Disclaimer:
This presentation has been produced in the context of a seminar/conference organized with the assistance of the European Union. It reflects the views only of the author, and the European Union cannot be held responsible for any use, which may be made of the information contained therein. The contents of this presentation are the sole responsibility of the author and can in no way be taken to reflect the views of the European Union or the European Union Academic Programme Hong Kong.
Smart Urban Planning (II) – New Town Development in Vienna and Hong Kong
2016 Urban Innovation Series: Smart Urban Planning (II) – New Town Development in Vienna and Hong Kong
8 November 2016

New Town Development in Hong Kong: The Road to Smart Growth

Ms. Phyllis Li, J.P., Deputy Director of Planning/Territorial, Planning Department, HKSAR Government
“New Towns” in Hong Kong are a response to a unique set of planning, social and economic circumstances.

Hong Kong’s strategy for the next generation of new towns has been reshaped towards Smart Growth and building Smart, Green and Inclusive communities.
Early Development of Hong Kong

- Starting off as a port, Hong Kong had its early land development concentrated along the Victoria Harbour.

- Inflow of migrants especially from the Mainland has posed tremendous pressure on the scarce land resources.
Prototype Satellite Town in Kwun Tong (1950s)

- A response to the proliferation of slums and squatters, shift from entrepot to manufacturing economy, and need of factory and housing land at the urban periphery
- Shek Kip Mei Fire in 1953 triggered the Government’s public housing programme, emphasizing the expeditious provision of low-cost shelters
- By 1965, we have 1 million population residing in public housing estates in the urban areas
- Not comprehensively planned, especially in community facility provision
First Generation New Town (1970s)

**Background**

**Colony Outline Plan 1972**
- New town decentralisation strategy for environmental improvement of the dense urban core

**New Town Development Programme 1973**
- Triggered by the 1972 Ten Years Housing Programme: to accommodate about 1.8 million people outside the overcrowded urban area

**Major Planning Principles**
- Comprehensive large-scale development for urban living and manufacturing industries
- Concepts of “self-containment” and “balanced development” with efficient external transport and railway links
Second Generation New Towns (Late 1970s)

**Background**
- Extending the traditional market towns in the NT to new towns
- Industrial estates to serve industrial diversification

- **Yuen Long New Town**
  - Land area: 561 ha
  - Planned population: 196,000

- **Fanling/Sheung Shui New Town**
  - Land Area: 667 ha
  - Planned population: 326,000

- **Tai Po New Town**
  - Land area: 2,898 ha
  - Planned population: 347,000
Third Generation New Towns (1980s and 1990s)

**Background**

- Expanding into further parts of the NT, reflecting a deliberate decision to continue growth in the NT (Tin Shui Wai and Tseung Kwan O New Towns) and to support the airport development (Tung Chung New Town)
- Industrial estates for special industries to serve territorial needs

**Tung Chung New Town**
- Land Area: 430 ha
- Planned population: 306,000
- Current population: 83,000

**Tin Shui Wai New Town**
- Land area: 1,738 ha
- Planned population: 450,000

**Tseung Kwan O New Town**
- Land area: 1,738 ha
- Planned population: 450,000

Tseung Kwan O Industrial Estate
Achievements & Challenges of the Three Generations of New Towns

Three Generations of New Towns

1st Generation
- Tung Chung
- Tin Shui Wai
- Yuen Long
- Fanling/Sheung Shui
- Tuen Mun
- Tsuen Wan
- Tseung Kwan O
- Tai Po
- Sha Tin
- Yuen Long/Tai Po

2nd Generation
- Sheung Shui

3rd Generation
- Tsuen Wan
- Tuen Mun
- Tung Chung
- Tin Shui Wai
- Yuen Long
- Fanling/Sheung Shui
- Tuen Mun
- Tsuen Wan
- Tseung Kwan O
- Tai Po
- Sha Tin
- Yuen Long/Tai Po
Achievements & Challenges of the Three Generations of New Towns

**Achievements**

**Remarkable Scale and Speed**
The population living in new towns has increased from 0.6 million in 1973 to 3.43 million in 2015 (almost 1 million increase per decade during the peak).

