

ReMIXED USE

Advancing Urban Regeneration of the Resettled Tenements by
Promoting Evolved Planning System and Urban Form in Taipei



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MASTER THESIS

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PREFACE

This master thesis “Remixed Use”, started from September 2014, was under the supervision of Metropolitan spatial structure research theme at Delft University of Technology, Faculty of Architecture, Department of Urbanism. In the city’s transforming era with the rising awareness among the citizens, the issue urban regeneration could be tackled with in a just, collaborative way, at the same time keeps Taipei’s identity. I hope the suggestion in this thesis could contribute the process of urban regeneration with an integration of planning and design strategies, in order to bring the result making the valuable extra-ordinary urban life become extraordinary in Taipei.

Working on the area where I live in and am familiar with was still surprising me often, because of the energy and stories behind people and space. In short, the year for finishing the thesis was a spectacular, as well as difficult journey for me. I would like to express my appreciation to people involved in the graduation year.

I would like to thank my mentors, who kindly understood my circumstance and were willing to spend extra time for me during this summer. My first mentor Lei, who inspired me a lot to discover from various angles during the meetings, sharing her encouraging words and crucial insight, especially when I was stuck. And my second mentor Birgit, who brought different perspectives for me to study vitality in an Asian city, devoting her great knowledge with the suggestion of design method.

Besides, I would like to thank people helped me during the site visiting. The staffs in OURs explained thoroughly not only the condition of the site but also giving me the opportunity to join the community meeting. And also people who held various forum helped me understanding issues in urban regeneration. They are admirable in making their contribution to foster civic engagement in Taipei.

I thank my friends who were with me in the past year. The last but the most importantly, I would like to thank my parent, sister and Allen, who always support me without any doubts, showing their understanding and love over the sea and cross the space.

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An aerial photograph of Taipei, Taiwan, showing a dense urban landscape with numerous high-rise buildings and residential structures. The city is viewed from a high angle, looking down towards the center. The sky is filled with soft, white clouds, and the overall color palette is dominated by blues and greys, with some greenery visible in the lower parts of the frame.

Chapter 1

THE CONTEXT

Motivation/ Taipei/ Resettled tenements/
Urban regeneration in Taipei



Image source: <http://propc.pixnet.net/album/set/16038348>

1.1 Motivation

The subject of this graduation project, in the research theme Metropolitan Spatial Structure, is urban regeneration of resettled tenements in Taipei. The reasons to choose this subject can be divided into two. Taipei as one of the most livable cities in the world, is famous for its diverse, cultural, and human-scale living environment. As the city grows, it inevitably face deterioration in inner areas. Thus, how does Taipei keep its characteristic in urban transformation is a main concern. The other reason why this project especially pays attention on resettled tenements is their vulnerable position in Taipei. They have been pointed out as urgent renewal areas for ten more years but the regeneration plans are stalled, showing that the existing planning system has limitations to improve the condition there. Urban regeneration is a key linking those two issues as a whole by providing determining policies and actions designed. However, in many cases regeneration in Taipei now do not guarantee the vitality coherent to urban fabric; moreover, there is the need of fostering interaction and dialogue in regeneration process. The main motivation behind this project is to investigate urban regeneration in resettled tenements, with the highlights to keep urban vitality.



Figure 1.1.1 Locations of resettled tenements in Taipei.

1.2 Taipei

Taipei in northern Taiwan region

Located in the eastern half of Taipei Basin in the northern Taiwan, the capital city consists of a total area of 272 km², of which only 39% is usable as urban land. The population in 2014 was roughly 2.7 million and the urban density reached 25,000 people per km².

Hills and mountains are the natural boundaries and landmarks of the city. They embrace the city on three sides: north, east, and west; Since the basin is surrounded by mountains, the river valleys that cut through them become the transportation channels connecting Taipei to the neighboring parts of Taiwan.

The city is a strong attraction to the internal and international visitors as it has one of the biggest job markets in the country as well as clusters of major commercial and cultural activities. Because of the developed traffic system and public transportations, people can live in its satellite cities and commute to work. After the high-speed railway operated, the western part of country has formed one-day living circle, which encourage more interactions happen in the city.

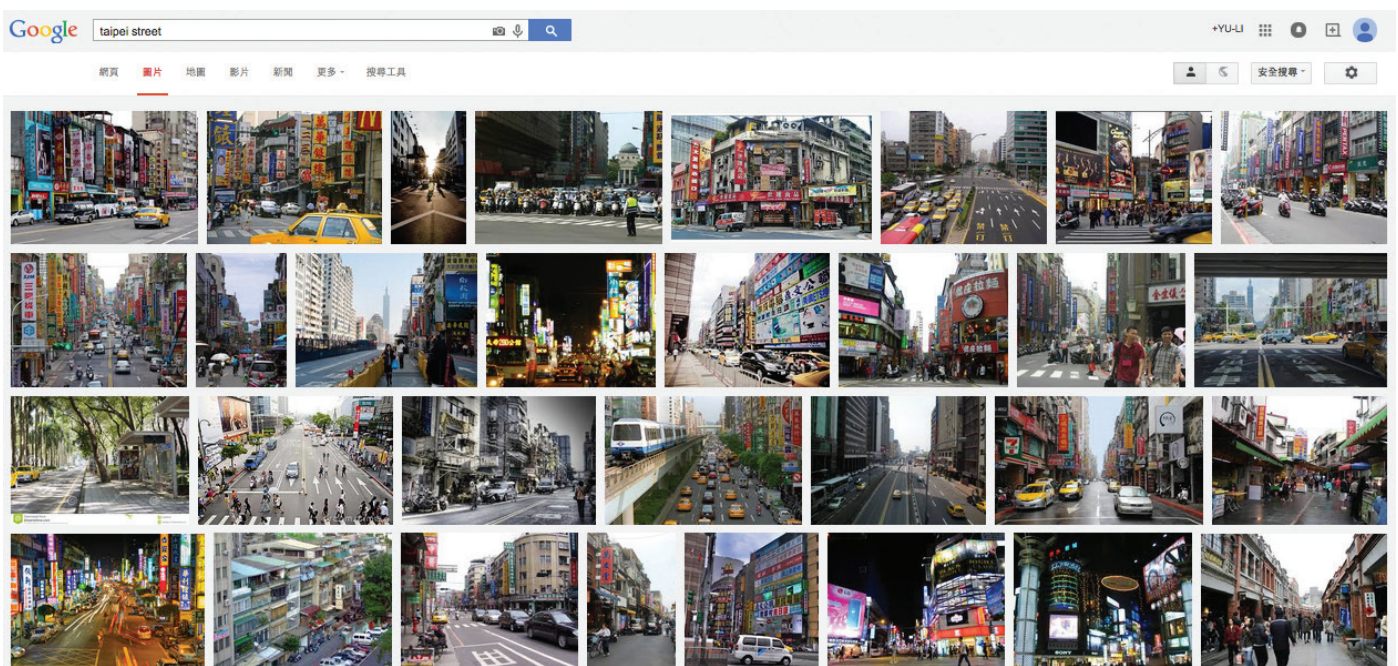


Figure 1.2.1 Taipei street. Image source: www.google.com

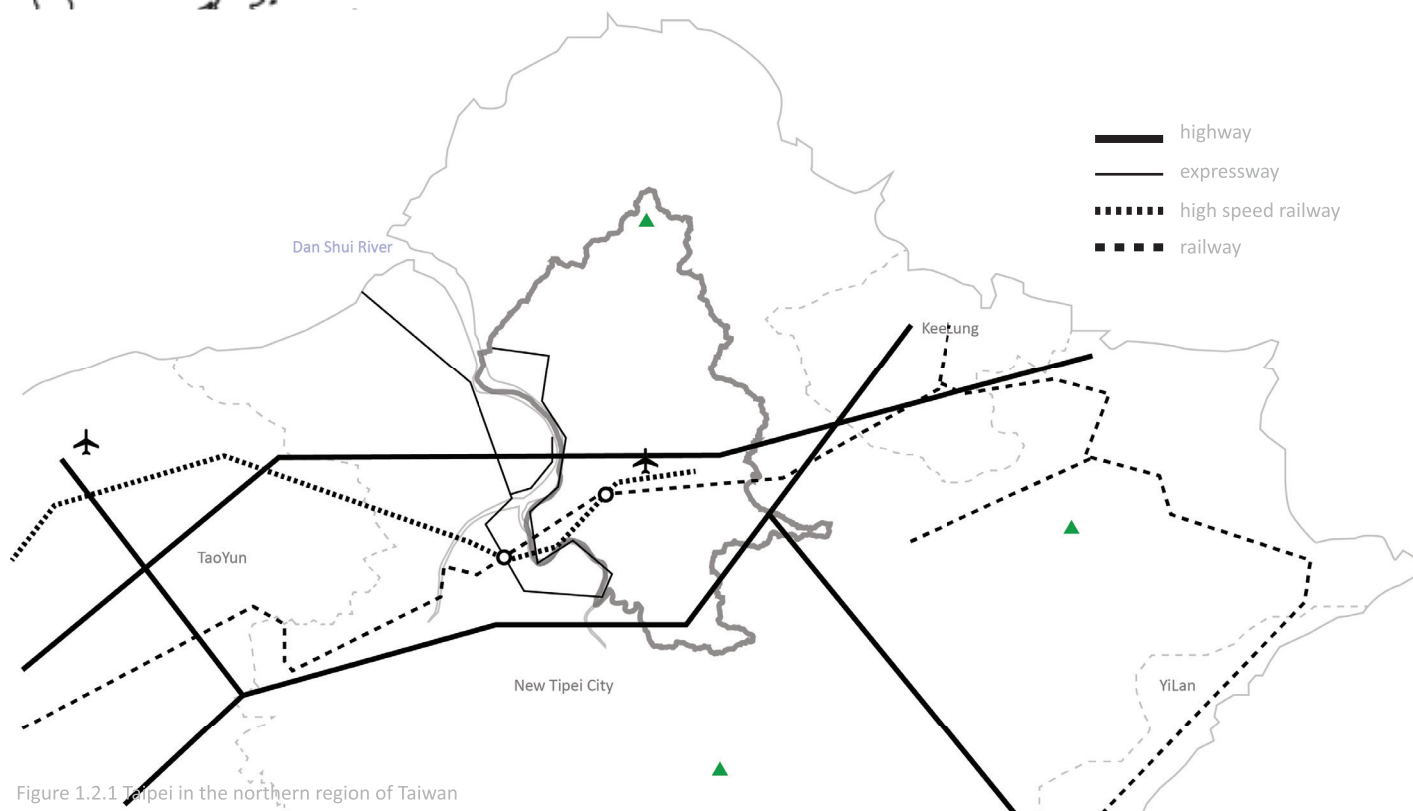
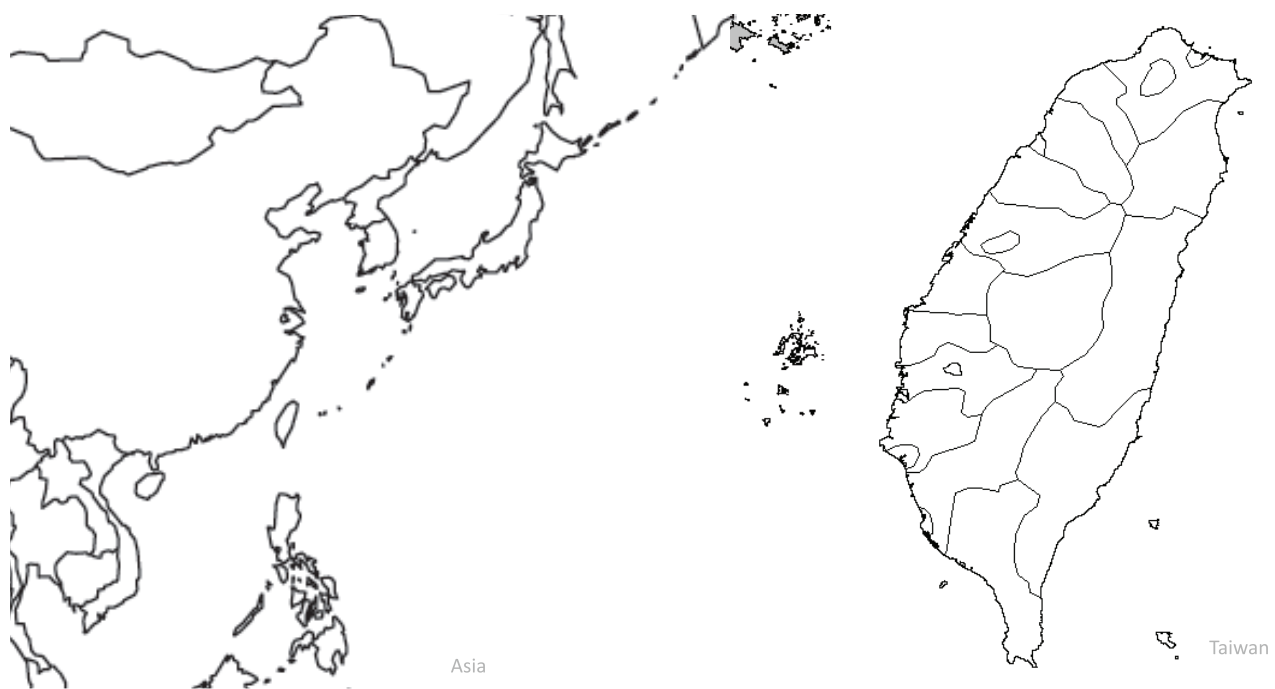


Figure 1.2.1 Taipei in the northern region of Taiwan

Historical evolution

The urban history of Taipei is a history of immigration, reclamation, and colonization. The City of Taipei as we know it today only exist until the end of nineteenth century. It first consisted of a few small settlements along the Dan Shui River waterfront, which were established in the later half of the seventeenth century. Before the river finally silted up from water transportation in the nineteenth century, these small villages functioned both as a gateway to the inner land of northern Taiwan and as trade centers for import and export. Spanish, and Dutches all shortly governed the harbor areas. After The Ming forces were subjugated by the Ching dynasty, Taipei was built as a walled city by Ching governing system in 1884. The wall-enclosed area was physically separate from the river front settlements and was planned for the Taiwan provincial government.

The Ching Dynasty agreed to surrender Taiwan to Japanese control after lost a major war against Japan in 1894. Taipei was again chosen to be the seat of government after the Japanese occupation began in 1895. The urban reconstruction was certainly one of the new rulers' priorities. The walls, symbolizing the old regime, were removed. The city walls and the West Gate were torn down in and four boulevards were built on top of their footprints. During the next fifty years from 1895 to 1945, the Japanese altered the major orientation of the city from north southward to east westward to honor the rising sun, the symbol of the ambitious new Asian empire, and the characteristics of urban form was physically and legally established. These include **a clear system of street hierarchies, street walls, continuous arcades, and linear commercial activities along different scales of paths, ranging from streets to alleys.**

Taiwan returned to Chinese control after World War II. But only two years later, the civil war between the Nationalists (Kuo Min Tang) and the Communists blazed throughout the mainland. The KMT lost and fled to Taiwan in 1949, and since that time Taipei has been the capital of Taiwan. An economic boom soon followed in the late 1970s, which accelerated the city's growth. Most of the urban development in Taipei after 1949 followed the framework established by the Japanese: **Major expansion occurred eastward from the historic walled city, and the growth then took place along the sides of the main boulevards.** In 1981, the government first made the city plan, and set up a expansion plan in the east in a new urbanism way to have bigger urban grids and high rise buildings. And in 1984, Department of Urban Development (DUD) published its first book regarding urban laws and regulations. After that, the developments in Taipei have been regulated under the rules. In order to improve the deteriorated buildings, urban renewal act was announced by national government in 1998.

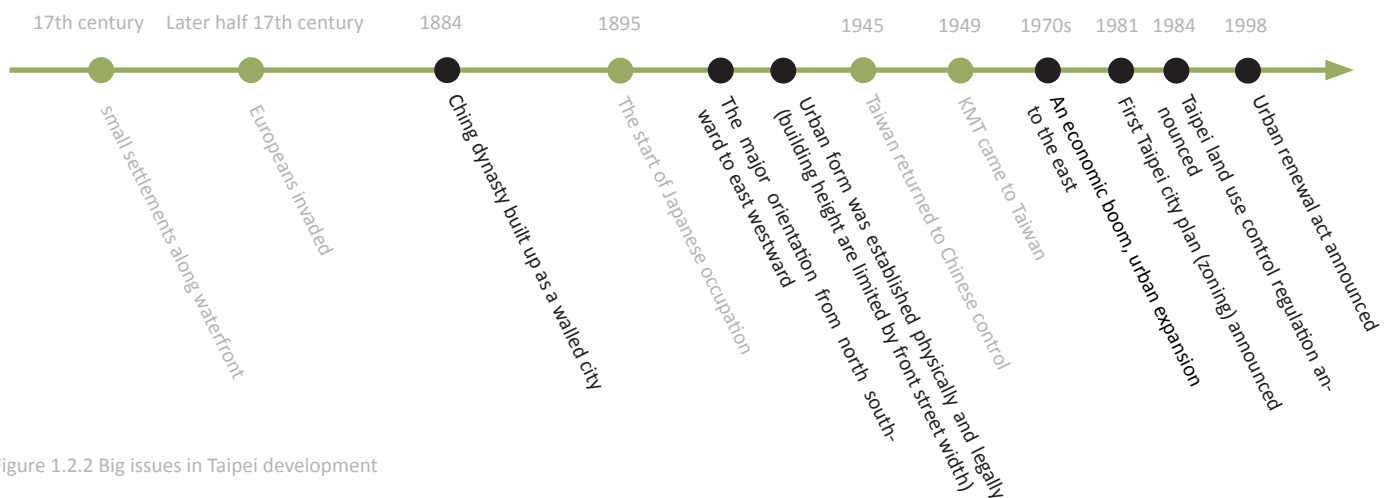
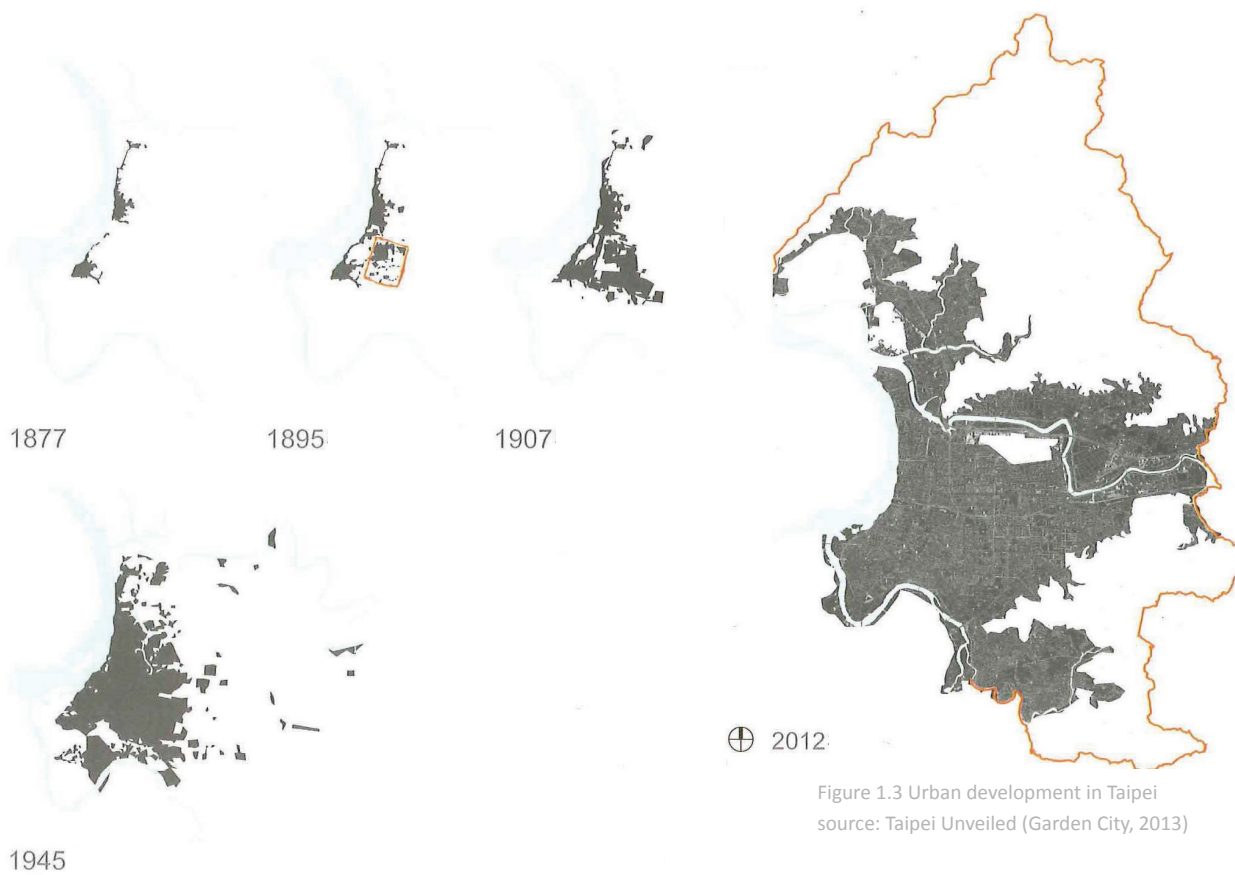


Figure 1.2.2 Big issues in Taipei development

1.3 Resettled Tenements

History

Taipei Resettled Tenements were built for public facilities and the resettled households in the early stage when the municipal government was moved to Taiwan in 1949. Because of the sudden and major immigrants from Mainland China, the issues of the illegal buildings (squatters) appeared. With a total of more than 10,000 households and shops in 24 places, resettled tenements partly resolved the problem. The constructions set up by public sectors on public lands, are belong to the residential buildings in the history of the public housings after the World War II in Taiwan, and they are also seen as the outstanding contribution for the flat development of the public housings. In order to reduce the loading from loaning for the resettled inhabitants, the smaller household units from 26 m² to 49 m² were provided. The resettled tenements were famous for their modernization at the time. The development was also a milestone that housing construction in Taiwan had moved from quantification to quality.

Social structure

At first, there were 70% inhabitants in the resettled tenements belong to political immigrants, who shared similar background, so there were strong social connection for identification and consciousness in communities. After the economic boom in 1970s, some residential moved out while the left were single elderly people and new blue-collar workers. As Taipei developed after 1980s, more tenants from other cities moved in, thus the fast changing social structure has brought the demolishment on social network. (Liao & Chen, 2006)

Besides, the small household units and relatively low rental price attract specific groups to stay, such as migrant workers and single parent family. And the need of more space caused informal attachment built. While the environment is getting worse, more disadvantaged group is moving in. The marginalized progress in both social and spatial aspects has been intensified. (see Table 1.1)

	Household	Rental ratio	Ratio of vulnerable group
Taiwan	7,378,039	10.9%	Lack of info
Taipei	943,310	13%	4.3%
Resettled tenements	11,105	40~60%	16.06%

Table 1.3.1 Number of household, rental ratio, and ratio of vulnerable group among Taiwan, Taipei and resettled tenements

Source: The organization of Urban Re-s



Figure 1.3.1 The resettled Tenement in 1968 & 2011.
Source: The organization of Urban Re-s

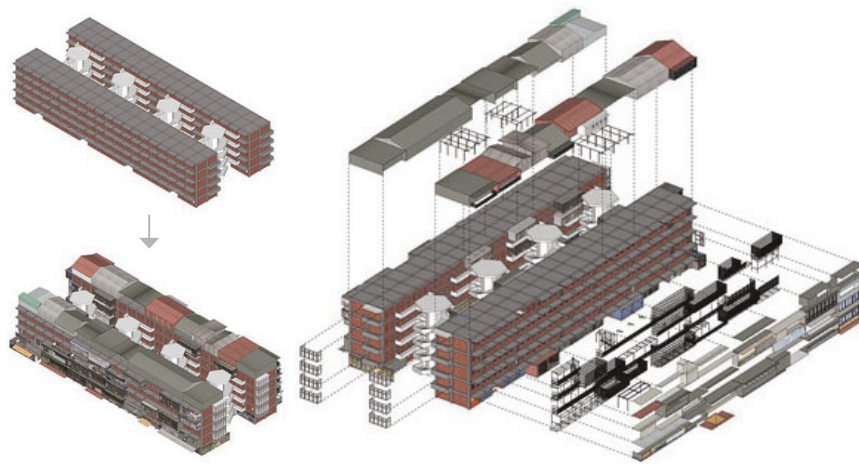


Figure 1.3.2 One example of resettled tenement's (South airport community) organic growth for informal attachment. source: www.szdesigncenter.org/?p=1445

Maintenance

The ownership of communities have been partly privatized after construction, but because the special classification of poverty right and incomplete records, the ownerships are complex. (see Figure 1.7) Some of communities have community boards elected by the inhabitants to manage basic cleaning and repair in neighborhoods. However, generally speaking, the main maintenance in the resettle tenements is spontaneous, or relies on minor improved projects from the related public sectors.

In recent years, only one resettled tenement community- Shui-Yuan Road Stage 1 completed the construction for urban renewal, the rest places are facing difficulties in promoting regeneration and the progress is delayed due to the difficult issues. Thus, after understanding the politic, social and economic background of resettled tenement communities, this project further explores the position of those communities in Taipei, and the potentials to redevelopment in the framework of Taipei urban regeneration.

Physical problems

After the economic growth, the living unit per person has increased to 10.38 m² in 2002. Compared to 7.8 m² in resettle tenements, the living space there can't not meet the requirement anymore. Therefore, the problem of informal spaces in the communities is serious. Attachments in the galleries, courtyards, and staircases threaten urban landscape and the safety for fire and crime. It is the main reason that the improvement is urgent.

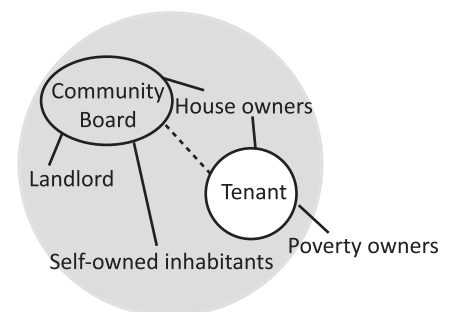


Figure 1.3.3 Social structure in communities
Source: The organization of Urban Re-s

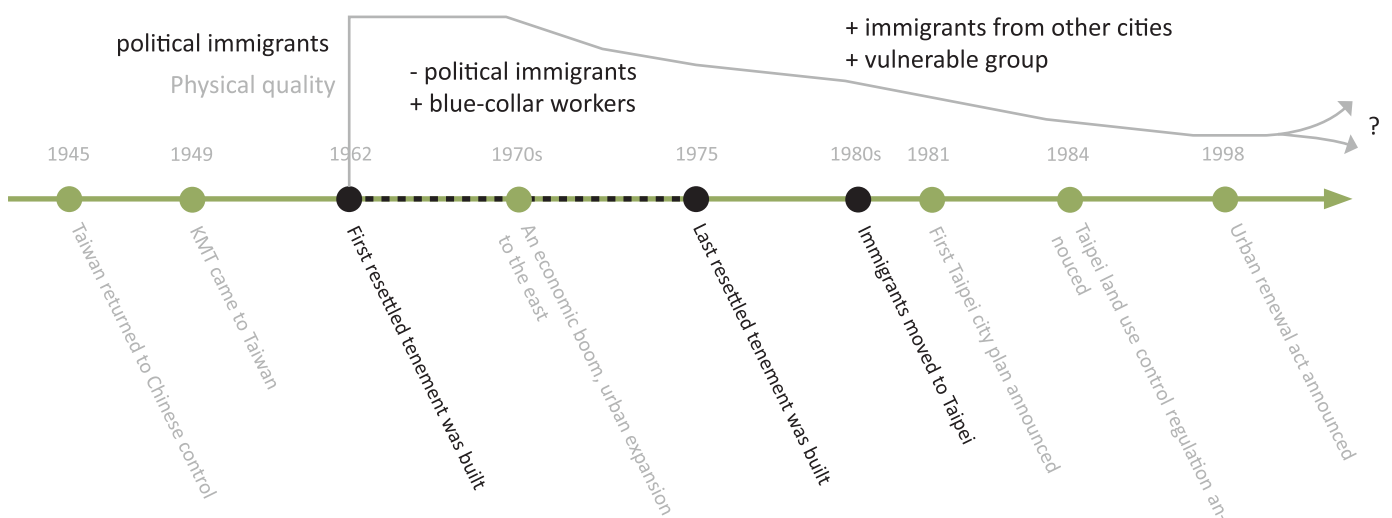


Figure 1.3.4 History and trend of resettled tenements

1.4 Urban Regeneration in Taipei

Evolution

Reviewing the evolution of Taipei's regeneration, this section categorizes three phases chronologically according to the objectives and strategies. By comparing the associated laws and regulations, promoting strategies, and implementation process, the framework of Taipei's regeneration can be understood and responds to Taipei's history after 1949.

Government' initiative for urban renewal in 1973-1992

Before 1973, the renovation in urban areas were named as City Improvement Plan, which only from the constructive point of view, established the public infrastructure such as dikes, parks, roads, and sewage system in the city. Resettled tenements are one of the outcome under this context. Since 1973, the update of Urban Planning Division added the new chapter "Old Urban District Special Chapter", a legal foundation of urban renewal was established. Taipei Urban Renewal Implication Guidelines further indicated the practical implication for projects. In this period Taipei city government investigated the illegal and deteriorated buildings in urban area, and built new housings through zone expropriation in city plan. Previous inhabitants could buy housing units from the new constructions based on their property value or get compensation. Taipei government played the active and main role in renewal process but due to the big loading of work and financial difficulty, the effectiveness was limited.

Incentives for private provision in 1993-2001

To accelerate the process in renewal projects, after the Department of Urban Development (DUD) was separated from the Department of Public Works and became an independent branch of the Taipei Municipal Government, a new chapter "Encouraging Private Sector Investment on Urban Renewal Ventures Special Chapter" was updated in Taipei Urban Renewal Implication Guidelines to encourage private investment in urban renewal projects. The main approach was joint construction with the agreement from all inhabitants and developers and giving floor area bonus to encourage private developers to invest. In this period the role of the government switched to as a supervisor, who founded urban renewal committee to examine projects proposed by private actors. Other accomplishments are: the announcement of designated renewal areas, which are considered of physical conditions, economic development, social network, public willing, conservation on historical areas, and also consulted by the opinions from district offices. Besides, the principal for a minimal development unit was firstly proposed based on Taipei's context, which considered of ownerships, characters of development, and succeed of renewal projects. Besides, city government founded renewal offices in neighborhoods to interact with locals and promote the concept of urban renewal. The regulations in this phase were still limited for private actors, more supporting measures were needed.

Private-public partnerships in 1998-now

The establishment of "The Urban Renewal Act" was promulgated by national government in 1998, and empowered local government to set up implication by following the principles in the act. Therefore, "Taipei Urban Renewal Implication Guidelines" transformed into "Taipei Urban Renewal Act", giving a lawful new

niche. Besides, the slogans from “Flip the axis to redevelop western Taipei” to “Redevelop to foster both the west and the east” was proposed by city government stoned that redevelopment has become the crucial issue for Taipei as a sustainable city. In 2002, city government introduced the regulations of planning subsidies for renovation in resettled tenements, hoping to push the redevelopments.

The main revolutions in this phase are: firstly, the introduction of right transfer for the major group who would stay in the same location after redevelopments, so those property owners can get their property value from the new construction; while those minor group who don’t want to participate would leave and can get their compensation. Secondly, various actors of private and public ones can start up a project, and the private ones can have more floor area bonus and tax reduced feedback based on specific rules. Thirdly, floor areas can transfer to redevelopment units from historical buildings and reserved land for the public infrastructure within a designated renewal area. And finally, public lands have to be considered to be involved in the nearby redevelopment units. Other than physical improvement, community empowerment, promotion of traditional industry and redevelopment of historical and cultural district have also become important strategies in urban regeneration. In general, urban renewal has gradually transformed into urban regeneration in Taipei with more aspects to concern and multiple actors.

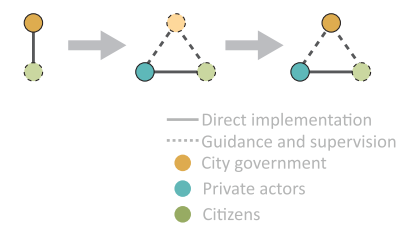


Figure 1.4.1 Evolution for actors' position in urban regeneration

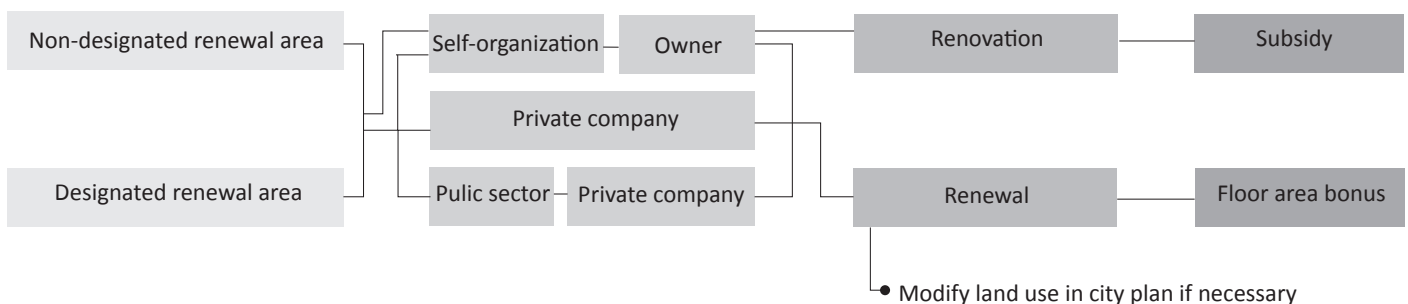


Figure 1.4.2 Existing planning system for urban regeneration in Taipei

Renewal planning system

In this section in order to reflect the opportunities and obstructions on resettled tenements in the framework of Taipei's regeneration, the review of the current renewal system is focus on the factors related to spatial formation and accors.

Examination

Urban renewal bussiness projects are examined by Taipei urban renewal committee in Taipei city urban regeneration office. The existing planning system only influence city plan when the projects refer to zone changes, in that case the proposals have to be approved by city plan committee and revise the city plan first.

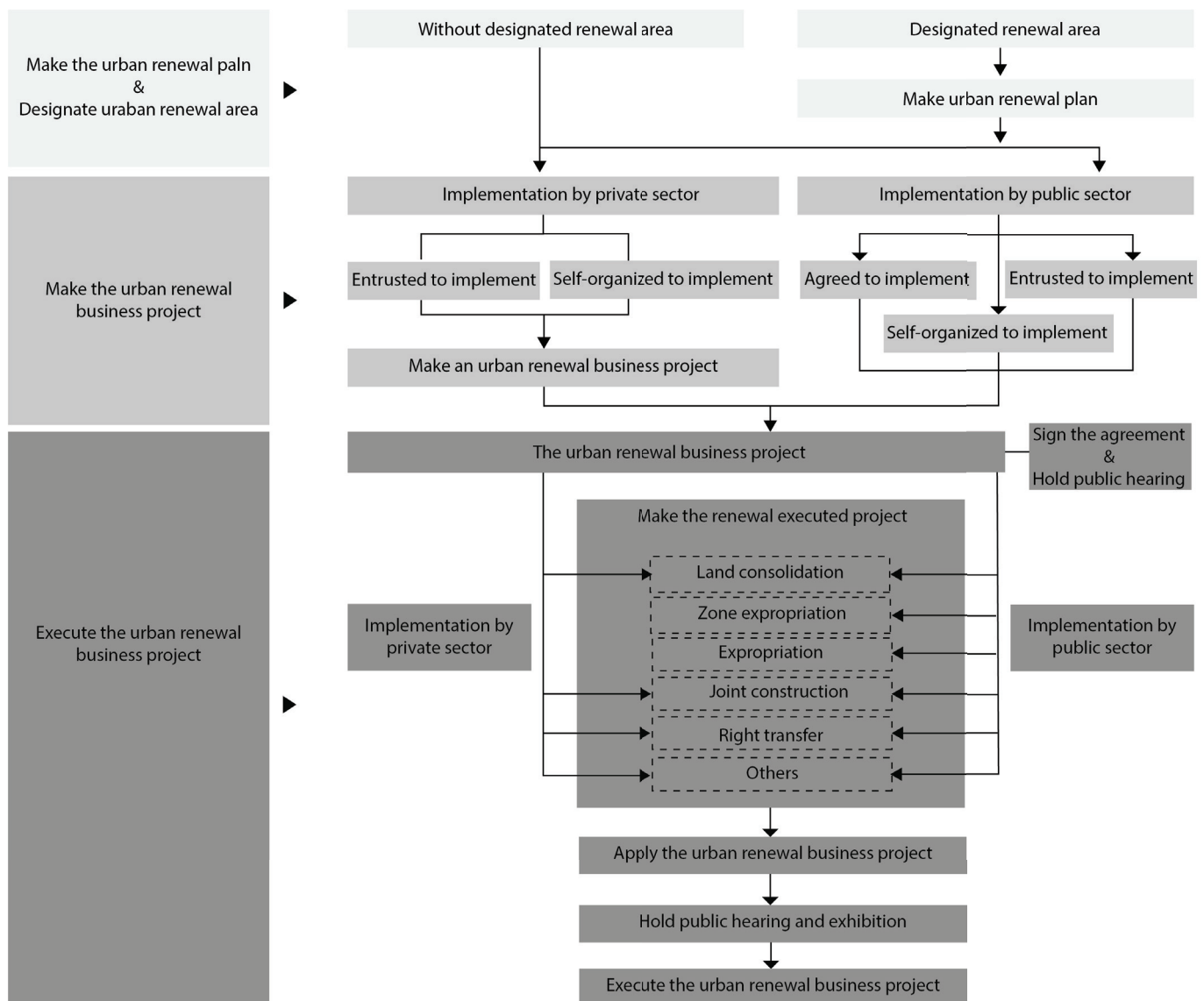


Figure 1.4.3 Urban renewal process.
Source: Taipei city urban regeneration office,
adjusted by Author.

Actors

The actors in current renewal planning system can be private sectors or public sectors. The private sectors can be further divided into self-organizations of poverty owners, self-organizations of poverty owners and a construction company (known as joint construction), and entrustments to agent implementers by poverty owners in a redevelopment unit, while the public sectors are depended on the ownerships of the public land, or the sectors who actively to implicate projects. The differences are result in financial operation and the value of readjusted property. Generally speaking, public sectors still tend to be passive because of the budgets.

Until 2013, there are 1,037 of redevelopment units have been proposed. 240 of them are proposed by the city government, while the other 797 by private sectors, that means 77% of urban redeveloped projects were activated by private sectors.

	Fund	Willing integration	Leading position	Planning & Design	Property distribution	Profit distribution	Risk	Efficiency
Self-organized residents	Loan						● Trust management	●
Construction company							● ●	● ●
Agent implementer	Loan						● Trust management	● ●

Table 1.4.1 The evaluation of renewal result from different actors.

Renewal units

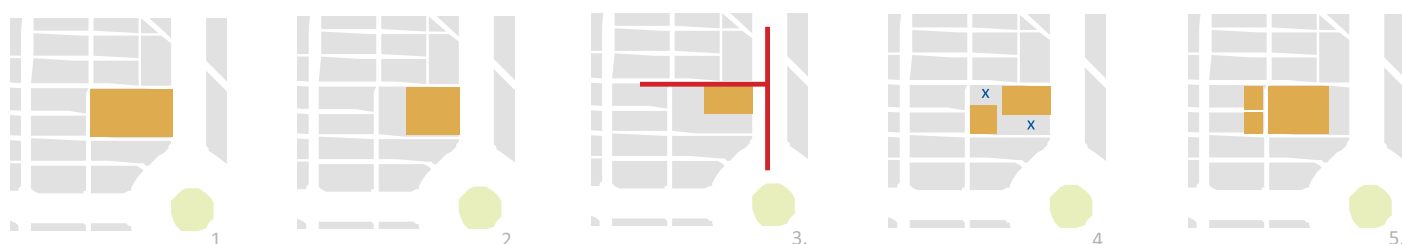
In the designated renewal areas announced by the city government, the actors follow the rules of minimal renewal unit (see figure 35.) to set up renewal plans. In the undesignated renewal areas, private sectors can also propose Urban renewal bussiness projects, once the development unit corresponds to the minimal area of renewal unit and the principles of physical conditions as follows:

1. Deteriorated buildings that are not fire protection construction and the fire-walls between the buildings are limited.
2. The arrangement of deteriorated buildings or the narrow roads that impact on public access or safety.
3. Buildings do not meet the surrounding urban function.
4. Buildings fail to cooperate with the nearby major construction.
5. Buildings have historical or cultural value, and are urgent to be preserved and maintained.
6. Buildings with poor living conditions, and are detrimental to public health or security.
7. Buildings with potential hazard on fire or earthquake.

In both projects resulted from different actors, they follow the same regulations and process afterward. As a result, there is no difference within or out of designated renewal areas. Moreover, in this framework it is easy that the redeveloped units scattered in the city, without guiding them to integrate with the city structure and future development.

Figure 1.4.4 Principles of proposing a minimal urban renewal unit. Source: Taipei city urban regeneration office, adjusted by Author.

1. A whole block
2. Within a block, and the area is $> 2000 \text{ m}^2$
3. Within a block, and facing to two roads, the area is $> 1000 \text{ m}^2$
4. Within a block, and no lands available to redevelop nearby, $> \text{the area is } 1000 \text{ or } 500 \text{ m}^2$ (needed approve by city government) integrated development while at least one of blocks correspond to any of previous principles
5. Integrated development while at least one of blocks correspond to any of previous principles



Methods of Acquisition

Current methods in urban renewal process to readjust property are the combination of first phase and second phase. Public sectors implicate land consolidations, zone expropriations, and expropriations. Since most plans are activated by private sectors, joint construction and right transfer are the common methods (see figure 1.4.5). Besides, providing floor area bonus is still an incentive for private developers, see figure 1.4.6. However, floor area bonus given in projects is controversial because not only it is hard to define the justice if the bonus provide for all renewal projects but also is not determined whether the bonus would be remained if those redevelopment units are reconstructed in the future since there is no zone changes in city plan.

