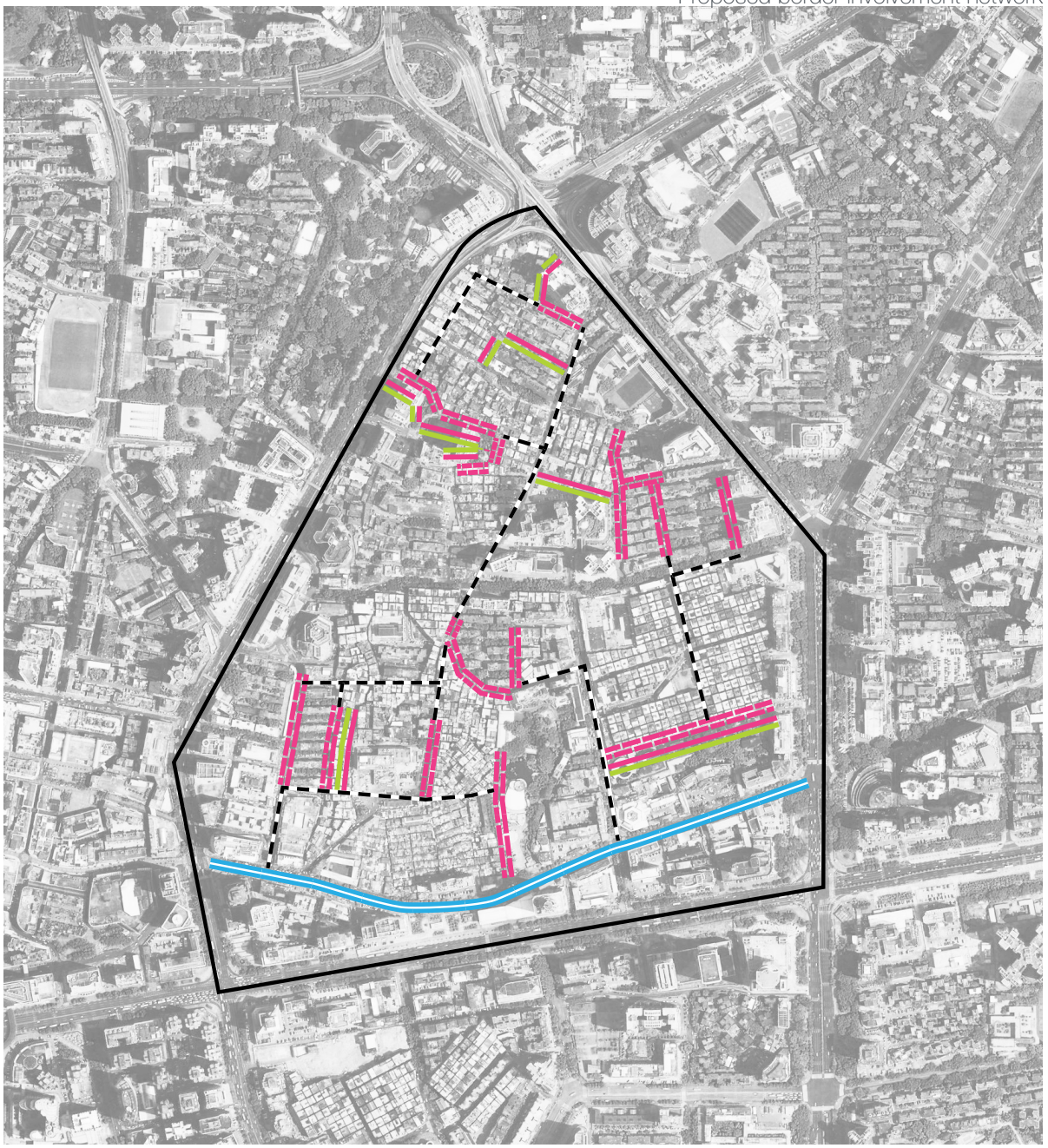
5.1.3 Border involvement

Lots of physical boundaries exist in this neighbourhood like wall and fences, distinct spatial quality, infrastructure etc. These boundaries are mapped in site area as can be seen on the right.



The proposal dealing with this boundary is to involve these borders into public space system---improve quality, add dynamic or function, thus to diminish ‘border’ effect, and turn this negative ‘border’ condition to positive public space.

Proposed border involvement network



Walls and fences

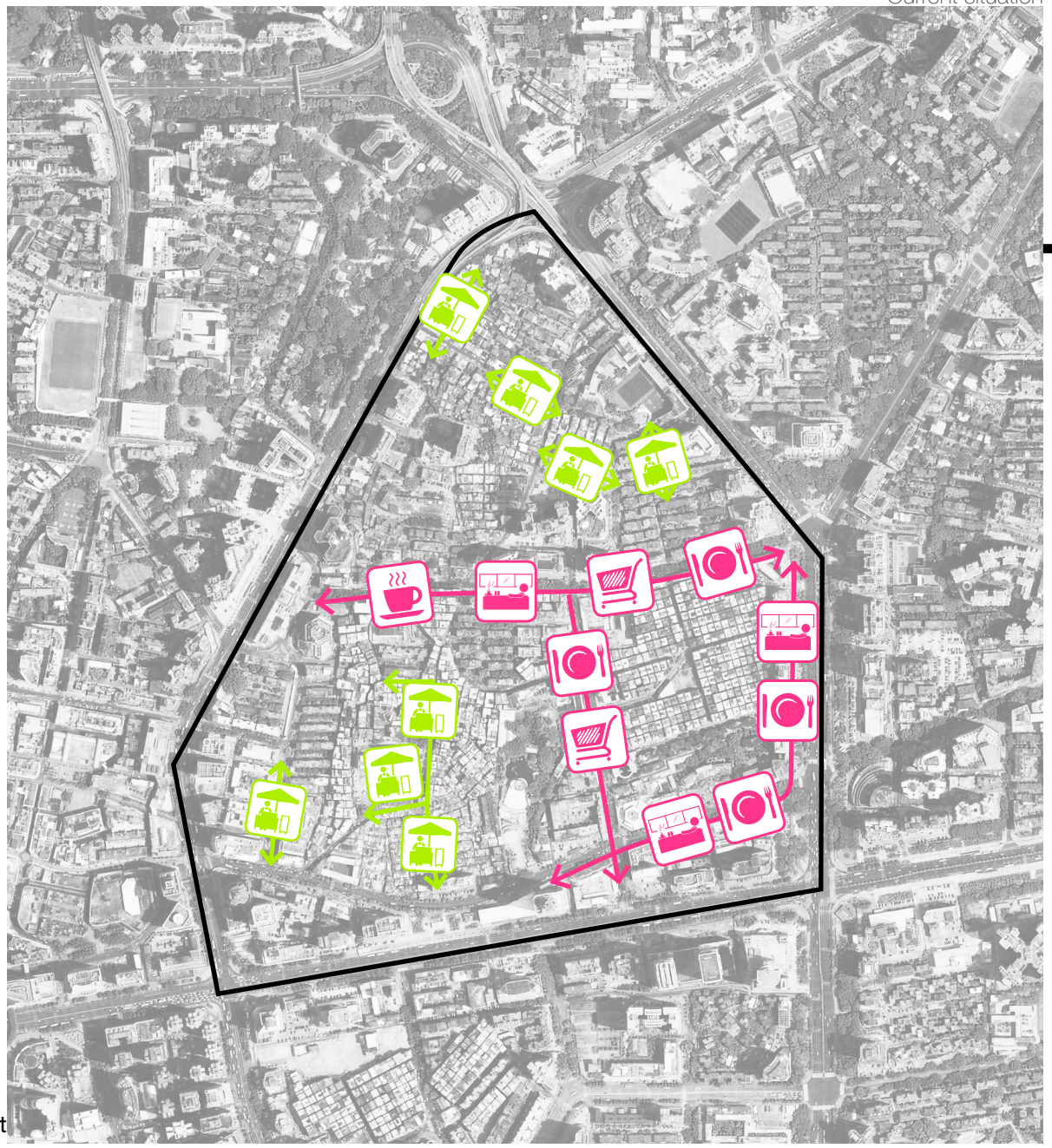
Infrastructure

Distinct spatial quality

Proposed connection

5.1.4 Daily supply network

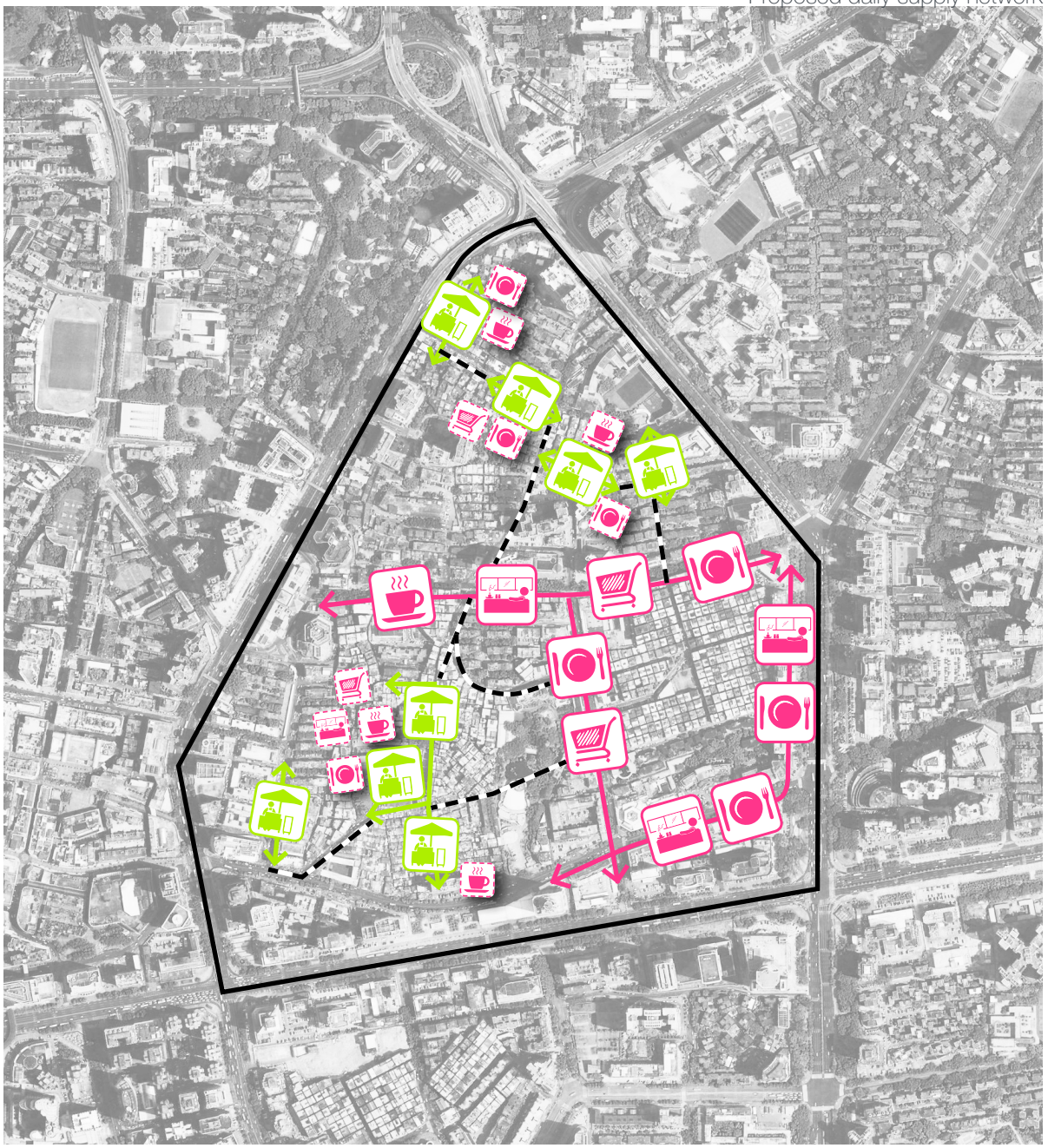
According to function analysis above, different social groups have different commercial types to fulfil daily use, which result in multiple introverted life circles. (right map)



In fact, those low-end floating markets inside urban villages have great value also for other social groups. Thus, I propose a daily supply network to involve all commercial types, and add more diversity inside urban villages to be more attractive, providing a continuous, comfortable walking environment for all residents.

