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Photo credit: Benny Lam

2017 HONG KONG YOUNG LEADERS PROGRAMME

Housing Affordability for the Next Generation

Accessible Approaches and Recommendations

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Executive Summary (1/2)

Housing in Hong Kong

Housing is Hong Kong's single most important policy concern as the territory recently became the world's most unaffordable housing market. According to one study, it will take a skilled worker 18.5 years to afford a 60 m² flat near the city centre. Property prices have surpassed their 1997 peak by 40% and the tight supply of new residential flats combined with strong end user and investment demand, stable economic performance, low interest rates and ample liquidity have boosted housing prices significantly.

The government has responded by implementing measures to curb housing demand and speculative activity, and has announced targets to provide 460,000 housing units over the next ten years. Despite the government's efforts, property prices and the demand for public housing has continued to rise. As of end-June 2017, there were about 150,200 general applicants for public rental housing with an average wait time of 4.7 years. Approximately 200,000 people live in very poor conditions in Hong Kong's 88,000 sub-divided units.

Based on the government's projections in its Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030, by 2046 a total 4,800 hectares of land will be required for development. Current supply estimated indicate that there will be a shortage of 1,200 hectares of land, of which 230 hectares are for housing.

Current Government Mandate

In order to find long-lasting and comprehensive solutions to the housing problem, it is important to ask the fundamental question of why the housing market has become the way it is and why cooling measures in place since 2010 have failed to stem the increase of property prices.

Hong Kong is one of the most tax-friendly economies in the world. One of the reasons why the government can keep taxes so low is because its largest revenue contributor is from land sales and property-related transactions (35%). Land premium payments contributed 22% of government revenue in 2016-2017. As the city's biggest landlord, there is little incentive for the government to implement measures that will significantly cool the property market.

The majority of the proceeds from land sales will go to the "capital works reserve fund", which is used only for infrastructure projects. Over the last 20 years, infrastructure expenditure has grown 291% to HK\$93 billion in 2016-17, versus housing expenditure which recorded the slowest growth amongst major policy areas over the same period of only 25% to HK\$30 billion.

The management of land and housing are also divided between the Transport and Housing Bureau and the Development Bureau, leading to separate policy decision making and administration.

The government has so far focused predominantly on land supply as the largest policy solution to the housing crisis and in August 2017, the Chief Executive Carrie Lam formed a Land Supply Task Force to identify potential developable land for housing. In her most recent policy address she also included measures such as providing transitional housing for public housing applicants and starter homes for the middle class. However, an even more holistic approach that considers all areas of this multi-faceted challenge is necessary to finding comprehensive solutions that benefit all.

Executive Summary (2/2)

Proposal to Increase Access to Affordable Housing

The proposal encourages a comprehensive review of the housing challenge in order to create new and holistic solutions that recognizes the political challenges but also seeks to reduce the influence of vested interests. The recommendations require action from the government and private sector and aims to benefits all parties, including most importantly the public. The key pillars of the policy proposal include:

- A new government structure, where a **new Housing Bureau** is established to manage all departments related to land and housing in order to provide a better coordinated effort to manage the housing affordability challenge. This will include putting the Lands Department under the new bureau and shifting its mandate from maximizing the monetisation of land to balancing housing needs with revenue generation.
- **Increasing housing supply by releasing under-utilised land** for residential development. The aim is to enable efficient land allocation for housing in urban areas with existing infrastructure, without the need to develop country parks or reclaim land. The comprehensive study reveals that measures to unlock existing under-utilised land can free up 4,379 hectares and provide roughly 2.9 million units, six-times the government's total number of units required over the next ten years.
- Government policies to help **lower construction costs and shortening the overall project life cycle** of housing development will help to speed up supply of new residential units to the market as well as decrease overall cost of housing.
- **Demand-management mechanisms** need to be more targeted at non-local and investor demand while supporting first-time home buyers and low-income tenants through a combination of enabling policies in both the private and public housing sector. Managing the overheating of the land sale process is also required.
- **Quality of housing** should not be compromised in the pursuit of affordability. Statutory minimum dwelling sizes, regulation of sub-divided units and provision of community services to help low-income groups and the elderly will provide better living environments. Adequate resources and direction need to be given to the redevelopment of decaying old buildings to ensure equitable and financially viable processes that help to increase housing supply.
- The creation of an independent and representative platform in the form of a "**Housing Policy Commission**". Its objective will be to review the current situation from a holistic viewpoint and propose suitable implementation measures for public consumption. The commission would have a short term mandate of 9-12 months to seek input from different stakeholders and make recommendations to the government.



Introduction & Background

Hong Kong Young Leaders Programme



The **Global Institute For Tomorrow (GIFT)** is an independent pan-Asian think tank providing content-rich and intellectually-challenging executive education from an Asian worldview.

Based on GIFT's internationally recognized experiential Global Leaders Programme, the **Hong Kong Young Leaders Programme (YLP)** is an annual platform to inspire a new generation of leaders and a new precedent of constructive dialogue and ideas, as well as promote cooperation and collaboration across sectors.

Project Team

In September 2017, young professionals from Hong Kong, mainland China and France representing different fields spanning business, government and civil society came together to participate in the third annual YLP. During the experiential module, the participants studied Hong Kong's housing issues and developed a series of innovative policy recommendations for increasing access to affordable housing.



Participating organisations:



Supporting Organisations

Supporting organisations:



Other supporting organisations to be thanked include: Civic Exchange, CLP Power, Construction Industry Council, Designing Hong Kong, Gammon Construction, Our Hong Kong Foundation, Po and Helena Chung Foundation, River Star Foundation, Sino Group, Skadden, Arps, Slate, Meagher & Flom LLP, Society for Community Organisation (SoCo)

Scope of Project (1/2)

Programme Objectives

To Establish Ground Truth:

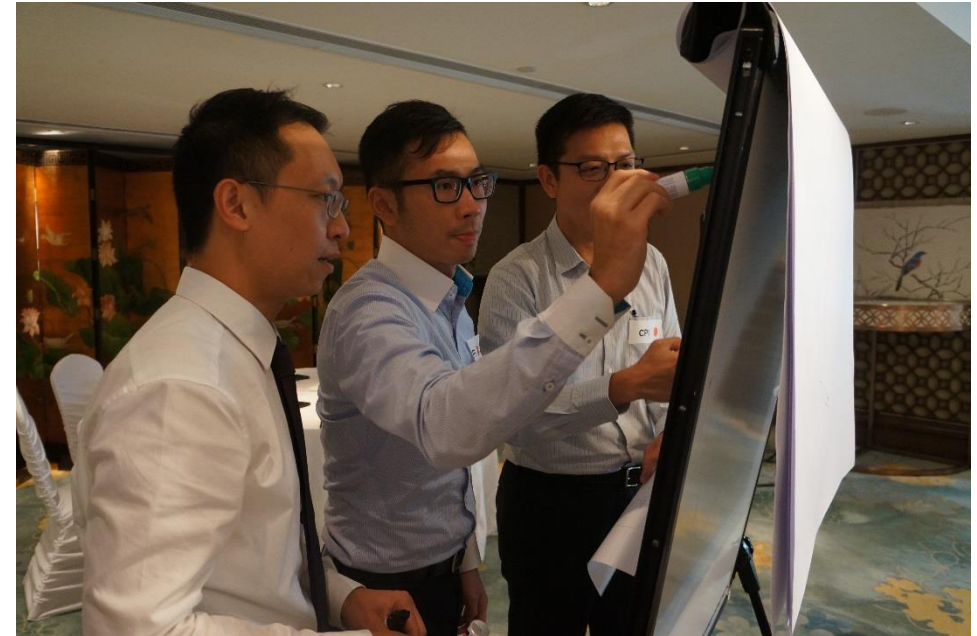
- To gather information and gain a better understanding of the factors contributing to Hong Kong's unaffordable home prices and the challenges and opportunities to making housing more affordable.
- Gain a realistic picture of the various vested interests and stakeholder aspirations vis-à-vis affordable housing.

To Develop:

- A road map of fresh policy recommendations to increase access to affordable housing and a framework for implementation to support the government's efforts to do so.

To Recommend:

- New institutional arrangements that enable the government to more effectively implement policies to manage housing prices.
- Solutions that require action from the government and private sector, and are inclusive of all segments of the population.



Scope of Project (2/2)

The YLP is a one month programme combining classroom and field based learning alongside research assignments.

Methodology

- During the programme, participants are divided into teams, each with a different focus connected to the most salient issues of the housing challenge (e.g. unlocking land, managing the market, etc.)
- After one week of classroom learning, teams conducted research assignments to dig deeper into the root causes and potential solutions to increase access to affordable housing.
- During the one-week intensive field project they engaged diverse stakeholders, conducted interviews, focus groups and site visits to learn about the problems first hand.

Outcomes

- With guidance from GIFT, participants analysed the information gathered through research, site visits and stakeholder meetings and developed the recommendations contained in this report.
- The participants also presented highlights of the report at a public forum to project stakeholders and representatives from business, government and civil society.



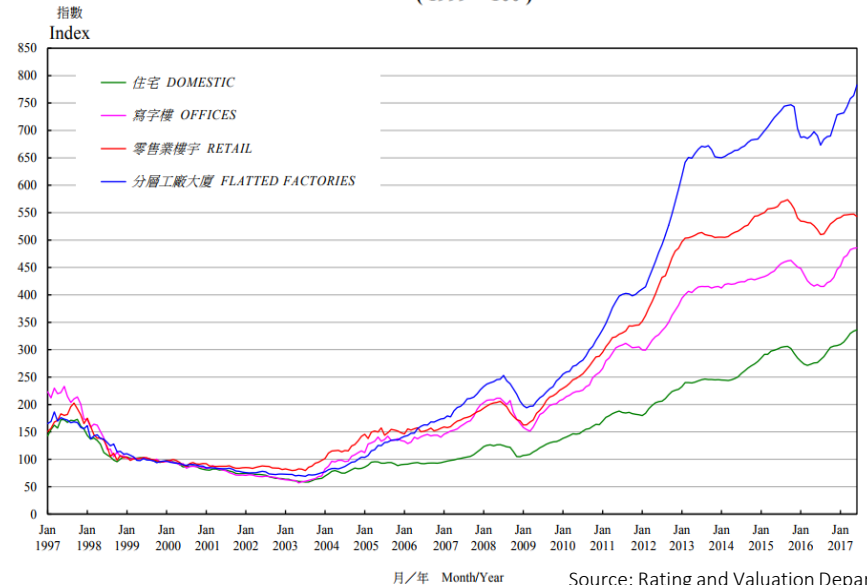


Current Situation & Challenges

Hong Kong's Housing Affordability Challenge

- Housing is Hong Kong's single most important policy concern as the territory recently became the world's most unaffordable housing market. According to one study, it will take a skilled worker 18.5 years to afford a 60 m² flat near the city centre.
- Flat prices have been on an almost uninterrupted uptrend since 2004. Tight supply of new residential flats, combined with strong end-user and investment demand, stable economic performance, low interest rates and ample liquidity have boosted housing prices significantly.
- The government has emphasised that resolving the housing problem lies with increasing supply. However, it takes time for the increase to be realised, and in the short-term the demand-supply imbalance will remain tight, prompting the government to impose demand-side measures to curb speculative activities and reduce investment demand.
- Despite government efforts, property prices and demand for public housing continue to rise as many residents are priced out of the property market. There are currently 150,200 applicants for public rental housing (PRH) with an average wait time of 4.7 years.
- An estimated 200,000 people live in the city's 88,000 subdivided flats. A survey conducted by Platform Concerning Subdivided Flats in Hong Kong found that the average living space per person is 5.6 m².

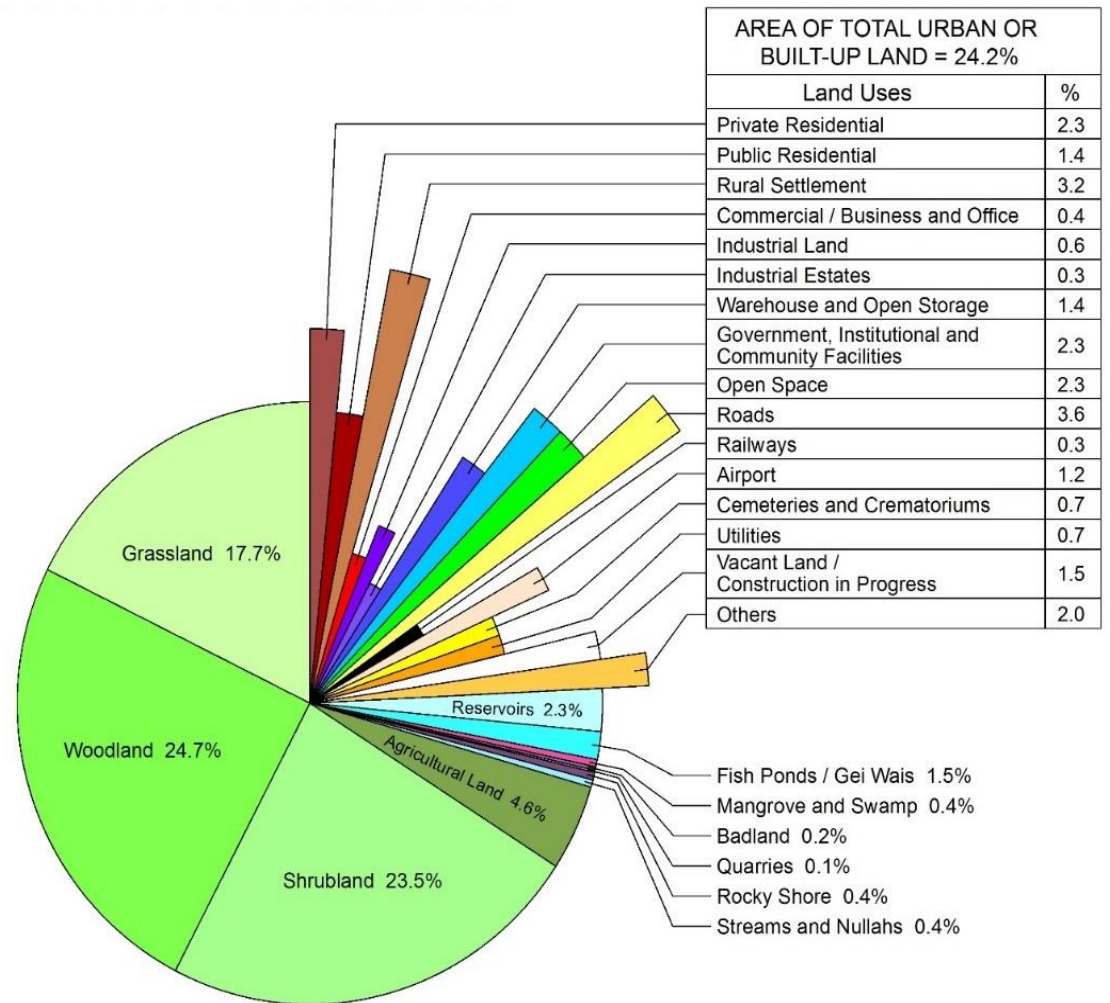
香港物業售價指數
PRICE INDICES FOR HONG KONG PROPERTY MARKET
(1999 = 100)



Hong Kong is the world's least affordable housing market

Hong Kong Housing in Figures

- Hong Kong has a total land area of 1,106.3 km², of which about 268 km² or **24% is built-up area**.
- It has a total population of 7.3 million and 2.5 million households.
- Home ownership rate is 50.4%, vs 90% in Singapore, 61.6% in Japan and 50% in London.
- 45.6% of the population live in public housing (of which 64% are in rental housing and the remaining subsidised sale flats).
- 56% of Hong Kong's housing stock is private housing (1.5 million units of the total 2.7 million units).
- Hong Kong has the highest construction costs in Asia, and is second only to New York globally.
- The government projects total housing demand in the coming 10 years will be 460,000 units and 1 million units by 2046.
- Based on the Planning Department's study "Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030", the total land shortfall to support residential development, including auxiliary facilities (such as economic uses, open space, transportation facilities) is 1,200 hectares (ha), of which 230 ha is required to build housing. **A shortfall of 1,200 ha is equivalent to only 1% of Hong Kong's total land area and 230 ha is 0.2% of that.**



Total land area = 1,110 km² (including about 4 km² of Mangrove and Swamp below the High Water Mark)
 Vegetated area cover about 78.7% of the land area of Hong Kong
 Country Parks, Special Areas and Mai Po Ramsar Site cover about 41.8% of the land area of Hong Kong

Source: Planning Department

Social Costs of High Housing Prices

- Half of Hong Kong's population live in rental properties. High home prices lead to higher rents. More income must be set aside to cover accommodation, leaving less disposable income for essentials and emergency.
- A 2013 survey found that mortgage or rent payments took up 44% of monthly income of the middle-class in Hong Kong.