Figure 1.4.5 Property transfer in renewal process. .
Source: Taipei city urban regeneration office, adjusted by Author.

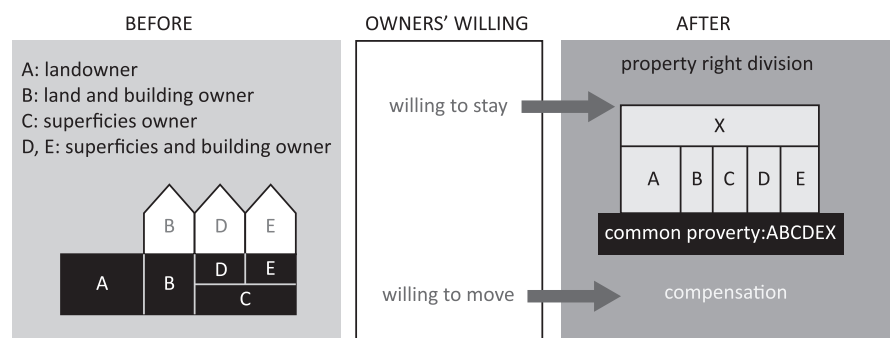
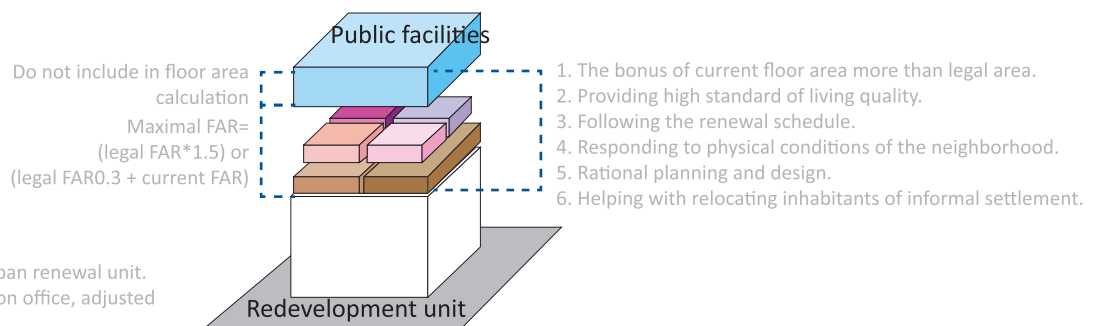


Figure 1.4.6 Floor area bonus for urban renewal unit.
Source: Taipei city urban regeneration office, adjusted by Author.



Other related regeneration strategy

a. Strategic redevelopment area

According to Urban Renewal Act, the following area can be proposed as Strategic redevelopment area by actors and announced as designate renewal area, and the maximal floor area bonus is 100 %. For now resettled tenements have already been identified by city government.

1. Areas near train or metro stations, within a radius of 400 meters.
2. Riverfront area
3. Other redevelopment areas correspond to important developing sites, approved by national government.

b. Urban Regeneration Stations

The Urban Regeneration Station (URS) is established to create a new urban forum and opportunities for public participation, which consists with the sustainable strategy for the future. It is a strategy initiated by the Urban Redevelopment Office of Taipei City Government. URS is a platform, a network and a campaign. Private sectors, NGOs, schools can propose plans to manage a URS in public lands or built areas with the agreement of owners. The functions of space are various. They can be used as an area for workshops, a common place for neighborhood

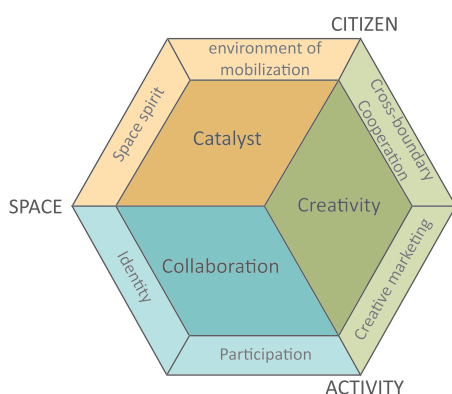


Figure 1.4.7 Concept of Urban Regeneration Station

activities, a hot spot for information gathering, a public space for social interaction, a venue for exhibitions, a location for experimental actions, and a resting area for tourists of the city. The goal for URS is to promote local economic initiatives and civic identity in a soft regeneration by linking space, citizen, and activity together, and extend into a new network system with creative atmosphere for redevelopment with infinite possibilities.

Reflection on resettled tenements

There are only one resettled tenement community is renovated (by community exertion) due to the catastrophe of metro construction. From the analysis above, it can be concluded the other renewal projects are stalled mostly because of no unified recognition within owners, insufficient mechanisms to activate a renewal unit, not enough return on investment for attracting actors, and the difficulty for relocating the disadvantaged inhabitants.

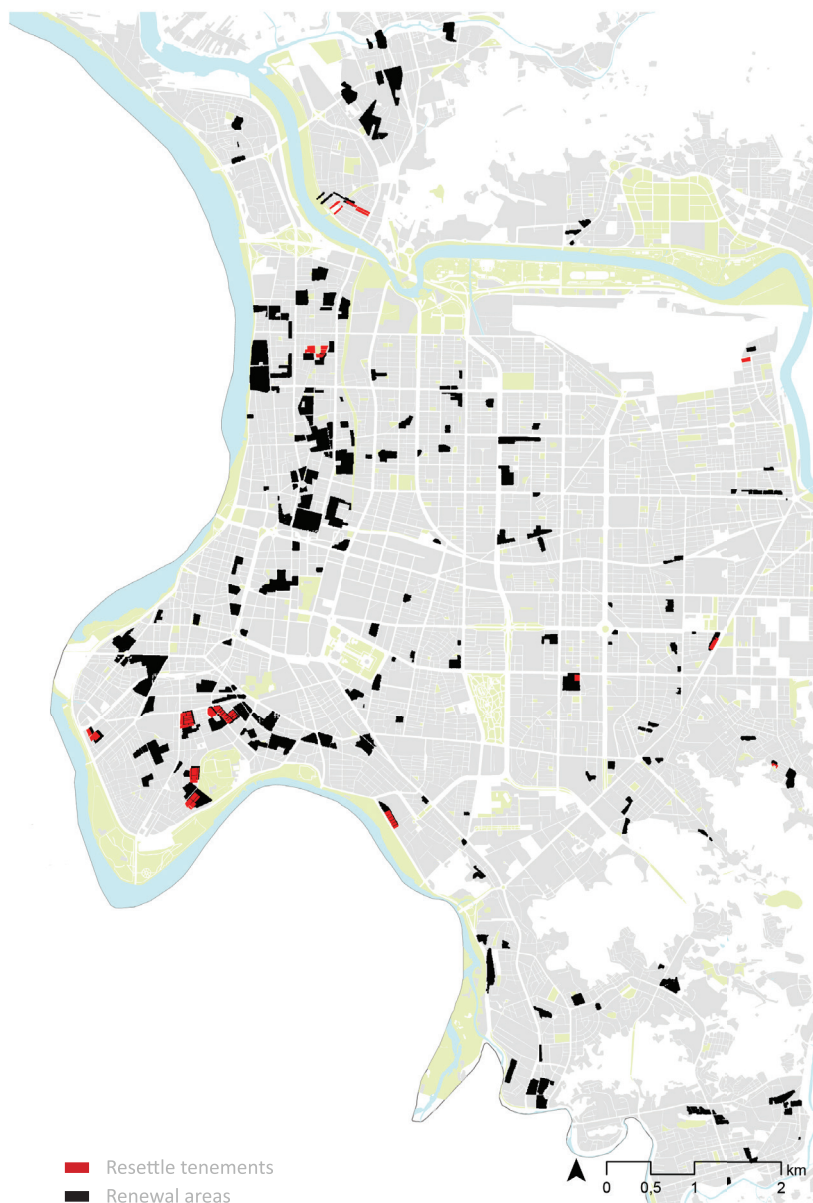
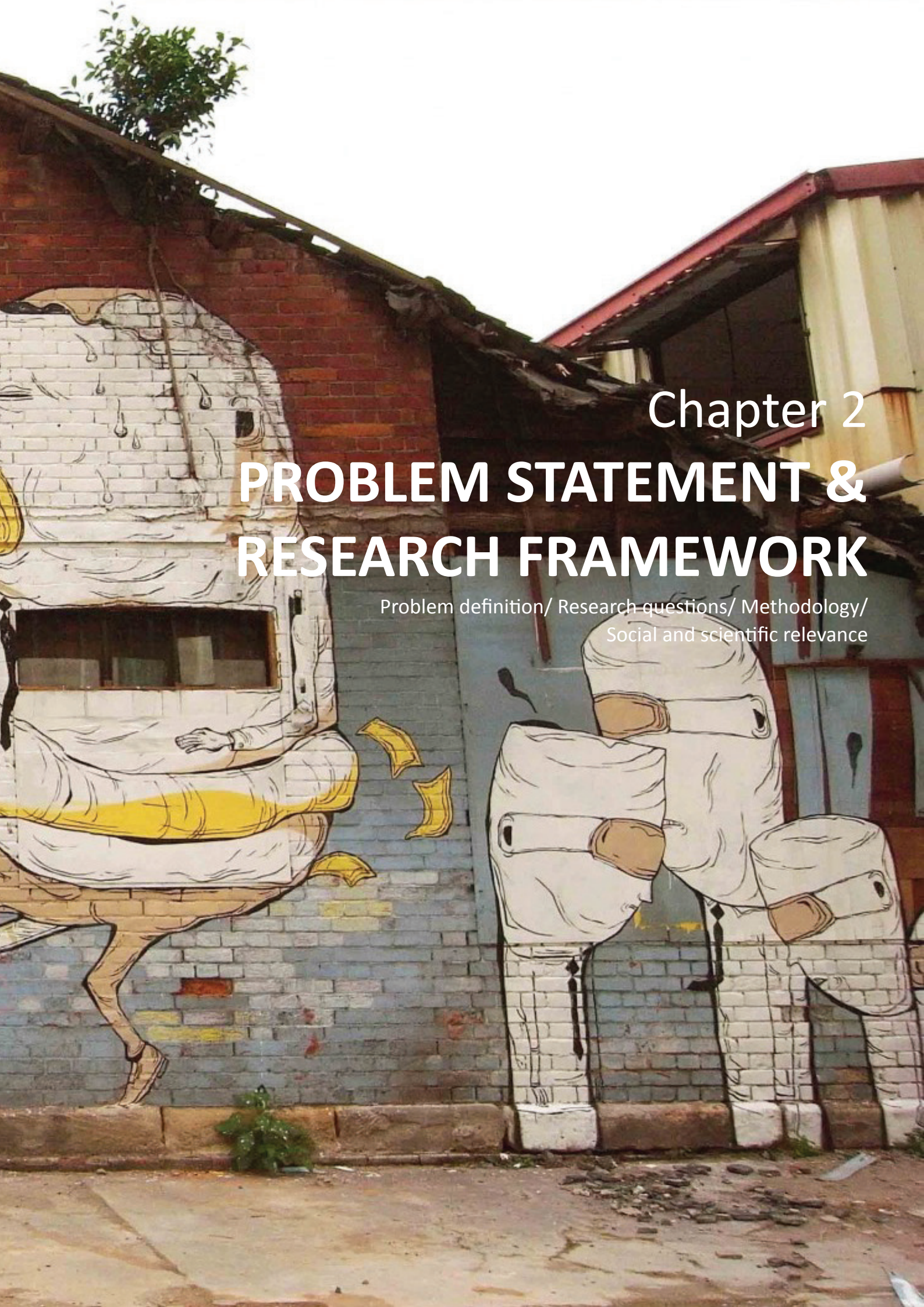


Figure1.4.8 Resettled tenements as Strategic re-development area in designated urban renewal. source: The organization of Urban Re-s, mapping by the author





Chapter 2

PROBLEM STATEMENT & RESEARCH FRAMEWORK

Problem definition/ Research questions/ Methodology/
Social and scientific relevance

2.1 Problem Definition

The redeveloping housing is not corresponding to existing urban fabric nor contributing to create vital and various urban life, while the regenerations in deprived communities such as resettled tenements where the issues are urgent but not easy to tackle with are procrastinating.

The problem statement in this project is evolved from multiple facts which are explored in the later analyses. Urban life in Taipei is formed by high dense, mix-used built environment, and the diverse activities, where the different types of mixed use can be found in different building patterns. In neighborhoods, many inhabitants expand their private spaces by adding informal attachments in public spaces over times. Sometimes on the ground floor, the expansion is available for small businesses, which has changed living quality a lot. On the one hand the city has become chaotic and humane by those spontaneous activities, on the other hand the conflicts in mixed use and the threats of fire safety bring negative concern as well.

Taipei city government has announced the renewal areas where the living conditions are needed to be improved preferentially. There are many ways allow either public or private sectors to set up renewal plans within those areas. However, based on the renewal regulations, private sectors can also propose renewal plan without of the areas, and can apply the same procedure in redevelopment process. It means the developments in other areas can have same opportunities to gain floor area bonus, which make the announcement of renewal areas has no differences in priority to be redeveloped. As a result, **there is no rational priorities order or supporting measures for city to be redeveloped in current urban regeneration policy and regulation in Taipei**, which lead the projects fragmented and without integrating with the overall spatial structure. In the free market because private developers are eager to earn the interest that the housing products bring, they are tending to propose renewal plans in any possible areas. And poverty owners are expecting to the increased value after redevelopments unrealistically, so they are bulling the housing market at the same time. In this context, the most controversial renewal plan 'Wenlin Yuan- the apartment complex ' has risen the citizens' awareness about urban regeneration in Taipei. Other than the critics to the private developers for 'enclosure movement ' , which implies their intension to make development plans is emerging; other issues have also been proposed in this event, such as participation in development process and living rights. Nevertheless, the action Taipei City Government forcibly expropriated and demolished the Wang family home in the plan has brought out many problems in regeneration process.

In terms of socio-spatial aspect, the result of urban renewal somehow has changed the urban life in neighborhoods without providing comparable public

interest. Due to the urban renewal policy and regulations, private actors usually are the active side to redevelop the areas because there are not enough funds from the government. The developers are inclined to gain floor areas as much as they can in redevelopments and without meeting the local needs. As a result, larger-scaled gated communities are replacing human-scale apartments. **They are not corresponding to the existing urban fabric, and reducing diverse economic activities.**

On the other side, **the deprived communities where have more challenges to integrate a renewal plan are not easy for the actors in urban regeneration to deal with.** Resettled tenements are the most vulnerable areas in Taipei where the high percentage of disadvantaged group live in. They were once the most stylish public housing in 1960s. However 50 years later, the living conditions there are way below average quality; because the over-populated inhabitants live in relatively small units, the inhabitants are tend to expand their living areas informally. The need for regeneration is obvious, but the complex ownerships, lacks of funds and community consensus obstruct the operation.

Thus, this graduation project takes resettled tenements as the crucial point to study the possibilities of future development by reviewing the existing redevelopment process and exploring vital urban form.

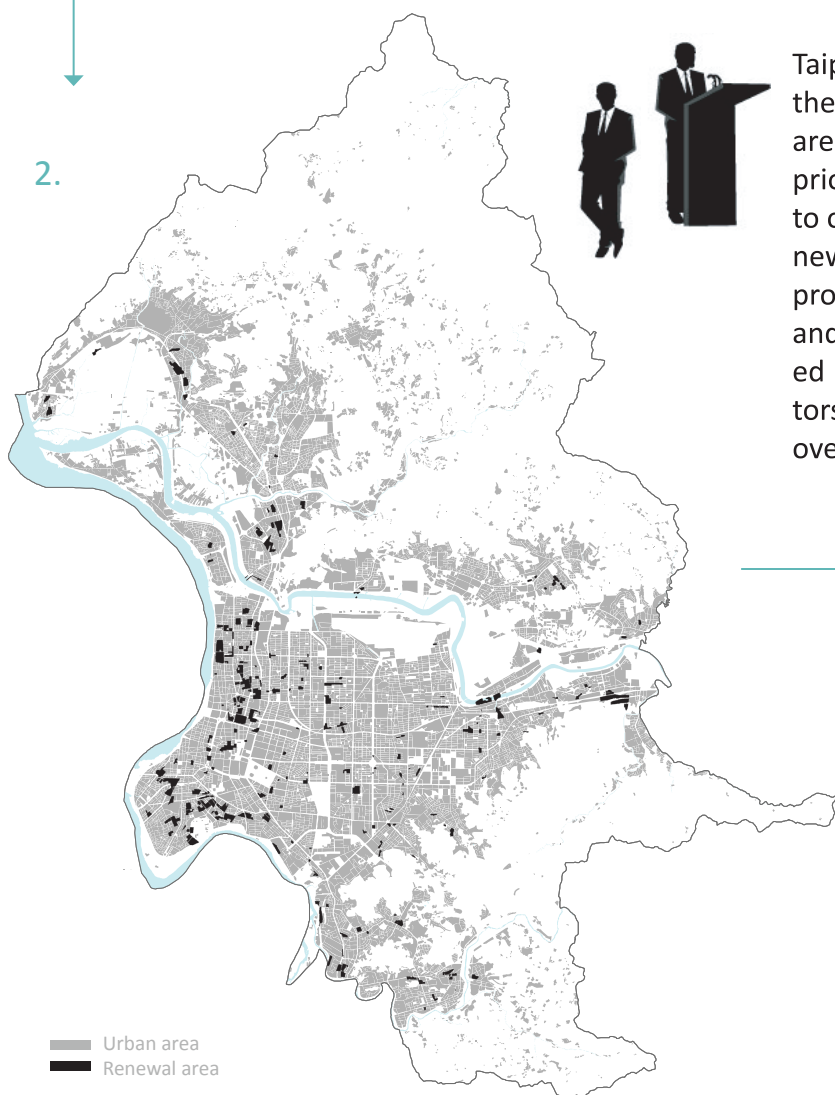
Problem Definition Mind Map

1.



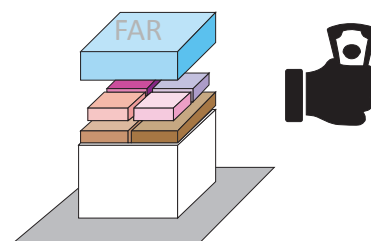
In the mixed use context, Taipei is a vibrant city. That is result from citizens' spontaneous activities. They expand their living space informally therefore a chaotic but humane physical conditions are formed. However sometimes the conflicts between public and private spaces are so serious that lower living qualities. So regeneration needs to be implicated.

2.



Taipei city government announced the renewal areas, but the renewal areas actually has no differences in priority to be redeveloped compared to other areas according to Urban Renewal Act. They both apply the same procedure in redevelopment process, and this leads the projects fragmented and mainly steered by private actors, and without integrating with the overall spatial vision.

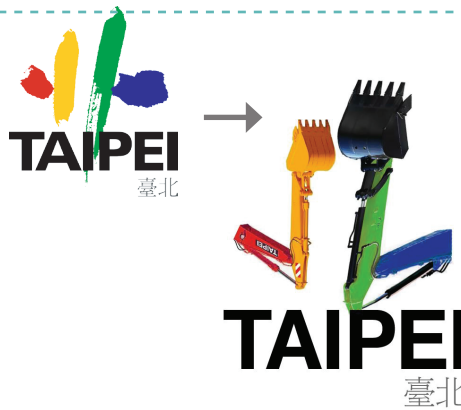
3.



So in the free market both of private developers and poverty owners are expecting to the increased interests from redevelopments.

4.

Besides, public opinion holds a controversial attitude to renewal plans, especially since the plan 'Wenlin Yuan- apartment complex' that discovered many problems in renewal process. People recreate the city emblem ironically with two excavators to imply the inappropriate renewal process.



5.

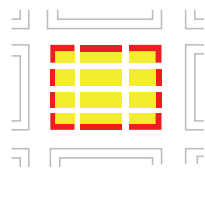


On the other side, regenerations in deprived communities where the issues are urgent but not easy to tackle with are procrastinating.

6.

residential + commercial function

residential function



source:<http://news.housefun.com.tw/news/article/20440640597.html>

Current result of urban renewal are inclined to gain floor areas as much as the developers can and without meeting the local needs. It turns out larger-scaled gated communities are replacing human-scale apartments. They cannot fit in the original physical fabric, and reducing the opportunities for local economy and producing gentrification and social segregation.

7.

So, the aim of this project is taking **resettled tenements** as the crucial point in order to study the possibilities of future development by reviewing the existing **regeneration process** and exploring **vital urban form** in **Taipei**.



2.2 Research Questions

How to regenerate resettled tenement areas in Taipei by proposing integrated urban regeneration process and urban form to maintain urban vitality ?

From the problem statement, the key words can make up the research question. In the picture above is one of the resettle tenements and its nearby new community, we distinguish the big contrast before and after the redevelopment, and the phenomenon is inspiring , again, to investigate the issues.

To simplify the research process the research questions is divided into three parts:

How to generate urban vitality?

The motivation of this project mentions that the main character of Taipei is her vitality, and also has a big concern for the redevelopments that these plans usually create lifeless communities. As this project aims to propose urban form that foster vibrant urban life, it is necessary to investigate the literatures concerning the subject of vitality.

How to redefine urban vitality in Taipei?

This sub-question is carried out by the problem that sometimes the overload of mixed use leads lower living qualities. Besides, the new building pattern in redevelopment plans is not coherent with current urban fabric. In order to answer the



question and consider both of the aspects, historical and spatial analysis is required to identify the city structure, pattern, and units in different scales. Meanwhile the review of planning system by case study can contribute to the project. Through spatial and planning system analysis, this stage concludes the vision and strategies for the project which include the typologies and rules for regeneration and development potentials among resettled tenements.

How to integrate the development of the urban form within urban regeneration process in Taipei?

In this stage a vision and strategies are made for the redevelopment in resettled tenements. Collaboration is one of basic elements to study. And to have a demonstration on urban regeneration process, a testing site is chosen. In this project further investigation on the specific area will be done to implicate the strategies. Finally the evaluations of the testing site will give the recommendations for Taipei to have an evolved planning system concerning about vital urban design in urban regeneration.

2.3 Methodology

How to generate urban vitality?

The project starts from the motivation, and based on the problem statement coming up with the main research question:

How to redevelop resettled tenement areas in Taipei by proposing integrated urban regeneration process and urban form to maintain urban vitality ?

The relation between the research questions, methods and final product are explained in the column on the right side. The methods to reach the aims of the analysis are both empirical research and theoretical research. The periodic products help to form the main product, which is the demonstration of planning system and rule application for the testing site of resettled tenement areas in Taipei urban regeneration. A simplified diagram below also explains the steps to accomplish this project.

Type of analysis

Research of urban vitality.

Method

Literature review.

Aim

This research mainly studies on urban vitality in terms of urban design in three parts. First part discusses general conditions of vitality using the work of Jacobs (1961) as the main source, while enriching these ideas with more recent views of Montgomery (1998), Tan (2007), Zhou (2012). Second part focuses on urban morphology responding to vitality. Caliskan (2013) and Hausleitner (2009)'s work help to conclude physical parameters related to vitality in a scientific way. The aim of this framework is to find the spatial elements for vital city life in revitalized areas.

Intended periodic product

Physical indicators related to vitality.

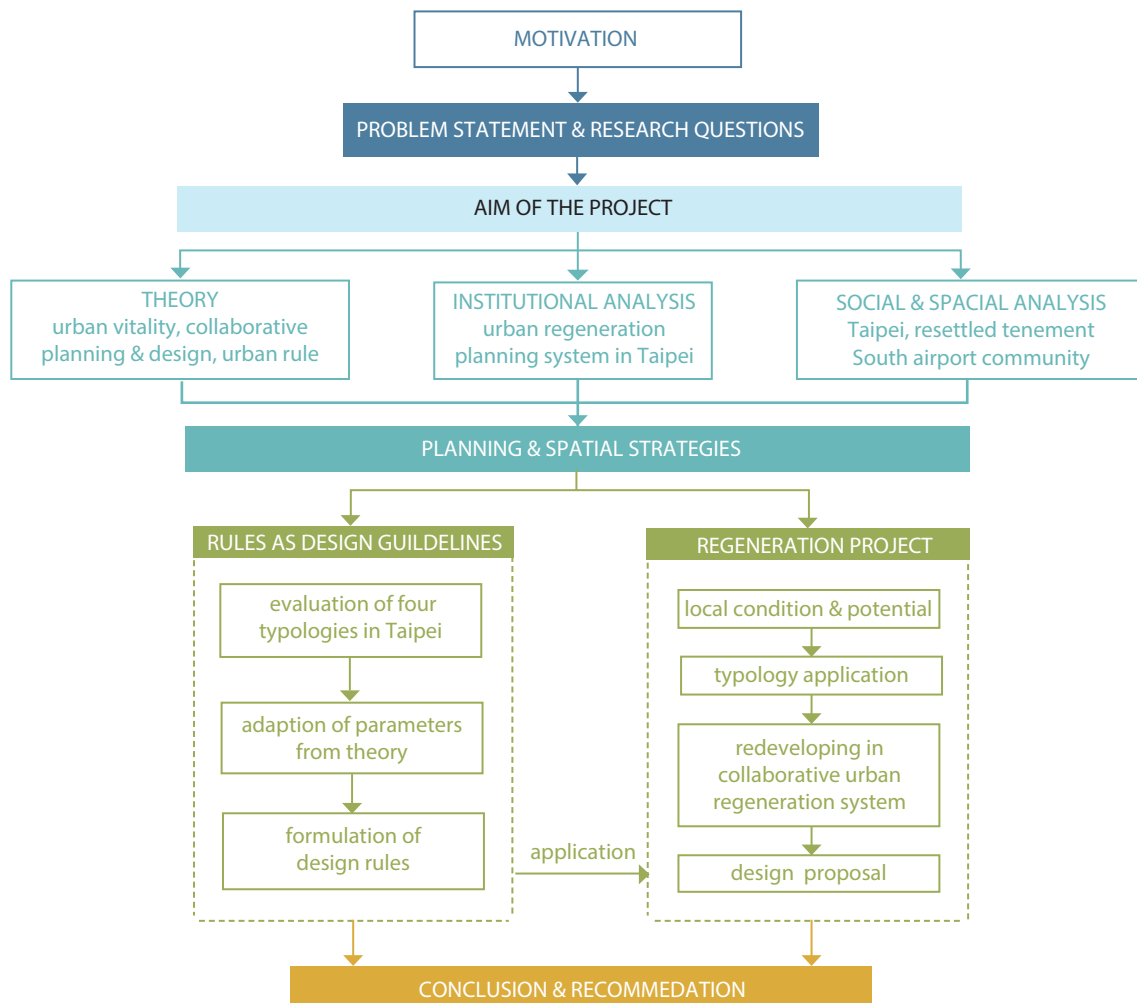


Figure 2.3.1 Thesis structure

How to redefine urban vitality in Taipei?

Type of analysis

Historical analysis of Taipei and the resettled tenements.

Method

Documents, maps and books review.

Aim

This analysis aims to investigate historical development of Taipei and the resettled tenements from papers. The results of this analysis will help to understand the development in the planning aspect.

Type of analysis

Analysis of Taipei and resettled tenement areas.

Method

Official planning document review, mapping, and literature review.

Aim

The analysis of the current structure and future development plans will help to identify the urban life conditions. The analysis from city scale, block scale to resettled tenements will be done to understand how city structure, mixed-use typologies and units affect on urban vitality, in order to formulate rules as design guidelines.

Type of analysis

Institutional analysis of urban regeneration.

Method

Planning document review (policies, regulations, data and plans), cases study.

Aim

The information will be collected mainly from Taipei City Urban Regeneration Office, Social Housing Advocacy Consortium and The Organization of Urban Re-s. The aim is to understand the policies, stakeholder involvement, spatial regulations. Planning system from Japan and Korea are reviewed to interpret experiences from other contexts to the project.

Intended periodic product

Planning and spatial strategies for the aim of project, typologies and rules for regeneration, and redevelopment potentials among resettled tenements.

How to integrate the development of the urban form within urban regeneration process in Taipei?

Type of analysis

Research of collaborative planning and design.

Method

Literature review.

Aim

This analysis firstly investigates the necessary shift to collaborative planning and design in planning system. Secondly, the discussion of participation and the roles of actors are provided in order to connect with the implications in practice.

Type of analysis

Spatial and social analysis of testing site.

Method

Fieldwork, observation, interview, mapping.

Aim

South airport communities is chosen in the project as a regeneration project to demonstrate the strategies.

Type of analysis

Design proposal for the testing site.

Method

Design based on the rules.

Aim

Following the results of the analysis, a design proposals (developing mode and spatial development) will be done in order to proof the performability on the design rules and proposed planning system.

Intended main product

Demonstration of developing mode and design based on the rules for the chosen resettled tenement.

2.4 Social and Scientific Relevance

Social Relevance

Urban regeneration has always been a controversial issue in Taipei, not only because it is a crucial strategy to reach the vision of a city, but also the changes of property right and housing market are very relevant by redevelopments. From city's point of view, the book 'Taipei Unveiled' (2013) points out the urban life are losing their vitality because of the segregated building patterns in redevelopments. On the other hand, the neoliberalism-oriented redevelopments can't improve the urgent conditions in vulnerable communities. Therefore, this project explores the regeneration process and considers the strategies start from the deprived neighborhoods, in order to have rational priority for redevelopments while keep urban vitality by integrating planning process with urban form.

Scientific Relevance

In order to comprehend challenges regeneration facing, it is necessary to look for new insights on urban planning and design in Taipei. The research theme Metropolitan Spatial Structure has rich academic achievements on related topics by studying spatial planning and institutional design. In this track, a better understanding of linkages between built urban form and interpretations of performance is provided. This project tries to give solutions from smaller-scaled structures-neighborhoods, nevertheless, are contextualized and understood, in order to deal with problems of social and spatial fragmentation in metropolitan level. From the problem statement, two subjects are mainly investigated in terms of design and planning. The subject of urban vitality has been set by number of projects (Deng, 2010; Zhou 2012; Kalinauskas, 2014), and this project particularly focuses on the physical conditions that can generate vibrant urban places. The other subject supports to revise the planning system is collaborative planning and design. The books (Qu & Hasselaar, 2011; Carmona, Burgess & Badenhorst, 2009) published by the chair of spatial planning and strategy help to build up the knowledge for renewal strategies. This graduation project aims to contribute to the mentioned subjects, while presenting the possible strategies and design rules in urban regeneration projects of Taipei.





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集Sony頂尖科技, 創造無止境的完美

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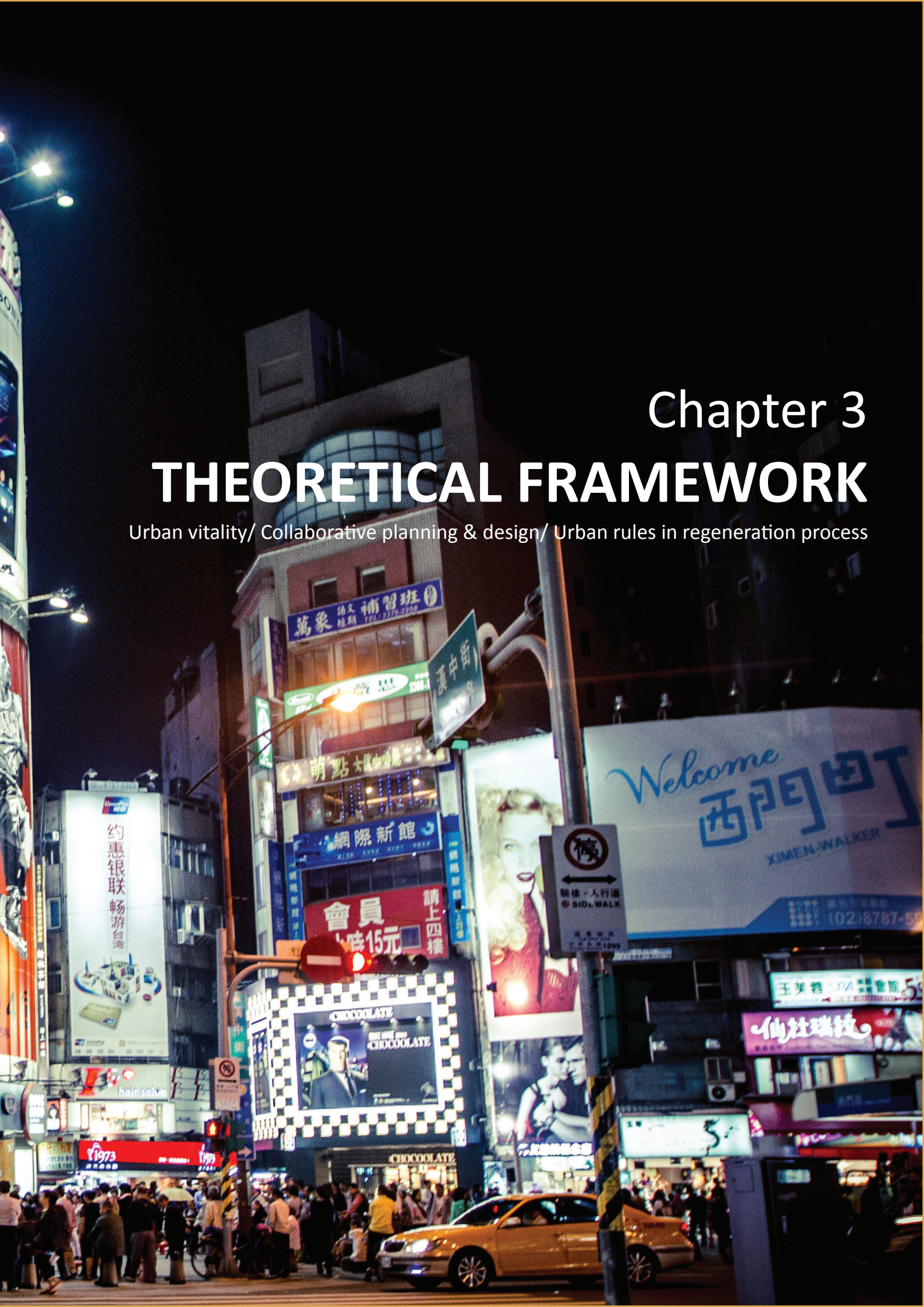
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日本大創百貨 DAISO
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Chapter 3

THEORETICAL FRAMEWORK

Urban vitality/ Collaborative planning & design/ Urban rules in regeneration process



3.1 Urban Vitality

The definition of a vibrant urban place

Jacobs (1961) and others such as Gehl (1989) and Cook (1980) argue that vibrant urban places are based predominantly on street life, and the various ways in which activity occurs in and through buildings and spaces. Primarily influenced by Jacobs, John Montgomery (1998) advocates the predominant role of active street life, which includes pedestrian flows in the street, as well as the presence of small-scale business activities. The successful urban place exists the combination of mixtures of activities, and the vitality they bring is what distinguishes successful urban areas and others. Urban vitality has strong connection with urbanity, urban quality, and urban liveliness. In regard to how to make a livable place, the theories on the sense of place (Relph, 1976; Canter, 1977; Punter, 1991; Montgomery, 1998) indicate that space becomes place when identity, memories and meanings are attached to it, both through the activities happening in there and through the influence of its configuration and form. Furthermore, from Canter's place model (1977), Montgomery also uses the three components activity, meaning, and physical attributes as overall guidelines to vitalize a place with the sense of place. He makes a specific theoretical inquiry on the notion of urban vitality in relation to urban design, and summarizing arguments and reviews of previous studies into principles of vitality and urbanity in a place. (See figure 3.) Those three elements are not individual characteristics in a place, but inter-related constituents to create a place. Meanwhile, the successful urban places must combine quality in those three essential elements.

In the long term urban vitality can only be achieved where there is a complex diversity of primary land uses and (largely economic) **ACTIVITY**. (Montgomery, 1998) The reason why the mix of complementary uses can be one of the key conditions of vitality is *"When one activity closes for lunch, or for the night, or for ever, others will continue to provide life and sense of security."* (Cowan, 2005) Creating the scope for marginal activities also give the built environment tolerance, dynamism and changeability as regards the urban economy. (Komossa, 2010) Besides, **IMAGE** and meaning derive from the activity one finds there, and the built form. An image of the city usually comes from a sense of identity for the users (in the sense of identifying with a place). Groat (2000) states that achieving civic meaning produces processes of place development toward being meaningful for people in the built environment. And he further explains that due to the various settings in a place, the value of civic meaning should be considered complexity and significance of a place in design process. The last but not the least factors is **FORM**. The link to urban vitality is basically identified by Jacobs's observations (1961): size of urban grain, various types and ages of architecture, critical density of the population. Those are with many attentions on the composition of urban blocks. The smaller and more frequent urban grain composed of small city blocks has larger number of these junctions than bigger and less frequent one. As a result it not only closely related to the walkability in cities but also provides diverse circumstances and routs for pedestrians to choose. Moreover, diverse architecture buildings contribute the adaptability on different activities happening in cities. And density in a way also means the capacity that activities that buildings can fit in and the public realm they can create. Using this relationship of three components in a place, Canter (1977) explains how this place model can be

implied in the condition of urban regeneration. When urban regeneration causes major changes in forms (physical attributes) and those changes can be identified, images (meanings) in relation to those physical changes could be identified and people's activities tied to the physical changes and the meanings in the place could be identified. Therefore we can understand that in urban regeneration, form changes operate crucially, so it is important to further elaborate the physical indicators that can regenerate the activities and images.

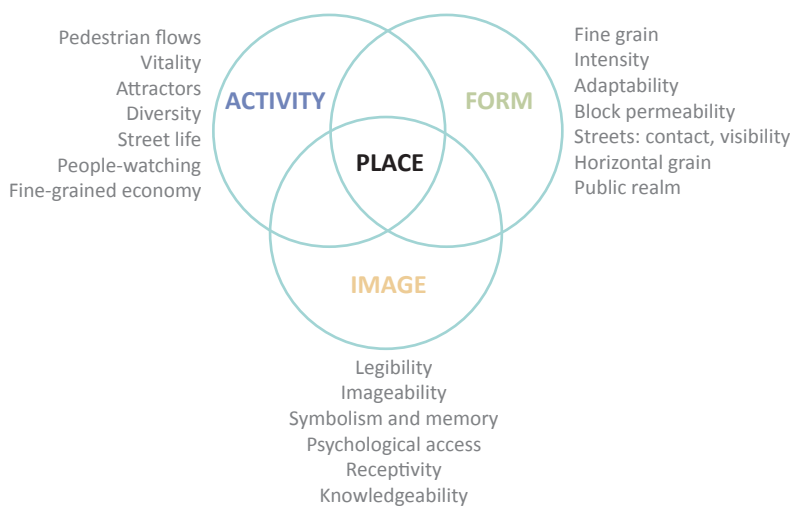


Figure 3.1.1 Place making factors for the project, based on Montgomery (1998).

Urban morphological components

After Caliskan's work (2013), here the project refers the three basic morphological components of street, plot and building. According to his words, "Each component is organized as the constitutive layers of the urban fabric, which are street pattern, plot layout and building setting." The reason to clarify them is not only provides a clear explanation by layers but also helps to understanding the interventions in different levels when facing regeneration.

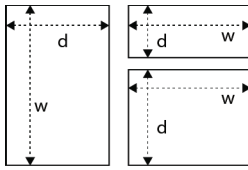


Figure 3.1.2 The different depth-to-width ratios within a block layout defined by the given street pattern.

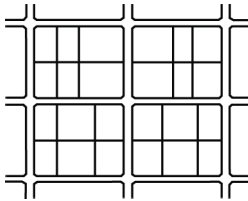


Figure 3.1.3 Variety of plot size in blocks.

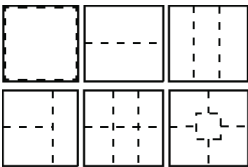


Figure 3.1.4 Basic types of organizing plot layout in blocks. Source: Çalişkan, 2013

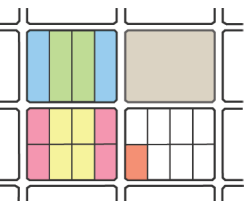


Figure 3.1.5 The basic plot types according to their positioning within the block, based on Meyer et al., 2008

The physical indicators in vibrant urban places

In the article making a city: urbanity, vitality and urban design, Montgomery (1998) proposes a question as following:

"Can city form be so designed as to stimulate activity, a positive image and therefore a strong sense of place?"

Hereby this section describes the indicators in terms of urban morphology that sometimes also are considered with each other to form physical conditions in revitalization. Following the physical conditions that are related to urban vitality are elaborated with the specific indicators by the orders of street pattern, plot layout and building setting.

Street pattern

a. Block-proportion

The character of a street pattern in terms of depth-to-width ratio provides an idea about the typology of a built fabric. (Çalişkan, 2013) Hausleitner (2009), by cases study, states that the blocks with a proportion of more than 1:4 are suitable mostly for service, whereas the blocks up to 1:2 are also providing conditions for production, depending additionally on the size of the block. Hence, it is possible to enhance the flexibility of the alternative building compositions when designing block-proportion in developments.

Plot layout

a. Variety of plot size

Within mixed city blocks, smaller units of different sizes have to be provided. Because a good urban place should not only accommodate large enterprises, the smaller businesses also need to exist. As discussed above, those local enterprises (i.e. corner shops, groceries, café) that often on the ground floor and mix with residential areas are considered as the source of urban vitality. (Çalişkan, 2013)

b. Plot division

Rieniets, et al (2009) states that there are high level of connectivity and navigation options which generates spontaneity and synergy for vitality in smaller grains of urban blocks because of the richer route network. This concept elaborates the importance of permeability for pedestrians in urban block, however here we have to have a notion that nowadays it can also be adapted by building types. The other concept on different types of plot division is they can end up with characteristic street profiles on the edge of the blocks. (Çalişkan, 2013)

c. Plot type

Çalişkan (2013) argues that plot types is to distinguish a plot without considering its outline (i.e. shape, size and proportions) and (internal) arrangement. The meaning behind is a plot may build various forms of connections with the streets, open spaces and neighboring plots. This point of view provides a position to consider functions in terms of revitalization when designing. The types can be generally concluded into single side-accessed middle-plot, corner-plot, double-sided middle plot, and trilateral side-plot, and single plot.