Functional boundary

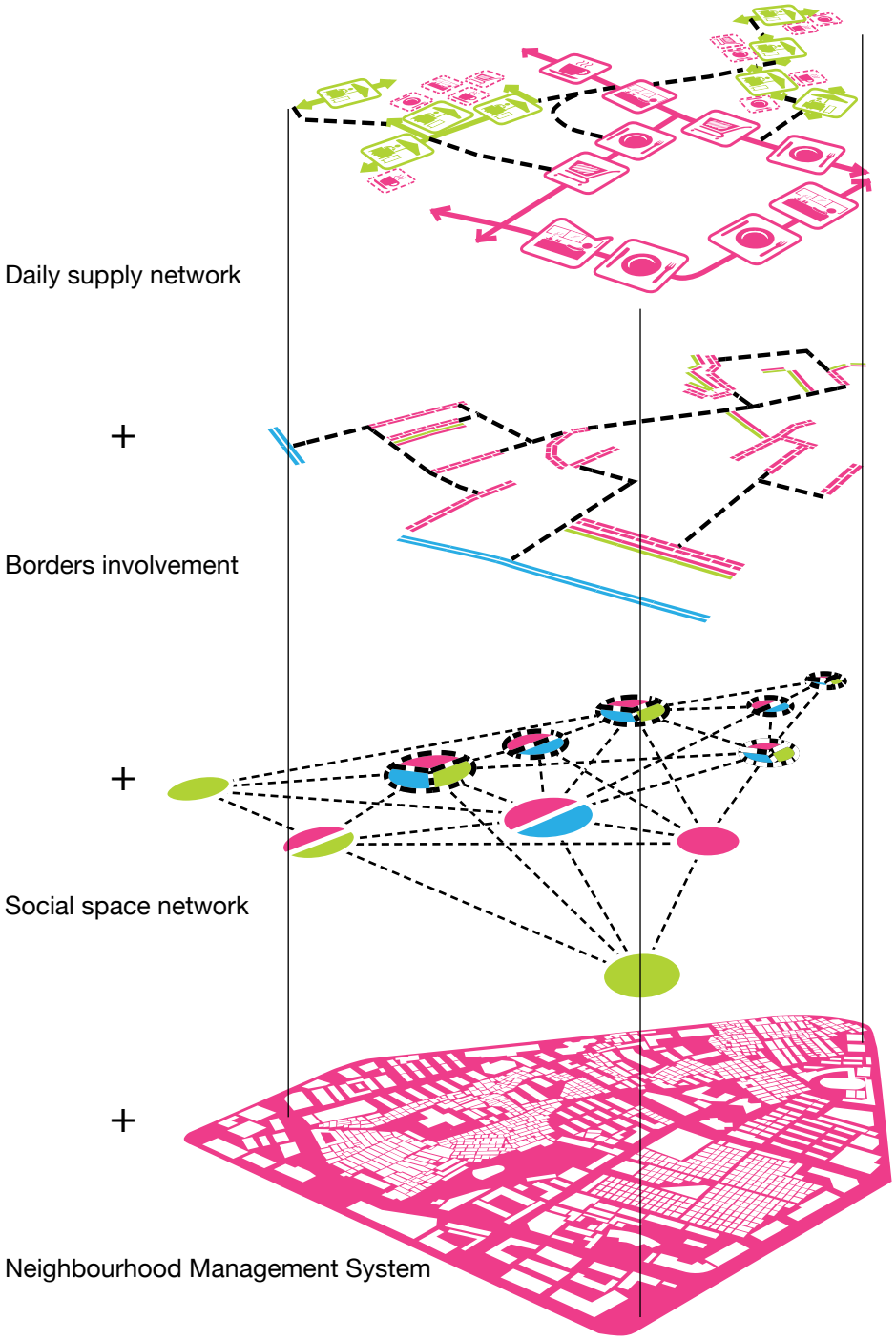
Proposed daily supply network



- Restaurants
- Supermarkets
- Tea room
- Recreation
- Informal market
- Proposed restaurants
- Proposed supermarkets
- Proposed tea room
- Proposed recreation
- Proposed connection

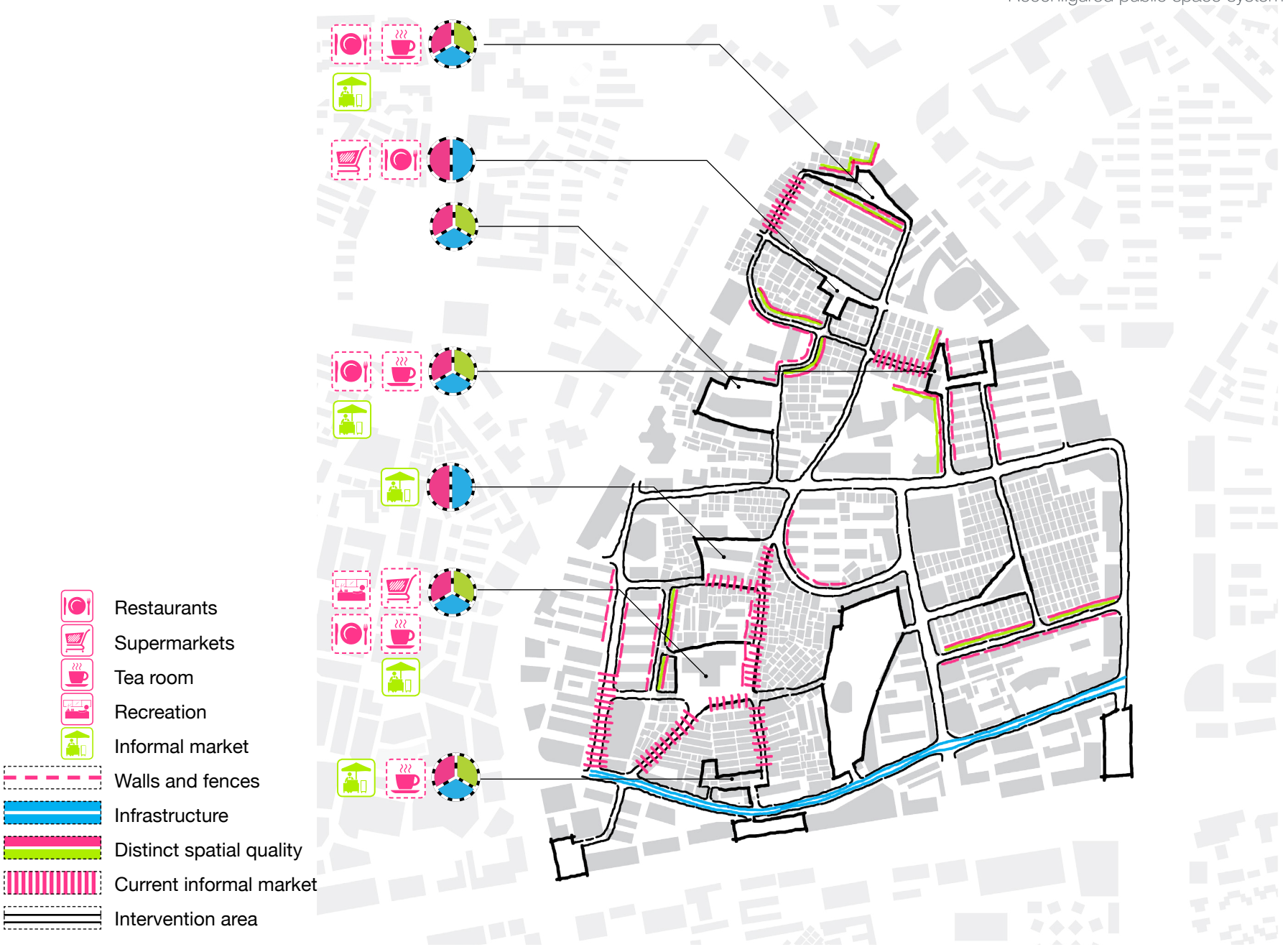
5.1.5 Composite structure plan

The four layers discussed above are dealing with different boundaries. When they are put together, a composite structure plan is formulated. Some parts of them are coincident, which means that more than one aim needs to be tackled in further intervention.

