OPENING THE BESIEGED CITY
Exploring an Inclusive Development Strategy for Tin Shui Wai in Hong Kong

Graduation Thesis Report / Jing FENG / 4122623 /
Complex Cities Studio / Department of Urbanism / TU Delft / 06/2012
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GRADUATION THESIS REPORT

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Cover: Photograph of Tin Shui Wai in Hong Kong (by HKAVMODE)
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Preface

A single mother lived with his son in Tin Shui Wai, a place called ‘Besieged City’ in Hong Kong. She worked in a local supermarket now. But, in the 1970s, she worked in a textile factory and supported her little brothers finishing their studies. With the dramatic socio-economic changes, now she had a hard life compared to her brothers. One day, she met a single living granny and helped her repairing television and changing the lamp. Then, it comes to the mid-autumn day, a special festival for Chinese family gathering together. So, the single mother, the son and the granny sitting together around the table, tasting the mooncake, watching the beautiful moon outside, and thinking about the past and future.

This is the simple but powerful and touching story in a movie called ‘The Way We Are’ by Ann Hui (fig.i). Tin Shui Wai, the so called ‘Besieged City’ in Hong Kong would be the study area of my graduation project. Tin Shui Wai is a new town where public housing gathered, with many socio-spatial problems happening in recent years, the ‘Besieged City’ has became the ‘City of Misery’. So, my graduation project would explore an inclusive development strategy to open the ‘Besieged City’.

Fig. i: Film shots from the movie ‘The way we are’. a: The name of the film, b: the single mother and her son, c: the single living granny, d: the single mother in the 70s, e: single mother worked in supermarket nowadays, f: the touching moment of single mother and granny in the movie. source: Google Image
Summary

Public housing system of Hong Kong was gradually established to meet the large demand of housing and intervene the property market since 1954. Together with the urban expansion to rural areas, new towns as self-sufficient areas were constructed to settle public housing in New Territory since 1970s. However, some new towns developed into public housing clusters without enough living opportunities because of socio-economic changes and huge economic benefit.

Tin Shui Wai is just such a new town of public housing cluster, with a large concentration of low-income groups. It is a Besieged City, out of the network of the mainstream of Hong Kong as a global financial metropolis and deserted at the edge of the metropolitan area. However, from Urbanism views, it still has potentials on different scales. The government is pushing a new development area of HSK next to TSW. There is no doubt that this area will attract investment with new infrastructure connection. However, it is hard to say whether the new development could benefit the low-income groups in TSW.

The Problem Statement of this project is:
On one hand, the housing problem of Hong Kong shouldn’t be considered as merely lack of housing, but as an urban problem with urban issues to consider like infrastructure, urban facilities and socio-economic life. The problem definition of housing problem in Hong Kong is lack of good living environment where people not only have housing, but a living. Since the target group of public housing is low-income people, the future plan for public housing should be how to provide good living environment for low-income people, a place where they can earn a living.

On the other hand, when new town became the main construction area for public housing, some of the new towns turned into isolated islands instead of ‘balance development’ because of exclusive decision-making and development process between the government and real estate developer. The real demands of public housing residents are not well-considered during the construction of new town. As a result, some new towns become public housing cluster, as well as sleeping towns for HK centre.

So, new towns of HK shouldn’t be constrained in simple urban spatial structure of HK center and New Town. The spatial position of new towns should be reflected on different scales: regional scale like PRD region and HK-SZ region; New town regions like West New Territory (WNT) and East New Territory (ENT); and the relation between different New towns. The potential of new towns on spatial structure of different scales would provide new development opportunities.

The Research Question of this project is:
How to develop an inclusive development strategy that may benefit the low-income groups of TSW, a new town with deprived public housing communities in HK, in line with the regional development of HK-SZ?

So, this graduation project is to explore an inclusive development strategy that could benefit the low-income groups to open the Besieged City of TSW. The new development strategy, as a supplement to the government’s plan, would follow the development trend of the WNT area, make good use of nature and human resources in local environment, create spatial opportunities for community development, and focus on improving the life quality of low-income groups.

The process of the project will be thoroughly unfolded in this booklet in the following parts:
1 – Introduction,
2 – Research and Analysis,
3 – Strategy,
4 – Design,
5 – Conclusion.
1. Introduction

Problem Statement
Project Area
Project Objective
Research Question
Methodology
Relevance
1. Introduction

Fig. 1.3: Hong Kong and Randstad comparison

Hong Kong         Randstad

AREA:             1,104 km$^2$  8,287 km$^2$

POPULATION:       7.1 million  7.5 million

Fig. 1.4: The location of Hong Kong on different scales, from China (Left) to Greater Pearl River Delta region and PRD region (middle), then to Hong Kong - Shen Zhen (right).

Fig. 1.3: Hong Kong and Randstad comparison
Hong Kong - Location

Hong Kong is an important trade port and one of the leading international financial metropolis (fig.1.1), as well as a Special Administrative Region (HKSAR) (fig.1.2) in the south of People’s Republic of China with ‘one country, two systems’ policy after the British-colony period. If compared the size of Hong Kong and Randstad (fig.1.3), it is obvious to found out that the population density of Hong Kong is extremely high, with almost the same amount of population living on 1/7 of the size of land.

After returning to China from Britain in 1997, the mainland China has become the most significant trading partner of Hong Kong. As a result, Hong Kong emphasized more and more economic development inside the Pearl River Delta (PRD) region in the past decades. Hong Kong would have more intense links inside the Greater PRD Region (fig.1.4) in the coming decades in the context of the evolution of the PRD Region as a multi-centred city-region, especially focusing on the cooperation between Hong Kong and Shen Zhen (HK 2030, 2009).
1. Introduction

Fig. 1.6: Hong Kong GDP and Average salaries improvement 1990-2010, they showed that the GDP of HK doubled but the income of low class people hasn't changed too much. Source: Censtatd HK, Made by T. Wen from DSD AT studio, 2011

Fig. 1.8: Poverty population and poverty rate in Hong Kong 2001-2010 1st half, source: HKCSS, 2010

Fig. 1.9: Average monthly household expenditure shows Housing cost the most for HK residents. Source: Censtatd HK, Made by T. Wen from DSD AT studio, 2011
Hong Kong - Economy and Social Inequality

Hong Kong is well known for the freest economy and low-tax shopping heaven with dense skyscrapers, however, the glass curtain walls not only reflect the dazzling modern life, but also conceal the hard life of many common people. The sharp comparison is shown in the diagram of Economy and Social Inequality (fig.1.5).

The GDP of Hong Kong doubled in the last two decades, however, the income of low class people hasn’t changed too much (fig.1.6). For example, the average salary of a administrative supervisor increased by 11,000 HK$, and the average salary increased by 4,000 HK$ for a general worker, but for a cleaner, it only increased by 2,000 HK$.

In 2009, Hong Kong tops world rich-poor gap (fig.1.7). The number of population live in poverty increased from 1,186,600 in 2001 to 1,260,000 in 2010 which covers 18.1% of total population (fig.1.8).

Hong Kong, as one of the so-called global cities of finance and command functions has become a spectacular island of wealth and privilege, especially speculative urban property market has become prime engines of capital accumulation (Harvey, 2005,p.157). The ever-growing housing price pushes the city to the top of the ranking list in property assets and rental fee in the world (Savills, 2011). As a result, housing cost covers the largest part of household expenditure (fig.1.9) and gradually becomes the heaviest burden on the shoulders of common people in Hong Kong.
1. Introduction

Fig. 1.10: Inadequate housing in Hong Kong, cubicle housing (a) and cage home (b) in Sham Shui Po (c) in the city center of HK. source: (a) and (b) from SOCo, 2011
Hong Kong - Housing Problem

For Hong Kong, housing has always been one of the most crucial problems along the urbanization process. Because of lacking affordable housing in the property market for majority of inhabitants, many people turned to public housing. However, public housing stock is far from the demand. That is the result of changes in public housing policy which will be illustrated in detail in next chapter. Moreover, there are about 210,000 people live in inadequate housing, and 100,000 households live in cage home, cocklofts and cubicles (fig.1.10) (SoCO, 2010). So, people demonstrated on the street (fig.1.11), complaining that the government helps the real estate developer killing people. On 14 Oct 2011, the chief executive (fig.1.12) said housing solutions would be the first priority in the coming government policies.

The current housing problems is the outcome of complicated relationships among the government (both colonial government and HKSAR government), property market, developers and urbanists. Their positions and relations changed in different periods of socio-economic development. It is not possible to illustrate the complicated relationships through the whole history in detail, however a general understanding of land use and the relation between land sale and property market would help to understand the current housing problem.
1. Introduction

![Pie Chart: Hong Kong Land Use Distribution in 2010](image1)

**Fig. 1.13:** Hong Kong Land usage distribution in 2010, Based on source: Pland HK, 2010

<table>
<thead>
<tr>
<th>Class</th>
<th>Area (sq.km)</th>
</tr>
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<tbody>
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<td>Residential</td>
<td>72</td>
</tr>
<tr>
<td>Commercial</td>
<td>4</td>
</tr>
<tr>
<td>Industrial</td>
<td>26</td>
</tr>
<tr>
<td>Transportation</td>
<td>66</td>
</tr>
<tr>
<td>Other Urban or Built-up Land</td>
<td>52</td>
</tr>
<tr>
<td>Agriculture</td>
<td>68</td>
</tr>
<tr>
<td>Woodland/Shrubland/Grassland/Wetland</td>
<td>740</td>
</tr>
<tr>
<td>Barren Land</td>
<td>7</td>
</tr>
<tr>
<td>Water Bodies</td>
<td>30</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1108</strong></td>
</tr>
</tbody>
</table>

![Map: New Town Development in HK](image2)

**Fig. 1.15:** New Town development in HK, Based on source: HK Pland

![Graph: Real Estate Market, Land Auction Area, Land Auction Premium](image3)

**Fig. 1.16:** Top: Housing price change in property market 1980-2011, source: Zarathustra, 2011  
Hong Kong - Land use, Land sale & Property market

Land Use

Currently, only less than 25% of the land has been developed and 40% of the land is preserved as country parks and nature reserves (Gov HK, 2011). The land for residential use is only 72 km² (fig.1.13). Because of the hilly terrain (fig.1.14), the solution to get more land is by terracing of hillslopes, reclamation of land from the sea and conversion of flat agricultural land (Pun, 1987:41), so land is precious and extremely expensive in Hong Kong. As a result, most buildings in Hong Kong follows closely to the height limitation in order to make full use of the value of the land.

Since 1970s, development of nine new towns (fig.1.15) changed a large number of rural land into urban land. The aim of new town was to release the population pressure in city center with the concept of self-sufficient development. However, the principal impetus behind new town construction was public housing programme (Pun, 1987:42).

Land sale and Property market

' Virtually all land in Hong Kong is leased or otherwise held from the Government of the HKSAR' (Landsd HK, 2005). The Land Tenure System followed the British rule before returning to China. Now, the new lease of land is granted for a term of 50 years (Landsd HK, 2005). Since 1855 when the colonial government was asked to earn money by themselves, land sale has been an important revenue for the government. Later, land sale was closely connected with the boom of property market which was called ‘land (re)development regime’ (Tang, 2008).

Since 1968, property market was bound with stock market, the relationship between property market and land sale became more complicated and difficult to handle (Tang, 2008). Many Chinese-funded enterprises emerged and defeated foreign-funded enterprises in this period mainly because of the development of property market. Some big Chinese-funded enterprises later monopolized the property market and became the dominant power of Hong Kong economy. Housing price in property market changed dramatically based on the land sale change by the government (fig.1.16).

As shown in the diagram (fig.1.17), on the one hand, the colonial government, due to subtle political reasons, didn’t want to disturb the prospering property market to gloom the future of Hong Kong, so the government and developer reached some agreement for profit; on the other hand, the property bubble was expanding day by day, so, public housing became a tool of government intervention to the property market.

Reviewing the public housing policy changes in the context of specific socio-economic condition would help to clarify the complicated urbanization process and understand the causality of housing problems.
1. Introduction

Fig. 1.21: Abercrombie Report 1948, Source: Sit, 2001

Fig. 1.22: Urban development till 1954, Based on Source: Shelton, Karakiewicz & Kwan 2011; Leung 1971
Public Housing in Hong Kong

History
Public housing was constructed after the Shek Kip Mei squatter fire (fig.1.18) on Christmas Eve 1953. Since then, a series public housing policy and construction came out through the urban development history. A detail illustration of socio-economic condition, urban plan and public housing development would be shown based on five stages of housing policy development (Yung, 2007, p.125) as follows:

1) Pre-1954 (fig.1.19):
   
   **Socio-economic condition**
   During this period, Hong Kong was mainly a transit port. The main urban development was Victoria city as the CBD of Hong Kong (fig.1.20). At the same period, many migrants from China mainland poured to Hong Kong because of WW II and China Civil War. So, urban squatting became a vexing issue (Dwyer 1970, p.609)

   **Urban Plan**
   In 1948, Abercrombie made an urban plan (fig.1.21) for Hong Kong government. It suggested a large area of new residential zones in New Territory. But the plan was not fulfilled at last. The urban development area till 1954 is shown in Fig.1.22.

   **Public Housing**
   There was no government intervention in housing, so many people including migrants lived in squatters on the peripheral of the city (fig.1.23). ‘However, the government gave limited and indirect housing assistance to the lower-middle- and middle-income households through the Housing Society’ (Yung, 2007, p.117)
1. Introduction
2) **1954-1972** (fig.1.24):

**Socio-economic condition**

In this period, Hong Kong became an export-oriented light industrial city with new industrial areas (fig.1.25). The small business, from textile and clothing industry later to electronic industry greatly prospered the economy condition in Hong Kong. On the social aspect, the Culture Revolution happened in China mainland influenced the atmosphere in Hong Kong. Some social riots against colonial government happened.

**Urban Plan**

Since 1954, Kwun Tong developed as a satellite town with new industrial areas (fig.1.26). In 1963, an outline plan was made to develop Tsuen Wan district (fig.1.27). In 1969, ‘Colony Outline Plan’ was made with five recommended plans of new town development, still giving priority to Tsuen Wan district.

**Public Housing**

Because of the Shek Kip Mei fire, fire resettlements were built up for fire victims. However, the primary reason for fire resettlement was not homeless but economic. The relief cost for fire victims was the same amount as the cost to build a six-storey resettlement block (Drakakis-Smith 1979 in Yung 2007). So, public housing could be considered as an accidental outcome of an accidental fire. Later, ‘because the community can no longer afford to carry the fire risk, health risk and threat to public order and public prestige which squatter areas present’(Lai 1994,p.190-191), squatter resettlements with low-cost housing program (fig.1.28) were built up. Moreover, the government wanted to clear land for urban development, so only squatters occupying land urgently needed for planned development were resettled (Yung, 2007,p.118). So, in this period, the resettlement was mainly for urban development especially new industrial areas (fig.1.29) in order to keep social stability and economic growth.
1. Introduction
During this period, diverse industry appeared in Hong Kong. Because of the Open Door Policy in China in 1978, labour intensive industry moved towards north and finally to PRD region in mainland China. The dominant force was technology intensive industry in new town areas (fig.1.31) and the emerging financial industry in the existing CBD area.

**Urban Plan**
The New Town Programme, which complemented the Ten-year Housing Programme, was embarked on in 1973 (Pun, 1987,p.46). In 1984, ‘Territorial Development Strategy’ (fig.1.32) was made which mainly focused on the development of new town area with both residential and industrial use within the territory of Hong Kong (fig.1.33). However, due to the economic change, many industrial land use were changed to office and other use later.

**Public Housing**
With the aim to stabilize social riots and promote economic growth, the colonial welfare state (Castells,2010,p.278) with a new governor started Ten-year Housing Program (fig.1.34) for the working class. In 1978, Home Ownership Scheme started the privatization process of public housing. Till this period, the public housing were mainly built up next to industrial areas (fig.1.35) to support industry growth, so working class benefitted from these housing policies. Government’s intervention to housing was releasing the pressure of industry owners.
1. Introduction
4) 1987-2002 (fig.1.36):

Socio-economic condition

In 1984, the agreement between China and British government cleared the rumors of the future of Hong Kong. This gave confidence to the economy development. Hong Kong as one of the Four Asian Tigers, became one of the leading international financial centers in the 1980s. Most of the production industry has moved to PRD region. This resulted in a large number of rezoned industrial area (fig.1.37). Many industrial areas turned to office and other business areas (fig.1.38). But, the property market boomed till 1997, when the Asian Financial Crisis happened after Hong Kong returned to China.