Building setting

a. Entrances

Entrances are important for the performance of a vibrant place in two ways: on the one hand the location of entrances is a condition for what type of use is supported, or for which it might have disadvantages, according to Hausleitner (2009). She also concludes that, *“in Amsterdam an entrance relating to one single unit instead of multiple units is supporting a flexibility of use of a unit or at least a change of use in the ground floor of a building.”*

On the other hand, we can name the frequency and rhythm of entrances as a major factor for the image of cities. Borrowing the idea from Çalışkan (2013) as following: *“since the presence of the rhythm yields predictability in a pictorial composition (Jirousek, 1995), the cumulative application of the rhythm in plot layouts on the larger scale potentially triggers the spatial legibility within urban fabric.”* the Frequency and rhythm of entrances in building settings represented the legibility more precisely.

b. Ground coverage

Ground coverage is the portion of an individual plot covered by the building ground floor. It shows the relationship between building footprint and open spaces within an urban fabric on the ground floor. (Çalışkan, 2013)

c. Floor area ratio

Floor area ratio indicates the ratio between the built-up space and the individual plot area. It shows the density of supporting facilities in a plot. (Çalışkan, 2013)

d. Frontality

This view represents the ‘sense of space’ (i.e. enclosure, oppression or exposure) in terms of environmental psychology on the ground floor along the each side of streets. (Çalışkan, 2013)

e. Confrontation

Confrontation is also considered as ‘street walls’, which is an important element of street vitality mainly in terms of pedestrian comfort and safety by the enclosed and continuous visuality of space. (Çalışkan, 2013)

Conclusion

Above all, we acknowledge the morphological elements to help us create the revitalized spatial conditions. However, it is important to stress that in designing a new piece of city, it is essential to consider form, activity and image coherently and progressively. Each should reinforce the other. Because urban forms are the most operable factors for urban designers in making a city, and the life of urban form is more long lasting than activities and images from the users, we have to be conscious when implicating those indicators.

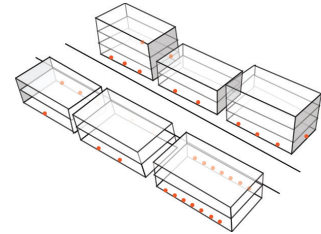


Figure 3.1.6 Some example options for building's entrances.

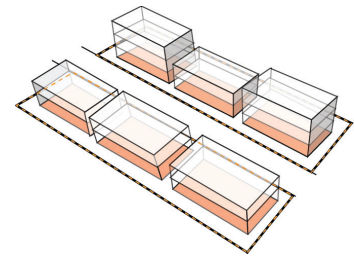


Figure 3.1.7 Ground coverage of urban blocks.

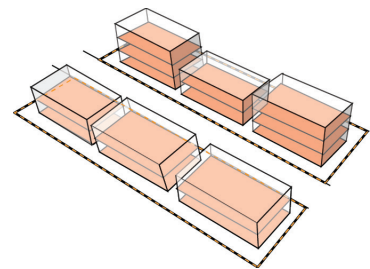


Figure 3.1.8 Floor area ratio (FAR) on the basis of block as the net area of construction.

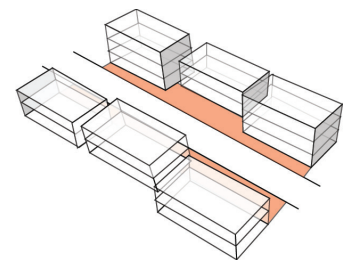


Figure 3.1.9 A street segment composed by the buildings. The front spaces facing the street in red are defining the frontality.

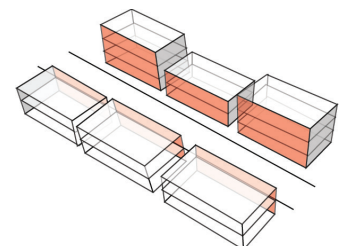


Figure 3.1.10 Front facades of the buildings defining the confrontation of the building setting on the street segment.

3.2 Collaborative Planning and Design

A changing planning system

By the late 1960s and early 1970s, many planners felt that modernism's clean lines and lack of human scale sapped vitality from the community, blaming them for high crime rates and social problems. What important to include within this matter, are also the changing circumstances in the social situation and its growing complexities. Collaborative planners argue that the city is not alike a rational machine that can be dissected through atomistic rationality but a complex organism that governs itself through sometimes discrete and fine methods and is virtually self-organizing. (Portugali, 2011)

From the arguments in this chapter, we can realize the role of diversity in urban regeneration. Such a shift in planning approach from rational-comprehensive, central control and blueprint to strategic, flexible, and collaborative is important to planners' capability of coping with the growing complexity and uncertainty of built environments. In addition, having an image of vitality in the cities is not only rely on the space formation, but also often results in a sense of belonging to a place, of feeling involved and taking an interest or perhaps even an active part in its affairs. (Montgomery, 1998) So one of the main suggestions for strategies in the project is to promote involvement and various cooperative modes of stakeholders and citizens in regeneration process.

Participation ladder

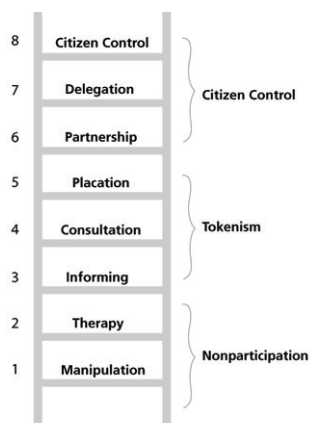


Figure 3.2.1 Ladder of participation. Source: Arnstein, 1969

Participation as a practice in spatial planning started with the presentation of a 'ladder of participation' by Sherry Arnstein in 1969 (Boonstra & Boelens, 2011). Participation, as Arnstein's (1969) definition, *"It is the means by which they can induce significant social reform which enables them to share benefits of the affluent society."* Arnstein's ladder *"juxtaposes powerless citizens with the powerful in order to highlight the fundamental divisions between them."* The ideas of the ladder is to clarify the real involved positions in planning process. In this ladder Arnstein presented citizen participation as eight rungs corresponding to the citizens' power when determining a plan. (see figure 3.2.1) The higher the citizen is on the ladder, the more influence the citizen on a plan. Participation could take place on different (increasing) levels or rungs, but only with partnerships citizens really start to gain influence in the process of decision-making and will they see results of involvement and participation in practice (Arnstein, 1969).

Recently, participation was incorporates in general policies for urban redevelopment (Qu & Hasselaar 2011). To adapt Arnstein's ladder of participation to today's situation (figure 3.2.2), Qu and Hasselaar distinguish the concepts of 'voice' and 'choice', where choice is more passive attitude referring the capability to choose between alternatives, while voice describes one way of adding to preference making for living and working provisions that are not yet covered by traditional producers, to ensure an *"open view of the complexity and dynamism of processes for which the context is ever changing and where all levels of influence and stakeholders coincide"* (Qu & Hasselaar, 2011).

8	Citizen control	Citizen Power	Voice
7	Delegated power		
6	Partnership		
5	Cooperation	Tokenism	Choice
4	Consideration		
3	Informing		
2	Neglect	Non participation	
1	Denial		

Figure 3.2.2 Adaptive ladder of citizen participation. Source: Qu & Hasselaar, 2011.

Roles for actors

Many of opportunities for social and spatial conditions would be brought through the advocacy of collaborative planning and design, such as stimulation of social cohesion and improvement of the spatial quality in working and living environments, economic revitalization through willingness to invest and the strengthening of civic support for public policies (Boonstra & Boelens, 2011).

To involve citizens as a part in planning process it is necessary to explore who they are and what legislative framework or power structure in the planning process need to be changed in order to involve them. There should be room for their initiatives, facilitated by the government. Because the term 'citizen' contains a wide variation of people with different positions or motivations, it is important to clarify who these people are and what their needs are to encourage them to participate in the process of urban interventions.

While citizens' initiatives are built in the planning process, still the role of the government remains important. *"Governments ask for citizen involvement and shared responsibility, but, according to their path-dependencies, hold on to instruments that keep them in central positions, in a society that is no longer governable from that kind of one-dimensional perspective. Thus, participation leads to an impasse and lock-in of spatial planning rather than to the aimed-for shared responsibility between governments and citizens"* (Boonstra & Boelens, 2011).

The same as urban planners and designers in collaborations. The government, urban planners and designers possess the professions and experiences of the higher scales and the longer term. *"The designer plays an important role, because he or she has the challenge of effecting a synthesis of different 'ingredients' that are provided by the various stakeholders"* (Rooij et al., 2012).

Other than the public-private partnership discussed above secures the success of urban interventions in current planning trend, sometimes the third sector also gets involved as a mediator or assistant. The third sector can include local residents and consumers, and other nonprofit organizations that represent social interests. The role of third sectors between public sectors and private sectors can be understood as figure 3.2.3.

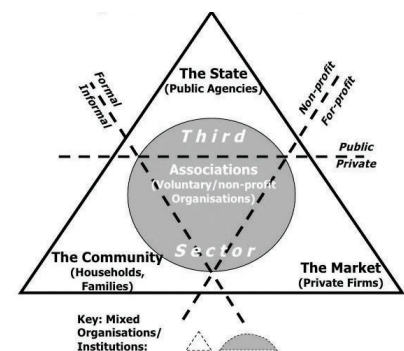


Figure 3.2.3 The role of the third sector. Source: Evers & Laville, 2004.

Conclusion

Collaborative planning and design process provide better outcomes and enhance long-term relationships in situations where *“many stakeholders with different needs” have “shared interests in common resources or challenges”* and where *“no actor can meet his/her interests without the cooperation of many others”* (Innes and Booher 2010; Innes and Gruber 2005).

Therefore in the current planning trend, more innovative and comprehensive planning, design and development processes should be provided. Despite from institutional design and policies, it is also necessary to direct different forms of bottom up initiatives (for example private commissioning, collective private commissioning and participatory commissioning, or any other types of do-it-yourself rebuilding/renovation projects) towards restructuring existing areas, where solutions for socio-spatial problems are currently under exploited. (Qu & Hasselaar, 2011) Within collaborative planning and design framework, the balance between demands and products requires diversity and competition between all actors, eg. producers (including cooperatives), the individual builders, and the catalogue buyers. Thus, it is important to make in-depth actor-network analysis in order to find out the potential actors with interesting ideas and initiatives and linking them together. Boelens (2006) further explains, *“Plan and design elements still play a role here, although not in the form of a pre-defined plan with abstract appeals for public-private collaboration, but in the form of opportunity maps, images and references, triggering key players and leading actors to elaborate concrete action plans themselves.”*

Planning and designing for diversity, which could stimulate people’s passive interaction with the built environment response, is only one approach. Through the involvement, where the multiple stakeholders and local inhabitants with changing positions and roles from design until maintenance of interventions can bring to diverse results, is considered a challenging initiative of stimulating urban vitality.

3.3 Urban Rules in Regeneration Process

The characteristics of rules

The characteristics of rules are ubiquitous, making control adjustable, and stay operational. (Lehnerer, 2009) They provide a flexible framework for negotiation within stakeholders, and participations into the design and development processes; meanwhile, various solutions can happen in the defined framework.

There are many dynamics in development process, such as the site conditions, the local regulations, enduring production (construction) factors and the expectations of the stakeholders. Similarly, it is a complex system of decisions making a series of dependent variables (i.e. building and network typologies) to achieve the desired controllable effects at the end. (See figure 3.3.1) To create places with a lot of independent variables, as the dynamics mentioned above, rules have the capacity to generate variety that can take the form of diversity with regard to social and spatial configuration. (Lehnerer, 2009) The use of rules in spatial planning is mainly for resolving the conflicting interests, which occasionally arise in the production of collective urban form and guaranteeing both the individual (design) freedom and the common interest. (Çalışkan, 2013) In this context, rules provide a common basis of coordination.

Rules as design control tools

Spatial planning involves various tools and mechanisms to coordinate individual designs in urban interventions. Design control mechanisms have a key role to guide the quality of urban form for the sake of public interest when public sector is still authorised with the control of land allocation, design and construction process in urban developments and transformations. (Çalışkan, 2013) In this context, rules are adopted to control the developments and transformations through planning permissions because rules can define the desired form as an end product of design. In addition, the urban rules based on simply formulated, clearly represented, relational and multi-scalar are potentially the good instruments to fill the critical gap between design and policy in planning. (Çalışkan, 2013) We could conclude from previous theoretical studies that approaching urban vitality many of morphological indicators need to apply, while managing urban regeneration requires the collaborations within diverse stakeholders. Therefore, to achieve a success urban regeneration in Taipei, different levels of design control tools and mechanisms acting in the same system is essential.

According to Çalışkan's study, the regularity power of planning is exercised by a certain set of tools, which can be generic such as guides or responsive to local context as codes. At most of times the rules are universal in the area where they operating, but sometimes there are also conditional ones. (i.g. 'if A exists, B will apply') This conditional form of control attempts to trigger new potential in developments rather than to dictate the limitations. The rules of this mechanism can be applied in order to inspire something possible, to give direction, to steer, rather than to only restrict. The transformation is guided by these rules such as floor area bonus rules or transfer of development rights rules which encourage the developers to develop the property beyond the minimum requirements.

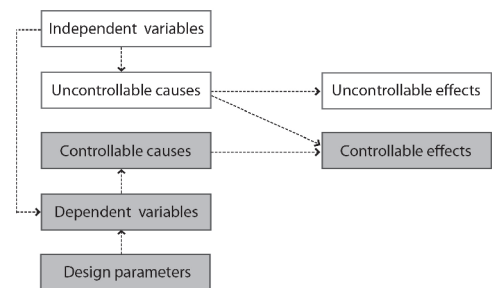


Figure 3.3.1 Design process based on the conceptualization in Levin, 1966. Source: Çalışkan, 2013. p.265.



Figure 3.3.2 The flexibility of rules as design control tools in the planning regime.

Urban rules are not only for examining and explaining cities, but also as fundamental urban design principles that can open up a highly professionalized medium of making cities to ordinary people. Different rules are depicted with the resulting intriguing spatial effects, which illustrates the invisible but direct relationship between regulation and space. The pattern language doesn't lead to a design itself, but is a way to systematically approach design problems on different scales and communicate them with a larger audience (Westrik et al, 1989).

Control mechanisms in Taipei

Taipei has four important control mechanisms: zoning, transfer of development rights regulations, floor area bonus regulations and building code. The first three have influence on the transformation and density of the city, where the flexibility of the variables of restriction and relaxation control the urban environment. It is a dynamic system where a set of rules not only steer what is restricted, but also what is possible, and even desirable. Building codes in Taipei, however, are more about regulating the safety issue or building construction. In the following paragraph those first three mechanism are elaborated about their application in Taipei.

Zoning

In 1984, Department of Urban Development (DUD) announced its urban land use control regulations, in which new guidelines belong to each zone, such as setback floor area ratio, ground cover ratio, were officially introduced. (see Table 3.3.1) After the announcement of Taipei urban land use control regulations, the control of urban density by floor area was established, which also replaced the ground coverage control regulated by the width of front streets from the influence of Japanese urban plan.

The zoning plan of the city follows the regulations, and the zoning plan is revised regularly according to the periodical overall review of urban plan. Zoning forms the basis for an overall area classification by functions, with categories such as residential, commercial, industrial, educational, institutional, open space, and so on, in order to adapt surrounding environment and existing fact in urban life. Within those categories there are various subdivisions, provide different levels of tolerance on specific activities. Each of these categories focuses on a particular function, but other functions are not excluded per definition. The result is that there is little obstruction for the residential area in Taipei to transform into a mixed use area with functional diversity.

Transfer of development rights regulations

The origin of Transfer of development rights (TDR) seeks to preserve landowners' asset value by moving the right to build a house from a location where development is prohibited (e.g., for environmental reasons) to a location where development is encouraged. In this mechanism, the development rights are sent out from a sending zone, and the development rights transfer into a receiving zone where a developer buys a right to build more quantity than currently permitted in the local zoning ordinance. In Taipei, TDR regulations are implemented in specific areas where a historical district, monuments, and lands reserved for the public infrastructure as sending zones, and receiving zones mainly focus on new developing districts, zones face main streets, and zones near metro stations.

Zone	Residential area									Commercial area			
	Category									Control			
Control	1	2	2-1	2-2	3	3-1	3-2	4	4-1	1	2	3	4
FAR (%)	60	120	160	225	225	300	400	300	400	360	630	560	800
Ground coverage (%)	30	35	35	35	45	45	45	50	50	55	65	65	75
Height Ratio	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0
Foreyard (M)	6	5	5	5	3	3	3	3	3				
Backyard (M)	3.0	3.0	3.0	3.0	2.5	2.5	2.5	2.5	2.5	3.0	3.0	3.0	2.5
Backyard ratio	0.6	0.4	0.3	0.3	0.25	0.25	0.25	0.25	0.25				
Side yard (M)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0				

Table 3.3.1 Taipei urban land use control regulations.
Source: Taipei urban development department

From 2014, a transaction platform of transferable development rights was established by Taipei city government called TDR bank. The function and role of the transaction platform, the transparency of the transaction information, the method of valuating developing rights, and the effects of TDRs on living environments are the core values factors for constructing this TDR transaction platform.

Floor area bonus regulations

Except for the floor area bonus regulations in the Renewal Act mentioned in chapter one, other floor area bonus are given where the design of open spaces in the developing units and if there is proposal for multi-used public facilities. Thus, the result from this mechanism in Taipei is a very diverse urban field with both large urban interventions as well as small architectural transformations. However, the floor area bonus regulations in Taipei has a serious problem that there is no careful calculation of total floor area for the city's capacity, so the 'extra' floor area will have over-loaded impact negatively in infrastructure. Therefore, it is important to consider the management of urban growth by relocating floor areas according to the city structure when speaking of this tool. (Tsai, 2014. & Chinese Institute of Urban Design, 2008.)

Conclusion

In this sense, morphological indicators can correspond to a specific site or the thematic transformation of an area and be transformed into rules. In a built environment where the individual actions in the system are mutually influent is unavoidable, and the complex nature of physical form is also critical to be specified the scale or unit operations in urban design.

The term 'urban vitality' can legitimately include all of the concerns described above; there is a 'collective consciousness', a consensus, among people generally. (Montgomery, 1998) Thus, depart from the existing terminology of control on urban planning, which implies the regulation of various individual design actions in accordance with a certain legal framework (Çalışkan, 2013), the new collaborative city-making methods should be provided, which are: a combination of collaborative planning (which already embraces various agencies and derives decision-making from negotiations between them) and collaborative design (existing methods rely on rule-based iterative process which control spatial outcomes). (Tan, 2014) In conclusion, the planning system needs to have a simple and consistently applied overarching legal framework in planning process, supported by flexible options in physical elements, which can be formulated as 'rules' in spatial formation, in order to redefine urban vitality in regeneration process in Taipei by propose an open negotiation and design method for collaboration process which involving the user and foster social coherence and desirable outcomes within stakeholders.

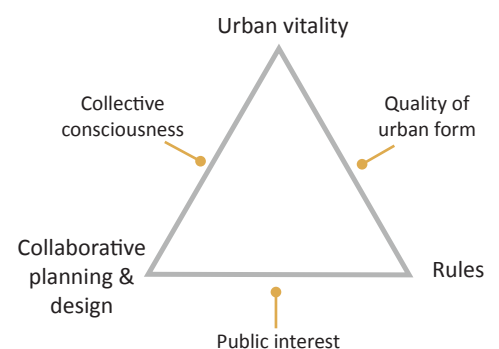


Figure 3.3.3 The relations between the three theories.

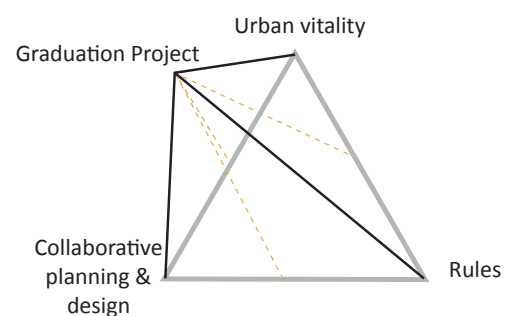


Figure 3.3.4 Integrating the three elements to produce desirable spatial outcomes in the project.





Chapter 4

SPATIAL & SOCIAL ANALYSIS

Analysis of Taipei/ Analysis of resettled tenements/
Analysis of South airport community/ Analysis of institutional condition

4.1 Analysis of Taipei

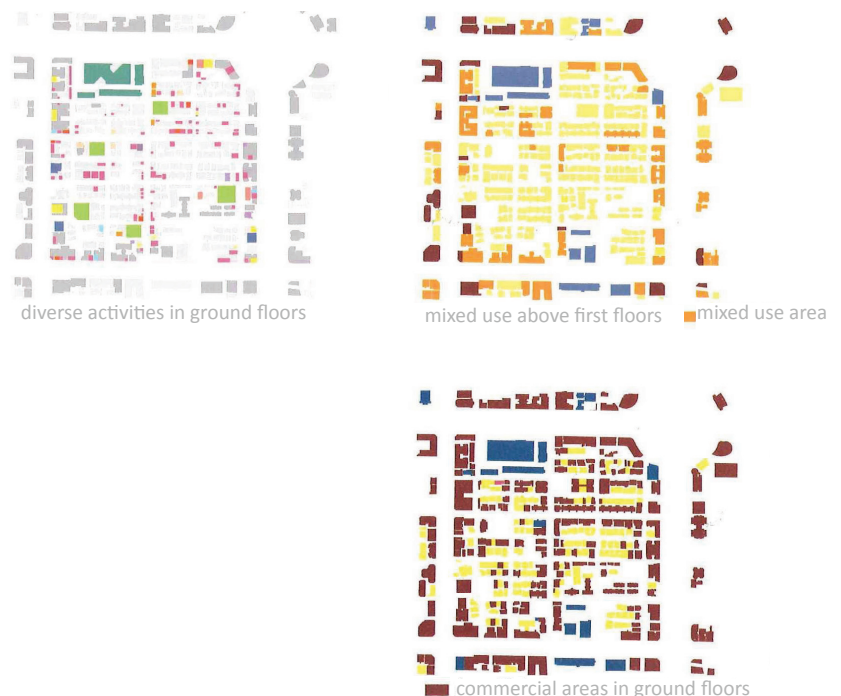
The flux city

Not like mostly western cities which are characterized by a comprehensive planning system that produce a set of coherent urban structure, Taipei is like many Asian city attempts through a set control guidelines, to generate new opportunities and allow development using economic forces in current planning system. That produces urban vitality in many ways, including the smaller scale developments brought out permeability within shorter urban blocks, and high level mixed-use function in either vertical or horizontal dimensions results from the tolerant zoning system.

Over a period of decades the buildings have evolved and morphed to create the Taipei that stands today. They have changed— adapted to the time, density and use. All things mix up spontaneously, and when density goes beyond a critical point, boundaries overlaps and clashes occur. So increases in the dis-benefits of mixed-use such as over-crowding, increased environmental wear and tear and conflicts over parking, traffic and noise are more likely. In many areas, the problems of lacking a efficient urban management or stimulations of urban regeneration need to be solved.

Land use control regulation provides basic control on land uses and density for developments, however, in the regeneration process, in order to prevent the development of lifeless buildings referred in the problem statement, the consideration of public/private realms at the street and block level, and the issues of urban design have to be included based on the context.

Figure 4.1.1 Character of land use. Source: Taipei Unveiled (Garden City, 2013)



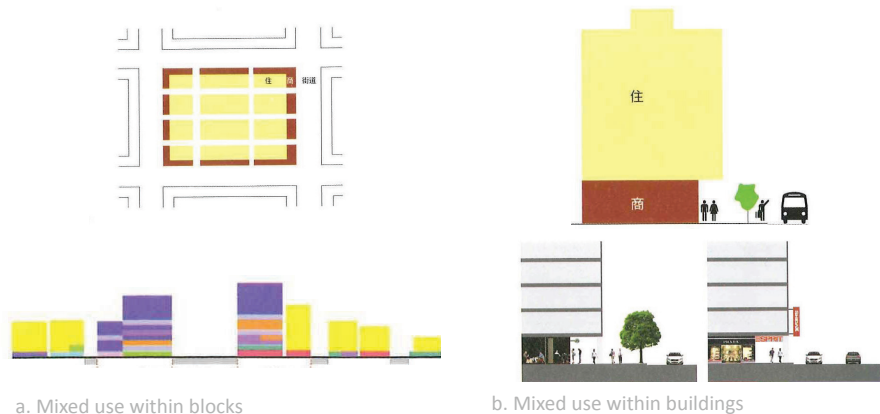


Figure 4.1.2 Mixed use in Taipei. Source: Taipei Unveiled (Garden City, 2013)

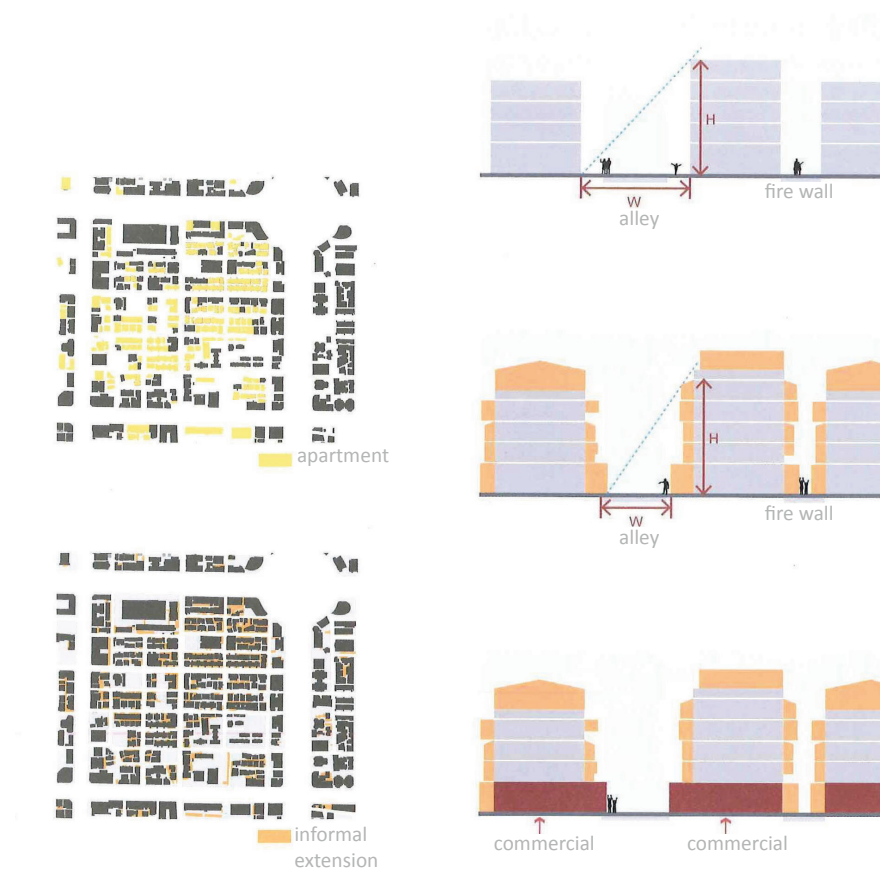


Figure 4.1.3 Informal extensions in Taipei. Source: Taipei Unveiled (Garden City, 2013)

Urban form

The typical urban form in Taipei is result from the Japanese planning mechanism and the structure of these planning strategies can still be clearly read today. The cross-section of Taipei show that apartments of lower height and small community parks within each city block are surrounded by high-rise buildings along major street. They constitute basin-like blocks. Wang (1996) concludes the characteristics of it are:

1. A rich and complex urban fabric of rational grids interwoven with informal paths.
2. A strong and clear spatial hierarchy of streets.
3. Linear and vital street activities with diverse uses.
4. Simultaneous front and back access for each dwelling unit; with the front as formal/commercial/city-wide space and the back as informal/social/neighborhood space.
5. A clear relationship between uses, building heights and their location within the hierarchy of different streets.
6. An emphasis on the spatial relationship between buildings and streets.
7. A simple and potent implementation framework.

From the zoning map, we can recognize that influenced by an old building code from the Japanese, the building heights are limited to a maximum of 1.5 times the street width that the building faces, so periphery buildings always possess much greater building heights, whereas the buildings inside the block are lower. (see figure 4.1.1 & 4.1.4) Again, because of the tolerant use group in the subdivision of zoning (in correspond to the existing uses resulted from early developments) and organic urban transformations, the pattern has brought different life styles and types of vitality in a block. As a result, the current land use functions in Taipei are much more vital and flexible than the zoning map presents. (see figure 4.1.5 & 4.1.6)

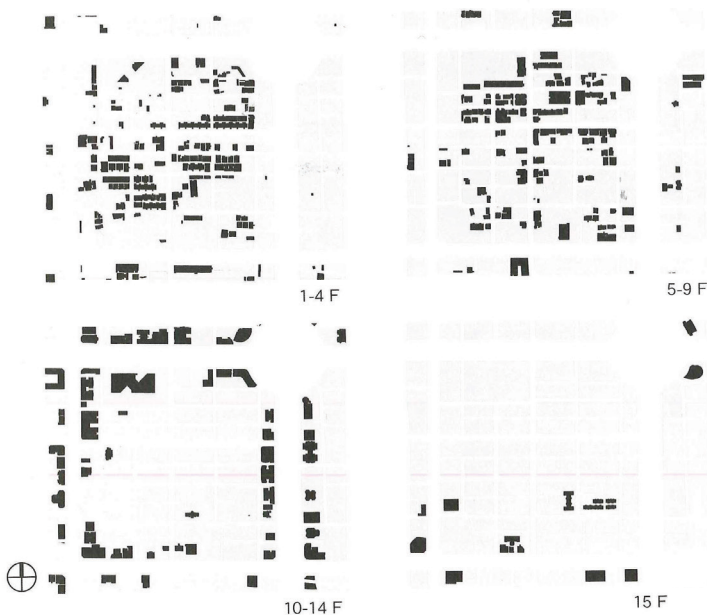
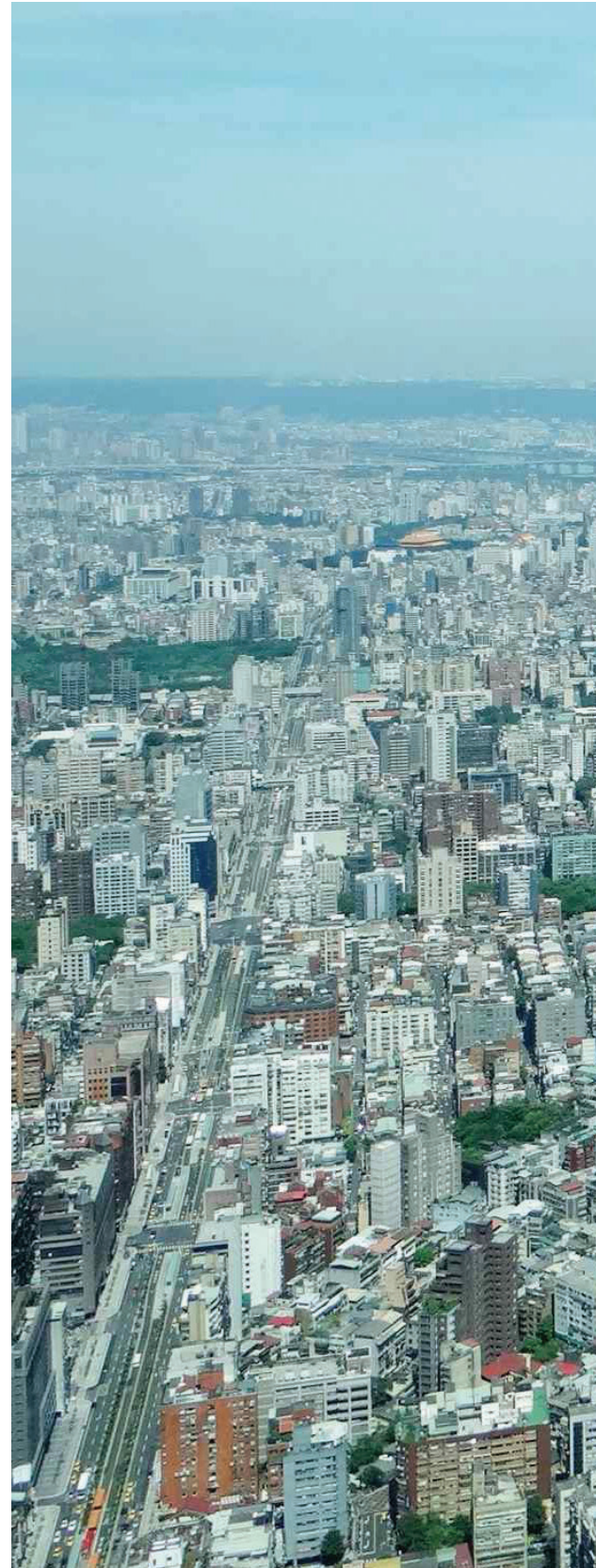


Figure 4.1.4 Building height in a block. Source: Taipei Unveiled (Garden City, 2013)





source: <http://ly0118.blog.sohu.com/272665999.html>

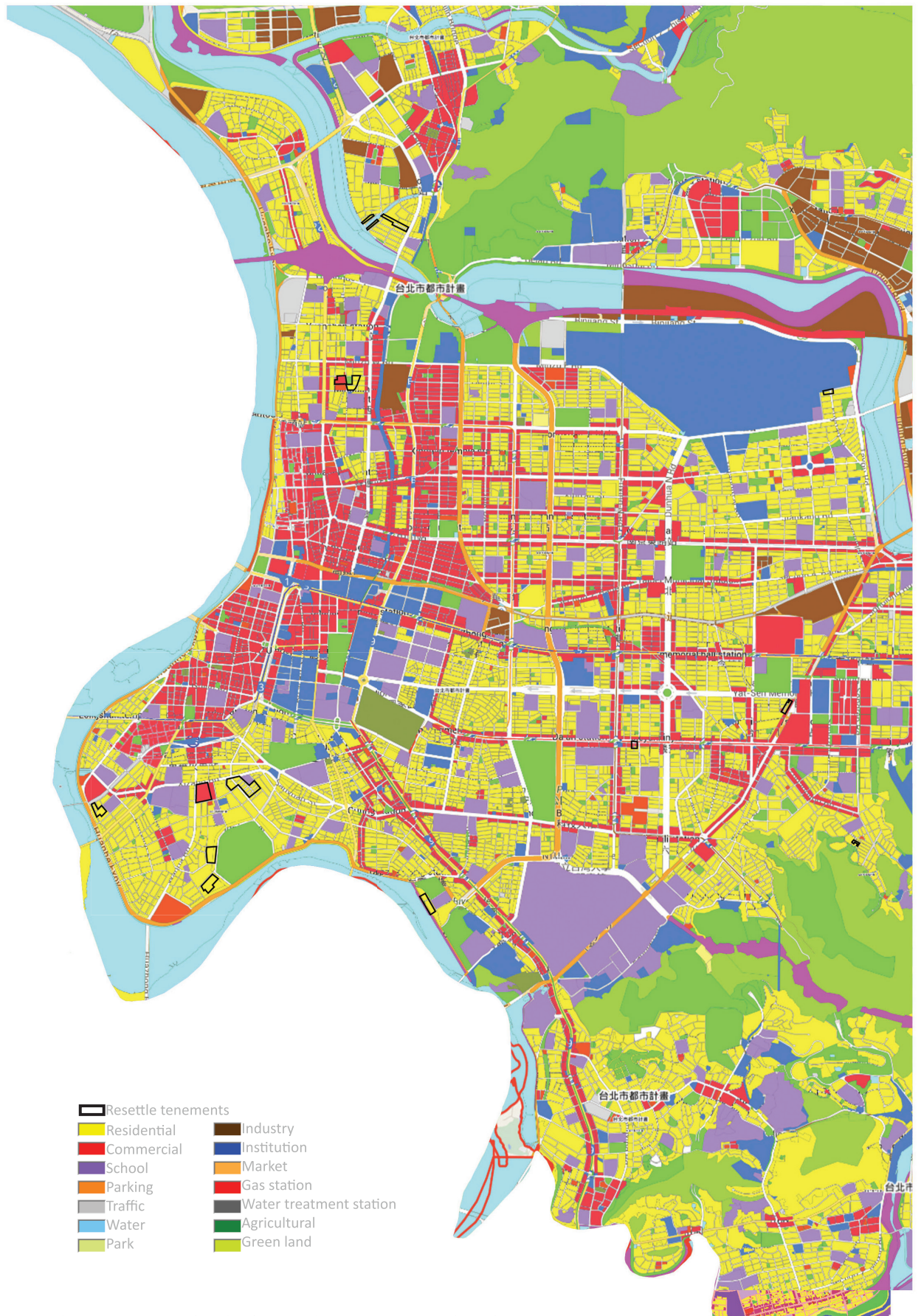


Figure 4.1.5 Taipei zoning plan. Source: Taipei urban development department, mapping by author

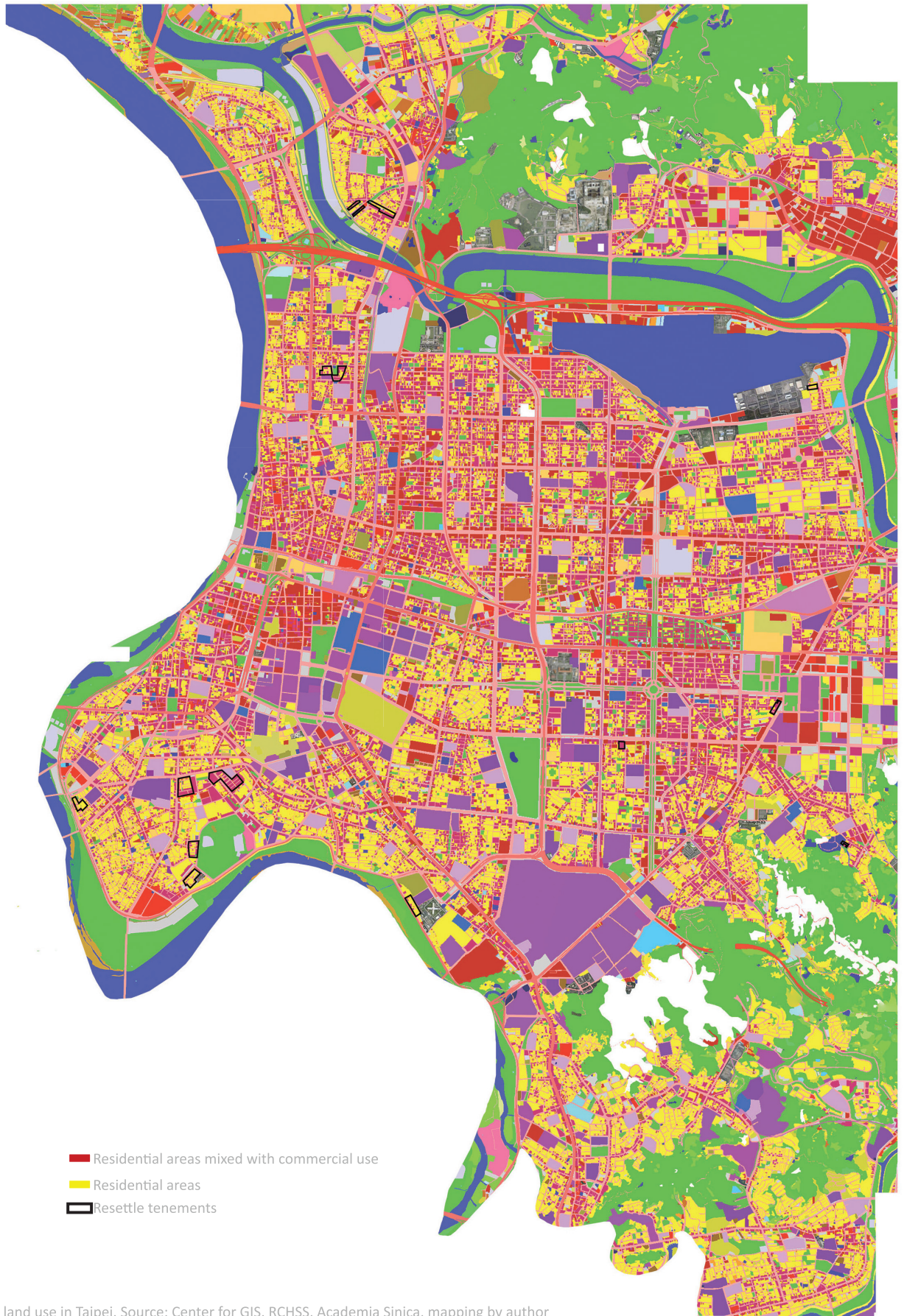


Figure 4.1.6 Current land use in Taipei. Source: Center for GIS, RCHSS, Academia Sinica, mapping by author

Mixed-use typologies

In order to find out the urban pattern correspond to the context in urban regeneration, in this section the mixed-use typologies (in this thesis refer to housing and working functions) in Taipei are studied to contribute the project. The mixed-use typologies can be generally concluded into four typologies elaborated in the following section. The typologies are studied by function, urban fabric, urban grain, building types, and surroundings, to reflect the influence on urban vitality- economic activity and the level of diversity. It also comprises other abstract features such as the urban experience, the nature of uses, definitions of public and private, conflict and security. For each typology, all of the features could be considered integrally to formulate design guideline in term of generating and redefine urban vitality in Taipei.