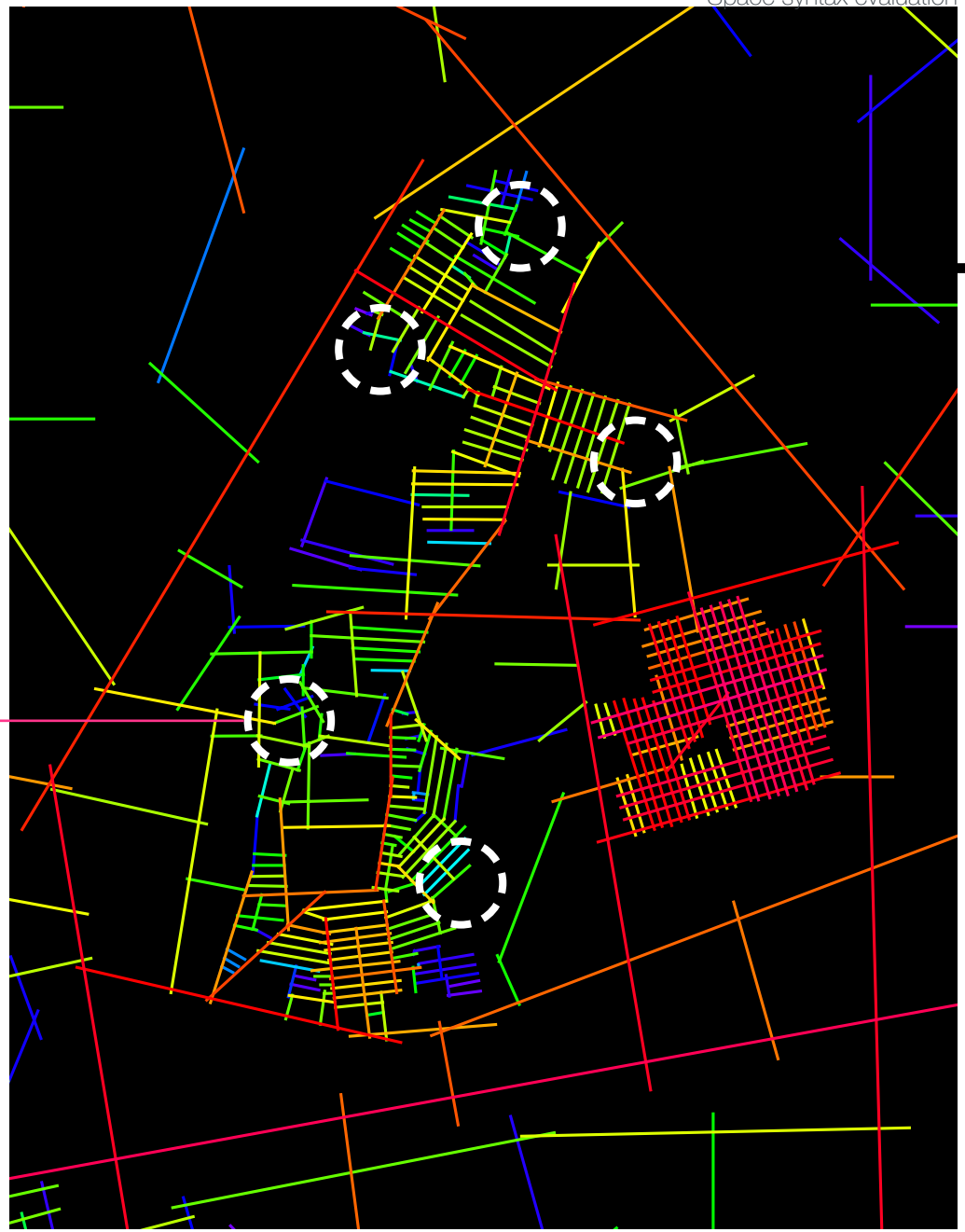


Composite structure plan

Reconfigured public space system



Here we evaluate this structure with space syntax to see if proposed connections are accessible. Those red lines have high-integrated value, while those are more blue and purple have less-integrated value, which need to be enhanced during intervention.

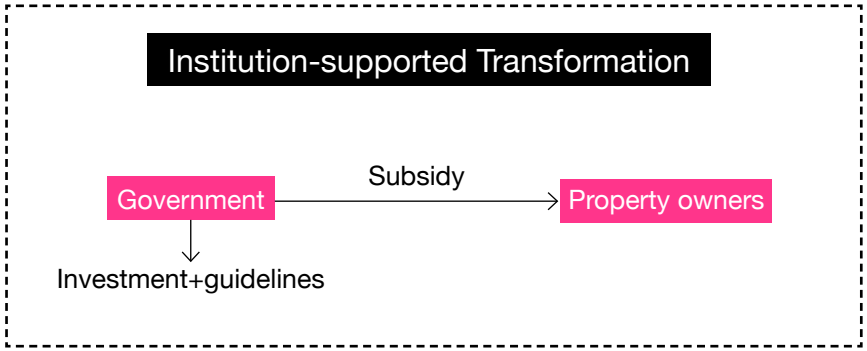


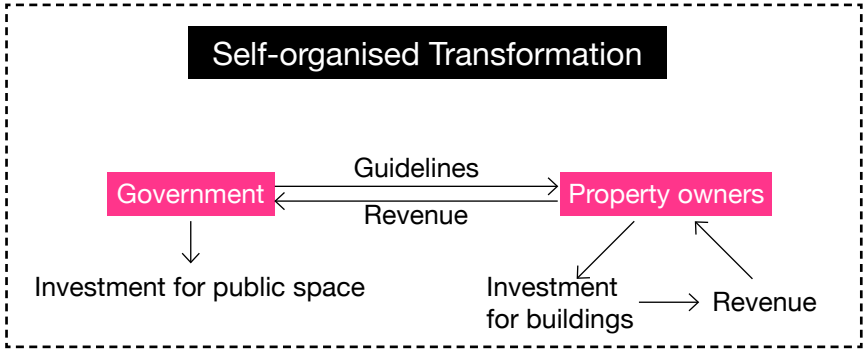
5.2 Toolbox for intervention

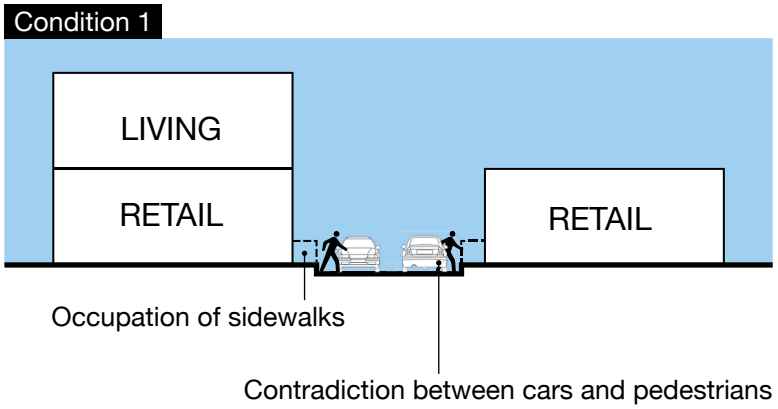
When dealing with this proposed public space network, there are different transform goals according to specific boundaries that need to tackle. This part will introduce different tools in terms of spatial transformation methods and stakeholders organization.

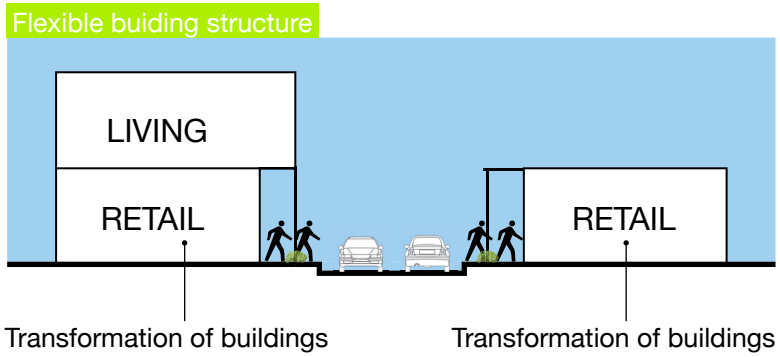
5.2.1 General connection

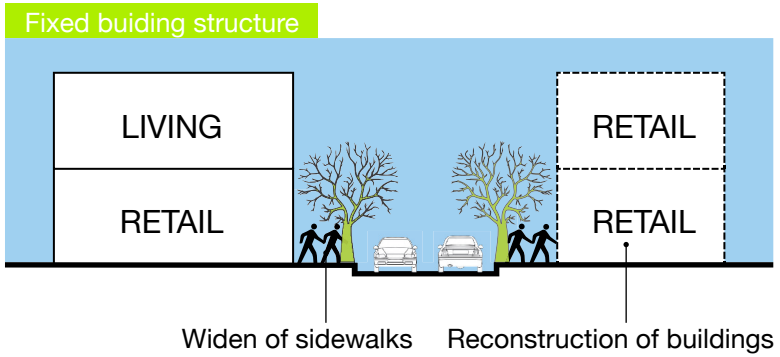
The first type is ‘general connection’. In those areas, walkability and connectivity need to be improved as basic elements within this public space network. When the connection is a street dealing with contradiction between cars and pedestrians (right diagram), there are two possible ways to solve---ground floor transformation and new construction of one side, depending on the building structure. These two transformation methods relates to different stakeholder organization (diagram below).