Urban Plan

In 1996, ‘Territorial Development Strategy Review’ (fig.1.39) was published. The most important part of this plan was putting Shen Zhen into the masterplan. Though connections between Shen Zhen and Hong Kong increased since 1978, the government realized the importance of those connections till the 1990s.

Public Housing

On the one hand, government controlled land sale for high revenue, which indirectly raised the private housing price. On the other hand, Housing Authority provided Public Rental Housing to low-income People and subsidized housing sale to middle income people with Home Ownership Scheme (fig.1.40). This government intervention into property market couldn’t cool the over heated proper market. Speculation of housing happened not only in private housing but also in public housing. Property bubble began to expand till the Asian Economic Crisis in 1997, making hundreds of people became negative equity. During this period, the process of privatization of public housing sped up, and a huge number of public housing were built up all over the territory (fig.1.41).
1. Introduction

Fig. 1.43: New industry area distribution till 2011, Based on Source: HKSTRC, 2011

Fig. 1.44: Hong Kong Science Park, Source: Google Image

Fig. 1.45: HK 2030 recommended development pattern (2007), Based on Source: HK 2030, 2009

Schematic Spatial Concepts
- Metro core
- Northern development axis
- Southern development axis
- Central development axis
- Regional transport corridor

Recommended development pattern:
- New development area (mixed use)
- Reinforcement area (residential)
- Reinforcement area (non-residential)
- Possible strategic highway by 2030
- Possible railway line by 2030

Hong Kong
- Main port
- CBD
- Highway
- MTR line
- Cross boundary way
- 24 hour Cross boundary buses
- Border crossing point
Now, the main economic sector of Hong Kong is financial service, Trading and logistics, tourism and producer and professional service (Gov HK, 2011). In this period, on the PRD regional scale, Hong Kong - Shen Zhen city region is expected to be one of the three main cores. In Hong Kong, the main industrial estates (fig.1.43) focus on new technology and innovation industry (fig.1.44). The CBD area expands through the renewal of city center and provides a large number of service employments, from the highest level like administrative executive to the lowest level like cleaners.

Urban Plan
Infrastructure is well constructed till this moment, especially the efficiency MTR system has reached most part of urban settlement. In 2007, ‘Hong Kong 2030’ was published. ‘Hong Kong 2030’ suggested more links within the Greater PRD region, especially cooperation with Shen Zhen. The recommended development pattern (fig.1.45) focusing on three axes development:

1). Metro Development Core: Intensive commercial/business zones and housing for urban-style living;
2). Central Development Axis: Community-type housing and education/knowledge-building facilities;
3). Southern Development Axis: Logistics and major tourism facilities;
4). Northern Development Axis: Non-intensive technology and business zones and other uses that capitalise on the strategic advantage of the boundary location. (HK 2030, 2009)

Public Housing
After the financial crisis in 1997, housing price continued decreasing till 2003. Government decided to free the property market in order to boost property price. Housing policy changed to Big Market Small Government (HK 2030, 2009), which means that the government only focused on supplying land for developers and providing public rental housing only for low-income people. From this period on, public housing is still in construction (fig.1.46) in large amount in new towns (fig.1.47). However, it has detached from economic growth, but becomes a social burden. So, a new ideology of public housing forms in Hong Kong, together with new problems.
Housing type in Hong Kong (Domestic Households, total 2,343,000 in 2011)

- Public Temporary Housing (0%)
  (All cleared in 2001)

- Public Permanent Housing (46.9%)

- Private Temporary Housing (0.7%)

- Private Permanent Housing (52.4%)
  - Private house / Villas / Village house / Staff quarters
  - HS Urban Improvement Scheme Flats
  - Flats of Hong Kong Settlers Housing Corporation Limited
  - HOS/MIHS/PSPS/RPS/MSS/TIPS/SSFS/SCS flats that can be traded in the open market (from 2001)

- Rental Flats (30.8%)
  - PRH & IR by HA
  - PRH & SE by HS

- Subsidized Sale Flats (16.2%)
  - TPS, HOS, PSPS, MIHS, BROI, MSS by HA
  - SSFS, SSDS by HS

Fig. 1.48: Housing type in HK, Based on source: HA, 2011

This diagram shows the basic housing type in HK, basically, there are two types: Public housing and Private housing, then each type consists of temporary housing and permanent housing. HA (Hong Kong Housing Authority) is a government department in charge of public housing, HS (Hong Kong Housing Society) is a non-government organisation helping with some housing programs. At the beginning, there were only Public Rental Housing (PRH), later, a series of programs like HOS, TPS, help middle-income people purchasing their own house with a discount, it is called Subsidized Sales Flats. Then all the programs stopped because the dramatic change in economic and housing market. Right now, the government is only responsible to provide PRH for low-income people. However, some people propose to restart programs like HOS so that more people can buy their own houses.

Fig. 1.49: Number of live applicants for public housing 2001-2011, the number of applicants increased dramatically because the extreme high housing price in market. Based on source: HA, 2011

Fig. 1.50: Distribution of Population by type of housing 1998-2011, it shows that more and more people live in private housing, partly because of the privatilization of public housing. Based on source: HA, 2011
Current condition

There are two main categories of housing type in Hong Kong: the public and the private (fig.1.48). In the public sector, there is a distinction between Public Rental Flats (PRH) and Subsidized Sale Flats. PRH is mainly for low-income people with means-tested subject subsidies. Applicants usually have to wait 2-3 years for a PRH house, however the waiting time is getting longer in recent years. The number of applicants for public housing increased from 108,000 in 2001 to 152,000 in 2011 (fig.1.49). Subsidized Sale Flats is mainly for higher low-income people and middle-income people to buy their own houses, and many related housing policies, like HOS, TPS and PSPS, were launched to support the privatization of public housing.

According to the latest figure (fig.1.50), about 46.9% of the domestic households live in public housing, which consist of 47.7% of total population. Due to the privatization of public housing, the proportion of population living in public housing decreased in the past decade. Moreover, the housing stock in the public sector increased far more less than in the private sector, that 280,000 flats were added in the private sector in the past decade while only 73,000 flats increased in the public sector (fig.1.51).

Since 2002, the public expenditure on housing from the government decreased (fig.1.52). From 2003, private housing price began to rise again, almost reach the price in 1997 when the property bubble broke down. People can’t afford to buy a house in the market, at the same time, housing became a speculation tool attracting rich people from China mainland which again raise the housing price. Many people began to protest for affordable housing and more public housing. Currently, housing problem is the main root of social discontent in Hong Kong.
Housing Trend on the theoretical level

There are differences between the housing systems of three welfare state regimes in western countries (Esping-Andersen, 1990; Hoekstra, 2003, p. 62) (fig. 1.53). Through the history of Housing Policy, several trends are clearly shown in dominant power, target groups and housing types (fig. 1.54). Though Hong Kong doesn’t belong to any of the welfare state regimes on the theoretical level, however according to the criteria, Hong Kong currently is heading for the Liberal welfare state which gives priority to market determination and concentrates mainly on low-income groups with mean-tested subject subsidies. The future of public housing in Hong Kong might be foreseen in the socially and spatially segregated and notorious neighborhoods in the United States.

It is important to realize that the purpose of Hong Kong government to build public housing was never for welfare like the Social-democratic welfare state regime, but always with hidden agenda of economic growth and control the land for further development. Also the target group of public housing was not low-income groups but low-income and middle-income workers who were the main force of economic development. The housing policy worked well in the past decades because the housing provision was based on existing employment, and people were grateful for the government although the original intention was not purely to give them housing.

However, with the tremendous change in economic structure, the working class were no longer the main force of development, especially the low-income people without professional skill and knowledge are thrown into the fourth world (Castells, 2010) where the worthless population disconnected with the network of valuable functions and people.

<table>
<thead>
<tr>
<th>Social-democratic</th>
<th>Corporatist</th>
<th>Liberal</th>
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<tbody>
<tr>
<td>Stratification</td>
<td>high, based on social status</td>
<td>high, based on social status</td>
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<td>Dominant power</td>
<td>state</td>
<td>family, NGO</td>
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<tr>
<td>Housing objectives</td>
<td>universal high housing quality</td>
<td>preserve social stratification, stimulate private actors</td>
</tr>
<tr>
<td>Subsidisation</td>
<td>large scale production subsidies</td>
<td>segmented subsidies, specific arrangement for specific groups</td>
</tr>
<tr>
<td>Price setting &amp; regulation</td>
<td>strong state influence</td>
<td>moderate state influence to correct negative effect of market</td>
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<tr>
<td>Housing allocation</td>
<td>on basis of need</td>
<td>state intervention to correct market, certain groups be favoured</td>
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<tr>
<td>Organisation</td>
<td>strict spatial planning</td>
<td>moderate strict spatial planning</td>
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<tr>
<td>Housing provision</td>
<td>state takes initiative for new housing production</td>
<td>private vector (households, small companies) takes initiative</td>
</tr>
</tbody>
</table>

Fig. 1.53: Differences between the housing systems of the welfare state regimes, Based on source: Hoekstra, 2003

<table>
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<tr>
<td>Dominant power</td>
<td>Market</td>
<td>Government intervention (land and housing sale)</td>
<td>Big market small government</td>
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<tr>
<td>Target groups</td>
<td>Fire victims</td>
<td>residents of planned area</td>
<td>working class</td>
<td>low-income middle-income</td>
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<tr>
<td>Housing type</td>
<td>Squatter</td>
<td>resettlement</td>
<td>low-cost housing</td>
<td>subsidized sale housing</td>
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Fig. 1.54: Housing policy trend in HK

After studying the public housing history in HK, several trends are clearly shown. The dominant power changed from market to government who has a great power over land and housing sale, then recently the government retreat as a land provider and leave the housing to the market. The target groups of public housing also changed along the time, because it is never for the poor but for ones who can contribute to economic growth. But now, since the economics rely on the ones who don’t need public housing, so public housing became a kind of welfare for low-income people. Finally, the housing types changed with the residents. They showed vividly how public housing evolved with the socio-economic changes and the living condition of HK people.
Nowadays, public housing is no longer appreciated by citizens like before. Public housing became an excuse to send the worthless people to the remote New Towns. But due to socio-economic reasons, some new towns were not built up as the planned concept of self-sufficient and balanced development. Then some new towns became public housing clusters without basic living opportunities. Although, new towns were connected to city center by efficient MTR system, but for the large number of low-income people who lived in public rental housing, the expensive transportation fee became the barrier of getting a job in city center. Without a stable job, public housing problems finally resulted in social problems like crime and poverty.

On one hand, the housing problem of Hong Kong shouldn’t be considered as merely lack of housing, but as an urban problem with urban issues to consider like infrastructure, urban facilities and socio-economic life. The history of public housing in Hong Kong has already told us that purely building more housing would result in worse urban and social problems. So, the problem definition (fig.1.55) of housing problem in Hong Kong is lack of good living environment where people not only have housing, but a living. Since the target group of public housing is low-income people, the future plan for public housing should be how to provide good living environment for low-income people, a place where they can earn a living.

On the other hand, when new town became the main construction area for public housing, some of the new towns turned into isolated islands instead of ‘balance development’ because of exclusive development process between the government and real estate developer. The real demands of public housing residents are not well-considered during the construction of new town. As a result, some new towns become public housing cluster, as well as sleeping towns for HK centre.

So, new towns of HK shouldn’t be constrained in simple urban spatial structure of HK center and New Town. The spatial position of new towns should be reflected on different scales: regional scale like PRD region and HK-SZ region; New town regions like West New Territory (WNT) and East New Territory (ENT); and the relation between different New towns. The potential of new towns on spatial structure of different scales would provide new development opportunities.

In the following chapters, this project would try to explore an inclusive development strategy in such a public housing cluster in Hong Kong - the new town of Tin Shui Wai (TSW).

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**Problem Statement**

**New Town in Urban Spatial Structure**

- **HK center**
- **New Town**
- **Regional scale:** PRD region, HK-SZ
- **New Town region:** WNT-ENT-NNT
- **Relation between New Towns**

**Fig. 1.55: Problem definition of the project**
1. Introduction

Fig. 1.56: the location of Tin Shui Wai in HK (top) and Yuen Long district (bottom)

Fig. 1.57: Tin Shui Wai and Amsterdam center comparison of size

Fig. 1.58: Population by type of quarters in Tin Shui Wai, Based on source: Census data, 2006

The figures shows TSW is a public housing cluster with 61.5% of households live in PRH, and 21.9% in SSF
3.1 The Besieged City

Tin Shui Wai is one of the two new towns developed in the district of Yuen Long in the northwest of Hong Kong (fig.1.56). It has the highest population density among all the new towns with nearly 300,000 people living on the area of 4.88 km². The size of Tin Shui Wai is smaller than the city center of Amsterdam (fig.1.57), but the population density is much higher. A large number of public housing clustered in Tin Shui Wai, 61.5% of population live in Public Rental Flats (fig.1.58), especially in the northern part, the proportion is 85%. Also 20% of population live on the subsidies from the government.

Tin Shui Wai is 25 km from the city center and developed from a fishing village in the late 1980s (fig.1.59). But how did TSW become the Besieged City? There are mainly three reasons (fig. 1.60):

1. Development and Planning approach

The development of TSW was prompted by real estate development and sped up by public housing policies (fig. 1.62 on next page). The government couldn’t launch other projects in this area partly because of a private agreement which was recently discovered by media between the government and the developer (Kwok, 2010). As a result, living expense is not cheap because most shopping malls are monopolized by big corporations. Right now, there is quite a few cheap consumption spaces for low-income residents.

The whole development process of TSW (fig. 1.61) was between the government and private developer, and the planning approach is top down and exclusive. Most importantly, the benefit of residents in the Community are not well-considered, especially the large population of low-income groups in public housing are trapped in this Besieged City.
Fig. 1.62: the development history of Tin Shui Wai

The map on the left shows construction period of different housing estates. The scheme on the right shows the changes of public housing policies which effect the development plan of TSW. It was started with private housing estate in the south part. Later, because of the changing public housing policies, more and more public housing were build up in a short period. From 1991 till 2008, 13.8% of the total production of public housing in HK were in TSW. Especially between 1999-2005, 21% of total public housing production happened in TSW. As a result, nearly 100,000 residents moved to TSW in the short 5 years time.
1954 Resettlement programme of She Kip Mei fire victims as the starting point of Public Housing in Hong Kong

1961 The Government Low-cost Housing Programme was introduced

1972 Ten-year Housing Programme (45,000 housing units/year)

1978 Home Ownership Scheme (HOS) started. 1979 Private Sector Participation Scheme (PSPS) started.

1979 Mighty City Company Limited (MCL) bought the land of TSW and proposed a new town project plan to the government

1982 Agreement between the government and MCL was signed, the government bought land back in TSW and handed over 38.8 ha to MCL for development into a private housing estate and a commercial complex.

1991-2008: 13.8% of total public housing production in HK was in TSW


1997 Chief Executive announced 85,000 housing unit production per year.

1998 Under TSW Outline Zoning Plan, the new town was plan for 350,000 people with 75% intended for public housing.

2000 Population intake in TSW north. TSW south had a population of 187,000.

2004 100,000 residents in TSW

2003 Cessation of HOS and PSPS because of slump in property market.

2011 Nearly 300,000 residents in TSW

1999-2005 48,073 public housing units (21% of HK)

2000 100,000 new residents to TSW

1998-2000 33,300 abandoned sale flats transfer to rental flats in TSW

1992-2005 73,700 abandoned sale flats transfer to rental flats in TSW

1950

1960

1970

1980

1990

2000

2010

Project Area - Tin Shui Wai (TSW)
2. Spatial Design

The design concept of housing estate is closed-in and inward. So, the separated housing estates become besieged island inside the besieged city. The building typology of Tin Shui Wai (fig.1.63) is very simple. There are 11 public rental housing estates, 6 subsidized sale housing courts and 3 private estates (fig.1.64). A typology sample of public housing estates (fig.1.65): 20-40 story housing buildings, a primary school and a middle school with playgrounds, some have a service building and a sharing shopping center in the edge of the block, and this sample just copy 15 times on the ground. Housing, in many cases, are connected directed to shopping center and station with skywalk which is a typical architecture structure in Hong Kong. The only variation is that the private estates are surrounded by a big park (TSW park) and most of the green space.