**Integrated Land and Infrastructure Development**
Clustering of developments enables efficient use of land and provision of public services and transport systems, preventing haphazard urban sprawl.

**Improved Quality of Living**
Provided lower density housing with more facilities and greenery outside the urban areas, relieving the congested urban environment.

**Balancing population distribution and development**
Successfully decentralised population and development from the urban core to the New Territories, with 41% of the population now live in the New Territories.
Achievements & Challenges of the Three Generations of New Towns

**Challenges**

**Large Commuting Flows**
Mismatch of homes and jobs as self containment is difficult

**Imbalanced Community**
Challenge in developing a balanced community as affected by housing mix and population and job profiles

**“Hiccups” in Facilities Provision**
Mismatch in the planned and actual provision of community facilities
Future Challenges of Hong Kong

- A growing and ageing population and a shrinking labour force
- Keen competition in the global and regional economy
- Providing new transport and other infrastructure
- Aspiration for Enhancing liveability
- Innovation and technology and enabling education to increase productivity
- A large quantity of old building stock
- Imbalance in home-job spatial distribution and jobs of a limited range of skills
- Meeting land requirement and adopting a much longer term view
- Readiness for climate change
The Road to Smart, Green and Inclusive Growth

- Think out of the box to create land, infrastructure, a good environment for people to live, work, play and do business, and communities.
- Long-standing strategy of creating a compact, transit-oriented and sustainable city.
- A planning framework for a smart growth strategy in Hong Kong in pursuit of three objectives.

1. Enhancing Liveability
2. Creating Capacity for Growth
3. Enhancing Economic Competitiveness
New Development Areas under Planning

1. Fanling North / Kwu Tung North NDAs
2. Hung Shui Kiu NDA
3. Yuen Long South Development
4. Tung Chung New Town
Long-term Development in the Future

New Territories North

East Lantau Metropolitan
Hung Shui Kiu New Development Area

From **Brown** to **Green**

The NDA project will build on land occupied by brownfield (about 190 ha) and other uses including squatters and abandoned farmland as part of the new town development and transform the degraded rural lands into optimal land uses.

Before

After
Hung Shui Kiu New Development Area

Positioning

A New Generation New Town
A Regional Economic and Civic Hub for the Northwest New Territories

- Adjoins Tin Shui Wai, Tuen Mun & Yuen Long New Towns
- Conveniently connected to the strategic transport infrastructure to Shenzhen, Hong Kong International Airport and main urban area
- Efficiently linked with new development nodes at Lantau and the Pearl River Delta region
To create a SUSTAINABLE, PEOPLE-ORIENTED AND BALANCED LIVING, WORKING AND BUSINESS COMMUNITY and A REGIONAL ECONOMIC AND CIVIC HUB fostering Hong Kong’s economic growth.
Hung Shui Kiu New Development Area
Development Parameters

Revised Recommended Outline Development Plan

<table>
<thead>
<tr>
<th>Category</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Population</td>
<td>About 176,000</td>
</tr>
<tr>
<td>Total Population</td>
<td>About 218,000</td>
</tr>
<tr>
<td>No. of New Flats</td>
<td>About 61,000</td>
</tr>
<tr>
<td>Housing Mix (Together with TSW)</td>
<td>Public 51% (69%) Private 49% (31%)</td>
</tr>
<tr>
<td>Employment</td>
<td>About 150,000</td>
</tr>
<tr>
<td>Commercial</td>
<td>75,000</td>
</tr>
<tr>
<td>Industry and Special Industry</td>
<td>61,000</td>
</tr>
<tr>
<td>G/IC and Other Services</td>
<td>14,000</td>
</tr>
<tr>
<td>Commercial Floor Area</td>
<td>About 2,055,000m²</td>
</tr>
<tr>
<td>Industrial and Special Industrial Uses Floor Area</td>
<td>About 4,312,000m²</td>
</tr>
</tbody>
</table>
• Concentrate developments around the HSK Station and TSW Station of West Rail, where development intensity descends towards the Lau Fau Shan and Deep Bay areas

• Provide commercial development nodes around HSK Station, TSW Station and northern part of the NDA

• “Logistics, Enterprise and Technology Quarter” is planned at the northwestern part of the NDA

• TSW River Channel runs through the NDA as a connecting green spine

• An inclusive community which is age-friendly, family-friendly and supportive of youth development.