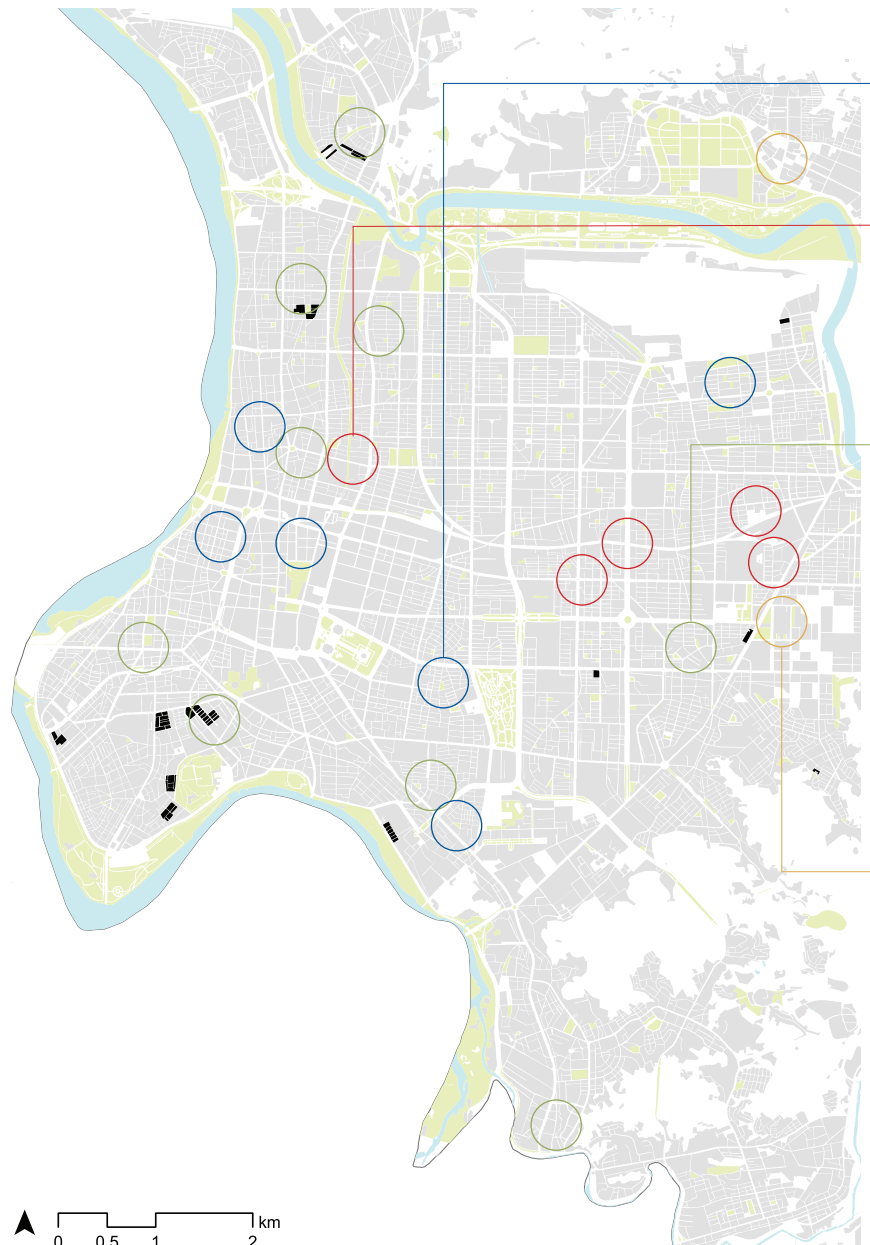
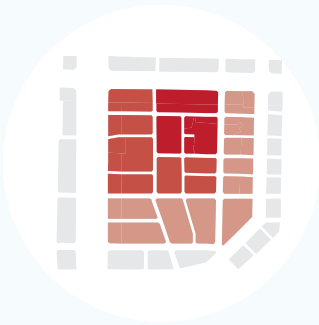


Figure 4.1.7 The well-known locations of four mixed use typologies.

Typology: commerce in neighborhoods

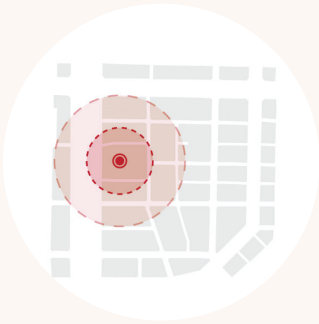


This type of urban pattern is basic foundation in Taipei. They were built in the early urban development. Diverse small business gather in shop houses or low-floor departments. Commercial functions exist on the ground floor mixed with residential functions on upper floors.



Photo credit: <http://goo.gl/mjX/HF>

Typology: radiant commerce

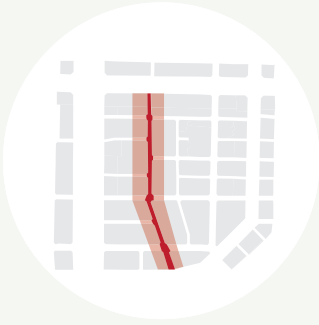


This type of urban pattern is based on a larger scale of business such as a shopping mall or a department store, and the economic energy influence the surrounding areas. Therefore this pattern produces various activities and usually combined with the previous type.



Photo credit: <http://goo.gl/4lIRg>

Typology: linear temporary market



This type of urban pattern develops in a linear way. Based on the physical form same as the first type (commerce in neighborhood), temporary markets occupy the streets in mornings and evenings. It is the most chaotic at the same time most vital cityscape in Taipei.



Photo credit: <http://goo.gl/2g38PR>

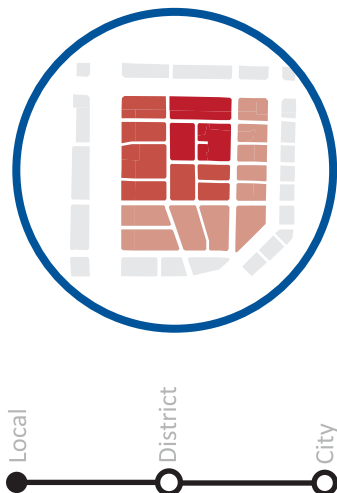
Typology: separation of commerce and residence



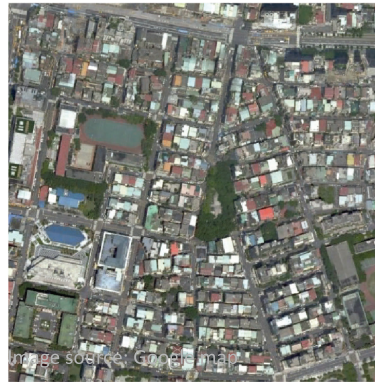
This type of urban pattern is strongly guided by planning system in later urban developments. It is developed by blocks, encouraging investments of shopping malls or high-rise housing complex. Therefore the commercial and residential functions are separate from block to block.



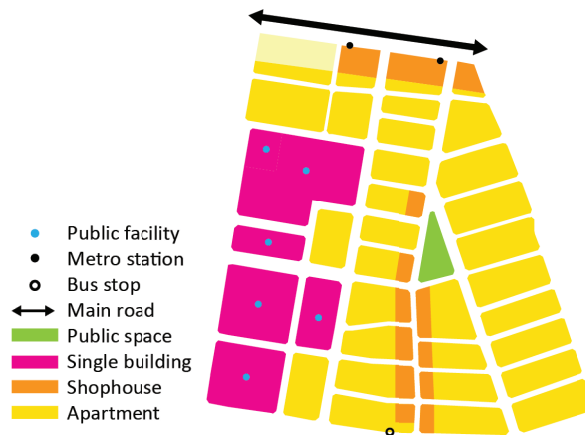
Photo credit: <http://goo.gl/Zro3XH>



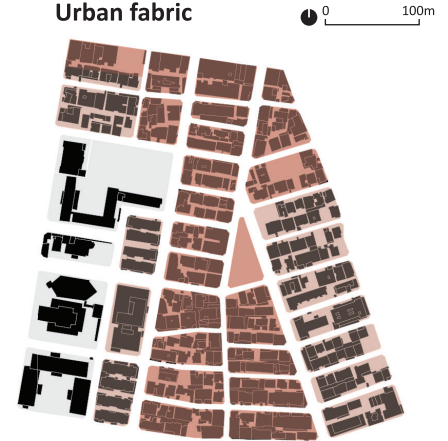
Example



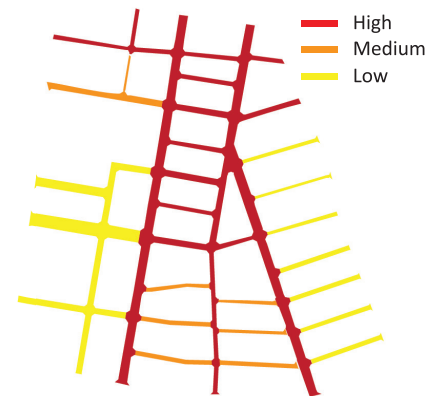
Building types & surroundings



Urban fabric



Urban vitality



Typology: commerce in neighborhoods

The neighborhoods for this typology refer to low-floor housing apartments. Because of the fast urbanized process, these housing complex are largely produced in 1960s to 1980s, and became the most common feature of living environment in Taipei.

The urban fabric presents several internal grid streets, whose widths are narrower than the bounding main street. As we move into the core of a neighborhood, we encounter many minor streets that run between buildings.

The ground level in the typology is seldom arcaded; mostly the building types are low-floor apartment, but there are also shop houses face major interior streets. The floors above are exclusively residential in both periphery and core cases.

This typology consists of diverse small business. Neighborhood retail and services such as convenient stores, shops, and restaurants occupy the spaces in the buildings facing major interior streets. Urban vitality here is with the hierarchy of different streets presenting the atmosphere from vibrant to quiet. As one approaches deeper into a block, the streets get narrower, and the spaces become less commer-

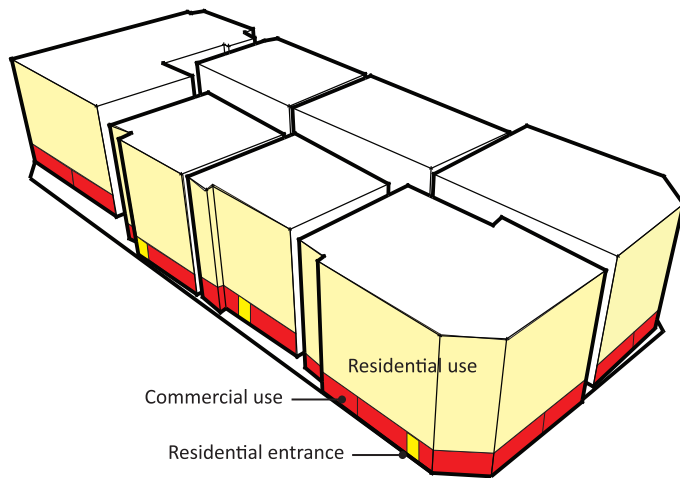
cial, more residential, and more private.

According to the street activities, many users form the urban life together. These residential buildings were designed around 100 m² per unit, providing for low/ middle income residents. Because of the smaller housing units, it's also easy to startup small business facing major interior streets on the ground floor, and they usually provide service for local visitors.

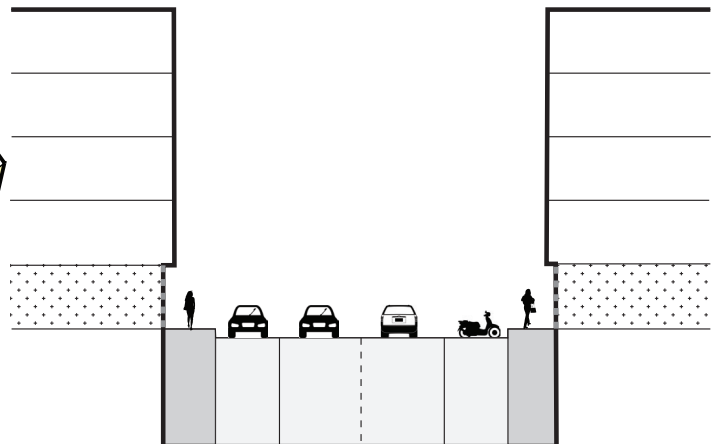
By observing the activities and user group here, inhabitants are main population in this residential category of zoning, and opening hours for neighborhood retails start around 9 o'clock in the morning. Visitors show later and reach higher amount in the evening.

There are many spatial problems due to the conflict on mixed use. Car and moped parking clogs pedestrian sidewalks, paths, and arcades. illegal building encroachments on the ground level erode the public space of back alleys and street corners.

Block typology



Street profile



Program-User



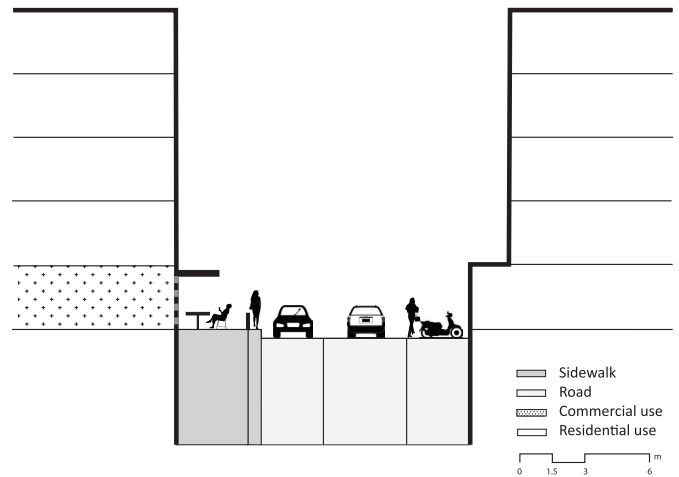
Middle/ low income inhabitants

Residential unit

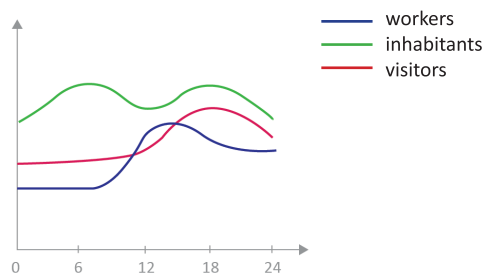


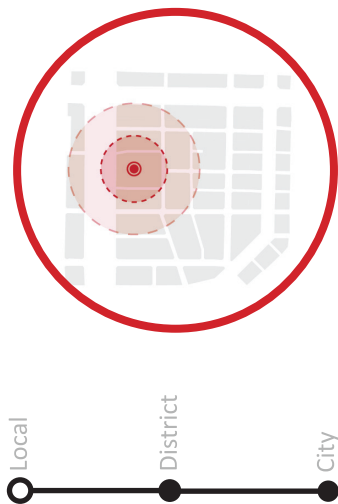
Designers
Mechanic
Self-employed people
Customer service people
Local visitor

Small business

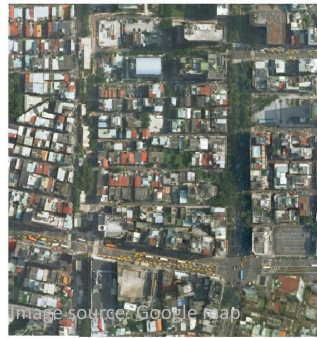


Travel timeline

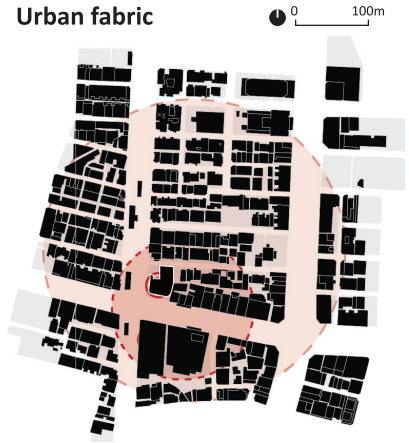




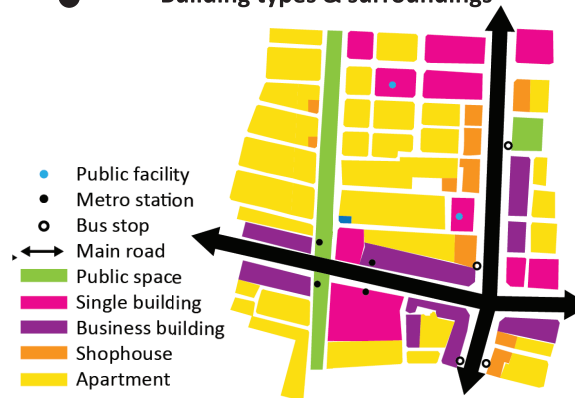
Example



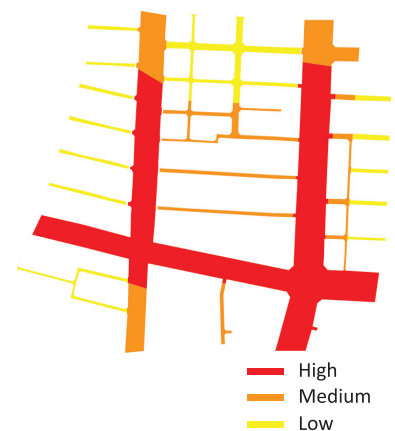
Urban fabric



Building types & surroundings



Urban vitality



Typology: radiant commerce

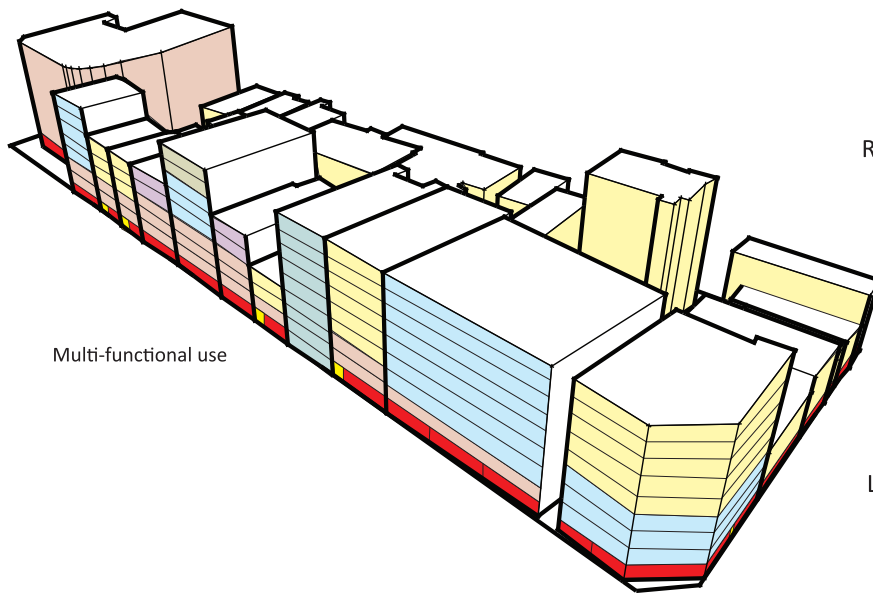
The scale of mixture in this typology is between large commercial space and street commerce along main streets. In the planning framework of Japanese occupied period, some large units were preserved and were built into large commercial space in the city plan. It became the core in the area of this typology, and gradually the economic activities spread into the streets nearby. Therefore, the main character is not only the large commercial space (in the most cases they are department stores.), the higher-rise business buildings beside the large commercial space on the blocks' edges also make the cityscape as well.

The building types always offer the linear and continuous arcade spaces for street activities and functions such as commerce, pedestrian circulation, and moped parking. The density is also higher compare to the commerce-in-neighborhood typology. The basement, first floor, even up to the mid-height floors in these periphery buildings are used as city-wide or district-wide commercial spaces or offices. In some cases these buildings also provide residential functions. Therefore, the diverse economic activities and uses contribute to high urban vitality, especially the area close to the economic core.

The users here can be divided into several types. White collars people work in the office, while customer service people provided service to visitors from districts or the city. On the other hand, because the housing price in is relatively high in these newer high-rise buildings and location, no lower class inhabitants can afford for them. The user group has different pattern from weekdays to weekends. In weekdays, the workers are much more than the inhabitants and visitors, however in weekends, only the customer service people still work, and the visitors are also more than weekdays.

The spatial problem for the typology is mainly about insufficient parking space. Although some building has internalized the need for parking when constructed, the vibrant urban life still absorb many people that make the parking space still scarce.

Block typology



Program-User



Middle income inhabitants

Residential unit



White-collar people

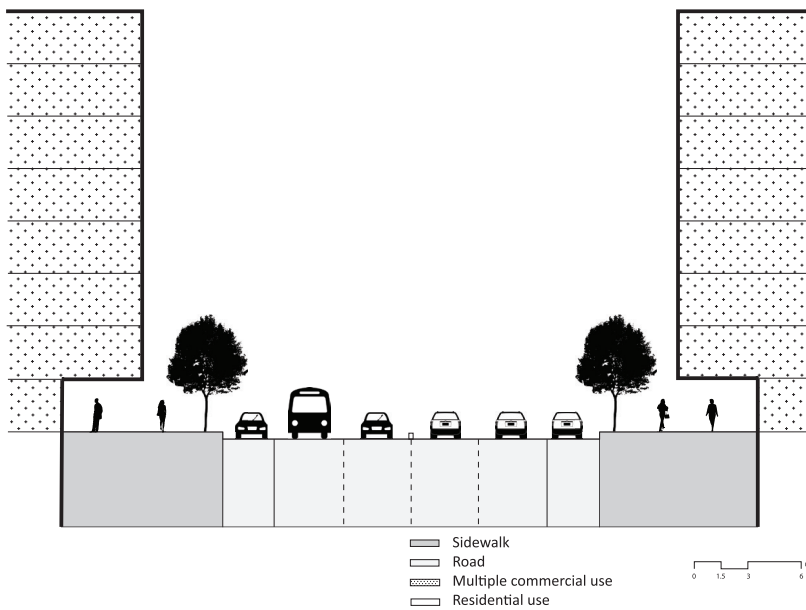
Office



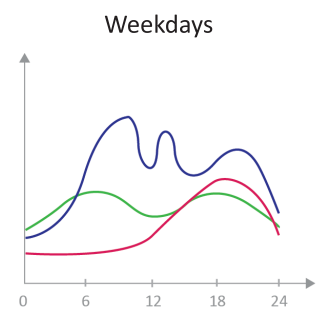
Customer service people
District-wide/ city-wide visitors

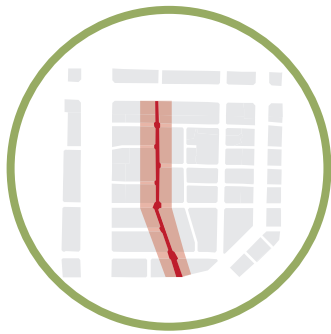
Large business

Street profile



Travel timeline

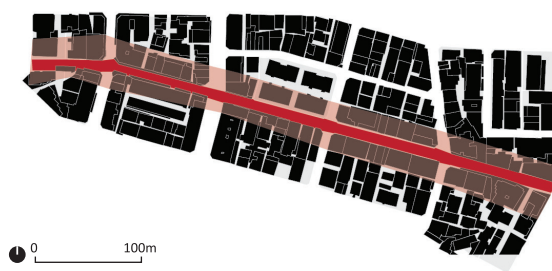




Example



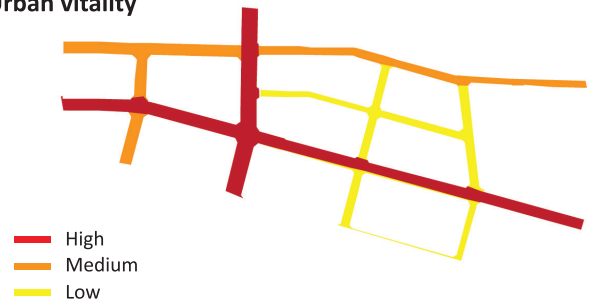
Urban fabric



Building types & surroundings



Urban vitality



Typology: linear temporary market

The most important element for this typology is the markets. The linear markets in this typology appear spontaneously. They are located in neighborhoods, in between the apartment buildings in the inner block. Sometimes the commercial space on the ground floor of the apartments extend their business area to streets, while sometimes the vendors occupy the front door area. Those businesses have dependence relationship by using public spaces and have created ambiguous ambience for everyday life. This can represent very much the folk culture in Taipei.

The most vital space in this typology is where the linear temporary market is. Those vendors are seldom extend their territory to other street, because somehow they all have the tacit agreement to show up at the same places everyday. The vendors gather along the street regularly in early mornings and evenings, and providing goods and fresh ingredients for local or district-wide customers.

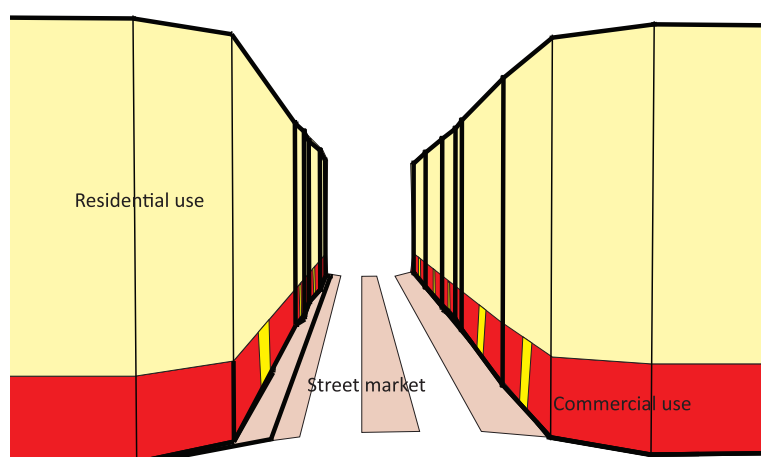
The activities happen in this typology are not only the commercial on ground floors and the vendors, but still the

home-working property in the apartments. Therefore it is a place consisted of small business as well. The users here are also the ones you can see always in Taipei's folk life.

Everyday when the vendors show up gradually, the area become vibrant and chaotic, but when they are not there in the afternoon, the area is just as the typology commerce in neighborhood. So this pattern is time-changing mixed use, and its flexibility can be adapted though different design approach.

Mentioned in previous session, current zoning and land uses do not correspond to the regulated ones and various types of commerce scattered everywhere introduces messiness, noise, even nuisance into the residential neighborhood, and the condition are especially severe in this typology. Therefore, here tend to be more low-income inhabitants, because people who can not afford the housing price in the other better living area only can stay here.

Block typology



Program-user



Middle/ low income inhabitants

Residential unit



Mechanic
Self-employed people
Customer service people
Local visitors

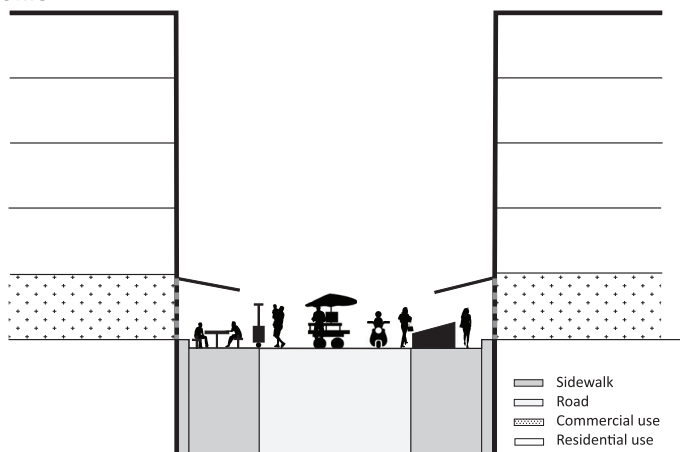
Small business



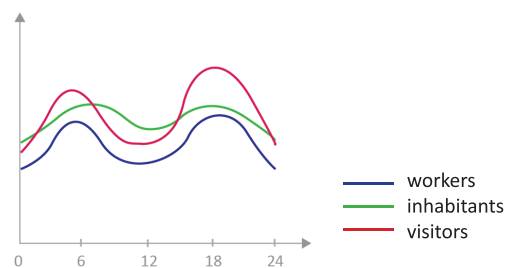
Vendor
Local/ district-wide visitors

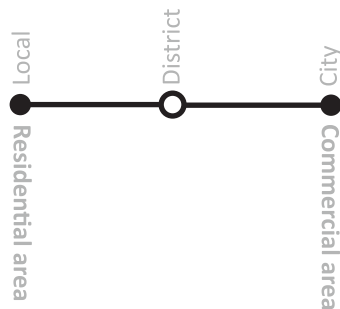
Market

Street profile

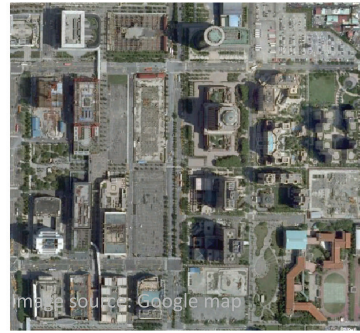


Travel timeline

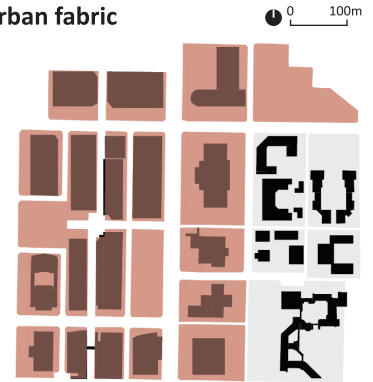




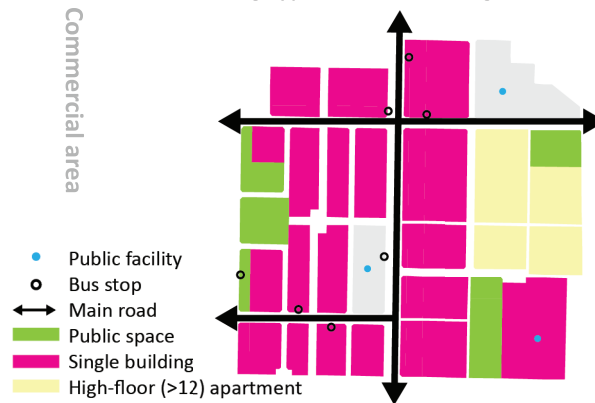
Example



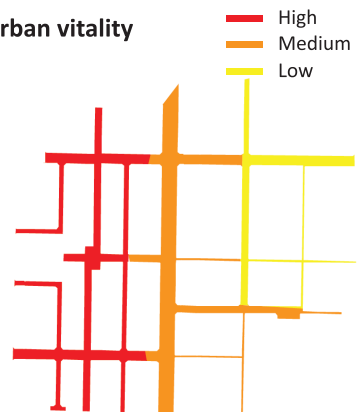
Urban fabric



Building types & surroundings



Urban vitality



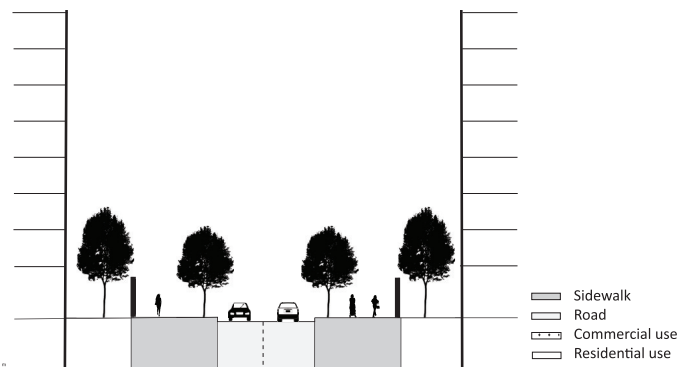
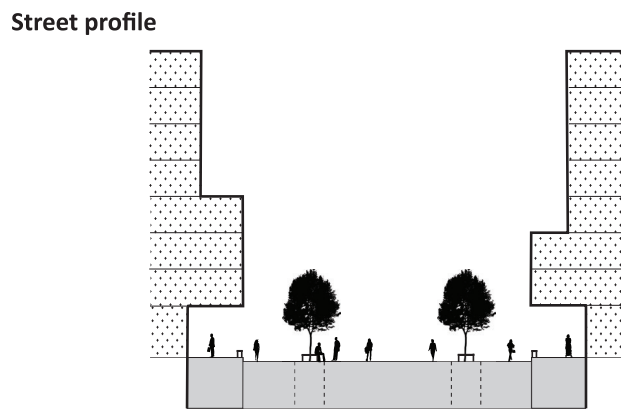
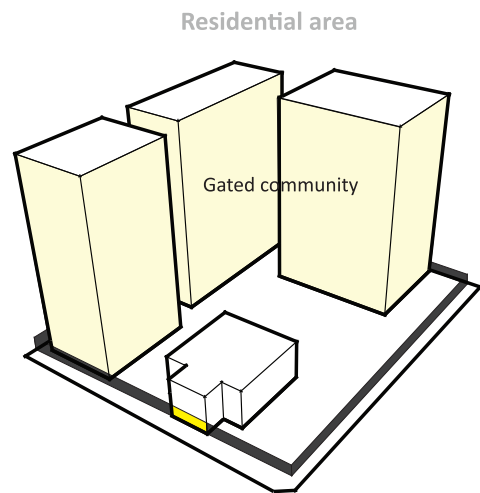
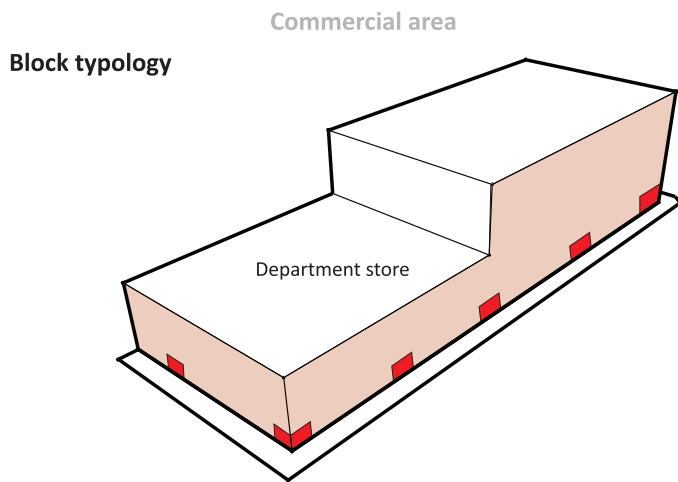
Typology: separation of commerce and residence

After 1980s, the typologies mentioned previously can no longer absorb the fast growth and development/redevelopment pressures that the city faces. Therefore new pattern was proposed not only because the economic trend but also the revolution of urban regulations. The architectural imagery of the “International Style” has been adopted to tackle the development pressures exerted on the city of Taipei. This style, as locally understood, has meant the creation of high-rise, articulated buildings with large set-backs as public plazas. This wholesale adoption of fashionable architecture and planning principles has been further enhanced by the private developers’ advertising of “modern” housing projects they build for sale. (Wang, 1996) Most of the buildings from current urban renewal projects are belong to this typology, and they are gradually and fragmentally replacing current urban fabric with monotonous activity.

In this typology, commercial and residential functions are much separate, so two phenomenon to the different land use are discussed separately. One is the commercial land. the newly acquired land is used for large-scale development with monstrous buildings, filled with large business such department stores, theater, head office and so on. Those uses attract city, even country-wide visitors here to shop, to work

and to experience the modern urban life. However, the big urban block and large scale building type can not absorb small business. This typology could has vital atmosphere only when there are enough larger investment in the area to connect the shopping route.

The other is the residential land. Updated regulations were created to encourage higher FAR with lower ground coverage. In this case building codes are the only regulating laws for these developments, do not adequately address larger urban issues beyond the building envelope. There are simply no urban design guidelines to regulate building-to-street relationships concerning to urban vitality. The social and cultural impact these new physical forms have brought onto the city have been greatly underestimated. Social places such as front doors, street corners, back alleys are disappearing as mentioned in the problem statement. The commercial use on the ground floor is hard to happen in this housing product, so the users here is basically the inhabitants. And in some extremely cases that the gated communities are built for the rich people. The building form language tend to be privatized the space often. Thus, areas with high-rise buildings and great set-backs become dead districts easily.



Program-User



Office

White-collar workers



Large business

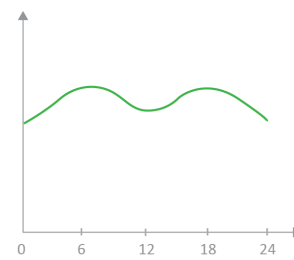
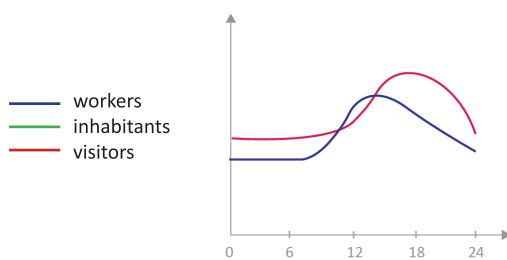
Customer service people
City-wide visitors



Residential unit

High income inhabitants

Travel timeline



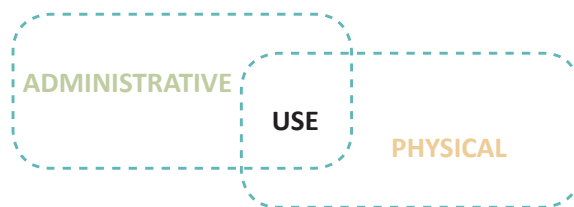
4.2 Analysis of Resettled Tenements

Unit organization

The scales of urban regeneration vary from plot-based, street, block to district. Nevertheless, the process of urban regeneration generates the specific configuration of the urban block. (Hausleitner & Nycolaas, 2014) Based on that, a development unit needs to investigate the existing basic units in urban regeneration process in order to evaluate the possibility to adapt changing needs. There are various levels of scale in unit organization on the physical and administrative aspects. Meanwhile, physical and administrative units are overlapped some parts and form an interdependent system. (See figure 4.2.1)

Physical changes in redevelopments are fundamentally considered as the 're-arrangement of property rights' in form and space. (Günay, 1997), so considering two aspects mentioned above, a development unit include two kinds of unit: control units and physical units. Cadaster, owner, and maintenance belong to control units, while design, construction, and distribution (connection individual user unit with public space) belong to physical units. According to Hausleitner and Nycolaas's conclusion in their work, *"complex unit organization makes physical change more difficult"*, therefore unit organization in regeneration process is essential. The rules for physical change can be implicated in urban design to produce physical units whose form are desirable with regard to urban vitality. Yet, when speaking of regeneration process, we inevitably have to consider control units, which the actors behind have strong interrelation to physical changes.

Figure 4.2.1 The components of a basic unit based on Hausleitner & Nycolaas, 2014.



As Table 4.2.1 shows, the unit organizations in resettled tenement are studied as the categories of cadaster, zoning, block, and construction, which are selected by studying the practical conditions in the resettled tenements.

Cadaster

Cadaster is about the division for ownership. Because the building types for the resettled tenements are all apartment, they all belong to the co-ownership part of condominium. The real condition need to be survey from land office. However, the ownership issue here for urban regeneration is complicated. Not only because the data is not easy to clarified, but also the vulnerable group here need to be dealt with carefully in regeneration process. Tackling this issue is also an important task that the graduation project pursues in the following chapter.

Zoning

In resettle tenements, the zoning categories are residential 2, residential 3, residential 3-1, residential 3-2, residential 4, commercial 1, commercial 3, and their definitions are as below:

Residential 2: Residential areas maintain middle population and building density, and allow small-scale commercial uses but industrial use, in order to maintain a high standard of living environment.

Residential 3: Residential areas maintain higher population and building density, and allow middle-scale commercial uses but industrial use, in order to maintain a middle standard of living environment.

Residential 3-1, 3-2: The area in residential 3 areas but connect to main road, parks, open spaces, squares, rivers, can have higher floor area ratio and wider range of uses.

Residential 4: Residential areas allow minor-polluted light industry and general retail uses, but mass industrial and commercial uses, in order to maintain the basic standards of living environment.

Commercial 1: Commercial areas provide retailing, service industry, entertainment industry, wholesale business, and other related commercial activities for local level.

Commercial 3: Commercial areas provide retailing, service industry, entertainment industry, wholesale business, and other related commercial activities for district level.

The zone of commercial category enables here to have higher density and operate business, which have much return on investment therefore can be activate firstly. Besides, the change for the zoning category is also possible in redevelopment process only if it fits current urban structure. Currently the resettled tenements are proposed as strategic renewal area, where the redevelopment can get twice floor area as to energize the improvement of living environment.

Block (plot)

It is hard to recognize block division clearly with a standard because of the organic urban developments in Taipei. There are many sub-blocks and plots, which make up the blocks. By studying block organization, we can review the permeability related to urban vitality that the block proportion or division has brought about. This can contribute to regeneration by designing how many economic activities could be introduced in the fine-grained blocks. And on those routes between the plots, the cars or pedestrian are the main concerned users. It is another aspect when spatial quality is considered.

Construction

In the resettled tenements, there are mainly two building types as figure 4.2.2 and figure 4.2.3. This element can be concluded as development potential in the physical aspect. Based on whether it is smaller-scalar I-shaped apartments or larger-scalar ring-shaped apartments the studied area, developers can determine to have flexible development phases.

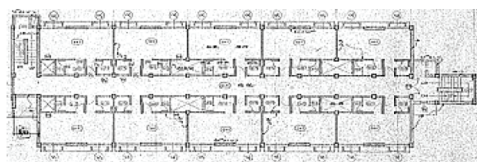


Figure 4.2.2 I-shaped building. Source: A study of the Planning Process and Housing Plan Types in Nan Chi Chang Resettled Tenement Communities of Taipei (Tseng, 2011)

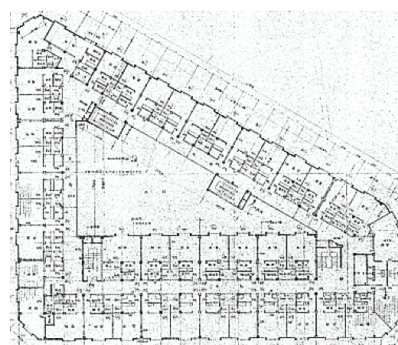






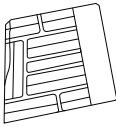
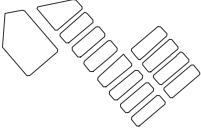

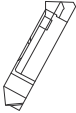
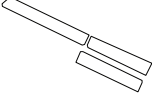
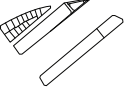

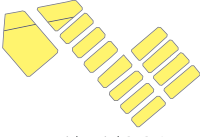

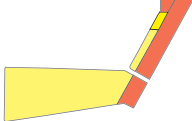
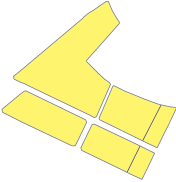

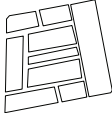
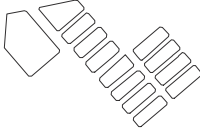


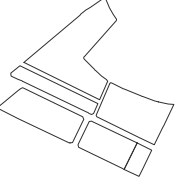
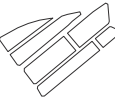
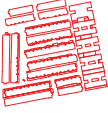
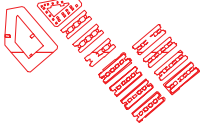
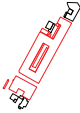
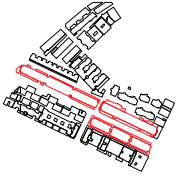
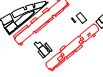


Figure 4.2.3 Ring-shaped building. Source: A study of the Planning Process and Housing Plan Types in Nan Chi Chang Resettled Tenement Communities of Taipei (Tseng, 2011)

<div> <div>site</div> <div>unit</div> </div>	<div>5</div> 	<div>8 12 11</div> 	<div>15</div> 	<div>16</div> 	<div>19</div> 	<div>18</div> 
cadaster						
zoning	 commercial 1	 residential 3, 3-1	 residential 3, commercial 3	 residential 3, 4 commercial 3	 residential 3, 3-2	 residential 3, 3-2
block						
construction						

						
						
						
residential 3, 3-1	residential 3, 3-1	commercial 1 residential 4	commercial 1 residential 3	residential 3, 3-1	residential 3	residential 3
						
						

Table 4.2.1 The unit organization of the resettled tenement.