In 2003, the new MTR line extended to Tin Shui Wai, but it is still not a good deal to get a waitress or cleaner job in the city center with the long and expensive trip every day. For the majority of the residents here, namely low-income people, expensive transportation fee trapped them in this besieged city on the periphery of Hong Kong, while inadequate job opportunities in Tin Shui Wai and surrounding new towns trapped them in their small public housing waiting for the subsidy from government to live on. So, the spatial design of housing estates and other facilities in TSW worsen the living condition of low-income residents. The impression of TSW is vividly shown in fig.1.66.
1. Introduction

Fig. 1.67: Birth place of residents of Tin Shui Wai and HK, source: HKU SWSA, 2009

Fig. 1.68: Median household income in TSW and HK in 2001 & 2006, source: HKU SWSA, 2009

Fig. 1.69: Age distribution in TSW and HK in 2006, source: HKU SWSA, 2009
3. Bad Public Image

The situation got even worse in the past decade with more and more low-income people settled here, especially new migrants. The median household income in TSW is lower than HK average (fig. 1.67), and the gap increased in recent years. The percentage of new migrants in TSW is higher than that of HK (fig. 1.68), 36.6% of the population in TSW were born in China mainland. The unemployment rate of TSW is 9.1% in 2006 (HKU SWSA, 2009), the highest in HK. Moreover, the percentage of young population in TSW is quite large compared to HK (fig. 1.69). Many young people couldn’t find a job nearby, so youth crime is particularly high in TSW. A film called ‘Besieged city’ (fig. 1.70) just represented youth crime happened in TSW.

Several shocking murders happened in Tin Shui Wai in the beginning of the new millennium and brought Tin Shui Wai to the spotlight of public media. Another film called ‘Night and Fog’ was made based on a true murder case in TSW (fig. 1.70). Later, City of Misery was entitled to Tin Shui Wai because the high rate of poverty, unemployment, suicide and crime.

Since then, a bad public image of TSW began to grow in HK. The residents of TSW even have trouble getting a job in other parts of HK, not to mention attract new development opportunities. Many NGOs help the residents to release pressure. The government paid some budget for psychological assistance of the residents, but no substantial solutions were implemented. So, the future of TSW is still in the misery.
1. Introduction

Fig. 1.71: Different scales used in this project:
left above: Bay area scale (part of PRD region)
left below: Regional scale (HK and SZ)
right above: West New Territory (WNT) scale (four new towns, TM in TM district, YL, TSW & HSK in YL district, HSK is a new development area)
right below: TSW scale
Project Objective - ‘Opening the Besieged City’

Tin Shui Wai could be considered as a fourth world which is out of the network of the mainstream of Hong Kong as a global financial metropolis and deserted at the edge of the metropolitan area. However, from Urbanism views, it still has potentials on different scales (fig. 1.71). Right now, the government is pushing a new development area called HSK next to TSW. With the big investment of infrastructure connection, WNT area would attract more development on regional scale in the coming future. Since the development plan of HSK is not decided yet, it is hard to say whether the new development could bring a bright future to TSW. Especially, the new development might hardly improve the living condition of low-income groups in TSW.

The basic idea of this project is to develop a development strategy that could benefit the low-income groups in TSW. The development strategy, as a supplement to the government’s plan, would follow the development trend of WNT area and make good use of nature and human resources in local environment. Unlike government’s plan which focusing on economic growth and large scale benefits, this development strategy will focus on the benefits low-income groups and small scale interventions.

The aim of the project is to improve the daily life quality of low-income groups, creating spatial opportunities for local economy development, promoting bicycle as a transportation mode to decrease living cost and make good use of new public space to benefit low-income groups. The main problem of HK society is not economic development, but growing rich-poor gap. Improving the living condition of low-income groups would help to improve the society of HK. So, the other aim of this project is to call the attention of planning department and our ever-developing society, don’t forget the ones behind and we can help them as long as we give priority to them.
Main research question:
How to develop an inclusive development strategy that may benefit the low-income groups of TSW, a new town with deprived public housing communities in HK, in line with the regional development of HK-SZ (different scales are shown in Fig.1.71)?

Sub-research questions:
1) What are the problems of TSW within the public housing, socio-economic and spatial networks in HK?
   a. What are the public housing, socio-economic and spatial networks in HK on regional and metropolitan scale?
   b. What is the position of TSW in those networks?

2) What are the potentials for a development strategy that can benefit low-income groups in TSW on three scales: regional, WNT and TSW scale?
   a. On regional scale, what are the potentials of WNT area as a new connecting zone between HK and SZ?
   b. On WNT scale, what are the potentials to develop local economy for low-income groups?
   c. On TSW scale, what are the potentials for community development and how to make good use of potentials created on different scale?

3) What kind of spatial condition and urban management can socio-spatially realize the development strategy?
   a. How to empower low-income communities to realize the development plan?
   b. How to realize the development plan spatially in places like public space?
Methodology

Different methods will be used to answer each sub-reasearch questions will be shown in a diagram within the time schedule framework (fig. 1.72), The theoretical and methodology framework of the whole graduation project is shown in fig.1.73. Here is the discription for detail methods:

**For Sub- RQ1:**
- **Literature study:** policy document, official statistics and maps, academic papers, professional books
- **Mapping:**
  - HKscale: transport network, socio-economic & urban spatial structure, public housing policy & distribution.
  - TSW scale: transport network, building typology analysis, service facility analysis.
- **Site visit:** experience Tin Shui Wai, interview residents

**For Sub- RQ2:**
- **Literature study:** policy document, official statistics and maps, academic papers
- **Mapping:**
  - Regional scale: HK-SZ cross-boundary transport connection, HK-SZ urban structure, HK new town analysis
  - WNT scale: transport / landscape / local service analysis
  - TSW scale: local service analysis, public space analysis
- **Space syntax:** analysis on WNT scale

**For Sub- RQ3:**
- **Reference Study** for strategy and design interventions
Main Research Question: How to develop an inclusive development strategy that may benefit the low-income groups of TSW, a new town with deprived public housing communities in HK, in line with the regional development of HK-SZ?

Sub Research Question 1:
What are the problems of TSW within the public housing, socio-economic and spatial networks in HK?

a. What are the public housing, socio-economic and spatial networks in HK on regional and metropolitan scale?
b. What is the position of TSW in those networks?

Sub Research Question 2:
What are the potentials for an inclusive development strategy to benefit low-income groups in TSW on regional, WNT and TSW scale?

a. On regional scale, what are the potentials of WNT area as a new connecting zone between HK and SZ?
b. On WNT scale, how to develop local economy for low-income groups?
c. On TSW scale, what are the potentials for community development and how to make good use of potentials created on all scales?

Sub Research Question 3:
What kind of spatial condition and urban management can socio-spatially realize the development strategy?

a. How to empower low-income communities to realize the development plan?
b. How to realize the development plan in space like public space?

Methods
- Literature study
- Mapping
- Site visit
- Problem statement
- Thesis plan
- Strategy (regional/WNT/TSW scale)
- Vision (regional/WNT/TSW scale)
- Reference Study
- Design (TSW scale)
- Thesis

Evaluation
Graduation

Fig. 1.72: Methodology scheme by Research Question in time schedule
Fig. 1.73: Methodology diagram and theoretical framework of the graduation project
Social relevance

“Some young people can’t afford to buy a house or a flat and they don’t have a place to live. So it means they can’t get married. And public housing isn’t sufficient,” said Helen Yip, a clerk in her 40s who joined the march with three friends.


Housing problem is the main root of social discontent in Hong Kong. Unaffordable housing price and lacking of public housing increased social inequality. However, the housing problem couldn’t be solved by purely building new housing, but without considering other urban issues like infrastructure, employment and social life. This lack of consideration resulted in public housing clusters like TSW and finally caused many social problems. So, the problem definition of housing is not lack of housing, but lack of good living environment where people not only have housing, but a living.

In cities like Hong Kong, much of the poverty is not the problem of individual but caused by the socio-economic system. This system couldn’t provide opportunities for poor people living a descent life through hard work. The existing public housing clusters like TSW are not helping the poor but pushing them into a more desperate and helpless condition. The public media called TSW the ‘Besieged City’ and ‘City of Misery’ because of the murder cases happened in recent years. These titles made the impression of TSW even more misery in public eyes. This project will illustrate the causality of TSW problem and public housing problem in HK. The residents of TSW are the victims of the socio-economic structure and public housing policy, so they shouldn’t be discriminated by the public. Instead, the government and the whole society should help them.

On the social level, the improvement of TSW could decrease the rich-poor gap of HK and social discontent caused by social inequality.

Academic relevance

Transforming deprived public housing communities is an interesting but hard issue in the academic field. It is a very practical question, and the solution of those problems would be much related with local context. Based on my limited research and reading, most of the studies were done in western cities. So, this project would be a new example of this issue in the context of Hong Kong, a unique Chinese city.

Moreover, in Hong Kong, most of the study of my project area - Tin Shui Wai - is focused in the fields of sociology and economic development. So this project will contribute in the field of spatial and urbanism studies.
Ethical relevance

This project is searching for a method to integrate the low-income groups into the development plan and finally the low-income groups could get benefit from the development. Generally speaking, development plan in HK give priority to economic growth and large scale benefits, even to the interest of corporations and individuals sometimes. As a result, low-income groups could hardly benefit from those developments.

It doesn’t mean that the government’s plans are wrong, but the government should concern the benefit of low-income groups more in the future. The main problem of HK society is not economic development, but growing rich-poor gap. Improving the living condition of the poor would help to improve the society of HK.

So, this urbanism project, as an experiment, will try to figure out what will happen if development plan give priority to low-income groups? Will the benefits of low-income groups bring development on local scale? Will social justice bring a better future for Hong Kong? As urbanists, we can’t save the world, but we might do a little help to the people in hard condition as long as we can, because more social justice in the field of Urbanism will benefit the whole urban area spatially and socially.

Studio relevance

My graduation studio is Complex Cities studio, and I also attended another studio in our faculty before P1 - Architecture Thinking studio of DSD which studied Hong Kong.

Complex Cities studio aims to investigate spatial changes under the context of globalization and study the complexity of urban environment. This is exactly the condition I am facing in my project. These two studios helps me to define the complicated urban problems with sharp viewpoints.

The methodology of Complex Cities studio is to formulate plans, strategies and designs as positive interventions to the project area with socio-economic and sustainable concerns. With the help of Complex Cities studio, I am able to submit a convincing and well-developed proposal as an inclusive development strategy to my project area - TSW, using urban solutions to solve existing urban problems.
2. Research & Analysis

Theoretical support
Analysis on Regional scale
Analysis on WNT scale
Analysis on TSW scale
Conclusion
Transforming deprived public housing communities
From housing and community development perspectives

Abstract
‘A central feature of recent economic restructuring is the development of new spatial patterns of unemployment and worklessness throughout advanced industrial economies’ (North & Syrett, 2006, p.6). On the spatial term, it resulted in deprived public housing communities both in the city centres like the United States and in the new towns on the periphery of the city like UK and Hong Kong. Because these deprived public housing areas are cut off from spatial connection, economic opportunities and social resources of the mainstream network, the residents there lost the opportunities to upward social mobility. The aim of this paper is to illustrate two types of theory that might bring light to the transformation of deprived public housing communities: housing solutions and community development strategy. The conclusion is that the combination of two theories on different scales might be a more comprehensive solution for the problem. Finally, if different experts could sit together, talk with local residents, encourage and help residents improving their living environment on different scales and perspectives, more valuable theory will come out in the future.

Key words
deprived public housing communities; de-concentration; social mix; community development; public space; local economy development

2. Research & Analysis

Theoretical Support - Literature Review Paper

The theoretical support of the graduation project is mainly from the paper of Literature Review, which is the final result of the course Theory of Urbanism. The aim of literature review is to study some theories of one general research topic, and finally use the theories to convince the project and also contribute to the knowledge body of Urbanism. The aim of this paper is to find some theories and methods to support my future vision and strategy. This paper helps me to formulate some basic directions of my graduation project.
1 Introduction

Under the background of globalization and neoliberalism economic system, many cities in developed world emphasis on free economy, competitive environment and service-oriented development. As a result, ‘a central feature of recent economic restructuring is the development of new spatial patterns of unemployment and worklessness throughout advanced industrial economies’ (North & Syrett, 2006, p.6). In the spatial term, the outcome is uneven geographical development, which is described as the ‘fourth world’ (Castells, 2010) where the low-income people without professional skill and knowledge are thrown into.

There are five causalities of urban poverty based on the theory of Bradshaw (2007): 1) poverty caused by individual deficiencies; 2) poverty caused by cultural belief systems that support subcultures of poverty; 3) poverty caused by Economic, political and social distortions; 4) poverty caused by geographical disparities; and 5) poverty caused by cumulative and cyclical interdependencies. ‘In some urban districts, the homogeneity of the housing stock has resulted in significant concentrations of low-income households and, indirectly, minority ethnic groups that are over-represented amongst the urban poor’ (Bolt, Phillips & Van Kempen, 2010, p.130). In this paper, the poverty problems of deprived communities with public housing are caused by mainly socioeconomic distortions or geographic disparities. In most cases, these deprived communities locate both in the city centres like the United States and in the new towns on the periphery of the city like UK and Hong Kong.

‘When socially deprived individuals and households live in the same neighbourhood, this clustering of poverty, unemployment, and welfare dependency could create a local climate, a neighbourhood culture, generating attitudes and practices that would further deepen the social isolation of the local residents’ (Bolt, Burgers & van Kempen, 1998, p.86). Because these deprived public housing areas are cut off from spatial connection, economic opportunities and social resources of the mainstream network, so the residents here lost the opportunities to upward social mobility.

The aim of this paper is to find some practical solutions to transform deprived public housing communities after a brief review of related theories and methods. It is a very complicated problem that needs spatial, economic and social considerations. Also, it is a very practical problem that is strongly context based. So, there is no ready-made theories just for the topic, especially the one that could fit into my graduation project in the next step. However, after a broad range of literature review searching for a theory, I found two fields that bring light to deprived public housing communities: social mix housing and community development, because they are more likely to be realized in my project area. Of course, there are also other fields that could contribute to the problem like spatial segregation, regional development, etc.

Following the introduction, two sections will be unfolded to illustrate theories and methods in:

1) housing solution in way of de-concentration and social mixing
2) community development in way of local economy development and social integration. In this paper, social integration will be discussed in terms of the need for public space.

In the last part, some evaluation of the above theories and methods will be given in the conclusion part. Also, a recommended theoretical strategy will be shown for my graduation project. Finally, several recommendations will be added to further reflect on the transformation of deprived public housing communities.

2 Housing solution

At first glance, the problems of deprived public housing communities are housing problems. In other words, high rate of public housing with low-income people caused social-spatial problems. So, two kinds of housing solution came up following this logic, one is de-concentration, the other is social mixing.

Inspired by the classic work by Wilson who studied the inner city poverty concentration, development strategies and programs of ‘De-concentration’ of poverty appeared (Stal & Zuberi, 2010). De-concentration is to de-concentrating poor residents of deprived communities to better developed areas. ‘In the US, Federally sponsored de-concentration attempts to disperse poverty via two linked federal policy initiatives. First, through the demolition of public housing and, second, through the use of housing vouchers intended to provide the displaced residents of public housing with greater economic opportunity through increased residential choice.’ (Crump, 2002, p.586). However, Crump (2002) argued that the strategies of these de-concentration programs were not for the interests of local residents of the deprived communities, but merely for the area’s economic benefits. There are also some other opponents (Goetz, 2003 cited by Stal & Zuberi, 2010) think that de-concentration programs should be used to promote local neighbourhoods and bring more chances to upward social mobility of local residents on local scale.

In European countries, ‘the creation of areas of mixed housing tenure, sometimes called ‘balanced communities’ became a popular strategic intervention to transform deprived communities’ (Bolt, Phillips & Van Kempen, 2010, p.130).
Musterd and van Kempen (2007) argued that social mixing housing strategy has the good wish that if there are diverse housing types and residents from different social class, some affluent households would remain in these areas and bring more socio-economic dynamics. Strategic interventions to attract more affluent households may include demolition of some public rental housing, construction of higher quality housing and mixed tenure dwellings (Bolt, Phillips & Van Kempen, 2010).

After studying on collection of papers on social mix housing strategies, Bolt, Phillips & Van Kempen (2010) concluded that such social mix policies rarely reach the goal, because, ‘first, residential mixing cannot be assumed to enhance community cohesion or people’s social capital. On the contrary, urban renewal policies have been found to disrupt communities. Displaced households experience difficulties in establishing new social ties. Second, tenure diversification does not always lead to more opportunities for a housing career within the neighbourhood’ (Bolt, Phillips & Van Kempen, 2010, p.132).