Reduces
Financial
Security

Lessens
Social
Cohesion

- High living costs limit the first steps towards settling down. Hong Kong has one of the highest average age of marriage and lowest birth rates in the world.
- Couples delaying marriage due to inability to afford family-sized housing, or having to live with their parents can lead to family conflicts and tension and higher divorce rates.

- As home prices rise, homeowner wealth increases at a higher rate than those who are renting.
- The disparity between haves and have-nots can create social isolation of disadvantaged groups who have no ability to own homes.

Driver of
Inequality

Limits
Social
Mobility

- Homeownership may remain out of reach for most middle-class young people, making them unable to improve their standard of living compared to previous generations.
- Reduced or reverse social mobility can lead to social and political tensions.

Housing unaffordability has costs that spread throughout society

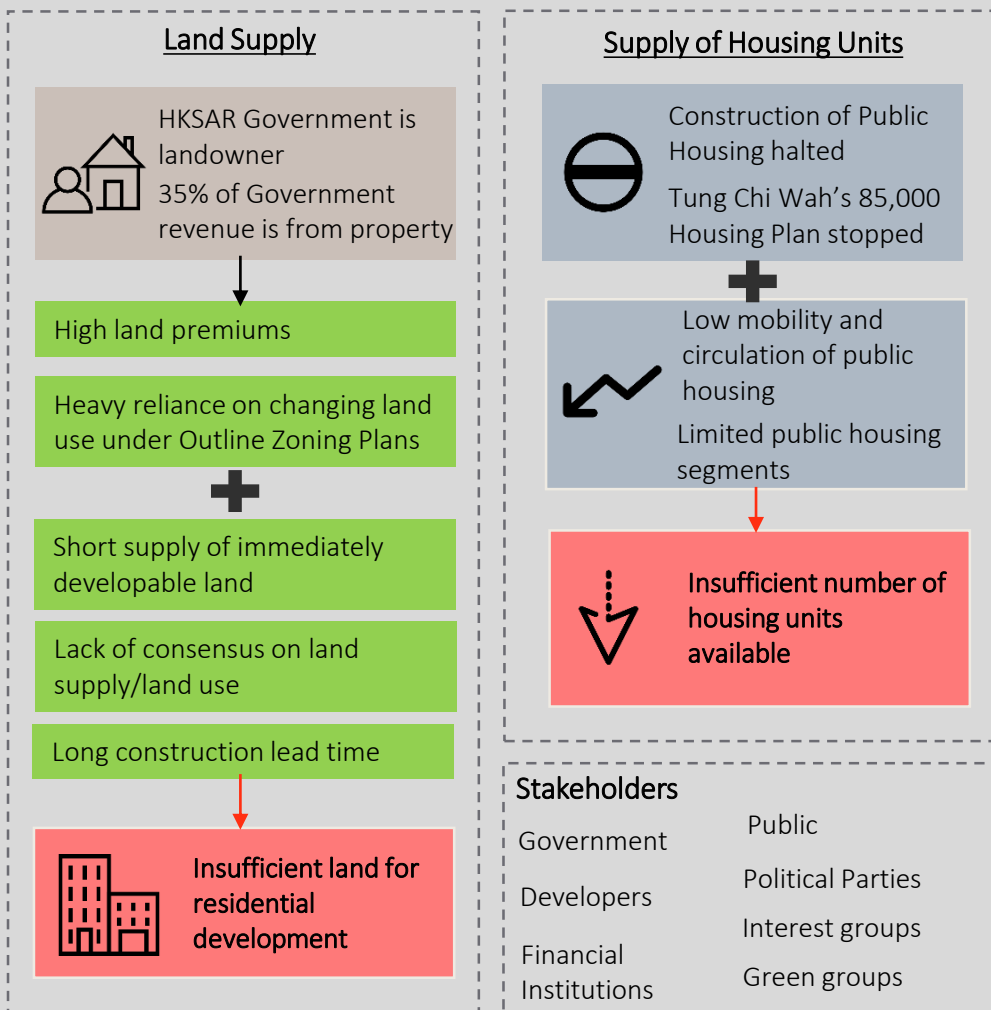
A Detailed Look at the Problem - Summary

- Before solutions can be developed, the real reasons for high housing prices in Hong Kong need to be considered. Beyond the issue of inadequate land supply, there are several factors that contribute to the ineffectiveness of recent measures to dampen the property market.
- The government is the entity with the authority to develop legislation and administer policies to reign in property prices. However, its current mandate, especially in its capacity as Hong Kong's biggest landlord, is to maximise the monetisation of land from land sales. This may conflict with goals to make housing more affordable.
- Supply of housing units and the conversion of developable land into residential use has dropped significantly in the past decade, contributing to rising home prices.
- Demographic factors such as an increase in the number of households and economic conditions such as the extremely low interest rate environment will continue to drive up demand.
- Striving for greater housing affordability should not compromise living quality. The trend towards smaller units in the private market and the prevalence of sub-divided flats and caged homes in the absence of adequate regulations results in citizens living in conditions that are detrimental to their quality of life.



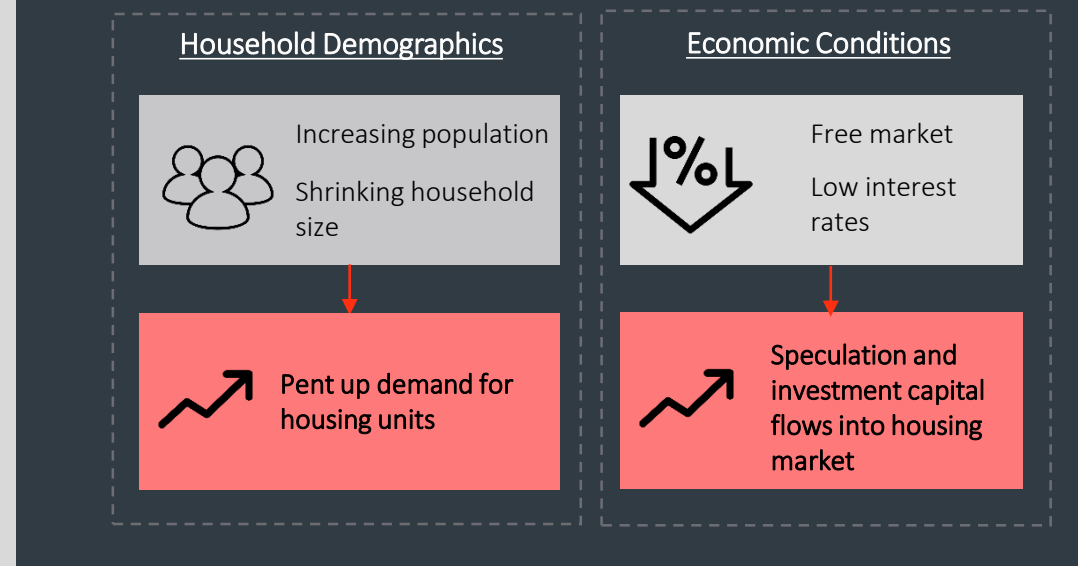
Reasons for Housing Unaffordability

SUPPLY



VS.

DEMAND



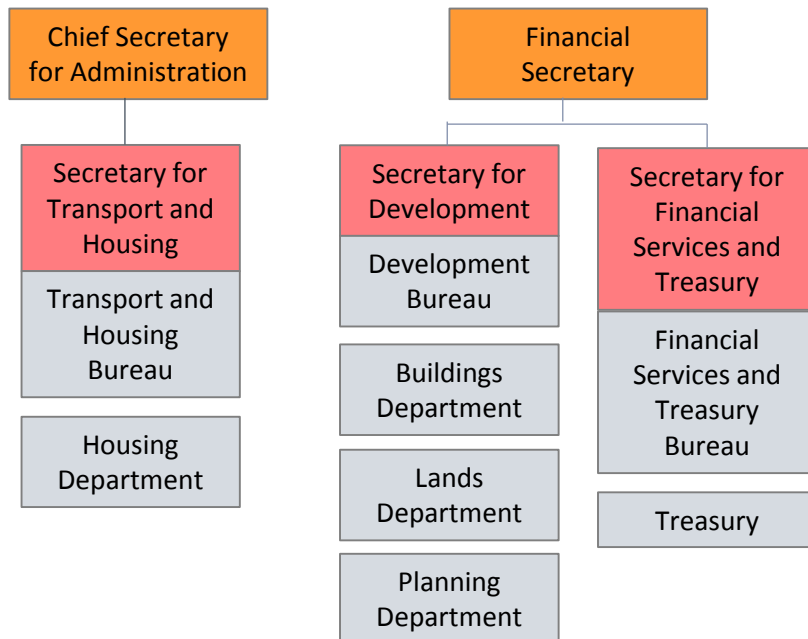
- The government's reliance on land/property for revenue leaves little incentive for it to curb the housing prices in Hong Kong. This has led to high land premiums and developers sitting on their land banks, reducing supply of land.
- The lack of land for residential development and insufficient number of housing units in the face of high demand and the inflow of capital amidst a low interest rate environment has led to a **supply-demand imbalance**.
- High home prices has forced people to live in sub-standard units and supported the development of "nano-flats". The availability of community and open space has also been compromised, diminishing living quality.

Supply and demand imbalance is the main reason why home prices have soared as quality of homes plummet

A Detailed Look at the Problem – Institutional Challenges

- At the heart of the housing affordability crisis is the government’s mandate and institutional structure.
- The government is Hong Kong’s landlord. Its land is administered by the Lands Department, under the Development Bureau reporting to the Financial Secretary, whose main objective is to maximise revenue from land. This contradicts the mandate of the Housing Department (Transport and Housing Bureau) who is responsible for providing and managing affordable housing.
- Property-related revenue was the largest contributor to government income in 2016-17 at 35% (as compared to profits tax at 25% and salaries tax at 11%). The lack of diversity in its revenue sources means that it is currently very reliant on a healthy property market, **leaving little incentive to curb the cost of housing**, which would diminish its revenues significantly.
- Proceeds from land sales are paid almost entirely upfront (97%), with the payment going to the “capital reserve fund” destined for infrastructure works. This favours larger developers and forces the government to spend on expensive infrastructure projects. In 2016-17, infrastructure spending was HK\$93 billion, the largest share of public expenditure (18%) versus expenditure on public housing which was only HK\$30 billion (10%).

Partial Organisation Chart of the HKSAR Government – housing related bureaus and departments



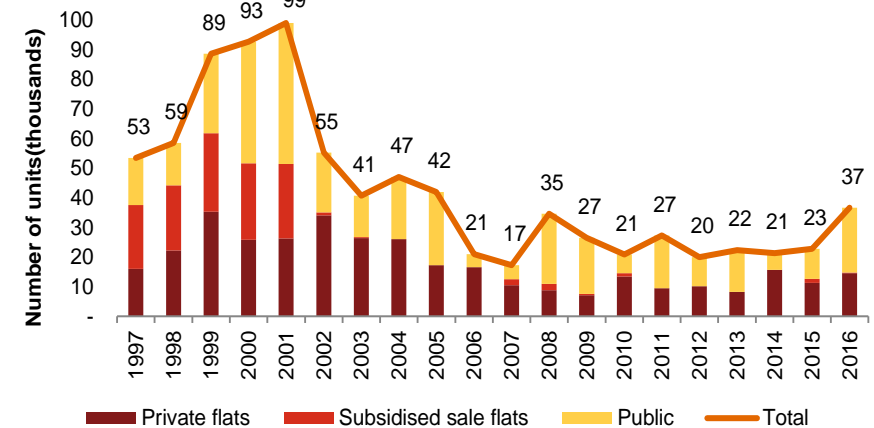
- At present there is no centralised bureau or department to manage land and residential development, make policies on housing and how to implement them to make housing more affordable.
- Housing related bureaus / departments operate in siloes and separately from each other (see chart). For example, the Housing Department administers public housing programmes while the Lands Department is responsible for selling land at market price.
- The goals of the Transport and Housing Bureau are not necessarily aligned with the Development Bureau or the Financial Services and Treasury Bureau, and most of its resources are diverted towards infrastructure spending which is much larger.
- Departments responsible for housing policy and administration are not considering the issue as a whole and the system is not set up to encourage collaboration and coordination between departments. This inevitably leads to conflicting goals and mandates.

A Detailed Look at the Problem – Supply

Shortage of residential flats completed each year

- The number of housing units completed in the private and public sector has dropped sharply since 2002 when the government suspended construction of Public Rental Housing (PRH) and the Home Ownership Scheme (HOS).
- Annual completion in the private sector was about 10,000 units over the last five years and about 19,000 PRH and HOS units were completed over the same period.
- The figures have shrunk by at least half compared with those in the decade previously.

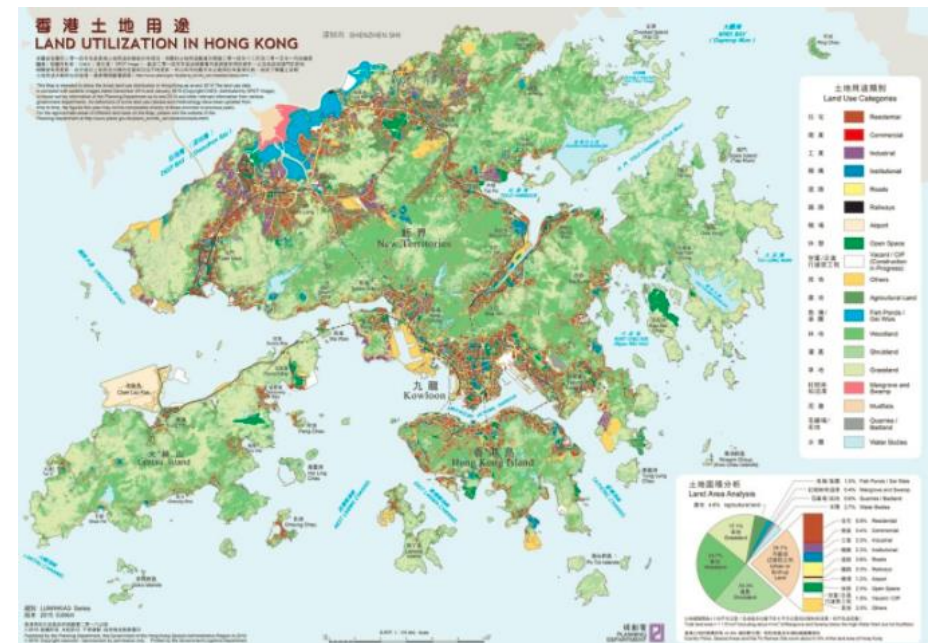
1997 to 2016 years completed flats



Source: <http://static01.hket.com/res/v3/image/content/860000/864399/HKET20111024OP02BTL.jpg>

Decrease of newly developed land supply in recent years

- The total land area of Hong Kong is about 1,106 km² (110,600 ha), of which 24% is existing built-up area. Together with the planned development areas and areas under study, the built-up area will increase to 311 km² or 28% of total land area. The majority of the remaining 72% land area comprises vegetated area cover. 41.8% of Hong Kong's land area is designated country park, special areas or Mai Po Ramsar Site.
- Land development has substantially dropped from 7,800 hectares in the period from 1995-2004 to 1,100 hectares in the past decade.
- Land subject to the lengthy town planning approval process rose from 8% of total residential gross floor area (GFA) in 2012 to 41% in 2015, reflecting a drop in readily developable land for residential use.
- The consultation process and construction lead time for residential development is estimated to be 7 years on average.



