

# CLOUD WALL

Interactive Street Design Strategy for the Reorganization  
of Urban Space in the context of Gated Communities in Modern China

P5 Report

Sep. 2010 – Jun. 2011



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June 29, 2011



## ACKNOWLEDGEMENTS

I want to address my greatest gratitude towards Wouter A.J. Vanstiphout and Maurice G.A.D. Harteveld for their warm help on this report; and my graduation studio mentors: Samir Bantal and Machiel van Dorst, for their useful suggestions, and Roberto Rocco for the revise advises on the report. I also want to thank my family, my boy friend, and my friends, for their encouragement and inspiration during the process of my graduation year.



# PREFACE

This is a project about gated communities in China. It is also a project about how you can re-understand those accustomed things in your city, and how you can participate in the making of city and use your own power to ameliorate urban issues starting from the most subtle things. In this project, the alternative role of the boundary between public and private space in the realization of urban vitality is re-examined, especially the walls and gates which exist as the concrete representation of the conflict. The already intensive urban issues like residential differentiation, abuse of cars, depression of public space, lost of urban identity, etc. have all lead us to the rethinking of how our residential model should be in modern city. And the gradually showed problems like shortage of social housing, social segregation (even the real ghetto for migrants and the poor) also call for smart solutions for prevention.

This project tries to confront these issues in the context of China's economic booming stage with people's fast-changing demands, question and learn from the making of ancient Chinese city, while adjust solution for modern city. It is admitted that we may still need walls and gates in future Chinese city? What remains important to explore is how we manage to reverse the walls and gates from a negative element into a positive and flexible component for the development of future city, and eventually, change the experience of living.



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A sidewalk outside the wall of Gui hua cheng community in Hangzhou  
Source: <http://hz.city8.com/>

# PERSONAL MOTIVATION

Developed from exception for the rich to common norm for everyone, gated communities have proved themselves to be a strong potential trend of future housing development in China. I am deeply attracted by this tremendous transition in modern China because I am experiencing it since I was born. There are many researches refer to the mechanism and development of gated communities in United States and England, but few in the context of China. Although real estate developers and municipalities in China are so enthusiastic about gated communities, we still need to be critical to them. As Blakely and Snyder claimed in their book, gated communities are not simply another form of residential settlement, they are part of a deeper social transformation (Blakely and Snyder, 1997). Take modern China as an example, it is better for us to understand gated communities as a consequence of trial on social conflict mitigation, rather than a negative solution which seems to inevitably lead to more serious social segregation, because somehow gated communities are able to allow low-income migrants and the middle-class living closed to each other just by simply building a wall between them. The effect is so great that the developer

seems to see gated communities as a master key to insure their development in any unpredictable urban environment.

Twenty years have passed since the opening of commodity housing market. Gated communities have become an inveterate habit for the market. Nowadays, Chinese customers do have plenty of choices in housing market, such as the location, the size, the housing type, and the price. However, one thing that remains steady and regular is the form of gating. From the process of planning and design to administration to construction, gating is the only rule that cannot be broken in this housing production chain. For most urbanism theories, in a good and healthy city, street life are vital, public space are well considered and designed, inhabitants are willing to communicate with each other and the urban environment is livable. Then what will happen if the entire city is divided by fences and gates? Where does the public realm go in a city filled with privatized communities? What are the relationships among gated dwellers and gated communities themselves? Whether is it a brand new scenario for the future city or a cancer in growth? Is there any pros and cons we can learn from the gating strategy? My graduation project started from exploring the answers to those questions.

# AIM OF THE PROJECT

This project provides an insight look into the mechanism and potentials of gated communities in Chinese context. It mainly focuses on the exploring of the social and spatial impacts especially the privatization trend that gated communities have brought to urban public space. The aim is to critically understand gated communities approach in Chinese context and provide an open solution which is more capable to balance between people's increasingly growing desire on privatization and the revival of public vitality in city.

proposed, aiming to explore the potentials of relationship between privatized living space and urban public space in future China.

The first approach is to figure out the spatial and social transformation of public realm under the influence of gated communities in modern China, this shows the specific social life patterns of gated communities' dwellers related to urban place. The second approach spotlights on the use of public space for its crucial role in the generating of urban diversity and social cohesion. In this part, rethinking the meaning of public space for transition China is the underpinning thought, and a debate about barricades is also

# SOCIETAL AND SCIENTIFIC RELEVANCE

Numerous researches discuss about gated communities from views of different disciplines, including sociology, urban geography, urban planning, political science, economy, etc. (Blakely and Snyder, 1997, Webster, 2001, Webster, 2002, Pow, 2006, Yu et al., 2009). The growing theoretical basis of gated communities has revealed the complexity behind this phenomenon, and as a result, constant debates about the pros and cons of gating occupy the mainstream of relevant academic field. However, no matter how misdoubted attitude scholars hold to this exclusionary form of housing, in reality, gated communities have absolutely achieved a tremendous favor from worldwide housing market, especially in developing countries (Blandy, 2006, Brunn, 2006, Coy, 2006, Polanska, 2010, Wang, 2010). For instance, in modern China, designing a master-planned community with gated form has been such a tacit agreement that anyone who attempts to break the norm would provoke doubt and judgement from professionals and demos. Metropolitan cities in China are gradually occupied by different forms of gated communities, while the pace of academic debate is far away from the spreading speed of gated communities in modern

cities.

Therefore, it is urgent to critically understand gated communities by firstly locating it in Chinese historical and local social-political context, in order to recognize it as a current major residential form partly inherited from traditional ones. Instead of entangling in question on gating or not, this paper intends to reveal the real influence and challenge brought by gated communities through deep investigation in Wenxin subdistrict, and the main research focuses on public space transformation under the influence of gated communities, and the potential role of public space in Metropolitan cities in the future trend of gated communities.





## GATED COMMUNITIES IN MODERN CHINA

Gated communities are worldwide phenomena. The term of “gated communities” was first proposed by Blakely and Snyder in their book about gated communities in United States (Yu et al., 2009) as the definition of “residential areas with restricted access in which normally public spaces are privatized” (Blakely and Snyder, 1997). Early examples in United States reaches back to 19th century with the development of “a number of privately owned and operated luxury subdivisions for the rich [...] exclusive neighborhoods designed to be separate and shielded from their surroundings” (McKenzie, 1994). The growth of gated communities was then driven by great favor from housing market, real estate developers, and government which were perceptible in both developed countries and developing countries (Blandy, 2006, Brunn, 2006, Coy, 2006, Polanska, 2010, Wang, 2010). Instead of being only refuges and paradises for the rich and celebrities, gated communities nowadays are more diverse and capable to serve various types of housing markets, including middle-class enclaves and social housing (Yu et al., 2009, Miao, 2003). Formal studies (Blakely and Snyder, 1997) indicate that people choose to live in a gated community for several reasons like sense of security, good living environment, high property value and implementation of privatization, among which, fear of crime is the most crucial motivation that push people into gated communities. Further investigation indicated that the emergence of gated communities represents the specific transformation of urban structure and social-spatial restructure during that time (Yu et al., 2009), reasons like consumer preferences and the economic approach of club goods have become

the initial motivation for living inside gated housing compounds (Webster, 2001, Blandy, 2006).

### China

As a reacting consequence to the dramatic social-spatial transformation, gated communities achieve tremendous popularity in developing countries like China. In modern China, most metropolitan cities are confronting a series of social and economic transformation, especially the government-lead transition from socialist economy to a market-oriented economy since 1978. In the domain of housing market, the distinct raise of the middle-class and the floating population (migrants who comes to metropolitan cities seeking for jobs and better life, most of them are off-farm workers) have brought about an intensive social-spatial differentiation in metropolitan areas because those people with similar social status, income level or lifestyle tend to live in the same community so that they can share a sense of identification and psychologically feel safer (Li et al., 2004).

Meanwhile, surveys (Messner et al., 2001) imply that the metropolitan cities in China have become much more dangerous than before. Regarded as an efficient housing strategy for privatized property protection, gates and walls approach has been applied to many newly constructed housing projects and even traditional housing settlements' retrofit. According to Yanhui Wang (2010), in 2005, more than 80 percent of newly built housing projects in China are gated, and as noticed throughout the inner city and suburbia,



more and more non-gated traditional neighbourhoods are facing the destiny of being wall-up by local government for the reason of preventing potential crime. It can be estimated that in future China, more and more residents in metropolitan cities will be living inside gated communities voluntarily or involuntarily (Xu and Yang, 2009).

Gated communities have been developing in China for nearly two decades. Although it is not written as compulsory provision in design process, most of the real estates' developments refer to any kinds of gating strategy as their basic sale strategy in housing market. In China, the term of gated communities is always linked with 'xiao qu' (also called micro-district), a typical Chinese living unit nowadays. Governments of Chinese cities are keen on using 'xiao qu' plus large-scale land subdivision strategy to accelerate land assignment procedure. When certain land is remised to private developer, they usually choose to wall up the territory in order to diminish external interference and build their own city without consideration of surrounding areas. After that, self-governance function like property management and homeowner association will also be established respectively in order to maintain the independent operation of each gated communities (see 'xiao qu' land remising system diagram p...). Eventually, when all adjacent residential areas have been filled up by each developer, the whole urban area will turn into an even larger-scale superblock, which may approach 100 acres in some cases(Luery, 2010), since gated communities usually tend to block some designated small streets for privately occupation, and as a result, the urban pattern become

even more fragmented. These superblocks can be strongly felt especially in new town development, where gated communities are being erected in a rate of 10 new every day from completely blank land. Considering from the perspective of urban vitality, the lack of neighborhood retail and barriers to entry in gated superblock limit any notion of cohesive community and any opportunities for programmatic friction(Luery, 2010). However, on the contrary, local government regard this gated-superblock-combination strategy as an efficient way in land market, since the clear boundaries help to claim responsibilities, and less public areas means more reduction on public expenditure. That's why the public policies are usually lack of confidence to say no to gated strategy.

In modern China, 80% of newly built housing projects are gated communities

10 new gated communities completed every day

In Hangzhou, 87% of entire population will be living in gated communities

Gated communities + Superblock = An efficient way in land market





A vacant land stands in between newly built neighbourhoods and office buildings in East new town of Hangzhou. Walls across the land clearly show the subdivision of land into different developers  
Source: <http://www.gaoloumi.com/forumdisplay.php?fid=41>





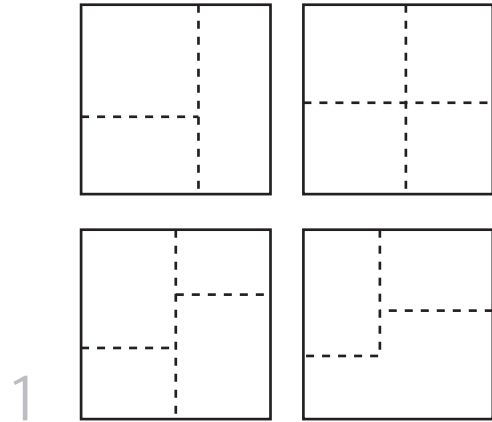
Streets and roads are planned and built before the construction of block itself, and the astonishing speed of construction allow China to create 10 new gated communities every day. However, the inhuman scale prevents people from joining in the public life of the new city.

Source: <http://www.gaoloumi.com/forumdisplay.php?fid=41>

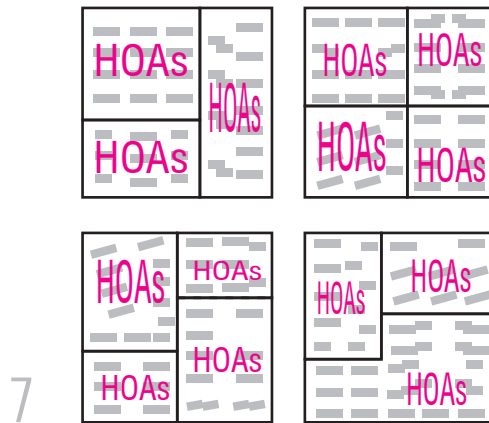
## 'XIAO QU'-BASED LAND REMISING SYSTEM IN CHINA

'Xiao qu' is the local term for 'micro-district' which was initially introduced to China from former Soviet Union in 1950s. After years of practice and development, it gradually transformed into current 'xiao qu' model, which is more suitable for Chinese local society. According to current norms, each 'xiao qu' has 8–35 hm<sup>2</sup> area, with 5,000 to 15,000 dwellers(Xu and Shao, 2004).

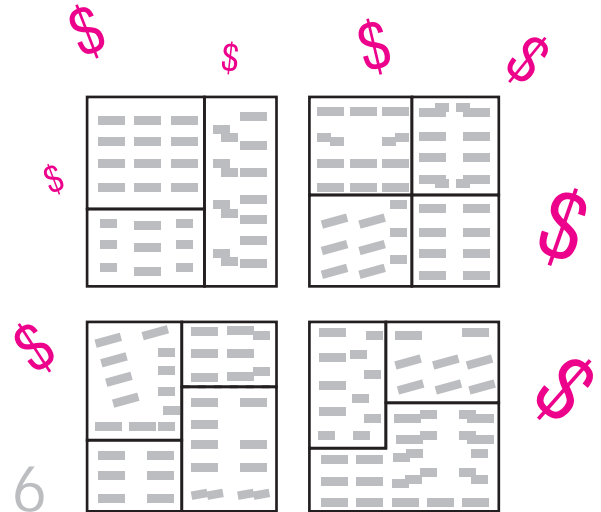
This diagram shows how housing projects are operated in contemporary Chinese land market.



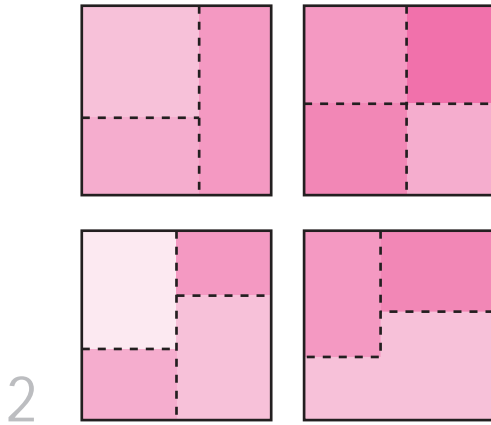
The boundary of each territory ready to be assigned is defined by planning streets and natural boundaries at the master plan. The distance between two main streets is around 400 meters, so the territories left are in large-scale if without subdivision.



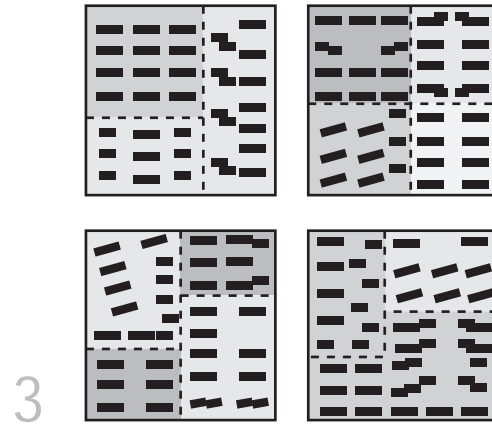
As long as more than 60% of dwellers have moved in, inhabitants can establish their own homeowner association to manage their community by themselves and also supervisor the PMC.



At this stage, PMC will be in charge of the maintenance work inside gated community, and the local government has the responsibility to construct the public facilities, such as sidewalks, public space, and traffic lanes outside the walls. Most of the houses have been sold, meanwhile, the community facilities and commercial space along street will also be sold out or put out to lease by developers.



Each territory is remised to private or semi-private real estate developers respectively. Developers will be informed about strict qualifications of their land, including the planning boundary, building boundary, FAR, proportion of functions, height control and so on, all according to the official control planning.



Nearly all 'xiao qu' is designed as gated, but most of them have appropriate number of gates for passage. Meanwhile, basic community facilities (like small supermarket and hair salon) are planned inside neighbourhood and some commercial space can also be found along the boundary.



When construction work completed, the responsibility of management will be transferred from the developer to the property management company (PMC). Most of the PMC will choose to wall up the community. Some previously designed gates will also be permanently closed in order to facilitate the safety control. Each gated community usually has 1-3 gates with security guards for passage.



Construction period usually lasts from 2-5 years varying in the attitude of developers. Especially in new town development, there is always a shortage of community facilities and amenities at the first stage, where new streets are always lack of pedestrians, and it takes more than 5 years to realize the vitality of city.

## GROWING CONFLICTS

1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995

In the recent decade years, we witnessed the exploding growth of floating population and the middle-class in Chinese society. Both of the two groups are concentrating in urban area, especially the floating population, as an influx from rural area to metropolitan cities, had dramatically changed China. The conflict between these two growing population groups exists not only in their income level, but also in their disparity of social status. Lack of communication between them leads to an increasingly expanded gap which acts as the major force at their residential differentiation. Walls around the middle-class gated communities are the representation of mistrust in Chinese society.

Meanwhile, there has been an accelerated growth of commodity

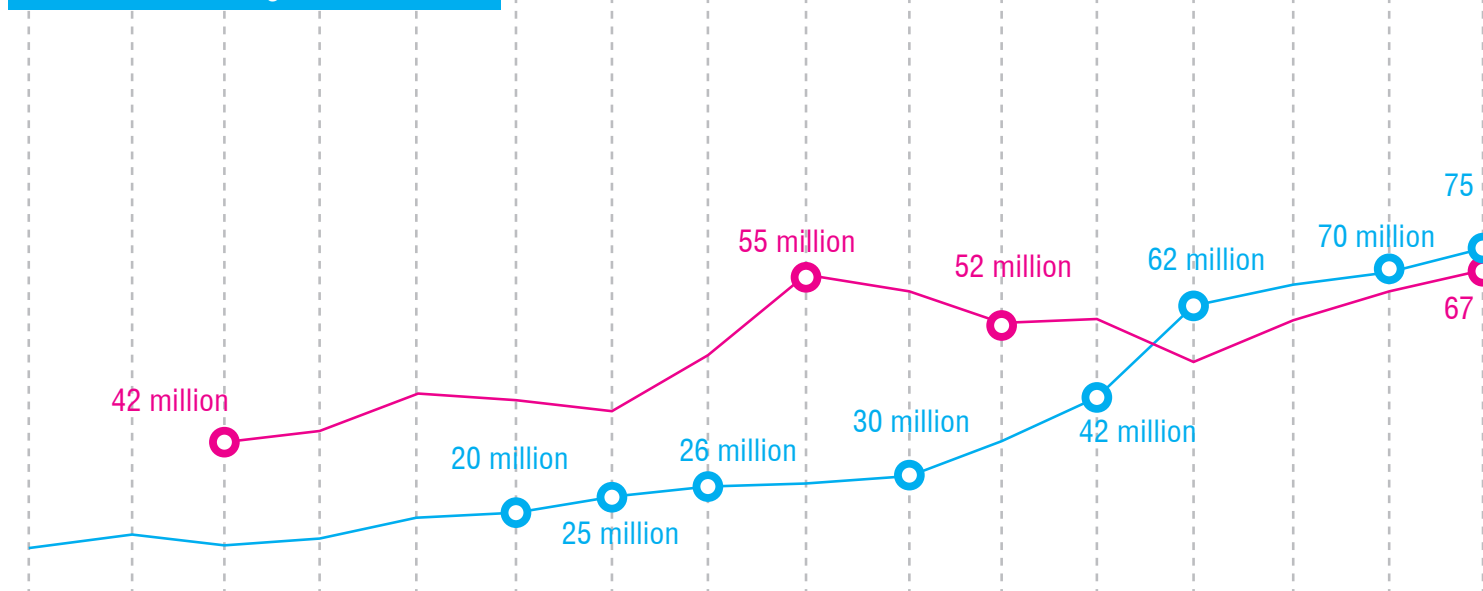
housing market although the world has just recovered a little from the global financial crisis in 2008; however in contrast, the real total construction area of social housing in China has never been able to satisfy the urgent demand from floating population, graduated students, and poverty families. That means in the coming few years, China will still experience an speedy urbanization process with this unbalanced condition.

### Total population of China's floating population

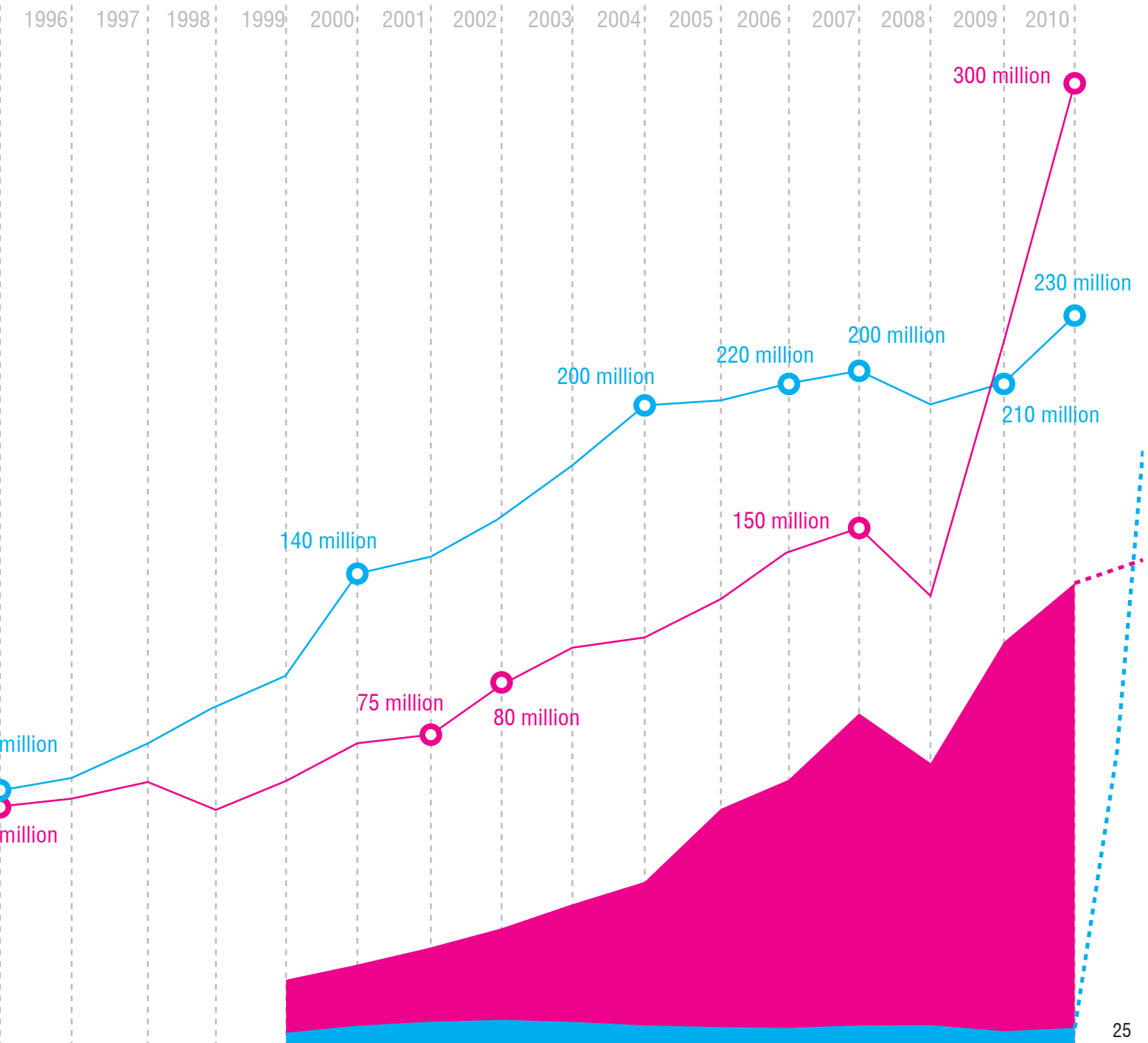
### Total population of China's middle-class

### China's commodity housing sales area

### China's social housing sales area











Double walls were raised in between the borders of rural settlement  
and the up-class enclave  
Source: <http://hz.city8.com/>



Public street in between two walls of adjacent gated communities which is occupied by parking  
Source: Photo by author, 2010

中队

STATION

←

30

前方学校  
注意避让

150m ↑

周一-周五 7:00-9:00  
11:00-14:00 16:00-19:00

东方休闲

东方休闲

东方休闲

东方休闲

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Birds eye view of the wall between gated rural settlement and the middle-class enclave  
Source: Photo by author, 2010