Both de-concentration and social mixing housing policies simplified the complexity of deprived community problems as housing problem rather than urban problem. So, housing solutions alone couldn’t solve the problem of deprived communities. Moreover, they are very effective in deflecting attention away from the main causes of the ‘urban problem’ (Bolt, Phillips & Van Kempen, 2010).

3 Community development

As mentioned in the introduction part, there are different causalities of urban poverty, so different anti-poverty programs in community development are implemented. For poverty types studied in this paper, several suggestions were made by Bradshaw (2007): 1). change the socio-economic system by grassroots social movement, independent institution willing to help the poor and change the policies; 2). Build self-sustaining communities through good visioning and planning and create opportunities for local resident. But, how to implement these suggestions in reality is a hard question for urbanists and planners. After some literature review, I found that there are two aspects that are more relevant for urbanism studies: local economy development and social integration by public space.

3.1 Local economy development

‘If the global economy no longer provides at affordable prices then we increasingly have to refocus on how things can be done (with less energy input) at the local level—and, it is contended, rethinking what kind of consumption processes are realistic and appropriate for these circumstances’ (Atkinson, 2005, p.292). This is especially true for deprived communities. For the resident of deprived communities, some might rely on government welfare subsidy, a stable job or economic opportunity in local or regional area might be the most crucial issue that can directly upgrade their living condition. Although employment and economic development are the central issue of policy initiatives to regenerate deprived neighbourhoods, but there are quite a few strong economic dimension in the current renewal projects, and this lack of consideration is seriously constraining the efficiency of current projects (North & Syrett, 2006).

For deprived communities, who lack of optimal combination of resources, how to make good use of existing and hidden assets through bottom-up approaches are crucial element for local economy development (Squazzoni, 2008). Following this staring point, there are several new ideas to think about local economy development in deprived areas.

One idea is the reconsideration of marketplace. Burkett (2011) argued that, people normally had a binary interpretation of the markets that people living in poverty access, as shown in Illustration 1. It means residents of deprived communities either get goods and service for free or funded, or they access from fully commercialized providers. However, Burkett suggested that there is a broader spectrum of ‘marketplaces’ that people can potentially access – that is, places and spaces where people are able to access goods and services that they need to survive. If people would develop the potential marketplaces like mutual aid market, family market, informal market and social market shown in Illustration 2, there would be much more opportunities and spaces that can contribute to the development of deprived communities and finally improve the living quality of local residents.

Illustration 1. Binary interpretation of the markets that people living in poverty access. source: (Burkett, 2011)
On the regional level, ‘the challenge is to extend the market area beyond the local arena, or to focus on people who will bring money into the area (tourists)’ (Marais & Botes, 2007, p.391). For example, industry area disappeared or decayed in some developed areas, tourism might become a new development potential if it has good natural or cultural resources, and this will bring new opportunities to local residents, especially for people without professional skills and knowledge to work in other areas. The important thing here is to reveal the potentials on regional scale and surrounding areas that could make direct connections to the resident of deprived communities. This could be implemented by both big projects and small interventions.

### 3.2 Social integration by Public space

If local economy development could improve the living condition of low-income groups by material revenue, then social integration will improve the quality of their social life through more communication and connection to the outside world.

In the project called ‘promoting the mobilization of low-income people to reduce and eliminate poverty’ in Canadian cities, several recommendations were listed. The first recommendation is to ‘Provide opportunities and spaces for people living in poverty to come together, and name, explore, and address issues’. Shared community spaces are strongly needed from the participants. This includes a range of physical spaces: gathering places, artistic places or ‘cultural sanctuaries’, recreation places (including lower priced recreation centres, access to local schools in summer, and bike lanes), green space and community gardens (with sheds and bathrooms), and places for children (Ravensbergen & VanderPlaat, 2009, p.398).

Public space in deprived communities could contribute to the regeneration of deprived communities in several terms, like the space for social communication, the space for local economy development, and the space for leisure activities with nice landscape.

‘As Jacobs (1961) long ago emphasized, specific physical characteristics of streets and land uses (e.g. relatively dense, mixed use spaces) can bring together people engaged in a diversity of activities at all hours of the day and night. This, in turn, creates a safe and pleasurable environment, which functions, on the one hand, to reproduce existing social relations and facilitate community bonding and, on the other hand, to create the conditions to support local economic activity. As such, the economic potential of public space is entwined with and may even be dependent on social and environmental features’ (Grodach, 2009, p.477).
When public spaces are successful [...] they will increase opportunities to participate in communal activity. This fellowship in the open nurtures the growth of public life, which is stunted by the social isolation of ghettos and suburbs. In the parks, plazas, markets, water-fronts, and natural areas of our cities, people from different cultural groups can come together in a supportive context of mutual enjoyment. As these experiences are repeated, public spaces become vessels to carry positive communal meanings’ (Carr, Francis, Rivlin & Stone, 1993, p. 344).

So, if the public space in deprived communities can develop into a place with lively social and economic activities. It will greatly improve the living environment of the whole area and even become a precious value to attract other people. Finally, it could promote the social integration of deprived communities into larger urban areas.

4 Conclusions

Transforming deprived public housing community is a complicated and practical issue. It needs varieties of research disciplines and studying fields both in theory and practice. So, it is important to realize that the problems will not be solved by a solution within one studying field, but need interdisciplinary cooperation. As illustrated in this short paper, after a limited literature review, the theory of housing solution and community development might bring light to the transformation of deprived public housing communities. Illustration 3 shows the basic finding of this paper. It will be illustrated in the next paragraph.

Illustration 3. Theories and methods of Transforming deprived public housing communities illustrated in the paper.

Illustration 4 shows the recommendation strategy for transforming deprived public housing communities: the combination of housing solution by more top-down approaches on larger scale and community development by more bottom-up approaches on local scale. These two methods should compensate and...
promote each other. Finally this recommended strategy would become a more comprehensive theoretical solution for my graduation project. Under the context of social mix with diverse socio-economic sources on larger scale, local economy development and social integration could promote each other on local scale in the process of development.

Since most of the theories available are under the context of western cities. It is still a question whether these theories and methods could be directly used in other areas, especially Chinese cities. However, the basic concept of these theories should have a universal meaning that only by giving priority to the needs of local residents during the development process, can the problems of deprived public housing communities be solved on root.

5 Recommendations

Through the limited reading, it is quite a pity to find that, sociology researchers have great ideas to development communities but constrained on the spatial level; urbanists have strong spatial analysis but lack of small but smart ideas; policy makers have ambitious plan for economic development but forget the poor people. If different experts could sit together, talk with local residents, encourage and help them improve their living environment from different scales and perspectives, maybe in the future, more valuable and strong theory and methods will come out in the knowledge body of urbanism.

Bibliography


2. Research & Analysis

Fig. 2.1: Conclusion from literature review

Fig. 2.2: Community development methods from literature review
The conclusion of literature review will guide the direction of the project and make theory support to the project. The theory study suggests that the combination of Housing solution on the regional scale and community development on the local scale will be a comprehensive solution for the project (fig.2.1).

On the regional scale - the HK-SZ scale, more high-income people could be attracted to WNT area by the development chance of HSK. On the local scale - the WNT scale and TSW scale, community development would improve the living condition of local residents. This will include local economy development and social integration (fig.2.2). And public space (fig.2.3) will be the spatial condition to realize it. Public space will be the place where different socio-economic and leisure activities could happen.

Fig. 2.3: The function of public space in this project
The Planning Department of Hong Kong, Guang Dong and Macao published ‘Study on the Action Plan for the Bay Area of the Pearl River Estuary’ (fig.2.4) in Jan 2011. The Bay Area (fig.2.5) constitutes the core of the Greater Pearl River Delta (GPRD) City-region. This study shows that the government is taking action to realize more developments on regional scale. By studying a series of planning maps, the position of WNT area in the Bay Area is shown clearly.

On the Green Network plan (fig.2.6), WNT area is on the Bay Area Greenway with a large area of Green Buffer zone because of its good natural environment and the wetland park of Hong Kong. While on another plan (fig.2.7), this area is consider to be a World-class ‘City Hallways’ in the future with the new development in HSK. On the transport level, WNT area is planned to be a Green Transport area (fig.2.8) which means giving priority to public and non-motorized transport. Moreover, the cross-boundary connections between HK and SZ (fig.2.9) will be more comprehensive in the future. It will be explained in detail on HK - SZ scale in next chapter.

Generally speaking, on the Bay Area scale, the position of WNT area is quite clear. The potential of WNT area is green environment and convenient connection to SZ as well as to other Bay areas.
Analysis on Regional scale

- **Fig. 2.6**: Green Network of Bay Area, Source: PRD Bay, 2011
- **Fig. 2.7**: World-class “City Hallways” of Bay Area, Source: PRD Bay, 2011
- **Fig. 2.8**: Green Transport System of Bay Area, Source: PRD Bay, 2011
- **Fig. 2.9**: Cross boundary Transport System of Bay Area, Source: PRD Bay, 2011
Fig. 2.10: Inter-city transport between HK - SZ and Inner-city transport from TSW in HK
HK - SZ Scale: Transport

The connection and cooperation between HK and SZ are getting more and more intensive since the Open Door Policy in 1978, especially after 1997 when HK returned China. In recent years, some people presumed that in the future, these two cities might emerge into one mega-metropolitan.

As shown in fig.2.10, more inter-city connection are planned: besides highway connections, GZ-SZ-HK Express rail line will shorten the traveling time enormously between the three cities; Western Express Line will connect the airport of SZ and HK directly with a stop in HSK, by then there might be a new MTR station in HSK and a new crossing border point nearby; moreover, the existing MTR line of East rail and West rail will be connected by Northern link, right now only East rail is directly connected with the main crossing-point to SZ, so it means in the future, West rail can also directly connected to SZ.

However, the inner-city transport from TSW to other parts of HK is both time and money consuming compare to the connection to SZ. So, the conclusion is WNT area will be the new connecting zone between HK and SZ. For WNT area, it should take advantage of its geographical location as a boundary as well as a middle-point between two cities.
2. Research & Analysis

Fig. 2.11: Cross-boundary trend figure, source: Northbound Southbound 2009
Top: 'Average daily number of cross-boundary passenger trips' shows that the number of trips increased dramatically in the last decade.

Middle: 'Number of passenger trips by usual place of residence' shows that cross-boundary passengers increased. In 2009, a large part of passengers are people living in HK (69%), visitors from the mainland (18%) and HK residents living in mainland (10%).

Bottom: 'Number of passenger trips made by visitors from the mainland by trip ends in the mainland' shows that mainland visitors increased a lot in recent years, especially visitors from SZ, the number of SZ visitors reaches nearly 41,000 which covers 42% of total mainland visitors in 2009.

Fig. 2.12: Trip purpose to HK, source: Northbound Southbound 2009
Top: 'Number of passenger trips made by visitors from the mainland by trip purpose to HK' shows most of the mainland visitors come to HK for leisure.

Bottom: 'Number of passenger trips made by HK residents living in mainland by trip purpose to HK' shows that for HK residents who live in the mainland, they come to HK mainly for work, and also school and leisure.
HK - SZ Scale: Cross-boundary trend

Since Hong Kong is still under the political policy of ‘One Country Two Systems’, there are some crossing-points between HK and SZ. Both HK residents and other Chinese need special document to cross the boundary. In recent years, some policies in favor of tourism in HK sped up the cross-boundary procedure. As shown in fig.2.11, the number of passenger trips increased enormously in the past decade, and a large part of passengers are people living in HK, followed by mainland visitors and HK residents living in mainland. It also shows that a large part of mainland visitors are from SZ and number is increasing every year.

For HK residents living in the mainland, the trip purpose to HK (fig.2.12) is mainly for work, and some for schooling and leisure. They live in mainland because of cheap housing, better living environment and cheaper living cost. For mainland visitors especially visitors from SZ, the trip purpose to HK is mostly for leisure. They would go shopping for low-tax product like electronics, clothing and cosmetics, and high-quality product that are hard to trust in the mainland like milk powder. They would also do the tourist things to fancy sightseeing or natural environment. In the past, housewives in TSW would go to SZ for cheap daily stuff like other HK residents, however, since 2010, more and more housewives of SZ began to buy daily stuff in HK because the inflation in the mainland and the depreciation of HK$ (fig.2.13).

The relationship between HK and SZ is very interesting and subtle. They are so close but so different. The residents of the two cities are clever enough to take advantage of each city.

So, for WNT area, how to make good use of the differentiation of the two cities, and how to attract commuters between the two cities as well as citizens from the two cities are all great potentials for future development.
Fig. 2.14: Urban structure of HK-SZ
HK - SZ Scale: Urban structure

The existing urban structure of HK-SZ is shown in fig. 2.14, three development axis in HK will release some pressure of the Metro Core in the future. All these three axes are developed mainly by new towns. ENT is considered to be a successful new town area by many HK citizens. ENT consists of Sha Tin (fig. 2.15), the most successful new town in HK; Tai Po, which has a legal dawn market to help elderly people earn some living; and Mo On Shan (fig. 2.16), mainly a residential area like TSW and was transformed from a mine area. The construction time of the new towns in both ENT and WNT are quite the same, and the spatial relationships between the new towns are also similar. However, after several decades of development, they are in totally different condition.

Compared to WNT, the successful elements of ENT might be: 1) direct connection to SZ and HK metro core by MTR line (fig. 2.17); 2) good natural environment and used to be a popular excursion area for HK citizen; 3) well-developed pedestrian and bicycle network; 4) regional shopping centre near MTR station which attract a lot of SZ citizens; and 5) appropriate proportion of private and public housing, with a large number of middle-class residents.

The government must also realize the huge difference between WNT and ENT, so they propose a series of infrastructure construction on regional scale in the coming future. The direct connection of East rail line to both SZ and HK core might be the basic stone for the development of ENT. In the coming future, with the new connection route in WNT (fig. 2.17), WNT area would be on the right track to follow the successful road of ENT. However, besides infrastructure connection, WNT area should also focus on building good living environment to attract diverse residents and exploring other development potentials.

The success of new towns would help to restructure the urban structure of Hong Kong. WNT area has the potential to develop into a new centrality both in Hong Kong and HK-SZ in the future.
2. Research & Analysis

Fig. 2.18: Conlusion on Regional scale
Conclusion

Based on the above analysis on regional scale, both Bay Area and HK-SZ scale. The position of WNT area in the future urban development are show in fig. 2.18 and as follows:

1). **WNT area would be a new connecting zone between HK and SZ with the new infrastructure connections**;

2). **WNT area would be a new centrality based on new development in HSK, so it will be attractive for both HK and SZ residents, especially for cross-boundary commuters**;

However, since the government’s plan of HSK development is not decided yet. So, whether the existing local residents of WNT area will benefit from future development is not sure yet, especially the low-income groups who are trapped in public housing clusters.

The relationship between my new strategy & plan and the government’s plan is shown in fig. 2.19. The New Strategy & Plan of this project would supplement the government’s plan from a bottom-up view.

![Fig. 2.19: The relationship between the government’s plan and new strategy & plan](image)
2. Research & Analysis

**Fig. 2.21: Social figures by districts, source: Census and Statistics Department, 2011**

Top: 'Median monthly household income by district, 2010' shows the household income in YL and TM is not high, lower than the overall figure of HK.

Middle: 'Proportion of households with income below average CSSA payment by district, 2010' shows that the low-income households proportion in YL and TM are quite high, especially YL tops the low-income proportion because of TSW.

Bottom: 'Proportion of workless households by district, 2010' shows that the workless households proportion is also high in YL and TM, higher than the overall figure of HK.

**Fig. 2.22: Employment rate, source: Census and Statistics Department, 2011**

Top: 'Employment status of population aged 15+ in administrative districts and unemployment rate in TSW, 2006' shows that in 2006, the unemployment rate in TSW, YL and TM are the top three in HK. Also, the job available which means the number of jobs per person in the labour force was only 0.4 compared to the overall figure of 0.8 (HKU SWSA, 2009)

Bottom: 'Unemployment rate by district, 2010' shows the unemployment rate in TM and YL is still higher than the overall figure.
Socio-economic condition

West New Territory (WNT) scale (fig.2.20) is another important scale studied in this project, which consists of YL district and TM district, with three new towns (YL, TM and TSW) and a new development area HSK. Some social figures (fig.2.21) shows that the median monthly household income in YL and TM are lower than the overall figure of HK, but the proportion of low-income households and workless households are all higher than overall figure of HK. This means that there is a large part of low-income residents in WNT area. Other figures (fig.2.22) shows that the unemployment rate of TSW, YL and TM are the highest in HK in 2006, and this rate is still high in 2010. Moreover, the job available, which means the number of jobs per person in the labour force, in TM and YL was only 0.4 compared to the overall figure of 0.8 (HKU SWSA,2009).