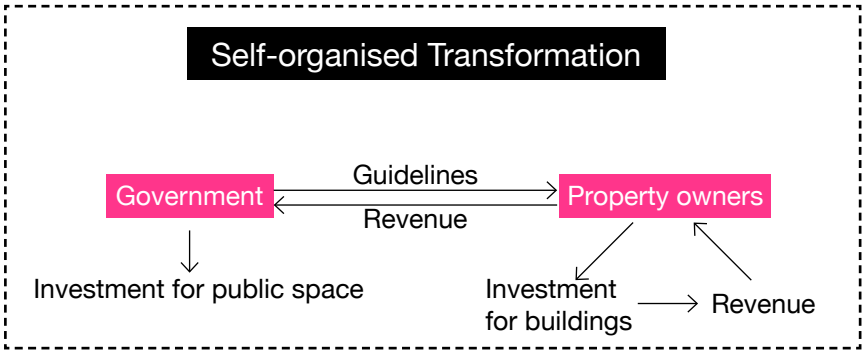


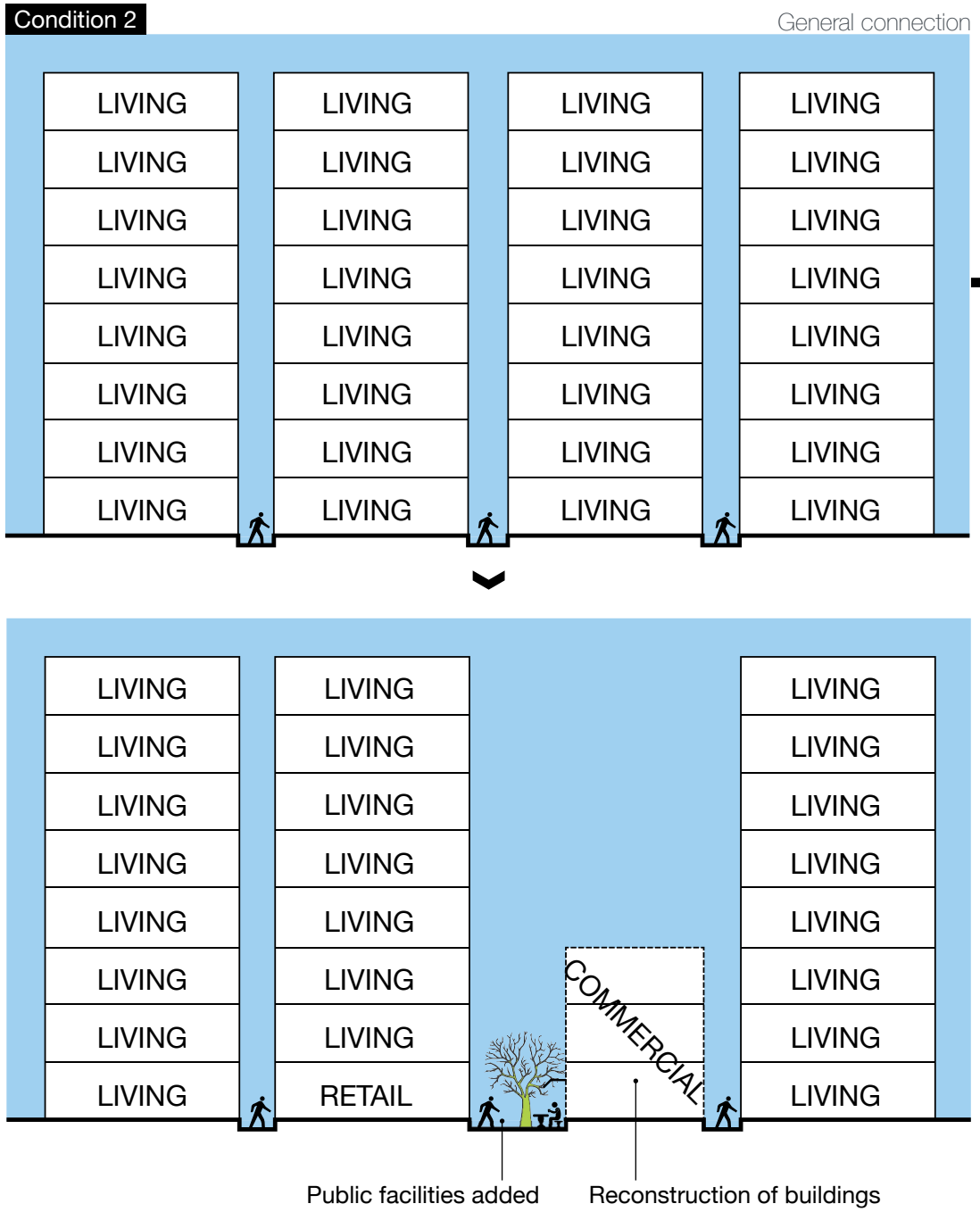




When connections inside urban villages need to be improved, there's always limited space (1-2meters). Here new constructions with function transform can be applied to make cost and revenue balanced. With this new construction, connections in between can be widen and new dynamic can be added such as commercial or social facilities (diagrams on the right).

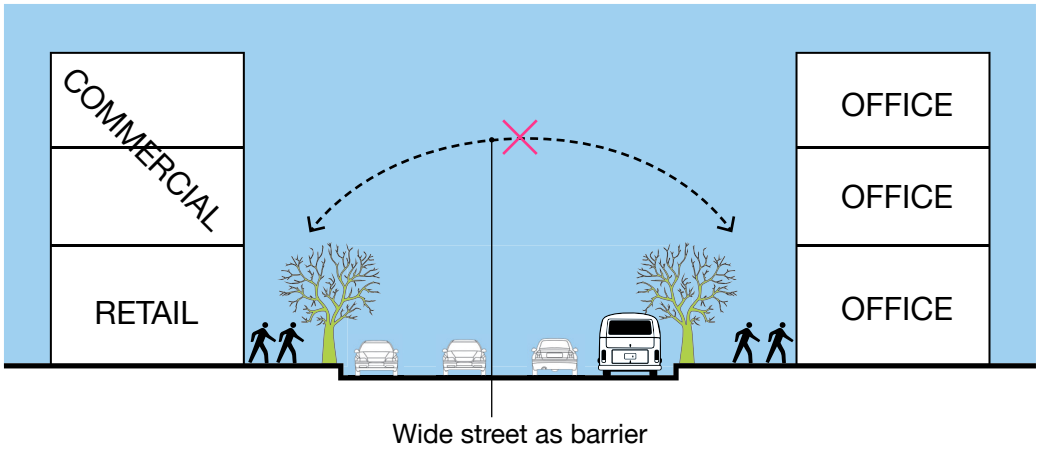
Under this condition, property owners can also act as developers too (diagram below).

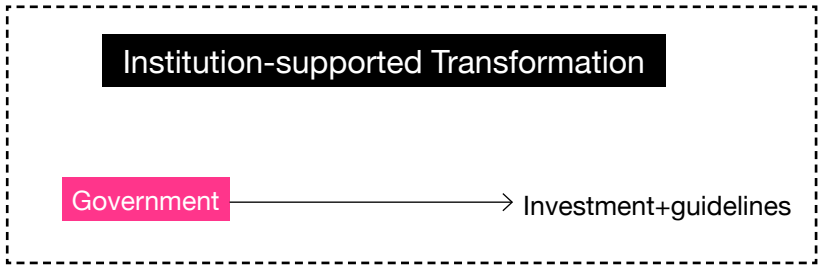


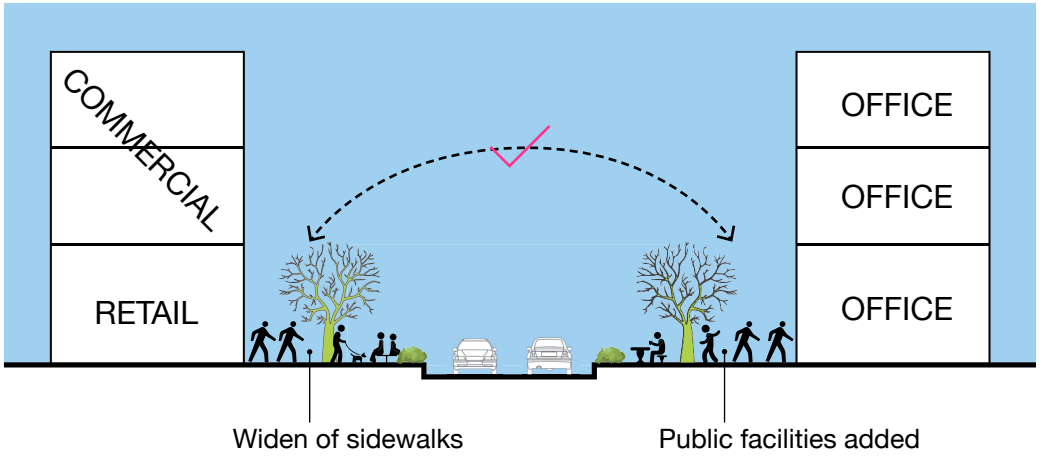


5.2.2 Infrastructure as physical boundary

When the road is too wide, it can act as barrier for connections. In this case, the road has four lanes, separating metro station, green space and several commodity enclaves apart from others. As two lanes always act as parking space, it's reasonable to transform them to part of sidewalks. Thus, facilities like benches, greenery can be added to make street attractive. Also the limit of traffic can improve¬ the accessibility of the street (diagrams on the right).
These two transformation methods relates to different stakeholder organization (diagram below).

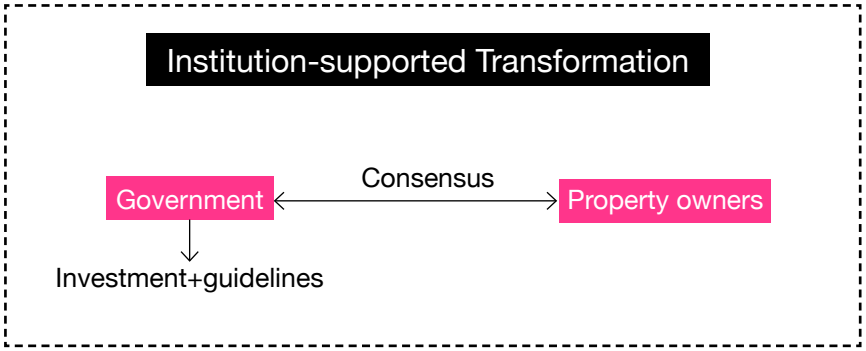




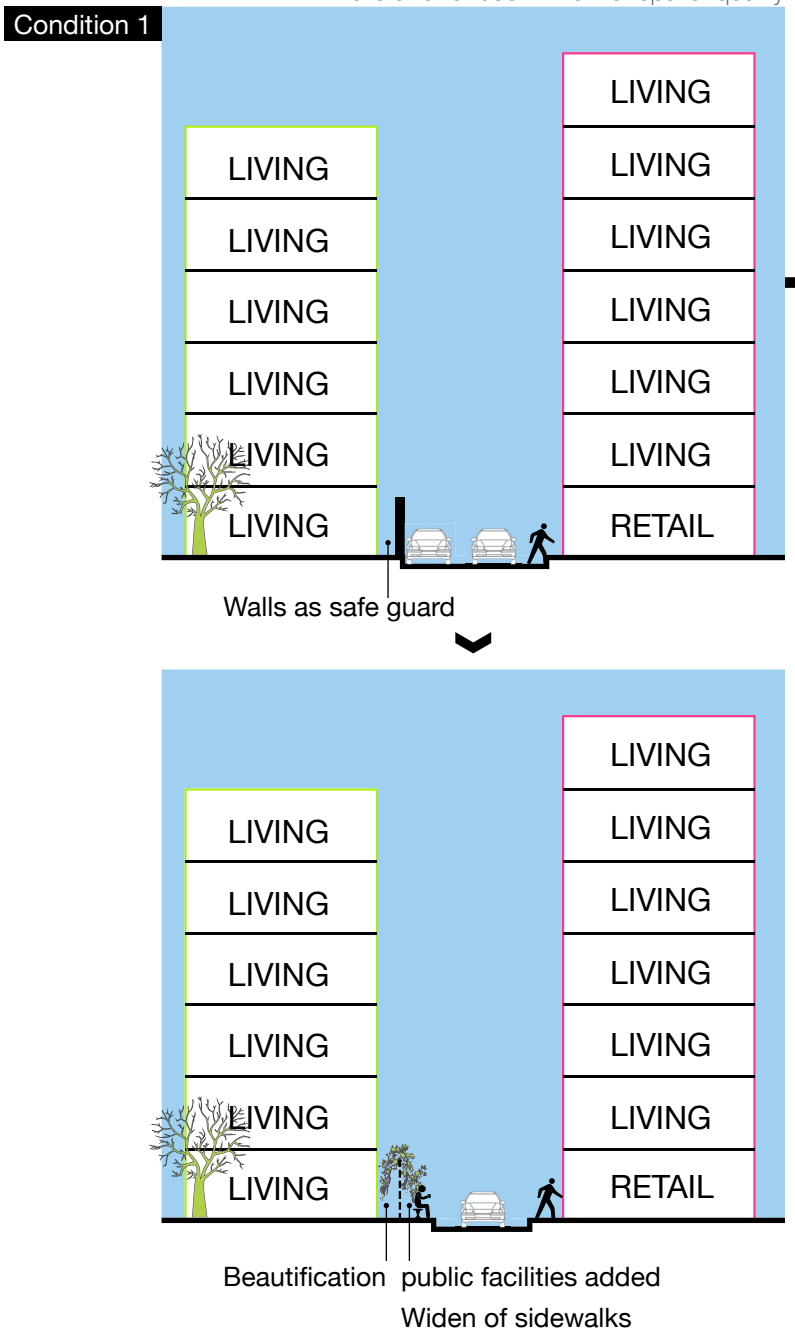


5.2.3 Wall and fences + distinct spatial quality as physical boundary

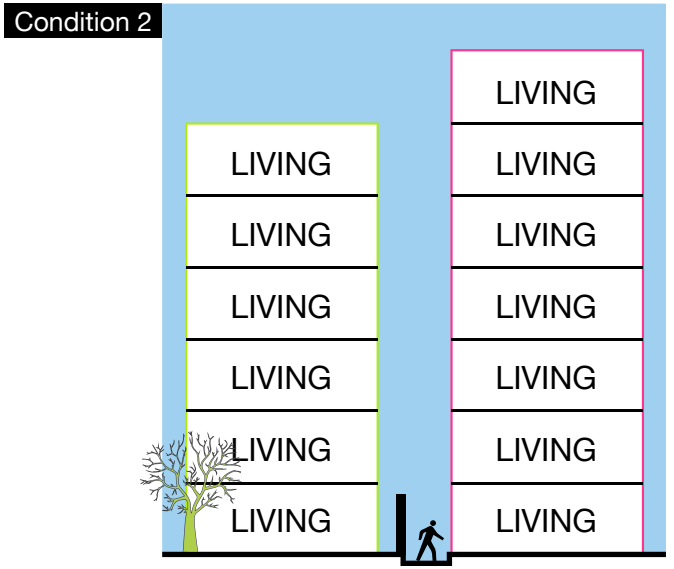
Walls and fences are common in commodity enclaves and some work-unit compounds for safety reasons. It's hard to remove walls as they serve certain functions, but it can act more than just walls. For example, certain beautification and new facilities can make space in between alive and attractive (diagrams on the right). In this case, only consensus is needed to make it work (diagram below).