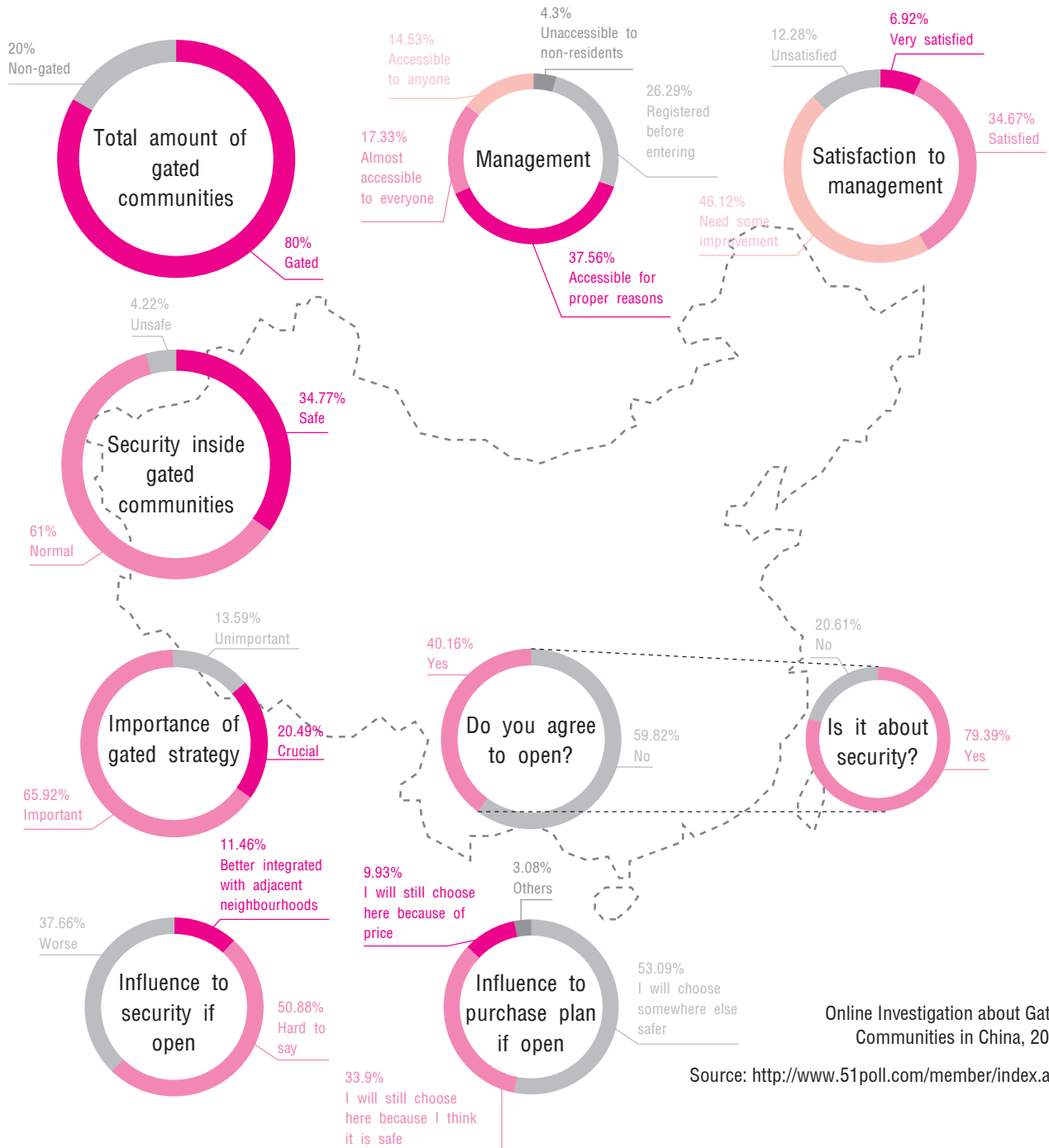
烟酒超市

★伟星管业

外贸床上用品

乔妮雅

丽影羊



Online Investigation about Gated Communities in China, 2005

Source: <http://www.51poll.com/member/index.asp>

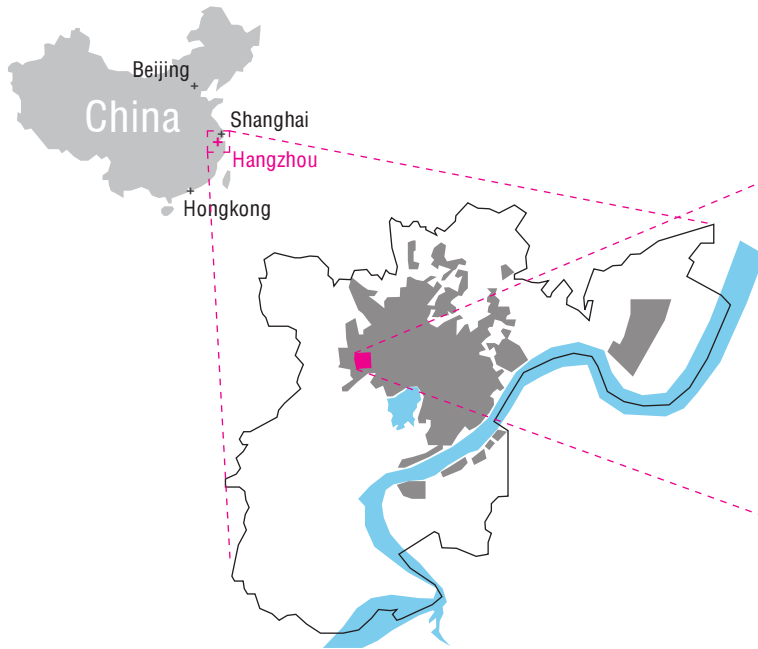


# THE FACT AND DEBATE ABOUT GATED COMMUNITIES IN CHINA

In contemporary Chinese cities, walls and fences are so well accepted by people that no matter how inconvenient and how much it will cost, people are always willing to pay for this security methods. In newly built neighbourhoods, Homeowner associations (HOAs) are usually set up for daily management of community affairs. HOAs are a voluntary organization whose members are voted democratically by dwellers. Usually, they will hire a property management company for the work of community management and maintaining. All the dwellers involved will need to pay for them and a fund especially used for community affairs (MOHURD, 2009). All the security methods including walls, fences, electronic security systems and guards are one important part of the measures that HOAs use to protect their private territories according to Real Right Law of the People's Republic of China (2007) and Regulations on Realty Management (2003).

The debate about gating or not has gone towards two extremities. On one hand, some municipality began to rethink the real security efficiency of walls and fences and their serious visual damage

brought to the urban landscape and social segregation. For instance, in 2005, the municipality of Guangzhou proposed in an urban planning and management guidelines (2005) that all the streets and lanes inside communities should be open to public, and it further required all the gated communities to break down their walls and return the private streets to the public. This decision provoked so much protest from gated communities' dwellers that it never been able to realize and eventually be dismissed by the municipality. On the other hand, some municipalities made a stand support for the enclosed housing form. Gating has become their crucial strategy to guarantee their people with sense of security. The municipality of Hangzhou even has started the Old Residential Areas Property Management Improvement Project (2009) in 2009, and intends to wall up all the old non-gated communities and arrange property management companies for them. By then, a new gated city will be born. This is why I choose Hangzhou as my research city.



City of Hangzhou



Wenxin Subdistrict

## THE CITY OF HANGZHOU

Hangzhou is a metropolitan city located in the Yangtze River Delta region of China, and the capital of Zhejiang province. It is a city with a population of 6.4 million people, and has been one of the most renowned and prosperous cities of China for its historic relics and natural beauty. Hangzhou is one of the six leading cities in Yangtze Delta Metropolitan Area, and plays an important role in the economic status of this most populous area in China. The city has more than tripled GDP in the last eight years, with GDP increasing from RMB 156.8 billion in 2001 to RMB 509.9 billion in 2009 and GDP per capita increasing from USD 3,025 to USD 10,968 ( "Hangzhou Economy Takes Off Within Five Year" ). Hangzhou is facing a booming urban expansion to satisfy the increasing housing demand from local residents and new migrants, and this is also the urgent issue faced by other metropolitan cities in modern China.

## WENXIN SUBDISTRICT

Wenxin Subdistrict is a comparatively new residential district in the urban periphery of Hangzhou. It has only 15 years of history in the housing planning of the city, and before being developed, this area is covered with small villages and wetlands landscape. But nowadays, it has become the major developing residential settlements in city of Hangzhou. Many citizens regard it as settlements for the executive and middle-class. This area is entirely composed of 60 gated communities, together with two shopping malls. The further investigation is concentrated on the area in between Wensan Road, Wenyi Road, Jingzhou Road and Zijin hua Road. The site includes 4 rural settlements, 16 upper and middle class gated communities, 1 shopping mall, and several office buildings.

# Existing wall types



Iron fence



Brick fence



Fence with painting



Fence with plants



Hedge



Shops underlying residential building



Shops underlying residential building with arcade



Independent shops

# PROBLEM DESCRIPTION

## **More gates ≠ more safe**

Walls, fences and security guards are expected to be barricades which stop not only criminals, but also the annoying salesmen, strangers, and the through traffic. However, as observed in reality, it is not always efficient once and for all. There are still many news and reports about burglary in gated communities, some even happened in the rich enclaves (News, 2010). Some inhabitants complained that the security guards are so perfunctory in their jobs that anyone with proper clothes or with rational reasons can easily go through the main entrance into the community. “We live in a traffic-controlled community, not a secure community” (Blakely and Snyder, 1997).

Jane Jacobs revealed that street eyes are the crucial element for preventing crime in streets. However, the emergence of walls and fences block off passers-by from monitoring what happened inside communities and create empty space especially at night. During an interview within one of the gated communities in Wenxin, several dwellers emphasized that they felt not safe to walk late inside their own community because there are barely patrols at night. Dwellers in gated communities are facing the paradox of gating to be safe but isolated from the public secure monitoring. The continuous fear of crime drives people to install more gates in between their private territories and the communal space, and all the left they can do is to rely on a responsible property management company.

## **Insufficient use of public facilities inside gated communities**

According to Residential Planning and Design Standard (1993), the newly built master-planned communities should have various amenities located inside, most of which including green spaces, playgrounds, community management offices and other community-oriented facilities, some even include commercial facilities (Miao, 2003). The real estate developers usually add more amenities like clubhouses, tennis courts and swimming pools to represent the superior quality of their projects. However, most of these public facilities and space fail to function as places for social activities. An investigation (2004) on the operating condition of clubhouses in Hangzhou revealed that almost every clubhouse and commercial facilities in gated communities closed down after only one year of operation due to the insufficient flow of customers to support them. Some facilities were abandoned since there was lack of money to maintain them.

## **Shrinking public streets**

The research area is entirely composed of gated communities. Besides demarcated by street grids, the whole urban space here is further divided by walls and fences among different residential compounds. Each gated communities is required to provide communal space for dwellers inside, but the space outside the barricades (usually contain sidewalks and public streets) are left out of consideration. In Wenxin, continuity of public spaces between blocks seldom occurs. Well considered and planned public space is rarely found in the outside of gated communities (Hu, 2010), hence, most of the social life like chatting, shopping, or playing Mahjong have no choice but occupying the narrow sidewalks and thus further block the way of pedestrian. The definition and function of public space is vague here, and the potential users of these public spaces are shrinking because dwellers prefer what they believe much safer privatized public space inside their communities, and there is indication that more and more social interaction between neighbours happened only inside their gated communities (Jiang, 2006).

## **Inequality of public domain**

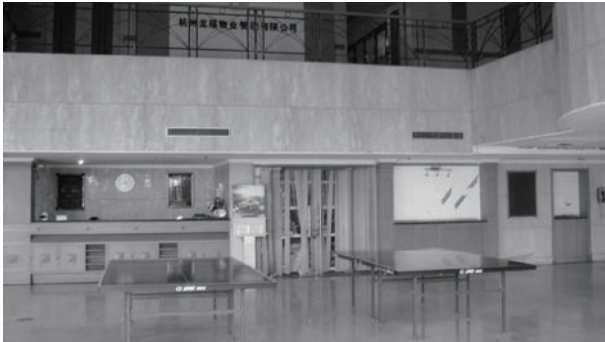
The social-spatial differentiation is obviously perceivable when walking through middle class enclaves to retrofitted gated communities to rural settlements. Compared to prior planned public space inside middle class enclaves, there is almost no space intended to function as public space in rural settlements. Due to the high building coverage ratio, dwellers in rural settlements usually occupy the linear space in between each line of housing buildings for privatized use or social activities. This type of self-created public space provides space for less expensive commercial activities which cover almost every aspect of daily facilities that less rich people and migrants need. Additionally, the higher residential density indicate that dwellers in rural settlements need more public space than inhabitants in middle class enclaves, but the current situation is that there is far less space for them both inside and outside their communities. The privatization of public space inside gated communities represents an unequal battle between the private interest and public interest, and the low-income people living in rural settlements are the direct victims who lose their rights on public space equality in the urbanization process of modern China.



Apart from the gate in the main entrance, each housing unit inside gated communities has electronic door  
Source: photo by author, 2010



Main entrance is usually used for traffic control instead of security control  
Source: photo by author, 2010



Empty clubhouse in Hupan Garden community, designed for communal activities and community management center. Most of the inhabitants claim that they never go into this building ever before  
Source: photo by author, 2010



The sidewalk outside one neighbourhood almost disappear, so that pedestrians have to walk in the slow traffic lane  
Source: photo by author, 2010



Abandoned tennis court in Hupan Garden community  
Source: photo by author, 2010



Activities like sitting and chatting occupy the sidewalk, not to mention the parking which encroaches the urban public space  
Source: photo by author, 2010



The narrow and boring sidewalk outside gated communities' fences, where barely social activities happened here  
Source: photo by author, 2010



Street view in between two walls of two adjacent neighbourhoods  
Source: photo by author, 2010



Above: Well-designed but inefficient privatized public space inside Dejia community in Hangzhou  
Source: photo by author, 2010

Below: Vital self-organized commercial street inside the rural settlement  
Source: photo by author, 2010



## PROBLEM STATEMENT

Gated communities as the more and more introverted residential pattern lead to intensive residential differentiation and limitation on urban diversity.

The shrinking and abandoned use of public street caused by superblocks are aggravated by the privatization of public space in gated communities.



## RESEACH QUESTION

How to revitalize the depressed public street and promote positive interaction and diversity among different social groups while satisfy the growing demand of residential privatization?





## EVOLUTION OF RESIDENTIAL PATTERN IN CHINESE HISTORY

The traditional Chinese cities before Song Dynasty (960–1279 AD) had a strictly controlled residential pattern which was called 'li fang'. It is a reflection and reinforcement of social hierarchy by confining populations rigidly in their respective wards (Xu and Yang, 2009). During the period of 'li fang', high walls with limited gateways were erected around each ward and commercial functional areas were separated zones far away from residential wards.

To the Song Dynasty, due to the growth of economy and the revolutionary of agricultural technologies, the previous controlled enclosed urban form was not suitable for ever growing demand of mercantile activities. Urban production activities like handicrafts and family workshops appeared on streets and demanded to demolish the physical barricades for trade activities. Eventually, a more open residential pattern called 'fang xiang' started to replace 'li fang' with free movement and mixed land-use. This is what we still can see in traditional neighbourhoods like 'hu tong-si he yuan' system in Beijing and 'li nong-shi ku men' system in Shanghai. In the 'fang xiang' system, basically, all the streets and lanes are accessible by any pedestrian, however, because of the specific structure of 'fang xiang', the sense of belonging and territorial control became even stronger. Walls were still important elements to separate the communal linear public space from private territories. It is still the wall rather than the home building itself that faces directly onto the street (Xu and Yang, 2009).

The residential form of 'fang xiang' developed voluntarily and

steadily until People's Republic of China was founded in 1949. Since then, the urbanization process started to develop under a socialist political framework. It is then the 'Danwei' system was introduced into China and replaced the traditional 'fang xiang' pattern into work unit compounds which include state enterprises and other service facilities (e.g. health care, education, research and administration) (Xu and Yang, 2009). Work unit compounds are self-contained neighbourhoods with high level of social mixture and close affiliation. Although most of the work unit compounds were originally built without walls, many of them started to build permanent walls in the 1960s to protect their territory and other resources from encroachment due to uneven development. Since then, almost every work unit compound was a walled enclosure or a cluster of several walled enclosures (Lu, 2006). Because of the walls surrounded, there was no need for the spatial structure of the work unit compounds to respect the surrounding context (Xu and Yang, 2009).

In 1978, Chinese government decided to carry on an economic reform from socialist economy towards a market-oriented economy. The major change in housing reform was that housing benefits would be provided in cash wages rather than in kind. This led to a full-scale national boom in commodity housing markets in the following decades (Xu and Yang, 2009). This was the time when large amount of housing projects were demanded that the municipalities can hardly satisfy them. Therefore, an urgent challenge for housing reform was to find a new pattern of urban

housing management within the existing economic and institutional structure (Xu and Yang, 2009). And this induced the emergence of urban housing management and modern gated communities.

Ever after the 'Danwei' system, Chinese government was keeping searching for an appropriate and also advanced housing theory for contemporary China. Based on the concept of Neighbourhood Unit from Perry, the residential area was expanded to include several public buildings like schools and commercial area, so that residents do not need to cross urban streets for most of their daily services. After 1970s, instead of scattered construction, the housing market turned into more concentrated and unified planning, design, construction and management (Kai and Zhao, 2009). The planning theory framework of residential area–microdistrict–residential group has gradually formed while the professionals were still searching for a more efficient way of housing development which could fit more to the social and political features at that time.

After the middle of 80s, xiao qu model spread China for its

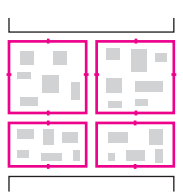
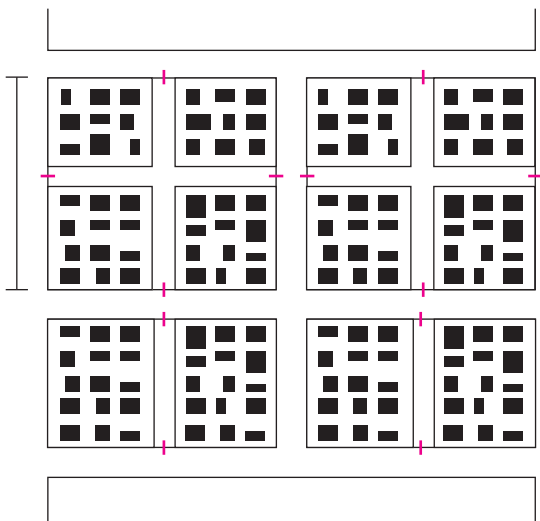
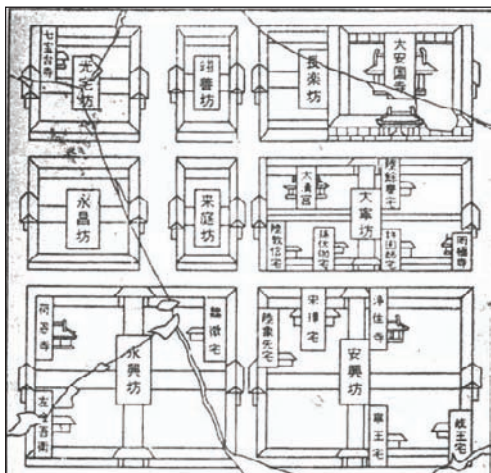
refreshing theory of concentrated green space, public space system and the spatial variety of living groups. At the same time, the form of gated communities in Hong Kong started to catch mainland China's real estate's eyes. Hong Kong was regarded as the pioneer of high density and compact housing development at that time, and this is what exactly the mainland China was looking for to accelerate their commodity housing market – an entire efficient producing chain of housing construction, sale and management. As a result, the concept of gated communities was introduced into China's housing market. Based on the previous well–developed 'xiao qu' system, gated strategy infused the sense of security and dignity into the propaganda of real estate developers. Together with local government's flavor of superblock land development in urban planning system, gated–superblock development model spread quickly throughout China until now.

## HISTORICAL COMPARISON

The diagram on next page tries to compare among the typical housing patterns throughout the history of China. It emphasizes on the changing scale of each basic community unit as well as the evolution of public space system.

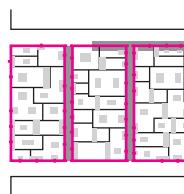
It is interesting to see that all of them are kind of gated communities with continuous walls around, however, the distribution of public space and the use of street significantly different from each other. The major factors may be the political and economic environment, but nowadays, with the increasingly open housing market, the will and demand from customers is becoming a dominant factor in the forming of housing pattern in modern Chinese city.

In the 'li fang' system, the whole city was composed of different blocks with very strict hierarchy. Residential blocks were enclosed by high walls, and housing can only be built inside the boundary. There is no planned public space in between each block except from

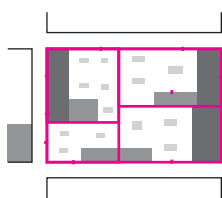
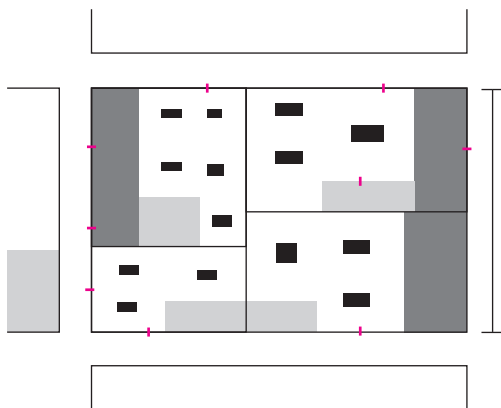


the wide street. Commercial areas like markets were restricted in another block which is far away separated from living blocks. There was curfew every night in the city that no normal citizen can go to street at night.

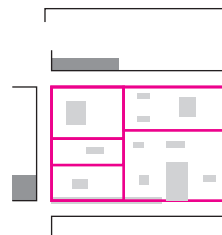
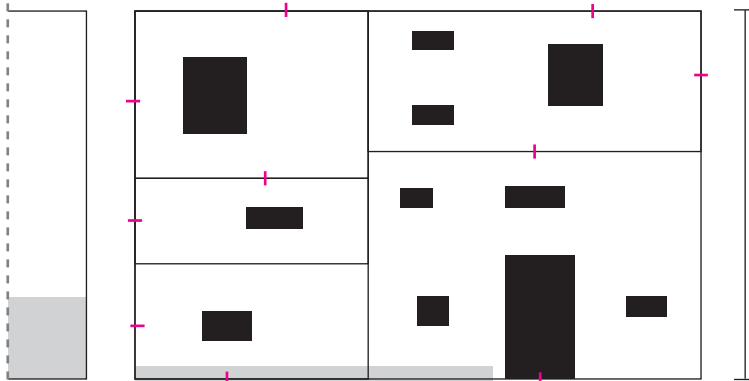
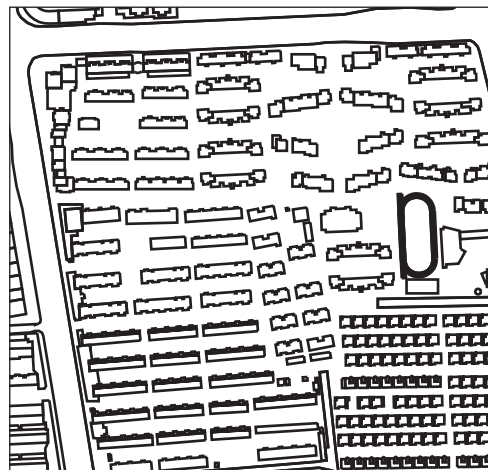
The 'fang xiang' system was supposed to support for the prosperity of family workshop and traders' economy. There was still clear hierarchy of street system, but all of the interfaces of street were open to the use of citizens. The basic living unit was family. About



30-100 families formed one community. There was no public square in city, but the linear public space was so well developed that it already formed a network which integrated into people's private space



Working space was integrated in housing compounds. Because of the involving of public facilities inside, most of the public activities happened inside residential compounds. However, there was still not so central public space and green space planned in each residential compound.



Privatized central public space was valued and well-designed by developer. It usually contains elegant landscape design with sport facilities and a club house for the dwellers.



Above: This ancient painting shows the common streetscape of the Song dynasty. A street completely designed and constructed by people themselves. A street formed in a slow but well self-organized process.  
Year 800  
Source: the ancient Chinese painting "Riverside Scene at Qingming Festival"

Below: Dynamic public activities happened on lanes from 'fang xiang' system. Linear public space which intergrated quite well with habitants' daily life.  
Year 1950  
Source: <http://www.da.hz.gov.cn/default.htm>







Above: Common view of a small alley in between two gated communities. No public life presented here.

Year 2010

Source: Photo by author, 2010

Below: Main street in Wenxin subdistrict with 6 traffic lanes, 2 slow traffic lanes, and sidewalks defined by fence and commercial space along the boundary.