Positions in Taipei

Transport infrastructure network



Figure 4.2.4 Transport infrastructure network

Historical analysis of the city reveals that the development is from the settlement in the west to the planned boulevards and new district in the east. Thus the road pattern in the west is more organic. Despite a few through-ways pass through central area, the connections to outer city basically rely on the higher level roads on the city border. Most of resettled tenements are sited in the western part in 1960s as the urban development process. Some of resettled tenements are located at main roads, while most of them are located in the neighborhoods.

Public transport



Figure 4.2.5 Public transportation

Currently the public transportation system in the city consists of the bus and metro networks. Both are well-developed and connecting the center with surrounding micro districts and New Taipei City. There are many metro lines are planned, and one of them will pass through several resettled tenements in the western south part. The railway and high speed railway system service the demand traveling to other cities. Besides, there are also a secondary airport in the north and public city bike service around all urban areas.

Main commercial districts

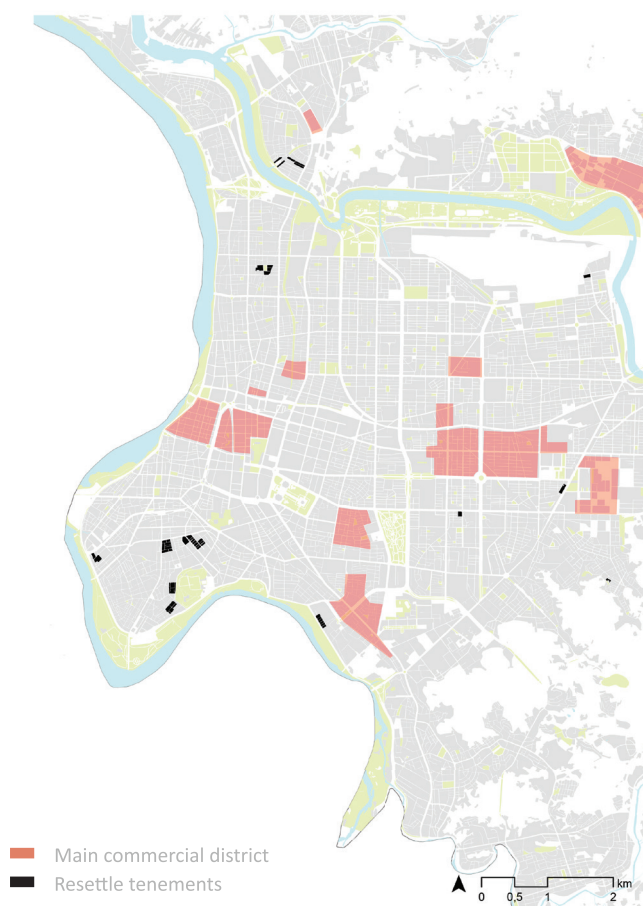


Figure 4.2.6 Commercial district

Each commercial district has its own characteristics based on the historical evolution. Some have been flourished earlier, especially the ones in the western part. They either stay traditional retails or evolve into alternative districts. Some are business districts consist of department stores and small shops developed later. For some area the workers triggered the commercial activities in the industrial park; while the area nearby universities can develop the commercial circles as well. This map helps to diagnose the roles that resettled tenements play in the urban structure.

Important sites and axis



Figure 4.2.7 Important sites and axis
Source: Taipei Unveiled (Garden City, 2013),
adjusted by Author

This map shows the cultural sites, including museums, cultural parks, temples, and historical buildings. They help to enrich the urban life and encourage cultural activities around them. So further the cultural axes were formed. Besides, it has been a long time that the government tries to propose the new development by closing the secondary airport. Because the high speed railway and the future airport metro line connect to the first international airport, the demand on this airport is decreasing. This map helps to diagnose from the city scale whether these important sites can be beneficial to the regeneration of resettled tenements.

Potential for urban regeneration

There are 22 sites of the resettled tenements located in different districts in Taipei. The previous analysis for urban structure and form in Taipei enable to define the potential for urban regeneration in resettled tenements. Their collective building form and historical background make their redevelopments can be dealt with similar solutions. However, their locations can represent different positions which can generate different kinds of vitality in Taipei. The classification for redeveloped potential has three levels based on the reasons as follows:

High potential: 5, 8, 11, 12, 15, 16, and 19

One factor is the blocks are along main roads, the other necessary factors are they are nearby important sites or metro stations. Furthermore, the current commercial category in zoning is also considered because it is much related to the developed density. Their locations provide much dynamic to change either soft or hard forms.

Medium potential: 1, 2, 3, 4, 6, and 7

The blocks are nearby important sites, metro stations, or public facilities such as parks. Although the secondary airport area has the potential to be developed, the plan is currently too vague to be considered.

Low potential: 9, 10, 13, 14, 17, 20, 21, and 22

The blocks are located in the city edge, or next to the hard border- infrastructure. These locations are less dynamic, and they are lack of stimulation to be invested.

From the study of unit organization, it gives a view to consider developments from physical and administrative aspects. When we zoom in to design in block scale, all of the aspects have to be managed together in order to operate the regeneration integrally.

The overview of resettled tenements helps to choose the site for implementation by testing the strategies in the graduation project, in order to apply the rules in the design phase. Finally the design proposals should reflect its position in Taipei and deal with the limitation in unit organization. In the graduation project, the site 11, 12 are chosen for demonstration, and the following chapter is going to explain their opportunities regarding to their physical quality, location and social structure in the community.

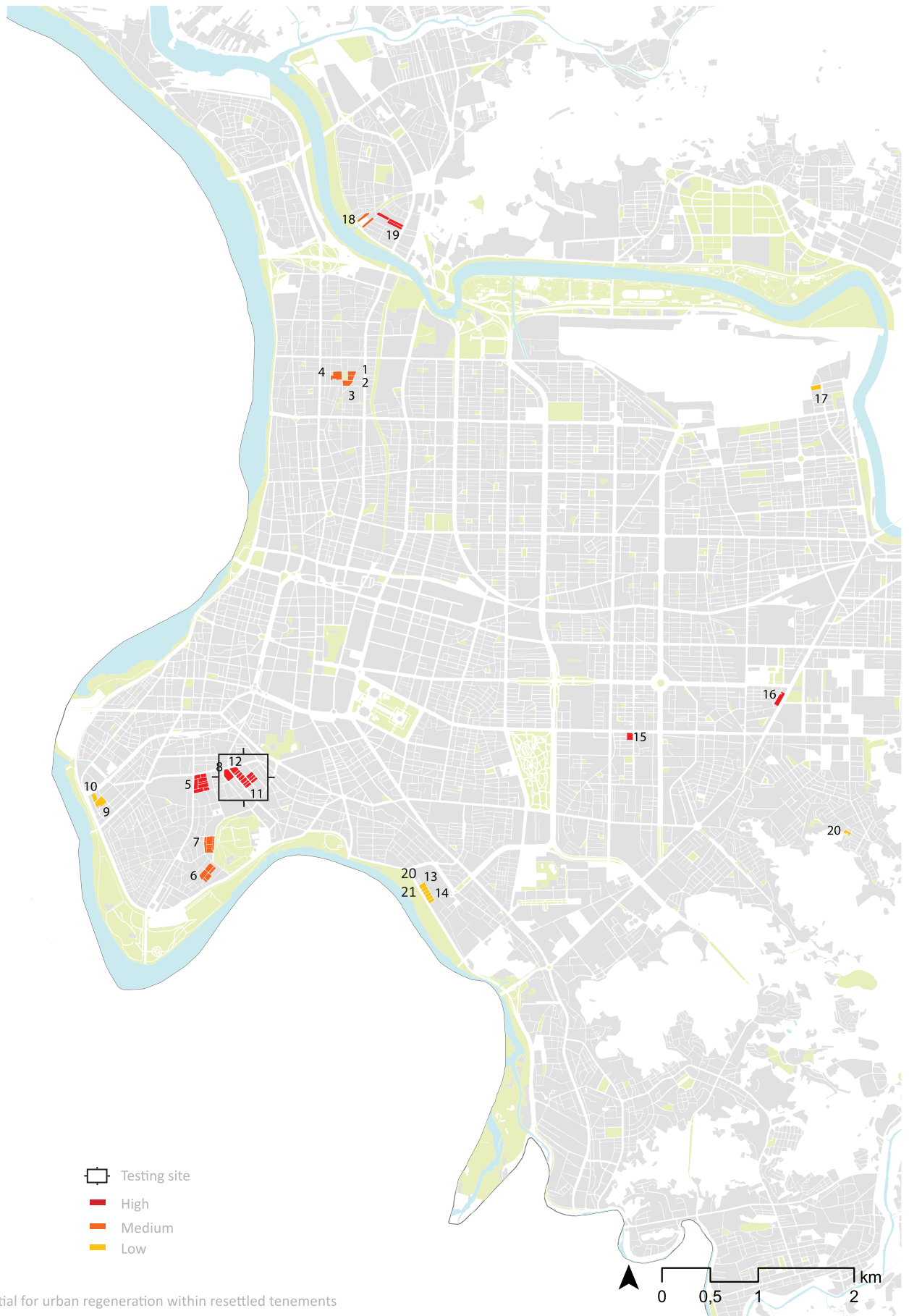


Figure 32. Potential for urban regeneration within resettled tenements

4.3 Analysis of South airport community

South airport community was the first public housing established for resettled tenement in 1964. At that time, the magnificent architecture style represented the modernization in Taipei. After 50 years, the deteriorated physical environment and vulnerable group has become the main features in the community, and it is more urgent and serious among all resettled tenements. Nevertheless, because of the location and existing political and social resources, this area still has opportunities to be improved. In this chapter, the analysis in spatial and social aspects are provided in order to position as an example for urban regeneration in resettled tenements.

Spatial analysis

Location

The community is located in southern Wanhua District in western Taipei. Compared to the nearby district where the characteristics are distinguish, the position of the district is still vague. There are many renewal projects among this area replacing existing urban fabric. Strategies in urban regeneration have to be proposed with the new metro line and city-wide western gateway plan, which tries to revitalize western Taipei.

Environment

There are diverse elements consisted of the community. Highly mixed use has brought urban vitality here however at the same time physical conditions are threaten and needed to be improved. The environment and four physical types on the ground floor are explained in the next page.



Figure 4.3.1. Urban fabric in South airport community



Figure 4.3.2 South Airport community in southern Wanhua area

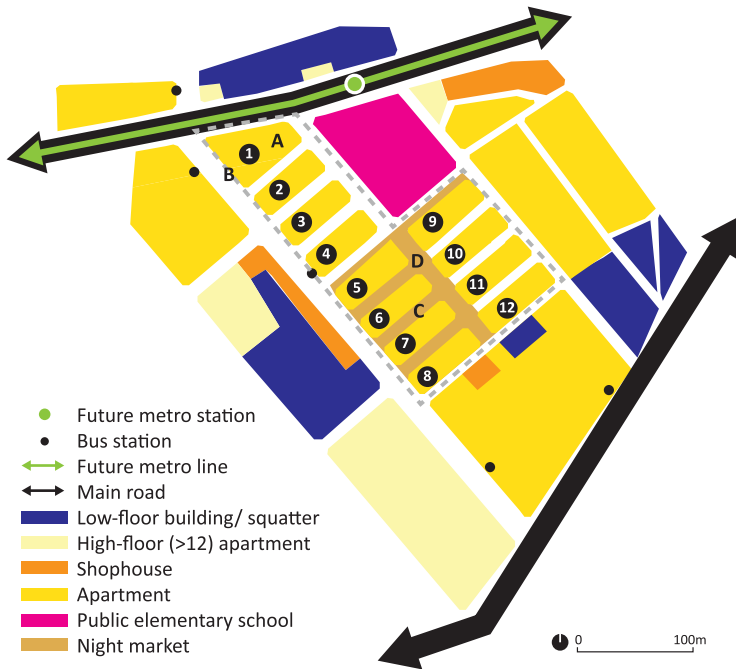


Figure 4.3.3 Building type and environment on site

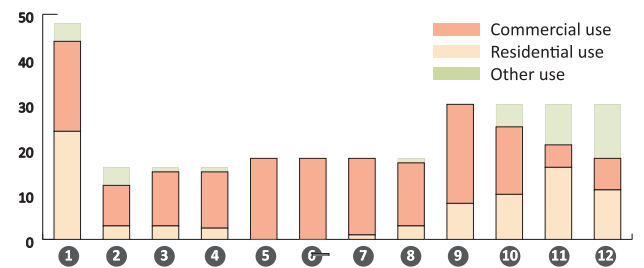


Figure 4.3.4 Numbers of commercial/ residential/ others use on the ground floor of the apartments on site. Source: The organization of Urban Re-s

A. Courtyard

There is a courtyard with some shops only in apartment 1, and it is traffic-free zone. The spaces in front of the shops become the places for interactions in the community.



B. Ground floor along streets

There are sidewalk zone on the ground floor along streets. However the space are occupied with scooters or private property.



C. Ground floor in allies

There is no sidewalk zone in front of entrances in the allies. Therefore all users share the narrower allies without distinction, which produce more conflicts than type B.



D. Night market

The vendors occupy the sidewalk as the business area, which produce noise and smell to the inhabitants. Visitors and vehicles share the market street where is crowded and dangerous.



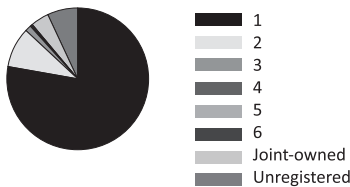


Figure 4.3.5 Units per property owners have. (1528 households to 1249 property owners)
Source: The organization of Urban Re-s

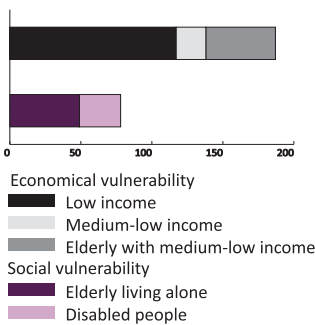


Figure 4.3.6 Number of vulnerable people among 1528 households in the community.
Source: The organization of Urban Re-s

Social analysis

From the demographic statistics, figure 4.3.5 shows the disperse ownership. The community is nearly privatized only a few house units belong to public sectors. Figure 4.3.6 & 4.3.7 show the social weakness in the community. They not only indicate the higher ratio of vulnerable group but also represent this area provides somehow the cheaper housing to rent for the vulnerable tenants. To conclude, 23.5% inhabitants are belong to vulnerable group (social & economic), and among the group, 68% are tenants.

The social structure in South airport community can be concluded into three parts based on the interviews and related studies as figure 4.3.8 shows.

Firstly, the community has already formed a strong network by the head of neighborhood. He set up Lohas office and food/time bank in the community in order to empower the vulnerable group and the work station managed by the sectors- Organization of Urban-Re's and Taipei Urban Redevelopment Center aims to foster dialogue in regeneration process.

Secondly, the vendors in night market is managed by both market self-association and Taipei market administration office. Although the conflicts between vendors and inhabitants are serious, the market still services the convenient life and the main feature for the community.

Thirdly, the issue of urban regeneration has been discussed here for years. It is from the main public opinion that Taipei city government would be the main actor to integrate the community because it is not a easy task to deal with the complex and fragile ownerships and the social feature.

Furthermore, the roles and interests among stakeholders based on the interviews for the community helps with understanding their position in urban regeneration.

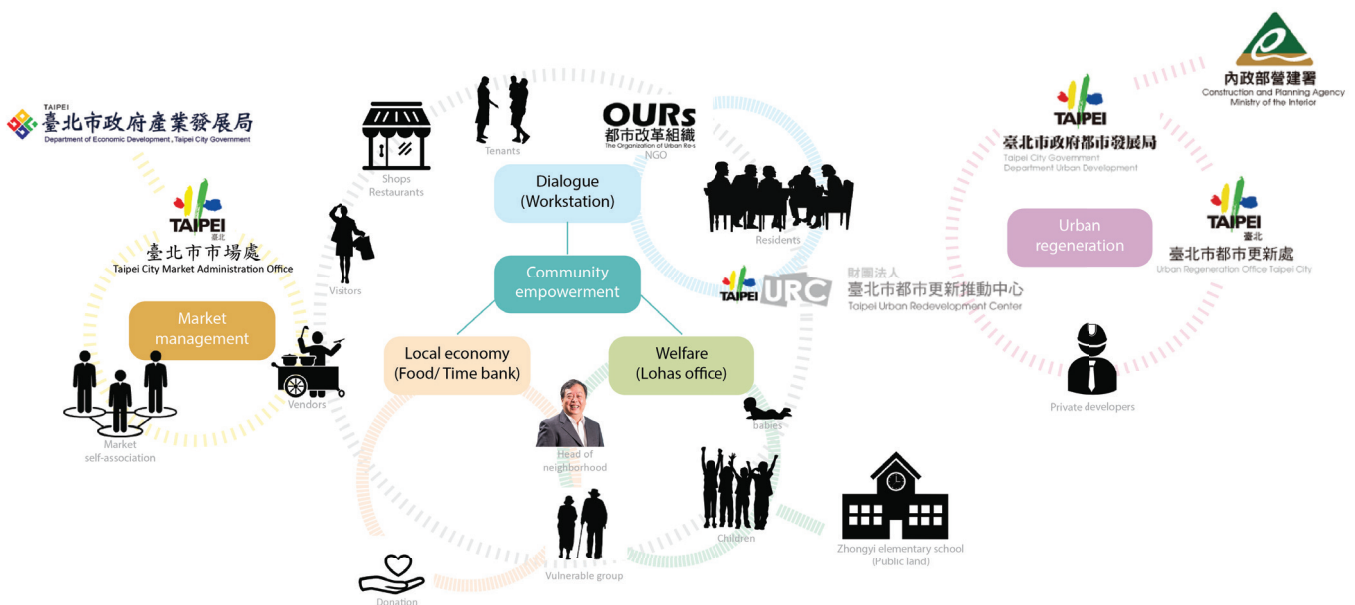


Figure 4.3.8 Social network among the stakeholders in South Airport community

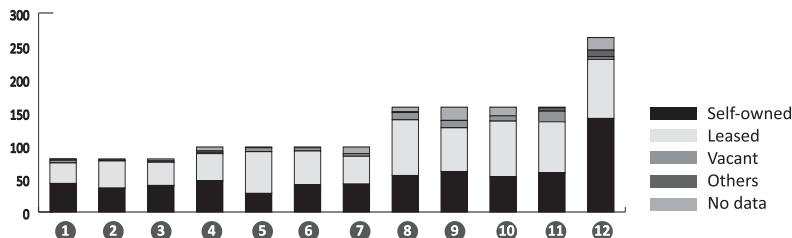
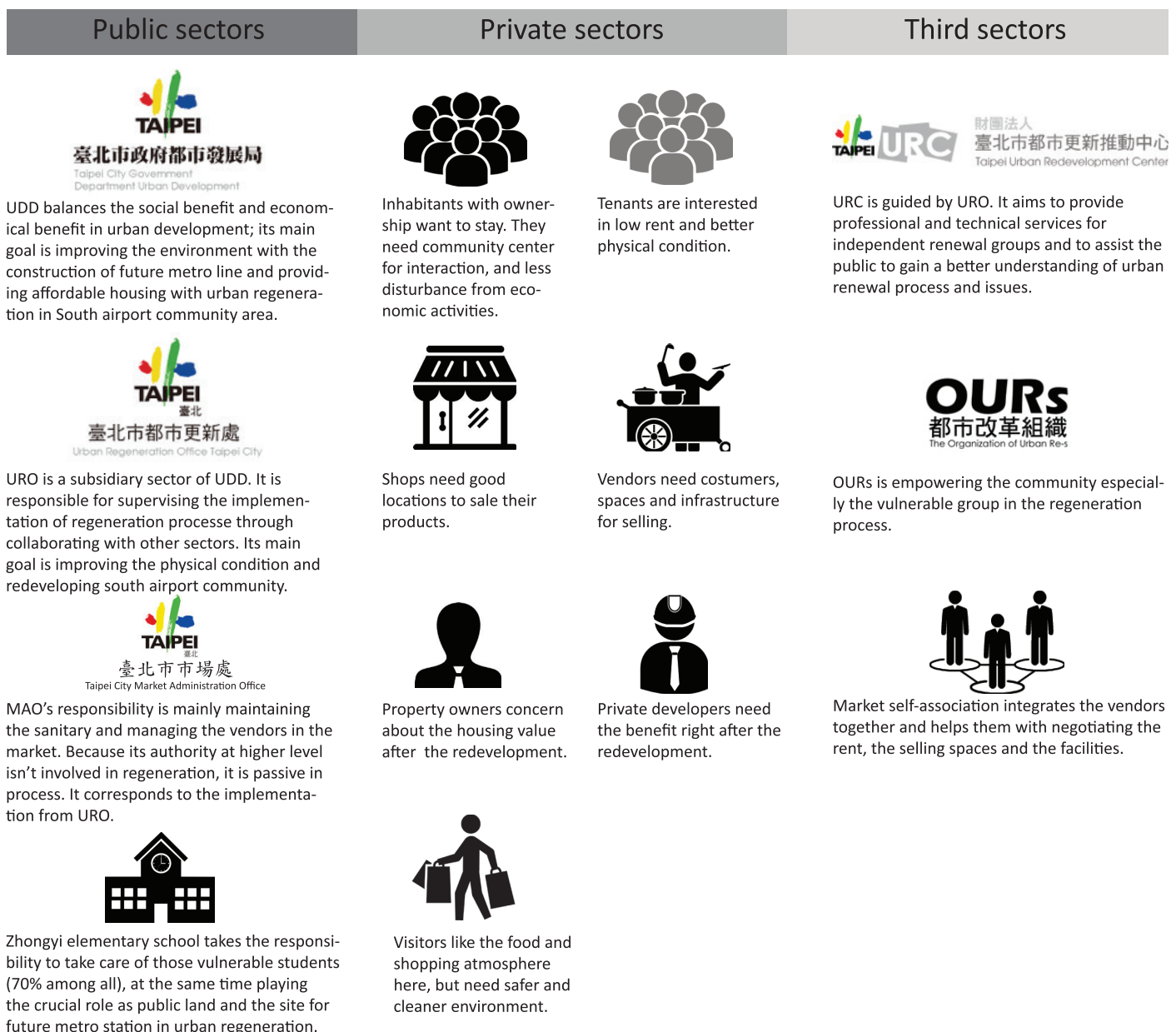


Figure 4.3.7 Number purchase and lease of the apartments on site.

Source: The organization of Urban Re-s

The roles and interests of stakeholders



4.4 Analysis of institutional condition

Stakeholders matrix

After reviewing the spatial and social condition on the site and Taipei, as well as the planning system, the matrix could conclude a view for the current position among the stakeholders in formation on urban life and implementation on urban regeneration. There are 4 zones can be categorized, which represent different characteristic in urban transformations. SWOT (strengths, weaknesses, opportunities, threats) analyses below for the groups in each zone could help with institutional design.

Zone 1: People who are property owners and living in South airport community have the most impact on both urban life and urban regeneration. The school as a public land could be a start in this vulnerable community. It at the same time plays an important role as a public facility.

Zone 2: This group has multiple reasons to have much influence on urban regeneration, but they are sharing the common that they are not living in the community. Again, property ownership is always powerful. The public power also force urban transformations, however in existing institutional system, the definition for urban regeneration is still too narrow to behave as a overall plan for economical or social evolution in the city. The public sectors normally behave passively as supervisors.

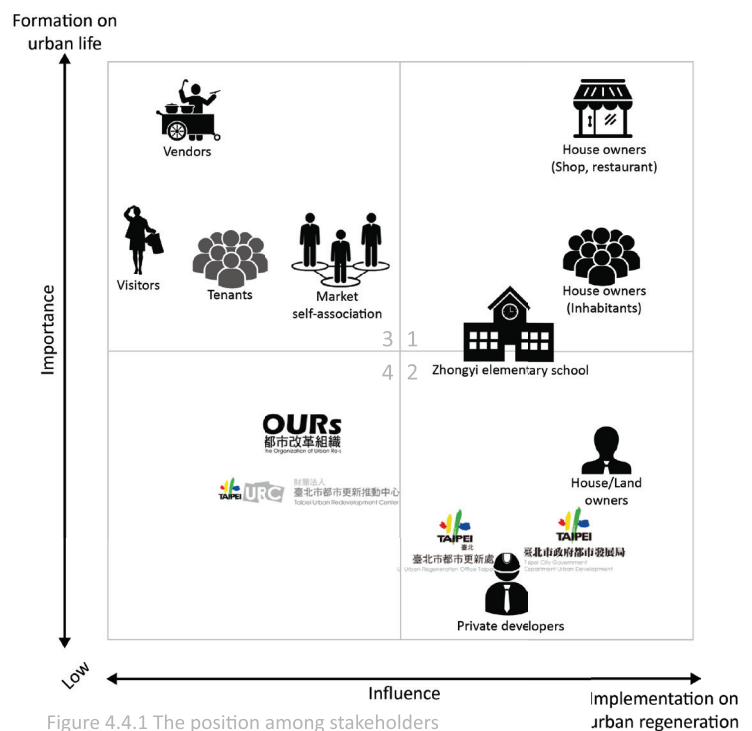


Figure 4.4.1 The position among stakeholders

Table 4.4.1 Urban regeneration planning system in Taiwan, Korea, and Japan. (Orange marks means public interest oriented.)

Where			Who		FA bonus & public interest		
Taipei, Taiwan							
Spatial investigation	Designated renewal area		Renewal unit	Public actors -> Private actors	Urban renewal	FA bonus	
	Non-designated renewal area		Renewal unit	Private actors			
Seoul, Korea							
Social and Spatial investigation	Seoul 100-year structure plan	Designated renewal area	Renewal unit	Land & Housing Corporation (LH)	Redevelopment	20% Public housing	FA bonus
				Public actors			
			Renewal unit	Private actors	Urban management Reconstruction	No FA bonus	
Japan							
Social and Spatial investigation	City plan	Designated renewal area	Renewal unit	Urban Renaissance Agency (UR)	Redevelopment	Economic renaissance	FA bonus
				Public actors			
		Renewal unit	Private actors	Redevelopment	FA bonus		
		Non-designated renewal area	Renewal unit	Private actors	Reconstruction	No FA bonus	

On the other hand, private companies would invest with their fund once the developments have financial return.

Zone 3: This group contributes vibrant and diverse urban life, but in the regeneration process if they can't afford the rent or there is no market place, they have no choice but leave. However, it is injustice that the public just ignore their weak economic position and living right.

Zone 4: Two third sectors in this zone are the mediator between stakeholders. They empower the inhabitants in the community at the same time state their voice to public sectors. Although they don't have direct impact on both side, they are still in a crucial position based on their relation to the community and their profession to negotiate with actors.

Case studies

Urban regeneration planning systems in Korea and Japan are studied and compared with in the graduation project because of the similarity on socio-spatial structure. Based on table 4.4.1, three features are important and worthy learning as follow:

1. Unlike Taiwan, the plan for urban regeneration are instructed and considered in **the framework of city plan on higher institutional hierarchy** in both countries. This mean provides a long-term and overview consideration for urban development.
2. There are **third sectors (LH in Korea and UR in Japan) in charge of redevelopment** on lager scale when the projects are more public interest oriented. They are not only actors collaborating with both public and private sectors in urban regeneration, but also manage public/ affordable housing.
3. There are **clear goals for urban regeneration showed on different scale of interventions**, which are distinguish as redevelopment, reconstruction, and urban management. FA bonus only provided in designated renewal area

where have pointed out in city plan. Other non-spatial methods such as tax/ loan concession or subsidy are implemented in non-designated renewal area as encouragements.

Diagnosis for Taipei

In the institutional and social aspect, the biggest dilemma on urban regeneration in South airport community is to relocate those vulnerable inhabitants in this imbalance power structure. At the same time, if they move to somewhere else, the urban life and social network in the community will also be destroyed. In the previous analysis, we learn that this area also service as "informal" affordable housing due to its lower rent resulted from poor physical environment. Nevertheless, in Taiwan, there are only 10.9% of housing provision for rental under the defective legislative framework, while only 0.08% for public housing. (see table 4.4.2 & figure 4.4.2) Moreover, in Taipei, the ratio of house to income is so high that it is nearly impossible for the inhabitants afford for the basic living requirement.

Therefore, this problem needs to be solved in a larger institutional framework. The solution is not only just for South airport community, but take the site as a starting point to review the planning system in Taipei.

Table 4.4.2 The housing market statistic

Year 2013	Ratio of self-owned housing	Ratio of house price to income
Taiwan	85.3	8.37
Taipei	81.9	15.01

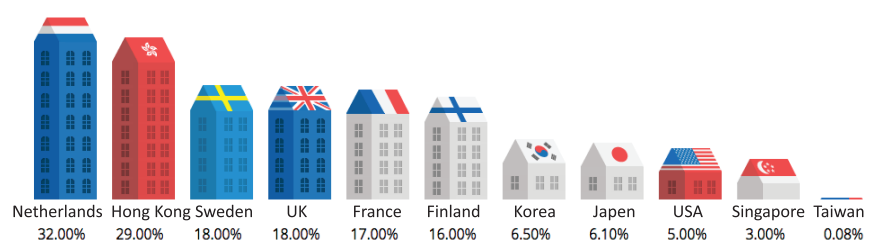


Figure 4.2.2 The ratio of social housing around the world. Source: www.urstaipei.net/housing/





Chapter 5

STRATEGY & THE RULES

Planning strategy/ Design strategy/
The rules as design guidelines/ From units to project

5.1 Planning Strategy

Redefining legal hierarchy for urban regeneration

Here we already have a full overview of regeneration planning system. From the case studies, a logical urban regeneration system needs to be considered in a bigger urban context, and the increase of density in urban regeneration needs to be further clarified by the standard of necessity, priority, and public benefit. Therefore, the first planning strategy is to redefine legal hierarchy for urban regeneration, which further redefine in what timing and situations the floor area bonus are provided. Therefore, a more rational and justice urban development can be realized. In the short term, a structure plan in a district level will guide urban regeneration, and floor area bonus should be provided carefully only in designated renewal area for programs in redevelopments, which would be crucially contribute whole urban system. In the long term, the city plan will further included regeneration plan providing an integrated legal framework.

Collaborating within stakeholders

Public sector holds the responsibility for economic development and social just, and in terms of social commitment, public sector should be a moderator (Sengupta, 2006) balancing public and private interest. Therefore, in the short term not only entrust private companies to implement urban regeneration, a third sector subsidized by public sectors will be involved in as one of actors to pursue public interest. In the long term, when the third sector has a sustainable financial basis, it can be fully responsible for operating redevelopments in degrading neighborhoods and managing affordable housing. Public sector becomes supervisor considering urban regeneration in the bigger framework in a inter-departmental way in city plan.

Urban redevelopment office (URO) has the most potential to become the transitional third sector like Land & Housing Corporation in Korea or Urban Renaissance Agency in Japan, which in charge of managing (providing) affordable housing. While the planning system is evolving, the power among stakeholders can be restructure. In the long-term, stakeholders would collaborate with each other by authorizing more living rights for tenants and caring more about the vulnerable groups in the institutional design.

Encouraging collective urban regeneration

Urban regeneration should consist of four methods in Taipei regarding existing legislation and institutional analysis, and also in regard of mixed use development processes by which mixing takes place (conservation, incremental change or wholesale redevelopment) 1. Renovation: improvement for building structure, facade, and public space. 2.Reconstruction: small-scalar intervention for rebuilding buildings. 3.Redevlopment: large-scalar intervention including rebuilding buildings and improving infrastructure which further change the city socially and economically. 4. Urban management: spatial management coordinated by stakeholders to support the objectives of urban development. Among them, the scale of reconstruction and redevelopment need to be distinguished from renewal unit in the existing legislation, in order to clarify their goals in regeneration process.

Through the four ways which function differently in urban regeneration, diverse stakeholders and objectives are included to have not only gradual revitalization and incremental restructuring of existing urban areas, but also comprehensive redevelopments of larger areas and sites, which help with maintaining or promoting mixed-use conditions in Taipei.

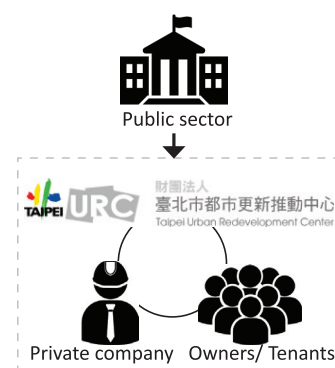


Figure 5.1.1 In long-term strategy, public sector as a supervisor guides the actors in urban regeneration.

Existing

Short-term

Long-term

Structure plan

Structure plan

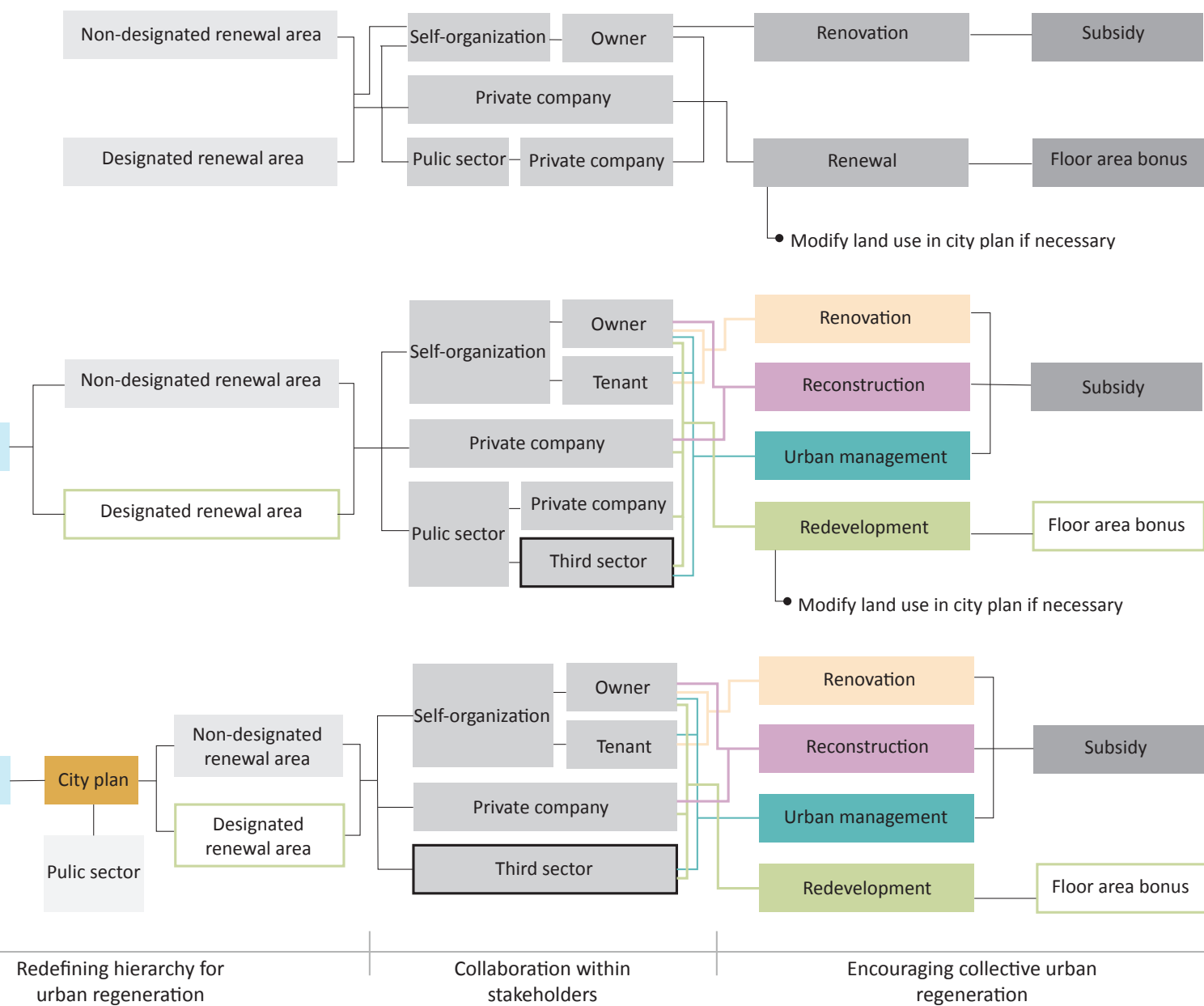


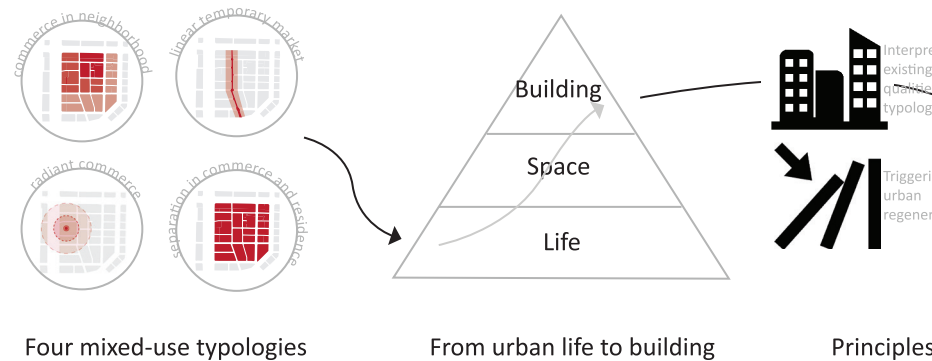
Figure 5.1.2 Planning strategy in transitional planning system for urban regeneration in Taipei.

5.2 Spatial Strategy

Applying mixed-use typologies based on centrality

Lynch (2000) states that mixed-use and diversity are desirable in the abstract, but they cannot be identified or measured until one knows how people perceive differences. From the social and spatial analysis in previous chapter, there are four typologies concluded as typical mixed-use pattern in Taipei. formulations of mixed-use development are insufficient in terms of urban design alone. It also comprises non-design features such as the urban experience, the nature of uses, definitions of public and private, conflict and security. Jan Gehl (1971) stated in his book that *“First life, then spaces, then buildings- the other way around never work.”* In this graduation project urban life in Taipei have been categorized by those typologies, so by observing their space and building types, it gives us a approach to translate what the urban form should be designed to achieve the desired urban life.

In regeneration process, it is very possible to contribute social change by reforming different space from the existing ones. Urban vitality could also be restructured. In order to have better living environment, it is crucial to clarify urban structure before applying those typologies in urban regeneration. Existing urban pattern, functions, and activities are all objective elements that help to diagnose, while potential developments are also need to be considered. For example, the locations of South airport community is nearby public transportation, so it could have higher density to afford more economic activities and diversity. Once the centrality for urban vitality and the urban structure are defined, it is more rational to apply the typologies. This conclusion does not simply connote the classical discrepancy between top-down and bottom-up design perspectives for managing urban complexity. Despite the very top-down processes implemented from large to small scale-frames, a very flexible basis is still provided for various applications of local form-compositions while ensuring higher coherency generated at the



level of collective urban fabric. (Çalışkan, 2013)

Formulating rules for typologies

How to make the rules in this strategy follow the principles below:

1. Considering current regulations of Taipei
2. Interpreting existing spatial qualities for each mixed-use typologies
3. Physical indicators from theoretical study of urban vitality
4. Triggering urban regeneration

The rules which contribute to better mixed use environment attempt to inspire new potential in urban regeneration rather than to dictate the limitations. It uses the philosophy that rules can be applied in order to make something possible, to give direction, to steer, rather than to restrict. Therefore, the strategy of typology application in this graduation project is not actually any form of plan, it is instead a dynamic system for rules that not only explain what is not allowed, but also what is possible and even desirable.

Thus, the transformation is guided by a clear system of rules which encourage the actors to develop the property beyond the minimum requirements under the proposed planning system mentioned in the planning strategy. Besides, they are distinguished by multi-scalar intervention from redevelopment, reconstruction, renovation, to urban management. The rules for smaller interventions could always be applied in bigger interventions. The result could be a very diverse urban field with both large urban developments as well as small architectural transformations. The transition from private to public, from quiet to busy and from low to high densities, is thus an ongoing process.

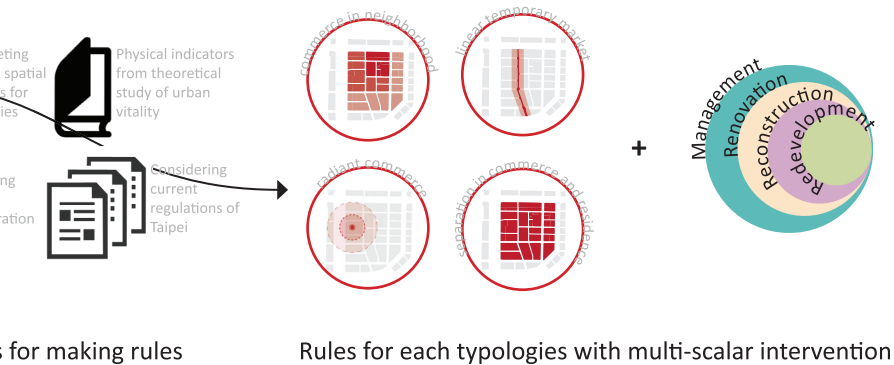


Figure 5.2.1 Process of rule formulation

5.3 The Rules as Design Guidelines

In this chapter, the rules are formulated from each mixed-use typologies with theoretical backup, and at the same time are referred to which method it could be applied in urban regeneration. They are further elaborated by four subjects.