Source: <http://www.mypolyuweb.hk/lswong/homepage/vegetation/LULC.html>

A Detailed Look at the Problem – Demand

Increase in number of households

According to the Census and Statistics Department (C&SD) projections released in Sep 2017:

- Total population will increase from 7.34 million in mid-2016 to a peak of 8.22 million in mid-2043 and decline to 7.72 million in mid-2066
- The number of elderly (aged 65 or above) as a percentage of the total population will increase from 16.6% in 2016 to 36.6% in 2066
- The number of households will reach a peak of 2.97 million in 2046 (an increase of 240,000 households in the next 30 years) before dropping to 2.95 in 2051. This reflects the decrease in household size from an average of 2.8 persons in 2016 to 2.7 in 2051.

Booming property price

The Centa-City Leading Index, a market index used to track Hong Kong property price, has increased significantly, reflecting a less affordable housing market. This is predominantly due to:

- Low interest rate environment – making investments into real estate much more attractive than keeping money in the bank.
- Increase of land cost due to both high purchase prices and high land premiums charged.
- High construction costs – Hong Kong has the second highest construction costs in the world, mainly due to the rise in labour cost.



Source: Hong Kong Free Press

A Detailed Look at the Problem – Affordability vs. Quality of Living

Soaring Housing Prices Drives Down Living Quality

- In addition to meeting housing demand and getting people into homes, attention should also be given to factors that make homes livable. Adequate building quality, provision of services such as running water, common areas and public spaces, are just some considerations pertinent in the development of new homes. Quality of housing and its impact on the quality of life also becomes increasingly important as the population of Hong Kong continues to age, and people look to “age in place”.
- Hong Kong does not have a statutory minimum size for a dwelling. The statutory requirement for housing in Taiwan and Korea is at least 13 m² per person and in London the smallest allowable unit size is 37 m².
- As housing prices continue to rise, developers have responded by releasing more “nano-flats”. The smallest unit on record measures 12 m². As a testament to the unaffordability of decent-sized units, nearly half of all flats to be released in 2018 will be smaller than 37 m².
- The unaffordable prices in the private housing market has driven many low-income individuals and households to seek **informal housing**.
- Government figures indicated that nearly 200,000 people live in some 88,000 subdivided flats in 2015 and about 65% lived in units as small as 7 m² (or 75 sq ft).
- Subdivided units are not only extremely small, they tend to lack proper ventilation, natural light and occupants often live in conditions of poor hygiene. Informal housing often do not comply with statutory codes such as fire safety and lack common areas and open space.
- The quality of homes in the informal sector are unlikely to improve if demand for these units remain high. Quality will also be difficult to manage as there are no clear housing quality guidelines to regulate these units.





Institutional Change

Summary

- Institutional change is critical to addressing the housing challenge. The current mandate of the government to maximise their ability to monetise land as a major source of revenue, through the Lands Department, needs to be balanced with affordable housing needs.
- The current structure with the Housing Department under the Transport and Housing Bureau (THB) and the Lands and Planning Department under the Development Bureau (DB) results in a lack of coordination and potential conflict in the housing policies created. It is recommended that all departments relevant to housing be put under a single bureau in order to address this challenge.
- A new Commission on Housing Policy that looks at solutions to the housing affordability challenge holistically, not just focused on land supply or providing temporary housing, should be set up. It should be filled with a representative cross-section of society to ensure all stakeholder views are considered and its findings made public. Its purpose would be to seek a wider array of public inputs, legitimise practical solutions and thus empower the government to act, and thereby with public support counter the influence of vested interests.



Photo credit: Benny Lam

Institutional Challenges in the Housing Market

The government's ability to deal with the varied housing interests between citizens, developers and different stakeholders is key to stabilising the market. However, the current government structure and mandate is one of the fundamental reasons why property prices have been difficult to bring down. Understanding the relationship between government, developers and citizens is the first step to finding solutions.

Government:

- Responsible for both public and private housing provision
- Existing government systems have been slow in unlocking land to meet housing demand

Citizens:

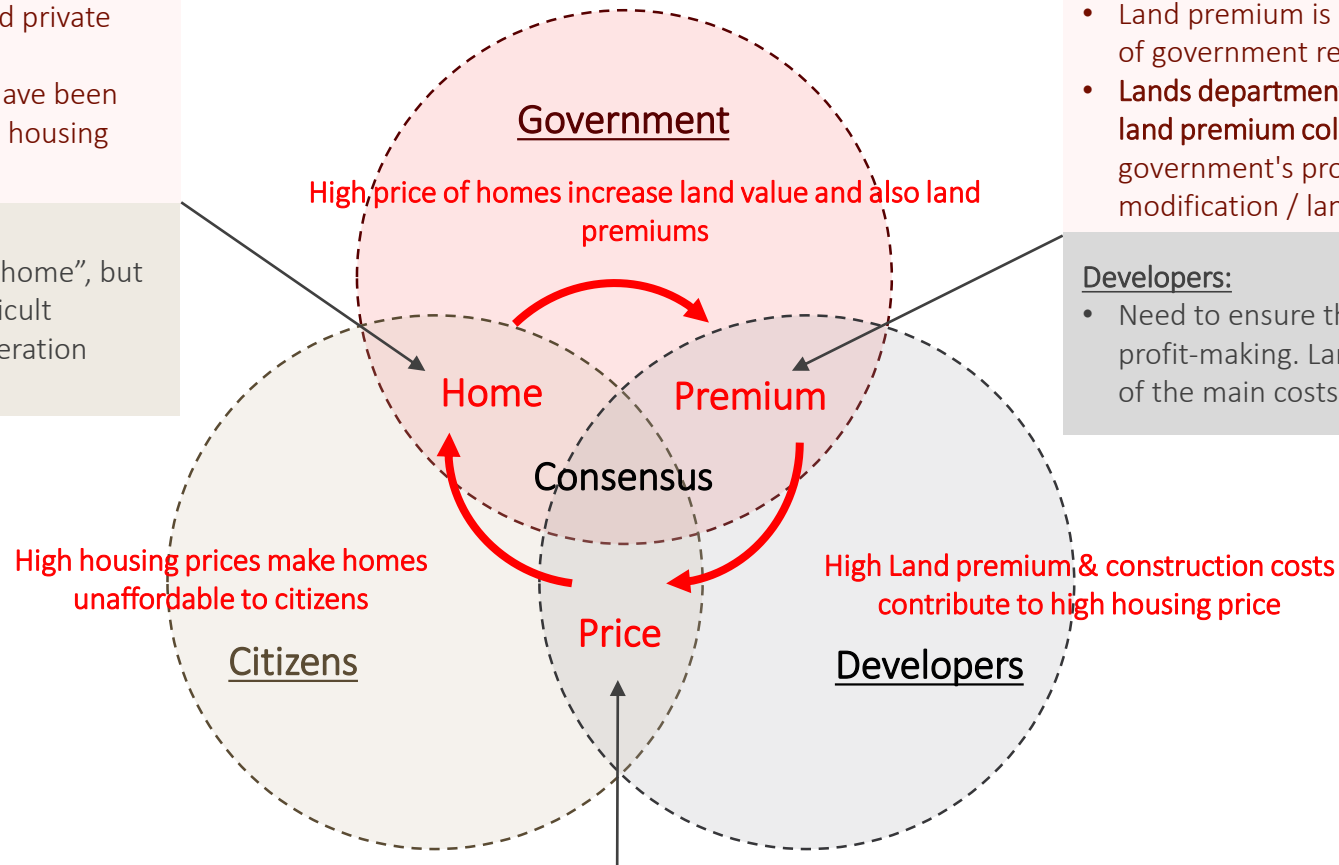
- Want to have ownership of a "home", but it is becoming increasingly difficult especially for the younger generation given the unaffordability

Government:

- Land premium is one of the key sources of government revenue
- **Lands department** is responsible for the **land premium collection**, it will ensure government's profit from land sale / land modification / land exchange

Developers:

- Need to ensure that developments are profit-making. Land premium will be one of the main costs of their projects



Developers:

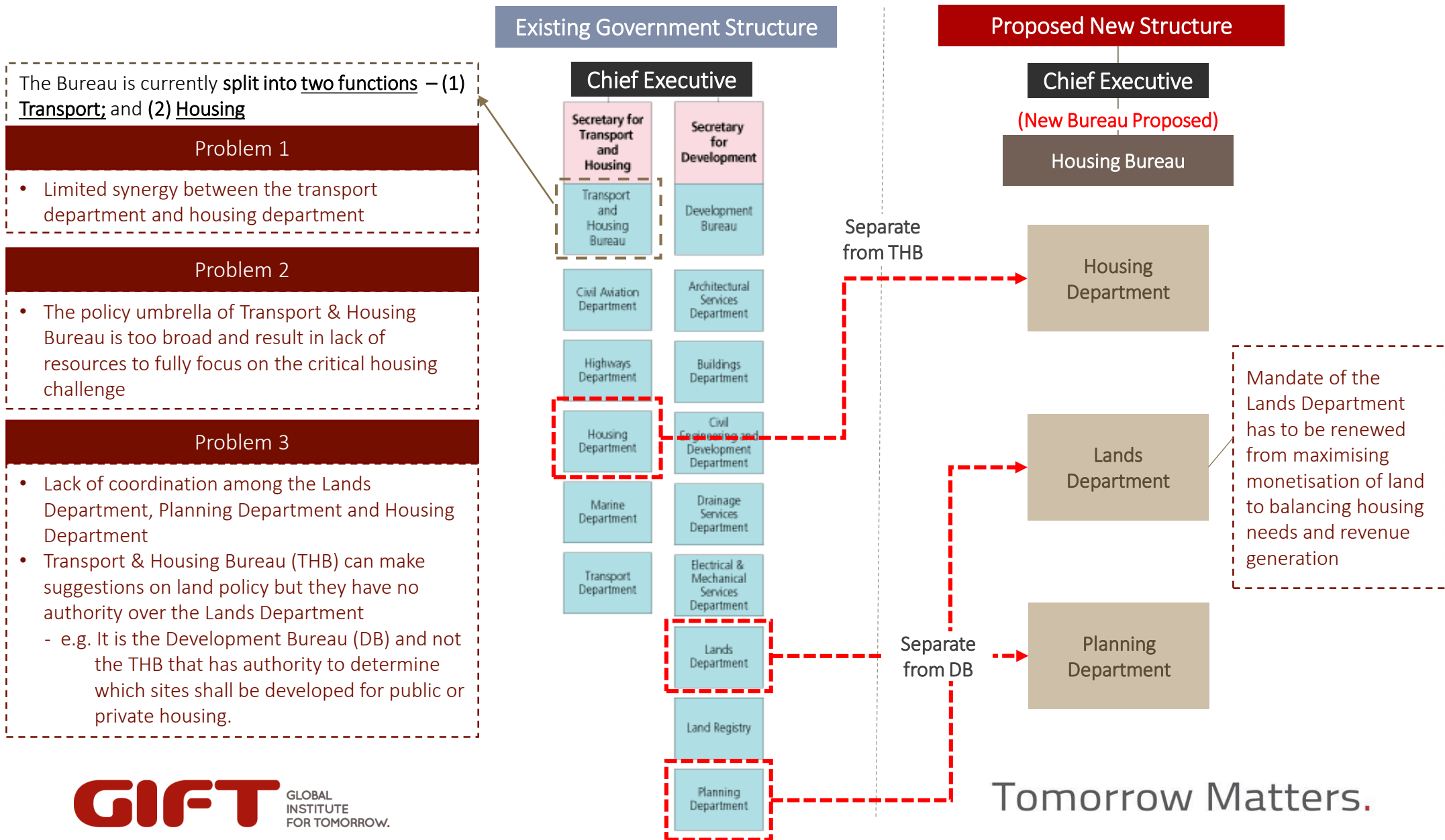
- Higher prices for the new projects due to higher land premium

Citizens:

- Hoping home prices can be more "affordable" and less volatile

Proposal for a New Government Bureau

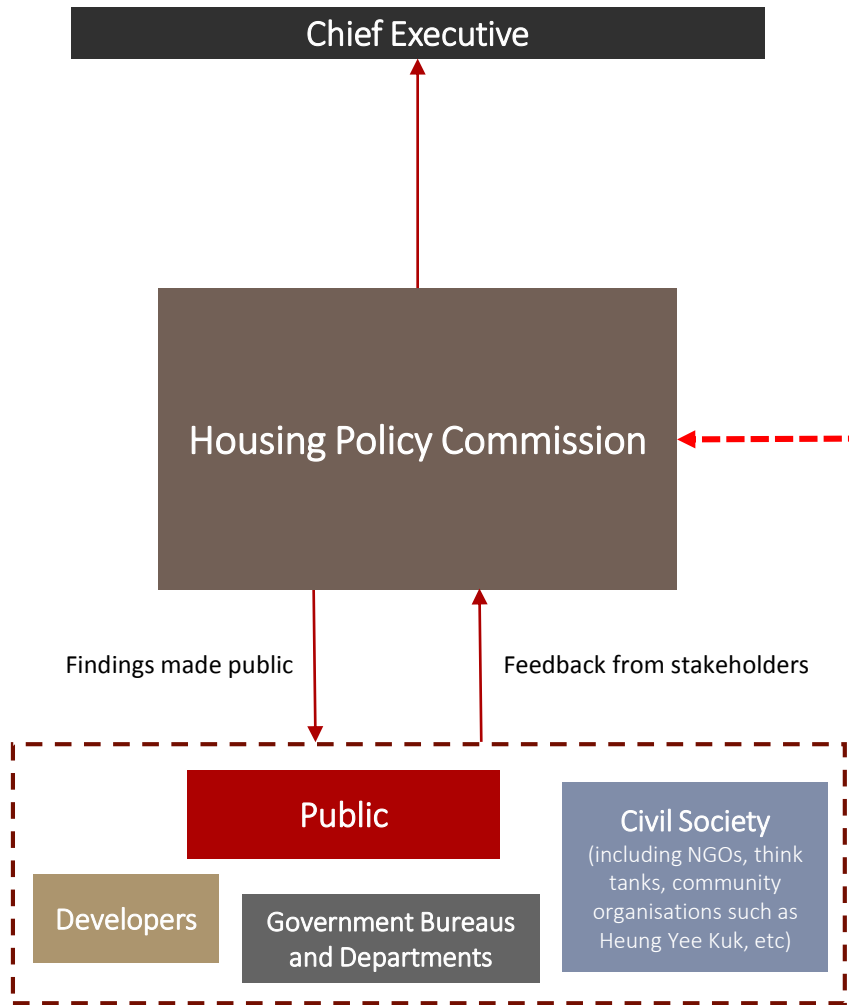
Create a **new Housing Bureau** where all housing related policies are made and administered under a single umbrella. This will facilitate changing the mandate of Lands Department from maximising the monetisation of land to balancing housing needs with revenue generation.



Proposal for a New “Housing Policy Commission”

A new Commission on Housing Policy would be established to look at solutions to the housing affordability challenge holistically, not just focused on land supply or providing temporary housing. It is filled with a representative cross-section of society to ensure all stakeholder views are considered and best determine how solutions can be implemented to best benefit the public. Its purpose would be to seek a wider array of public inputs, legitimise practical solutions and empower the government to act, and with public support counter the influence of vested interests.

The commission will have a short term mandate of 9-12 months to seek input from different stakeholders and develop its proposal to present directly to the Chief Executive.



Housing Policy Commission Set Up

Proposed Objective:	To review the current situation from a holistic viewpoint and prepare suitable implementation measures with support from the public for consideration by the government.
Proposed Composition:	<ul style="list-style-type: none"> • Chairperson – Someone with good public image and recognition, who could act as a good connector with different stakeholders in both public and private sector, non-government officials but with political influence. Suggestions include someone from the Legislative Council or the Executive Council, for example. • Members shall include: <ul style="list-style-type: none"> - Different Political Parties - Green Group - Heung Yee Kuk - Developers - Young people - Representatives from the related government departments (e.g. Lands, Planning, Housing Department)

A Housing Policy Commission should provide a holistic overview of the challenges and needed policies



Unlocking Land

Summary

The full picture of just how much land is available for development, in particular for housing, is often unclear. This section will seek to demystify the topic of land supply, whether there is adequate land for residential development and if it is necessary to develop country parks and reclaim land.