Year 2010

Source: Photo by author, 2010





Above: The extension of dwellers' various daily use in collective space inside community from the 'fang xiang' system  
Source: <http://www.flickr.com/>

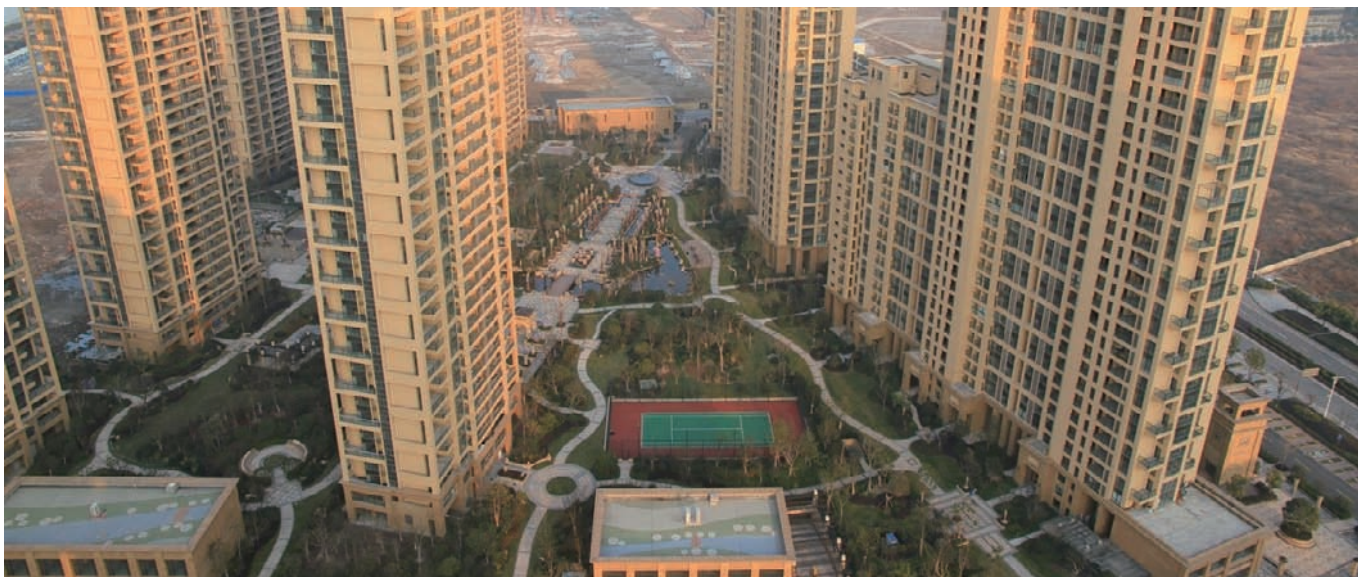
Below: Bird eye view of the linear public space in shi ku men community  
Source: <http://t.sina.com.cn>



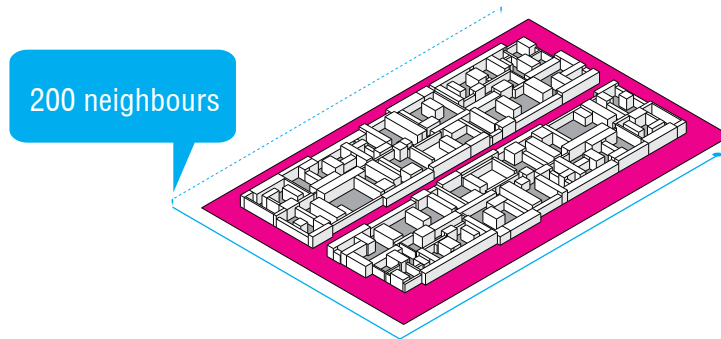


Above: Privatized public space with children's playing installation and waterfront landscape design in Hupan gated community  
Source: Photo by author, 2010

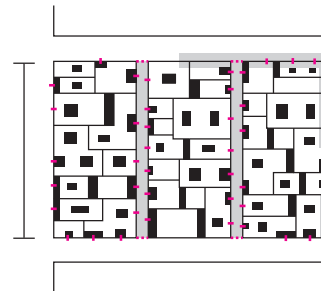
Below: Bird's eye view of the central public space in one newly built modern gated community in Hangzhou  
Source: <http://www.gaoloumi.com/forumdisplay.php?fid=41>

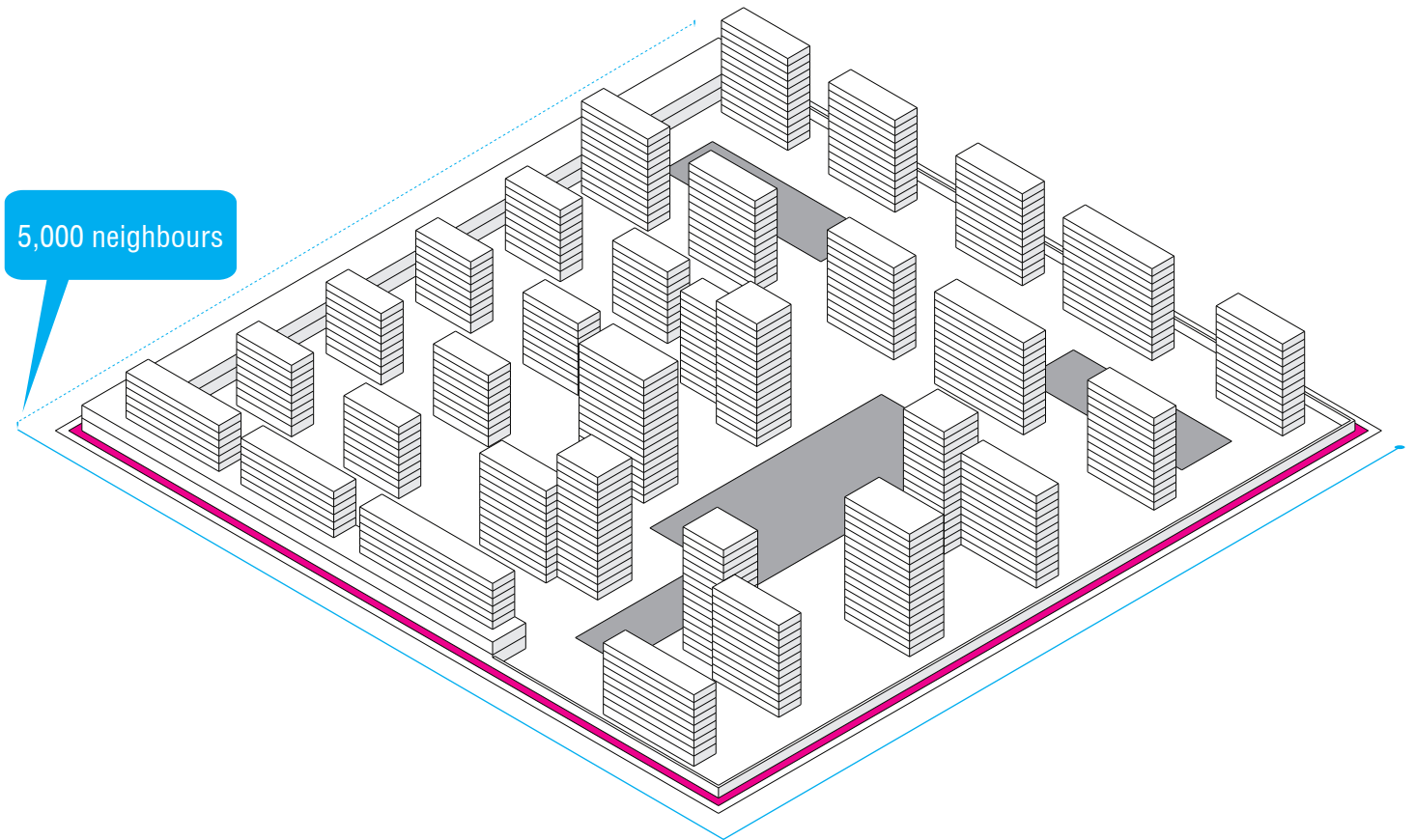


# SCALE COMPARISON OF TRADITIONAL 'FANG XIANG' COMMUNITY AND MODERN GATED COMMUNITY

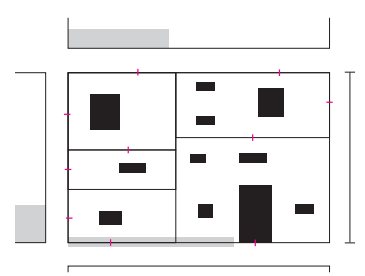


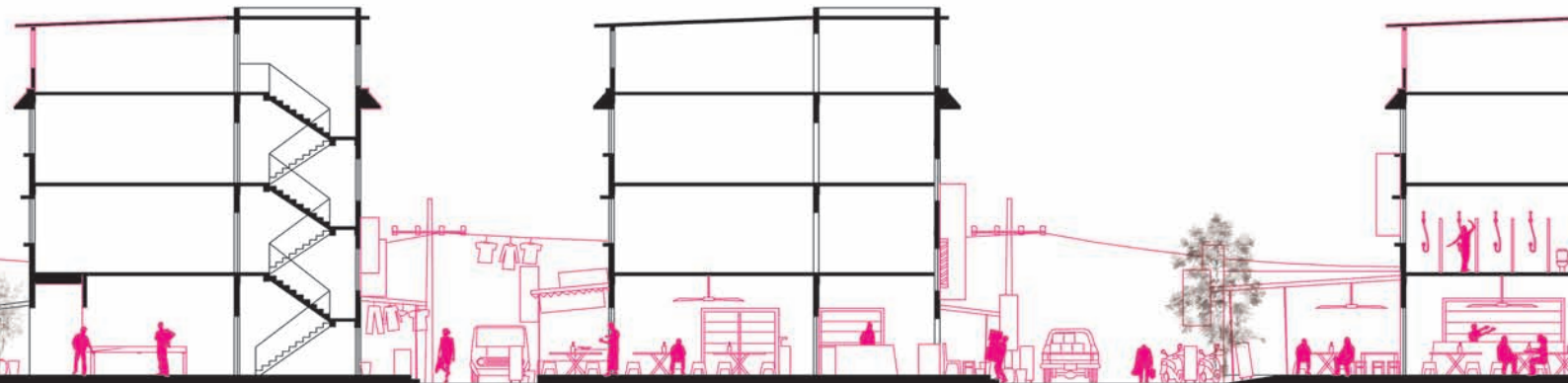
One person living in the traditional 'fang xiang' community normally has about 200 neighbours. The distance between two lanes is around 140 meters, which forms the basic scale of one neighbourhood block. The distance between two alleys, which is also used as linear collective space by dwellers, is about 50 meters. As a result, the walking distance when someone wants to go through the entire community from point A to point B is normally no more than 250 meters. The scale is quite reasonable for human being's cognitive ability and very suitable for walking and cycling. Linear public space is integrated quite well with private space in courtyards.





One person living in modern gated community usually has more than 5,000 neighbours. The size of the community is decided according to the subdivision of block, so that the normal ground area of one community is about 15hm<sup>2</sup>. The distance from point A to point B when following the un-accessible boundary is around 800 meters, obviously, not a suitable distance for walking. The only public space left due to the extreme expansion of walls is the sidewalk. However, the indifferent image of the boundary make it a worse experience to walk along the walls of gated communities.

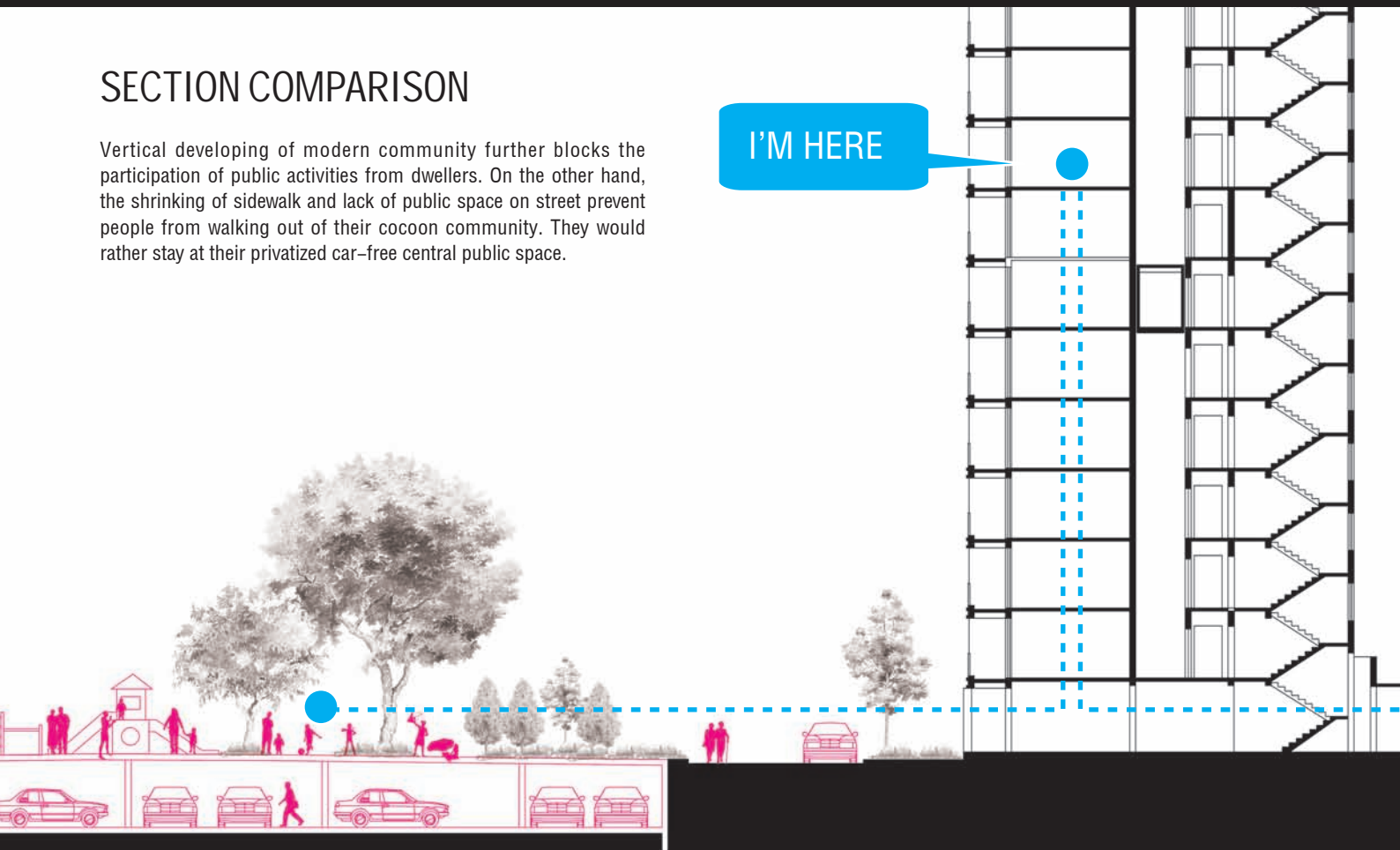


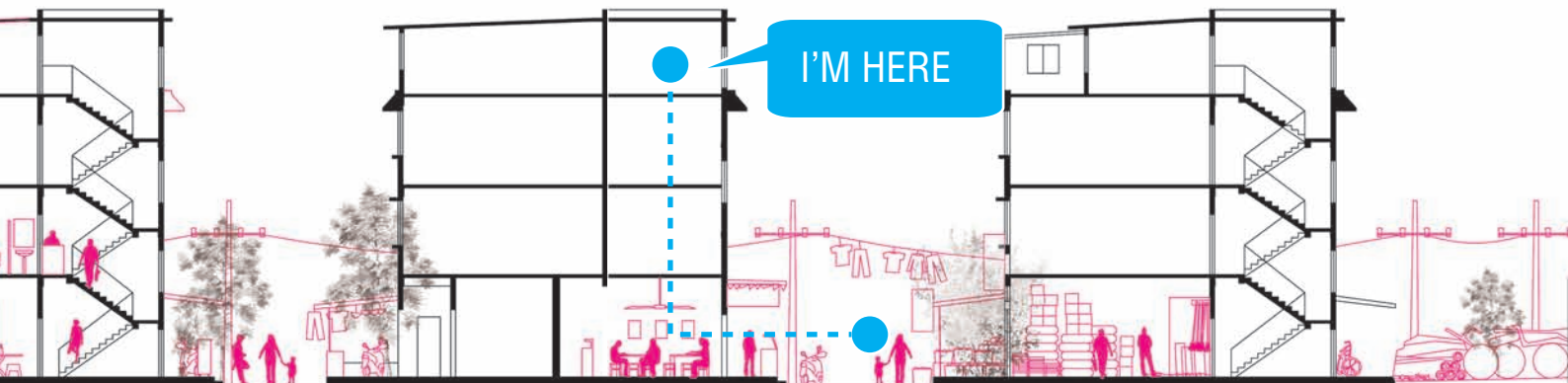


## SECTION COMPARISON

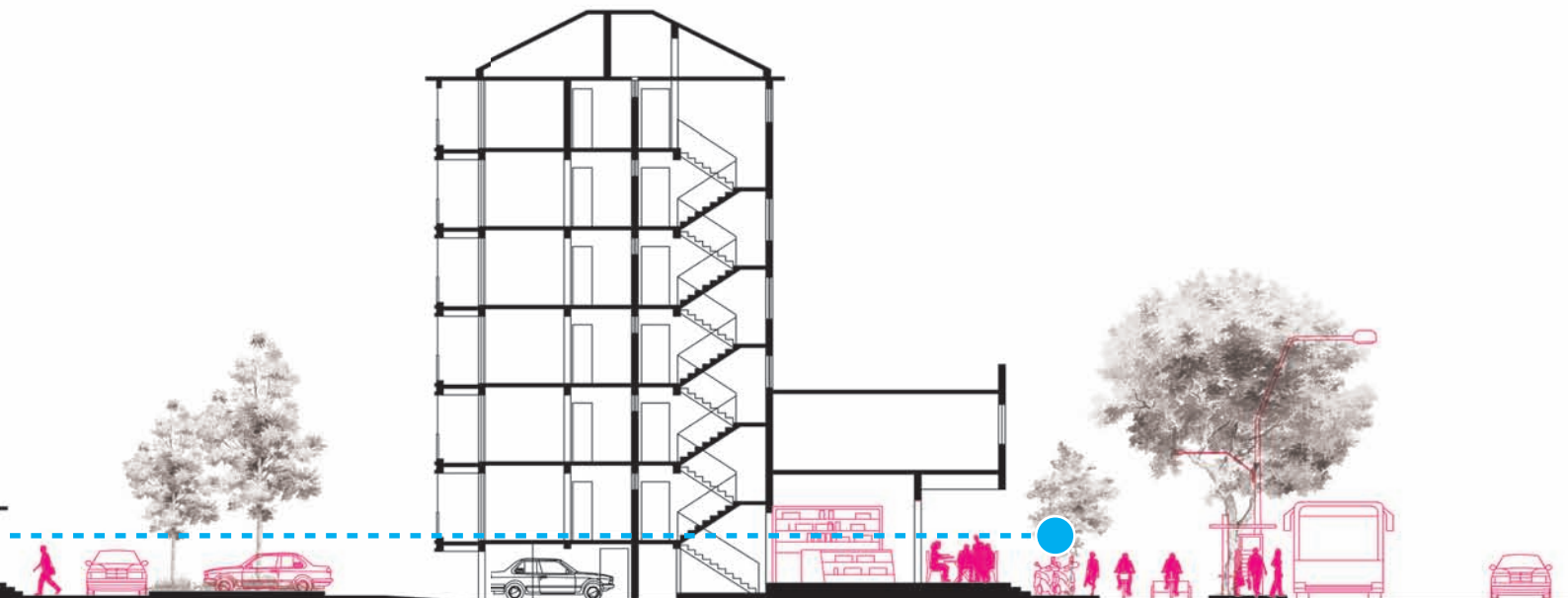
Vertical developing of modern community further blocks the participation of public activities from dwellers. On the other hand, the shrinking of sidewalk and lack of public space on street prevent people from walking out of their cocoon community. They would rather stay at their privatized car-free central public space.

I'M HERE



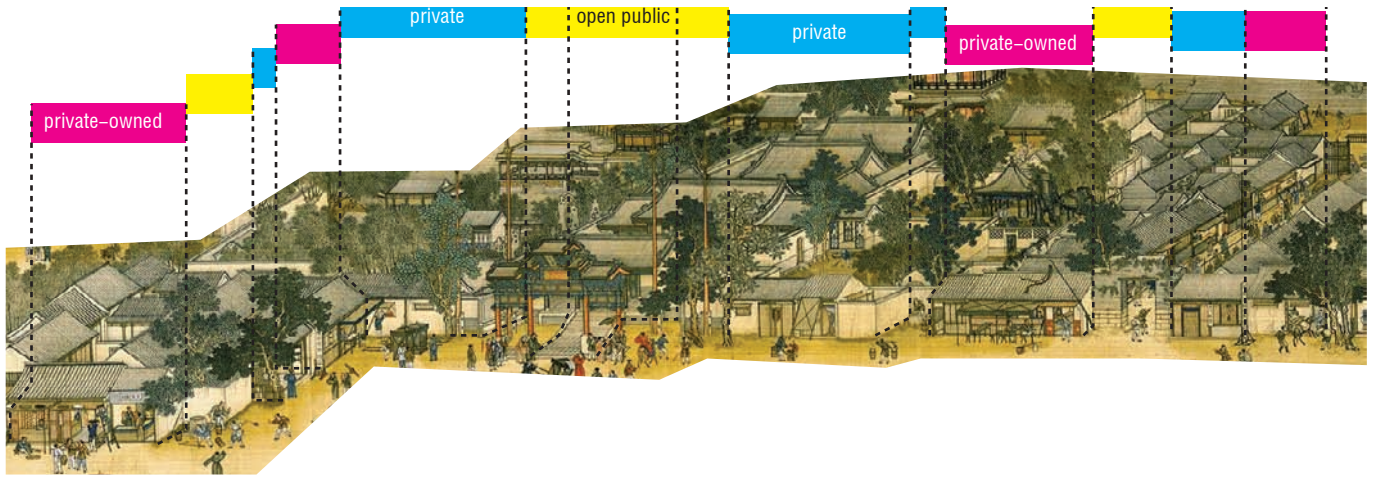


Section of traditional living blocks  
Source: Illustrated by author



Section of modern gated communities living blocks  
Source: Illustrated by author

# STREET INTERFACE COMPARISON



## Interweaved traditional street

One main reason why streetscape in ancient Chinese city was so dynamic is the interweave use of open public space, private-owned public space, and private space. Corner space and retreat space formed by the organization of buildings along street are the open public space, where anyone can go and stay. Shops and family workshops along street formed the private-owned public space where people with certain purpose shall go into. It is interesting to see that most of this private-owned public space intends to borrow some space from public street as their expansion into public life, such as the outdoor sitting of small restaurant, and the movable fortune-telling stands. In the meantime, some private housing is also confronting street by adding courtyards in between private house and public street, and these are the private space. Analysis of the ancient painting above indicates the smart organization of those three spatial types along street. The interweaving relationship among each type of space enriches the rhythm of street. The diverse street space becomes the generator of public activities in various

groups. And what's more, the entire street is designed and built by people themselves. This slow but well organized process allows the most dynamic use of public street happening here.





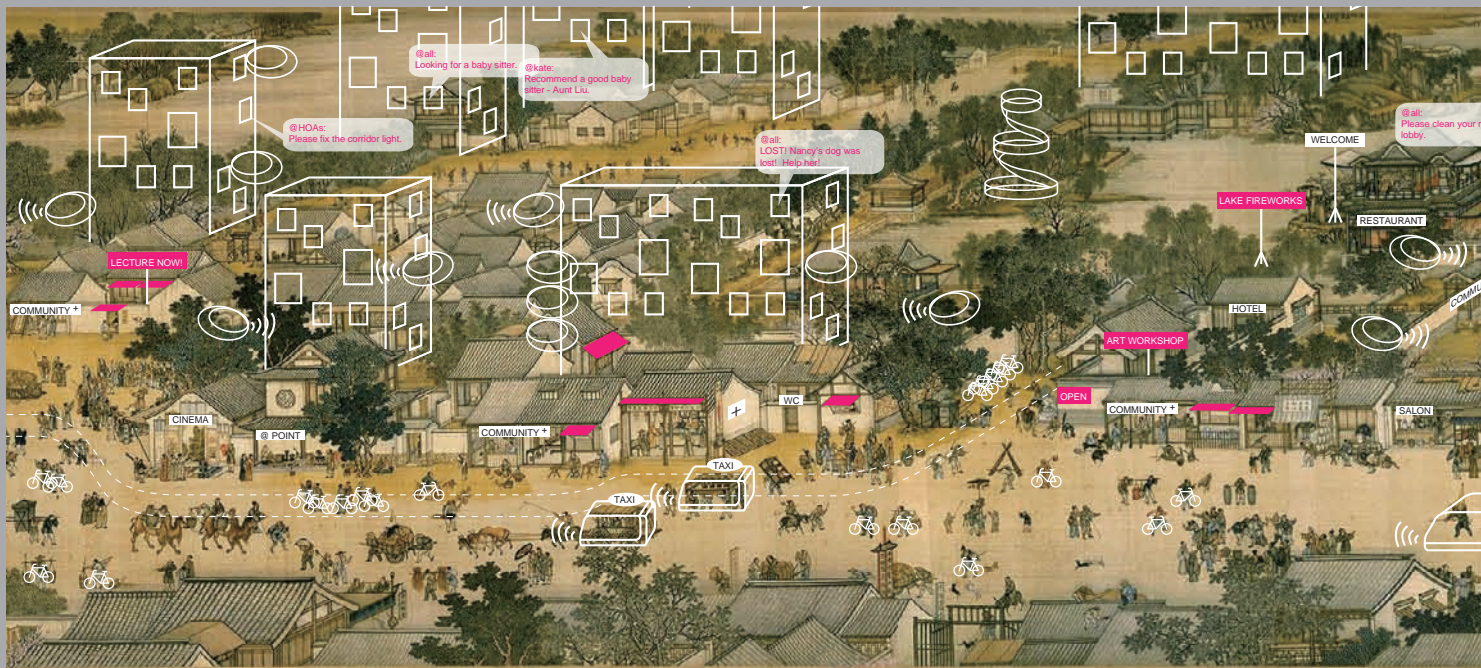
private-owned public space

private-owned public space

open public space

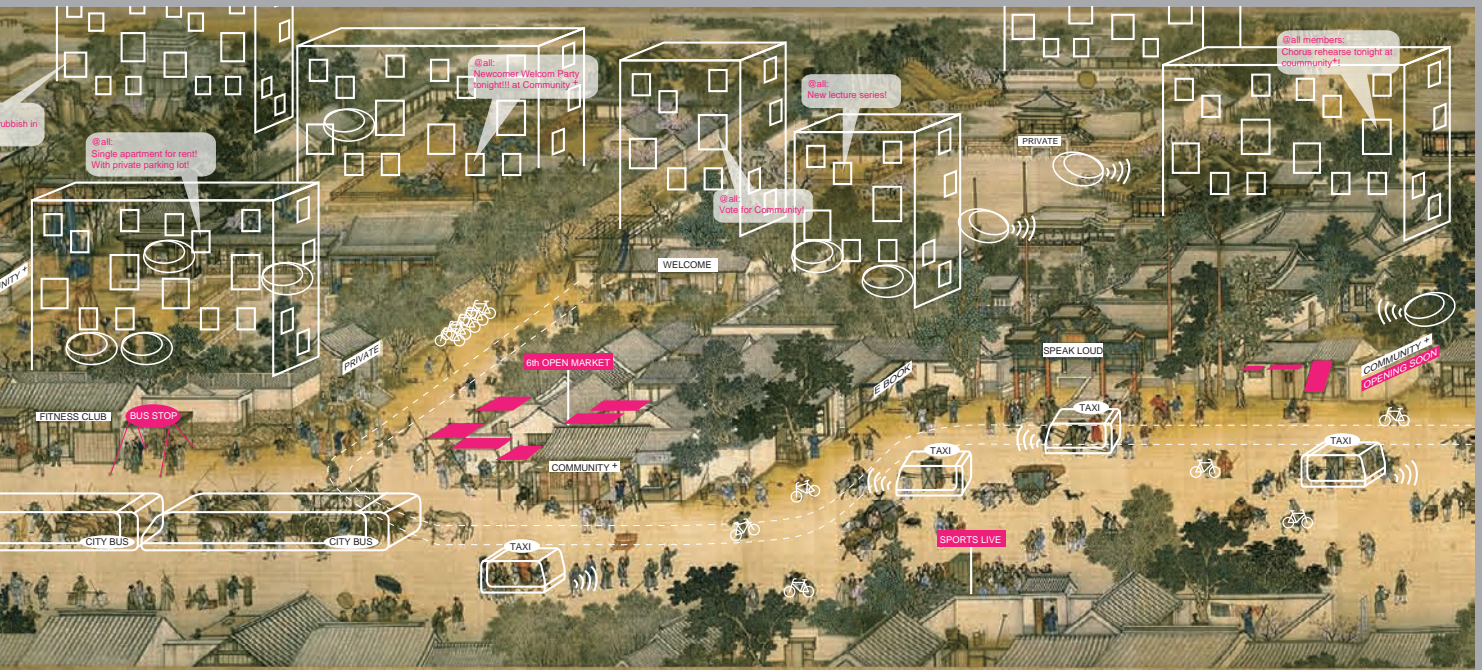
## Parallel modern street

In contrast, what streets outside modern gated communities provide us is a parallel organized space which has much less interaction between private and public space. No matter the boundary with commercial space or those with just common walls, almost no transition between open public space, private-owned public space and private space is made. The real estate developers and designers paid no attention to the organization of public street space. Even when there is a series of commercial space planned along one street, the streetscape still feels boring because of the endless repeating of similar exterior style and the lack of diversification. The absence of housing units in the ground floor around the boundary is also a problem leads to the shrinking use of public street, especially at night. As Jacobs emphasized, street eyes are necessary for the security and vitality of neighbourhood. For streets around gated communities, the continuous eyes from shops, pedlars and dwellers are equally important.