• Provision of an array of civic, community, education and leisure facilities

• Integration with Tuen Mun New Town, TSW New Town and Yuen Long South
Hung Shui Kiu New Development Area
As a Smart, Green and Resilient City

Sustainable Planning and Urban Design
Smart Mobility
Integrated Smart, Green and Resilient Infrastructure System
Hung Shui Kiu New Development Area
As a Smart, Green and Resilient City

Sustainable Planning and Urban Design

- Smart Use of Land Resources
- Smart Economy and Job Diversity
- Smart and Green Design
Sustainable Planning and Urban Design

a. Smart Use of Land Resources

Smart Creation of Land: From Brown to Green

The HSK NDA project is to transform the existing vast extent of brownfield sites of about 190 ha to optimal land uses and improve the overall environment.
Sustainable Planning and Urban Design

a. Smart Use of Land Resources

Smart Creation of Land : From Urban Sprawl to Efficient Use

About 24 ha of land is reserved for port back-up, storage and workshop uses for the development of proposed multi-storey buildings to accommodate some of the affected brownfield operations in a land efficient and environmentally friendly manner.
a. Smart Use of Land Resources

Through comprehensive planning and removal of brownfield sites, HSK NDA will provide about 61,000 new flats to meet the medium to long term housing needs of Hong Kong.

Provide a total of about 2.05 million m² commercial floor area and about 4.31 million m² industrial and special industrial uses floor area.
Sustainable Planning and Urban Design

a. Smart Use of Land Resources

**Optimisation of Land Use**

- Compact rail-based development
- High-density developments concentrated around Hung Shui Kiu Station and Tin Shui Wai Station, complementing the “Regional Economic and Civic Hub” and “District Commercial Node”
- Development intensity descends towards the north

[Map showing Proposed HSK Station and Existing TSW Station]
Sustainable Planning and Urban Design

b. Smart Economy and Job Diversity

Smart Economy, Products and Services

- HSK NDA will be one of the key drivers for Hong Kong’s economic growth and new industries
- Plenty of solution spaces to meet the surging demand for economic uses including office, retail and hotels space
- A platform for modern logistics, innovation and technology uses and special industrial uses
- Land reservation for Enterprise & Technology Park will accommodate a variety of innovation and technology uses, including research centre, testing & certification use, data centre, modern industries and other related businesses and non-polluting industrial uses
- A regional economic hub and a new community for energy efficient and smart production, smart products and smart services
Sustainable Planning and Urban Design

b. Smart Economy and Job Diversity

Job Diversity and Better Home-Job Balance

- The HSK NDA will create about 150,000 new employment opportunities spanning across a wide spectrum of sectors, and cater for labour force of different educational attributes and skills.

- It will bring jobs closer to residents not only in HSK but also TSW, Tuen Mun and Yuen Long. The NDA will also help reduce the imbalance in the spatial distribution of population and jobs in the territory.

Population and Employment in New Town (Source: 2011 Population Census)

<table>
<thead>
<tr>
<th>New Town</th>
<th>Population (a)</th>
<th>Employment (b)</th>
<th>b/a(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YL + TM + TSW New Towns</td>
<td>921,544</td>
<td>175,651</td>
<td>19%</td>
</tr>
<tr>
<td>HSK NDA</td>
<td>About 218,000</td>
<td>About 150,000</td>
<td>About 69%</td>
</tr>
<tr>
<td>YL + TM + TSW New Towns + HSK NDA</td>
<td>About 1,139,544</td>
<td>About 325,651</td>
<td>About 28%</td>
</tr>
<tr>
<td>Territorial</td>
<td>7,071,576</td>
<td>3,547,781</td>
<td>50%</td>
</tr>
</tbody>
</table>
Sustainable Planning and Urban Design

c. Smart and Green Design

Smart Homes, Smart Offices and Smart Features

- Green and energy efficient building design will be encouraged including use of recycled and green construction materials.