Land that can be unlocked in the short to medium term

- Brownfield sites – exist due to a loophole in land planning. There is an under-utilisation of occupied greenbelt and/or abandoned agricultural sites of around 1,300 hectares.
- Private land banks – there are 1,000 hectares of agricultural sites held by property developers, which could be converted into housing through a public-private partnership model.
- Short-term tenancy sites – there are 800 hectares of government land temporarily left idle and leased for short-term use, many of them are car parks. These sites could be unlocked to provide transitional housing.
- Vacant school premises (VSP) – there are 191 vacant school sites in Hong Kong that could be better utilized if they are resumed and included as part of the land pool

Land that can be unlocked in the medium to long term

- Kwai Tsing Port relocation – the port currently sits on 279 hectares of prime land. There has been declining activity at the port and more land is needed for it to be competitive and cater to mega-carriers.
- “Ding Building” (Small House) Policy – there are 1,200 hectares of unused and unallocated land of which 930 hectares is suitable for development into more land efficient and higher quality homes.
- Unused land at Disneyland – there are 60 hectares of “undetermined” land reserved for further development of the theme park.

After analysis of the appropriate land sources in the city, the potential amount of land that can be unlocked is 4,379 hectares (which can be developed into an estimated 2,912,035 units) exceeding the ten-year government supply requirement of 460,000 units by **633%**.



Overview of Land Supply

- Existing problem: we do not have a full picture of how much land is available for allocation of land usage, especially for housing.
- Solution: to establish a land pool mechanism by allocating various plots of land for better usage. For example, converting brownfield or short-term tenancy sites to housing or to “Government, Institution or Community” (GIC) use. GIC facilities include provisions such as exhibition/convention halls, markets, library, hospitals, cooked food centres, public transport terminals, schools, etc.
- The table below shows the current land type and the potential sources of land suitable for short, mid and long term housing development.
- For reference, currently approximately 1,600 hectares of land is used for public housing and 2,600 hectares of land for private housing.

Land Type	Total Area (hectares)	Potential Sources of Land Within Each Land Type	Land Area from Potential Sources of Land (hectares)	% of Total Area	Short/Mid/Long Term Development
Rural (small house)	3,500	Government owned, reserved land for the Small House Policy	933	27%	Mid - Long Term
Agricultural	5,100	Brownfield ¹ / PPP ²	2,300	45%	Short - Mid Term
Warehouse and open storage	1,600	Brownfield / Short-term tenancy ³	800	50%	Short - Mid Term
GIC	2,600	Abandoned schools ⁴ / Kwai Chung Park ⁵ / Area of unleased or unallocated government land ⁶	417	16%	Short - Mid Term
Vacant land / under construction	1,700	Disneyland / Area of unleased or unallocated government land ⁷	391.5	23%	Mid - Long Term

Land area assumptions:

- 100% of brownfield sites = 1,300 Ha
- Land stock by developers = 1,000 Ha
- 100% of short-term tenancy land = 800 Ha
- Abandoned schools = 5.6 Ha
- Kwai Chung Park = 27 Ha
- All unleased or unallocated government land for GIC = 384.4Ha
- All residential unleased or unallocated government land = 391.5Ha

Sources:

- http://www.pland.gov.hk/pland_en/info_serv/statistic/landu.html
- <http://liber-research.com/>
- https://www.devb.gov.hk/filemanager/en/content_809/Table_Eng.pdf
- <https://www.hk01.com/article/115998>
- http://www.landsd.gov.hk/en/legco/sfc_question_2016/DEVBPL369.pdf
- <http://www.info.gov.hk/gia/general/201402/26/P201402260276.htm>
- <http://www.info.gov.hk/gia/general/201702/08/P2017020800632.htm>
- http://www.devb.gov.hk/filemanager/en/content_1054/Paper_05_2017.pdf

Brownfield Sites

There is no official definition of a **brownfield site** in Hong Kong, but the term generally refers to Green Belt land or abandoned agriculture sites converted to other uses such as port backup land, recycling yards or open storage facilities. The planning intention of Green Belt zoning is primarily to promote conservation of the natural environment and act as a buffer from encroachment by urban development. It covers mainly slopes, hillsides and some country parks and most is government land, although there are also small pockets of private land.

Brownfield sprawl

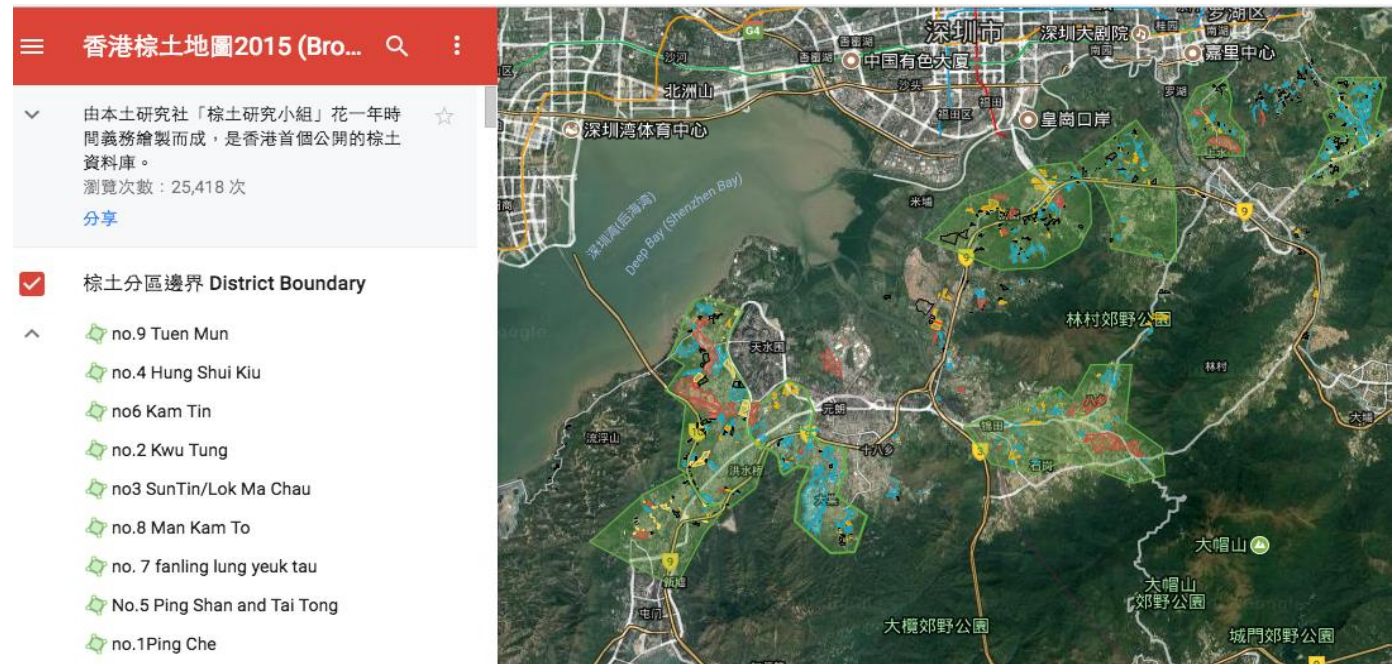
- There is a loophole in land planning that allows agricultural land to be resumed lawfully for non-agriculture uses such as storage, container or recycling yards.
- The effect is that the total amount of agricultural land has decreased while the area of brownfields have continued to increase.

Potential brownfield sites for housing

- There are 9 major sites scattered in north and northwest New Territories with an estimated **1,300 hectares** for potential development (equivalent to around **400,000 households or housing for 1 million people**). The size of potential brownfield sites may increase as more agricultural land is converted.

Challenges with developing brownfield sites

- Converting land from agriculture use to brownfield is very profitable because operational revenue that can be generated from brownfield uses is generally higher than when used for agricultural purposes. This also increases the land value significantly.
- The land value for brownfields is approximately \$1,300 per square feet (based on a rental of ~\$2.61 per square feet and 2.5% annual return).
- Government compensation for brownfield land acquisition is typically based on agricultural land use, as per its official zoning, which is significantly lower at \$400 per square feet (one-third of the brownfield land valuation). Not surprisingly, landowners do not accept the compensation.



Source: Liber Research Community (2015), <http://liber-research.com/>

Brownfield Sites – A Case Study

Case Study – Wang Chau

- The case of Wang Chau is an example of how a lack of brownfield policy direction and vested interests can affect housing development.
- The government's original plans to build 17,000 public housing units was scaled-down to just 4,000 flats, displacing three villages on a greenbelt site instead of developing a larger brownfield site said to be used by powerful rural figures that could yield an additional 13,000 flats.
- The brownfield sites are used mainly for car / container storage and covered 17 hectares of privately-owned land.
- The estimated revenue from leasing approximately half of the brownfield area is HK\$33 million per year.
- An added complication is that the storage operators are not the land owners, who would not receive any compensation from the government for the loss of land to run their business.
- In order to resume the brownfield site, the government would either need to compensate both the landlord and the operator, or they would need to find a way to address the legality of converting agricultural sites into brownfields in order to avoid continued brownfield sprawl.



Government needs to devise brownfield policy to provide direction for brownfield development

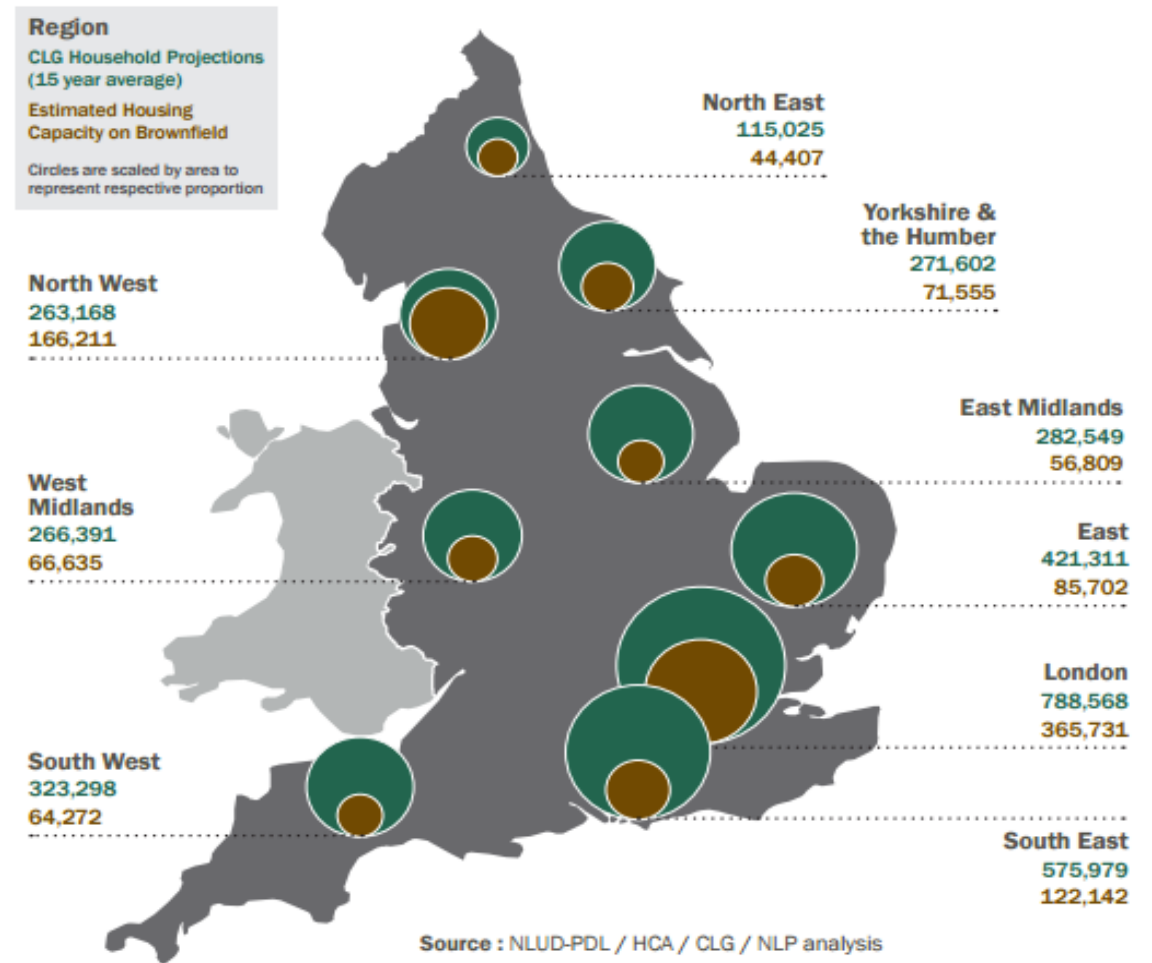
Brownfield Policy – A Test of Government Will

References for how the government can deal with brownfield sites can be drawn from actions taken in other countries.

- Action needs to be taken to stop the spread of brownfield sites and close planning loopholes that make it lawful for agriculture land to be converted into brownfields. In the UK, the government set a target that 60% of all new housing developments are to be built on brownfield land by 2008.
- Brownfield land tends to be contaminated and polluted. An uncontrolled spread of brownfield sites is also detrimental to sustainable urban planning. In the US, the Brownfields Program was introduced to provide grant, guidance and tax incentives to support brownfield development in the country. In particular, the Brownfields Law provides financial assistance to assess and clean up brownfields, clarifies liability protections and provides tax incentives for states and communities to induce brownfield development.
- If brownfield land can be accessed, the government would have a large potential land pool of 1,200 hectares. The success of the UK government's push to develop brownfield sites resulted in the proportion of new homes built on brownfields to increase from 55% in 1989 to 81% in 2012.

The ratio of household projections vs housing capacity on brownfield sites in the UK

Figure 1: Regional comparison of CLG Household projections and estimated housing capacity on brownfield sites



Source: <http://www.legco.gov.hk/research-publications/english/1617fs02-brownfield-development-20170116-e.pdf>

Lessons from other countries show the potential of brownfield policies to future development

Releasing Land Banks through Public-Private Partnerships

**~1,000
hectares**

of agricultural sites from
key developers in HK

= ~4 times

the housing land supply
shortage (230 Ha) mentioned in
government's 2030+ report

Under the existing government system, lease modification to convert agricultural sites to residential usage is difficult.

- Complicated and lengthy land premium negotiation process.
- The current land premium assessment results in very high premiums that may not adequately reflect the development costs incurred by developers.
- The inability to reach an agreement on premium payments means that most of the agriculture sites held in developers' land banks are yet to be unlocked and converted into new residential homes.

Recommendation:

Government to review the
existing land premium
assessment process

Incentives by
providing land
premium discount to
developers

Public-private-partnership to
provide both
Public Housing
and Private Housing

Public-private partnerships (PPP) between the government and developers would unlock the private land banks through a discount of the land premium to incentivise developers to release the land and provide part of the land for free to the government to develop more public housing. This would benefit the public in terms of increasing access to private and public housing, and unlock under-utilised agricultural land for residential use.

How to Implement Public-Private Partnerships

An example of how the Public-Private-Partnership could work:

(A) Under Normal Lease Modification: Assumptions:	
(1) Land Price	HK\$5,000
(2) Construction Price Private Market	HK\$5,000
Total Cost per sqft (1)+(2)	HK\$10,000
Developer's expected margin	17.5%
(A) Implied Selling price	HK\$12,121

(B) Under Suggested Public-Private-Partnership		Assumptions:		
Land Price		HK\$5,000		
Government Discount*		50%		
(1) Discounted Land Price		HK\$2,500		
Public Housing Land Ratio		Scenario 1	Scenario 2	Scenario 3
Private Housing Land Ratio		30%	20%	40%
		70%	80%	60%
Construction Price Private Market		HK\$5,000	HK\$5,000	HK\$5,000
Construction Price Public Housing		HK\$3,000	HK\$3,000	HK\$3,000
(2) Weighted Average Construction Cost (using the above ratio)		HK\$4,400	HK\$4,600	HK\$4,200
Total Cost per sqft (1)+(2)		HK\$6,900	HK\$7,100	HK\$6,700
Implied profit (HK\$) with the same selling price in (A)		HK\$2,264	HK\$3,246	HK\$955
Implied profit margin (%) with the same selling price in (A)		23%	37%	9%

*Public housing must be built and given for free to the Government

The above example demonstrates a scenario where a 50% land premium discount is given in return for the government taking part of the land for free to develop public housing. In the example, even if up to 40% of the land was released for public housing, the developer would still make a profit. If the developer gave up 30% of its land for public housing, it would make more profit than if it developed the entire parcel of land at original premiums. This suggests a potential to achieve a win-win result.