Allegory: Parallel world

Source: Illustrated by author based on the ancient Chinese painting "Riverside Scene at Qingming Festival"



## RELATIONSHIP BETWEEN LIVING COMMUNITY AND CITY

To sum up, the evolution of housing pattern is actually an evolution of relationship between living community and city. Open? Closed? Overlapped? Or Crossing? And to what extent can living community embrace the urban public attribute? No matter in what forms, it is sure that city can provide community with public facilities and the community can also contribute opportunity of public life back into city. The essential thing is not the attitude of open or gated, but the proper role of boundary and interface in between city and community, and furthermore, does it response to the local social and cultural identity and to what extent it respect human being's scale of habit?

So **what is the proper relationship between community and city for modern China?**

**Can we reinvent the traditional local lifestyle for our time?**

Back to the research question: How to revitalize the depressed

public street and promote positive interaction and diversity among different social groups while satisfy the growing demand of residential privatization?

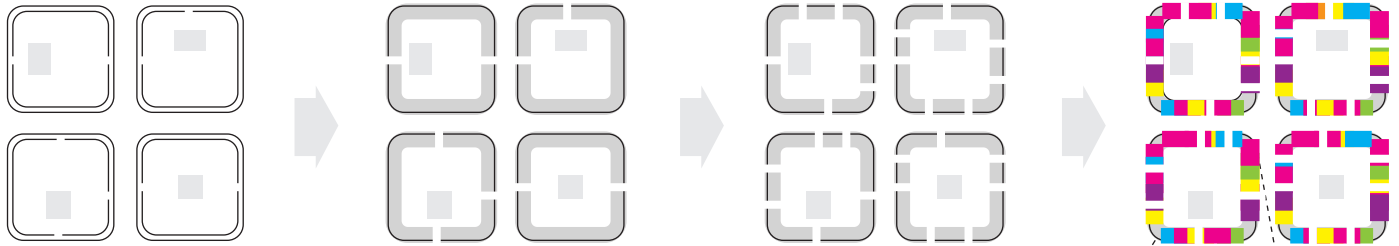
My answer will be to **use the interweaving boundary as a tool to rescale superbloc and revitalize depressing street. This boundary is what I called the cloud wall.**





# CLOUD WALL

## Redefinition of wall



Cloud wall is a new definition of wall under the context of gated communities in modern China. Here the form of wall is regarded as a heritage from historical development of China, and gated communities is recognized as an evolution of public and private relation in modern society.

By making the scope of wall thicker, cloud wall is capable to accommodate more diverse programmes, and most of them are functions benefit for both outside and inside of the living territory. The plan of cloud wall is about building up a more flexible and permeable boundary in between private living space and public activities space, for the purpose of reusing and revitalizing gated communities starting from the most subtle element.

Basic scale of one territory surrounded by cloud wall:

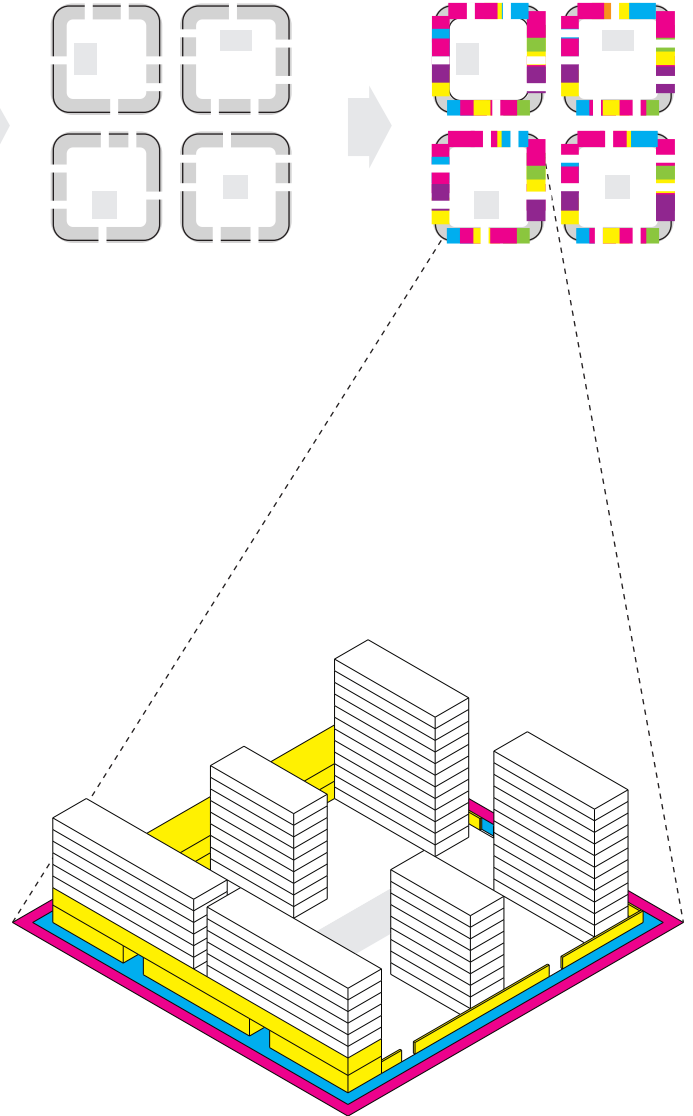
Area: 2–5hm<sup>2</sup>

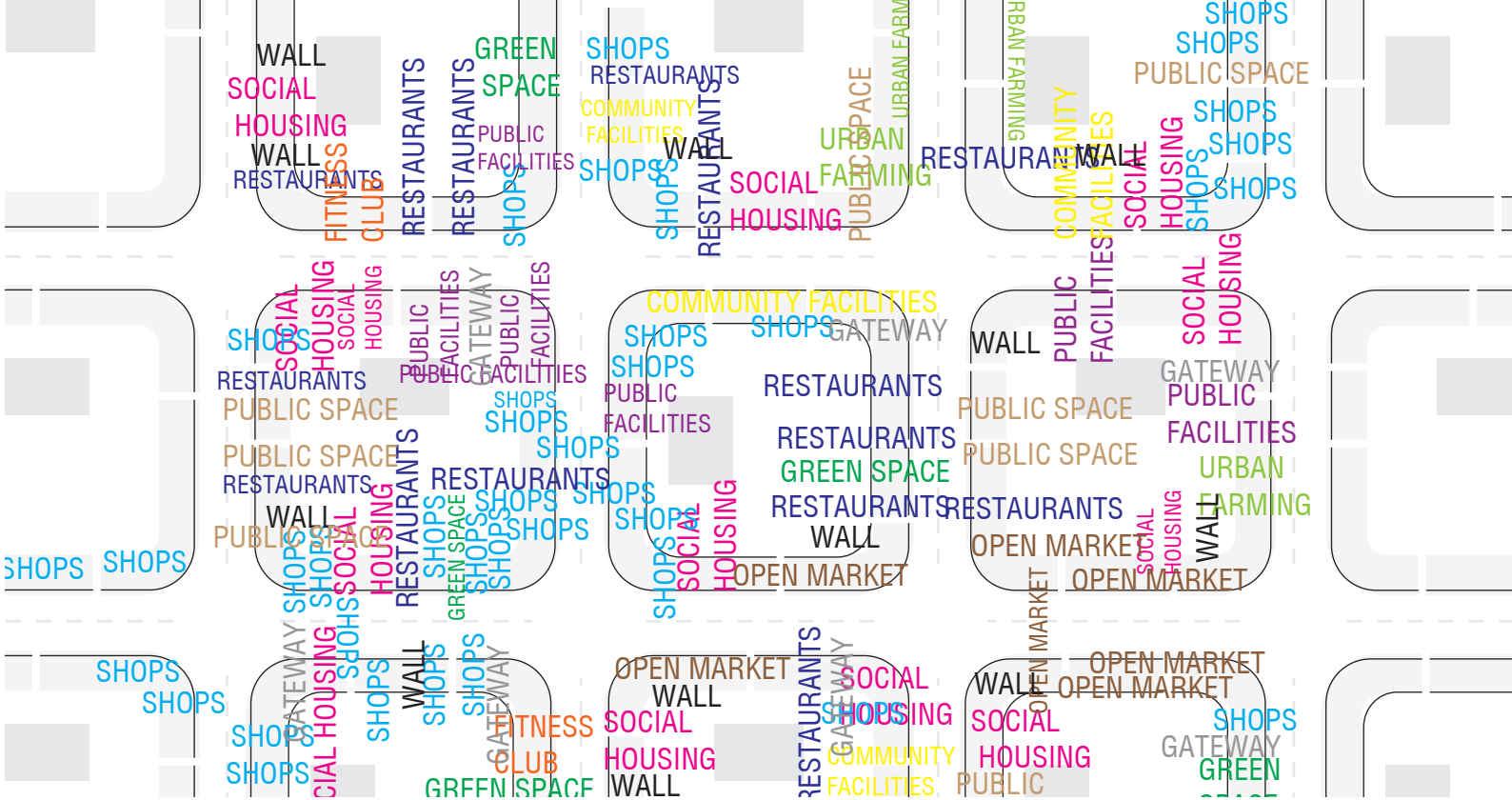
Family: 400–850 family

Dwellers: 1400–3000

Maximum distance of gateways: 40m

Cloud wall ground area: 3,000–4,800m<sup>2</sup>



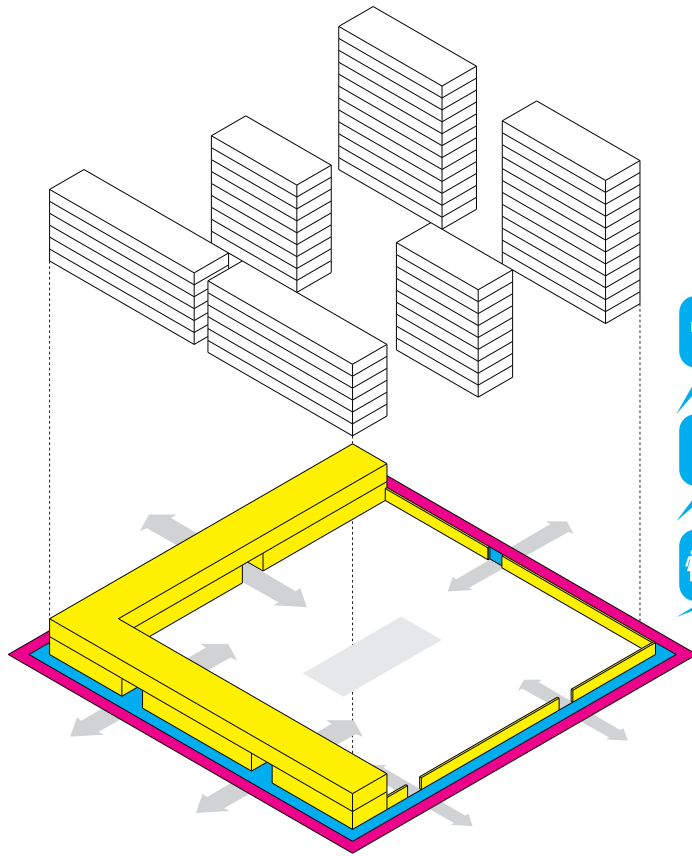


## Interweaved function

Most of the programmes settled in the cloud wall are rentable services and free access resource for the city. This means that cloud wall will be a place where both community service and urban public services coexist. In each cloud wall unit (defined as the one surround one gated community), it is set that minimum of 5% total areas will be used for social housing, minimum of 4% total areas will be used as open public space, minimum of 3% total areas of cloud wall will used as community services, and the rest space of cloud wall are free to the market. These mandatory rules of function proportions will guarantee that each cloud wall is contributive to the integration of public and private relationship in the city, and ensure that public interests are always protected from the encroachment of private interests. Furthermore, the flexible distribution of different types of space and the adjustable proportion are good for the forming of diverse atmosphere and identity on each community.

Apart from the mandatory programmes, those functions open to

the market are always welcome refreshing creativity and power from grassroots. It is also possible to combine and develop together by spatial strategy like merging, bridging, connection, and marketing strategy like establishing specialized street and market, the later will have to be coordinated with policy and strategic planning from local government.



 Social housing  
Jobs

 Profit X

 Security  
Convenience

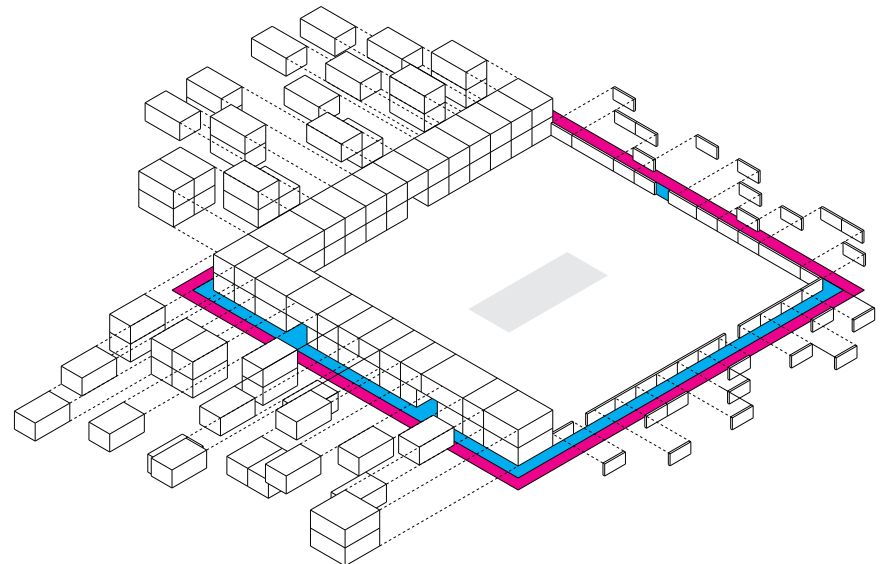
## Benefit for different groups

Cloud wall will have to satisfy different groups who participant or be involved in the project. For the local government who make decision, cloud wall can realize the revitalization of depressed streets in both built-up gated communities' area and new town by small costs of transformation. For the developer who makes the start-up investment, multiple benefit from rental and sale of the commercial space can be expected. For dwellers living inside gated communities, the security brought by walls and gates are still preserved while much more convenience and vital public life are provided. For those who do business in cloud wall, a much more flexible system which helps them to survival in the unpredictable changing market economy is waiting for them to experience. And last but not least, the combination of possible social

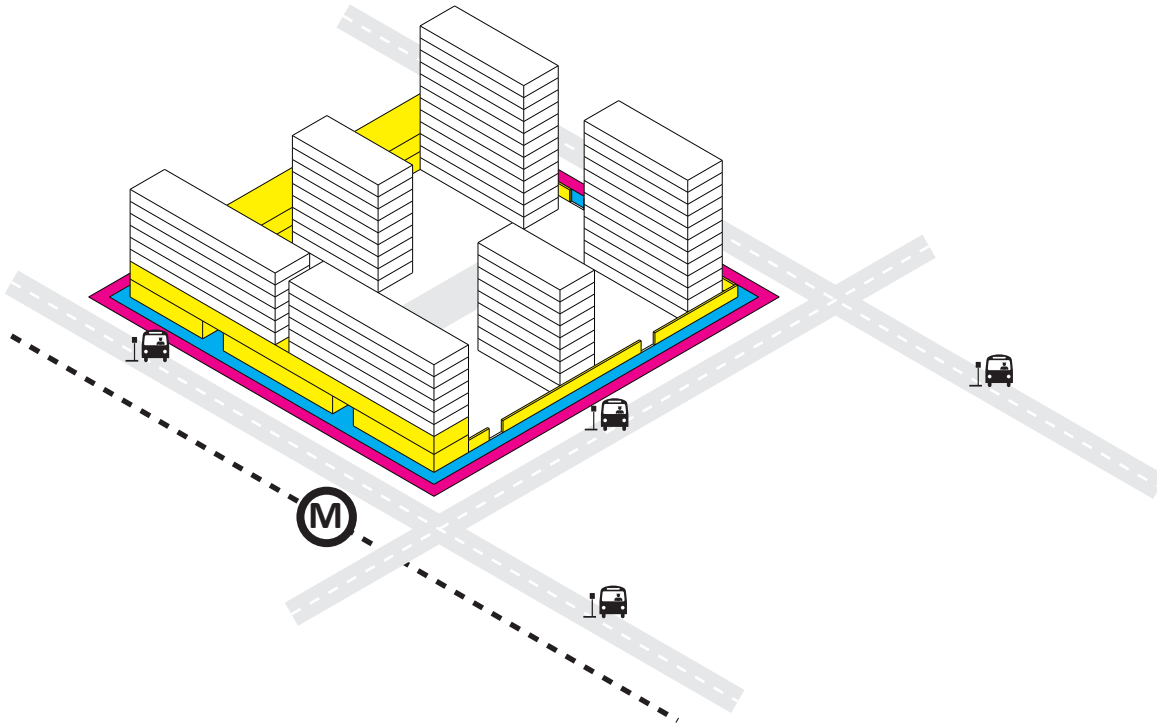
housing and various job opportunities into cloud wall provides a new solution to realize the government's ambition of mixed living among migrants and the middle class. It helps to mitigate the increasingly intensive residential differentiation and defend for fairness in public resource.

## Self-initiative action

The building of cloud wall is a process about self-initiative and cooperation. Each member of the city can participate into the decision making procedure, just like the traditional way in ancient city that local people build their street by themselves. This time, what street look like will be decided and directly influenced by each







participants involved. Instead of entirely top-down planning, this time, people are the designers. What's more, cloud wall is not a fixed plan anymore. It is open to change and revisal anytime according the people's changing demands.

## Embedded with urban network

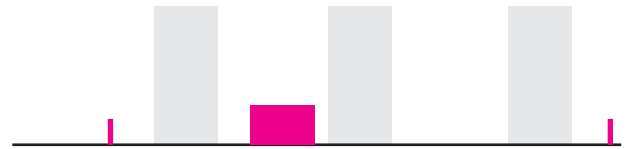
Cloud wall can never be existed alone in the city. It is an assistant layer of the entire urban framework. The urban network, such as the public transportation network, the public space system, the public facilities system, is the basic growth land for cloud wall. They support the well-functioning of cloud wall, and also help to realize the efficient use of public resources. The strategic plan of cloud wall will have to consider the set of interfaces for the smart switching between cloud wall and the urban network.

# A NEW DEFINITION OF COMMUNITY BASED ON CLOUD WALL

Study of the possible relationship between community and city



Community seperated by wall from city



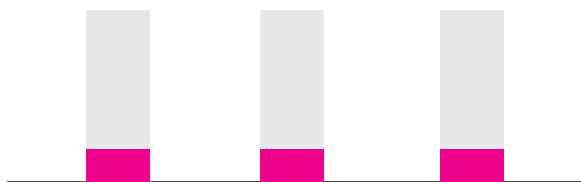
Community seperated by wall from city, but with collective facilities inside



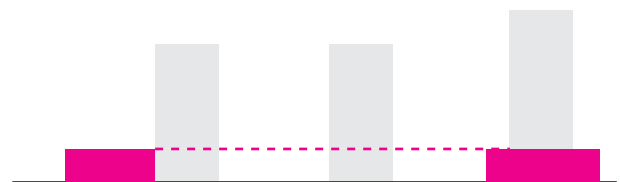
Community open to city, with collective facilities



Community lifted up from city, but with urban functions beneath



Community open to city, but with individual urban functions beneath



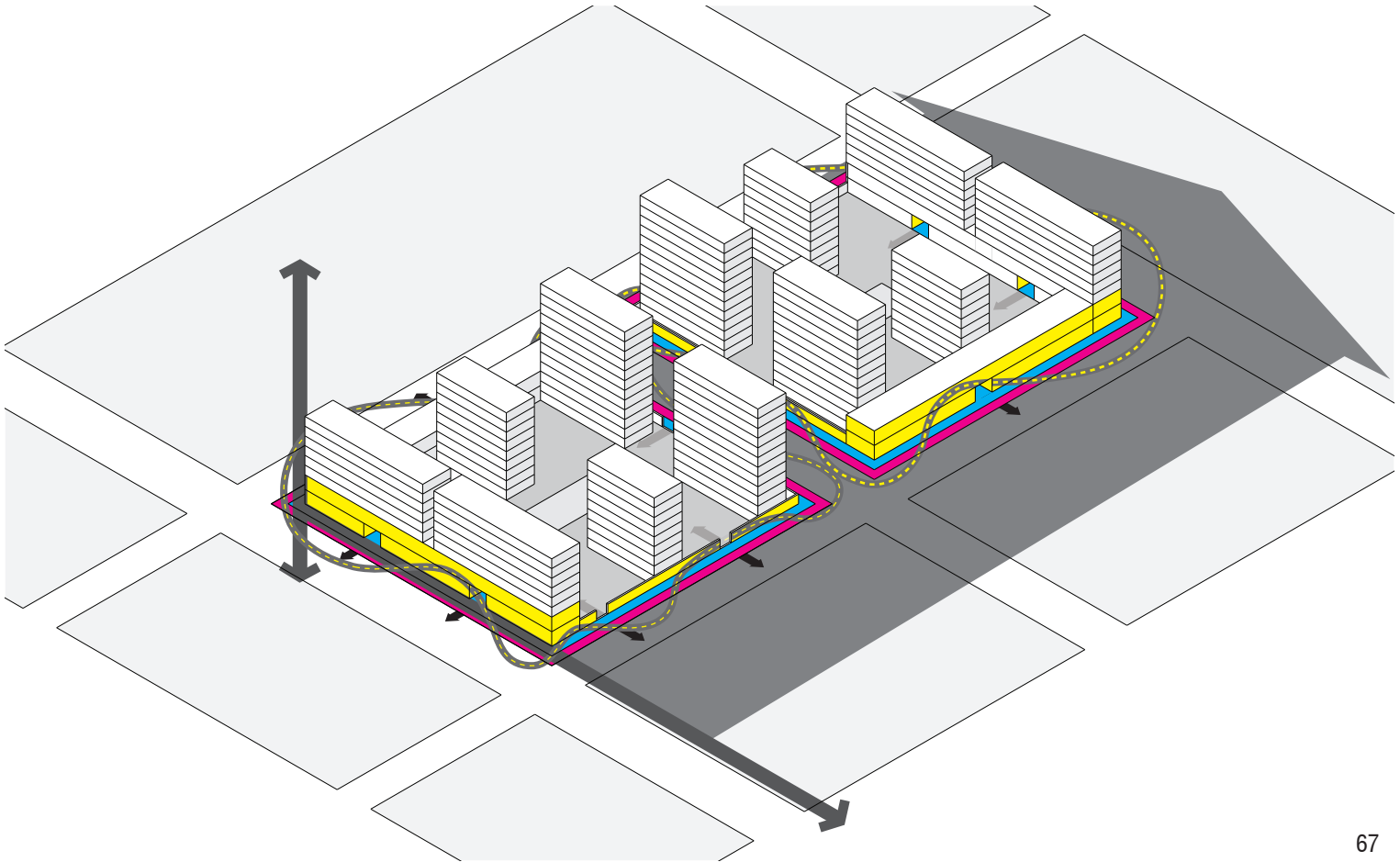
Community with urban functions as walls

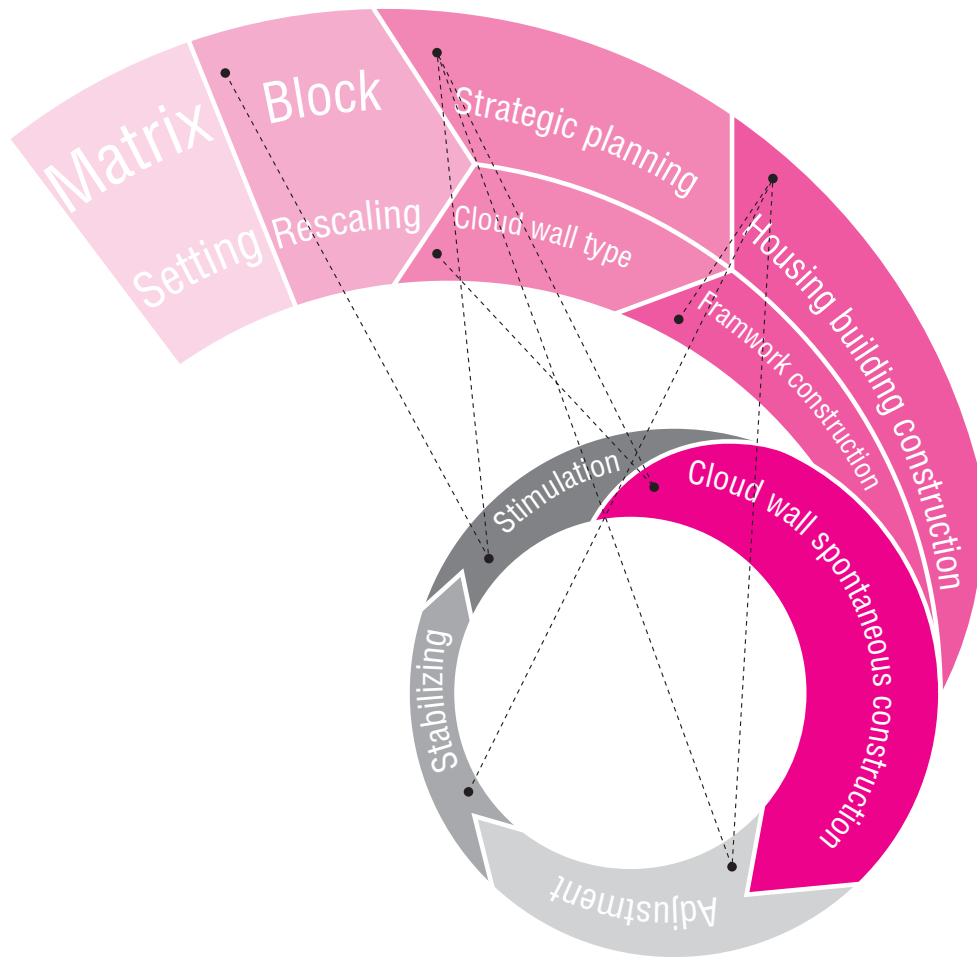
## Redefinition of community

1. Suitable scale closed to the behavior and recognition habit of modern human being.
2. Multiple dimensions intensified. The forming of community is both emphasized on three-dimensional space and time space. Thus, the new community represents for a dynamic procedure rather than a fixed project.
3. More interfaces between different layers of urban network. For instance, more interface area with sidewalk lanes and more switching points for public transportation.
4. Much more consideration on the boundary of community. The cloud wall will be used as the main strategy in the formation of mix-used, relatively permeable boundary.
5. Interactive relationship between community and city. The cloud wall creates easier access to urban space, but still guarantees

the interests of privatized public space inside community. The new relationship will be an easier switching situation aiming for better mobility between private and public sphere.