- Information and communication technology will enable smart living, smart offices and smart business, and more convenience for the aged and the disadvantaged.

- Urban living close to nature is planned, leveraging the Tin Shui Wai River Channel and riverside promenade to form a green spine that spans across HSK NDA and connects the larger open space at Regional Plaza and Regional Park and the surrounding water bodies.
Hung Shui Kiu New Development Area
As a Smart, Green and Resilient City

- Green Mobility
- Walkable, Cycle-Friendly and Inclusive Mobility

Smart Mobility
a. Green Mobility

- **External**: HSK NDA will be connected externally by railway link via the Hung Shui Kiu Station and Tin Shui Wai Station.

- **Internal**: A Green Transit Corridor (GTC) comprising a highly efficient Environmental-Friendly Transport System (EFTS), pedestrian walkways and cycle tracks is also planned.

- About 85% of population will reside within 500m of the railway and 200m from the EFTS/Light Rail stations.

- Four planned Public Transport Interchanges for facilitating multi-modal transport.
b. Walkable, Cycle-Friendly and Inclusive Mobility

- Concentrate major population and economic activities within walking distance of the mass transit and public transport nodes

- Comprehensive pedestrian walkway and cycle track network integrated with open space, amenity area and district nodes

- Shopping streets lined with retail frontages along TSW River Channel and near the proposed HSK Station with 5 in 1 functions including Circulation, Leisure, Air ventilation, Visual Permeability and Thriving Local Economy

- Employing elderly-friendly design to cater for the ageing community, such as universal design, elderly pedestrian signal devices, etc.
Hung Shui Kiu New Development Area
As a Smart, Green and Resilient City

Integrated Smart, Green and Resilient Infrastructure System

- Total Water Management
- Sustainable Drainage System
- Solid Waste Management
- Green Energy Saving
- Information and Communication Technology
Integrated Smart, Green and Resilient Infrastructure System

A strategically planned, integrated and land efficient network of physical infrastructure
Integrated Smart, Green and Resilient Infrastructure System

**Sustainable Urban Drainage**

- Flood retention lake in the Regional Park and other planned flood retention facilities will serve to regulate storm water for adjacent villages

**Water Resources**

- Revitalise the Tin Shui Wai River Channel with major green spines, breezeways and view corridors introduced along the riverside
- Use of treated sewage effluent and rainwater harvesting will be explored for toilet flushing and landscape irrigation
Integrated Smart, Green and Resilient Infrastructure System

**Refuse Collection and Sorting**
- Automatic refuse collection system and organic waste management facilities will be explored.
- A Community Green Station is proposed for environmental education purposes and collection of recyclables.

**Smart Energy**
- Encourage energy efficient buildings.
- Explore use of district cooling system.

**Information and Communication Technology**
- Establish an Information and Communication Technology Platform and promotion of open data
- Coordination of different city functions to enhance city management and convenience of residents and business activities
- Promotion of smart homes and smart offices
Conclusion

• New Urban Agenda adopted at Habitat III in October 2016

• Direction of new town development in Hong Kong has moved towards “Smart Growth”

• Sheer scale of housing and other development needs must be catered for in a balanced and optimised manner

• New Town as a multi-functional development cluster provides a variety of opportunities not only for housing and employment, but also in economic, social, cultural and conservation realms to build liveable towns and smart, green and inclusive communities

• An important means for championing sustainable urban development with a view to meeting our present and future social, environmental and economic needs and aspirations
CITY SMART DEVELOPMENT IN EUROPE VIENNA

Smart Urban Planning (II) – New Town Development in Vienna and Hong Kong