What if the PPP model cannot reach a public consensus?

DON'T FORGET!

The government may acquire private land by resumption for the implementation of public projects such as a road scheme, a public housing development, an urban renewal project, an open space, a drainage improvement project, a new market, a school or any item in the Public Works Programme. The Director of Lands is given the authority to implement resumption and compensation provisions of the existing Ordinances

Short Term Tenancy Land

Current Usage

- Short Term Tenancy land refers to government land that does not yet have a long-term development plan and is temporarily left idle and rented out for short-term usage. The total area of the land leased out under short term tenancies is **800 hectares**.
- One major usage for Short-Term Tenancy land is for car parking lots.
- In 2016, there were a total of 185 Short Term Tenancy car parks in Hong Kong, providing a total of 32,200 parking spaces. The total size of this land used is 152 hectares.
- In the ten years between 2006 and 2016, the total number of licensed vehicles in Hong Kong increased continuously from about 553,000 to about 746,000, with a growth rate of 35% and an average annual growth rate of 3%. The total number of parking spaces for various types of vehicles increased from about 678,000 in 2006 to about 743,000 in 2016, representing a growth rate of 9.5%, which is less than the rate of increase of licensed vehicles.
- Therefore, the overall ratio of parking spaces to vehicles in the period also dropped from 1.32 to 1.05.



Short Term Tenancy Land used for car parking in Mong Kok

Sources:

[https://www.devb.gov.hk/filemanager/en/content_942/DEVB\(PL\)-2-e1.pdf](https://www.devb.gov.hk/filemanager/en/content_942/DEVB(PL)-2-e1.pdf)

<http://www.legco.gov.hk/yr16-17/english/panels/tp/papers/tp20170519cb4-1021-9-e.pdf>

Auto-parking Systems to Release Short Term Tenancy Land

Introduction of auto-parking systems to release Short Term Tenancy Land

- The need to provide parking spaces and the existing shortage in the city has locked up Short Term Tenancy land and prevents it from being used for other purposes, such as for transitional housing or GIC facilities to enhance the quality of living areas.
- Introduction of high density automated parking systems can enhance the efficiency of land use and potentially increase the number of parking spaces available. It would also unlock land for other uses.
- In particular, most Short Term Tenancy car parks are located in urban areas with existing infrastructure, services and amenities nearby and suitable for residential development. The land released can be used to construct transitional housing for people living in poor conditions (such as those in subdivided units) or for those who are waiting for public rental housing.



Creative ideas can help to unlock land for housing solutions

Vacant School Premises

- Currently there are **191 vacant schools** in Hong Kong. These could be better utilised if they are resumed and included as part of the land pool.
- The vacant school premises (VSP) are located across the different districts, but are mostly in Yuen Long and North District, and some schools have been vacant for over a decade.
- Some issues that may be faced when considering the resumption of VSP land include:
 - Some schools are not registered in the system.
 - There is a lack of transparency in terms of the VSP review process and the size of the respective sites.
 - 18 sites are held by the Education Bureau (as opposed to being managed centrally by the Planning Department) and therefore are excluded from the government land use planning and allocation. These 18 should be returned to the government to be considered for building of public housing.

Vacant schools allocation and size

Department Responsible	No. of vacant schools	Earmarked Usage	Total size (Ha)
Planning Department	129	G/IC	?
	28	THB – housing	?
	10	Land use review	?
	6	Rural use	?
Education Bureau	18	N/A	7.17
Total	191		



Sources: Planning Department, Lands Department; <http://www.info.gov.hk/gia/general/201702/08/P2017020800632.htm>

Port Relocation – Kwai Tsing Container Terminals

- Hong Kong is ranked as the fifth busiest in the world for port throughput, trailing behind Shanghai, Singapore, Shenzhen and Ningbo. However, its throughput and capacity utilisation has been falling.

Total container throughput in HK (m teu)



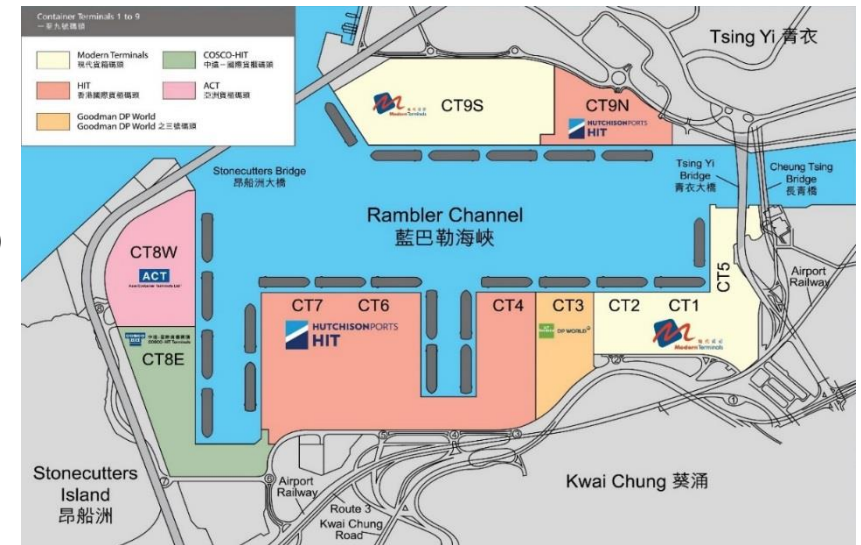
Source: Hong Kong Maritime and Port Board

SCMP

Capacity utilization Rate (%)

2011	82.9%
2012	83.2%
2013	81.5%
2014	83.7%
2015	74.2%
2016	72.4%

Source: GIFT team analysis

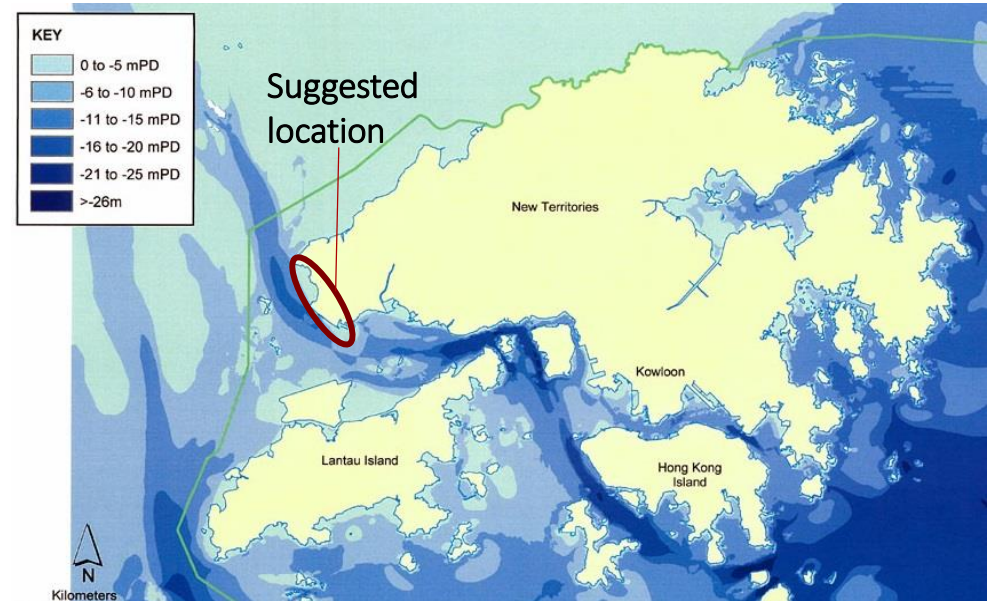


- There are several reasons for the decreasing competitiveness. Among its closest competitors, Hong Kong charges the highest terminal handling fees due to labour costs.
- Land shortage is another reason for the port's decreasing competitiveness. The Kwai Tsing Container Terminals covers a total area of about **279 hectares**, comprises 9 container terminals with 24 berths and has a total handling capacity of around 21 million twenty-foot equivalent units ("TEUs") per year. But port operators need more space to provide more berths and be able to cater to mega-vessels in order to remain competitive.
- In its existing location surrounded by infrastructure and developments, there is no scope for landward expansion.
- In comparison, Singapore is in the process of migrating its existing terminal to a parcel of reclaimed land in Tuas with an area of 1,000 hectares. This will become the largest port in the world with a capacity of 65 million TEUs per year, releasing around 270 hectares of prime real estate to the Housing & Development Board

Port Relocation Proposal

Proposal to relocate Kwai Tsing Container Terminals

- Relocating the Kwai Tsing Container Terminals to an area in New Territories West, by Lung Kwu Wan, would free up 279 hectares of prime real estate, close to existing infrastructure and services.
- The advantages of having the port by Lung Kwu Wan are:
 - Land reclaiming cost is relatively low, estimated at HK\$56 billion
 - Close to Tuen Mun-Lantau link
 - Close to Macau Bridge
 - Close to Shenzhen Bridge
 - Good infrastructure in place
 - Sufficient space to build a 650 hectare state of the art new port
 - More space to cater to mega-carriers efficiently
 - Will not disrupt current shipping lanes and trajectory
 - Potential 100 hectares of land for port expansion in the future from Tuen Mun landfill
 - Port expansion is the request of the Shipping industry and the relocation would be a win-win solution for both the industry and housing development.



Small House Policy

Small House Policy

- The Small House Policy was introduced in December 1972 with the objectives to improve housing and sanitary standards in the rural areas of the New Territories.
- Under the Small House Policy, an indigenous male villager, who is aged 18 or above and descended through the male line from a resident in 1898 of a recognized village in the New Territories, may apply to the Lands Department once during his lifetime for permission to build for himself a small house of a regulated size (not more than three storeys with a maximum roofed-cover area not exceeding 700 square feet) on a suitable site within his own village.
- The rights to build small houses are usually referred to as “Ding” rights, where “Ding” has the meaning of male in Chinese.
- The government holds around 1,201.2 hectares of unleased or unallocated land for village type development of which **933 hectares** is maintained to support the existing Small House Policy.

Village Type Development	Land Area (Ha)
Area of unleased or unallocated government land	1,201.2
Types of land which are considered not suitable for development, not yet available for development, or with low development potential:	
Roads / Passageways	137.3
Man-made slopes	106.9
Simplified Temporary Land Allocation	24.1
Unleased or unallocated government land after deducting the types of land above	932.9

Small House Policy to “Ding” Building Policy

Small House Policy



“Ding” Building Policy

“Ding” Building Policy

- The proposed “Ding” Building Policy replaces the Small House Policy with the provision of a flat around 1,000 square feet (93 m²) in public housing built by the government,
- The objectives are to improve the land use efficiency in the rural areas of the New Territories and unlock the government land currently planned for village type development.
- The government will be responsible for the construction cost of the flats and provide the land. In return, the qualified villager will surrender his “Ding” rights and return a 700 square feet (65 m²) of land to the government. The plot would have to be on land suitable for building small houses, i.e. areas within Village Environs (“VEs”), as well as the Village Type Development (“V”) zones as stipulated in statutory town plans.
- The new policy would unlock 933 hectares of government land.
- “Ding” Building Policy will end when the villagers run out of suitable land.



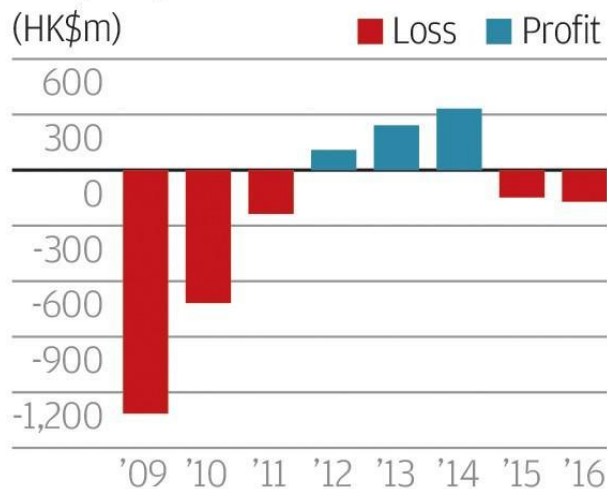
Rethinking the existing Small House Policy to create a mutually beneficial solution to all stakeholders

Hong Kong Disneyland

- Hong Kong Disneyland has only turned a profit three times in its 12 years of operation, and falling attendance in the past two years coupled with the newly opened Shanghai Disneyland, suggests that the competitiveness of Hong Kong's park will continue to decrease.
- The theme park currently covers 126 hectares, however there are an additional 60 hectares of "undetermined" land (grey area) reserved for further development.
- The entire land area of Disneyland is equivalent in size to Jordon and Tsim Sha Tsui combined, Tiu Keng Leng and Tseung Kwan O combined, or Kai Tak and Kowloon Bay combined.

Disneyland in the red

Hong Kong Disneyland's balance sheet



Source: Disneyland

SCMP



Source: Dr. Leung Kai Chi

Releasing Land from Disneyland

Proposal to take back the undeveloped portion of Disneyland for housing

- The reserved land held by Disneyland that is yet to be developed has an area of **60 hectares**. If this land was used to develop public housing estates, it could accommodate **20,000 households or 54,000 people**.
- The recommendation to develop this potential site is feasible because:
 - Infrastructure is readily available. Sufficient roads and public transportation designed to support Disneyland are already in place, meaning minimal spending on infrastructure development in the immediate term would be required. Future residents would also be able to easily access existing larger towns in Tung Chung and New Territories West.
 - There is only one single stakeholder (Disneyland) that would be affected, in contrast to other solutions where there are usually multiple stakeholders to engage, consult and negotiate with.
 - This is a choice between commercial need and housing need, and does not involve existing residents.
 - The government can exercise its land resumption rights to take control of the land.



Undeveloped land reserved for Disneyland expansion could accommodate 20,000 households

Other Potential Alternatives for Consideration

Relocation of Stanley Prison and nearby correctional institutions

- Releases 35 hectares of land
- Move the institutions to rural areas in New Territories
- Prime land released for redevelopment into residential projects

Relocation of public facilities to underground space

- A good example is the relocation of the Sha Tin sewage treatment works to stone caverns
- To study the feasibility of moving other public facilities

Redevelopment of Kwai Chung Park

- Releases 27 hectares of land
- The park is located in an urban area but has been left idle for many years.

Stanley Prison



Kwai Chung Park



There are enough potential sites for housing development that does not include reclamation or building in country parks

Summary of Potential Land to be Unlocked

Potential Land	Estimated area (hectares)	Estimated no .of households	Estimated % of total need*
Short to medium term			
Brownfield sites	1,300	864,500	188%
Public-Private Partnership (PPP)	1,000	665,000	145%
Short term tenancy	800	532,000	116%
Schools	7	4,655	1%
Medium to long term			
Relocation of port	279	185,535	40%
“Ding” Buildings	933	620,445	135%
Disneyland	60	39,900	9%
Total	4,379	2,912,035	633%

* Based on the total no. of units required for the next 10 years (i.e. 460,000 units) according to Hong Kong 2030+

- The governments needs to implement a series of measures to unlock the total 4,379 hectares of potential land.
- However, even if some of the land sources proposed are not immediately feasible for development (such as the land zoned for Village-type development to support the Small House Policy), if just 28% of this potential land is unlocked, it would satisfy the government estimated shortfall of 1,200 hectares for residential development with necessary auxiliary services by 2046.
- According to a report by Our Hong Kong Foundation (Oct 2017), an estimated 9,350 hectares of land will be needed over the next 30 years (compared to the government’s current estimate of 4,800 hectares). Regardless of the estimated requirement, the findings in this section show that a significant portion of developable land can be realised through more efficient usage of existing land. Strong political commitment and the willingness to use existing laws is the key driver to unlocking this land.