6. Identity cultivated by local inhabitants and participants involved in the cloud wall making procedure.





## MAIN PROCEDURE OF THE MAKING OF CLOUD WALL-BASED COMMUNITY

The main procedure of the making of cloud wall-based community can be imagined as a centripetal movement towards the relatively balanced condition of a community. Different stages of the procedure are interacted with each other. The life cycle of cloud wall is actually endless since there will always be new stimulations and adjustment, and people's demands are unpredictable in the long term of development. The flexibility of the procedure is that it can be entered in at any stage according to the aim of the project.

## WENXIN STRATEGIC AND DESIGN CASE

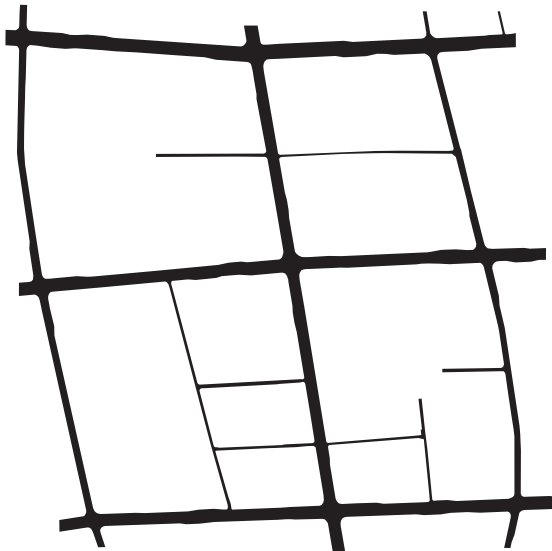
The case of Wenxin will show the procedure of cloud wall generation in a transformation project of built-up gated communities' area.

# Rescaling

The current situation is featured as gated superblocks with indifferent street image and absence of public space. Although almost all of the independent community was planned in smaller scale, most of the lanes in between those communities were blocked and used as privatized street or parking lot. The entire plot is divided by fragmented and discontinuous lanes.

The first step is to downgrade the scale back into proper scale defined by the definition of cloud wall-based community. A well-accessible street network is established to ensure the accessibility from all sides of each community boundary. In the 4 areas of rural settlement, an even smaller scale of subdivision is used taking into account the more open community demand from the migrants and off-land farmers. The smaller scale block allows them to have more flows of passer-by which is good for their small business and survival. The grey spaces are the existing public buildings including shopping mall, office buildings, elementary school and a public

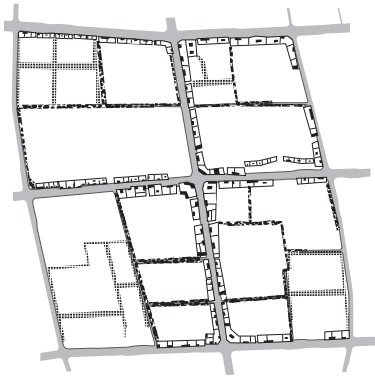
square.



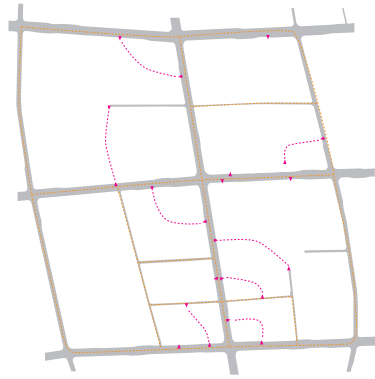
# Strategic Plan



- |                                                                                                                  |                                                                                                           |                                                                                                             |                                                                                                       |                                                                                                            |
|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------|
|  public core                  |  commercial cloud wall |  green space             |  existing gateway  |  metro station        |
|  commercial-living mixed area |  village cloud wall    |  privatized public space |  added new gateway |  bus stop             |
|  underground parking lot      |  thin cloud wall       |  public corridor         |  green corridor    |  public bicycle point |



Distribution map of cloud wall



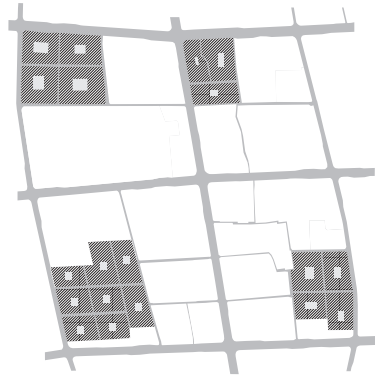
Existin gateways and random path



New gateways and random path



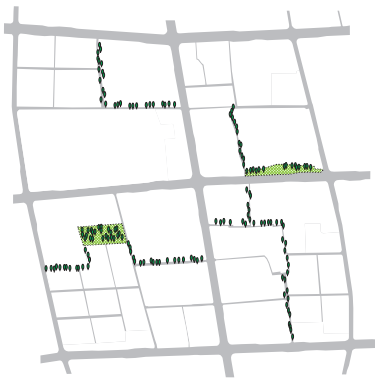
Public core – open areas for public activities with public buildings, square, and shopping mall



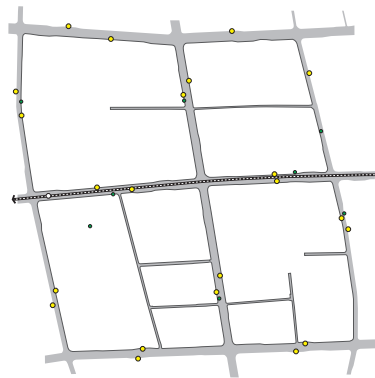
Shophouse cluster – rural settlements composed of shophouses, non-gated area but territory defined by village cloud wall



Public corridor – main street with concentrated public space, green space, amenities, and intensification use of cloud wall



Green space structure



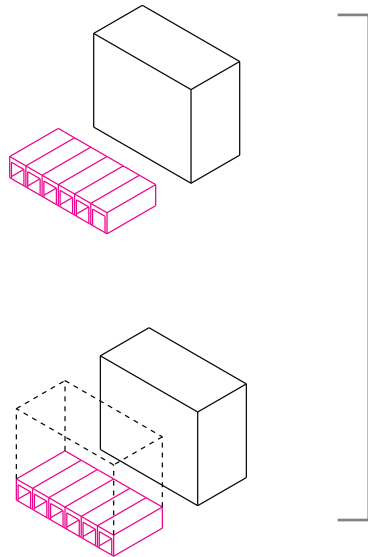
Public transportation network embedded



Map of new underground parking lot



# Types of Cloud Wall according to Existing Situation

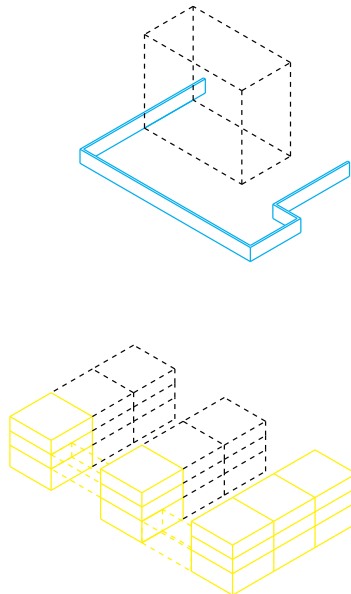


## Commercial wall

Commercial cloud walls are those with commercial space currently set around the boundaries of gated communities. There are two types of commercial walls. One is with commercial space underneath residential building, another one is with commercial space as independent buildings along the boundary. The advantage of this type of cloud wall is that it contains plenty of space for various scales of commercial activities from fitness club to grocery. It is very flexible to nearly all kinds of spatial modules, and it even has opportunity for cooperation between adjacent communities. However, compared to other types of cloud wall, the commercial wall demand more investment at transformation, thus, the construction period will be longer, as well as the cycle of return on investment. It is more suitable for maturely operated business.

## Thin wall

Thin wall is the most simple and common wall we understand. The floor area is almost nothing, so that the available space for transformation is quite limited. However, because of its mini scale, the realization of any function becomes even swift. The conversion between two functions could be made immediately, for instance, it can be used as a breakfast kiosk in the morning, and in the afternoon may be changed into a public reading corner. The flexibility of thin wall relies on the fine mobility and compact spatial arrangement of those functions applied there. It works well with small business and pedlars from migrants which are currently struggling for their life in the city. It also works well for urban farming at the inner side of wall, where inhabitants of gated communities can grow their own vegetables and even glasshouse there.



## Village wall

The high-density low-rise living areas here are not village in the city as most people know in metropolitan cities. They are rural settlements which are the later-era version of relocated village in the city. They have been unified planned and settled by local government 15 years ago, but they have been abandoned by the city already and start to fend for themselves. That is the time when the local government walls them up to separate them from the middle

class gated communities nearby. However, they survival from the expansion of metropolitan city and find their own role in the booming urbanization process – they become the shelter for those migrants swarming into big cities. Nowadays, a mini self-sufficient community can be found in each rural settlement in Wenxin, and most of them have built up their own characteristic by utilizing their unique migrant cultures coming from all around China. The transformation here emphasizes on the conservation of each feature of them. The current wall will be demolished toward a free-access collective community, and the new village wall which is not exactly a concrete wall, but a vague wall which delimits the boundary of living unit will create a better sense of belonging for villagers living inside. The transformation of cloud wall here allows participants to add on their current buildings to create an even more compact complex.

# CLOUD WALL HANDBOOK

FOR WENXIN

# Introduction

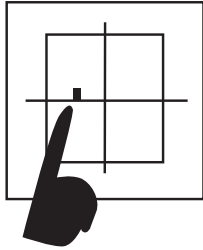
This is a handbook specially written for the one who participates in the cloud wall transformation project in Wenxin sub-district. The major reading groups will be inhabitants living in Wenxin (both the middle class from gated communities and migrants from rural settlements), small and big business operators in Wenxin, investors who are interested at putting investment into Wenxin, and also communities who involved and coordinating in this transformation project. This handbook will also work as an agreement among citizens, social groups, communities, and local government, for it regulates the responsibility and duty of each group, while argumentations are possible based on the principle of cloud wall strategy.

Basically, this is a book providing you practical information about how to build or rent or convert your own cloud wall in Wenxin sub-district. This includes spatial modules, function inspiration, regulations, process guide, and some assistant tools. After reading, you will also be aware of what kind of profit you may get from applying cloud wall around your neighbourhood, and what contribution you may make to your city, so that you're ensured to gain extra profit and more flexibility in your cloud wall investment beside from keeping current advantage.

Have fun with cloud wall, and start experiencing your city with more possibilities and imagination!

# How to Use This Handbook?

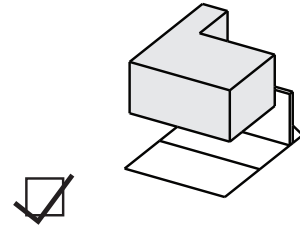
1 Choose your cloud wall from the map



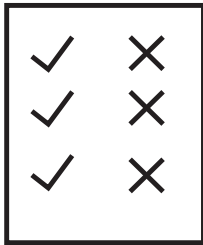
2 What function you want?



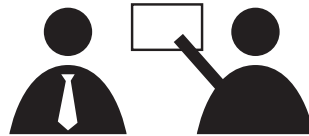
3 Choose spatial module for it



4 Be aware of the regulation



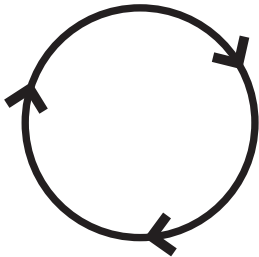
5 Apply to your community with the proposal for your cloud wall



6 Once approved, you can start construction, pay attention to the various construction period



7 Process can be reviewed here




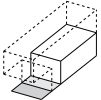
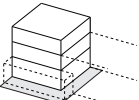








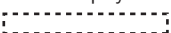



8 You are informed of the responsibility and duty of local government and community, you can get help from them anytime



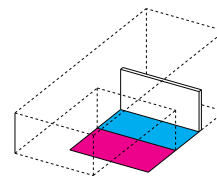
9 Scenarios are reference for your future consideration. Be aware of the cooperation among participants



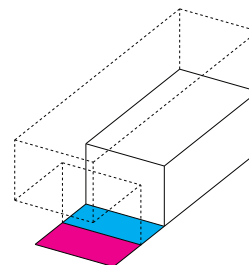
# Matrix Setting

			
Investment requires	¥	¥	¥
Pay back period			
Potential areas available			
Valid period of lease contract	< 1 month 	> 1 year 	self-employed 
Construction period	< 1 week 	< 0.5 year 	< 0.5 year 
Potential profits	¥	¥	¥

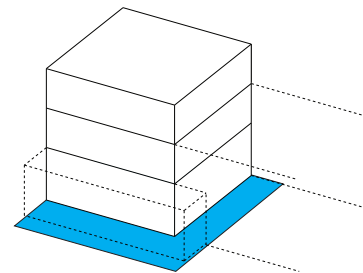
Comparison among three cloud wall types



Thin cloud wall

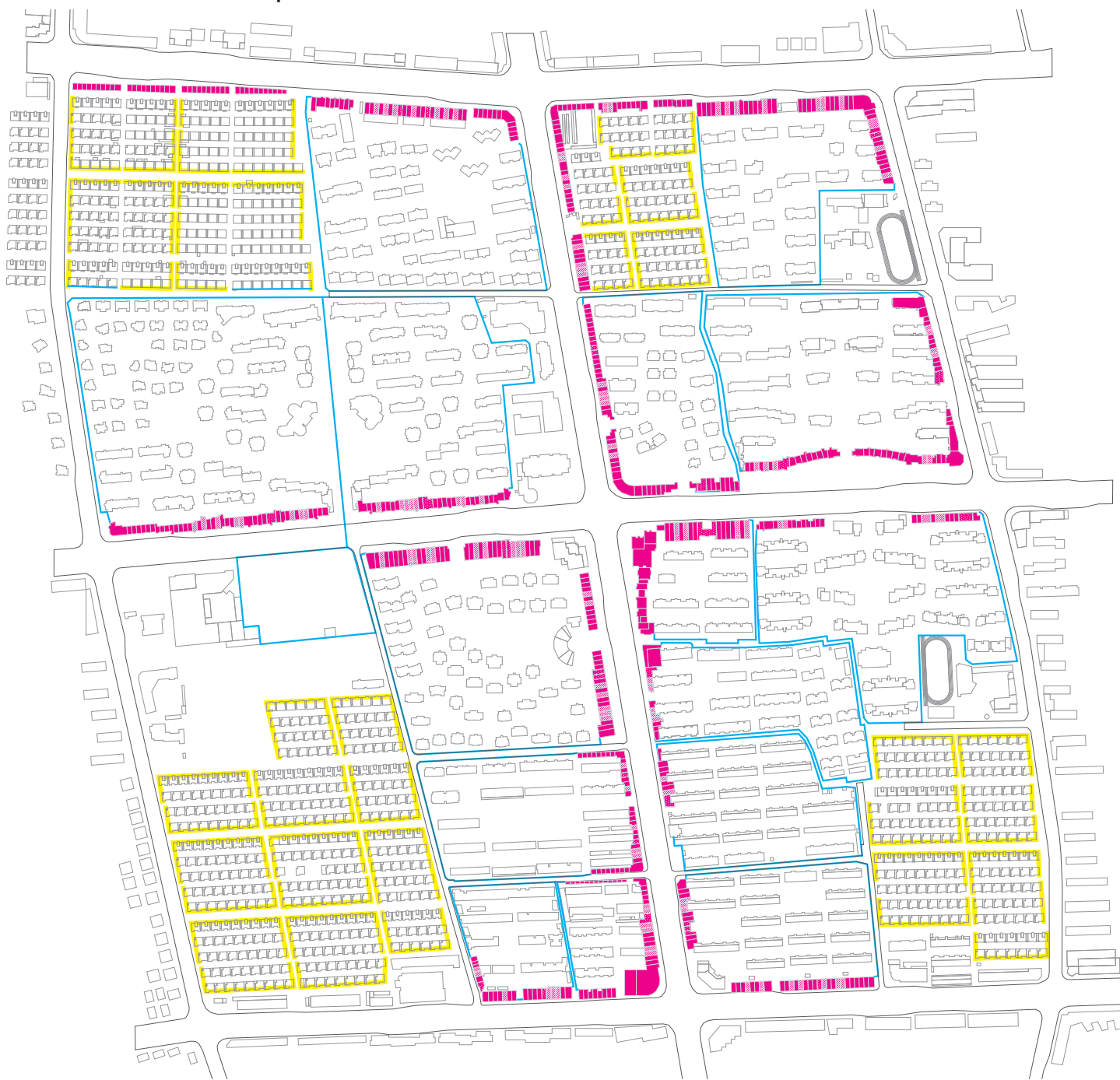


Commercial cloud wall

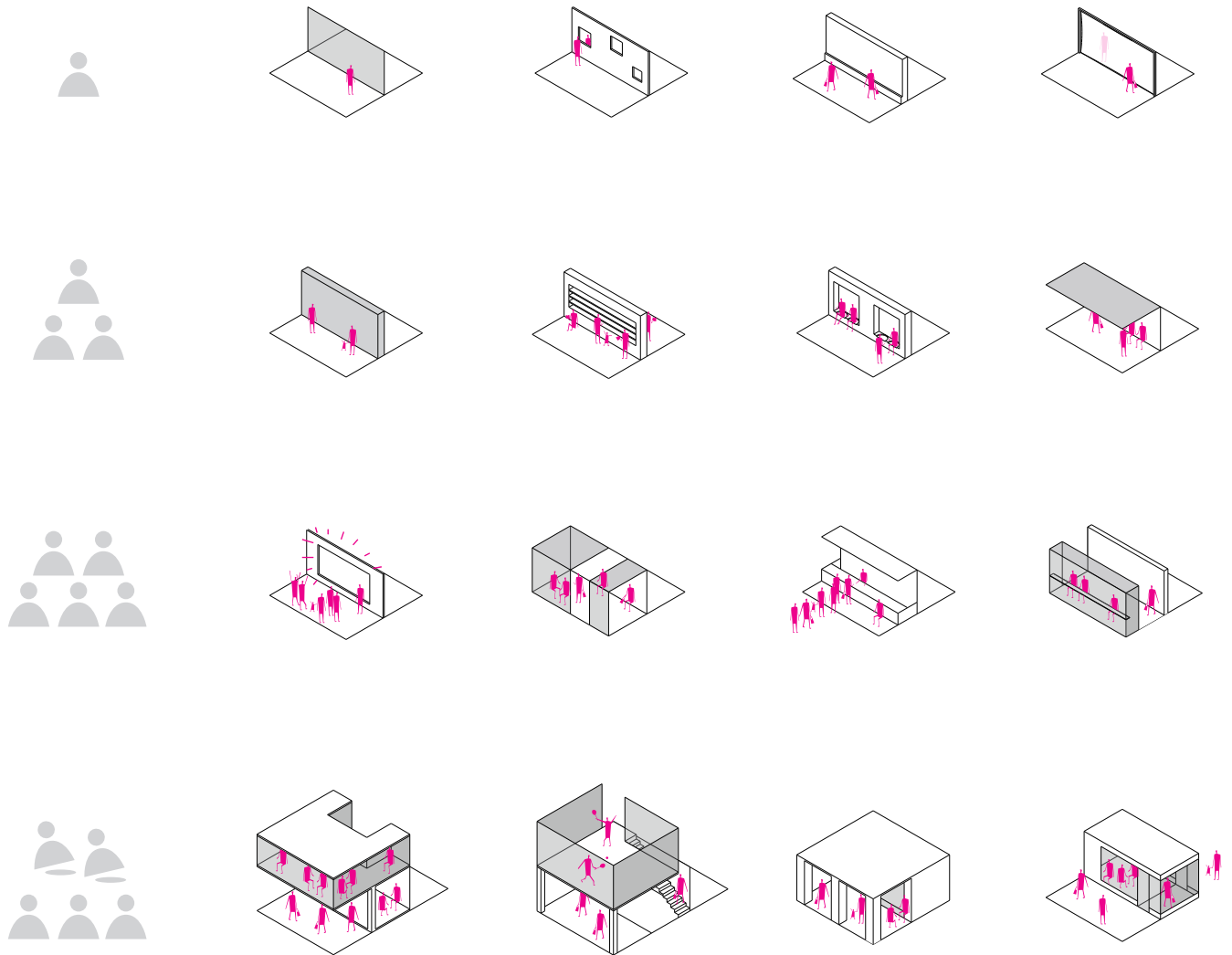


Village cloud wall

# Distribution Map of Cloud Wall



# Functional Inspiration



and more ...



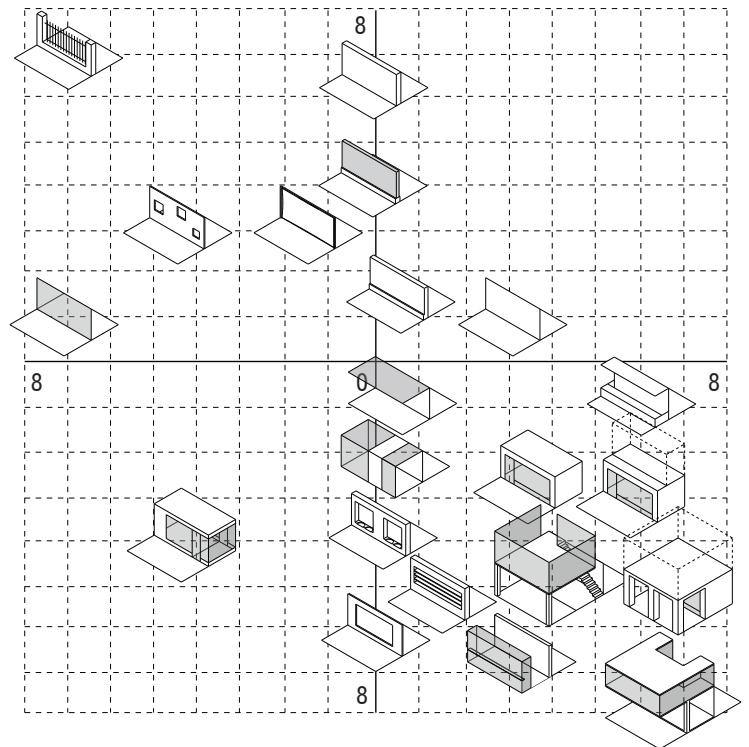
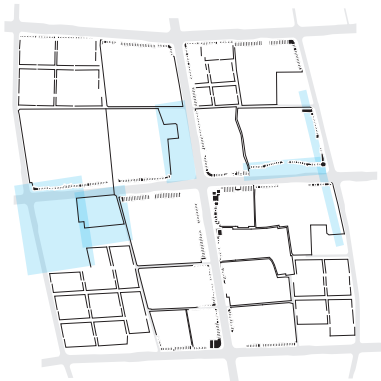
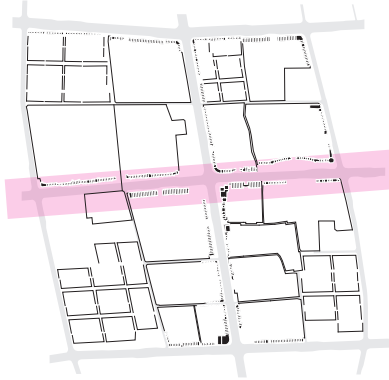
## Tips for programme decision

### Be aware of the strategic planning

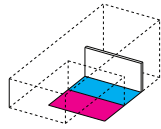
Strategic plan set a framework for the future Wenxin. Relatively speaking, the areas along public corridor, public cores, and rural settlements have more opportunity and potentials for development. So when you start to make a decision, please pay more attention to the strategic plan and public policy related.