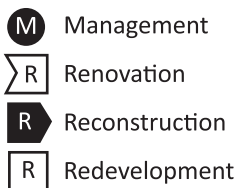


Figure 5.3.1 Icons of urban regeneration elements



Figure 5.3.2 Rules for all typology and its diagram



Figure 5.3.3 Possible providers of affordable housing in urban regeneration

Street pattern	Building setting
- block-proportion	- entrance
Plot layout	- ground coverage
- variety of plat size	- floor area ratio
- plot division	- frontality
- plot type	- confrontation

Figure 5.3.4 Physical indicators concluded from theoretical study

Centrality for the location of typologies

The rules in this subject translate the features from the four typologies, which based on their spatial analysis in the Taipei context. Mixed use needs to be understood in terms of its location (central, inner or suburban/edge). (Rowley, 1996) Those typologies at the same time represent the density on their pattern, which could be also understood as the centrality for their capacity of economic activities.

Floor area bonus for public interests

Bonus rules invite the actor to increase the quality and be rewarded with quantity, optimizing the value of real estate. It works as a catalyst for dynamic developments. (Reuser, 2014)

Rules for all typology: Provision of affordable housing with programs

From stakeholders and institutional analysis, in order to relocate those low-income tenants, the need for affordable housing is obvious. In New York and Seoul, developments acquires floor area bonus by providing affordable housing. So not only the existing floor area bonus rules, but the bonus for promoting affordable housing can also stimulate investment. In the view point of transportation costs and patterns in promoting affordability, transit-oriented development for affordable housing is applied to avoid the hidden transportation costs arising from housing location for low-income group living in affordable housing. (Pollard, 2010)

In addition to the previous bonus rule as a way to solve social problem in urban regeneration for all typologies, other bonus rules are explained in the applied typology.

Physical indicators for generating urban vitality

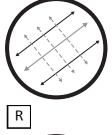
For Rowley (1996) mixed use needs to be understood in many ways including its grain, density and permeability; setting or scale (building, block, street or neighborhood), which are very related to those conclusive physical indicators when speaking of urban vitality in chapter 3- theoretical framework. Therefore for those mixed-use typology, rules in terms of urban vitality are effective to guarantee a vibrant built environment.

Solution principles for mixed use conflicts

Among the typologies, there are still conflicts resulted from mixed use in each ones. As Lynch (2000) states that too much diversity leads to an abundance of offerings resulting in urban stress. According to Grant (2002) mixed land use involves increasing the diversity of uses within the fabric by encouraging a compatible mix, which generates synergies and does not create conflict. Thus, even though some of their physical features can be recognized to formulate rules as design guidelines based on the physical indicators in theoretical backup, there are still more needed to be generated as to solve these spatial conflicts from the site observation.

Commerce in the neighborhood

Centrality for the location of typologies



1. Located along lower-level streets

The density is medium consisted of low-floor apartments, and they are along instead the main streets mostly along lower-level streets.



2. More economic activities based on centrality

It is resulted from one of the typical features of this typology that the economic activities are amount-hierarchical from edge to inner block. For mixed-use development, it also contribute to reducing the conflicts by clarifying the centrality in the neighborhood.

Floor area bonus for public interests



3. Contribution of open space plus parking

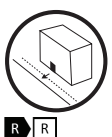
From the spatial analysis we know there are limited space for parking and because of the informal extension of the buildings, there are nearly no space for people to stop and meet. Although the existing regulation already provides for floor area bonus from constructing open space, it should be narrow down to especially this typology and specifically refer to parks or square rather than linear sidewalk.

Physical indicators for generating urban vitality



4. Short plot

From theoretical study, plot division is a key for generating urban vitality. As Jane Jacobs stated that for a lively urban corner to emerge, the length of blocks must be kept as short as possible. As the same concept, short plot could also provide permeability for various routes.



5. Commercial entrances face to streets

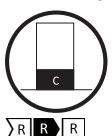
The location of the entrance supports its commercial use. (Hausleitner, 2009) It can attract more customers by facing public space directly.



6. Front yard for sidewalks

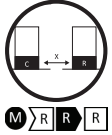
Leaving space on ground floor along the side of streets for activities make sense of space and build better relation with streets and buildings. (Çalışkan, 2013)

Solution principles for mixed use conflicts



7. Shops on ground-floor zone

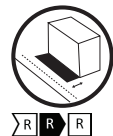
Too much economic synergy in residential buildings may disturbs inhabitants. Setting commercial spaces only on ground floors could maintain certain level urban vitality and form "street ballets" illustrated from Jane Jacobs (1961).



8. Fixed use unless approved

Following the rule that the economic activities are gradient from edge to inner block, the change of use from residential to commercial in some

area is not allowed based on the centrality from site observation. This is top-down planned from the city structure but still can be bottom-up regulated from community association to maintain the physical quality.



9. Front yard for sidewalks

From the analysis we know the informal extension on the ground floor is a serious problem that narrow the space for public. Applying this rule can leaving the space into sidewalks which plays a vital role in city life. It could be further divided into zones with different use such as frontage zone, pedestrian through zone, street furniture/ curb zone, and enhancement/ buffer zone.

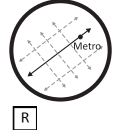


10. Human-oriented traffic

From the analysis, to make the streets in neighborhood more friendly to pedestrian, pavements or curb extensions visually (sometimes physically) narrow the roadway, creating safer and shorter crossings for pedestrians to shop and to meet. Curb extensions have multiple applications ranging from traffic calming to bus bulbs and mid-block crossings.

Radiant commerce

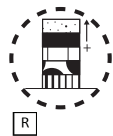
Centrality for the location of typologies



1. Located along main streets and near public transit stations

The density is high and they are along main streets. Transit-oriented development could be applied for this typology therefore the area should be public transit stations nearby.

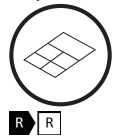
Floor area bonus for public interests



2. Separation construction and installation

Buildings with flexible floor plan by separating construction and installations could ensure the functions are flexible and exchangeable within the outline of the building. Taking the reference from Korea, this bonus rule can densify the city can so that the openness allows. (Reuser, 2014) Through pointing out typical locations and activities this typology has, more investment can be invited to foster the economic activities.

Physical indicators for generating urban vitality



3. Plot size diversity

The redevelopments in this typology could keep the diversity of plot size in order to encourage various scale of use and promote diversity happen in the blocks. (Jacob, 1961)

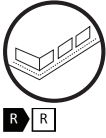


4. High entrance frequency

This rule is to support vibrant atmosphere and the frequency is according to the centrality of urban vitality. Entrances as transitions from private

to public also in a way to enhance the condition for facilities. (Hausleitner, 2009)

5. Street wall continuity



Toward the streets, buildings should stand directly on the edge of their parcels. This endows the street with a continuous streetscape. This could also contribute future explicit plans effecting the consistent subdivision of green zones or other public space. (Lehenerer, 2009)

Solution principles for mixed use conflicts

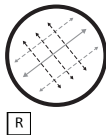


6. Flexible parking hour

From the analysis of users' travel timeline, a rule of flexible parking hour could contribute the flexibility of uses for pedestrian space and the parking space.

Linear temporary market

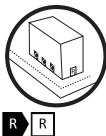
Centrality for the location of typologies



1. Crossed by main streets

It is easier for shipping if temporary markets crossed by main streets. Because the linear street it occupied is usually full of vendors and visitors, shipping entered directly from the main street is more efficient and could release traffic jam.

Physical indicators for generating urban vitality



2. Entrances on different sides

As the previous analysis shows that the vendors in market and the shops on ground floors have dependence relationship by using public spaces and have created ambiguous ambiance, so housing settlement of commercial entrances on the side with the market could help mutual business.



3. Width of sidewalk

The limited spaces for pedestrian in markets could be improved by recommending minimum width of sidewalk (Frontality (Çalışkan, 2013), in terms of urban vitality) based on the street width and the scale of market. Designs that create a high-quality experience at street level will enhance the economic strength of commercial districts and the quality of life of neighborhoods. (Rogers, Halstead, Gardner & Carlson, 2010)

Solution principles for mixed use conflicts



4. Entrances on different sides

In order to solve the conflicts, separating commercial entrance from residential entrance can keep inhabitants from the disturbance of economic activity. (Hausleitner, 2009)



5. Classified vendors

There are many kinds of vendors selling different goods such as warm foods, clothing, and sundry

goods. Based on observations, classifying them and ordering them in the market could be easier to manage their externalities from business.

6. Vendors gathering



Based on observations, the market could be easier to be managed if gathering the vendors which need water, gas and seats. The space could also has alternative use when the market is not there.

7. Traffic-free hours

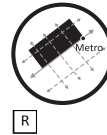


In spatial analysis we know time is also one of specular aspects to mixed-use in this typology. Managing Streets in different time zones provide users from vehicles to pedestrian is a solution to reduce conflicts in crowded areas.

Separation of commerce and residence

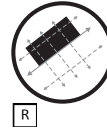
(C for Commercial district, R for Residential district)

Centrality for the location of typologies



C-1. Located vastly along main streets and near public transit stations

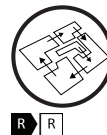
This typology services as city-wide commercial district attracting large amount of visitors, so transit-oriented development is necessary.



R-1. Located vastly along main streets

Based on observations, this typology has higher density of housing accommodation therefore located along main streets provides better accessibility.

Physical indicators for generating urban vitality



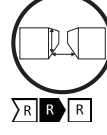
C-2.& R-2. Lot assembly for certain size

When developing this large-scalar typology, a building lot that has been assembled from a number of individual lots is more valuable than the sum of its individual parts. (Lehenerer, 2009) Economies of scale from developments with certain size by joint development secure financial return.



C-3: Shop frontage continuity

Ground-floor zones should form strips of commercial uses that go beyond the dimensions of the single block to extend economical synergy. (Lehenerer, 2009)



C-4.& R-3. Human scale design

To develop at appropriate, transit-supporting densities without overwhelming the surrounding context, the human-scaled building help with achieving a good neighborhood fit. (Lehenerer, 2009)

Solution principles for mixed use conflicts



R-4. Open space for the public

Building lay out should leave public space opened to the public in order to solve the problem of privatization observed from existing condition.



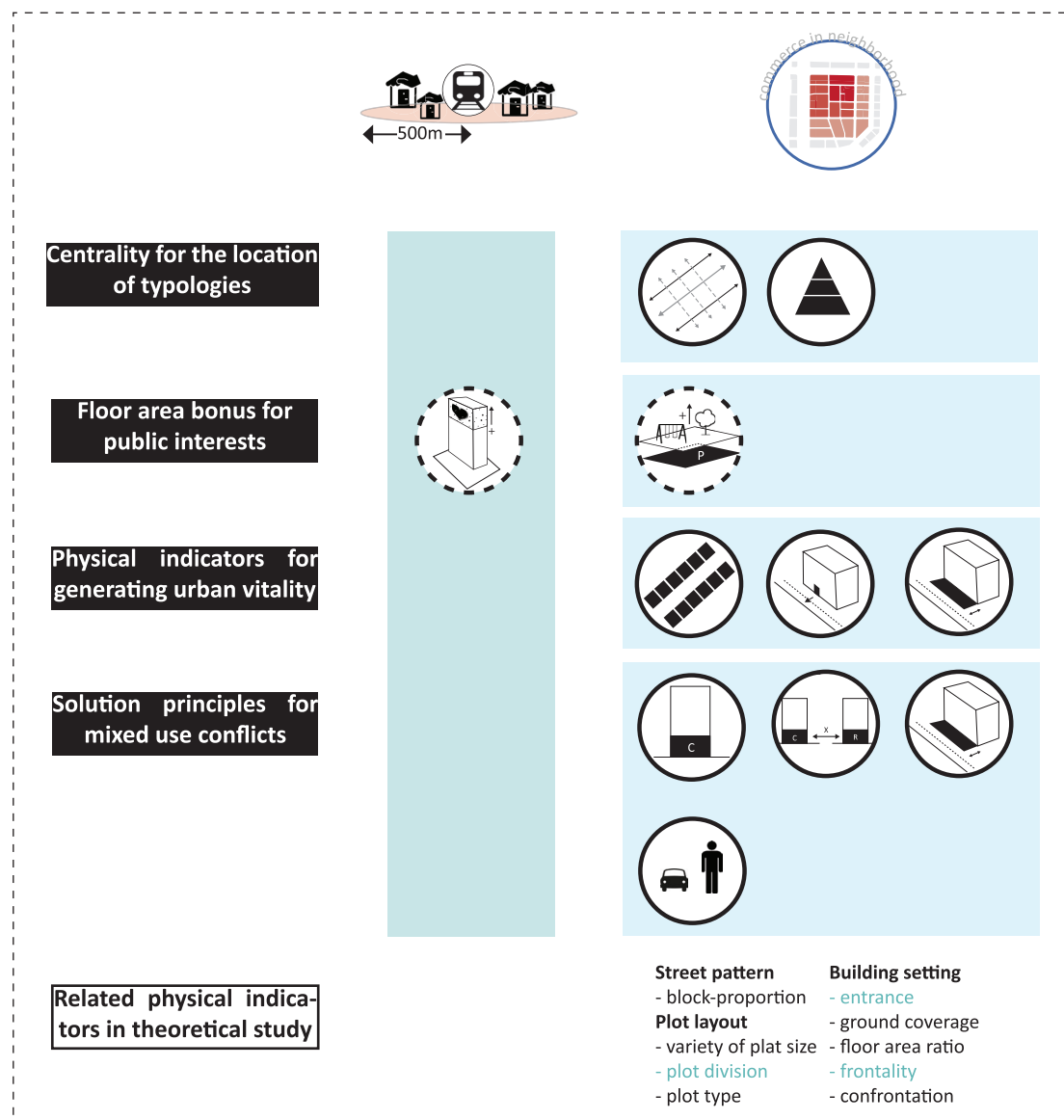
R-5. The between-block mixed-use development

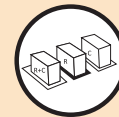
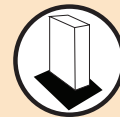
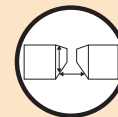
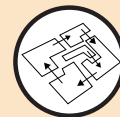
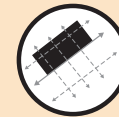
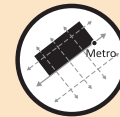
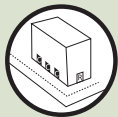
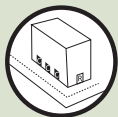
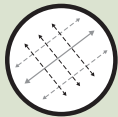
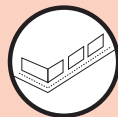
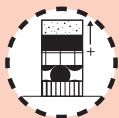
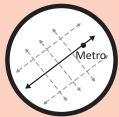
In order to avoid dead urban life, mixed use is still encouraged in a way in the district. From Lai's study (2006), there is still latent demand for more mixed settings in Taipei though it land use is highly mixed already. Half of those residing in mixed-use buildings prefer business not in their building, but in the neighborhood. The between-block mixed-use is the best preference for the interviewee considering both accessibility and amenities.



Photo credit: The organization of Urban Re-s

Rules overview





- Street pattern**
- block-proportion
- Plot layout**
- variety of plat size
 - plot division
 - plot type

- Building setting**
- entrance
 - ground coverage
 - floor area ratio
 - frontality
 - confrontation

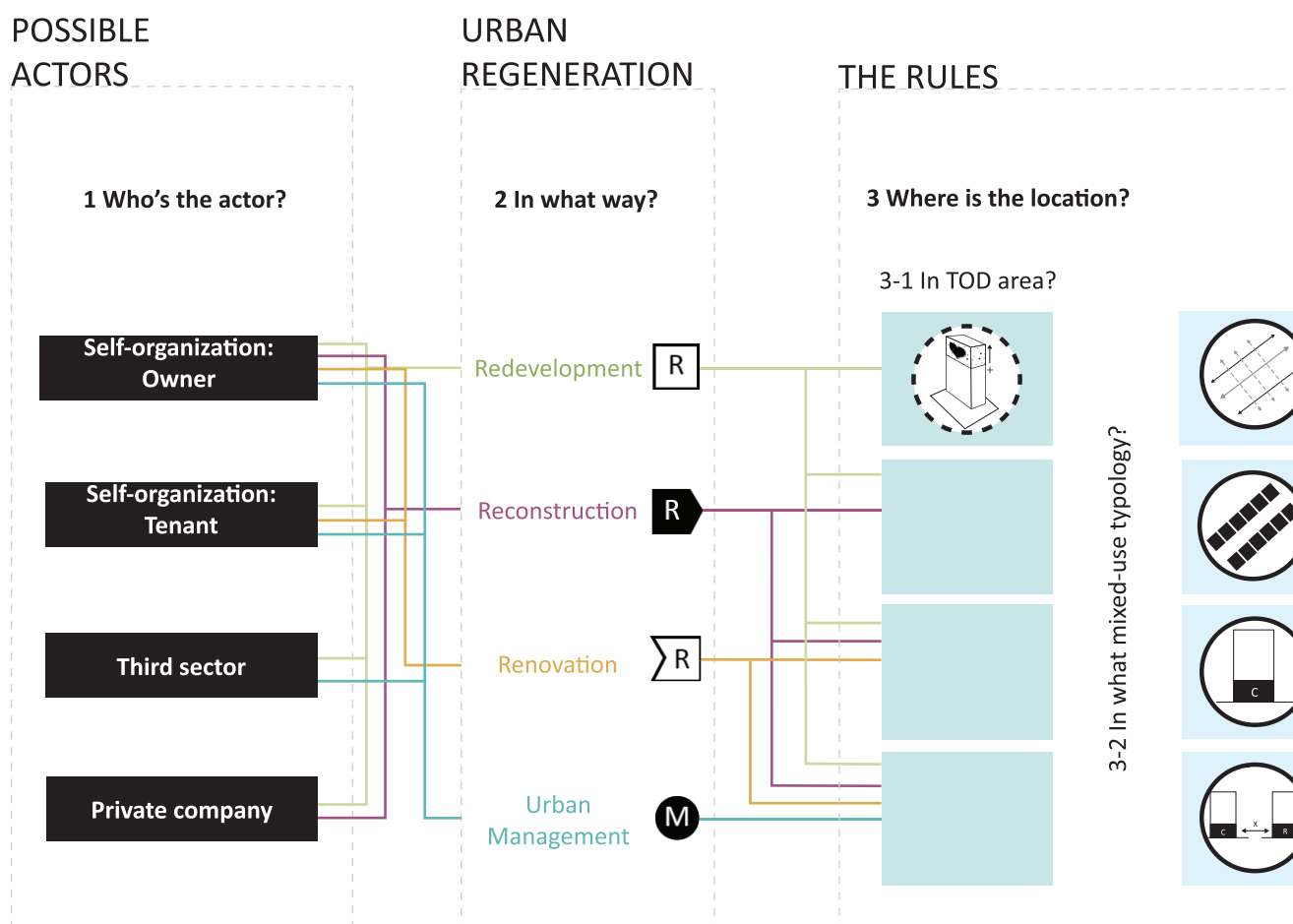
- Street pattern**
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- Street pattern**
- block-proportion
- Plot layout**
- variety of plat size
 - plot division
 - plot type

- Building setting**
- entrance
 - ground coverage
 - floor area ratio
 - frontality
 - confrontation

How to use the rules



5.4 From units to project

The reason that current urban regeneration system mainly focuses on the renewal units is the government tries to enhance feasibility in both economic and social aspect, in order to trigger redevelopments especially by private sectors. However, current spatial formation in renewal plans are neglecting the value of urban design and not contributing to vital urban life in Taipei, while the urgent vulnerable communities such as resettled tenements are lack of enough stimulation to activate urban regeneration.

An integrated project in strategic planning is needed, in order to toward urban efficiency and productivity with the counter-measures required to deal with the social and spatial inequities. The project contains renewal areas in the local scale can have various determinant factors due to the heterogeneity of the interests involved in. It is planned, designed and implemented in determined phases with different stakeholders who have clear goals and objectives; all the processes are under Taipei City Government's supervision. The city offers a set of guidelines that demonstrate the opportunities and possibilities for urban regeneration. The city also helps institute local redevelopment committees comprised of residents, developers, professionals, and public officials, with regeneration options and public participation. Actors are encouraged to develop whatever areas of land they can acquire-as long as they work together with other groups. But still a comprehensive regulatory framework can minimize the potential destruction of urban life forms by free market forces.

Hence, "From units to integrated projects" is the main conclusion for the strategies, which take a project as key for urban synergy, and alley the potential regeneration units guided by the rules. It can achieve valid regeneration within stakeholders, and coherent urban pattern fits in proposed city structure that redefine urban vitality in Taipei.

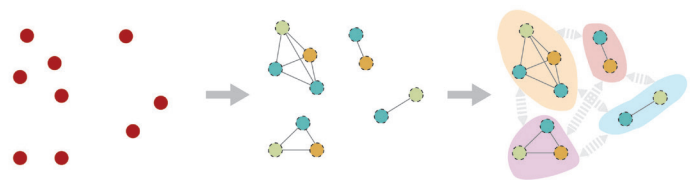


Figure 5.4.1 From units to integrated projects



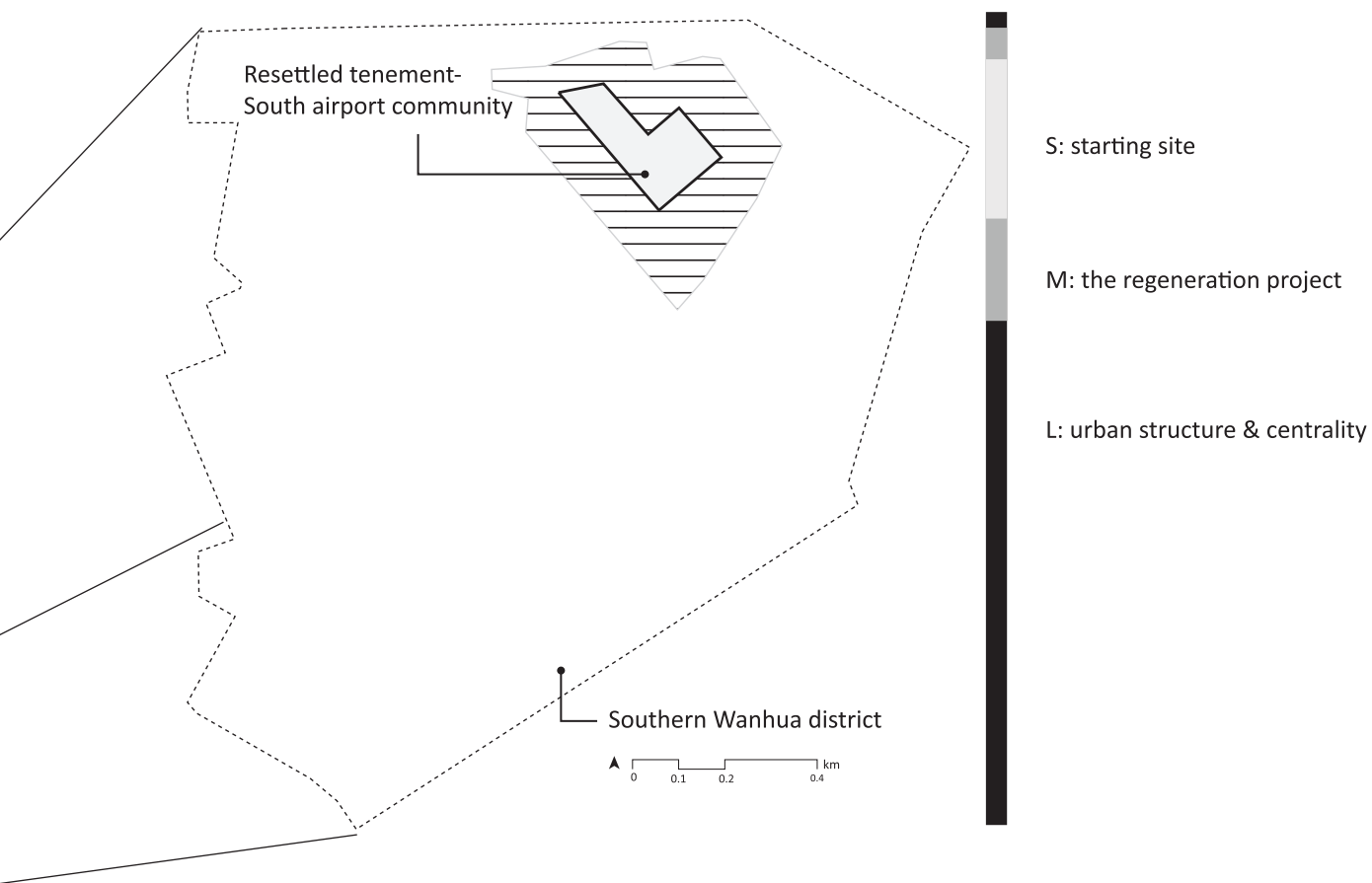


Figure 5.4.2 Implementation of the graduation project

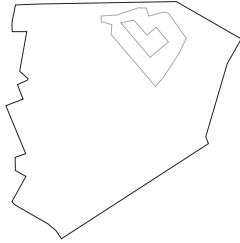


Chapter 6

REGENERATION PROJECT

Urban structure of southern Wnahua/
Implementation on South-airport community/
Developing mode/ Applying the rules





L: urban structure & centrality

6.1 Urban Structure of Southern Wanhua

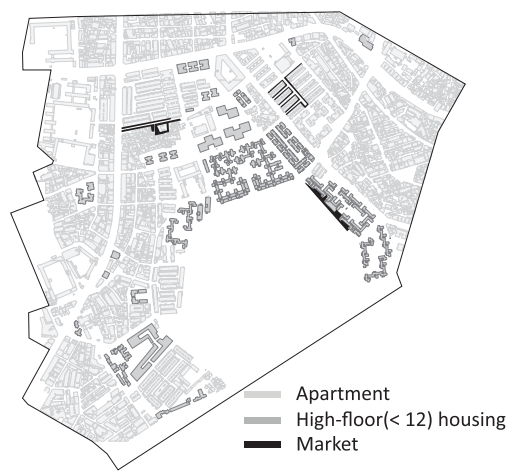
Current condition

To activate the regeneration project, South airport community needs to be reviewed the position in the larger scale. Therefore, understanding for southern Wanhua district in spatial way is important. Now the district is mainly residential area with small bussiness in the apartments, and due to its early development and socio-economic postion of inhabitants. There area many designated renewal areas provide potential urban synergy. But still some blocks are being rebuilding and replacing the existing urban pattern.

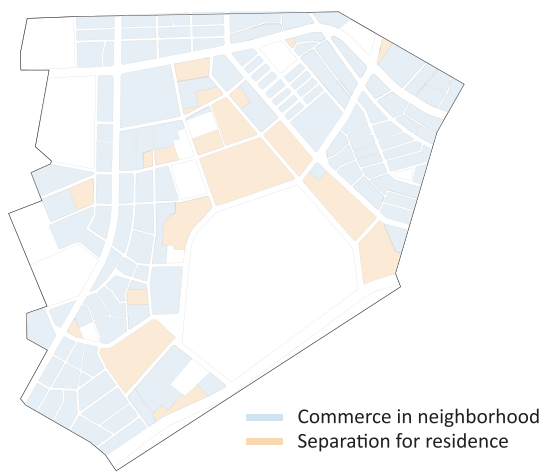
The locations of designated renewal area, public transportaiotn and public land give a view for restructuring the district and forming the centrality. , Again, the future metro line will give many opportunities to revitalize the district.



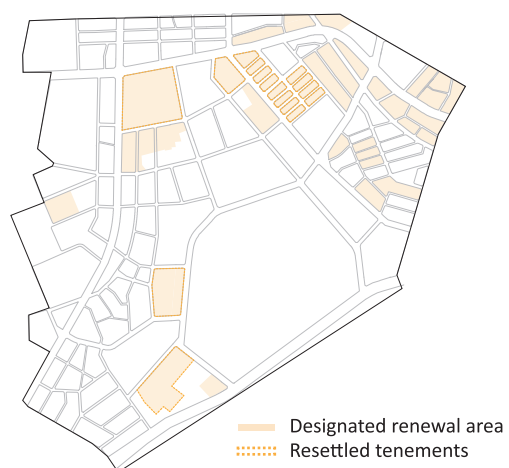
Figure 6.1.1 Southern Wanhua district. Image source: google earth (2013)



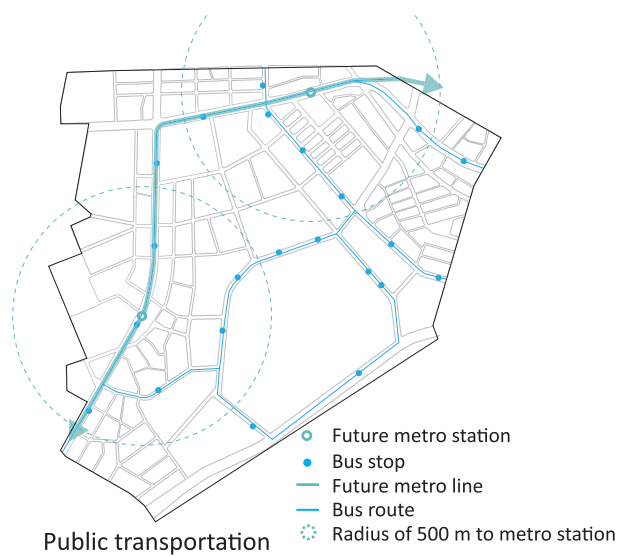
Urban fabric



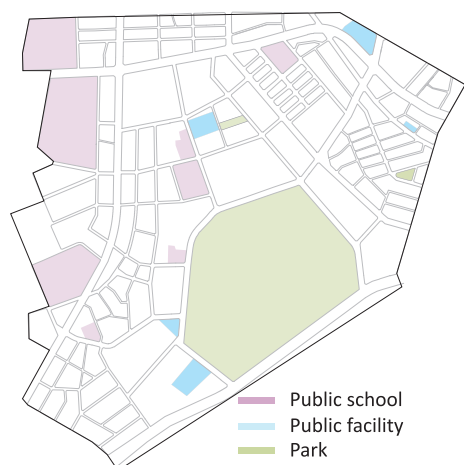
Division of mixed-use typology



Designate renewal area



Public transportation



Public land



Figure 6.1.2 Spatial analysis of current condition

Centrality and division of mixed-use typology

From the analysis of current condition, the centrality of urban vitality is clarified. Besides, applying the rules also forms the concept of typology division. The conclusion could be concluded as one of the elements in structure plan of the district, which would guide urban regeneration project.

According to the concept of typology division, a proposed typology division is planned for future urban regeneration. In the typology analysis, the users in typology separation for commerce are higher income people and the programs are tended to have metropolitan impact. Therefore, to preserve the strong social structure in the community, typology separation for commerce would be excluded. In order to form the living environment fit urban structure, stakeholders could take actions from either urban management, renovation, reconstruction or redevelopments and follow the rules of the matched typologies. Some of blocks are belong to designated renewal area have bigger opportunities for larger-scalar intervention. Therefore their block proportions are adjusted based on the unit organization and the rules.

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Concept of typology division

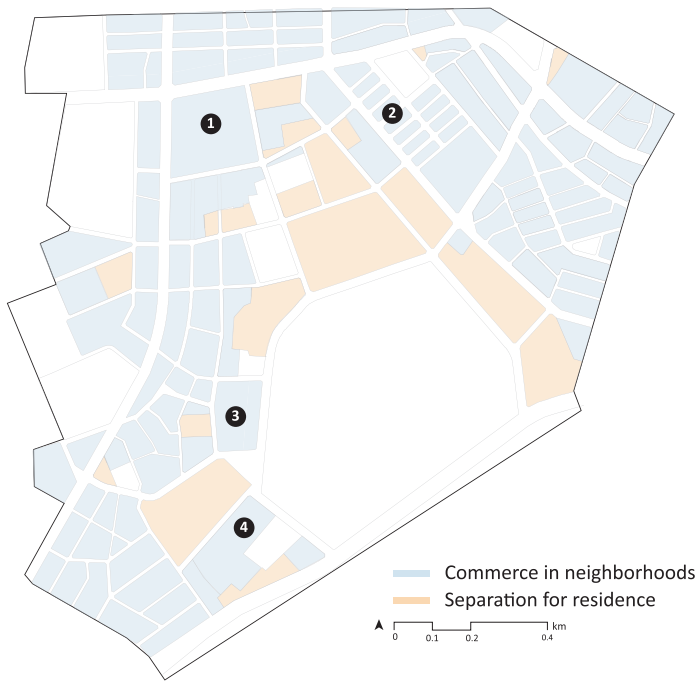
The division follows the rules in the district-level. The concept of typology division not only gives a vision to urban form, but also give a suggestion on zoning plan referred to density (floor area and ground coverage).

Centrality of urban vitality

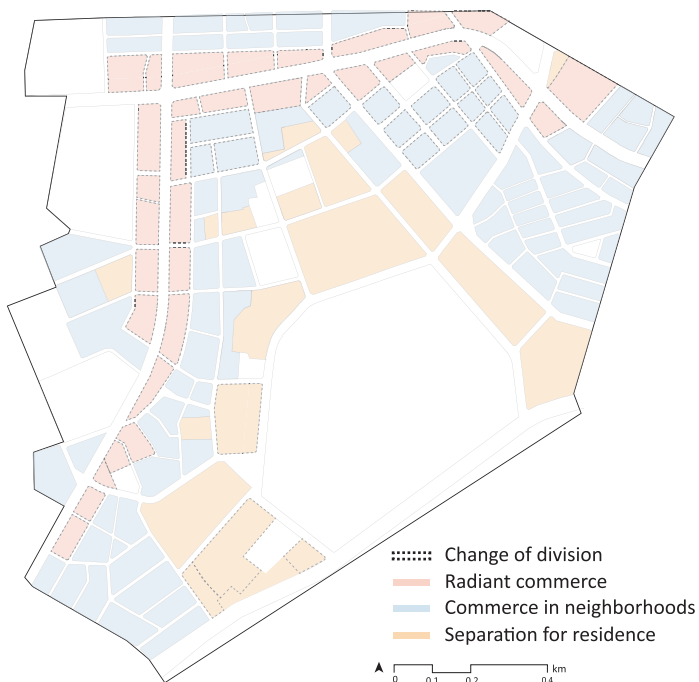
The centrality is basically reflected on the road level and public transportation. Areas in radius of 500 m from metro stations could accommodate more and various activities.

Current condition

An overview of spatial condition from previous pages provides a framework for centrality of urban vitality and typology division.



Current division of mixed-use typology



Proposed division of mixed-use typology

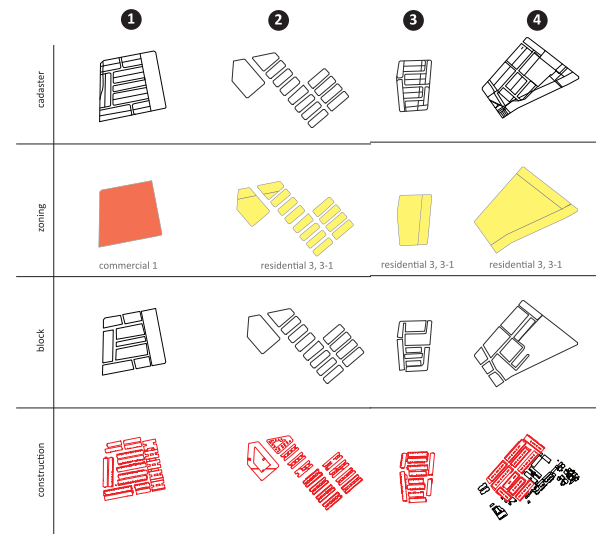


Figure 6.1.3 Unit organization of resettled tenement in southern Wanhua

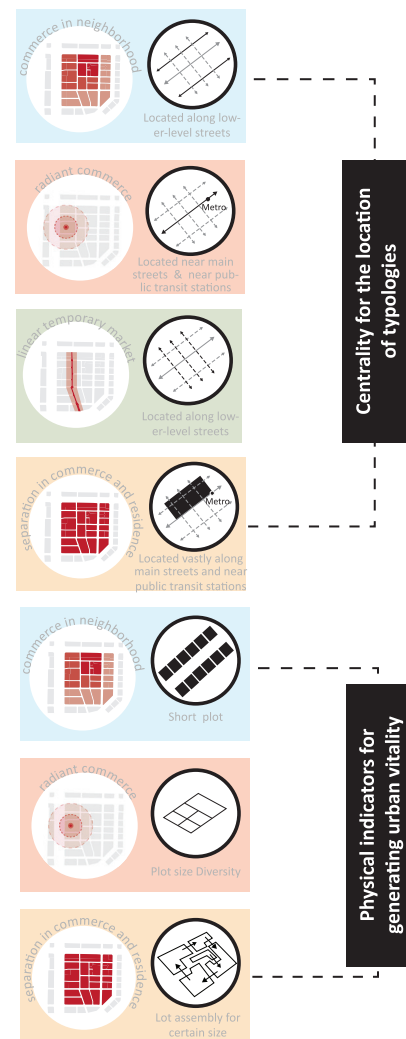
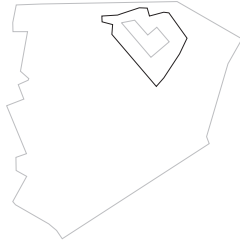


Figure 6.1.4 The rules applied in the district-level

6.2 Implementation on South airport community

Current condition

From the site visiting, current conditions of physical quality and street vitality are recorded. There are high density of small business in the community that have negative effect on the living environment especially the night market. The vendors in the night market not only take over the water and electricity from the apartments, but also the noise, smell and waste from them threaten the environment. Many of inhabitants living in upper floors could not even open their windows everyday. Other than this, the small units and informal attachments make the apartment no longer suitable for living nowadays. Main opinions to the physical environment from the public including many studies, Taipei city government, the inhabitants all agree that the main approach for here is to redevelop the apartment. But still, how to redistribute economic activities here and relocate the inhabitants are important to be dealt with.



M: the regeneration project

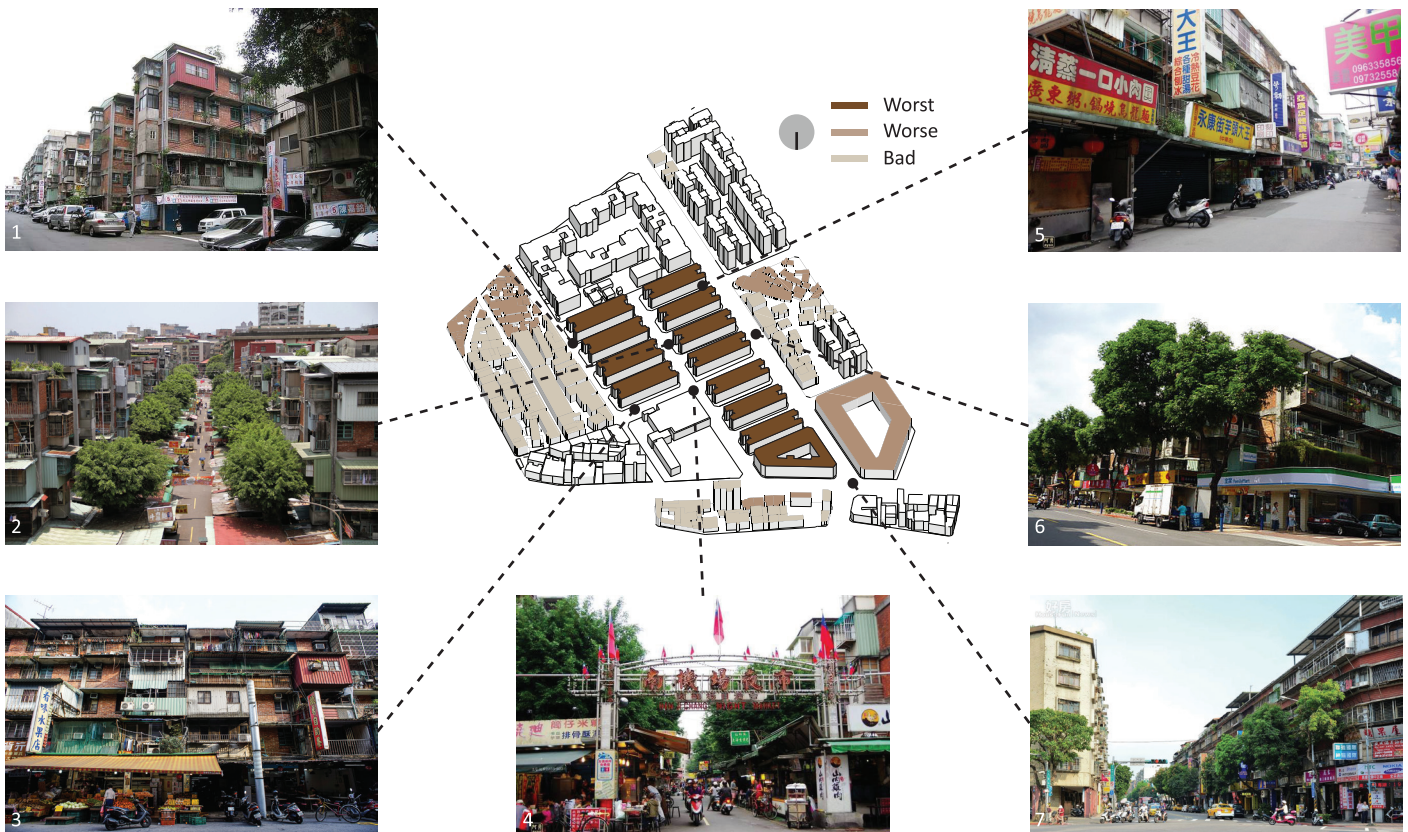


Figure 6.2.1 Physical condition and street vitality of South airport community
image source:

1. ftdesign.tw/
2. sshnanjichang.blogspot.nl/p/blog-page.html
3. www.flickr.com
4. blog.udn.com/litto/23378418
5. blog.udn.com/litto/23378418
6. news.housefun.com.tw/news/article/162937104006.html
7. tweetybaby.pixnet.net/

From current condition to proposed structure

Proposed street vitality and division of mixed-use typology are considered from the current condition and urban structure of south Wanhua in the larger scale. The blocks along the main street would become the typology radiant commerce, and have higher density. In the typology commerce in neighborhood, the rule applied could guide the amount of economic activities and diversity hierarchically in the neighborhoods. Some of blocks are divided in order to increase the permeability while some of them are merged in order to reduce the opportunity for fostering economic activities. What's more, redeveloping two blocks at a time in South airport community is also efficient in terms of the time cost for negotiation among the households/ property owners.