Potential land that can be unlocked is more than 6 times the total number of units required over the next 10 years



Construction Costs

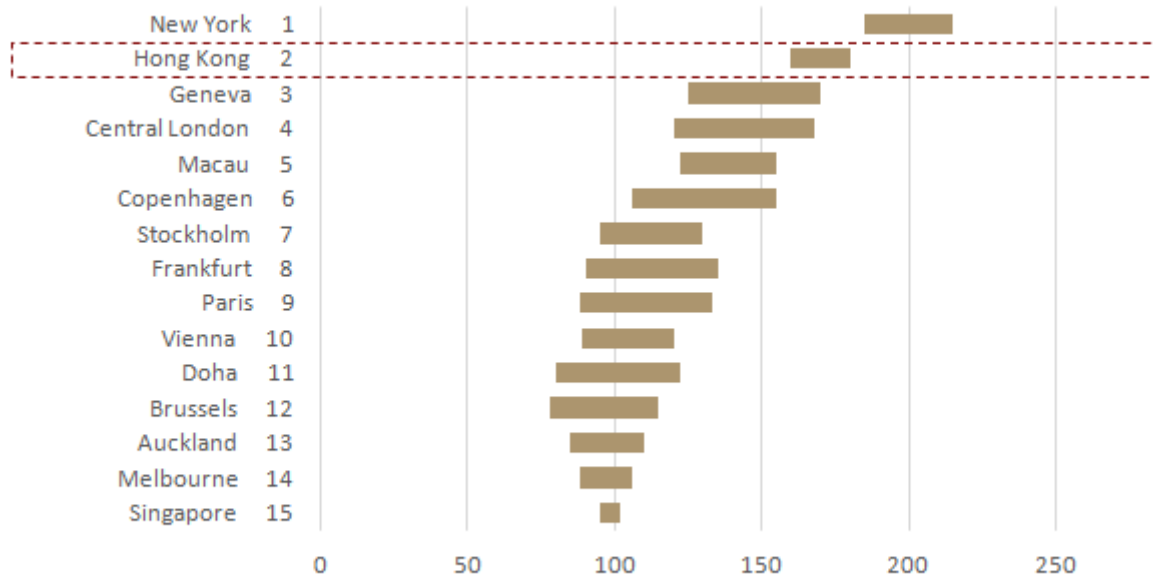
Summary

- Hong Kong has the highest construction costs in Asia, and is the second most expensive in the world. Managing construction and development costs can help to improve housing affordability overall.
- The increasing demand for construction works and rising wages are among some of the challenges facing the construction industry.
- The current system of multi-layer subcontracting contributes to inflated construction costs.
- Technology can have a positive influence on housing construction productivity and cost management, and helps to reduce some reliance on labour.
- The existing public housing development cycle takes seven years, from land identification to tender, construction and tenants taking possession of the premises.
- Given the pressing demand for affordable housing today, compressing the project life cycle of public housing development will increase the supply of completed flats earlier, and relieve the long waiting time for public housing.
- With the pre-construction phase taking up half of the overall lead-time, critical review is necessary to identify ways to compress the processing time required from different government departments. It is expected that the project life cycle can be shorted by 40% after efficiency measures are introduced.



Construction Cost in Hong Kong

International Construction Cost Comparison Index



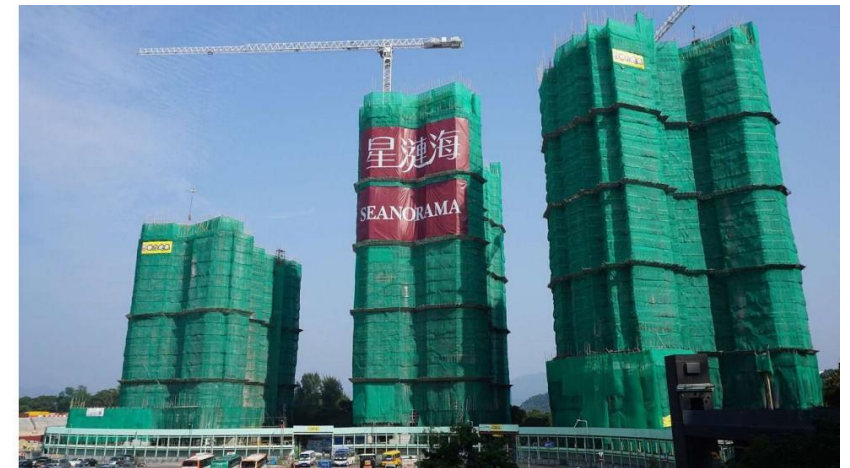
Source: Arcadis International Construction Cost 2017

- In terms of construction cost, Hong Kong is second only to New York globally.
- Demand for construction has remained high due to a vibrant private sector and large infrastructure projects, and the construction sector has remained at peak activity. However, a limited supply of inputs is driving up costs.
- Rising building and development costs, coupled with the need for continued development projects to generate profits for developers, has contributed to higher housing prices for buyers.
- Construction costs increased by 3.9% from 2012 to 2017 mainly due to increasing labour cost, which grew by 6.2%.

Breakdown of Construction Cost

(HK\$)	Dec-12	Dec-13	Dec-14	Dec-15	Dec-16	May-17	% of total	12-17 CAGR
Labour	1,695	1,881	2,056	2,181	2,352	2,426	52.9%	6.2%
Other	1,155	1,225	1,274	1,282	1,369	1,417	30.9%	3.5%
Material	795	788	752	683	713	745	16.2%	(1.1%)
Total	3,645	3,894	4,083	4,147	4,434	4,588	100.0%	3.9%

Source: Civil Engineering and Development Department



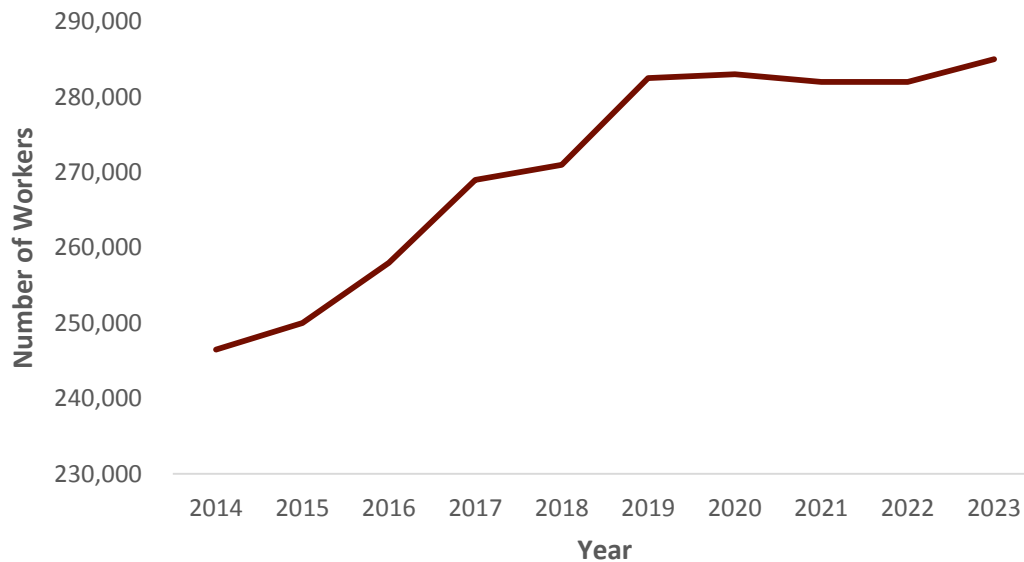
Construction costs have continued to rise as the sector remains at peak activity

Construction Cost in Hong Kong – Labour Costs

- Labour costs are driven up by two main components: the number of labour employed and worker wages.
- Forecasts show that the demand for construction workers is expected to reach 285,000 by 2023, an increase of around 10.45% in 7 years.
- The increase in labour price has been higher than Hong Kong’s Consumer Price Index and nominal wage due to shortage of labour and dominance of the multi-subcontracting system in the market.

No. of Labour Employed

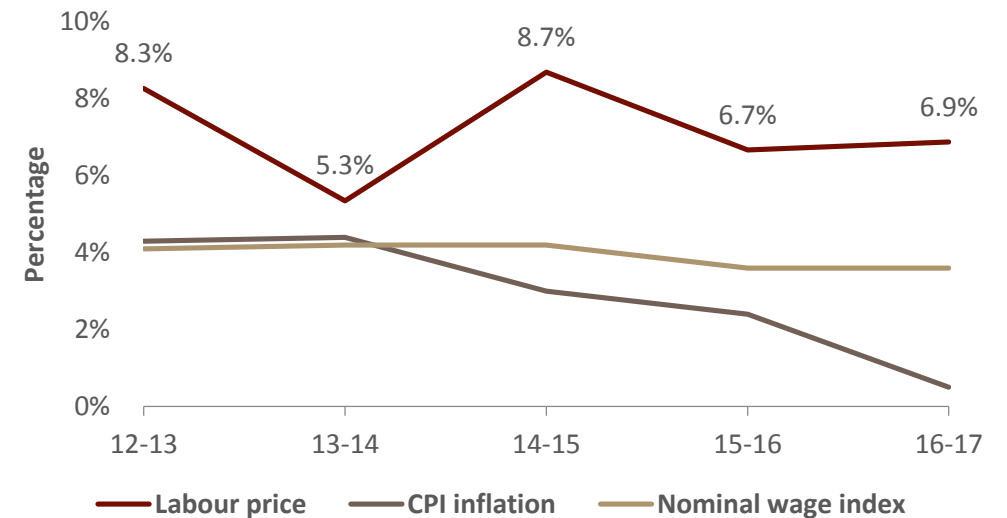
Demand for Construction Workers Forecast



Source: CIC Manpower Forecasting Model

Worker Wage

Percentage change on construction worker price, CPI and nominal wages

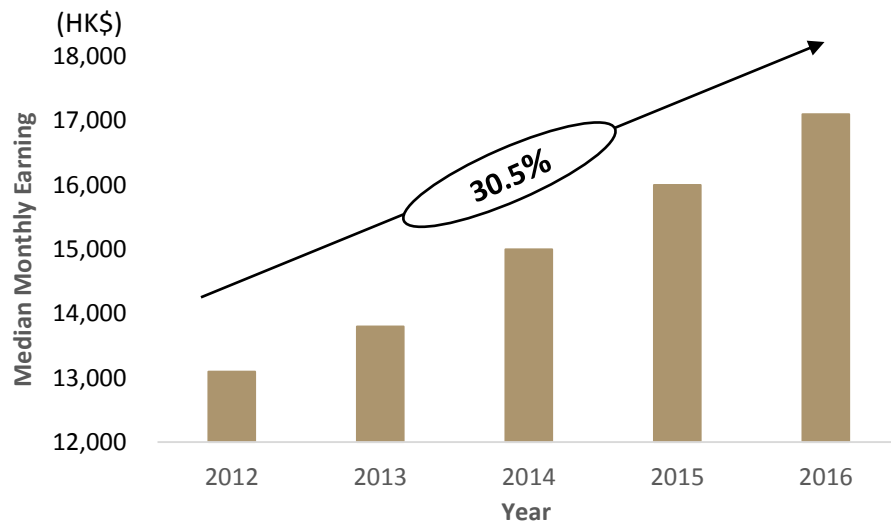


Source: Arcadis and Census and Statistics Department

Increasing demand for construction workers and rising labour price has put pressure on construction costs

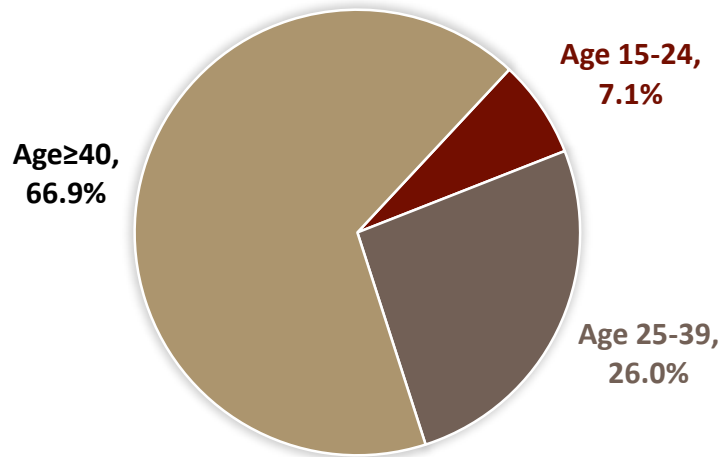
Shortage of Labour

Median monthly earning for construction workers



Source: 2017H1 Arcadis China and Hong Kong Quarterly Construction Cost Review

Age Distribution of Workers



Source: 2017H1 Arcadis China and Hong Kong Quarterly Construction Cost Review

Shortage of construction operatives available is the biggest contributor to high costs. According to the Construction Industry Council (CIC), an additional 10,000 – 15,000 construction workers are required over the next several years.

The main reasons for shortage of labour are:

- Local employment practices:
 - The Hong Kong Federation of Trade Unions and other union organisations view labour importation as a threat to the wages of local workers.
 - The Supplementary Labour Scheme (SLS) dictates that local workers must be given priority in filling job vacancies and employers are required to pay a lump sum levy equivalent to HK\$400 per month for each imported worker, with a maximum contract of 24 months.
 - Singapore and Macau imported 25% of their labour versus Hong Kong's 0.1% in 2014.
- Ageing workforce:
 - In 2013, the median age of the construction workforce was 55. 12% of registered construction workers were over 60 years (i.e. had already reached retirement age), and 44% were over 50 years.
 - The industry's lack of appeal to younger generations is a reason for the ageing workforce.
- Lack of qualified talent:
 - A shift in focus of major investments to projects in Mainland China and Macau, coupled with a large amount of infrastructure works in Hong Kong, has resulted in a growing shortage of skilled labour in the industry.

Managing Labour Shortage

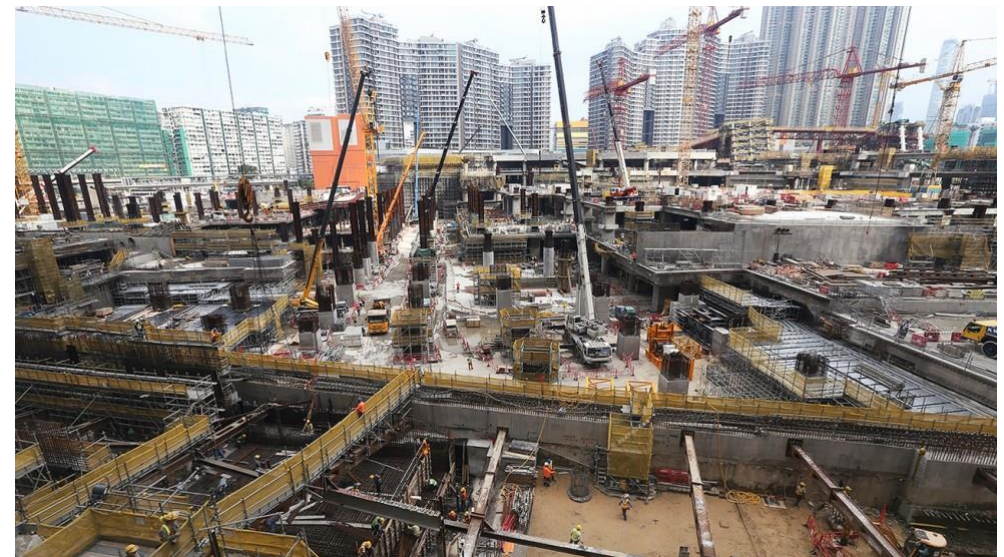
Tackling the problem of labour shortage in the construction industry will require a multi-faceted approach.