### Self-test

The chart below shows the feature and influence on people's behavior of different functions. Once you make a decision of what function you want to have in your cloud wall sector, you can use this chart for a self-test of your consideration.



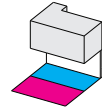
# Spatial Module



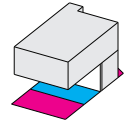
Thin wall



T



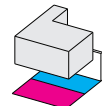
DH



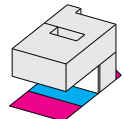
DHE



TD



DHP



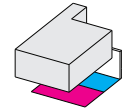
DHEP

## Choose your spatial module

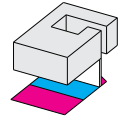
A series of spatial modules are designed to help you with the construction work. According to the type of cloud wall you have, you may choose from this catalog for the spatial solution of your ambition. The spatial solutions include expansion, shrinking, hanging, connection, etc. Each module has a code underneath which help you to understand its spatial feature.



E



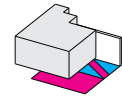
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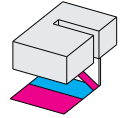
DHEP



E



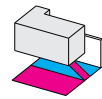
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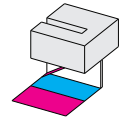
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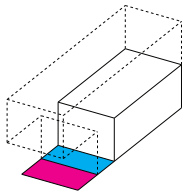


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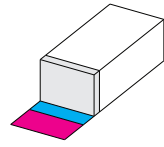


DHEP

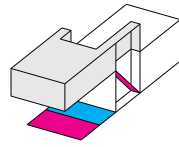
- D = double use
- H = hanging
- E = expansion
- S = shrinking
- C = connection
- T = through
- P = patio



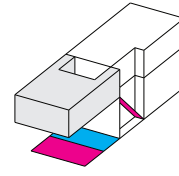
Commercial wall



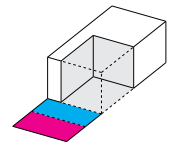
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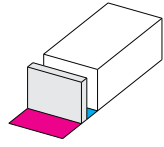
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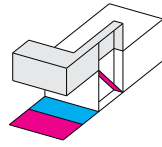
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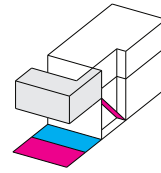
S



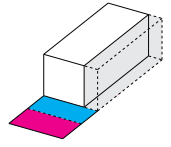
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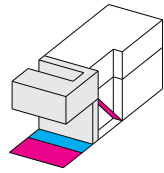
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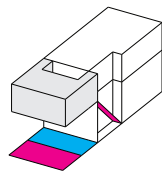
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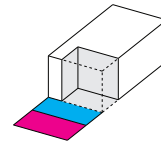
DSTC



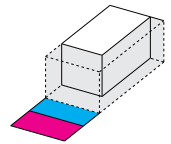
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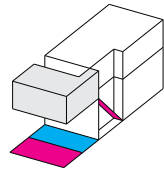
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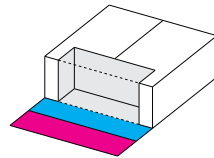
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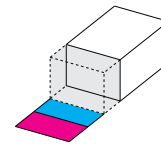
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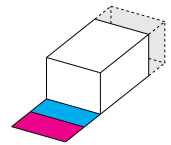
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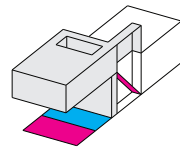
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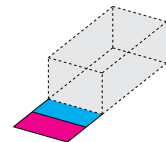
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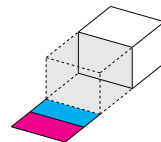
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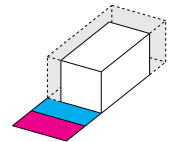
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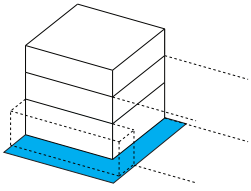
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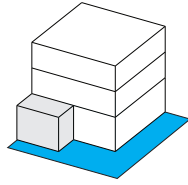
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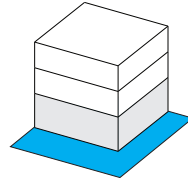
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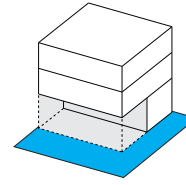
Village wall



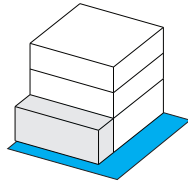
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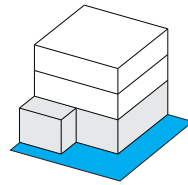
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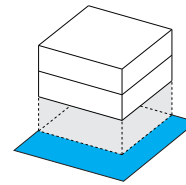
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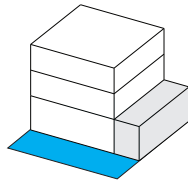
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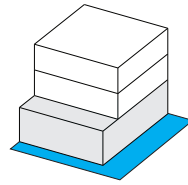
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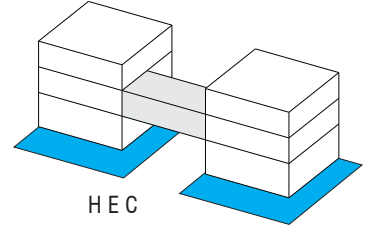
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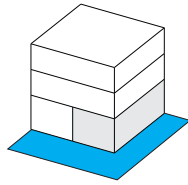
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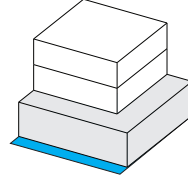
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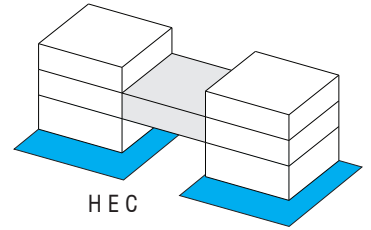
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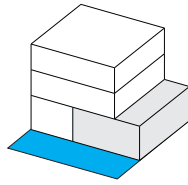
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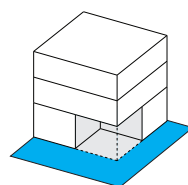
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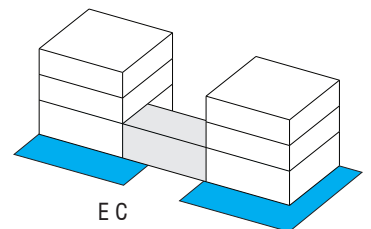
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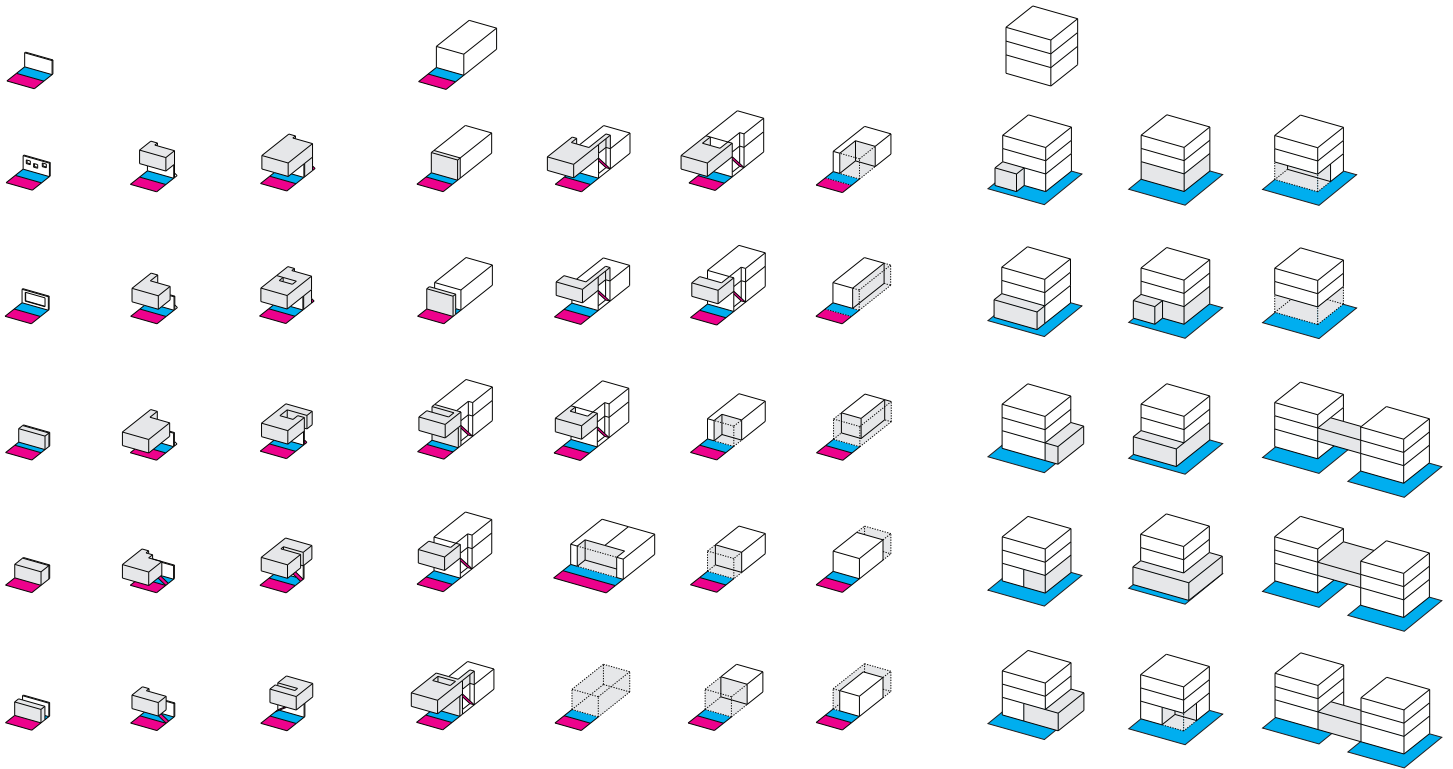


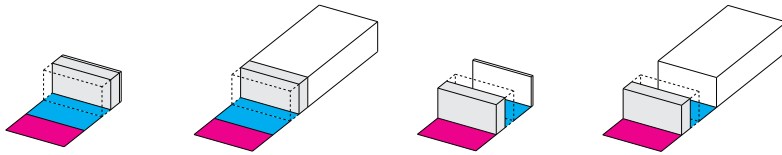
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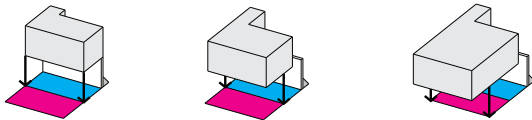
EC

# Index of Spatial Module

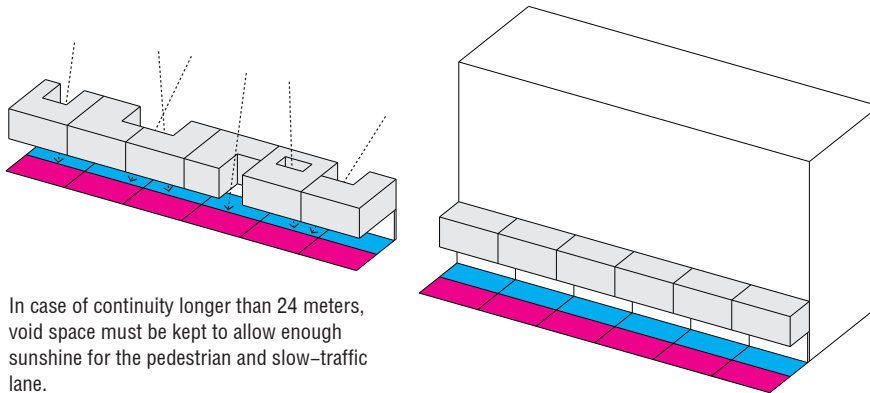




After extension, minimum 3 meters wide left in pedestrian lane.

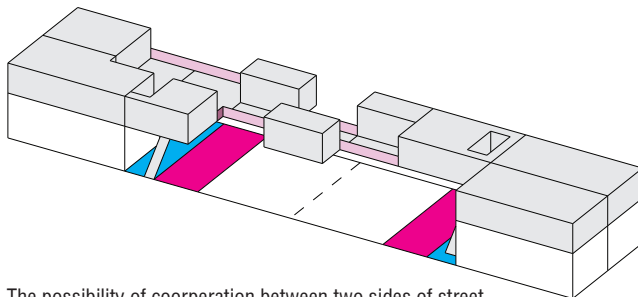


Three possible reinforcement points for the support of suspended extension part.



In case of continuity longer than 24 meters, void space must be kept to allow enough sunshine for the pedestrian and slow-traffic lane.

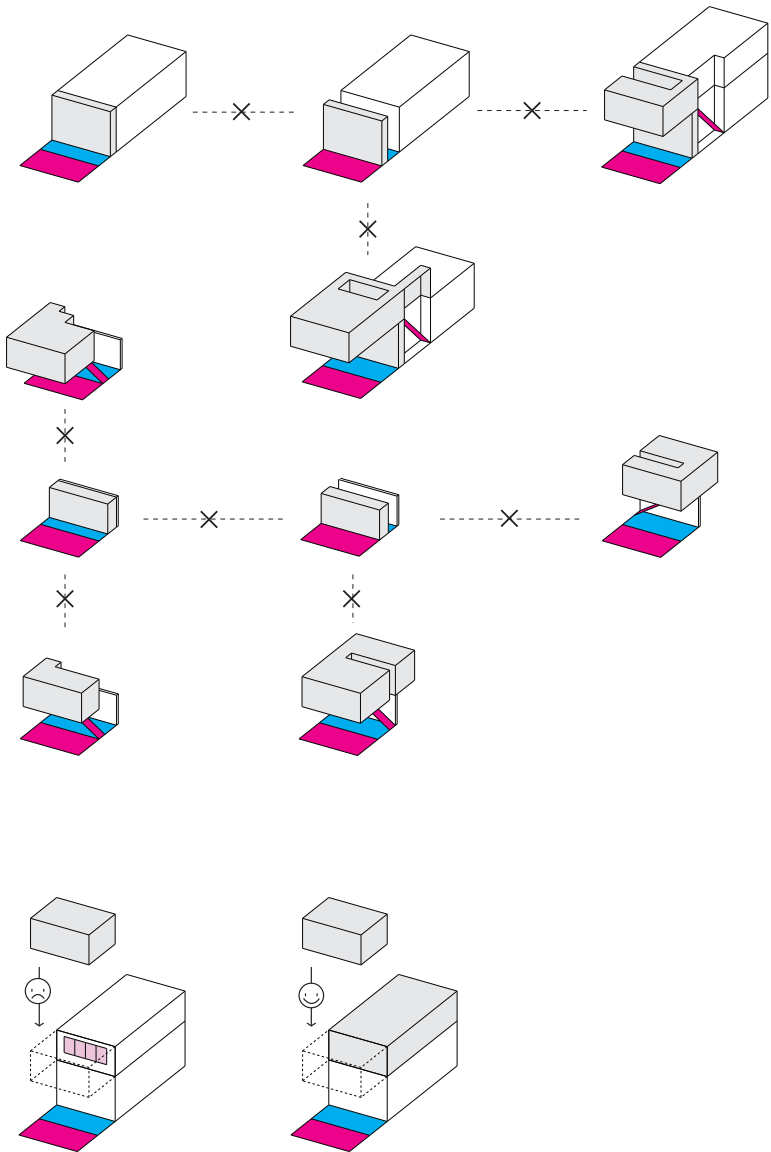
The roof of the extension part can be used as terrace for the living units above.



The possibility of cooperation between two sides of street to build a pedestrian bridge for win-win benefits and public contribution.

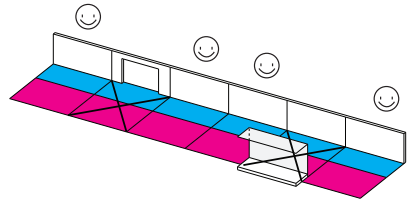
## Choose your spatial module

The construction procedure of cloud wall is a process of about creativity and cooperation. Please obey the mandatory regulations here, and be aware of your contribution to the public interests.

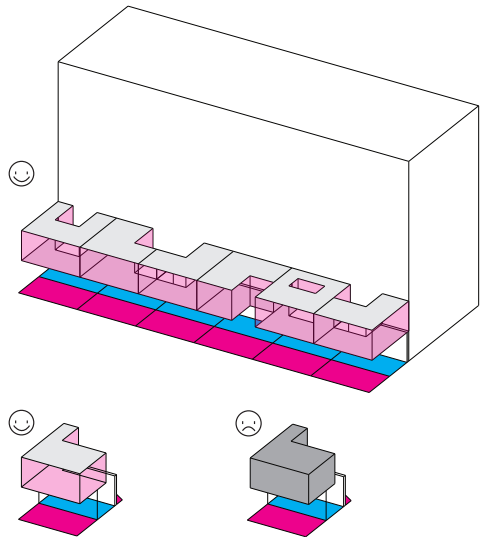


No blocking of sunshine on the first floor living unit. Unless it has been transferred to commercial use.

Some modules are forbidden to be used adjacently.

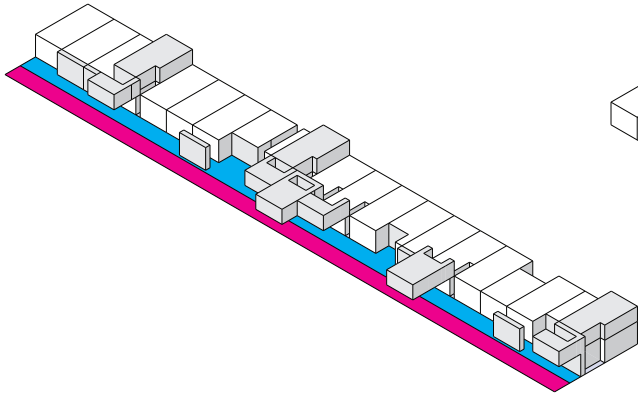


No occupation on the site of bus stop and entrance.

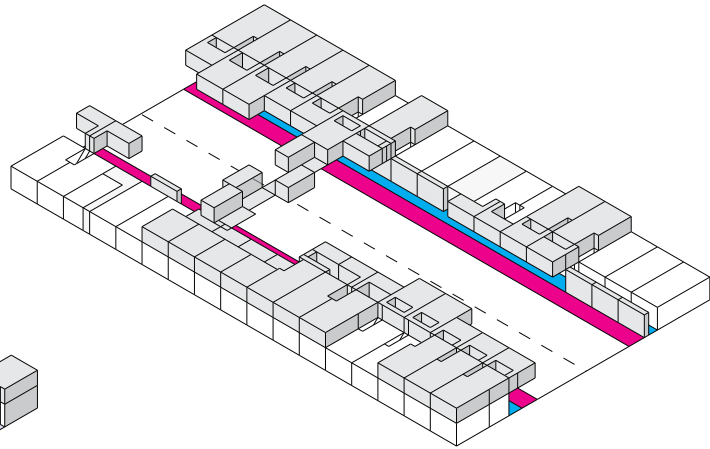


Transparent materials are encouraged to be used on the cloud wall facade, while at single wall condition, transparent materials are required, "black box" is not allowed.

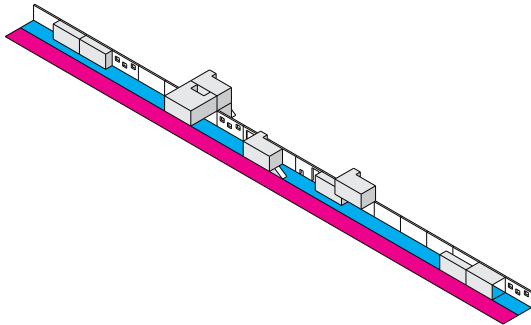
# Switch of spatial module



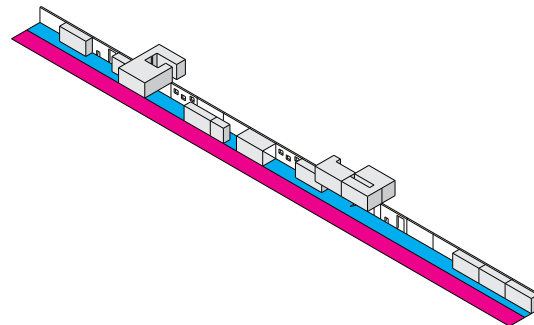
Normal



Extremely Good



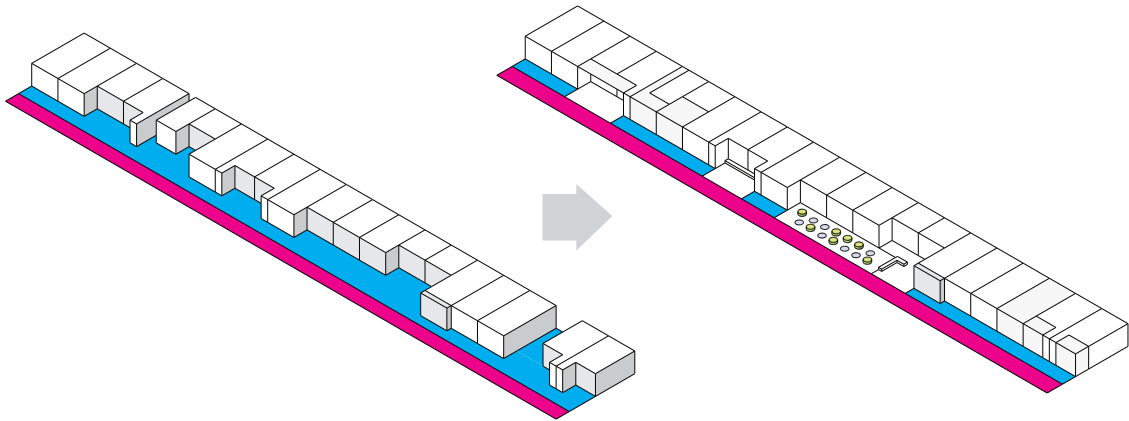
Normal



Extremely Good

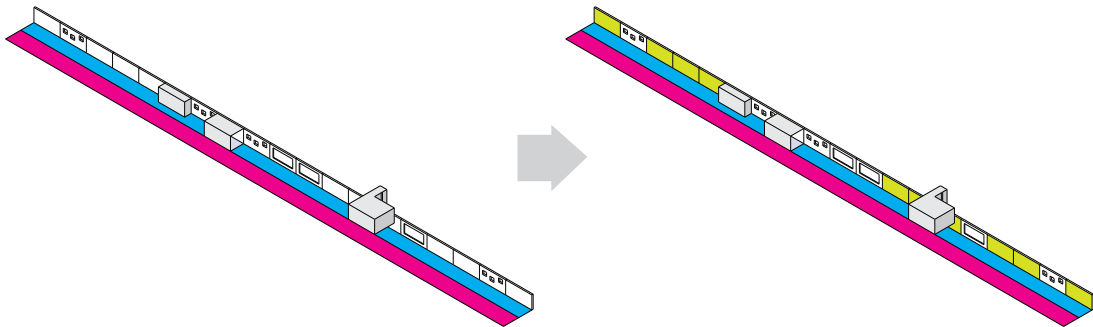
Because of the flexible feature of cloud wall, and the unpredictable developing of market and social demands, there may be various scenarios at the end of relatively steady phase. In extremely good scenario, when lots of expansion and hanging modules are used, it is possible for adjacent cloud wall participants or even the two side of cloud wall street to cooperate into special street. In extremely bad scenario when most of the cloud wall sectors are shrinking or unoccupied, the local government has duty to transform the wasted space into better use, like public space or green space. It is also possible to transform long-term abandoned cloud wall sector to social housing owned by local government.