From the housing type perspective (fig. 2.23), the population percentage living in public rental flats is high in three new towns compared to other new towns, especially TSW has the percentage of 61.5%.

All these social figures show that the socio-economic condition in WNT area is not well at the moment. It needs some development to improve the current socio-economic conditions.
2. Research & Analysis

Fig. 2.24: Transport analysis on WNT scale
Transport Analysis

There are different types of transport connection in WNT area, from metro to light rail, bus and bicycle as shown in fig.2.24. MTR system (fig.2.25) of HK consisting of metro and light rail, is well-known around the world for its efficiency and convenience. However, MTR system is expensive for low-income people in WNT area, especially if they have a job in the city centre, the transport cost and time consuming would often stop them from the work in the end. The road is often occupied by car and light rail, so pedestrians and bicycles must use foot bridge to cross the road. Bus network is well connected and also cheaper. But bus will take longer time especially in the traffic jam during rush hours.

Generally speaking, on the ground level, pedestrian and bicycle don’t have priority. The road is made for the automobile, and it is the overall condition in HK as well as many Asian cities.

Recently, the government gave some subsidies to residents of TSW who work in the city center. However residents still have to pay a large part of their salary on transport. The subsidy is not the solution for the problem, on the contrary, it is encouraging the uneven development and monocentric urban structure in HK. Instead, efforts should be taken to promote local development on WNT scale so that people don’t have to commute to the center every day.
2. Research & Analysis

Fig. 2.26: Proposed NT cycle track network

Fig. 2.27: Bicycle use condition in TSW
Bicycle

Unlike European cities that encourage the use of bicycle, bicycle in HK is in an embarrassed condition. It might because of the hilly terrain and crowed street in the city center, so the government consider bicycle as a leisure activity rather than a type of transport mode. But things are a bit different in the new towns in New Territory where it is flatter and less populated. Bicycle network was planned in most new towns and bicycle can be seen everywhere in WNT area.

The government also propose a public bicycle network in New Territory (fig. 2.26) which is supposed to finish in 2015. This network will link different view sites and several bike rental spots will be built near MTR station. It is obvious that this network is designed for tourists. Bicycle is still not encouraged as a transport mode in HK.

This attitude to bicycle brings many problems in the design of bicycle facilities. There is not enough bicycle parking and other related bicycle facilities like rental and repair, also since bicycle is not seriously taken as a transport mode, many pedestrian walk on bicycle path (fig. 2.27). Moreover, there is not a well-designed bicycle network in WNT area that could all connect together, it means the bicycle path will suddenly stop and bicycle need to share road with car or pedestrian sometimes. All these problems make bicycle a dangerous transport.

However, if the government could upgrade the position of bicycle and make well-designed bicycle network, bicycle could become a new alternative for low-income people who want to save some transport money. It is not saying that a well-developed bicycle network will attract many people to abandon other transport modes. It is just offering another choice for people especially those have no choice at the moment.

There are already many people using bicycle to go shopping or go to work in WNT area no matter how dangerous the road is, because bicycle as a free transport will save them some transport cost. So, it is not hard to imagine, a well-developed bicycle network will help more low-income people. Most importantly, if new development in WNT area could bring some employment on local scale, this will further encourage bicycle as a transport mode and support local economy development. By then, people don’t have to travel hours to the city center, but go to work freely by bicycle and exercising themselves on the way.
2. Research & Analysis

Fig. 2.28: Landscape analysis on WNT scale
NATURE LANDSCAPE

Tai Lam Country park

Wetland park

Mai Po Nature Reserve

Fig. 2.29: Nature Landscape images on WNT scale, source: Google Image
2. Research & Analysis

SEASIDE LANDSCAPE

Golden Beach  
Lung Kwu Tan seaside  
Seafood in Lau Fau Hill

Fig. 2.30: Seaside Landscape images on WNT scale, source: Google Image

CULTURE LANDSCAPE

Castle Peak Temple  
Heritage village-Ping Shan  
Traditional event

Local Temple  
Fishing pond village

Fig. 2.31: Culture Landscape images on WNT scale, source: Google Image
Landscape Analysis

The WNT area is rich in landscape recourses. After some landscape analysis (fig.2.28), three types of landscape are shown:

1) Nature landscape (fig.2.29):
   Tai Lam Country park is the second largest country park in HK, besides beautiful sightseeing, it provides hiking route and a series of barbecue and picnic sites.
   The Wetland park is a new tourist attraction to experience the wetland with the function of ecological mitigation and education.
   Mai Po nature reserve is a precious wetland area and protected as a home for wild creatures. It attracts many birds every year, as well as visitors watching the spectacular view from nearby spots.

2) Seaside landscape (fig.2.30):
   Golden Beach is a comprehensive tourism site with beach, shopping mall, hotel and other recreation facilities. There are also some other beaches along the coast.
   Pak Nai is a natural seaside beside the village. It is well-known as a place to watch sunset.
   Lung Kwu Tan is another natural seaside next to a village with the amazing view of red trees. There is also a temple nearby.
   Lau Fau Hill in on the north part near TSW. It is famous for cheap and delicious seafood. There are many restaurants selling special seafood and attracting many visitors.
   Tsim Bei Tsui is at the border point of HK. Besides natural sight, the city of SZ is just in the opposite.

3) Culture landscape (fig.2.31):
   Castle Peak Temple is the most famous temple in HK with some historical architecture on the Castle Peak. There are some other famous temples in the WNT area and local temples in the village.
   Ping Shan is a well-preserved traditional village with a heritage trail which connects several declared monument and graded buildings. It is a perfect place to understand the traditional village culture of HK.
   There are also some fishing pond villages on the northern part near the wetland area, like Nam Sang Wai.

The landscape in WNT are diverse and with high quality. The different landscape distribute all over the area. They can be good resources for local economy development to attract visitors from both HK and SZ.
2. Research & Analysis

Fig. 2.32: Local service analysis
Local Service Analysis

The distribution of local service in WNT area shown in fig.2.32, the images (fig.2.33) and conditions are analyzed as follows. There is a main shopping center in the town centre of YL and TM respectively, but the quality of scale is not comparable to the one in Sha Tin- a new town of ENT. There are not enough marketplaces for low-income residents. Dawn market and other informal market are illegal in WNT area, while there is a legal informal market in Tai Po - a new town of ENT. However, this type of informal market is essential for low-income groups, providing not only cheap consumption, but also job opportunities. Moreover, unlike streets full of food stalls in the city centre of HK, there are not that much stalls in WNT area. These food stalls lack of special characteristics that could attract visitors. There are only three hotels in the entire area, one is five star in TM, one is four star in TSW, the other is an ordinary one in YL. Several barbecue & picnic sites near the country park are not well used.

Agriculture is not supported as an industry in HK. There are two types of farm besides normal farming (fig.2.34). One is accredited farm encouraged by government for safe farm product. It has grown to a system with production and sale. The other is leisure and organic farm, with the aim to attract visitors. There are a large number of accredited farms and leisure farms in WNT area. Following the trend that people concern more about the safety of food and slow-speed life, these types of farms became very popular in recent years.

In general, the local service condition is not good enough, neither to meet the demand of low-income groups as well as other residents, nor to attract visitors in HK and SZ. There should be some improvement to upgrade both the quantity and the quality of local service. The basic line is to meet the demand of local people especially low-income groups, and the better scenario is to offer high-quality serve to visitors and improve local development.
2. Research & Analysis

Fig. 2.35: Transport analysis on TSW scale
Transport analysis

The transport network is shown in fig. 2.35 with images in fig. 2.36. The transport inside TSW relies on light rail, but the light rail construction has become a barrier on ground level. The road is designed for automobile and not friendly to pedestrian and bicycle. Pedestrian and bicycle have to cross the foot bridge. There are many people riding bicycles, however they are facing many difficulties: unconnected bicycle path, sharing path with pedestrian and cars, carrying bicycle to cross the foot bridge, no parking, etc.

There are two types of pedestrian connections at crossing points in TSW (fig. 2.37). In many parts, it is by foot bridge. This type of skywalk connection is a linear connection: it connects from home to shopping mall, then to light rail station, finally to the metro station. It shows a kind of life trace of many residents in TSW: home- shopping- MTR- work- MTR- shopping- home.

The other type is on the ground level. This type of street walk connection is more convenient and offering more choices. It is not more dangerous than foot bridge like some people worried, as long as you follow the traffic rule. These two types of connections show that spatial design will effect people’s activities by connecting route and the choices offering to people.

In general, like other places in HK, there is no priority for pedestrian on ground level. Unfortunately, most of the low-income people in TSW don’t have cars, so the road failed their mission. TSW is not big, the light rail only takes 20 minutes to make a circle through the whole area. Instead of wide and empty road, the future development in TSW should encourage the street level activity and give the road back to pedestrian and bicycles. This will bring more convenient and offer more choices to the residents, especially the low-income groups, as well as bring dynamic street life and local development opportunities.
2. Research & Analysis

![Local service analysis on TSW scale](image)

- Housing
- School
- Green space
- River
- Service
- Shopping center
- Indoor parking
- Outdoor parking
- Public Transport interchange
- Bus terminal
- Wet market/cooked food stall

Legend:
- Main road
- Secondary road
- Light rail line
- MTR rail line
- Bus line
- Bicycle path
- Bridge
- Foot bridge
- Light rail station
- MTR station

Fig. 2.38: Local service analysis on TSW scale
Local Service analysis

The local service analysis is shown in fig.2.38 with images in fig.2.39. The open space inside housing estate is generally in good quality with diverse facilities. But in the northern part, the quality is not good, lacking open space for leisure activity. The commercial service relies on shopping malls and wet markets run by big corporations. Because of commercial monopoly, the price is higher than other areas like YL. So daily consumption is expensive for low-income groups. These shopping malls are all designed as single complex building connected by skywalk system with housing estate. The whole TSW only has three places with shops on the street level (fig.2.40) and the sense of street life like other parts of HK.

It is hard to define public space in HK, because many spaces are privatized so that people are not free to use. In TSW, it is easy to find open space with landscape design, but it is only a place for rest. So, there is hardly any public space for social communication or economic activities, a place everyone is free to use. Especially for children who covers one fifth of the whole population, there are some roof gardens on top of the shopping malls for children to play, but the parents think it is not safe. So, children don’t have safe places to play while their mothers can watch them from the window.

There should be diverse commercial service and safe public space for residents to use, some places always have eyes watching like Jacobs described. That will help to improve the living quality of residents and promote social life and economic opportunities, especially for the low-income groups.
Fig. 2.41: Housing estate design analysis on TSW scale
Housing Estate design analysis

The transport system and service quality resulted in the closed-in housing estates shown in fig. 2.41. These housing estates were originally designed as inward-oriented independent communities surrounded by fence. So, TSW (fig. 2.42) is made up of isolated communities. The foot bridge lifted the route to shopping malls, so people had to face the empty street (fig. 2.43).

As shown before, the spatial structure is so simple with the same housing estate sample (fig. 2.44) copying 15 times on the empty ground. Inside the housing estate, different facilities and services are provided, but there is no connection between housing estates. So, TSW is merely a sleeping area rather than a living area, it is a huge residential with 300,000 residents rather than a new town.

Such design problems should be avoided in the future. The essential thing right now is to create opportunities in space that could promote lively urban life, and encourage places where people could have diverse socio-economic and other activities as they wish.
2. Research & Analysis

### LANDSCAPE
Diverse & High quality

### TRANSPORT
Convenient, Not Affordable

### LOCAL SERVICE
Lack in Quantity & Quality

### SOCIO-ECONOMIC CONDITION
Poor condition, need dynamics

Fig. 2.45: Conclusion of analysis on WNT scale

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**Government’s future development**

- High-quality Living Area
- Multi-function Leisure Area
- Public housing Living

Fig. 2.46: Potentials of WNT area for future development

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Fig. 2.47: TSW residents fight for their own right, they protest for hospital construction (left) and the self organised dawn market along the river calling for legal space permitted by government (right). Source: Google Image
Conclusion

WNT scale
Based on the above analysis on WNT scale which is shown in the summary of Fig.2.45, the landscape in this area is diverse with high quality; the transport connection is convenient but not affordable for low-income groups; local service is lack in both quantity and quality; and the socio-economic condition is in poor condition that needs more dynamics.

However, WNT area has potentials for future development (fig.2.46) as follows:

1). WNT area could develop into a high-quality living area with a new living style based on new transport connection, new development area of HKS and existing natural environment;

2). Based on the diverse landscape quality in WNT area, it has the potential to develop into a multi-function leisure area for HK and SZ residents.

3). WNT area should be able to provide affordable, accessible and lively living environment for the current low-income groups who live in public housing clusters in new towns.

TSW scale
Due to spacious housing with cheaper price compared to the city centre of Hong Kong and proximity to natural environment, the living condition in TSW have advantaged to attract residents. However, based on above analysis it is clear that there are many spatial problems in this public housing cluster which worsen the socio-economic conditions of this New Town. So, low-income groups are trapped in this besieged city.

On the other side of the coin, there are also some precious qualities in TSW (fig.2.47) because of public housing concentration. Some residents have strong community sense and are willing to help each other. They struggled for public facilities like hospital, library and public space. Moreover, there are some NGOs helping the residents fighting for their benefit, like the current illegal Dawn Market in the riverfront. In the context of TSW, the active participation of local residents would be a crucial element for future change.

Spatial interventions might start the transformation of TSW on both spatial and socio-economic aspects. This process would be detail illustrated in Strategy and Design Part.
3. Strategy

Vision
Case study
Strategy Approach
Green Route Network
Strategic Plan for TSW
Process into Reality
3. Strategy

Fig. 3.1: Vision of the project, it shows the relation among three scales.
Vision

Under the background of government’s proposal on regional scale which will bring social mix and new development into WNT area, the vision of this project is (fig.3.1):

Promote urban dynamics in WNT area by more physical and socio-economic connections among different new towns. Improve local economy development, social integration and living environment based on existing natural and human resources to meet the demands of both local residents and potential visitors. So, WNT area would have the potentialities to develop into a social-mix area with diverse development: high-quality living area, multi-function leisure area, and public housing living area linking the two cities of HK and SZ. In return, government’s plan will benefit from a better image of WNT area.

TSW - the Besieged City - could be opened outward with closer connections to other new towns and more development opportunities in WNT area. Strategic interventions within TSW scale could open the closed-in housing estates and transform the public housing cluster into affordable, accessible and lively living environment for existing low-income groups in TSW.

The improvement and development on each scale would promote and benefit from each other. The better future of TSW would rely on development on larger scales, meanwhile, the improvement of TSW would contribute greatly to the prosperity of WNT area and HK.
3. Strategy

Fig. 3.2: The future life scenario scheme of WNT area
Future life in WNT area

A new strategy will bring benefit to existing local residents, new residents and visitors. Their lives will be connected together by the new strategy. Here is the future life scenario of WNT area (fig. 3.2):

1) **Tourists:** Tourists can cycle along the well-designed bicycle network and experience the diverse landscape. They will stop by at different service centres: rent a bicycle, visit a sightseeing, have lunch at local food stalls and enjoy the unique home-made food by housewives, do some shopping in shopping malls or local market, visit a leisure farm and pick some fresh vegetables for dinner, go to seaside for the sunset and have some seafood, stay in family hotel.

2) **Local residents:** In the morning, mothers will leave public housing community, send children to school, and then ride a bicycle to work. They work in leisure farm, local market, food stalls, bicycle rental spot or other service areas. After the work, on their way to take the children home, they will go to local market for some cheap and fresh food.