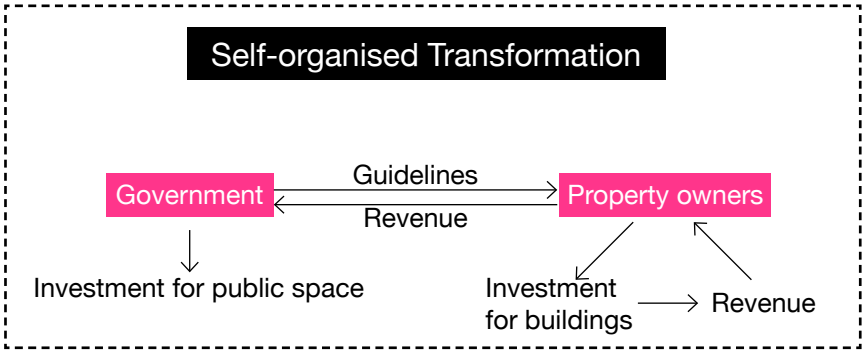


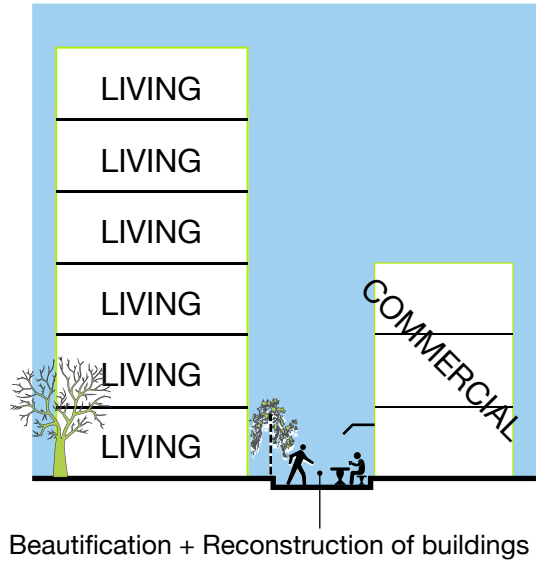
Walls and fences + Distinct spatial quality



On other conditions like what is shown on the right, there's limited space for improvement, then new construction is needed. This process involves government and property owners (diagram below) to improve boundary conditions.

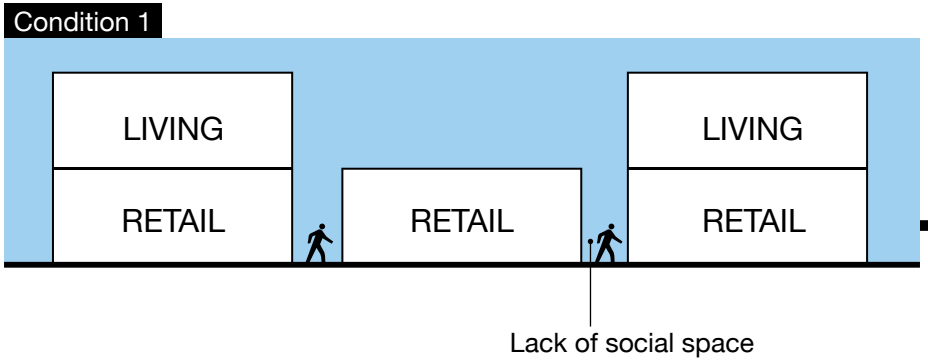


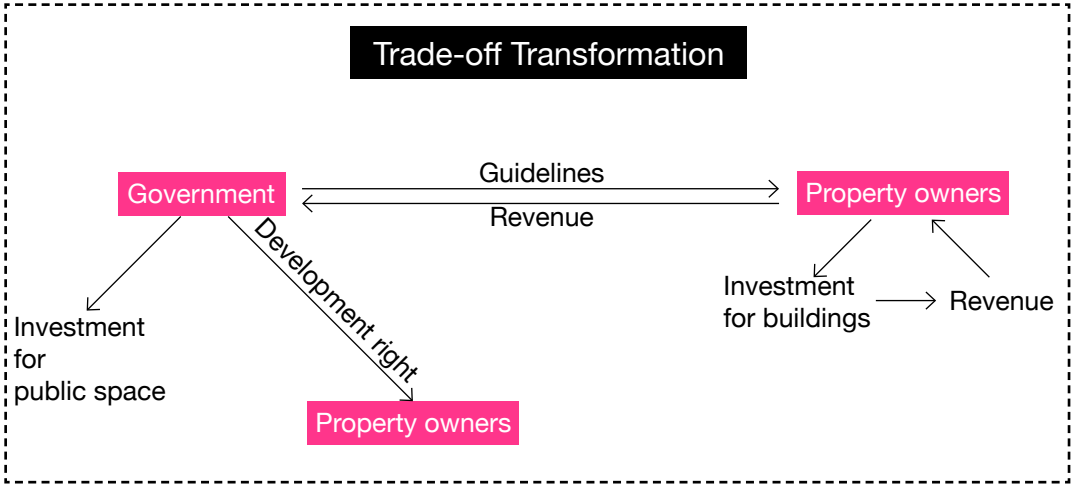


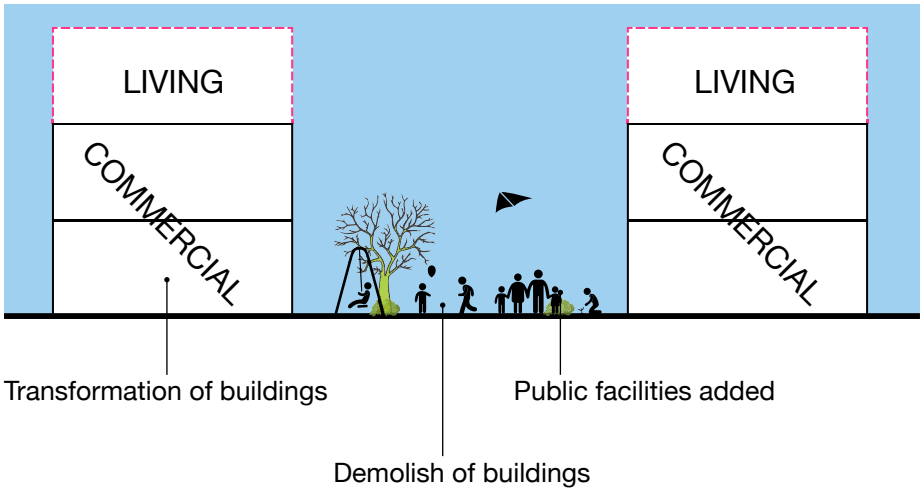


5.2.4 Social space making

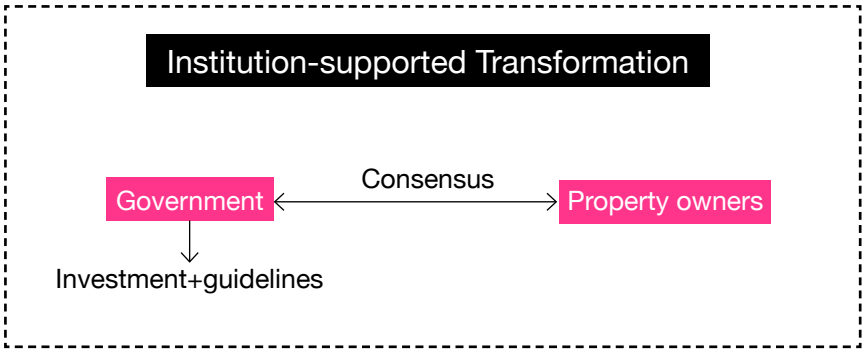
For where social space is needed, there are two conditions. If there is no extra space for that, then demolish and transformations are both needed. The way of balancing different stakeholders can be seen as 'trade-off transformation'---those transformed buildings can accommodate more space for commercial use, which can be transferred to property owners whose buildings are demolished (diagram below).