Training local young people

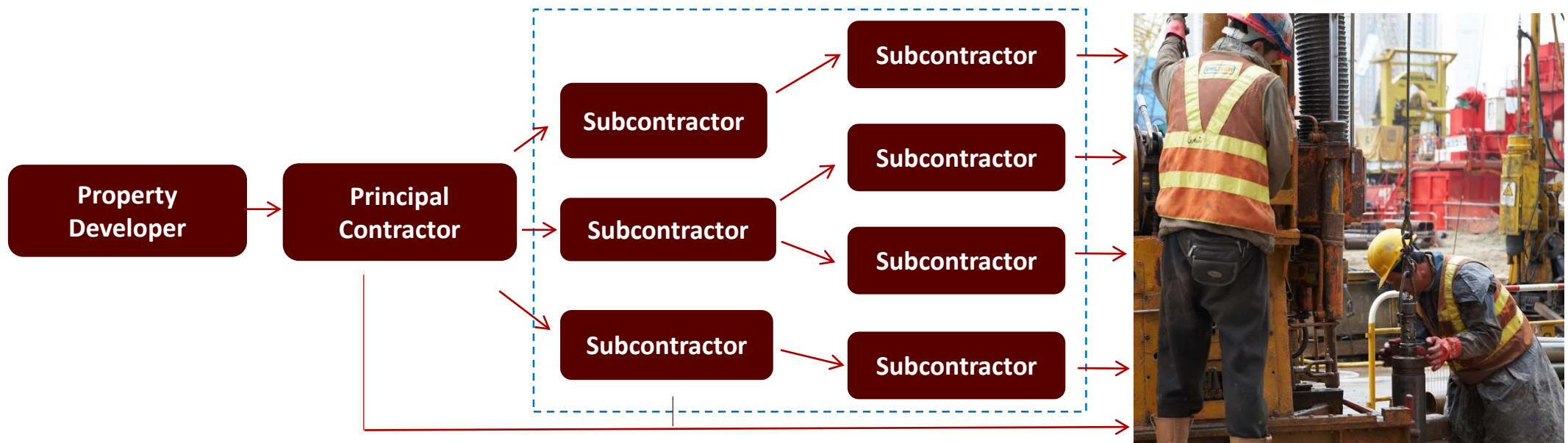
- The government should offer more comprehensive training course to raise the technical proficiency and reputation of construction industry employees, thus attracting and retaining more youth to the industry.
- Between 2009 and 2016, the Construction Industry Council trained more than 24,000 semi-skilled construction workers. About 60% of them were below 35-years-old, well below the average age of 46.
- While this shows that young people are interested in joining the industry, the retention rate remains low. There is a need to both improve working hours and improve the perception of working in the industry to retain young talent.

Importation of Labour

- Measures to facilitate labour importation is urgently needed for the construction industry.
- Relaxing the policy for labour importation and shortening the visa application process (currently it takes up to seven months for non-local workers visas to be approved) could allow local employers greater flexibility when managing their labour needs.
- Challenges associated with managing imported labour such as threat to wages of local workers, the settling in of foreign workers and their demand for housing will need to be considered also.



Subcontracting System



- The subcontracting system has been in place in the construction industry for decades. Multiple layers of subcontracting prevent the labour from earning, and the principal contractor from paying, the equilibrium price. Subcontractors extract value from the chain leaving the principal contractor paying higher fees and wages and the workers sometimes receiving less pay.
- Some government departments and private developers have **restricted the layers to two** to address the problem of multilayer subcontracting.
- The “designated workers for designated skills” scheme introduced in 2016 provides transparency to the subcontracting system and serves as a platform where developers / principal contractors could **hire registered skilled labour directly**, thereby reducing administration costs, overheads and others costs in the layers.
- To reduce construction costs, it is recommended that a maximum two-layer subcontracting system should be adopted and applied to all public and private sectors.

Multilayer subcontracting pushes up construction costs

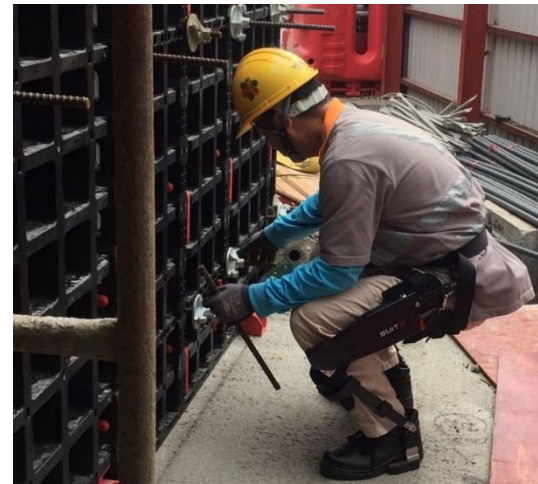
Construction Technology (1/2)



3D printed wall



Rendering of 3D printed building



Robotic exoskeletons assisting workers



Drone site inspection

3D Printing

Advantages

- Shorter construction time
- Precise construction management with less waste leading to lower material costs
- Less noise, dust and emission pollution
- Fewer accidents and injuries on site

Potential of the technology

- Dubai-based construction technology firm plans to construct a 3D-printed skyscraper
- “Crane Printing”: to combine 3D printing and existing construction methods to provide faster, cost effective and environmentally friendly solutions
- 3D printing is still in its infancy and will need to adapt to Hong Kong regulations, climate, weather, safety standards, etc. before it can be adopted

Robotic and Machinery Assistance

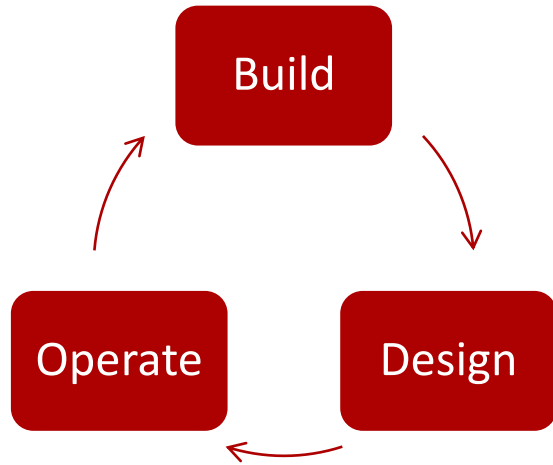
Advantages

- Reduce reliance on manpower
- Increase efficiency and productivity on and off the construction sites

Existing use

- Hong Kong construction companies use robotic exoskeletons to help workers lift heavy objects
- Drones are employed for site inspections and construction process monitoring

Construction Technology (2/2)



57 floors (800 apartment units) in 19 days in Chang Sha, China

Building Information Modelling (BIM)

Advantages

- Integrates IT to enhance productivity through better planning, design, works and cost management.
- 3D digital platform that includes building data
- Integrates different professions to design, construct and manage works
- Providing information of construction visually, reducing design errors

BIM in Hong Kong

- Housing Authority (HA) has implemented BIM in 19 projects since 2006
- HA can actively monitor project life cycle costing
- Various government departments and private contractors use BIM
- Government encourages implementation of BIM by providing a platform to introduce the technology.

Modular Construction

Advantages

- Prefabricated units made in factories and assembled in units and blocks on site
- Reduce manpower demand
- Reduce labour cost
- Better quality assurance
- Site safety
- Time efficiency

Modular construction in Hong Kong

- Hong Kong government first introduced the method in 1970s.
- It applies the modern modular construction method to increase speed of housing development
- Higher supply in shorter time can help to overcome demand-supply imbalance

Construction Materials

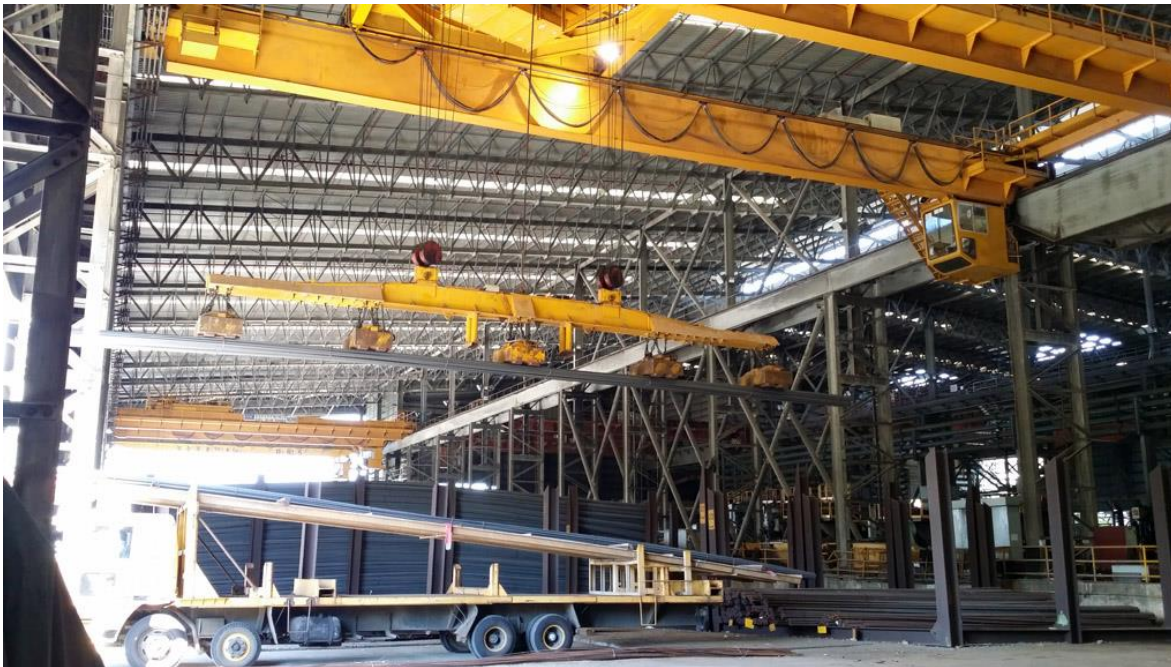
- Building materials account for 40-45% of total construction costs.
- Enhancing material quality and introducing new building materials will help to prolong building life and reduce long term maintenance costs.
- New building materials will need to undergo stringent and long process of testing, and the government will need to be responsive to the benefits that new materials and technology can bring to improve quality as well as reduce construction lead time.

Source of new materials
(e.g. bioplastics, metamaterials)

Enhancement of material quality
(e.g. concrete, cement, steel)



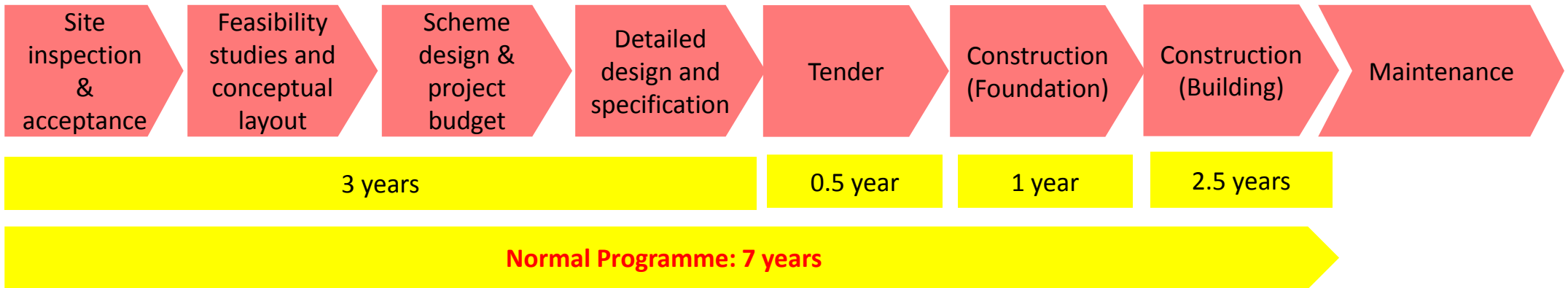
Reduce carbon footprint, social cost
Improve long-term durability and performance
Reduce construction cost



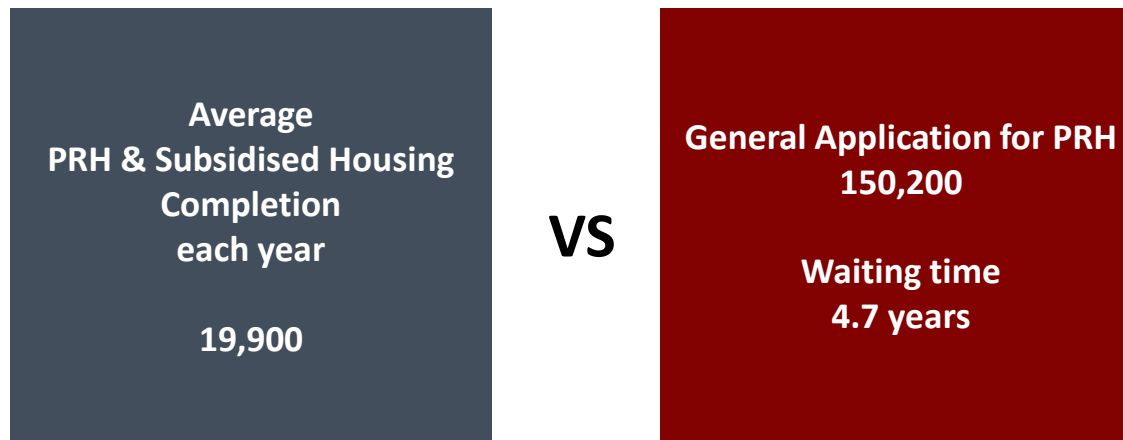
Metamaterials

Current Housing Project Life Cycle

Project Life Cycle of Public Rental Housing (PRH) Construction in HK

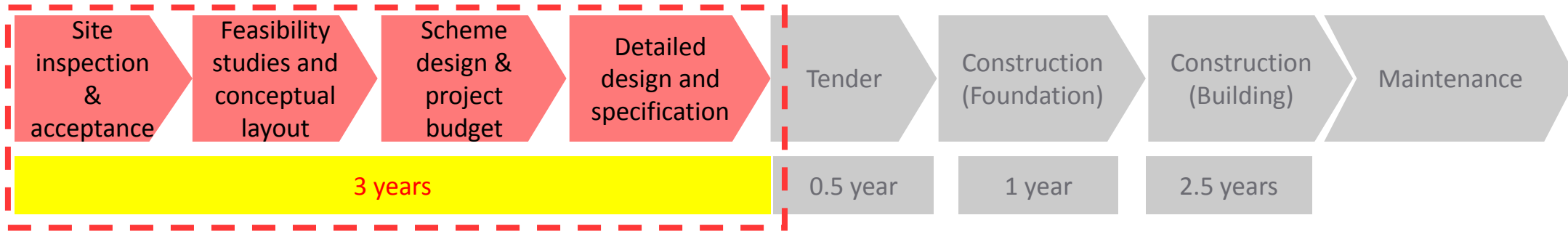


Source: HK Housing Authority_ Legco paper CB(1) 1633/11-12(02)



Shortening project life cycle will improve efficiency and increase housing supply in a shorter time period

Pre-Construction Procedures



Statutory & technical submissions required to go through government departments sequentially

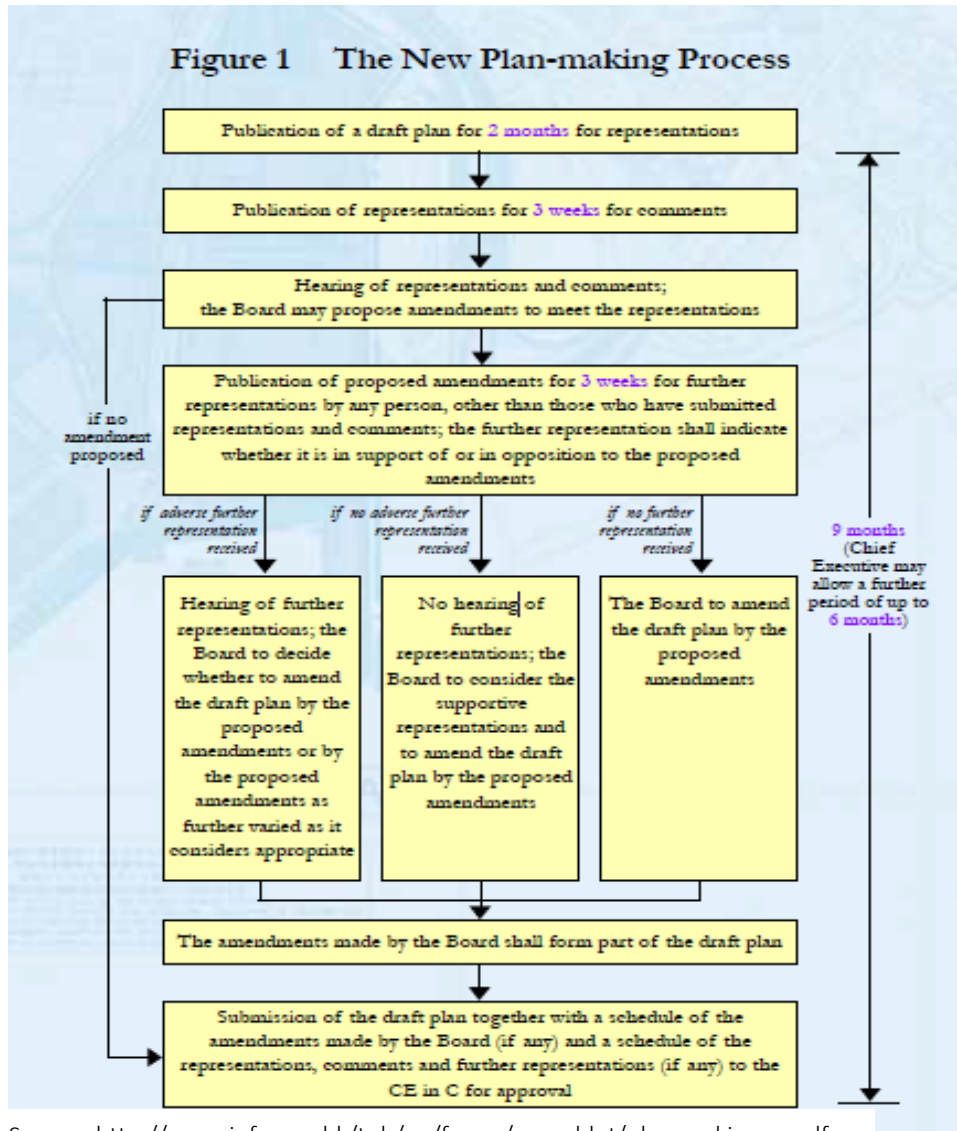
Stages	Government procedures
Planning & feasibility Studies	<ul style="list-style-type: none"> Town Planning Board approval for rezoning (if needed) Apply for Simplified Temporary Land Allocation - review and investigation by Lands Department
Detailed design and specification	<p>Requires statutory & technical submission to different government departments:</p> <ul style="list-style-type: none"> Architectural design & specification Building services design & specification Civil engineering on various assessment Civil engineering on road and infrastructure design Structural engineering design & specification Geotechnical engineering to secure approval for site formation Tree removal Master landscape layout



Public Consultation

Sequential review of statutory and technical compliance by different departments is uncoordinated and inefficient

Pre-Construction Procedures – Town Planning Procedures



Source: http://www.info.gov.hk/tpb/en/forms/pamphlet/plan-making_e.pdf

- Pre-construction procedures for housing development include Town Planning Board approval of land zoned as Comprehensive Development Area.
- Statutory Town Planning Procedures under the Town Planning (Amendment) Ordinance from 2004 is an example of how the processes in place delay development of housing.
- The outdated regulations and lengthy town planning process has contributed to the slow release of new housing supply.