3) **New residents:** New residents are attracted to WNT area because of the new lifestyle here: convenient connection to SZ and HK, new opportunities in HSK, beautiful living environment with fresh air and green, and most importantly, the lively community life promoted by the new strategy. They could also enjoy local service and get on well with local residents.
3. Strategy

Fact & Figures

<table>
<thead>
<tr>
<th>Bijlmermeer</th>
<th>Tin Shui Wai (TSW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area: 6km²</td>
<td>4.88 km²</td>
</tr>
<tr>
<td>Population: 100,000</td>
<td>300,000</td>
</tr>
<tr>
<td>Location: Amsterdam - Amsterdam southeast</td>
<td>Hong Kong - West New Territory (WNT)</td>
</tr>
<tr>
<td>Starting Time: 1966</td>
<td>1991</td>
</tr>
<tr>
<td>High-rise flats proportion: 90% (10 honey comb pattern, 10 storey)</td>
<td>100% (towers of 20-40 storeys)</td>
</tr>
<tr>
<td>Development impetus:</td>
<td>Public housing demand &amp; economic benefit</td>
</tr>
<tr>
<td>Housing demand (WW II)</td>
<td>rental flats 61.5% / subsidized sale flats 21.9%</td>
</tr>
<tr>
<td>Public housing:</td>
<td></td>
</tr>
</tbody>
</table>

Fig. 3.3: Comparison between Bijlmermeer and TSW

Fig. 3.4: The model of final Bijlmermeer master plan (above) with the idea of separate traffic flows (below), source: OOSTENDORP & SIESWERDA, 2007

Fig. 3.5: High-rise flats with large green space, source: HELLEMAN & WASSENBERG, 2004
Bijlmermeer

Bijlmermeer is a famous large scale social housing renovation case not only in the Netherlands but around the world. As a new development area in the southeast of Amsterdam, it has almost the same size and the position in urban structure with TSW (fig.3.3). It developed since 1966 and shared the same modern city design ideas like TSW, with separated functions and the separation of traffic and people (fig.3.4). Bijlmermeer was firstly designed with many huge-scale 10-floor honeycomb shape housing flats (fig.3.5) with large green space(fig.3.6) which is not attractive to middle class groups. So, like the TSW case, a large concentration of public housing with low-income groups (especially new immigrants) but without enough living opportunities gradually resulted in spatial and social problems. TSW and Bijlmermeer shared some similar problem phenomenon (fig.3.7) at first glance, like monotonous district, lack of urban sense, allocating people with the fewest options, etc. So, a study of Bijlmermeer case might bring light to the transformation of TSW.

PROBLEMS

<table>
<thead>
<tr>
<th>Spatial defects</th>
<th>Monotonous district: housing supply, housing design, urban planning structure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lack of urban sense with spatial hierarchy &amp; differentiation, mix function, smaller scale</td>
</tr>
<tr>
<td></td>
<td>Unfinished facilities (stores, sports &amp; recreation space) because lack of finance</td>
</tr>
<tr>
<td></td>
<td>Public transport realised too late (Metro)</td>
</tr>
<tr>
<td>Socio-economic problems</td>
<td>Allocate people with the fewest options because housing available most quickly (single-class, low-income, unemployed, ethnically diverse, 80% immigrants in 1990s)</td>
</tr>
<tr>
<td>Management problems</td>
<td>Uncontrolled semi-public &amp; collective spaces and many blind spots</td>
</tr>
<tr>
<td></td>
<td>Security &amp; maintenance problem, need intensive management (cost too much)</td>
</tr>
<tr>
<td></td>
<td>Vacant apartments (some occupied by squatters), housing association lost money</td>
</tr>
</tbody>
</table>

Fig. 3.5: Development process of Bijlmermeer, source: VANSTIPHOUT, 2008

Fig. 3.7: Problem comparison between Bijlmermeer and TSW, based on source: BRUIJNE, VAN HOOGSTRATEN, KIESKEBOOM & LUITEN, 2002; HELLEMAN & WASSENBERG, 2004
3. Strategy

Fig. 3.9: Demolition of high-rise flats (left) and parking garages (right), source: HELLEMAN & WASSENBERG, 2004

Fig. 3.10: The situation in 1992 (above) and in 2010 (below), before and after physical renewal, based on source: HELLEMAN & WASSENBERG, 2004

Fig. 3.11: ArenA plan, source: BUURMAN, 2005
Bijlmermeer Renovation

The renovation process of Bijlmermeer (fig.3.8) lasts for over 30 years which is still in the process at the moment. It started with small intervention which turned out to be useless, then later turned into radical demolition of high-rise flats and unused spaces (fig.3.9) with an arrange of physical renewal projects (fig.3.10). In 2002, a ‘Final plan of Approach’ based on residents survey was launched with an integral approach of spatial interventions, socio-economic measures and intensive management. In the spatial interventions, 9 different types of living environment were created to attract more middle-class groups. The construction of ArenA (fig.3.11) with many urban projects on the east side tried to create a new centrality and linked Bijlmermeer in Amsterdam region which brought urban dynamics and living opportunities for local residents.

The housing types (fig.3.12) dramatically changed with only 50% subsidized rental flats (used to be 92%). Now, more low-rise housing and medium-rise housing were built, with only 45% of high-rise (used to be 90%).

Fig. 3.8: Bijlmermeer renovation process, based on source: BRUIJNE, VAN HOOGSTRATEN, KWEKKEBOOM & LUITEN, 2002; HELLEMAN & WASSENBERG, 2004

Fig. 3.12: Bijlmermeer Housing types, based on source: BRPO, 2008
3. Strategy

### Aim of renovation (DE HAAN, 2009)

- The strengthening of the social, cultural and economic position of the residents;
- The strengthening of the position of houses and the districts within the Amsterdam housing market;
- The supply of jobs, cultural activities and accessibility;
- Create conditions for a well-maintained district.

### Conditions for success (HELLEMAN & WASSENBERG, 2004)

1. Connection of the area on the regional level: improvement of surrounding Amsterdam ArenA
2. An integrative approach: the combination of spatial, socio-economic and management programs
3. No fear of radical solution when small interventions didn’t work
4. Financial support from various groups and healthy financial operation
5. Participation of inhabitants

### Critique (VANSTIPHOUT, 2008)

Bijlmermeer built as a statement, demolished as a statement, but local residents’ inside view are ignored

Bijlmermeer was a stake in a bitter territorial dispute, a collective place of different authorities & department. One single private party took over the renovation with an integrative approach to achieve demographic change.

The implementation turned out to be sectoral plans without central vision or strategy. It is a large-scale, top-down & authoritarian approach, not a small-scale, organic & interactive approach.

---

**Bijlmermeer Renovation Evaluation**

As shown in fig. 3.13, the aim of renovation and conditions for success are summed up, however, there are also some critiques: local residents’ inside view are ignored, the renovation is more to achieve demographic change, and it is still a large-scale, top-down and authoritarian approach rather than small-scale, organic and interactive one. Some images of renovation (fig. 3.14) shows the quality of new living environment which are convincing and might be good examples for TSW.

However, after a deeper comparison study between Bijlmermeer and TSW (fig. 3.15), it is shown that the problem root of Bijlmermeer is the vacancy and concentration of low-income groups which made the housing corporation and government losing money all the time. So, the renovation core is to create diverse housing for diverse residents to meet housing market demand. But this is not the condition in TSW. However, the integrative approach in the renovation of Bijlmermeer shows some potentials to improve not only physical but also socio-economic condition of public housing cluster through spatial interventions.

To sum up, the renovation of Bijlmermeer is the consumerism type of Provide - Accept, in which residents are lined up to choose their housing life type, and low-income groups need to wait in queue but might be throw-out sometimes. However, in the case of TSW, the new strategy should use both integral and inclusive approach, which might be the type of Empowerment - Create. With this approach, low-income groups will get spatial opportunities to develop within their own system and create their own life styles based on their own needs and potentialities.
Housing Market Demand

Diverse housing
Diverse residents
Diverse living environment

Housing Corporation
City & Local Council

Integral approach
Spatial interventions
Socio-economic measures
Intensive management

Local residents participation

Problem root
Vacancy & Low-income
Maintain & Security
Crime & Getto

Renovation core

Supplement approach

NOT IN TSW

LESSON FOR TSW

Renovation (Bijlmermeer): large scale, top-down, authoritarian
Provide - Accept (consumerism)

New Strategy:
Integral & Inclusive approach
Small-scale, organic & interactive
Empowerment - Create

Low-income class: wait in queue / throw-out

STRATEGY:
Provide spatial opportunities to promote development within their own system

Fig. 3.15: Bijlmermeer lesson for TSW

Case Study

91
TSW development strategy: Integral & Inclusive approach

Spatial interventions
- Create spatial hierarchy: Green Route network
  -- priority to pedestrian & bicycle
  -- mix-function public space on human scale
  -- transformation of underused space

Socio-economic measures
- Encourage small business activities
  -- diverse marketplaces
  -- unique local business (bicycle, catering, leisure farm...)
- Short term job creation programs
  -- building work for unemployed
  -- adult's training
  -- contractors with new development to provide certain amount of jobs for local residents
- Long term structural programs
  -- residents empowerment
  -- youth education & development
  -- multiculture cohesion

Urban management
- Create safe living environment
  -- decrease blind spots
  -- lively space with eyes on the street
  -- safe playgrounds for children
- Resident participation for urban management
  -- optimal combination of ‘space, time & people’
  -- collaboration among government, NGO, self-organization, and other groups & individuals

Fig. 3.17: TSW development strategy: Integral & Inclusive approach
Strategy

Inspired by the integral approach of the Bijlmermeer experience (fig.3.16), the development strategy for TSW would be an integral and inclusive approach (fig.3.17) as follows:

1) **Spatial interventions**: Spatial interventions will focus on creating spatial hierarchy on local level by the design of Green Route Network.

2) **Socio-economic measures**: On the socio-economic parts, small business activities will be encouraged to meet the affordable demands of local residents. Moreover, both short term job creation programs and long term structural programs would gradually improve the socio-economic conditions on local level.

3) **Urban management**: Urban management would create safe living environment which will need the participation of local residents, as well as collaboration among different stakeholders.

These three aspects of the development strategy should work as a whole system: the spatial interventions would be the physical platform for the happening of socio-economic measures, then the transformation process will be implemented by urban management.
3. Strategy

Fig. 3.18: Strategy of Green Route Network on WNT scale
Strategy - Green Route Network

The spatial intervention of the strategy is the Green Route Network (fig.3.18). As shown in the scheme (fig.3.19), the Green Route Network consists of the following parts:

1) **Green Route Circle** (fig.3.20): It is a circle connecting the main landscape sightseeing, town centres, main streets, transport hubs and potential development areas. Diverse transport modes will be provided on this circle like metro, light-rail, bus, a well-designed bicycle network and a slow-drive route.

2) **Connecting Line** (fig.3.21): Connecting Line is the extension of Green Route Circle into local neighborhoods and other important places, with convenient public transport and bicycle connections.

3) **Opening Line in TSW** (fig.3.22): Three lines as the Opening Line will go through TSW which connect crucial places around TSW. The Opening Lines are the potential development lines that will open the Besieged City. Details will be illustrated in the following chapter.

4) **Service Centres** (fig.3.23): Along the green route lines, different hierarchy of service centres will be established with multi-functions based on existing service distribution. These centres will be combined with transportation, landscape and other important function areas to meet the demands of both local residents and potential visitors. They could also provide job opportunities for local residents especially the low-income groups.
3. Strategy

Fig. 3.20: Green Route Network: Green Route Circle
Green Route Circle

- Bicycle & Pedestrian priority / Public transport connection / Slow drive tour

- Connecting important places and potential development areas together

<table>
<thead>
<tr>
<th>Natural landscape</th>
<th>Cultural site</th>
<th>Seaside</th>
<th>Leisure farm</th>
<th>Shopping mall</th>
<th>Market</th>
<th>Food stalls</th>
</tr>
</thead>
</table>

Sea

Nature landscape

Seaside

MTR line

Intercity Highway

Green Route Circle

0  606m
3. Strategy

Fig. 3.21: Green Route Network: Connecting Line
Connecting Line

- Extension of Green Route into local neighborhoods & other important places
- Connecting local residents to the Green Route by bicycle path and public transport

![Map of Green Route Network](image)
3. Strategy

Fig. 3.22: Green Route Network: Opening Line in TSW
Opening Line in TSW

- Extention of Green Route going through TSW, connecting crucial places around TSW
  1. Lau Fau Hill → TSW → Nam Sang Wai
  2. Tsim Bei Tsui → TSW → HSK
  3. Wetland park → TSW MTR station → Ping Shan → YL town centre

- Potential development lines in TSW to open the Besiege City
  River line / Street line / View line
3. Strategy

Fig. 3.23: Green Route Network: Service Centre
Service center (regional/ WNT/ local level)

- Service areas of Green Route network near important places & current local service
- Creating multi-function service centers to meet local demand & potential visitors
- Promoting job opportunites in the Green Route network for local residents
3. Strategy

Fig. 3.24: Green Route Network Layer map, it shows the relation of Green Route Network and existing landscape, infrastructure and urban function area.
3. Strategy

The BeltLine is a dynamic and transformative project for Atlanta. Through the development of a new transit system, multiuse trails, and greenspace along a 22-mile loop of historic rail lines that traverse the urban core, the BeltLine will better connect our neighborhoods, improve our travel and mobility, spur economic development, and elevate the overall quality of life in the city.

Fig. 3.25: Left: Location of BeltLine in the city of Atlanta; Right: New BeltLine map, source: BeltLine, 2011

Fig. 3.27: Size comparison of Atlanta Beltline and Green Route Network, source: BeltLine, 2011
Green Route Network Reference

Atlanta BeltLine

The project of Atlanta BeltLine (fig. 3.25) was developed from a student’s graduation project which reflected on the automobile oriented urbanization process in American cities. This project is in the construction process at the moment which influenced 45 neighborhoods in 12 council districts with about 100,000 people within half mile of the BeltLine. The slogan is that ‘every resident will benefit from the BeltLine’. The BeltLine focuses on 8 fields of projects (fig. 3.26): transit, park, trails, job & economic development, affordable & workforce housing, existing communities & historic preservation, public art & street scapes, and environmental clean-up.

The BeltLine and Green Route Network are similar in scale (fig. 3.27) and share the same design concept: using an infrastructure loop to encircle different urban areas together and promote development along the loop. Although the two projects focus on different projects, but they share the same future images (fig. 3.28) in which the needs of local residents will be the first priority, with environmental friendly transport, lively public space and sustainable urban development.

In the case of BeltLine, it is a densification with big urban projects along the new transit line around the city centre. However, in the case of Green Route Network, it promotes public transport and bicycle route as a new transportation mode for local residents as well as visitors, so there will be more spatial opportunities for local development from more bottom-up considerations. The success of Atlanta BeltLine would encourage the implementation of Green Route Network.
3. Strategy

Fig. 3.29: Green Route Network Phasing map
Phasing of Green Route Network

As shown in fig.3.29, the phasing consists of three parts:

**Phasing 1:** Connecting existing new towns and constructing service centres near current transportation hub and town centres.

**Phasing 2:** Connecting other important places of the area and extending the Green Route into local neighbourhoods with more service centres.

**Phasing 3:** Connecting rural villages and new development area of HSK.

The construction of Green Route Network will follow this principle fig.3.30: first to meet some local demands, then to meet some visitor demands which will again promote local demands. It should be an interactive circle between local and visitor demands.
3. Strategy

Fig. 3.31: From Green Route Network to Strategic Lines in TSW

Fig. 3.32: Functions of Strategic Lines in TSW
Strategic Lines in TSW

Based on Green Route Network on WNT scale, there are three Strategic Lines going through TSW(fig.3.31), other four lines within TSW scale connect the three main lines with the direction towards the riverfront and HSK development area. Among all these lines (fig.3.32), some function as opening TSW to the outside, some opening TSW inside; some focus on local service, some on both local/ tourist service, and the rest mainly on tourist service.

As shown in fig.3.33:
The River Line currently is not well used because people turn their back to the river, however in the future, both TSW and HSK could benefit from the riverfront development;

The Street Line is the separation of north and south part only used by car, however, it might be a new junction to link north and south part, even extend to the future HSK development area;

Visitors to wetland park now ignore the existence of TSW, however, with the future development of View Line, visitors could be attracted to bicycle through TSW and enjoy local service.
Fig. 3.34: Strategic plan on TSW scale
Strategic Plan of TSW

Based on the strategic lines, strategic projects at specific locations would form the strategic plan of TSW(fig.3.34) for spatial transformations. There will be three big projects which would need large investment and four small projects along the riverfront which would be constructed rely on residents participation. Altogether, these projects would Open TSW to a better future.

The process into reality of the strategic plan would be illustrated in next part. In the design section, different projects would be shown in details.
3. Strategy

Process into Reality (fig.3.35)

My graduation project would be the starting point of an inclusive development of TSW. It is a strategy and design proposal for both the government and the local communities. It still has a long way ahead to become reality.