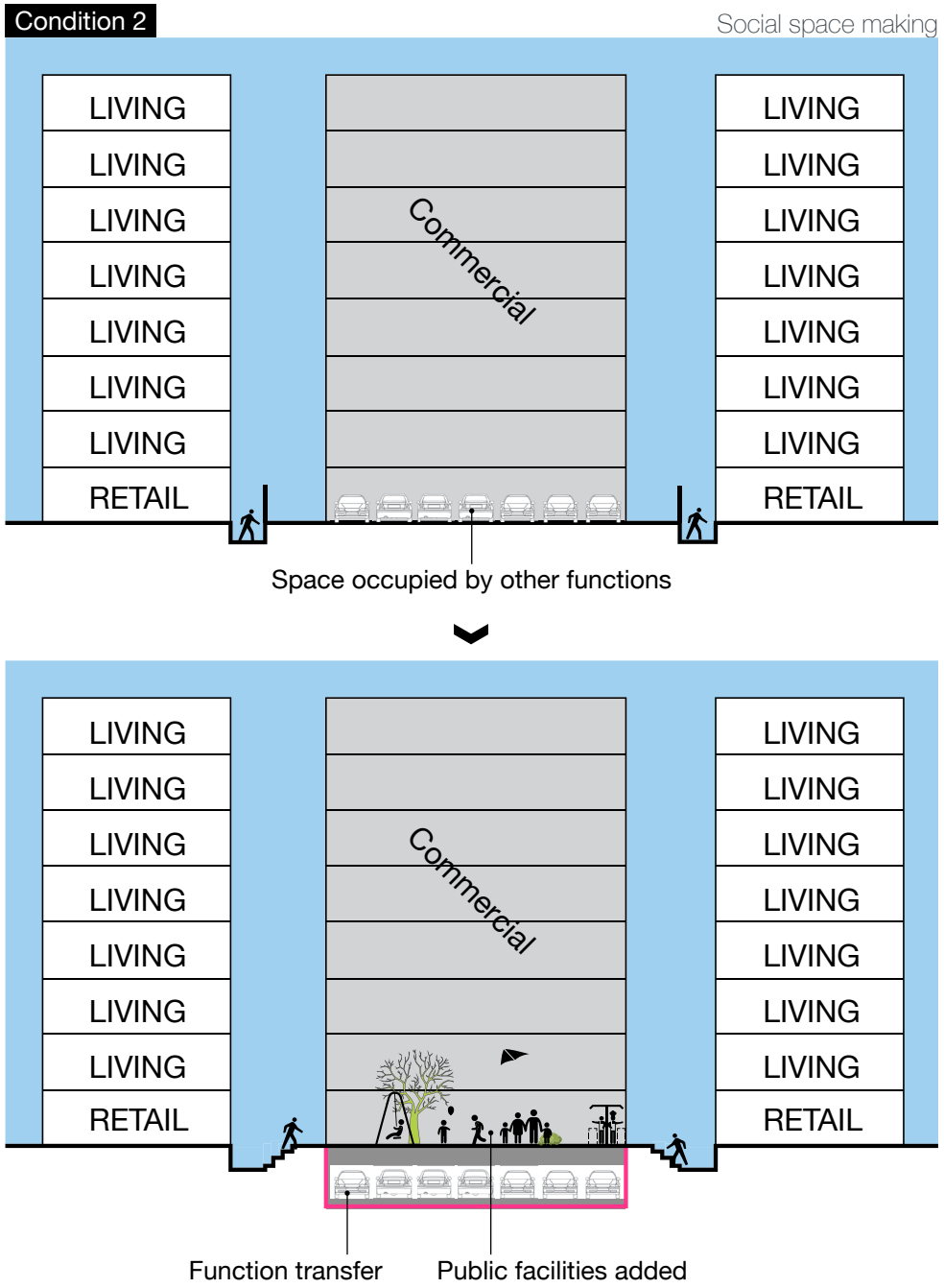






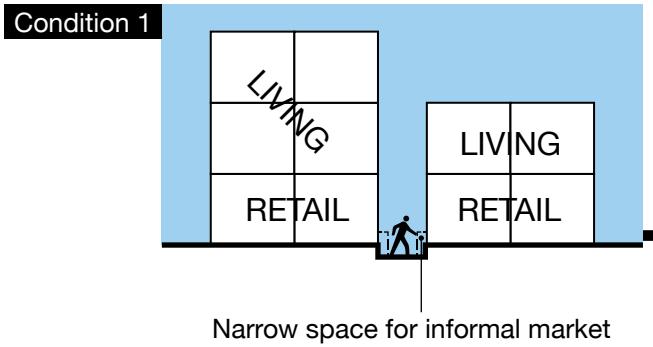
If there is a potential space, but occupied by other functions (in this case, parking lot), function transfer can be applied here to use underground space. Thus, ground-floor space can be transformed to social space accommodating public facilities. Under this condition, institution-supported transformation can be used (diagram below).

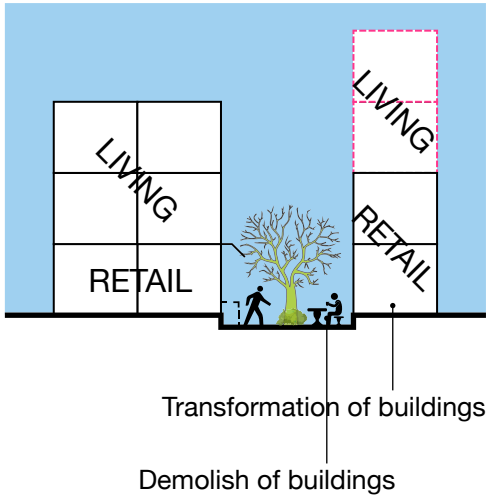


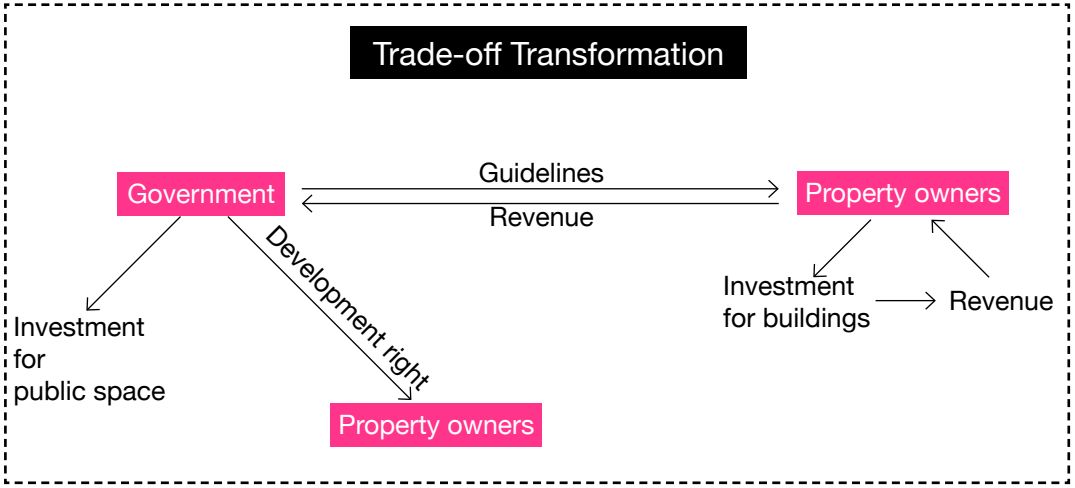


5.2.5 Informal market street

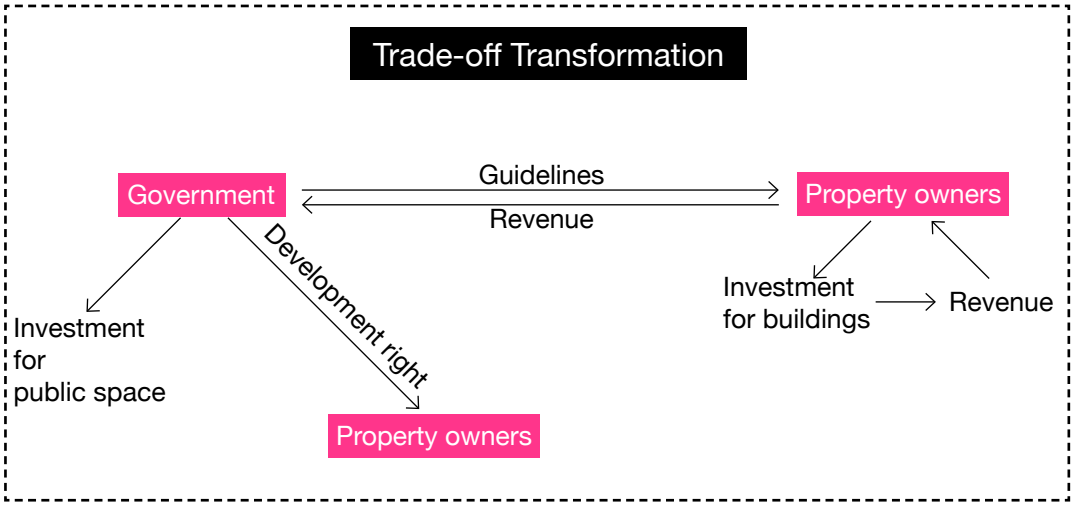
In the case of informal market street, the narrow and unpleasant spatial quality is a common issue. In order to get more space on street, one side of buildings can be demolished and transformed to higher buildings (diagram on the right). What's more, other commercial types aiming at middle or upper class can be added to stimulate diversity. Trade-off transformation can be applied in this case.

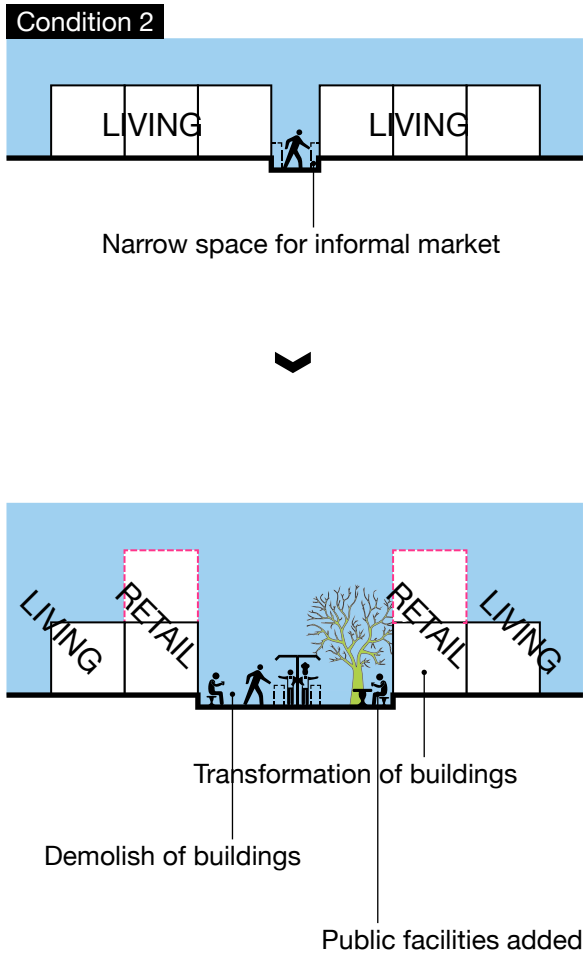




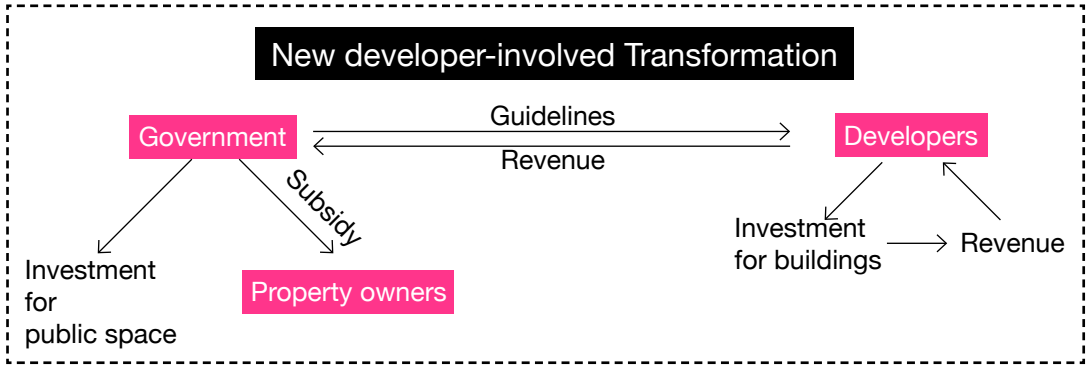


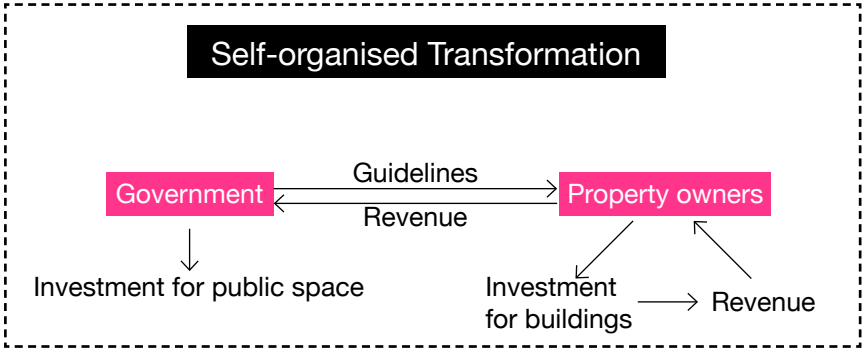
When it's possible to transform both sides of buildings, market street can accommodate more social functions (diagram on the right). The street can be wider, and buildings on both sides can be higher to exchange development right (diagram below).