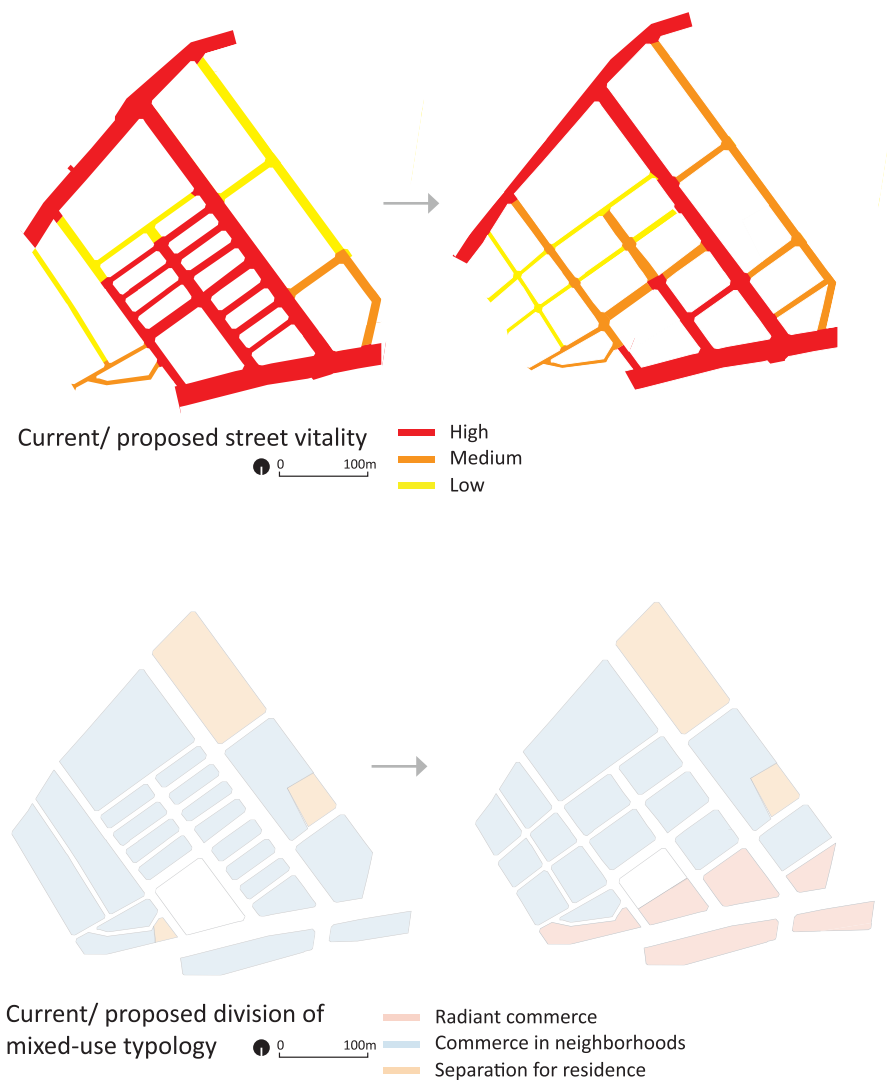


Figure 6.2.2 The rules applied in the neighborhood-level

Flexibility of the design with the rules

Based on the previous social and spatial analyses, there are some requirements in terms of urban structure and determinable programs.

1. Block division keeps the permeability.
2. Transit oriented development with higher density nearby the future metro station.
3. Different levels of density for economic activity based on proposed street vitality.
4. Preserving Zhongyi elementary school for vulnerable students and future students from increased inhabitants after the redevelopment.
5. Relocating the night market but still in the community to maintain the identity.
6. Following the rules of each typology.

These are the crucial element for the urban regeneration project. In this framework, several design proposal could happen because the rules would steer the desirable outcome in many ways. A possible design proposal is offered in the graduation project by applying the rules and meeting stakeholders' interests.

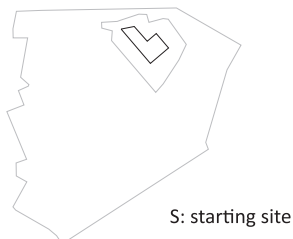


Figure 6.2.2 Physical requirements of South airport community



Possible design proposal of South airport community





6.3 Developing Mode

South airport community as a starting site

South airport community is the first concern and also behaves as a starting site in the regeneration project. Redeveloping the community by the third sector URC (could be firstly guided by Taipei city government) is imperative from the social and spatial analyses. With the construction of new metro station on the public school, it is a opportunity to densify the public land with multi-functional program, while redesigning the school and providing affordable housing and working spaces by URC. This public land serves as a trigger for the regeneration project. On the one hand the inhabitants in the community could be relocated here to further operate the developments. On the other hand the shifting role of URC from a commissioner to a executor could be realized on process. In short, the implementation here play an important role to advance urban regeneration spatially and institutionally.

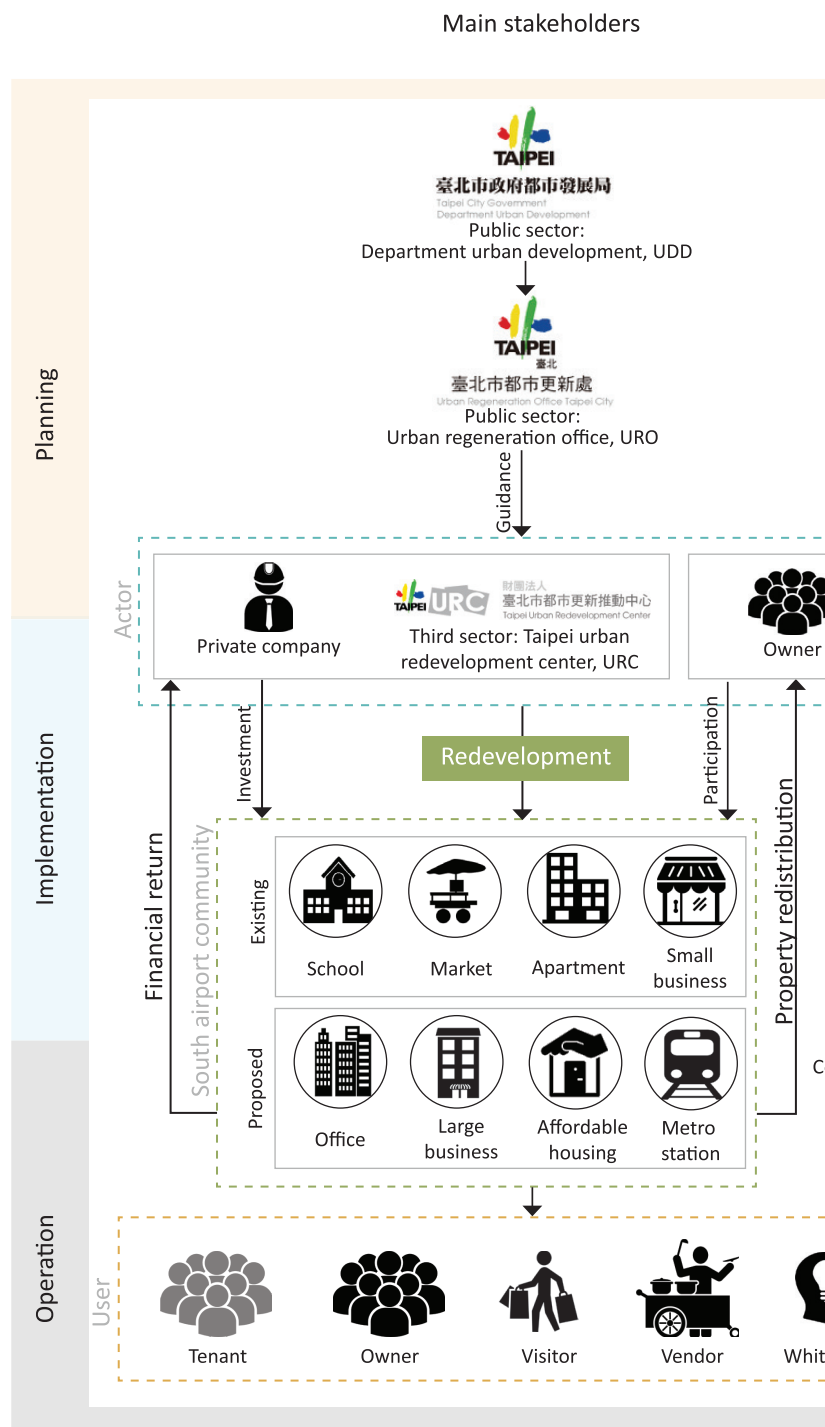
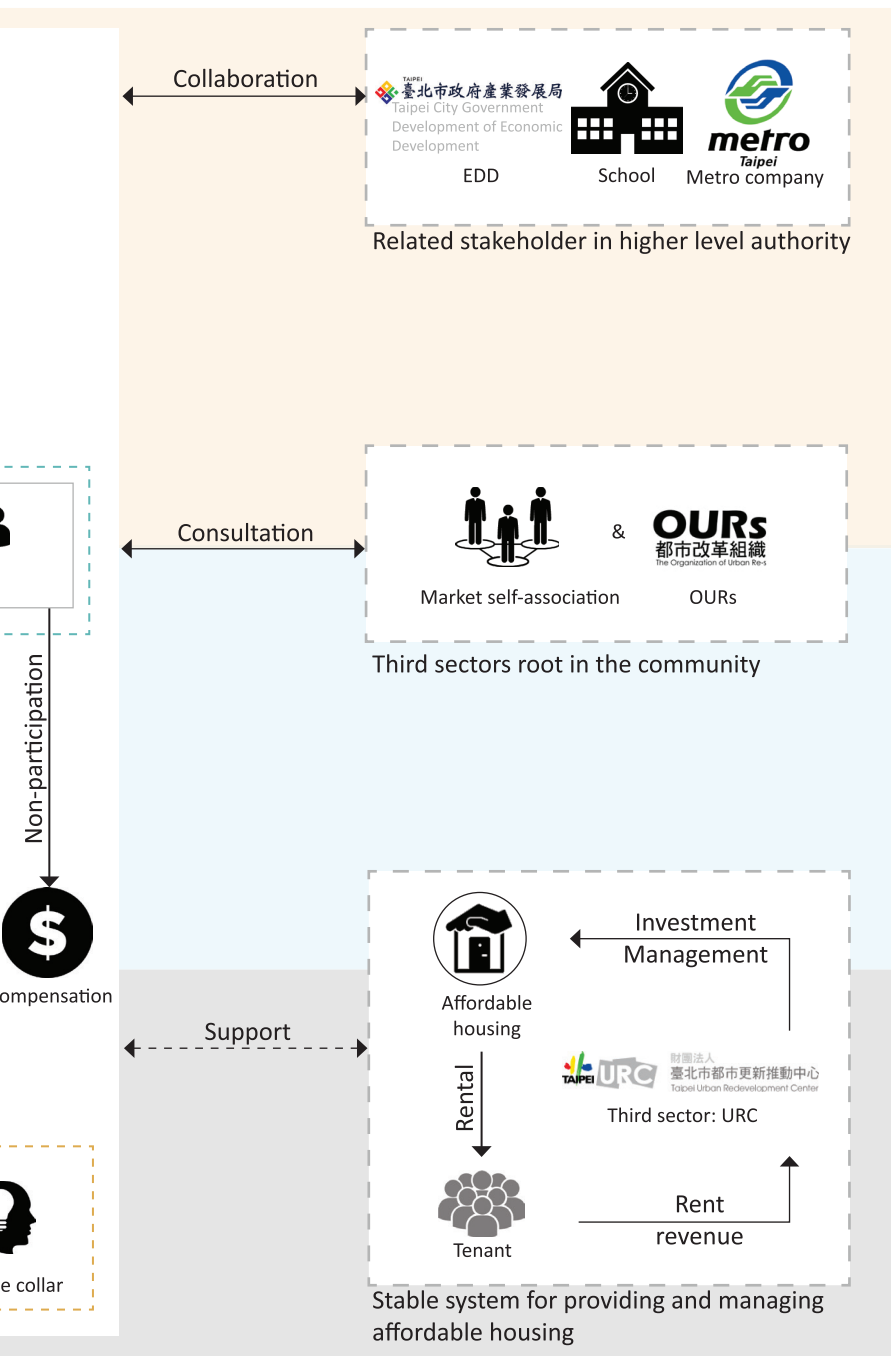


Figure 6.3.1 Possible approach to revitalize the area

Other stakeholders

Additional remark: New/ transformed stakeholder



TAIPEI
臺北市政府都市發展局
Taipei City Government
Department Urban Development

Urban development department in Taipei City government provides a structure plan with related departments from a broad scope, and behaves as a supervisor and mediator in regeneration process.

TAIPEI
臺北市政府產業發展局
Taipei City Government
Development of Economic Development

Together with Urban development department, urban regeneration take consideration with city-level economic development strategy collaborated with economic development department. Especially the increase of mobility and density in this case provides many potentials.

TAIPEI URC
財團法人
臺北市政府都市更新推動中心
Taipei Urban Redevelopment Center

The third sector Taipei Urban Redevelopment Center changes its role from an assistant to an actor in urban regeneration. Besides, it also manages affordable housing either invested by itself or contributed from private sectors in the redevelopments.

In short-term it is supported by public sectors. The long-term goal is to reach self-liquidation and becomes a independent and sustainable organization.

White collar

Due to the introduction of office, white collar workers will be the new comers. They are not only directly create value of economic output, but also will become the consumers for small business in the area.

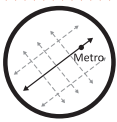
Tenant

With the stable provision of affordable housing and the involvement of third sectors in redevelopment process, the tenants will have better positions in urban regeneration.

6.4 Applying The Rules

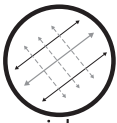
In this session, the demonstrations for the regeneration project is shown to explain how to apply the rules in whole and in each typology. Through the design depends on stakeholders' interests, the functions and density of the area are restructured and rearranged. In the proposed planning system, the stakeholders could reach the common interests. The new programs, users, and the evaluations for the proposal are discussed as well.

Centrality for the location of typologies



Located along main streets and near public transit stations

Based on the level of street and new metro station, blocks along the main street are belong to typology radiant commerce.



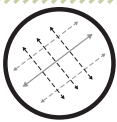
Located along lower-level streets

From social analyses and current urban fabric, most of blocks are belong to commerce in neighborhoods.



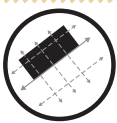
More economic activities based on centrality

Possible spaces for economic activities are directed by urban structure in urban regeneration.



Crossed by main streets

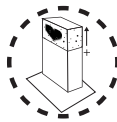
Moving the night market to the place near main street and on the block of high density could rearrange the uses and solve conflicts by design.



Located vastly along main streets

In respond to nearby urban fabric and its location, the block next to the district-wide park is belong to typology separation for residence.

Floor area bonus for public interests



Provision of affordable housing with programs

The whole regeneration project is in TOD areas, but only the construction by redevelopments could apply this rule.



Separation construction and installation

Gaining the bonus in the typology is also securing the investment for the third sector. Because the developers would make sure if there are investors for the programs in the buildings.

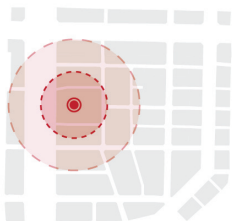
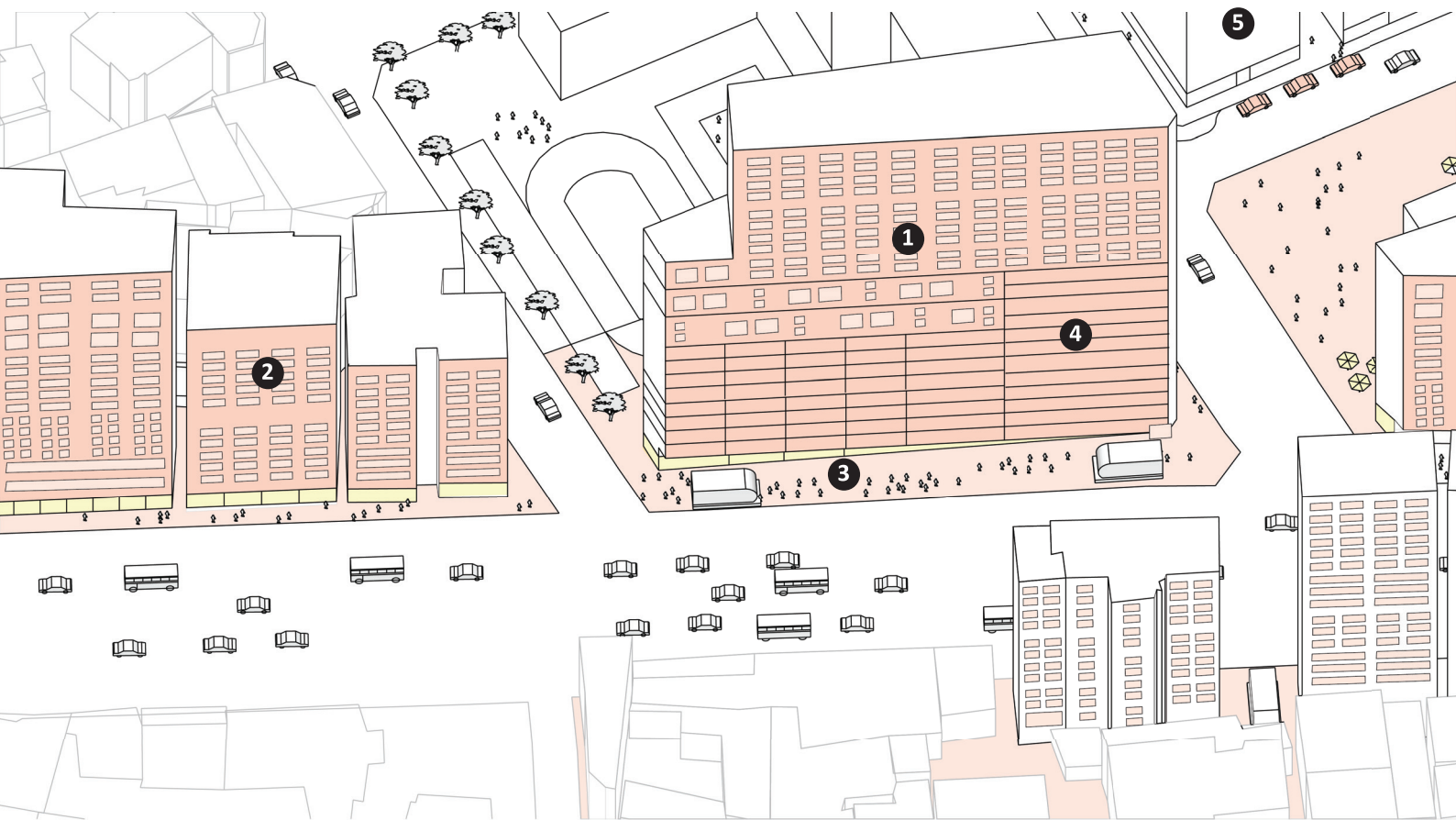


Contribution of open space plus parking

This rule is applied in redevelopments when the economic activities could still satisfy the urban structure.



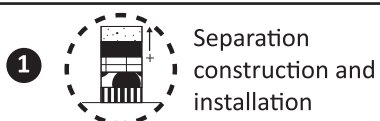




Radiant commerce

After the regeneration, the floor area largely increases in the blocks. The space could accommodate various functions. The high-floor housing not only serves as the transitional housing for relocated inhabitants, but also as the selling housing for financial return. Certain amount of provision for affordable housing here stirs the third sector URC to change its role into an actor and managing affordable housing in order to reach self-liquidation in the long term. The working spaces are for both large and small business. They are planned with Department of economic

development of Taipei city government as to correspond to the economic policy in the larger framework. It could be a chance for southern Wanhua to be revitalized and to contribute the renaissance of western Taipei.



Separation construction and installation

In this way, several housing types for diverse households and various working spaces for different stores or works could be designed.



Plot size diversity

Because construction unit of the existing block for redeveloping is a building on whole block, the redevelopments preferably build one building. Therefore the plot is the block in this case. However in other cases, for example the reconstructed buildings nearby, they

could keep the diversity for plot size.



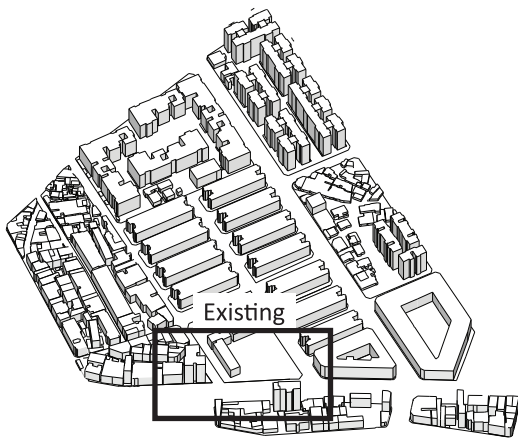
High entrance frequency

In order to enhance the urban vitality here, more economic activities would be introduced with high entrance frequency.



Street wall continuity

Above certain height of the buildings the facade stand the certain distance from the edge of the blocks. A strong image of the street scape is formed by applying this rule.



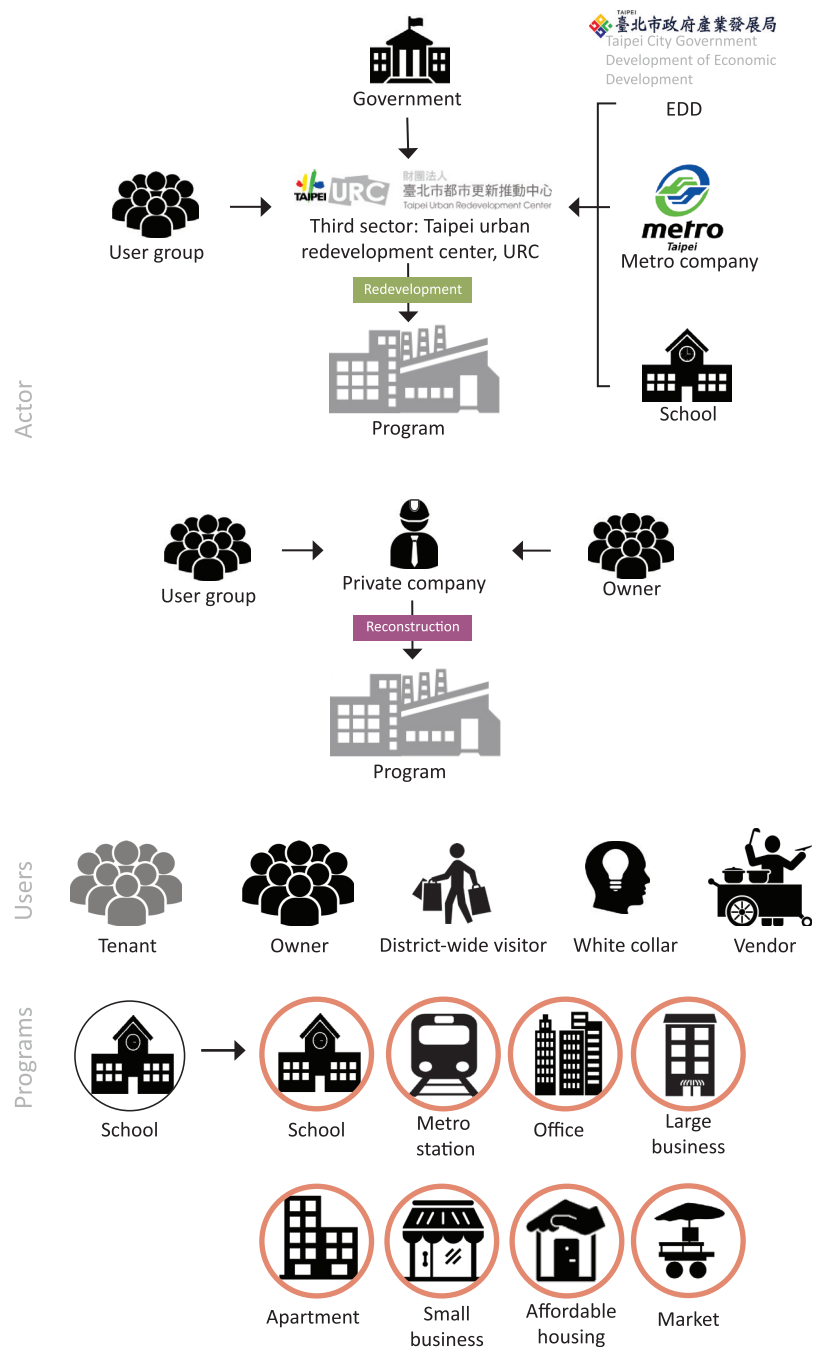
Demonstrative area



Figure 6.4.1 Street wall continuity
Image source:
https://c1.staticflickr.com/7/6045/6381044273_5b9f03f7db.jpg



The ground-floor zone of one side of the building is part of the relocated night market. This rule forming the time-difference mixed use is applied together with the rule traffic-free hour in typology linear temporary market. The use of space is elaborated in the following session.





Current condition



Impression of typology: Radiant commerce on eye-level



1 Separation construction and installation



4 Street wall continuity



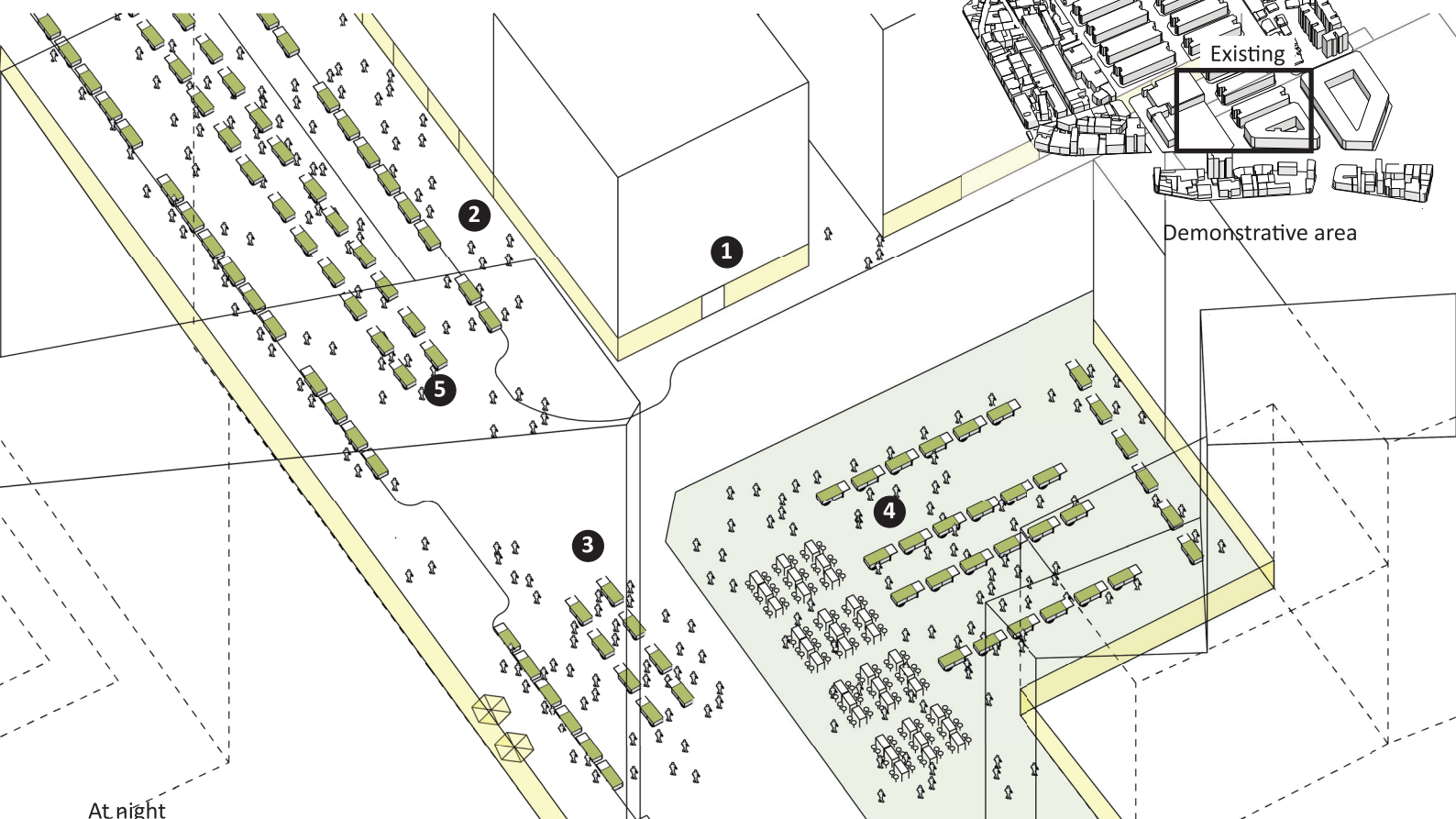
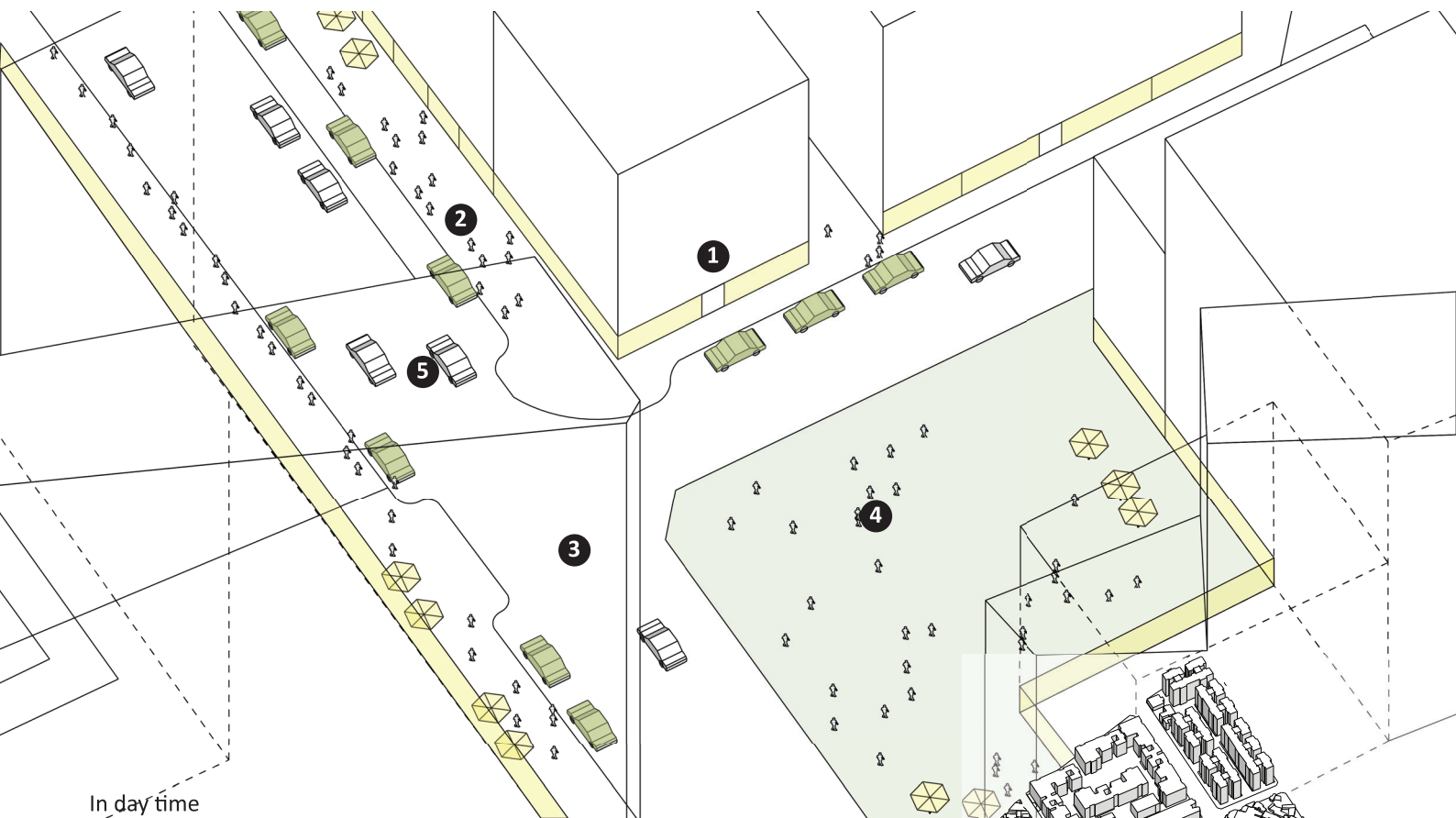
2 Plot size diversity

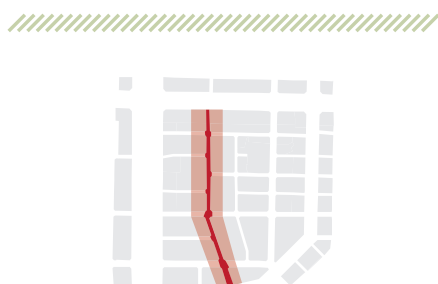
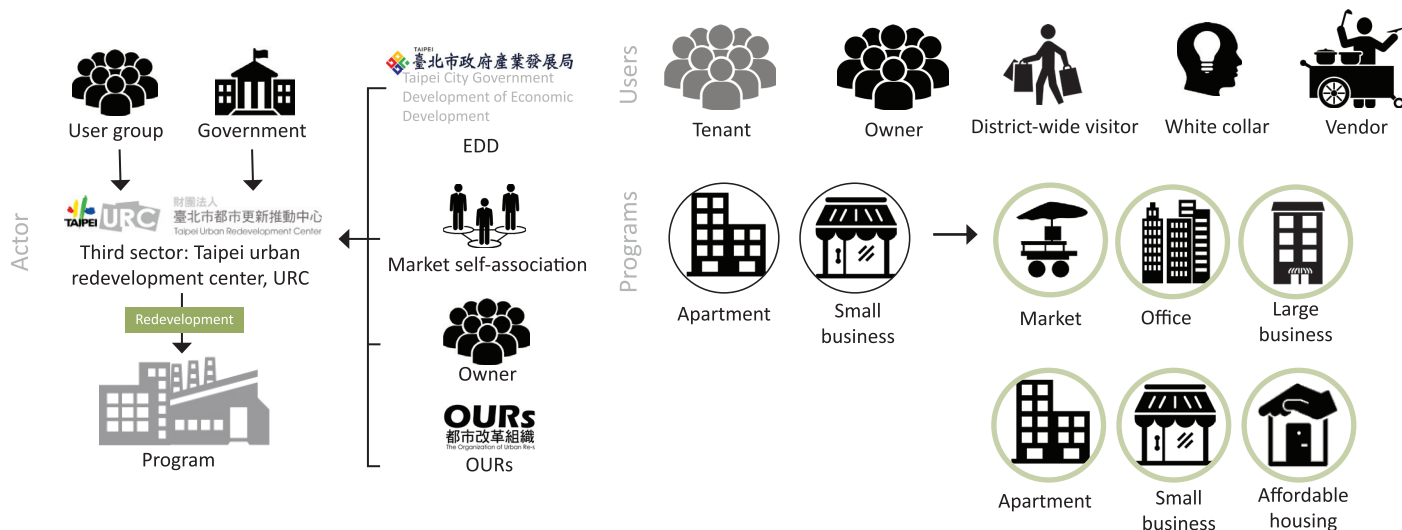


5 Flexible parking hour



3 High entrance frequency

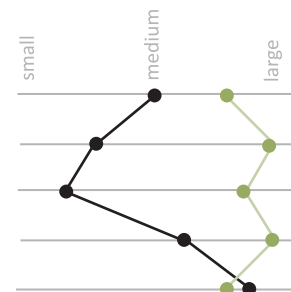




Evaluation

- Amount of economic activity
- Level of diversity
- Area of public space
- Floor area
- Ground coverage

*considering informal extensions



Linear temporary market

Considering urban structure and interest among the inhabitants and vendors, the night market is relocated into two parts in the redevelopments with the assistance of market self-association. Some vendors are gathered on the block along the main street. The high-dense block with lower ground coverage leaves big open space so that the vendors could manage their small business. While some vendors still keep the linear market using the parking spaces during traffic-free hour, and share the sidewalk zone with visitors the shops on the ground floor.



The yellow parts are representing the commercial entrances. They bring the diversity in the area and benefit from the market in terms of customer attractions. The entrances for inhabitants are set in the other side of the buildings.



Between vendors and on the sidewalks, certain width of space are reserve for pedestrians in order to have better walking experience.



As mentioned, the classification for the vendors would take place in the two physical forms of the market.



The vendors here produce more impact of noise and smell. On the lower-floor zone the workers are not working when the vendors are here, while the higher-floor zone the inhabitants are too distant to be influenced on. The square as a market place in the evening could also be a public space for white collar

workers to relax in weekdays. In weekends, it also has flexibility to transform into the place holding city events.



The flexible uses on the streets in different time zone for traffic and pedestrian create more comfortable and safe walking experience in the crowded market.



Figure 6.4.2 Market hall, Rotterdam. The residential entrances are located in the outside of the building separate from the market space.

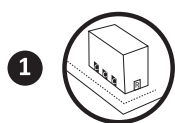
Image source:
<http://inhabitat.com/mvrdvs-gorgeous-tunnel-shaped-market-hall-opens-its-doors-today-in-rotterdam/>



Current condition



Impression of typology: linear temporary in day time on eye-level



1 Entrances on different sides



4 Vendors gathering



2 Width of sidewalk



5 Traffic-free hours



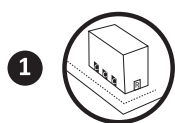
3 Classified vendors



Current condition



Impression of typology: linear temporary at night on eye-level



1 Entrances on different sides



4 Vendors gathering



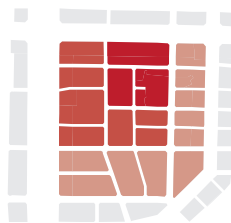
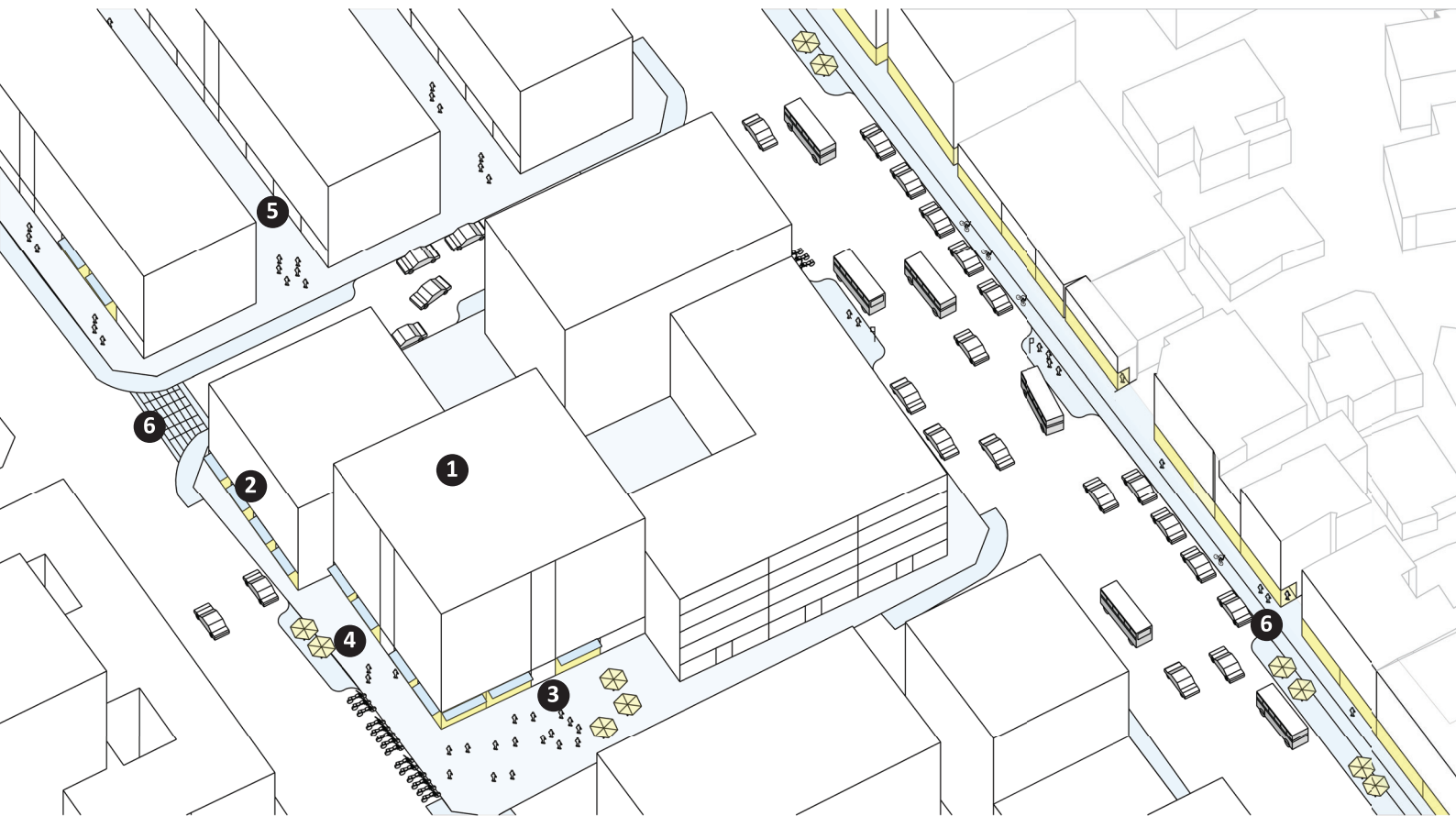
2 Width of sidewalk



5 Traffic-free hours



3 Classified vendors



Commerce in neighborhoods

After the regeneration, the floor area slightly increases in the redeveloping blocks. Affordable housing is also promising in here. Most of the inhabitants could still be relocated back to the apartments on the block, while some of them would be relocated to the high-floor housing on the blocks along the main streets. Therefore, the design should secure here from gentrification. The neighborhood still maintains some economic activities, which are small business. The public spaces are largely improved by applying the rules.