After the proposal process, a preliminary plan would be made based on the information gathered: 1) feedback and limits from different departments of the government; 2) the result and feedback from community participation. As shown in the diagram, the community participation is a crucial stage where local residents would express their demands and ideas with the help of professional planners organized by local NGOs.

This preliminary plan would further develop into an Implementation Plan. In this process, Opening TSW Association - an independent, non-profit and non-state organization - would be responsible for the action. Like shown in the diagram, it will 1) build up a communication platform for different stakeholders; 2) coordinate the demands and interest among different stakeholders; 3) implement the transfer payments development plan; and 4) promote incentive policies for development: like encouraging private developers by future HSK development priority.

Then during the process of construction, local residents could also participate. The big projects could provide construction employment for local residents, while the small projects could be self-built by local residents with the help from NGOs and volunteers.

Management after construction is also very important. On the one hand, public space where daily socio-economic and leisure activities happened should be organized with best combination among space, time & people. On the other hand, communication space should be built up through community service like youth centre and women centre, as well as internet space with local website to involve young people. All these management could be done by local self-made organizations like street vendor union, housewife association, etc with the help of other stakeholders.

This is still a theoretical process imaged by a master student. But it helps to make a bit clear the complicated process of a plan into reality.
Graduation Project:
*Opening the Besieged City, an inclusive development strategy for TSW in HONG KONG*

**Community Participation**
- Express Demands & Ideas
- Organization work
- Draw plan & Design

**Methods:** Action planning event, Design workshop, Local tour, etc. (Wates & Brook, 2006)

**Opening TSW Association**
- Independent, non-profit, non-state organization

- Build up a communication platform for different stakeholders
- Coordinate the demands and interests among different stakeholders
- Implement the transfer payments development plan
- Promote incentive policies for development: like encouraging private developers by future HSK development priority

**Feedback & Limits**

**Big Projects**
- Provide construction employment for local residents

**Small Projects**
- Self-build by local residents with the help from NGOs and volunteers

**Local Self-made organizations:**
- Street vendor union, House wife association, Youth team, etc

**Public Space**
- Daily social, economic & leisure activities

**Communication Space**
- Community service: Youth centre, Women centre, etc
- Internet space: local website, forum, Facebook, etc
3. Strategy

**Development & Planning Approach**

**Spatial Design**

**Bad Public Image**

---

**Socio-economic Problem**

- social justice ?
- democratic ?
- free economy ?
- value of life ?
- ???

**Spatial Problem**

---

**ON THE GROUND**

- Spatial Opportunities
- Benefit of Local residents

---

**Ideas for TSW**

---

**Fig. 3.36: Solution framework for the Besieged City TSW**

---

**Free Economy of Common Interests**

In the framework of Free Economy of Common Interests
Provide spatial opportunities to low-income groups,
A place where they can work hard for a better living.

---

**Planning, design, construction & management**

In the process of planning, design, construction & management
Provide participation opportunities to local residents.
A platform for democratic society and social justice.

---

**Fig. 3.37: Baselines of the Project**
Solution framework

Fig. 3.36 shows the idea of solution framework for the Besieged City TSW. As mentioned before, there are three main reasons that resulted in the Besieged City. If ‘development & planning approach’ and ‘bad public image’ are more socio-economic problems which raised the questions like social justice, democratic, free economy, etc, then spatial design is more spatial related. There are also some ideas for TSW in HK, but none of them worked. After a brief evaluation of some ideas, it is not hard to realize that all these ideas are not ‘On the ground’.

‘On the ground’ means, on the one hand, it provides spatial opportunities and shows changes in specific locations; on the other hand, it has something to do with local residents and could bring benefit to them. In this case, this project starts with spatial problem, then provide some ‘On the ground’ solutions, finally, that will bring changes to socio-economic conditions.

Baselines of the project

As shown before, the process into reality is very complicated. This project is open to flexible changes, and sometimes there might be some compromise when conflicts happen. However, no matter how the form changes, the baselines of this project will stick to the end.

Based on the solution framework, the baselines of the project (fig. 3.37) are developed as follows:

1) In the framework of Free Economy of Common Interest (right now the Free economy is not open to everyone, for example, the vendors and small businessmen are not given the opportunity to compete in the free market), the project should provide spatial opportunities to low-income groups, offering them a place where they can work hard for a better living.

2) In the process of planning, design, construction and management, the project should provide participation opportunities to local residents, offering a platform for democratic society and social justice.
3. Strategy

**NOW**

- Public Housing
- New Town
- Trapped in the Besieged City

**PAY**

- Participation for community development

**GAIN**

- Social justice
- Affordable, accessible, lively living environment

Fig. 3.38: Stakeholders change of Now, Pay and Gain
Stakeholders
The evolvement of different stakeholders is very crucial for this project. One of the causality of the Besieged city is the exclusive decision-making process. In this part, I will discuss the stakeholders change of NOW, PAY & GAIN of this project (fig.3.38).

NOW
The whole development process of TSW was between the Public sector of government and Private sector of real estate developer, and the planning approach is top down and exclusive. So, the benefit of public housing residents who are trapped in the Besieged city are not well-considered.

PAY
The realization of this project would need the help of an independent, non-profit, non-state organization: Opening TSW Association. This organisation will coordination the benefit and interest of different stakeholders, mainly three parts: Public sector, Private sector and local Communities. The Public sector and Private sector would provide investment, while the communities would take participation in the community development, offering their questions and ideas.

GAIN
In the end, all the three parts will gain benefit from the development of TSW and a better image of WNT area. The Public sector will benefit from private development on local level; the Private developer will benefit from New residents and visitors, as well as local residents; the Communities would benefit from the affordable, accessible and lively living environment; the improvement of local Communities will bring more social justice to the Public society. So, everybody could benefit from the this project, as long as everybody are willing to sit around one table and discuss for a better future of TSW.

Fig 3.39 will show the stakeholders’ PAY & GAIN based on different types of projects on next page.
**Stakeholders**

**Infrastructure**
- Public: Department of Planning Transportation
- Private: MTR
  - Developer of HSK
  - Other developers
- Community Participation: Design workshops

**Building**
- Public: Housing Authority Fundation
- Private: Corporation (LINK)
  - Local businessman
- Community Organization
  - NGO
- Residents: New businessman
  - Consumer

**Public Space**
- Public: Housing Authority Fundation
- Private: Local farmer
  - Vendor
- Community Participation: Construction & Management

---

Fig. 3.39: Stakeholders' Pay and Gain of different projects
Opening TSW Association

PAY

GAIN

Encourage small business
Local economy development

Social integration

New Residents
Visitors

New Residents
Visitors

Tram / Bicycle route
Phasical connection

Social justice

$ space

Opening TSW Association

Social justice

$ !

$ ?!!

$ ?!

$ $$

$ $$$

$ $
4. Design

HK Street
North Junction
New Street
North Loop
Riverfront
Design Guidelines
4. Design

4.17. Street sections and plans showing changing street and building form. The sequence shows the demise of the original shop-house, appearance of cantilevered forms, massive block, and early podium and tower. Additional informal structures are also evident.

Fig. 4.1: Podium development in HK, source: SHELTON, KARAKIEWICZ & KVAN, 2011

6.7a, 6.7b and 6.7c. Mei Foo Estate was built over a period of 13 years. This trio of images shows both elevated towers on plots and towers with a deck where shopping and commercial services occur at both ground and deck levels (opposite).

6.8. Mei Foo Estate. Here, two levels of commerce and two levels of car parking create the podium, from which the towers rise.

Fig. 4.2: Podium in Mei Foo Estate, source: SHELTON, KARAKIEWICZ & KVAN, 2011
HK street - Podium

HK street is well known for high density and vertical space which is shown in the form of podium (fig.4.1) along with the change of street and building form. Podium shows the flexible, mix-function and efficient space use of street and building. In Mei Foo Estate (fig.4.2), podium under housing towers provide shopping and commercial service at both ground and deck levels. There is also podium with two levels of commerce and two levels of car parking under the high towers. In this case, the traditional HK street life still remains in high density housing estate.

In new towns like Sha Tin (fig.4.3), the volumes of podium are full of shops and services served as ground for towers and connected by skywalk system, while the busy traffic running on the ground level. Because of the busy HK street with large population flow, podium became the design guide lines for new towns. However, the separation of traffic and pedestrian also gives priority to automobile and eliminate the street life in monofunction area like TSW.

In the design part, the concept of podium could be used to recreate street life by densification and transformation of unused space.

Fig. 4.3: Podium in Sha Tin new town, source: SHELTON, KARAKIEWICZ & KVAN, 2011
Fig. 4.4: Illustration of street space of Pei Ho Street (top), Illustration of business space of Pei Ho Street (bottom), Source: LIANG, 2008
**HK street - Street Market**

HK street market is not only a unique attraction for tourists but also an important place of daily life for HK residents. During the fast development process, many street market disappeared and gave position to complex box. As shown in the illustration of street space and business space (fig.4.4), street market is a type of flowing and flexible street space with all types of shops and services and it is closely related with local residents’ daily life.

As shown in fig.4.5, the composition of street market is very simple, with movable hawker stalls in the street which defines the space of main street and sidewalk. However, the walking experience would be very dynamic and diverse because the street market also connected to the ground level shops of nearby buildings.

In the design part, the concept of street market would be used to recreate street life and provide affordable consumption. There will be various types of marketplaces, like dawn market, night market, flea market, mutual aid market, etc. Those new markets would provide also job opportunities for local residents with proper urban management to run the market.
4. Design

Fig. 4.6: Current condition of the junction

Fig. 4.7: Proposed transformation of the junction
North Junction

Currently (fig.4.6), the north junction gathered different function buildings in the super dense north part, but they are separated by road and light rail track. In the future (fig.4.7), a public space line will connect different functions together and promote lively street life with the transformation of unused parking space into street shops. So, the new north junction would be a mix-function centre in the north part.

Fig.4.8 shows the ground level plan in which the public space line connects housing, school, street shops, shopping center, bus terminal all together. The public space line consists of three parts: the east part is designed for surrounding housing and school as a rest place and a safe playground for children; the middle part connects the street shops on north and south part with street market several times a week; the west part is the extension of landscape inside the housing estate and the riverfront, so it has clear direction.

Fig.4.9 shows the elevated level with skywalk system. Sections (fig.4.10 & fig.4.11) show the street profile with landscape and mix-function spaces. A before and after image (fig.4.12) will directly show the image of the change and future scenario.
4. Design

Fig. 4.10: North Junction section 1
Fig. 4.9: Elevated level plan of North Junction

Fig. 4.11: North Junction section 2

Transformation of unused space
New commercial area
Existing shopping area
New community service
Existing service area
Existing green space
Tram station
Tram line
Bicycle path
Elevated walkway
Fig. 4.12: Before (left) and After (right) image of North Junction
4. Design

Fig. 4.13: Current condition of the street

- Shopping centre connected only by skywalk
- Ground parking inside housing estate next to the street
- Empty parking building
- Street profile with ground level shops

Street profile only friendly for car

Fig. 4.15: Ground level plan of New Street

- Transformation of Facilities building
- Shopping centre
- Bus Terminal
- Tram station
- Transformation of Parking & Facilities building (1st floor)

Fig. 4.15: Ground level plan of New Street
New Street

Currently (fig.4.13), the street is the separation of north and south part and only for the car use. In the future (fig.4.14), a new street would be built with street shops along the road and welcome the visit of pedestrian and cyclists. So, the new street would link the north and south part and become a new centre in TSW.

Fig.4.15 shows the ground level plan in which the transformation mainly by: 1) adding more ground connection from housing estate to the street; 2) densification by low-rise buildings and transformation of unused space in parking building; 3) public space along the street with new square, well connected walkway and bicycle route. Fig.4.16 shows the elevated level with skywalk system. Sections (fig.4.17 & fig.4.18) shows the street profile with landscape and mix-function space, and fig.4.19 shows the transformation of the 1st and 2nd floor of parking building into street commercial space.
4. Design

Fig. 4.16: Elevated level plan of New Street

Fig. 4.17: New Street section 1

Fig. 4.18: New Street section 2

Fig. 4.16: Elevated level plan of New Street
Fig. 4.19: Section of parking building transformation
4. Design

**Stakeholders**

- Local Government / HK HA
- Independent Organization of Opening TSW Association
- Private developer
- Fundation
- New small-business owners
- Parking Building owner (LINK)
- Planners / Architects
- Local residents and corporations

**Plan & Design**

- Local Government / HK HA
- Independent Organization of Opening TSW Association
- Private developer
- Fundation
- New small-business owners
- Parking Building owner (LINK)
- Planners / Architects
- Local employment

All stakeholders have agreement on:
1) How much new commercial & service space are needed?
2) How much parking space to transform?
3) Spatial form of new stores

**Construction**

- Local employment
- Independent Organization of Opening TSW Association
- Private developer
- New small-business owners
- Parking Building owner (LINK)

Fig. 4.20: The Process into Reality of New Street
New Street - Flexibility

Detail explanation of the process into reality of New Street is shown in fig.4.20. There are three scenarios (fig.4.21) of the New Street based on different investment and complicated reality:

**New Street Scenario 1**

*Densification by low-rise commercial space*

In this scenario, some empty space would be used for densification by low-rise buildings. There will be more small-business commercial space and it would have influence on two housing estates.

**New Street Scenario 2**

*Densification by low-rise commercial space*  
+ *Transformation of unused parking building*

In this scenario, some parking space will be also transformed into small-business commercial and service. These interventions would have influence on four housing estates, and create some street life on east part of New Street.

**New Street Scenario 3**

*Densification by low-rise commercial space*  
+ *Transformation of unused parking building*  
+ *Transformation of shopping centre*

In this scenario, the existing shopping centres will be also transformed for diverse ground connectivity. So, the whole New Street (fig.4.22) would become a lively and attractive centrality for TSW, with extension to the riverfront, even to new development area of HSK.
4. Design

Fig. 4.23: Existing Light Rail system in TSW
Light Rail system in TSW

The current LR system (fig.4.23) is the dominant public transport mode in TSW. It is convenient, however, it has become a barrier for spatial development:

1). As shown in fig.4.24, the LR tracks are fine in the south part with ground crossings for pedestrian, however, in the north part, the LR tracks occupied too much ground space because of fence along the track and elevated tracks. They stopped potential street-level activities in many parts of TSW.

2). Overlapping lines are not efficient, like the two circle lines (the red and green line in fig.4.25). Moreover the fare is also not affordable for low-income groups.
Fig. 4.26: North Loop proposal and its cover area
North Loop

New Tram Line
Length: 2.2km
Stop: 9
LR/Tram exchange station: 2

Residents in service
500m Radius: 60,000
800m Radius: 100,000
1100m Radius: 150,000

Housing estates in service
8 PRH, 2 HOS, 1 Private

North Loop

The North Loop (fig.4.26) will introduce a tram line in the north part, this new line would release more space in the dense north part to promote public space and street life. As shown in fig.4.27, the new tram line will be 2.2km long with 9 stops (2 stops are LR/tram exchange with easy transfer). The new tram tracks would better accommodated with cycling path and walkways, so bicycle and walking would be encouraged within different service radius. The design strategies are as follows:

1). Remove the two LR circle lines (705/706) and divide the big circle into north and south loops. In the north part, build a North Loop of Tram line. In the south part, the remaining two LR lines would change into South Loop.

2). There will be more public transport modes for residents: LR, Tram, bus, bicycle & walking which are cheaper, efficient with more public space.

3). The street between two exchange stations would be designed with nice public space and commercial space, and it will be connected to TSW park and the riverfront, even extend to new development area of HSK in future.
4. Design

Fig. 4.28: Left: Tram system of Strasbourg, source: wikipedia; Right: North Loop in TSW and Strasbourg inner city size comparison

Before (left) and after (right) improvements to urban design and traffic control accompanied with the introduction of light rail in Strasbourg.

The Place de la Gare before (left) and after (right) traffic reorganisation and redesigning to accommodate light rail. The trams run underground at this point, freeing up land formerly used as a bus interchange.

Fig. 4.29: Before and After image of tram project in Strasbourg, source: Thomas, 2002
North Loop Reference - Strasbourg Tram Project

Strasbourg tram project is a famous urban design case which shows how tram changed a city. Strasbourg city area is about 78 km² with a population of 650,000 in the north of France. It is a city with mainly service industry like HK. It has a high-density city centre and a mixed density inner ring, surrounded by lower density suburban villages. If we put TSW and North Loop in the city centre of strasbourg (fig.4.28), it is clear that the north loop only covers several stops. So, the north loop is very applicable on size and scale. There is also a bold assumption that the WNT area has the potential to run a tram system just like Strasbourg. However, in this project, I will only propose the construction of North Loop.