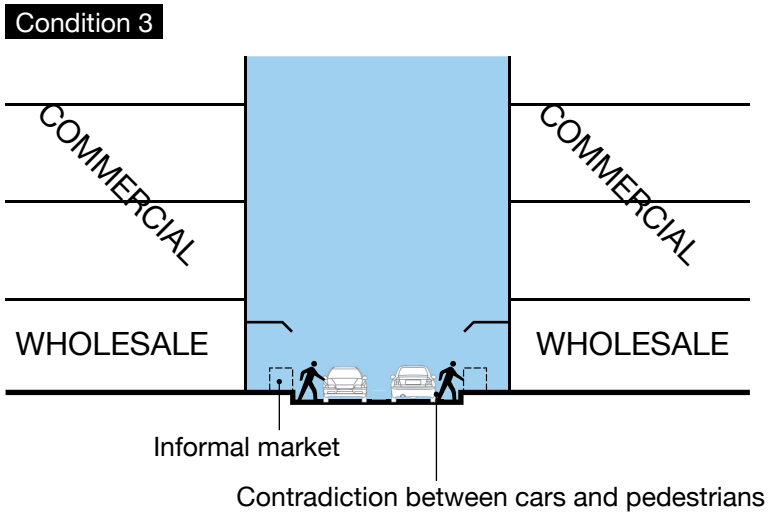


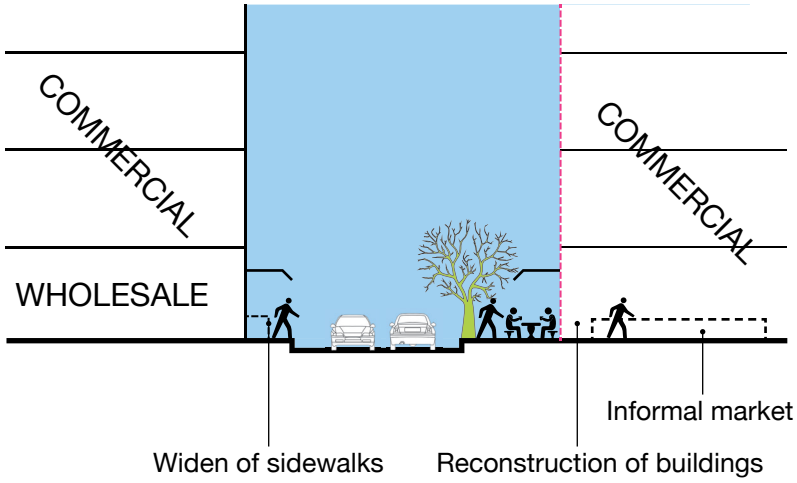


When informal market street also has to deal with cars, and there's limited chance for buildings transformation (high-rise, large public building), a new project is needed. Within this new project, sidewalls can be widened, functions can also be rearranged to accommodate multiple commercial types (diagram on the right). In this case, when property owners are not able to transform buildings by themselves, a new developer will be involved---new developer-involved transformation (diagram below).

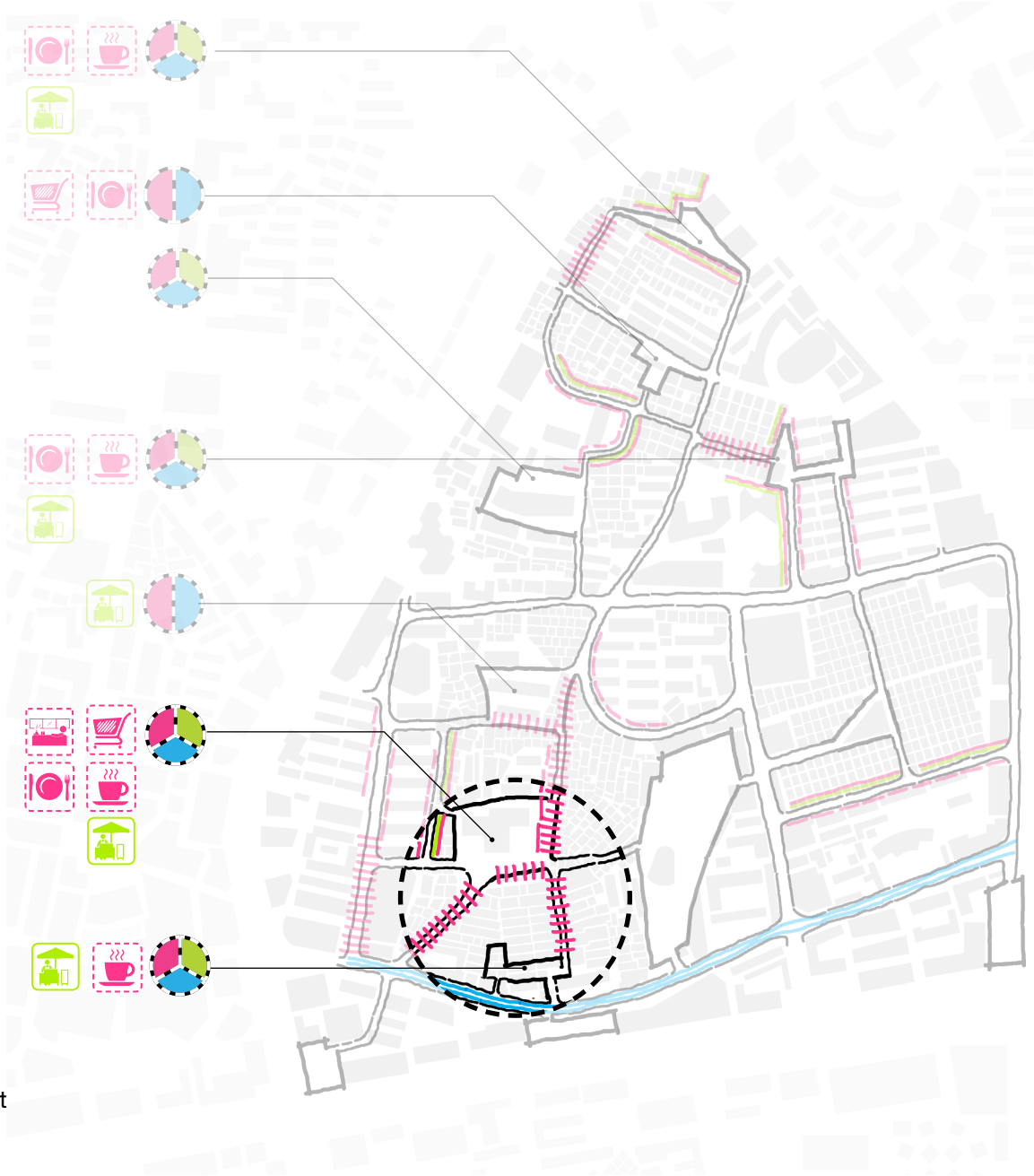








Transformation Type			Spatial Intervention	Interest-balance Model
1. General connection	Mixed-use streets	One-side transformation	Widen of sidewalks; Reconstruction of buildings	Self-organised
		Two-side transformation	Transformation of buildings	Institution-supported
	Pedestrian routes		Reconstruction of buildings; Public facilities added	Self-organised
2. Physical boundary---Infrastructure			Widen of sidewalks; Public facilities added	Institution-supported
3. Physical boundary ---Walls and fences & distinct spatial quality	Mixed-use streets		Widen of sidewalks; Public facilities added; Beautification	Institution-supported
	Pedestrian routes		Beautification; Reconstruction of buildings	Self-organised
4. Social space making	Limited space		Transformation of buildings; Demolish of buildings; Public facilities added	Trade-off
	Potential space		Function transfer; Public facilities added	Institution-supported
5. Informal-market street	Mixed-use streets		Reconstruction of buildings; Widen of sidewalks;	New developer-involved; Self-organised
	Pedestrian routes	One-side transformation	Transformation of buildings; Demolish of buildings;	Trade-off
		Two-side transformation	Transformation of buildings; Demolish of buildings; Public facilities added	Trade-off


Restaurants
Supermarkets
Tea room
Recreation
Informal market
Walls and fences
Infrastructure
Distinct spatial quality
Current informal market
Intervention area

New construction or transformed buildings
Informal markets
New trees
Public facility
Green space
Perspective

1 General connection
2 Physical boundary---Infrastructure
3 Physical boundary---Wall and fences & distinct spatial quality
4 Social space
5 Informal market street

Perpective of central square

Part 6 Reflection

1. The relationship between the theme of the studio and the subject chosen in this framework

'The subject of this studio is contemporary cities in global and regional contexts and how we as urban planners and designers work strategically to guide their development. Cities today are complex and diverse and have many aspects and characters and many different ways of being seen and understood…' (Complex Cities and Regions in Transformation)

As one of the preferred projects in this studio, Shenzhen is an interesting and challenging location to explore. Its strategic location in Chinese and global context, its tremendous transformation during the past decades and also multiple consequences caused by that have drawn lots of attention and need to be studied. Compared to other global cities in the world, Shenzhen shares lots of common social and spatial problems although they are influenced by different context. The study of similar global cities has contributed to the understanding of Shenzhen, and on the other hand, this project in Shenzhen may also remind people of similar problems in other cities and offer a suggestion of how to understand and react.

2. The relationship between the project and the wider social context

This project raises the problem of 'social-spatial segregation', which has been studied a lot, especially in European countries. The social consequence of 'segregation' relates to lots of negative effects caused by it. People living in different parts of a city often get unequal access to basic public services (Feitosa et al., 2007), which means living in certain spaces often suffer from poor quality of infrastructure, housing, public space and higher exposure to violence etc. (Bolt et al. 2009). Furthermore, the segregation may limit one's access to information, resources and opportunities to contact with other groups, then leads to intense prejudice and discrimination and incomplete participation in society, such as labour market participation and others like education, politics and culture (Musterd, 2005). This problem is actually very common but ignored in big cities of China due to its rapid urbanization. The majority of low-income groups live in degraded places such as urban villages while upper-class group live in gated communities, which have restricted access to outsiders. In this project, the challenge is to how to deal with 'segregation' caused by multiple boundaries in a complex and ever-changing context, diminish negative effect and lead to a better social environment for all groups.