Extremely Bad

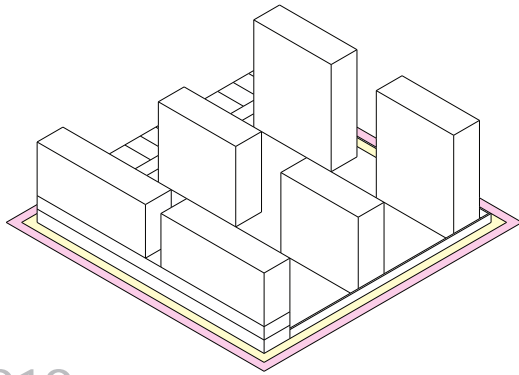
Transforming to permanent public space



Extremely Bad

Transforming to green

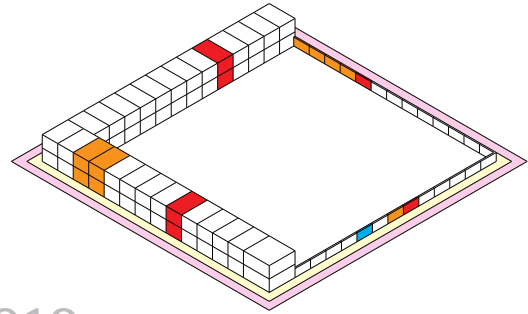
# Process with timetable



2010

Existing situation of boundary

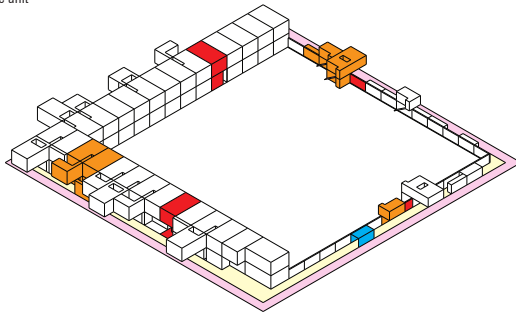
- community service
- gateway
- public service
- basic unit



2010

2010, Subdivision into cloud wall sector with mandatory sectors decide by community. The rest of white sectors are open for your choose.

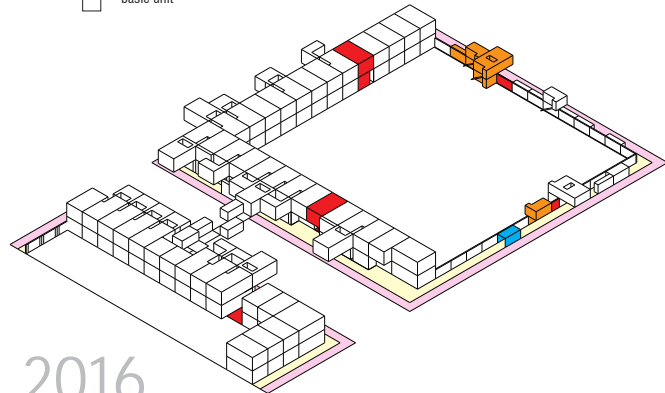
- community service
- gateway
- public service
- basic unit



2016

2016, five years later, the relatively steady situation

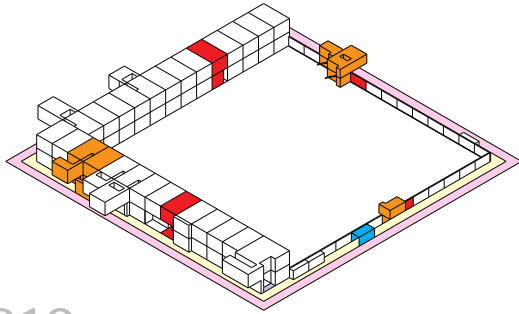
- community service
- gateway
- public service
- basic unit



2016

2016, cooperation appears, a shopping street is formed by participants of cloud wall

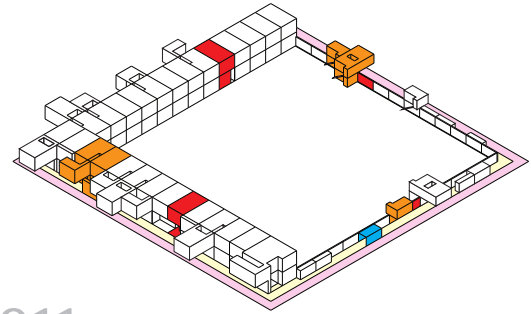
- community service
- gateway
- public service
- basic unit



2010

2010, result of your first choice

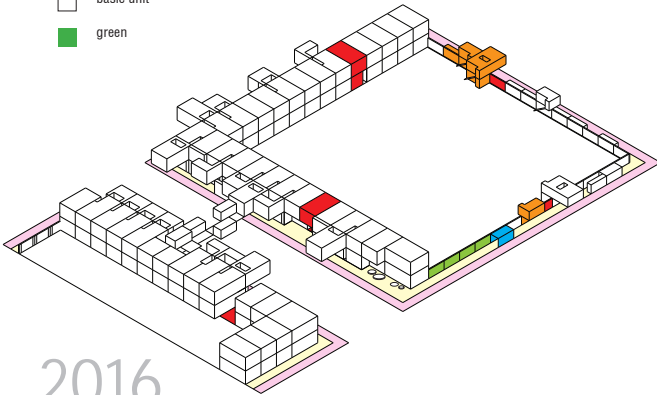
- community service
- gateway
- public service
- basic unit



2011

2011, one year period for adjustment and development of first choice

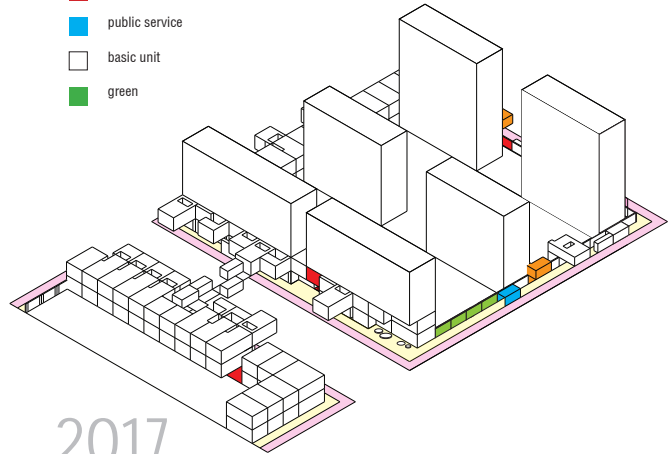
- community service
- gateway
- public service
- basic unit
- green



2016

2016, the long time unoccupied cloud wall sectors will be withdrawn by local government and transformed to other public use

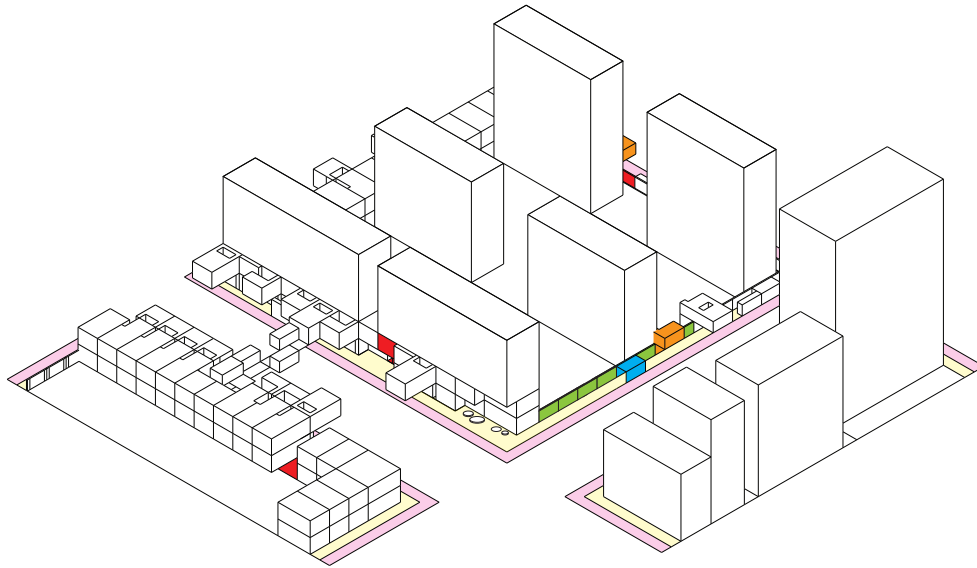
- community service
- gateway
- public service
- basic unit
- green



2017

2017, the second relatively steady situation

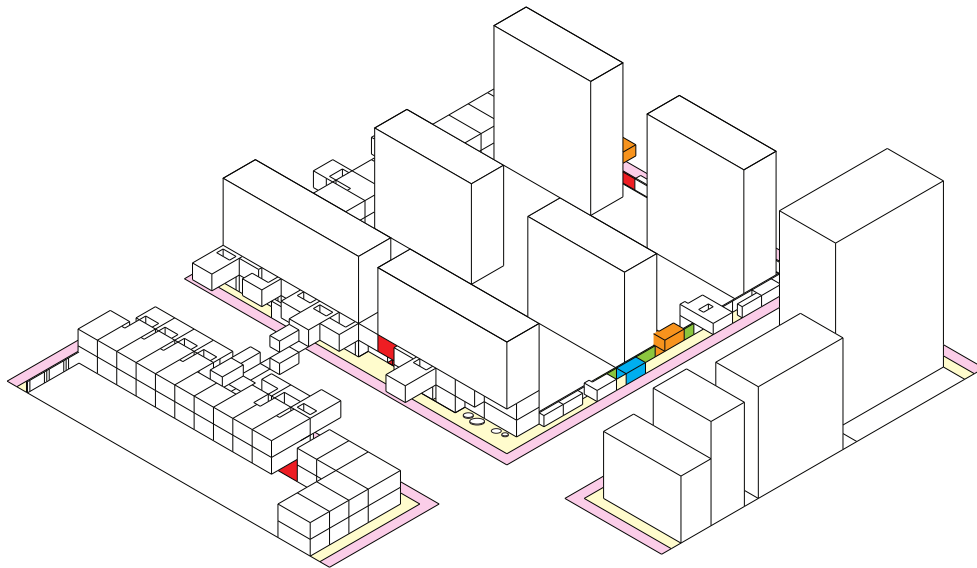
- community service
- gateway
- public service
- basic unit
- green



2020

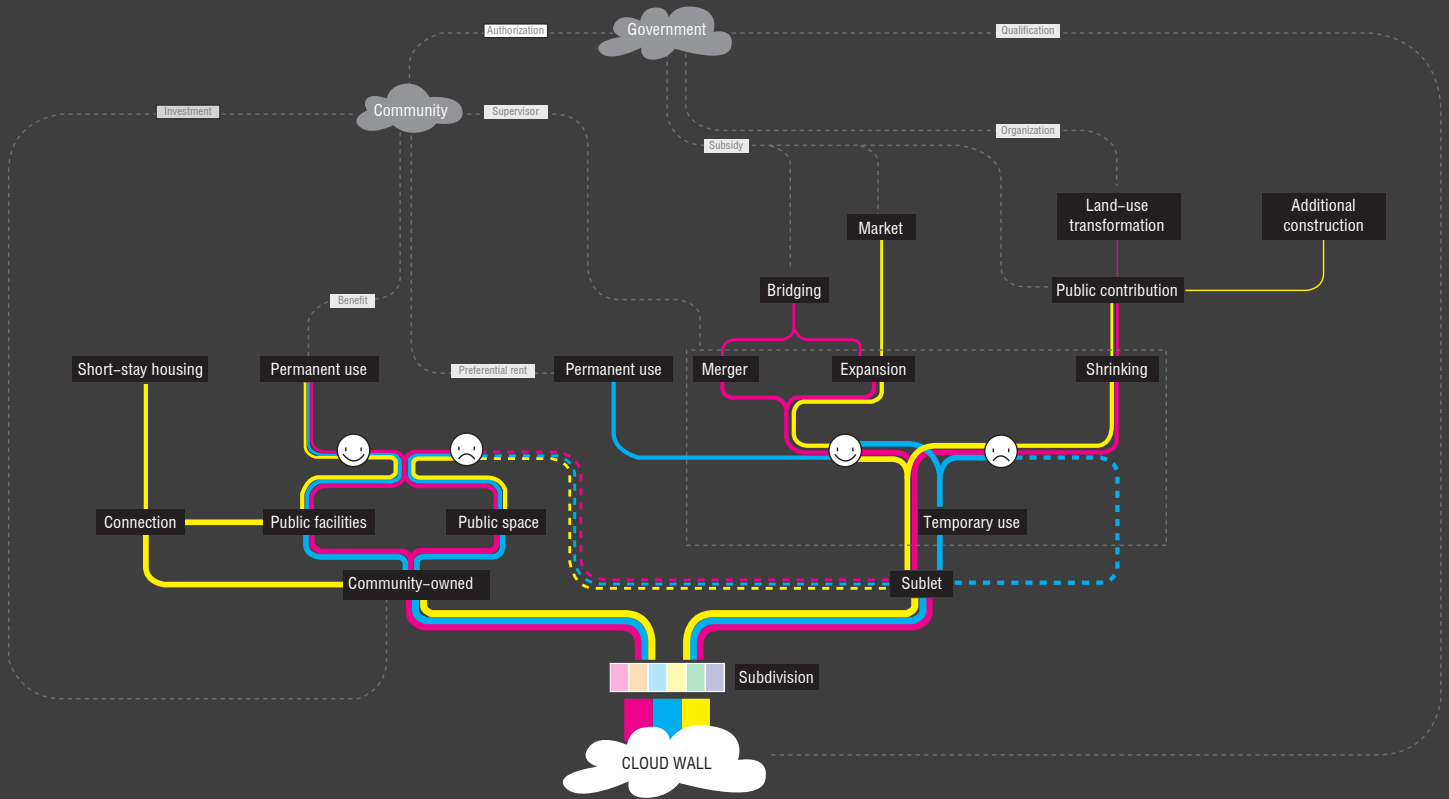
2020, when new stimulation happened

- community service
- gateway
- public service
- basic unit
- green



2020

2020, you can restart the cloud wall procedure again



## FAQs

### Who has the responsibility of maintenance for cloud wall?

Cloud walls that have been leased should be maintained by the renters themselves. The maintenance duty includes sidewalk in front of your cloud wall. The maintenance fees of cloud walls that have been withdrawn by local government or community will be paid by them.

### What should I do if I want to modify or quit the cloud wall proposal within the valid contract period?

Within valid contract period, you cannot operate large-scale renovation, what you can do is to adjust in small-scale and details that will not cause striking alteration in exterior. The design proposal for your cloud wall will should be remain the same within the valid period of lease contract.

### **What should I do if there are conflicts caused by adjacent cloud wall around mine?**

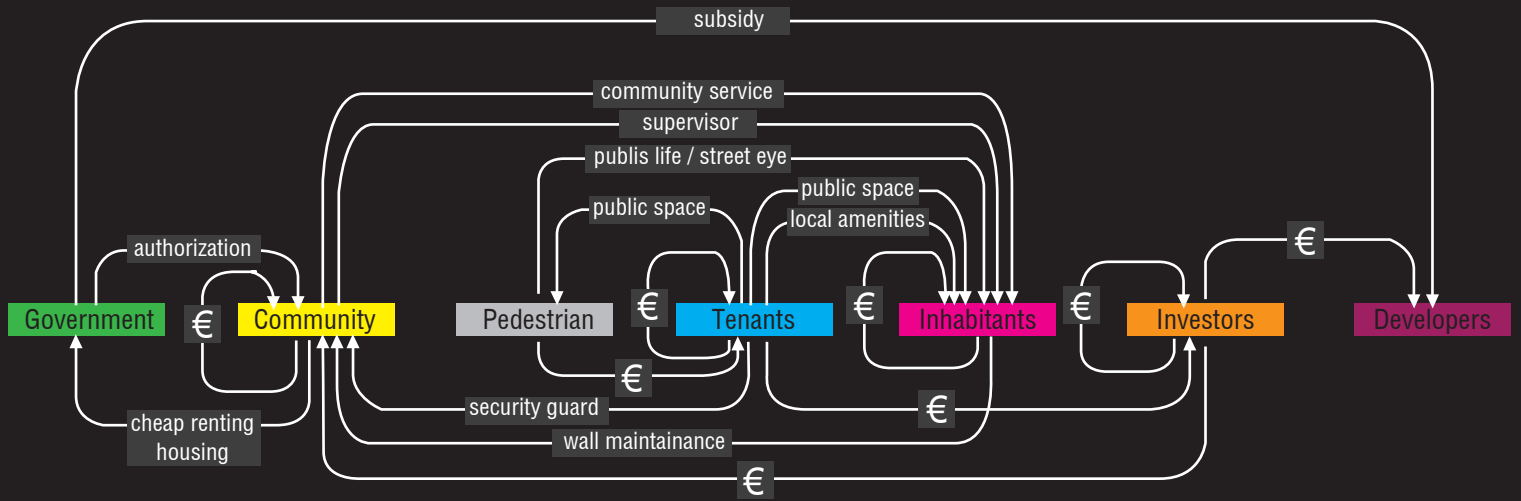
First you should realize that cloud wall strategy is a process about cooperation and negotiation. Each proposal of cloud wall will be put in publicity for two weeks in order to collect suggestions and get supervise from the public. Within this publicity anyone can claim their objection referring to the proposal. When it starts construction, further conflicts like building noise, invasion of interests should be negotiated through related community.



CLOUD WALL  
HANDBOOK  
FOR WENXIN



# PARTICIPANTS & BENEFIT BALANCE





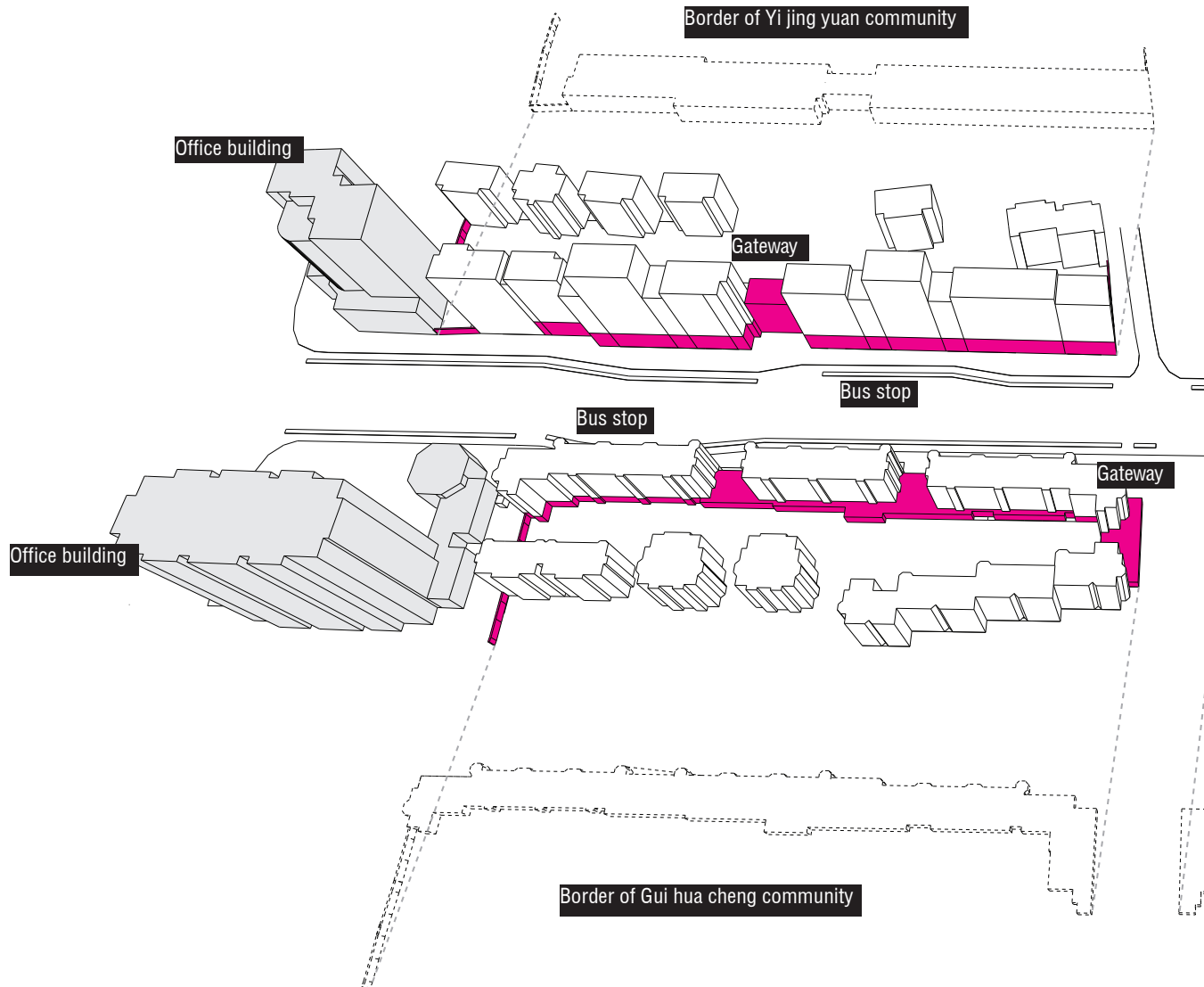






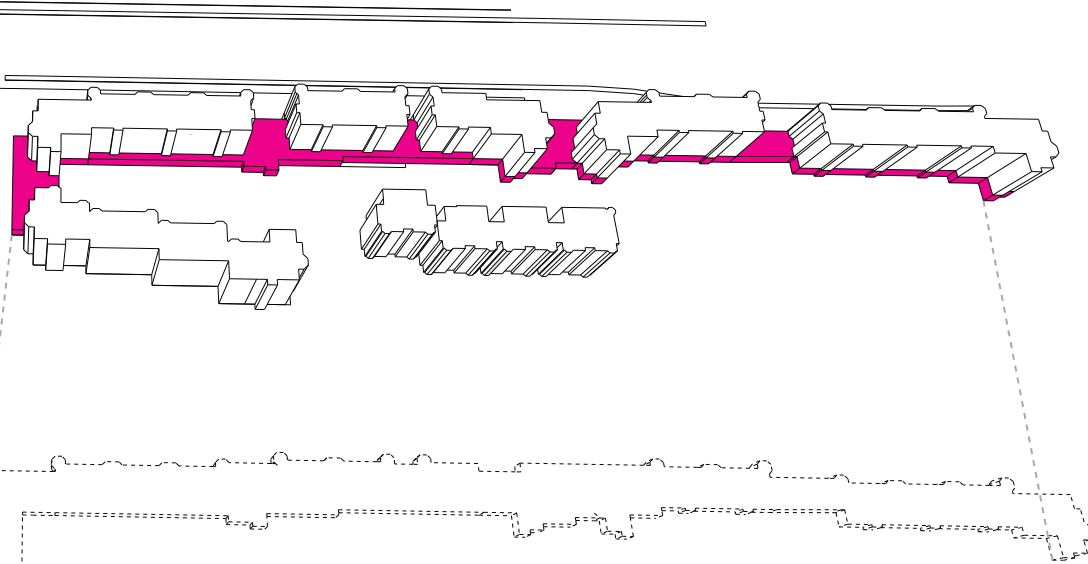
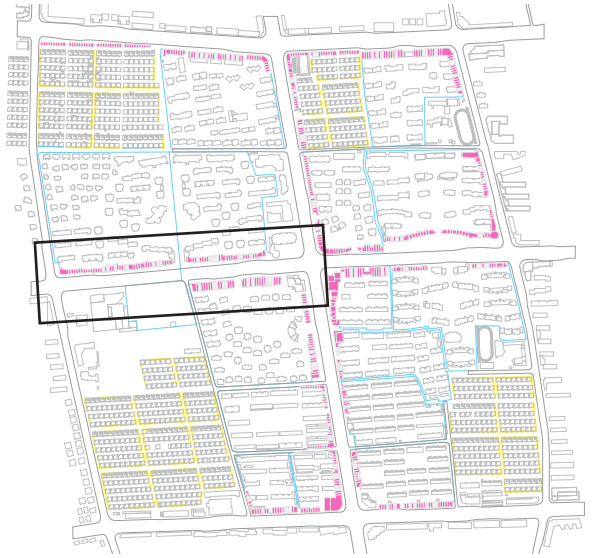
Satellite map of Wen'er street in 2010  
Source: <http://www.flashearth.com/>