The success of Strasbourg tram project is summed up as follows:

1).Reorganizing Traffic (fig.4.29)
Reduce car traffic congestion in inner city and promote public transport use.

2).Urban Renewal
Revitalize the city centre by urban design of public space which accommodate the tram system. Redesign the road with new tram tracks and improve conditions for pedestrians and cyclists.

3).Integration with diverse transportation modes
New tram lines and stops are designed with convenient transfer to bus, cycling and walking.

The image of Strasbourg tram is shown in fig.4.30 which could happen in the future of TSW. Strasbourg used to rely on car traffic which brought many problems to the city. Strasbourg is lucky is reuse the tram system to not only solve the traffic problem but also improving the urban environment through urban design project. Tram is not expensive compared to metro and light rail, and tram could get on well with street life, pedestrian and bicycles.

Fig.4.31 shows the plan of North Loop with two exchange stations. The before and after image (fig.4.32) shows directly what change could happen.
4. Design
Fig. 4.31: Plan of North Loop, exchange between light rail and tram

Fig. 4.32: Before and After image of North Loop
4. Design

Fig. 4.33: Current condition of riverfront

- The other side of the river, and Sz at the background
- Fence surrounded the housing
- Selling hawker in the dawn market
- Public space without river view
- River and the housing
- Riverfront profile
- Tin Shui Wai Park
Currently (fig.4.33), there are some landscape design in the riverfront, however, the river is still not in good use, because many people turn their back to the river. In the coming future (fig.4.34), both TSW and HSK will benefit from the river if the riverfront could be better used. If the riverfront in TSW is lively and attractive, it will encourage development on the other side of the river in HSK area.

The main design strategies are as follows:
1). Add more visual and spatial connection to the riverfront

2). Remove the fence and open the housing estate to the riverfront. Create a lively riverfront with multi-function public space based on existing green space.

3). Design of 4 crucial public space along the riverfront (shown in next part)
Riverfront Reference - Sha Tin, Shing Mun River

There is a success riverfront case not far from TSW - Sha Tin (fig.4.35). Shing Mun River was designed for the drainage of storm water just like the river in TSW. But now the riverfront is a popular recreational place with green space, bicycle & pedestrian path and sports activities enjoyed by the residents of Sha Tin.

From the images of the riverfront (fig.4.36), it is not hard to recognize that the new town of Sha Tin developed along the river and benefits a lot from the river. The planning land use of outline planning zone (fig.4.37) shows that there are mix-function developments along the riverfront on both sides of the river. So, TSW has not realized the importance of the river yet. Together with the new development in HSK, both TSW and HSK will benefit greatly from the river like what happened in Sha Tin. Sha Tin is always considered as a successful new town, the riverfront is definitely one crucial successful element.

TSW could learn many experience from Sha Tin, especially how to make good use of the river, turn the riverfront into a precious value of the whole area, and let the people enjoy the riverfront.
Riverfront Reference - Cheonggyecheon River Restoration Project, Seoul, South Korea

Cheonggyecheon River Restoration is a successful urban design project in Seoul. As shown in fig. 4.38, it used to be a stream in ancient times, and later constructed as highway, but now it is a multifunction river park where many Seoul citizens enjoyed (fig. 4.39). The masterplan (fig. 4.40) shows the environment quality of riverfront and how it connects the separated north and south parts. Sections (fig. 4.41) also show how the riverfront adapted with the street, traffic and different urban function areas.

This project receives high praise: ‘It’s an interdisciplinary urban design project, facilitating critical connections between landscape and economics, engineering and planning, politics and architecture. Cheonggyecheon is an urban intervention with far-reaching significance for the city as a whole, as the project scope is far more extensive than the linear park. Environmentally, the restored waterway and plantings have not only changed the ecology along its banks but have affected the climatic conditions in the city center. Economically, the Cheonggyecheon has stimulated business activity in the surrounding area and effectively linked the north and south of Seoul. It shows urban design can catalyze economic development, reinforce connection with the natural environment, and improve the quality of the urban condition for residents and visitors alike.’ (Harvard GSD, 2010)

TSW could learn how a riverfront project brings changes and new development on higher level and scale, not only physically, but also socio-economically.
Riverfront Design

Riverfront a
Riverfront a is the extension of North Junction, the plan (fig.4.42) shows how the housing connects with the riverfront. Trees and new square will take place of the current fence to separate housing area and riverfront. Sections (fig.4.43 & fig.4.44) show different layers of riverfront: walkway, bicycle path, green space, wood deck into the river, etc.

Riverfront b
Riverfront b is a special area currently, now there are two schools besides the street, so an illegal dawn market happened here when the parents sent children to school. The plan and section (fig.4.45 & fig.4.46) shows how to organize the dawn market spatially in the riverfront.

Riverfront c
Riverfront c is the extension of North Loop, the plan and section (fig.4.47 & fig.4.48) shows how to transform part of the ground parking space into community service area. Two low-rise building could be built for community service, like Youth Centre combined with community gardens where children can learn vegetation while mothers do the gardening work; and Bicycle Club where residents can learn bicycle, they can also practice in the parking area when it is empty.

Riverfront d
Riverfront d is the extension of Tin Shui Rd Park, the plan and section (fig.4.49 & fig.4.50) shows how to expand the park into the riverfront.

Fig.4.51 shows the future image of Riverfront, not only as a recreational riverfront, but also as a flowing market riverfront with diverse marketplaces, like Dawn Market from 7am to 9am, Evening Market from 7pm to 9pm, as well as weekend market of flea market or mutual aid market. These new markets would be organized and managed by local community groups like Vendor Union, Housewife association, etc.
Fig. 4.42: Plan of Riverfront a

Fig. 4.44: Section 2 of Riverfront a
4. Design

Fig. 4.45: Plan of Riverfront b

Fig. 4.46: Section 1 of Riverfront b
4. Design

Fig. 4.49: Plan of Riverfront

Fig. 4.50: Section 1 of Riverfront
Riverfront Future Image

Flowing Market Riverfront
- Dawn Market 7am-9am
- Evening Market 7pm-9pm
- Weekend Flea Market / Mutual Aid Market

Recreational Riverfront
4. Design

**STAKEHOLDERS**

- Independent Organization
- Opening TSW Association
- Local Gov.
- HK HA
- Planners
- Architects
- Fundation
- NGOs
- Vendor Union
- Market Supervisor Group

Local residents’ self-made organization

---

**PLAN & DESIGN**

- Independent Organization
- Opening TSW Association
- Local Gov.
- HK HA
- Planners
- Architects
- Fundation
- NGOs
- Vendor Union
- Market Supervisor Group

---

**CONSTRUCTION**

- Independent Organization
- Opening TSW Association
- Local Employment
- Volunteers
- Vendor Union
- Market Supervisor Group

---

**MANAGEMENT**

- Independent Organization
- Opening TSW Association
- Vendor Union
- Market Supervisor Group
- Operate markets
- Supervise markets
- Time schedule of different markets
- Market location and number of vendors
- Cleaning arrangement & noise protection

---

Two groups have agreement on:
1) Time schedule of different markets
2) Market location and number of vendors
3) Cleaning arrangement & noise protection

---

**STAKEHOLDERS**

- Coordinator
  - Independent Organization of Opening TSW Association
- Public sector
  - Local Government / HK HA
  - Fundation
- Private sector
  - Planners / Architects
  - NGOs
- Local residents’ self-made organization
  - Vendor Union
  - Market Supervisor Group

---

**PLAN & DESIGN**

- Coordinator
  - Independent Organization of Opening TSW Association
- Investors
  - Local Government / HK HA
  - Fundation
  - Vendor Union
- Designers
  - Planners / Architects
  - NGOs
  - Vendor Union
  - Market Supervisor Group

---

**CONSTRUCTION**

- Coordinator
  - Independent Organization of Opening TSW Association
- Self-built program by
  - Vendor Union
  - Market Supervisor Group
  - Local employment
  - Volunteers

---

**MANAGEMENT**

- Coordinator
  - Independent Organization of Opening TSW Association
- Operate markets
  - Vendor Union
- Supervise markets
  - Market Supervisor Group

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Fig. 4.52: The Process into Reality of Riverfront
Riverfront - Flexibility

Detail explanation of the process into reality of riverfront is shown in fig.4.52. There are three scenarios (fig.4.53) of the riverfront based on different investment and complicated reality:

**Riverfront Scenario 1**  
*Flowing Market Riverfront*

In this scenario, a flowing market would be built up to meet the demand of low-income residents. It needs small investment and residents participation. This scenario would solve the urgent problems in TSW.

**Riverfront Scenario 2**  
*Flowing Market Riverfront + Water enjoyable Riverfront*

In this scenario, not only low-income residents would benefit from the flowing market, but also middle and high-income residents could benefit from the water enjoyable riverfront. So, the riverfront would become lively and attractive. This scenario would improve the image and living quality of TSW.

**Riverfront Scenario 3**  
*Flowing Market Riverfront + Water enjoyable Riverfront + HSK Riverfront development*

In this scenario, when TSW has a lively and attractive riverfront, it would promote the development of the other side of the riverfront in HSK. Finally, both TSW and HSK would benefit from the riverfront. This scenario is a long term vision for TSW, as well as a strategy to link TSW with future development in HSK.

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Fig. 4.53: Three scenarios of Riverfront:  
- a. Existing condition  
- b. Riverfront Scenario 1  
- c. Riverfront Scenario 2  
- d. Riverfront Scenario 3
4. Design

**DESIGN GUIDELINES**  
*Bring urban sense and spatial hierarchy into TSW with mix-function & human-scale design.*

---

**Diverse & Affordable Transportation**

Diverse public transport connections on different scale  
Encourage affordable transportation modes without pedestrian connection barrier on local scale

<table>
<thead>
<tr>
<th>Mode</th>
<th>HK-SZ</th>
<th>HK</th>
<th>TSW</th>
<th>WNT</th>
<th>TSW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metro</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light rail</td>
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<tr>
<td>Bus</td>
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</tr>
<tr>
<td>Tram</td>
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<tr>
<td>Bicycle</td>
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</tr>
<tr>
<td>Pedestrian</td>
<td></td>
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</tbody>
</table>

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**Multi-function Public Space**

Public space for leisure activities, economic activities and social activities at different time for various demands

<table>
<thead>
<tr>
<th>Leisure activities</th>
<th>Economic activities</th>
<th>Social activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape: Green/ Blue</td>
<td>Diverse Market: Dawn/ Night/ FleaK</td>
<td>Open space Community service centres</td>
</tr>
<tr>
<td>Weekend/ Mutual Aid Market</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Lively Street life**

Open the closed-in housing estates to main street  
Learning from tradition HK street: mix-function & flexible space, diverse street connections

<table>
<thead>
<tr>
<th>Open housing estates</th>
<th>HK street</th>
<th>Well-designed street connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td></td>
<td></td>
</tr>
<tr>
<td>After</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Remove the fence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open to main street</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Densification by low-rise building</td>
<td>Transformation of unused space for small and local business</td>
<td>Bicycle route Ground-level &amp; Elevated walkway</td>
</tr>
</tbody>
</table>

Fig. 4.54: Design guidelines of the project
Conclusion - Design Guidelines

The design part shows how to reflect strategy in reality and space. The aim of spatial intervention is to create spatial hierarchy and bring urban sense into TSW with mix-function and human-scale design. There are three aspects in the design guidelines (fig.4.54) as follows:

1) Diverse & Affordable Transportation
Besides the current public transport connection: metro on HK-SZ and HK scale, light rail on WNT and TSW scale, bus on all scales; there will be a new connection by tram on TSW scale which would not be a barrier on ground level anymore. Moreover, bicycle as an affordable transport mode would be encouraged on WNT and TSW scale. In conclusion, more priority will be given to bicycle and pedestrian on local scale.

2) Multi-function Public Space
Currently, public space is mainly for leisure activities. However, as shown in the theoretical part, public space has the potential for the happening of socio-economic measures. So, public space should be multi-function: for leisure activities with green and blue landscape; for economic activities with diverse market; for social activities with open space or community service centres where residents would have more social interactions.

3) Lively Street Life
The closed-in design of housing estates besieged each housing estate inside the besieged city. So, the first step would be removing the fence and opening the inward housing estates to main street. Then, the street should learn from traditional HK street with mix-function, flexible space and diverse street connections. The lively street could be created by densification of low-rise building and transformation of unused space to encourage small and local business. On the street, well designed street connections of bicycle route, ground-level and elevated walkway would make the street friendly for pedestrian and cyclists.

These design guidelines as the conclusion part of design could be a design approach for similar cases.
5. Conclusion

Evaluation and Reflection
Bibliography
Evaluation and reflection

Inclusive development strategy

In this project, a keyword is ‘Inclusive development strategy’. ‘Inclusive’ is considered as the solution for the existing ‘exclusive’ development and decision-making process. Here, ‘inclusive’ means the combination of ‘top-down’ and ‘bottom-up’, as well as participation of various stakeholders, especially the low-income groups. Through this inclusive development strategy, the low-income groups could not only express their demands, but also join the decision-making process. So, there would be one or more dimensions to consider during the future development of TSW, and this would achieve the benefit of a larger population and social justice.

However, ‘Inclusive’ is much easier to say than to act. Although in this project, the strategies and designs are trying to convince every stakeholder that everyone could be benefit as long as everyone follows the new process. The new process is also based on the assumption that all the stakeholders are willing to bring a better future to TSW without too much selfishness. But, there are much more concerns and doubts in reality. For example, if some local residents are not willing to participate because they don’t want to get trouble, or some residents don’t participate positively; if the local government is too cautious to take action; if the parking building owners don’t want to transform empty parking space although there would be new profit from transformation; if the private developers and small-business men don’t have enough confidence in the improvement of TSW...

But on the other side of the coin, all those circumstances might be positive triggers for ‘inclusive’ discussions in TSW and the society of HK.

More improvement of the project

This is not a 100% work (maybe 80%), so there is still some space for improvement as long as time goes on:

- Though this project focus on low-income groups, but a truly inclusive development strategy should include the benefit of everyone based on the principle of common interest. Another vulnerable group is the juvenile (almost 20% of population), their future is closely related with the future of TSW. Currently, there are over 50 schools in TSW, however, the youth related service might decrease when juvenile grow up. The change in demographic composition in the future would have great influence on TSW, not only about social-mix groups (low-income, middle-income, high-income), but also about different age groups and different migrant groups.

- The so-called ‘On the ground’ projects still need diverse design proposals to show the detail image and spatial quality. Design in detail would need more time and more smart ideas to reflect the urban strategy. The design part in this project only shows the basic design concept and limited design scenarios. The discussion of flexibility is only a start. ‘On the ground’ design would need more residents participation and the cooperation of different stakeholders.

- The Green Route Network strategy could bring some employments for local people, but this might not enormously improve local socio-economic condition. There should be more economic strategies together with urban strategy to develop local economy. This project only shows some spatial opportunities, more socio-economic opportunities still need to be discovered.
Replicability of approach in this project

In Hong Kong, some new towns with large public housing concentration might find valuable approach of this project, like the overall inclusive and integral strategy approach, and the design guidelines.

In the mainland China, the experience of TSW needs strong attention, because China is currently undergoing many affordable housing projects all over the country. On the one hand, they should try to avoid the problems of TSW; on the other hand, when similar problems happened, the approach in this project might be a good example.

The values of Urbanist, from Spatial change to Social change

In this project, Urbanist is not a neutral subject that only produces plans and drawings. Here, urbanist has strong values for social justice. Because of the strong values, this project is not only a problem solving project, but also considers new development and vision on larger scale. The urbanist is trying to build up a bridge between the group with fewest options and spatial-social resource with diverse options, bringing different stakeholders to the same round table for discussions, and facilitating an inclusive future with better social condition.

The relation between spatial change and social change is a controversial issue, it not simply who decides who, but they have influence on one another in different context. In this project, when socio-economic condition is not good, bad spatial design could worsen the social condition. So, if there is no solution in socio-economic aspects, then good spatial interventions might improve the social condition. However, when politicians seek for the help from architect to solve social problems, we have to be aware that spatial change is only a carrier and start for social change, but not everything.