3. The relationship between the methodical line of approach of the studio and the method chosen in this framework

'The studio puts forward the idea that spatial planners should act as articulators between various stakeholders producing the city. Spatial planners do that by assisting those stakeholders with translating those disparate interests into spatial organization that is notionally beneficial for society. We do that through the proposition of new forms of spatial organization and spatial intervention, by envisioning new forms of associations between different stakeholders, by using innovative tools to promote sustainability, by articulating those aspects through RESEARCH and DESIGN…' (Complex Cities and Regions in Transformation)

In my own project, one of the most important aspects is how to balance various interests of multiple stakeholders. The initial motivation of 'socio-spatial segregation' is actually the huge disparity of social and spatial resources that are accessible to different social groups. In order to deal with negative effects caused by this 'disparity', it's vital to consider and facilitate lower-class groups during interventions. However, to some extent, this may limit the interests of current beneficiaries such as developers or property owners. Then it's another challenge in this project to balance them all at the same time.

4. The relationship between research and design

The research of this project starts with understanding 'socio-spatial' segregation in various scales. From bigger scale as in China and Shenzhen city, it seems that two strong forces play vital roles---market and institution. When it comes to local scale, multiple boundaries come out as both consequences and causes of current situation. The problem seems too complex to tackle with a simple design proposal, so I propose different strategy layers for each kind of boundary and combine them together as a complex strategy network in the end. So the 'design' is closely related to what I got from 'research', and it's very clear that 'where', 'what' I should deal with and 'how'.
However, I can still see the limitations of my approach. The original goal of this project is to provide a public space network so that different groups could share, use and communicate. That means they can always find suitable and affordable housing in this neighbourhood. I can't foresee or predict the future effect caused by my interventions, but for sure the improvement of public space will raise the price of surrounding housing. If that happens without any regulation or control from relevant organizations, the 'reconfigured neighbourhood' for all may become another gated community only for wealthy people.

Part 7 Reference

ATKINSON, R. & KINTREA, K. (2000) Owner-occupation, social mix and neighbourhood impacts. Policy & Politics, 28, 93-108.
BOLT, G., VAN KEMPEN, R. & VAN WEESEP, J. (2009) After urban restructuring: relocations and segregation in Dutch cities. Tijdschrift voor economische en sociale geografie, 100, 502-518.
BREITUNG, W. 2011. Borders and the city: Intra-urban boundaries in Guangzhou (China). Quaestiones Geographicae, 30, 55-61.
CASTELLS, M. & MOLLENKOPF, J. (1991) Dual city. Restructuring New York. New York: Russell Sage Foundation,.
CHUNG, H. 2010. Building an image of Villages-in-the-City: A Clarification of China's Distinct Urban Spaces. International Journal of Urban and Regional Research, 34, 421-437.
CLARK, W. A. (1986) Residential segregation in American cities: A review and interpretation. Population Research and Policy Review, 5, 95-127.
DAWKINS, C. J. (2004) Measuring the spatial pattern of residential segregation. Urban Studies, 41, 833-851.
DEKKER, K. & BOLT, G. (2005) Social cohesion in post-war estates in the Netherlands: Differences between socioeconomic and ethnic groups. Urban Studies, 42, 2447-2470.
DETR, C. (2000) By Design: Urban design in the planning system: toward better practice. Department of the Environment, Transport and the Regions, London,.
DUNCAN, O. D. & DUNCAN, B. (1955) A methodological analysis of segregation indexes. American sociological review, 20, 210-217.
FEITOSA, F. F., CAMARA, G., MONTEIRO, A. M. V., KOSCHITZKI, T. & SILVA, M. P. (2007) Global and local spatial indices of urban segregation. International Journal of Geographical Information Science, 21, 299-323.
FORREST R, KEARNS A. (2001) Social cohesion, social capital and the neighbourhood[J]. Urban studies , 38(12), 2125-2143.
FRANCIS, J., GILES-CORTI, B., WOOD, L. & KNUIMAN, M. 2012. Creating sense of community: The role of public space. Journal of Environmental Psychology.
GEHL, J. 2011. Life between buildings: using public space, Island Press.
GRAHAM, E., MANLEY, D., HISCOCK, R., BOYLE, P. & DOHERTY, J. (2009) Mixing housing tenures: is it good for social well-being?. Urban Studies, 46, 139-165.
GREENBERG RAANAN, M. & SHOVAL, N. (2014) Mental maps compared to actual spatial behavior using GPS data: A new method for investigating segregation in cities. Cities, 36, 28-40.
GU, C. & SHEN, J. (2003) Transformation of urban socio-spatial structure in socialist market economies: the case of Beijing. Habitat International, 27, 107-122.
HAMNETT, C. & RANDOLPH, B. (1988) Cities, Housing and Profits: flat break-up and the decline of private renting, , Taylor & Francis.
HAO, P., SLIUZAS, R. & GEERTMAN, S. 2011. The development and redevelopment of urban villages in Shenzhen. Habitat International, 35, 214-224.
JARGOWSKY, P. A. (1996) Take the money and run: Economic segregation in US metropolitan areas. American sociological review, , 984-998.
JOHNSTON, R., FORREST, J. & POULSEN, M. (2001) The geography of an EthniCity: residential segregation of birthplace and language groups in Sydney, 1996. Housing Studies, 16, 569-594.
KATZ, P., SCULLY, V. J. & BRESSI, T. W. 1994. The new urbanism: Toward an architecture of community, McGraw-Hill New York.
LAWHON, L. L. 2009. The neighborhood unit: physical design or physical determinism? Journal of Planning History, 8, 111-132.
LELÉVRIER, C. (2013) Social mix neighbourhood policies and social interaction: The experience of newcomers in three new renewal developments in France. Cities,.
LEVIN, I. (2013) Planning and place in the city: mapping place identity. Australian Planner, , 1-2. .
LI, Z. & WU, F. (2006) Socio-spatial differentiation and residential inequalities in Shanghai: a case study of three neighbourhoods. Housing Studies, 21, 695-717.
LIU, Y. & WU, F. (2006) Urban poverty neighbourhoods: Typology and spatial concentration under China's market transition, a case study of Nanjing. Geoforum, 37, 610-626.
LUND, H. 2003. Testing the claims of new urbanism: Local access, pedestrian travel, and neighboring behaviors. Journal of the American Planning Association, 69, 414-429.
LYNCH, K. (1960) The image of the city, , the MIT Press.
MADANIPOUR, A. (1996) Design of urban space: An inquiry into a socio-spatial process, , Wiley Chichester.
MADRAZO, B. & VAN KEMPEN, R. (2012) Explaining divided cities in China. Geoforum, 43, 158-168.
MARCUSE, P. & VAN KEMPEN, R. (2000) Conclusion: a changed spatial order. Globalizing Cities: A New Spatial Order?, , 249-275.
MARCUSE, P. & VAN KEMPEN, R. (2002) Of states and cities: the partitioning of urban space, , Oxford University Press.
MARCUSE, P. (1989) 'Dual City': a muddy metaphor for a quartered city. International journal of urban and regional research, 13, 697-708.
MARCUSE, P. (2000) The language of globalization. MONTHLY REVIEW-NEW YORK-, 52, 23-27.
MCMILLAN, D. W. & CHAVIS, D. M. 1986. Sense of community: A definition and theory. Journal of community psychology, 14, 6-23.
MILLS, E. S. & HAMILTON, B. W. (1994) Urban economics, , HarperCollins College Publishers New York.
MONKKONEN, P. & ZHANG, X. (2013) Innovative measurement of spatial segregation: Comparative evidence from Hong Kong and San Francisco. Regional Science and Urban Economics,.
MUGNANO, S. & PALVARINI, P. (2013) "Sharing space without hanging together": A case study of social mix policy in Milan. Cities,.
MURDIE, R. A. (1969) Factorial Ecology of Metropolitan Toronto, 1951-1961: an essay

on the social geography of the city, , [University of Chicago], Department of Geography.
MURIE, A. & MUSTERD, S. (1996) Social segregation, housing tenure and social change in Dutch cities in the late 1980s. Urban studies, 33, 495-516.
MUSTERD, S. (2005) Social and ethnic segregation in Europe: Levels, causes, and effects. Journal of Urban Affairs, 27, 331-348.
NETZBAND, M., BANZHAF, E., HÖFER, R. & HANNEMANN, K. (2009) Identifying the poor in cities: how can remote sensing help to profile slums in fast growing cities and megacities. IHDP Update, 1, 22-28.
REARDON, S. F. & O SULLIVAN, D. (2004) Measures of spatial segregation. Sociological methodology, 34, 121-162.
RELPH, E. (1976) Place and placelessness, , Pion London.
ROMERO, H., Vásquez, A., Fuentes, C., Salgado, M., Schmidt, A., & Banzhaf, E. (2012) Assessing urban environmental segregation (UES). The case of Santiago de Chile. Ecological Indicators, 23, 76-87.
RUIZ TAGLE, J. (2012) A Theory of Socio-spatial Integration: Problems, Policies and Concepts from a US Perspective. International Journal of Urban and Regional Research,.
SAKODA, J. M. (1981) A generalized index of dissimilarity. Demography, 18, 245-250.
SHEVKY, E. & BELL, W. (1955) Social area analysis; theory, illustrative application and computational procedures..
SYKORA, L. (1999) Processes of socio-spatial differentiation in post-communist Prague. Housing Studies, 14, 679-701.
TALEN, E. 1999. Sense of community and neighbourhood form: An assessment of the social doctrine of new urbanism. Urban studies, 36, 1361-1379.
VAN KEMPEN, R. & MURIE, A. (2009) The new divided city: changing patterns in European cities. Tijdschrift voor economische en sociale geografie, 100, 377-398.
VAN KEMPEN, R. & ŞULE ÖZÜEKREN, A. (1998) Ethnic segregation in cities: new forms and explanations in a dynamic world. Urban studies, 35, 1631-1656.
WESSEL, T. (2000) Social polarisation and socioeconomic segregation in a welfare state: the case of Oslo. Urban Studies, 37, 1947-1967.
WU, F. 2005. Rediscovering the 'gate'under market transition: from work-unit compounds to commodity housing enclaves. Housing Studies, 20, 235-254.
WHITE, M. J. (1983) The measurement of spatial segregation. American journal of sociology, , 1008-1018.
WONG, D. W. (1998) Measuring multiethnic spatial segregation. Urban Geography, 19, 77-87.
WOOD, G. (2003) Staying secure, staying poor: the "Faustian Bargain". World Development, 31, 455-471.
ZACHARIAS, J. & TANG, Y. 2010. Restructuring and repositioning Shenzhen, China's new mega city. Progress in Planning, 73, 209-249