1 Short plot

Even though the blocks are merged into one for the redevelopments, it is still shorter compared to other existing blocks in Taipei. This approach in a way to limit permeability, so there would not become too active.



2 Commercial entrances face to streets

The entrances face to street create the opportunities to design attractive facade and storefront to cater to the eye level of pedestrians and invite them to enter in.



3 Front yard for sidewalks

The sidewalks are designed into several zones by different pavement and heights for pedestrians to walk through,

to sit with street furnitures. They are also creating open spaces for the shops to extend their business area in certain level, rather than enclosure and occupy them by fixed informal attachments.



Figure Extended business area in parts of sidewalk

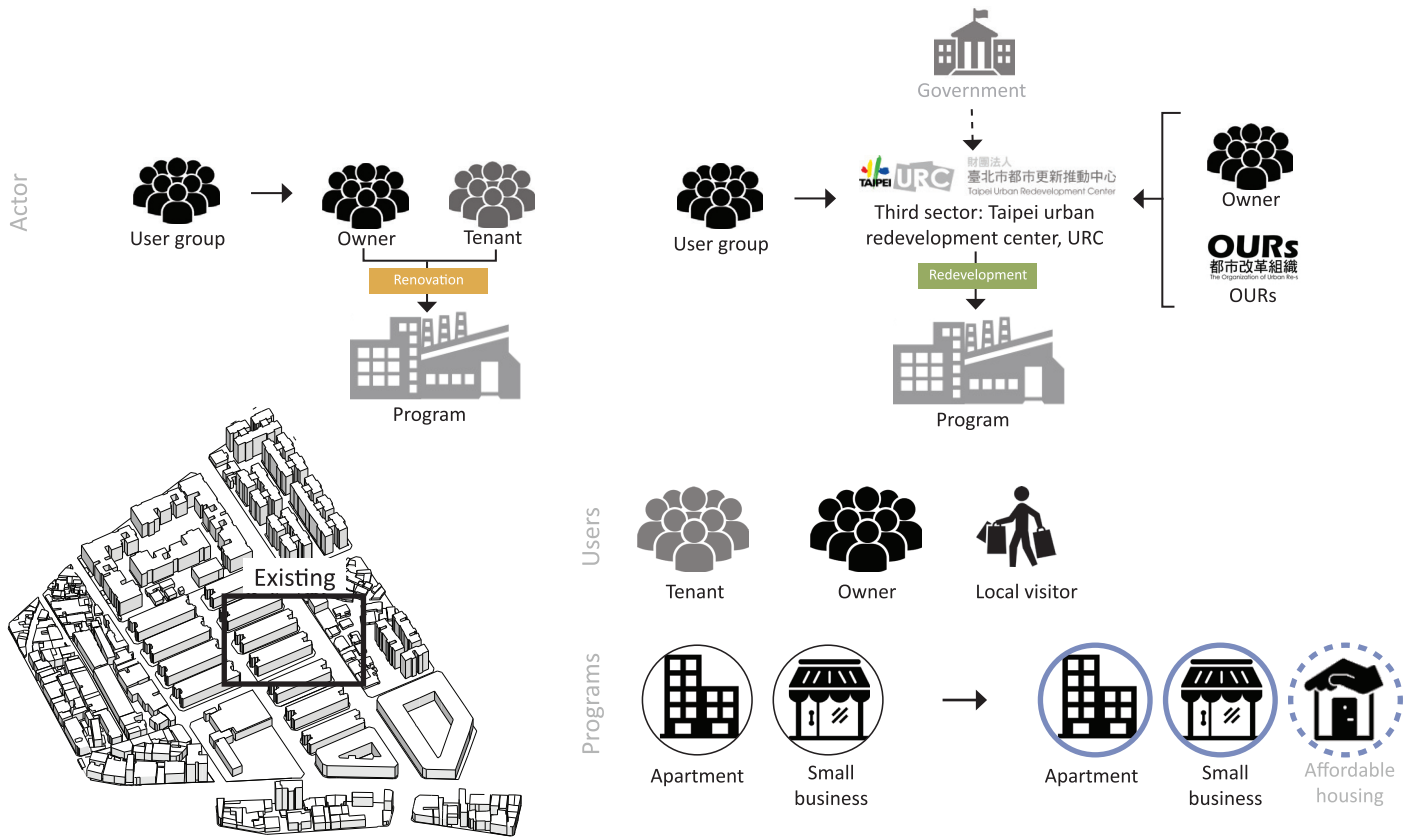
Image source:

<http://www.urbancincy.com/2014/07/how-to-reimagine-our-streets-around-the-concept-of-shared-space/>



4 Shops on ground-floor zone

It also attracts the pedestrians more directly and easily without disturbing the inhabitant too much. Following the urban structure, more shops are locat-



Demonstrative area

ed in the vertical-direct streets when designing the apartments.



The design refers to the centrality in urban structure to form spaces for shops or living units. But still, there are some spaces which are promising to transform the functions should be regulated by public sectors.



To applying the rules, more detailed street design is done by sidewalk extensions. As a result, bus bulbs help buses move faster and more reliably without leaving the travel lane; curb extensions increase the amount of public space and slow traffic speed; and bike lane as a buffer zone is separated from roads.

Evaluation

- Amount of economic activity
- Level of diversity
- Area of public space
- Floor area
- Ground coverage

*considering informal extensions

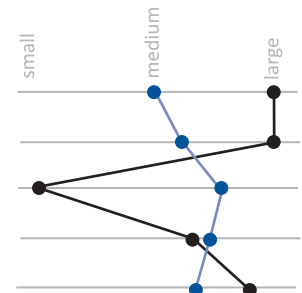


Figure 6.4.3 NEW YORK, NY. The visibility of crossing pedestrians was improved here using pinchpoints constructed with interim materials. Image source: Urban Street Design Guide. Island Press.



Figure 6.4.4 Speed table to be adapted in traffic calm zone in the neighborhoods. Image source: Urban Street Design Guide. Island Press.



Current condition

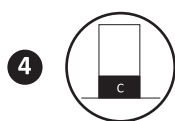


Impression of typology: commerce in neighborhoods on eye-level



1

Short plot



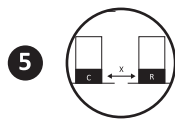
4

Shops on ground-floor zone



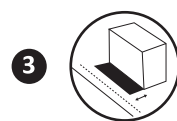
2

Commercial entrances face to streets



5

Fixed use unless approved



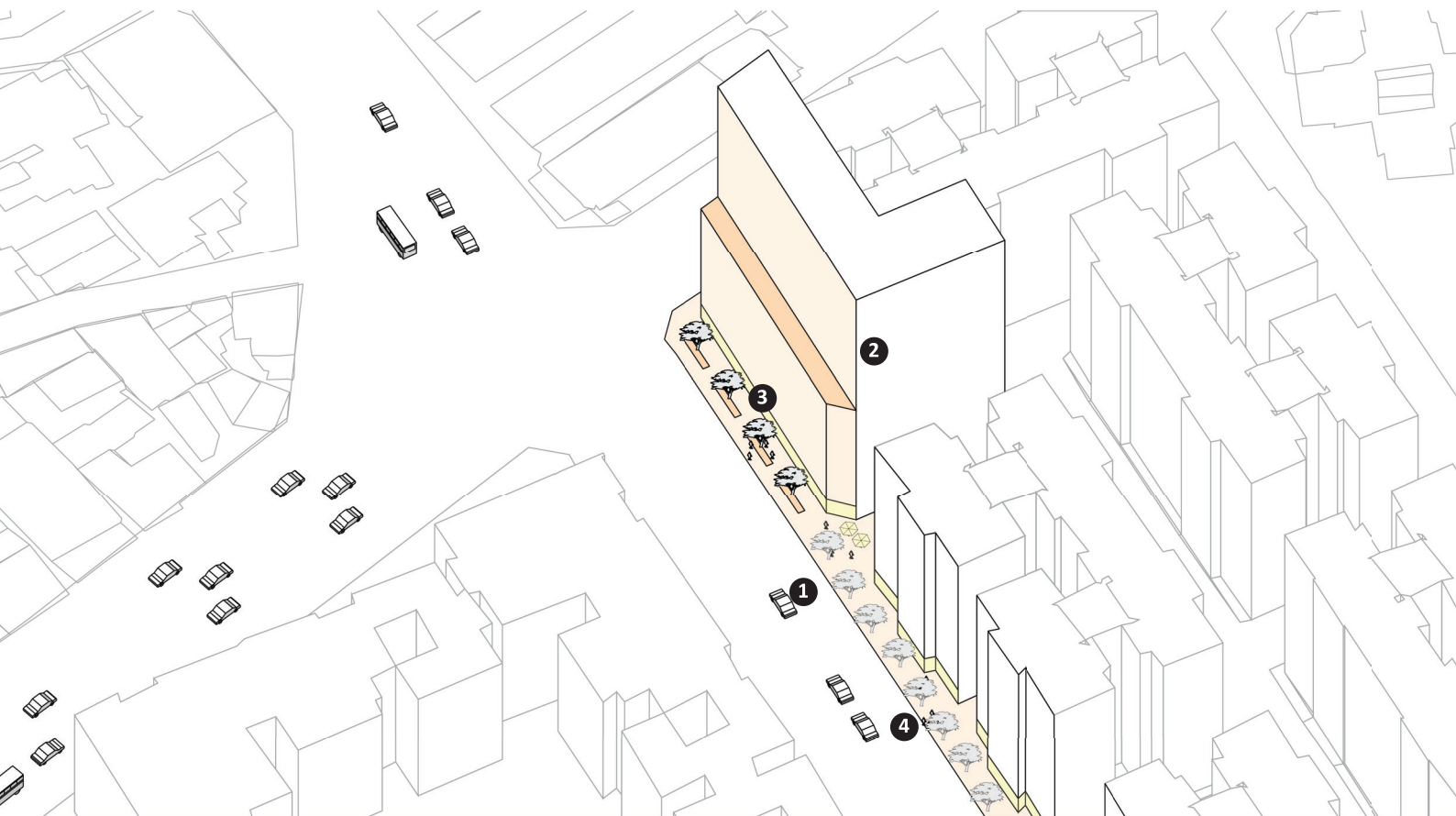
3

Front yard for sidewalks



6

Human-oriented traffic



Separation of commerce and residence (residence in the area)

In addition to the redevelopments of resettled tenement- South airport community, other areas in the regeneration project would activate the process mainly by private sectors. The existing shop houses in this block are in designated renewal area. Although the approach for reconstructions could not apply for the bonus rule, they still could be reconstructed by infilling the developing rights, which is attracting to private companies. And still, the reconstruction would contribute to form the

centrality for urban vitality.

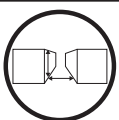
1



Lot assembly for certain size

Three plots are assemble together as a re-constructive unit, forming a housing complex coherent to the urban scape of high-floor apartments nearby.

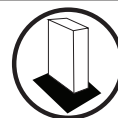
2



Human scale design

There are several approaches to design the building in human scale. Here the building steps back a certain height to maintain the sense of space.

3



Open space for the public

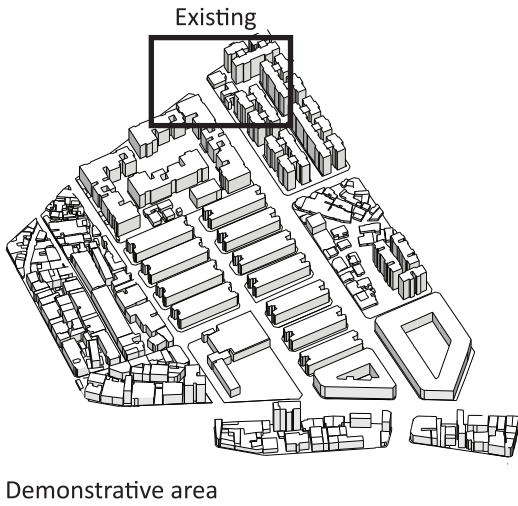
Unlike many new housings tend to separate the boundaries between public and private, sometimes even privatize the public space abstractly by design, the proposed high-floor apartment has transitional zone from the main entrance and the shops to the sidewalk by greenery design and placing street furniture



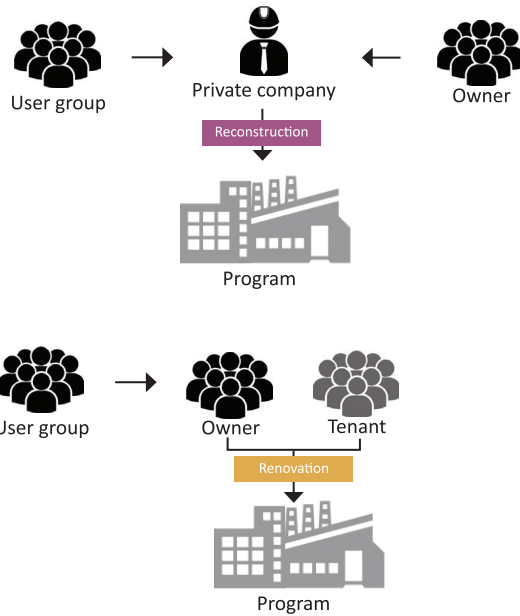
Figure 6.4.5 Open space for public

Image source:

<http://www.socketsite.com/archives/2014/12/refined-designs-timing-400-foot-tower-transbay-block-9.html>



Actor



4



The between-block mixed-use development

In the block there are many economic activities existing already in current condition. As to restructure urban vitality, renovation on streets is still promising to enhance the physical quality.

Users

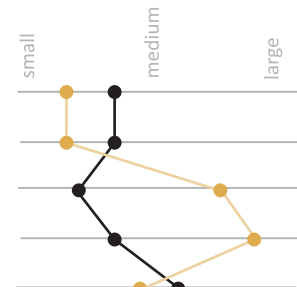


Programs




Evaluation

Amount of economic activity
Level of diversity
Area of public space
Floor area
Ground coverage
*considering informal extensions





An aerial photograph of a busy pedestrian plaza. The ground is paved with large, light-colored rectangular tiles. In the lower-left quadrant, a person is pushing a cart filled with a large, colorful assortment of balloons, including characters like Mickey Mouse and various animal shapes. Several groups of people are walking across the plaza. In the center-right, a man and a woman are walking together, with the woman pushing a stroller. To their right, a man is bending over a small table or cart, possibly a vendor. In the foreground, two men are walking towards the camera. The overall scene is a bustling public space.

Chapter 7 Reflection

Conclusion/ Evaluation/ Recommendation

7.1 Conclusion

Problem statement →

This graduation project is carried out in the research theme “Metropolitan Spatial structures”, and motivated from personal experience and observation in the city Taipei, Taiwan. In the sense of understanding how multi-scalar interventions by spatial strategic planning can affect on metropolitan spatial structure, this project also tries to redefine urban vitality in Taipei by finding out the physical indicators which compose the urban form and revising existing planning system to stimulate integrated urban regeneration. Regarding to those happening renewal projects is not helping the most urgent deteriorated area and improve the whole urban system, therefore the most vulnerable communities resettled tenements are chosen as the research focus. The main goal of this project is to figure out how the mixed-use urban configuration can be evolved through urban regeneration to adapt city structure for urban vitality in Taipei.

Following the research line set up by the research theme, there are several planning tools used in the project to deal with different issues. These approaches help to organize the arguments for the design and illustrate its impact on the larger scale further form the metropolitan spatial structure. Hereby two important research frameworks are discussed from issues, methods to argumentations. Later the conclusive rules as design guidelines are evoked to contribute for design as a testing example on the site.

Sub-question 1 →
How to generate urban vitality?

The first part is encouraging the urban form in terms of urban vitality and also considering city structure in urban regeneration. The definition of urban vitality for this graduation project is diversity and economic activity, in regard of mixed-use context in Taipei. Theoretical research helps to produce the physical indicators that related to urban vitality. On the other hands, the empirical study takes four mixed-use typologies in Taipei as the patterns to study. Not only their physical characteristics in a way to provide multi-disciplinary spatial strategies for maintaining urban vitality or eliminating conflicts on mixed use in the integrated regeneration project, but also the activities and users in the typologies help to determine social structure in the urban transformation.

Sub-question 2 →
How to redefine urban vitality in Taipei?

Sub-question 3 →
How to integrate the development of the urban form within urban regeneration process in Taipei?

The second part is how to solve the failure on planning system in urban regeneration process. This part in the project focuses on studying the planning system for urban regeneration and stakeholder analysis. Learning from the theories, the institutional design for collaborative planning and design helps replacing the existing fragmented redevelopment units into a integrated regeneration project with multi-scalar interventions by clarifying different roles of public/ private/ third sectors and also the interests or limits for stakeholders on the sites. Besides, through case comparison from Japan and Korea, it can contribute to the project by redefining the priority of redevelopment. The proposed planning system with a shifted role for public/ third sector could therefore concern the whole urban system and neglected deteriorated communities more.

Based on the two research frameworks, several rules as design guidelines in different typologies are concluded. They service multi-scalar interventions- management, renovation, reconstruction, and redevelopment in different physical scales. They can be universal to redefine urban vitality fitting in city structure, and also conditional to achieve some of public interests by providing bonus rules in urban

regeneration.

Both the rules and proposed planning system play important roles in design. The south airport community is the testing site because its urgent physical condition and high potential from the settlement of new metro station for regeneration. In the design part of the project, on the one hand applying the proposed planning system gives a comprehensive plan on the site, balances diverse interests from stakeholders; on the other hand the rules guide the desirable urban vitality and still provide flexibility for urban designers and architects to design. Therefore, the relationship between research and design in this graduation project is showing how the institutional design in research part is manipulated in the reality, and providing a design example from the rules to explain the possibly urban form that maintains vital mixed-use development in the area.

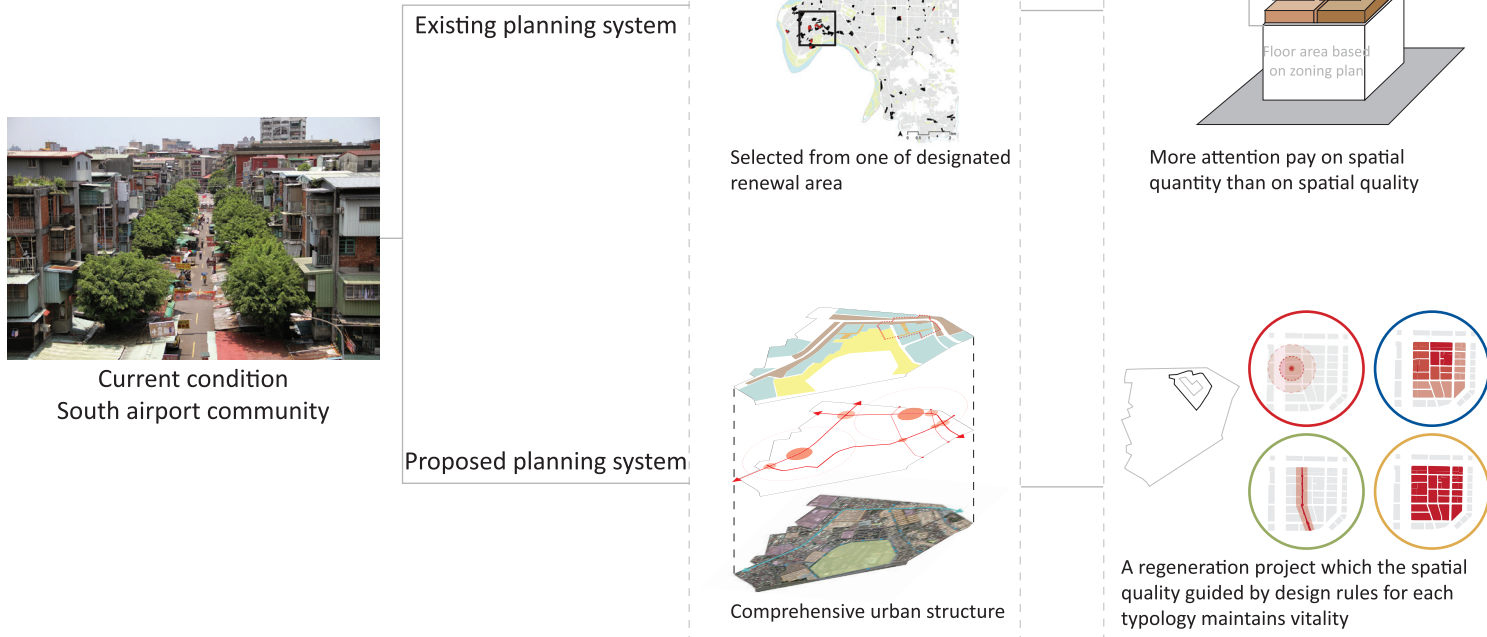
Finally, the approach used in the graduation project improves current notorious Taipei urban regeneration into the collaborative one towards to public interests and the city's identity. However, we should keep in mind that city as a complex system, there are always still other factors such as local image, political issue, historical preservation or district-wide intervention could influence urban transformation, and they haven't been discussed as to keep the main line and reduce unpredictability to complete the project. Nevertheless, the value of the project is not about designing a fixed outcome, because in the end, there might be several different spatial configurations suitable for the area which meets these rules. As an inhabitant living in Taipei, the project for me is pursuing to activate a justice, collaborative urban regeneration within stakeholders by following Taipei's rules for urban vitality.

← Main research question
How to redevelop resettled tenement areas in Taipei by proposing integrated urban regeneration process and urban form to maintain urban vitality ?

7.2 Evaluation

Evaluation on the outcome of the implementation

Comparison with the vision from Taipei City government



Transformed positions of the stakeholders

As mentioned during analysis, there are many stakeholders play important roles in forming urban life but don't have such right in urban regeneration. In the strategy part, the proposed planning system encourage collaboration among stakeholders. From the regeneration project which was used to elaborate a concrete application of the strategy has already shown there could be various actors cooperate with other related stakeholders to activate the intervention in urban regeneration. Furthermore the transformed position among stakeholder can be evaluated from the operation in the design proposal in three aspects.

First, empowerment on tenants and vulnerable group. With the transformation of the third sector, the living right for them would be more took care of by supporting concrete solution of provision and management of affordable housing, as well as the third sector behaves as a helper and consultant in regeneration process.

Second, integration with economic development and urban regeneration. This is also in result of proposed planning system in planning strategy. A larger scale of legal and spatial framework should be firstly considered in urban regeneration, so the department of urban development would be able to make the complex plan with other departments. In this sense, when it comes to larger intervention such as redevelopments, the economic development in city scale could be involved in. Therefore, the programs introduced in would have their legitimacy, and also the new-comers with the programs would bring diverse interactions in the area to increase vitality.

Third, Coherence between user group. The design implementation is aiming at providing qualified places meet stakeholders' demands. Therefore, with the spatial interventions, the activities are also restructured. By connecting the relationship among the stakeholders, it is in a way increasing their influence on urban regeneration together to complete the implementation. The inhabitants and white-collar people become customers for the business, while the rent from the tenants in both residential and commercial uses become the profit for the third sector and the property owners. After regeneration, the user group would live in the mixed-use area at the same time their interactions would form coherent, vital community.

Intervention



Taipei City government

Renewal

Current proposal is the city government would be the actor, further entrusting to private developers

Renovation

Reconstruction

Urban management

Redevelopment

Various methods with matched actors to (gradually) meet desirable urban structure



Image source: Taipei City government

Outcome

High-rise residential complex

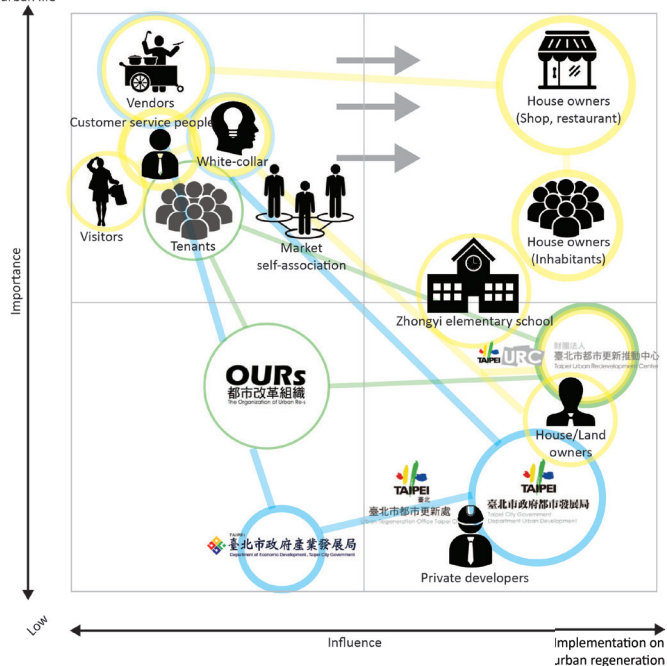
Lack of comprehensive plan in the larger scale.
Tend to provide affordable housing by abolishing the school.
Irresponsible to urban fabric nearby.



Urban vitality in different typologies

A larger framework of the area is provided.
Keeping the school while providing affordable housing by developing a multi-use block.
Balancing social needs and economic benefits.

Formation on urban life

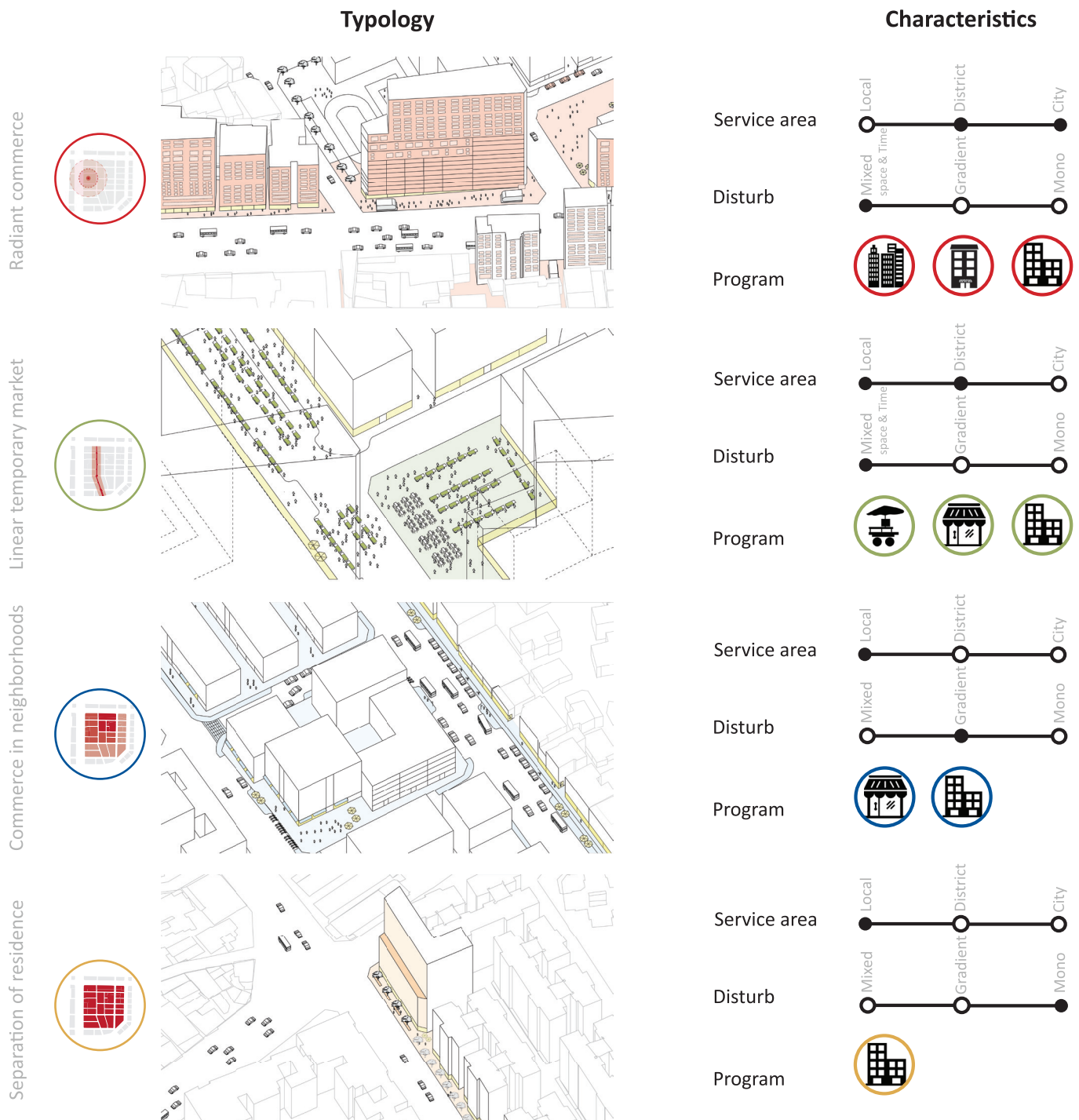


- Coherent relations between user group
- Empowerment on tenants/ vulnerable group
- Integration with economic development

7.2.1 Transformed stakeholder matrix

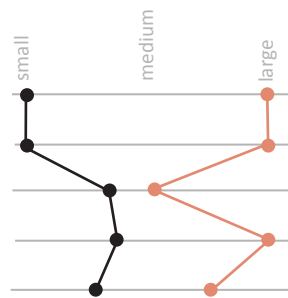
Profiles for each typology

From the profiles for each typology, we could see the design on the testing site of the graduation project is attempt to keep the characteristics of each typology, as well as restructure the activities and urban form by following the rules to enhance the spatial quality. The changes through design in each typology are comparable here. We could know what the quantity could be in each criteria to satisfy the characteristics. And the conclusion elaborates the main focus for the design especially in the spatial aspect.

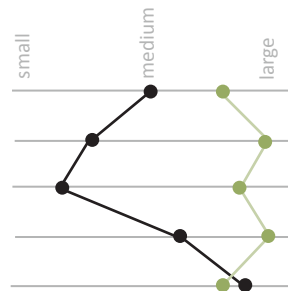


Before & After

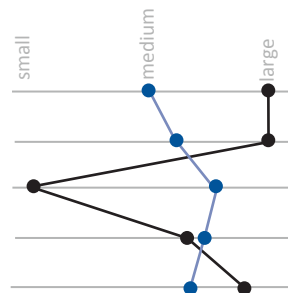
Amount of economic activity
Level of diversity
Area of public space
Floor area
Ground coverage
*considering informal extensions



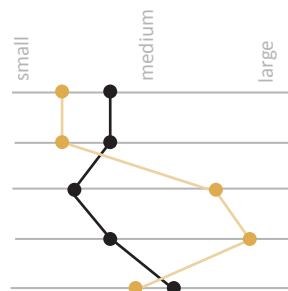
Amount of economic activity
Level of diversity
Area of public space
Floor area
Ground coverage
*considering informal extensions



Amount of economic activity
Level of diversity
Area of public space
Floor area
Ground coverage
*considering informal extensions



Amount of economic activity
Level of diversity
Area of public space
Floor area
Ground coverage
*considering informal extensions



Conclusion

The focus is put on activating the regeneration project on the public land with the construction of metro station by bringing multiprograms while maintaining the school in high-dense buildings. Therefore the density is much more than previous monofunctional use- the school had.

The focus is put on how the market interact with other uses. Relocating the street temporary market in a multi-functional, high-dense block, in order to have coherent public life and people flows among different time in a day, as well as safe and comfortable shopping environment for the visitors.

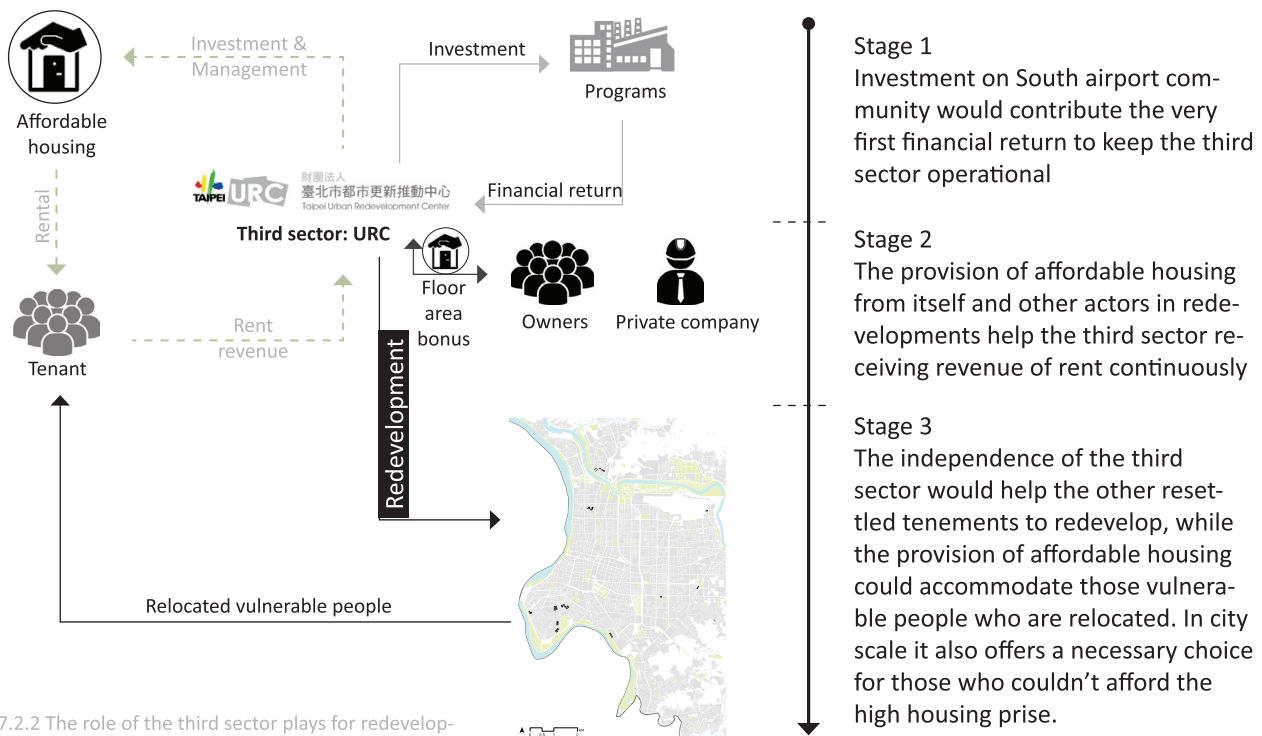
The focus is put on transforming the neighborhoods into a more livable environment by providing more public space along linear street activities and limiting activity and diversity at certain level by design, while keeping the close-related characteristic between buildings and streets of the typology.

Aiming at providing large-scalar residential complex with more concentrated public space while maintaining the vitality by giving focus on building-to-street urban design and the between-block relationship rather than adding economic activities.

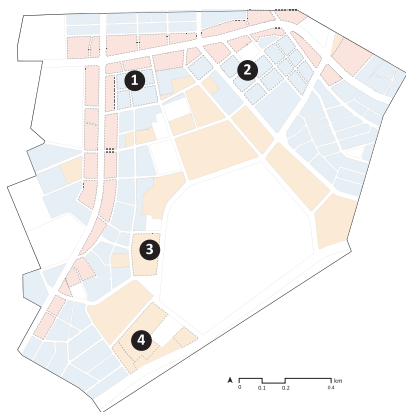
Reflection on the other resettled tenements further to Taipei

Planning aspect

The proposed planning system in the graduation project encourages a collaborative urban regeneration that stakeholders are able to have clear objects in spatial interventions. What is crucial is still the evolved role of the third sector. In a way the redevelopments in South airport community does have big chance to drive the transformation of URC. The diagram below shows how the system that URC could function, in order to support regeneration in the other resettled tenements further to Taipei.



7.2.2 The role of the third sector plays for redevelopments in resettled tenement



7.2.3 Resettled tenement in different mixed-use typologies in Southern Wanhua area

Design aspect

It is determined to find the typologies for every resettled tenements, therefore the application for the rules come out from the graduation project is possible. For example in Southern Wanhua district, there are other three resettled tenements, so the method is able to be duplicated even for other area in Taipei.

Before intervening sites, a clear city structure should be clarified beforehand according to planning and design strategy, which could be in line with the transition period of planning hierarchy and institutional system in Taiwan. In the near future, legislative spatial plan at city level would be announced. Other than this, the existing TDR bank as a transaction platform of transferable development rights in Taipei could monitor and manage the density based on city structure. So consideration on consisting of comprehensive regeneration plan based on the method in this graduation project becomes much practical in both planning and design sides.

7.3 Recommendation

To conclude, recommendation on urban regeneration in Taipei's mixed-use context follow as below. The strategies and tools in the project still remain the possibility for extended implementation or further research.

Develop coherent pattern among mixed-use typologies

In the regeneration project, the implementation has elaborated concretely for the strategies that the division of mixed-use typology provides a framework to develop the design based on the rules. However, there could be a supplement for further research that how to create a coherent pattern between/ among typologies. The issue is a matter of how the larger pattern forms. Alexander (1977) wrote in his book- *A Pattern Language: Towns, Building and Construction* that these large patterns, which give so much structure to a town or of a neighborhood, can be created by centralized authority, or by laws, or by master plans. We believe instead that they can emerge gradually and organically, almost of their own accord, if every act of building, large or small, takes on the responsibility for gradually shaping its small corner of the world to make these larger patterns appears there.

Thus, especially in the project there are several typologies with their own characteristics, the incremental development could be further studied with the interventions at multiple levels- redevelopment, reconstruction, renovation, and urban management.

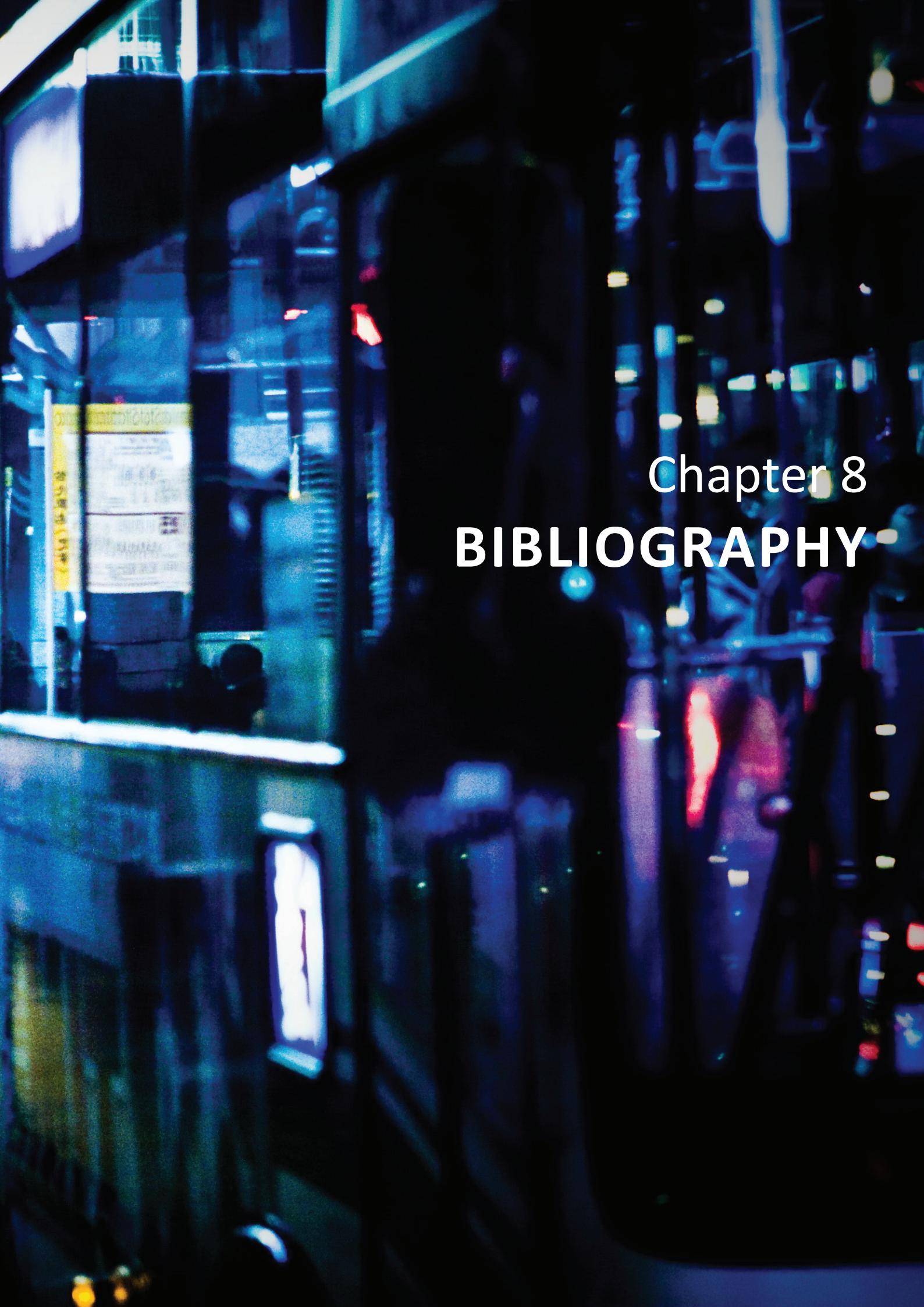
Adapt dynamic indicators for the rules in empirical research

The empirical study in this graduation project tries to adapt the method of evident-based urban design. Through observing, knowledge about user groups and possible conflicts could be founded. Then the indicators in those design rules are generic to form the mixed-use typology of urban environment. Therefore it is possible to use this method in other area of Taipei. However, in such a flux city, every location is unique according to its context (location, hierarchy and historical background) and therefore a closer understanding for the physical environment and stakeholders is needed for different areas in practice, and then using the adaptive rules from indicators, to facilitate design proposals in regeneration to maintain vitality.

Apply the rules in city gaming during urban regeneration process

Continued from the preceding paragraph, an alternative, or an extensive application of rules could be evolved, to further adapt collaborative planning and design which in the project are more focused on planning aspect. City gaming is an effective negotiation method reaching common interests for developing plans among stakeholders. It could help with localizing the design outcome in different context even with same rules. In the individual projects, within a small-step participatory design process, the coherent whole would be generated only by the incremental design rules that are mainly on space, layout, construction and (morphological) centres. (Alexander et al., 1987) Since this project has provided an initial perspective on contextualized rules for typologies in Taipei, the tool of city gaming is promising and highly recommended to be studied.





Chapter 8

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