# WEN ER STREET CLOUD WALL SELF-INITIATIVE TRANSFORMATION



Public square

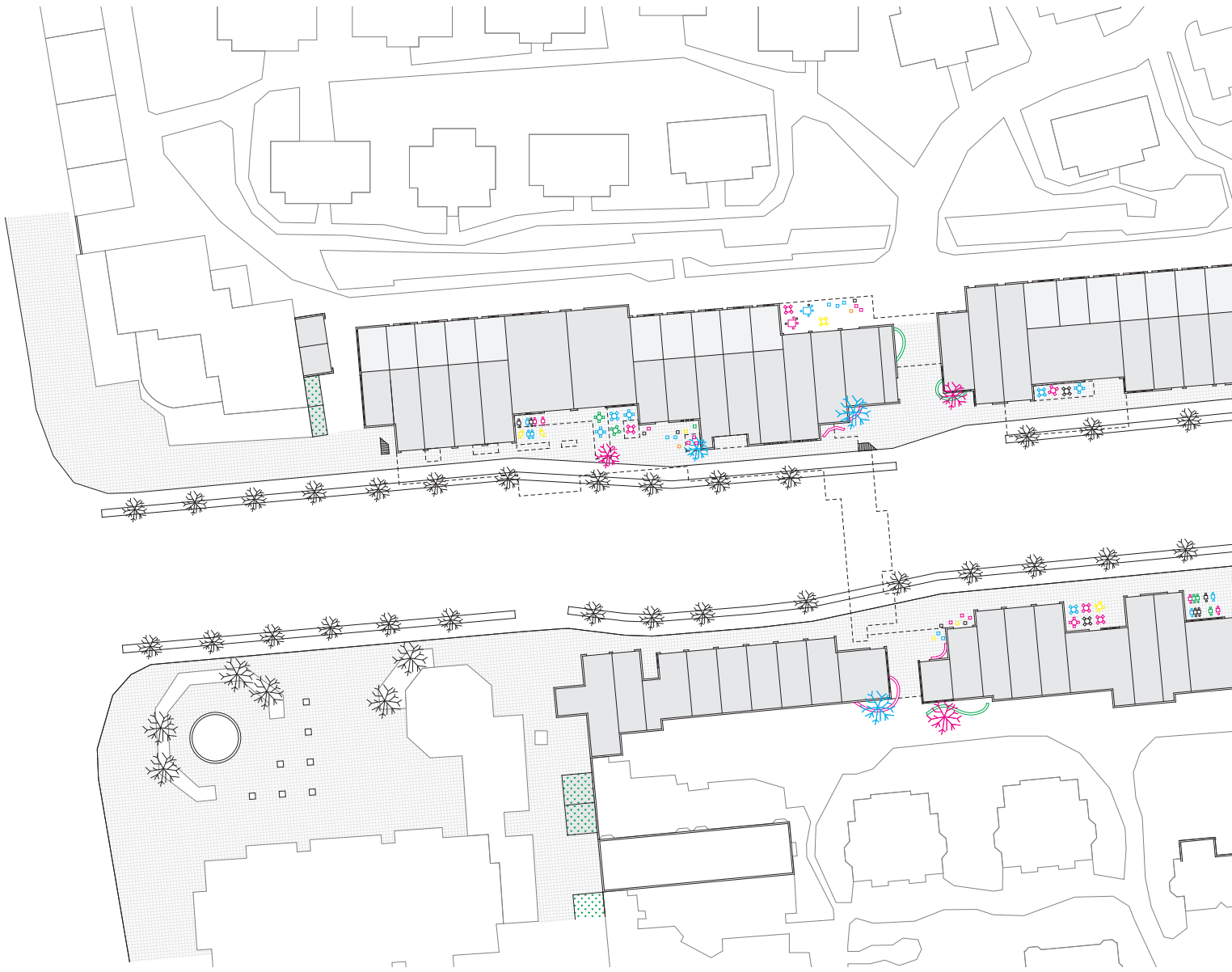
Shopping mall



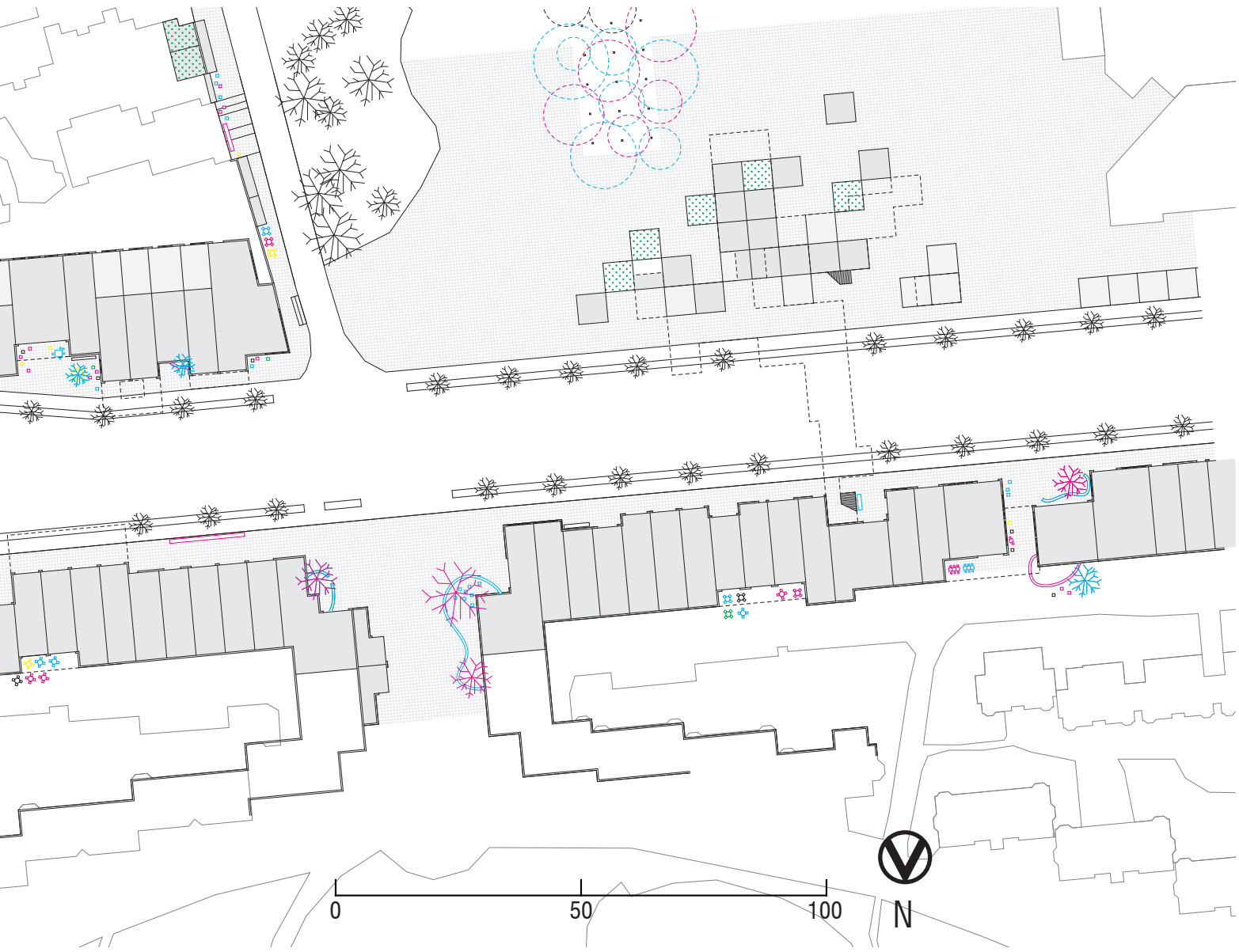
Border of Gui hua cheng community

Current function distribution, 2010

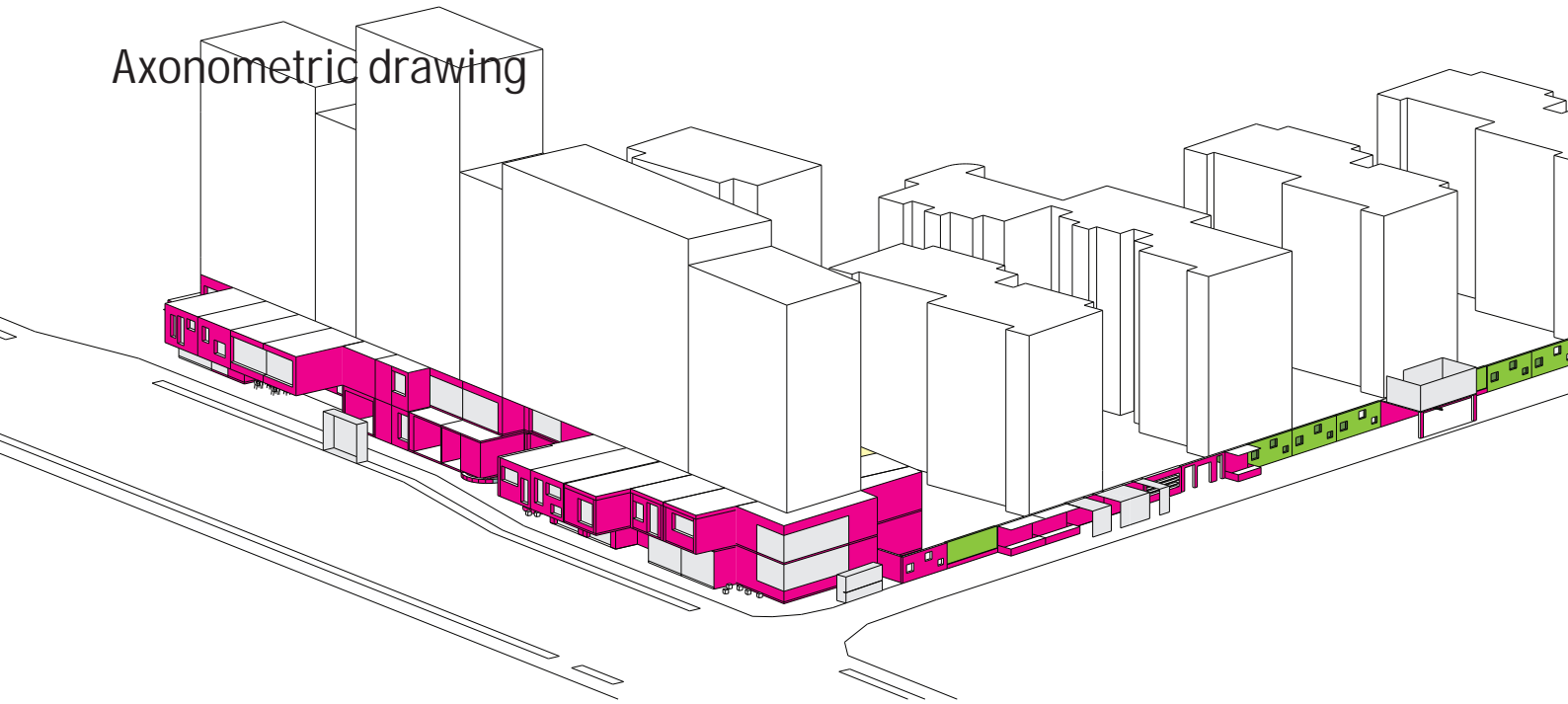
# Transformation map of Wen er street, 2015







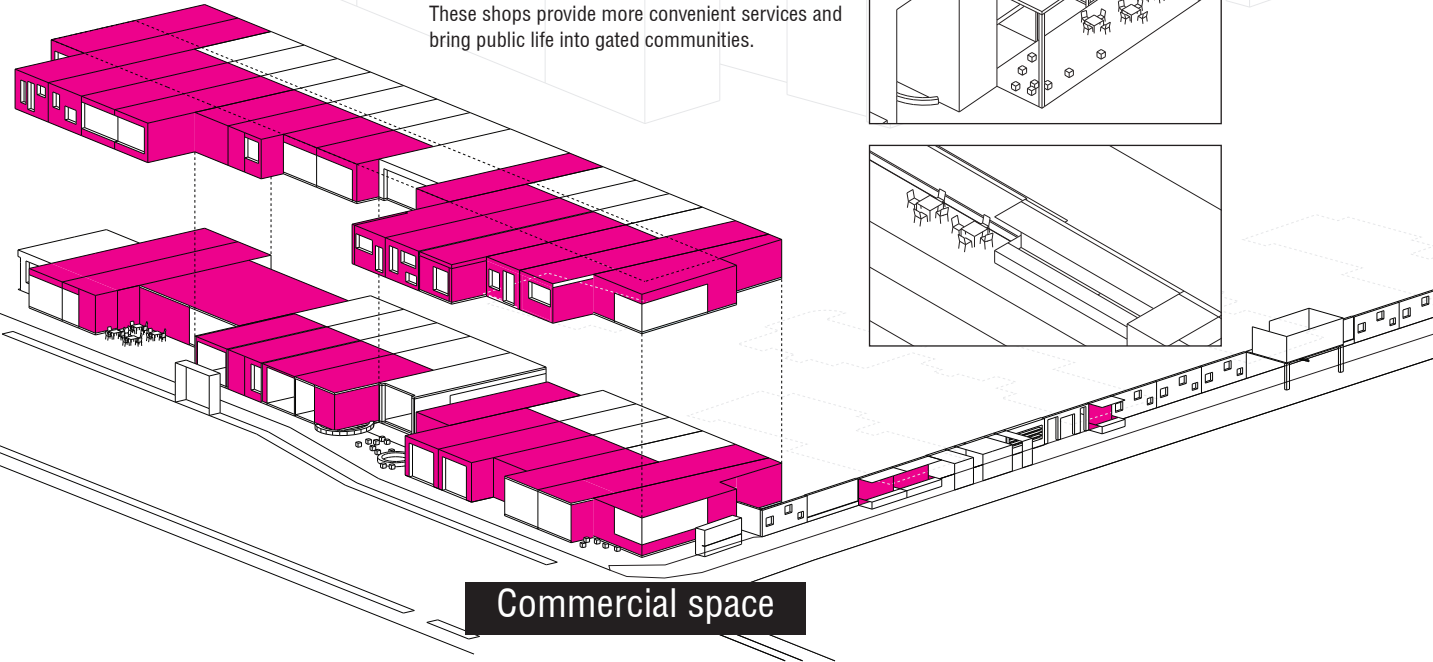
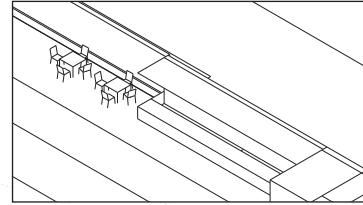
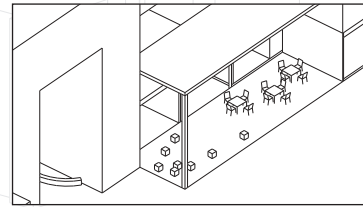
# Axonometric drawing



**NEW ENTRANCE**  
Cloud wall opens more entrance & exit along the enclosed boundary. Safety is still guaranteed while the accessibility to public space and street is reinforced for gated communities dwellers, thus, partly downgrade the gated superblock scale.

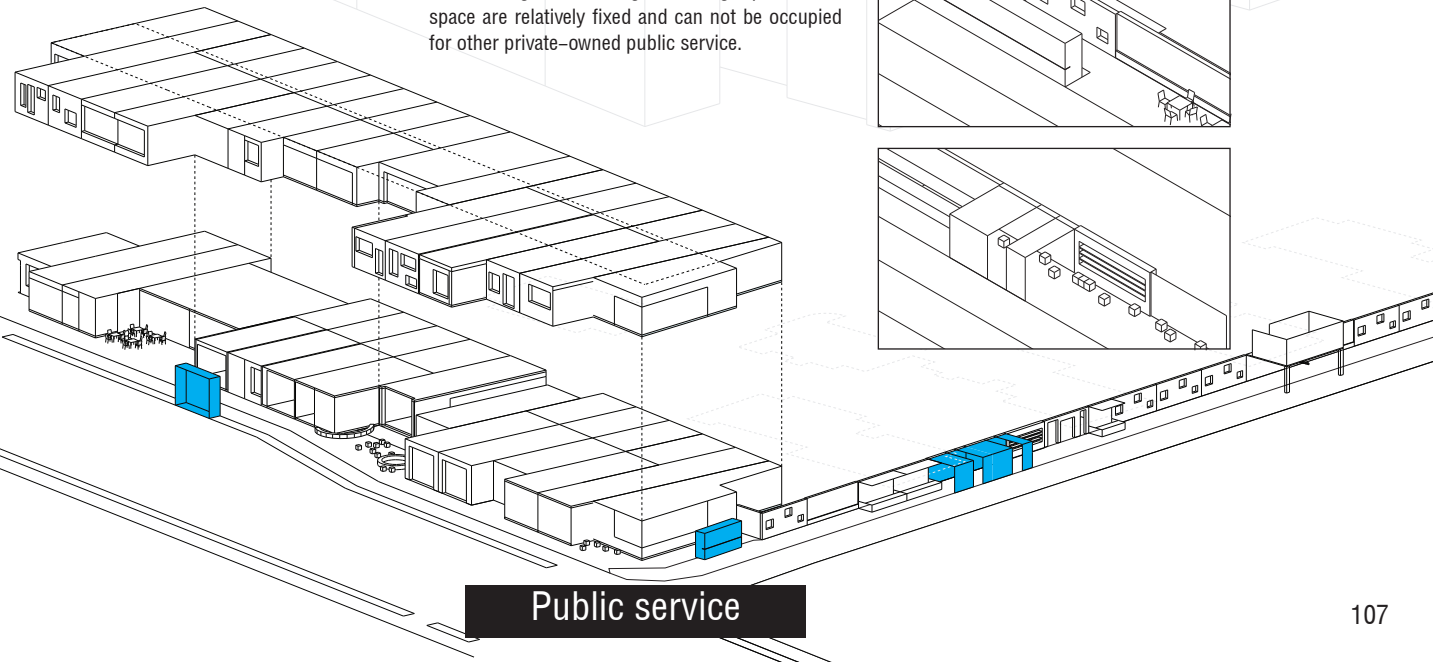
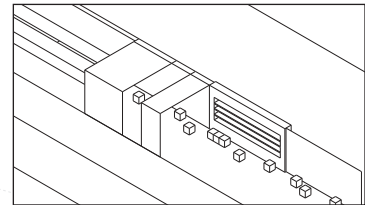
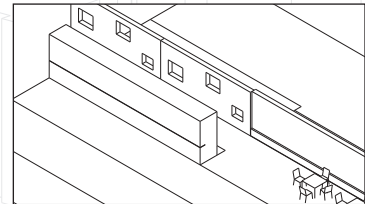
**New gateway**

**COMMERCIAL SPACE SERVE INSIDE COMMUNITY**  
Some commercial space in cloud wall are dual shops serve both inside and outside community. These shops provide more convenient services and bring public life into gated communities.



**Commercial space**

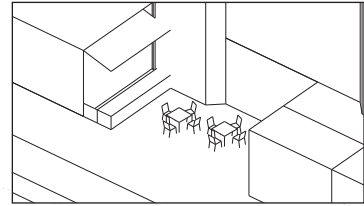
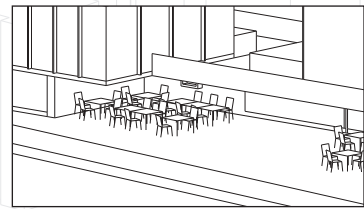
**PUBLIC SERVICE**  
Public service like bus stop, newstand, mini library were arranged according to strategic plan. Their space are relatively fixed and can not be occupied for other private-owned public service.



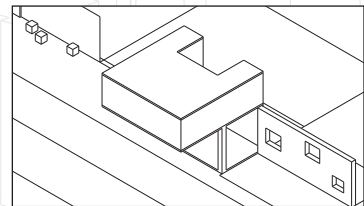
**Public service**

### PUBLIC SPACE

Outdoor cafe and teahouse with commercial street above, the voids allow more sunshine to the bottom space. Suitable for leisure activities like Mahjong playing.



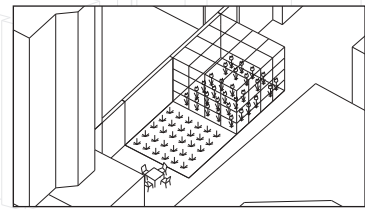
Public space



### COMMUNITY SERVICE

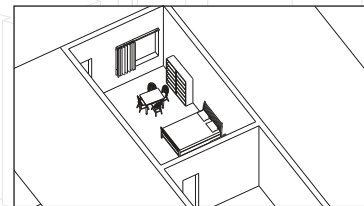
Community services such as community activity center, HAOs office, children's workshop, etc. will be set in cloud wall as well. Community has priority in choosing the location of community services.

Community service



**URBAN FARMING**

Space under the wall can be used as urban farming for inhabitants of gated communities. Isn't it attractive to serve your family with vegetables that planted by yourself?



**CHEAP RENTING HOUSING**

Possible to be used as public cheap renting housing or as the supportive living space for commercial space in front. Minimum of 30 m<sup>2</sup>, suitable for business start-ups, rural workers and single family.

**Cheap renting housing**





禁止外地及市属  
五县(市)电动  
自行车通行。

Current photo of the double walls between two gated communities







Vision after cloud wall transformation





Current photo of Wen'er streetscape





Vision after cloud wall transformation





## CONCLUSION

To sum up, I see the problems of the disregard of urban public space and the limitation of interaction and diversity between different social classes, in the context of a more and more multipolar society built up on gated-superblock development model. What I aimed to do is to revitalize urban public space, especially the public street, and promote positive interaction among different social classes while keeping the advantage of gated communities in China.

By further research, I realize that the crucial reasons behind the problematic phenomena are the un-proper scale of how we organizing living community, and the limited potentiality of diversity and interaction on border. At meantime, research from historical view implies that walls and gates are embedded in Chinese culture. So I try to reverse the border from the problem to a solution.

I introduce 'cloud wall' as a new definition of border into the transformation process of gated communities. It highlights on the intensified use of border while open up more connectivity potentials to the urban network. The definition of cloud wall-based community helps to rescale gated-superblock. And last but not least, it is also an open resource tool for different stakeholders like the migrants, the middle-class inhabitants, community, planner, and local government cooperating together on the decision making process of urban development.









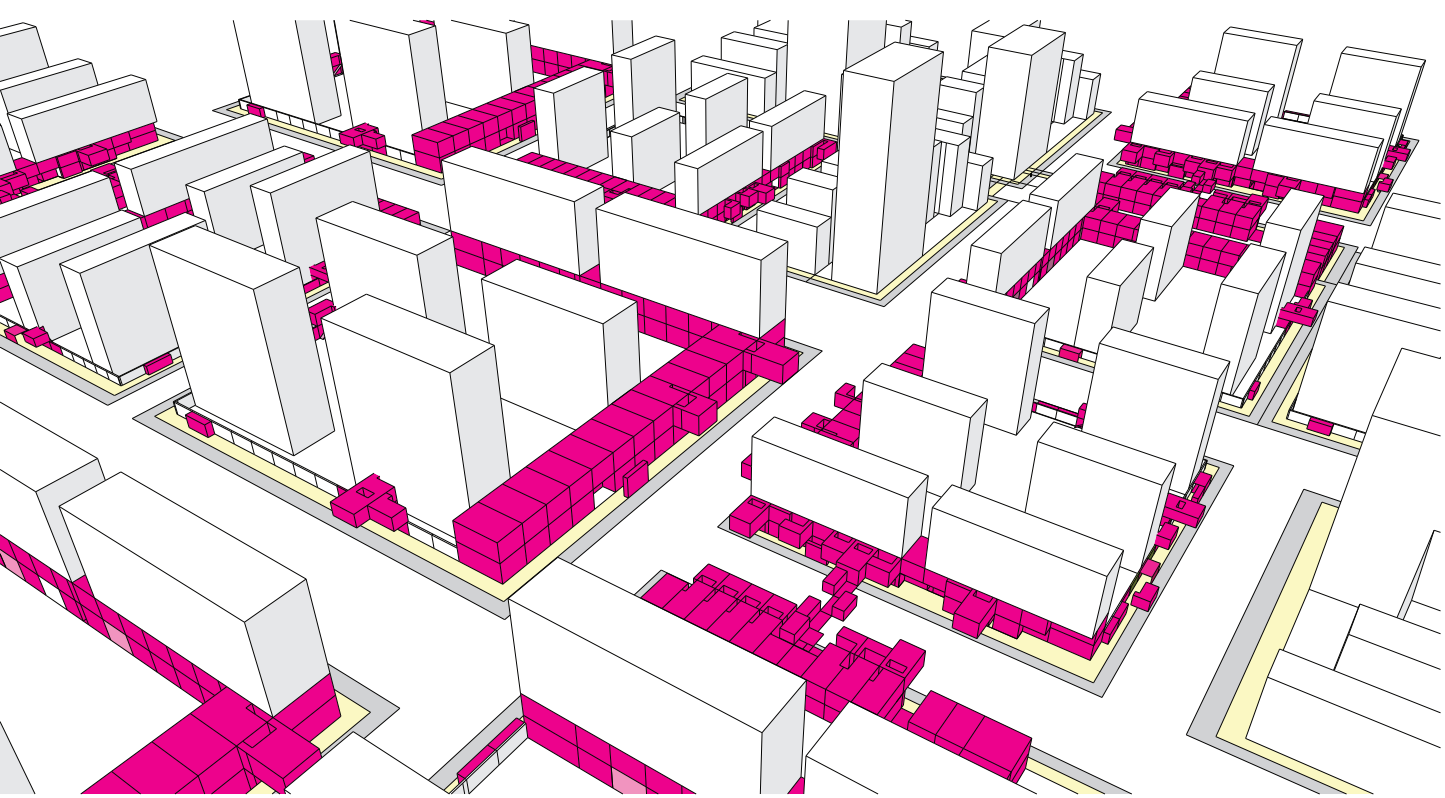
## REFLECTION

### Is there an end of cloud wall process?

I think not. City is a developing society instead of a project with limited time scope. The physical form of cloud wall may tend to become steady, but the functions embedded will always be dynamic and ready to change according to people's demands.

### What is our role as urban planners and designer in cloud wall strategy?

Wen xin case is a testing of the cloud wall strategy. By putting cloud wall strategy into practical transformation project in my research area, it is revealed that the design of strategic plan and the fully consideration of process management system is quite important to the implementation of cloud wall model. As a result, urban planners and designers are required to pay more attention to the formulating of strategic plan referring to each project area. On one hand, the framework of underpinning structure of relative area are the matrix of cloud wall generation, thus it should be clear and well organized into cloud wall system, in order to realize the benefits for both community and city level. On the other hand, since cloud wall is an endless process of negotiation and cooperation, the balance among different stakeholders should be guaranteed by a benefit distribution plan in advance, and an efficient management system should also be set from the perspective of public policy to coordinate possible conflict between public interest and private interests. In conclusion, cloud wall is not only a design tool, but a comprehensive system



## Is it also applicable to other Chinese cities?

combine with planning, public policy, urban management, and is able to provide people certain rights and capability to influence their city's developing procedure.

Yes. Gated communities are very common phenomenon throughout China. The conception of cloud wall is basically a redefinition of the relationship between community and city, and since it is formed based on the research of common development process of Chinese cities, as a result, it is suitable to other Chinese cities too. However, when applied to another city, a further investigation on local context and the understanding of local existing situation should be valued. This respect of local context should be considered and represented at strategic plan. Meanwhile, the cloud wall types will have to be adjusted according to each project respectively.





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Jun. 29, 2011