Process is subject to comment and opposition

Pre-construction procedures need to be streamlined to reduce construction life cycle

Solutions to Streamline Pre-Construction Procedures

Parallel moves among government departments

- Hong Kong Housing Authority (HA) successfully completed its Home Ownership Scheme (HOS) programme in 2016-17 through a fast-track approach.
- The three year pre-construction lead time was compressed to one year as a result of HA trebling its efforts and many government procedures conducted in parallel.
- Learnings from this successful trial should be widely adopted

Cross-departmental unit to centralise review process

- Processing statutory and technical submissions by cross-departmental units allows for better coordination and improved efficiency.
- For example, instead of reviewing plans first by Lands Department then by District Lands Offices, a centralised unit reviews all plans concurrently.
- Centralised review of the same draft plan or design submissions under a common database among different departments will increase efficiency

Regular cross-departmental forums

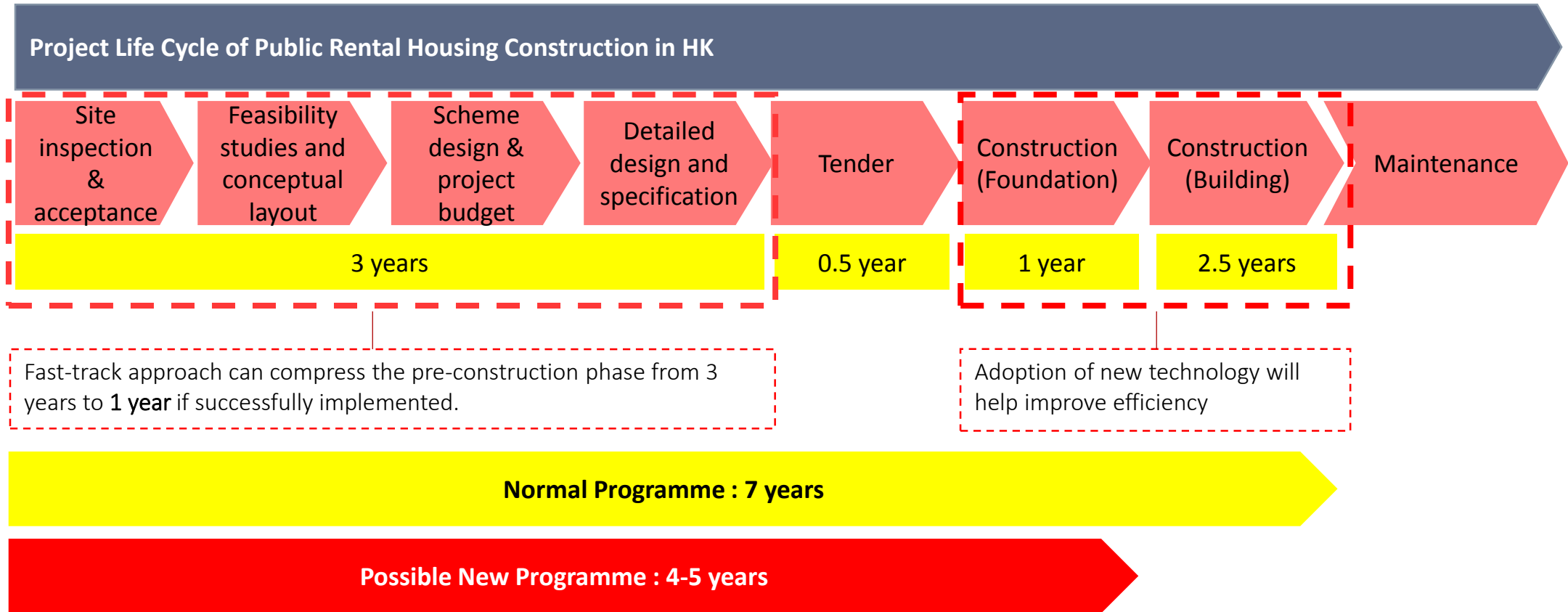
- Regular cross-departmental discussions and forums can be organized to review practices, procedures and evaluation principles that are not suited to industry developments and needs

Regular review of outdated ordinances and streamline statutory review

- Last amendment of Town Planning Ordinance was in 2004.
- It is time to review the ordinance and streamline statutory procedures to keep up with industry development

Outcome of Streamlined Project Life Cycle

A new housing project life cycle can compress housing construction lead time by 40%, from 7 years to 4-5 years.



Source: HK Housing Authority_ Legco paper CB(1) 1633/11-12(02)

Organisational change, leveraging technology and critical review of statutory procedures can streamline project life cycle

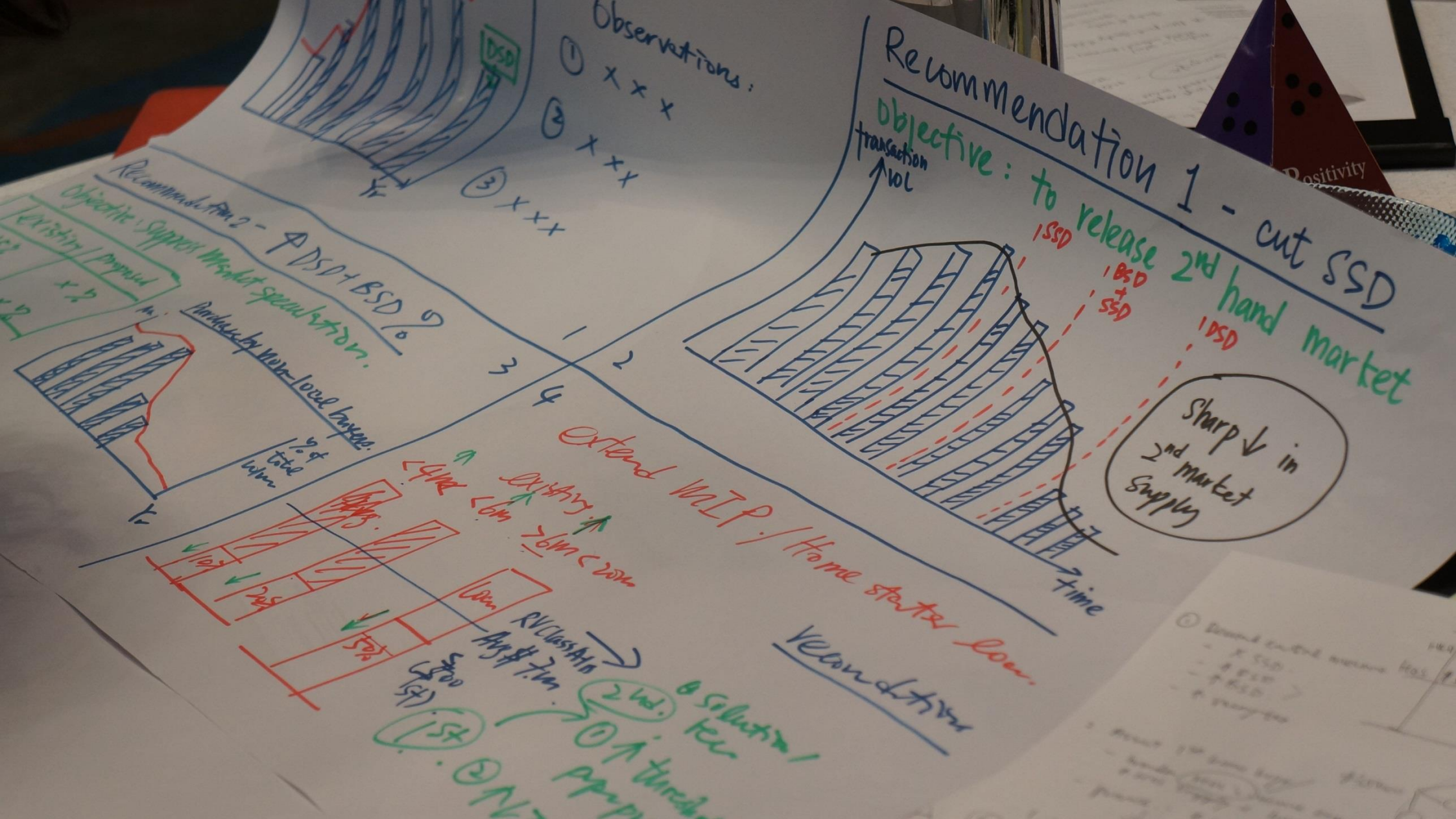
Possible Challenges to Implementation

Silo Departmental Operations

- Each government department operates under its own mandate, which has served their own professional practices well for a long time. However, a holistic vision is lacking when it comes to tackling issues like housing.
- Introduction of any cross-departmental approach may create grey areas in responsibilities. Resistance to change can be anticipated.
- Any cross-departmental unit to coordinate statutory reviews should be empowered with a high level of authority. As an example, it required the Chief Secretary chairing the Steering Committee on Climate Change to make collaboration between 15 bureaus and units in the government possible.

Aversion to Change Mindset

- Many practices and assessment principles adopted by different departments have been established for a long time. Requiring government employees to change their practices will take time and effort.
- Any streamlining or re-engineering procedures through organisational changes or technology may trigger concerns about change in required skill sets and job security. Innovation, strong will and clear communication will be required to make change.
- Developing a stakeholder platform with participation from different industry practitioners and departmental representatives can help facilitate exchange of up-to-date practices.



Managing the Market

Summary

The severe imbalance between demand and supply in Hong Kong's free market is the major reason why housing has become so unaffordable. In terms of demand, there has been an increase both in real housing demand and in investment demand. This has had a ripple effect across both the private and public housing sectors. Solutions to manage the housing market must therefore look at how to better manage the private sector as well as the public sector.

Managing the Private Sector Market

- The introduction of a host of different duties and taxes since 2009 has seen a shrinking in the number of property transactions as well as a near freeze of the secondary market, while prices have continued to climb.
- Further measures to curb investment demand will help to limit investment activity while relaxing the Special Stamp Duty and implementing vacancy tax will increase supply from the second-hand market.
- Support for first-time home buyers including exemption from ad-valorem stamp duty, raising the loan-to-value ratio, offering flat-rate home loans and home starter loans will help make homes more affordable to those who need them.

Managing government subsidised schemes

- To ensure public housing resources are properly allocated, the Home Ownership Scheme income eligibility and the Well-off Tenants Policies should be reviewed.
- Transitional housing should be provided for applicants waiting for public rental housing to better take care of such households while they are queuing.

Land sale process

- Private housing development land will be bundled with a public housing development site to incentivise property developers to construct public housing.
- Increasing transparency to the land sale process will help to stabilise the market.



Introduction to Hong Kong Housing Demand

Demand-Supply Imbalance

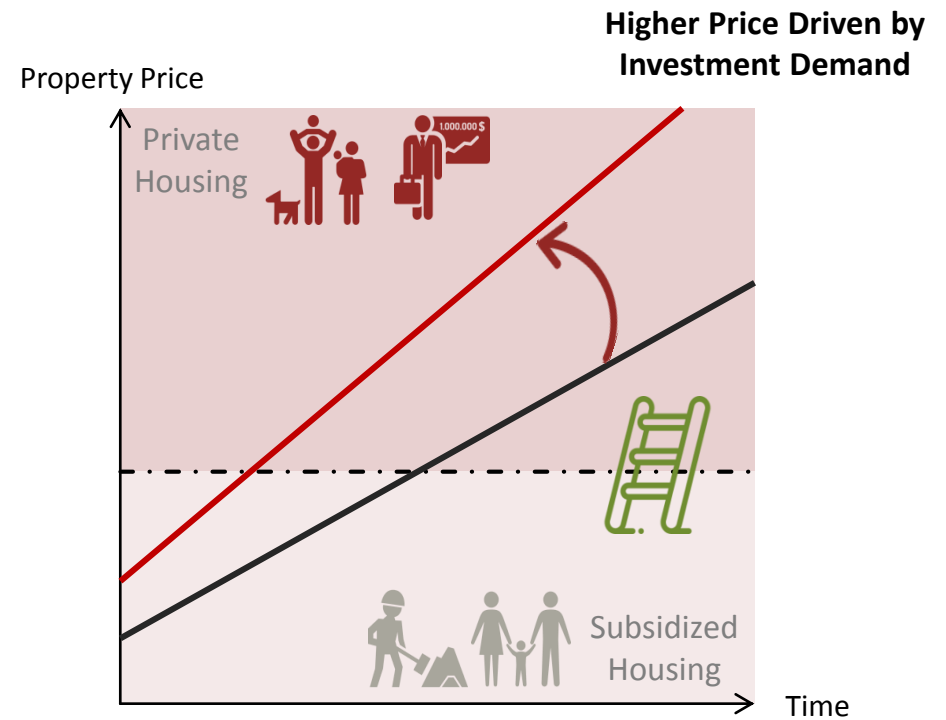
- The severe unaffordability of housing is to a large extent attributed to the **critical imbalance between supply and demand** under the free economy of Hong Kong. In other words, the supply of land for building residential housing and the supply of housing units are far from meeting the demand.

Increase in Real Housing Demand

- According to the latest forecast by the Government, the population of Hong Kong is currently 7.4 million and is expected to reach its peak of 8.2 million by mid-2046. Concurrently, household sizes are shrinking. It is forecasted that the average household size would decrease from 2.8 persons in 2016 to 2.7 in 2051 due to the shifting preference of married couples to have fewer children, and the prevalence of more young persons and elderly living on their own.

Increase in Investment Demand

- Economic conditions are another key determinant of housing demand. Amid ample market liquidity and free capital mobility, exceptionally low interest rates and mortgage lending rates have promoted speculation, stimulating investors to search for yields and attracting money from overseas markets. This is evidenced by the active participation of Mainland buyers and developers in both the property and land sale markets.



Factors	Housing Demand
<ul style="list-style-type: none"> Low Interest Rate Free Market 	Investment Demand
<ul style="list-style-type: none"> Demographic Changes Immigration Reducing Household Size 	Real Housing Demand

Policies should aim to suppress investment demand and meet real housing demand

Managing the Market

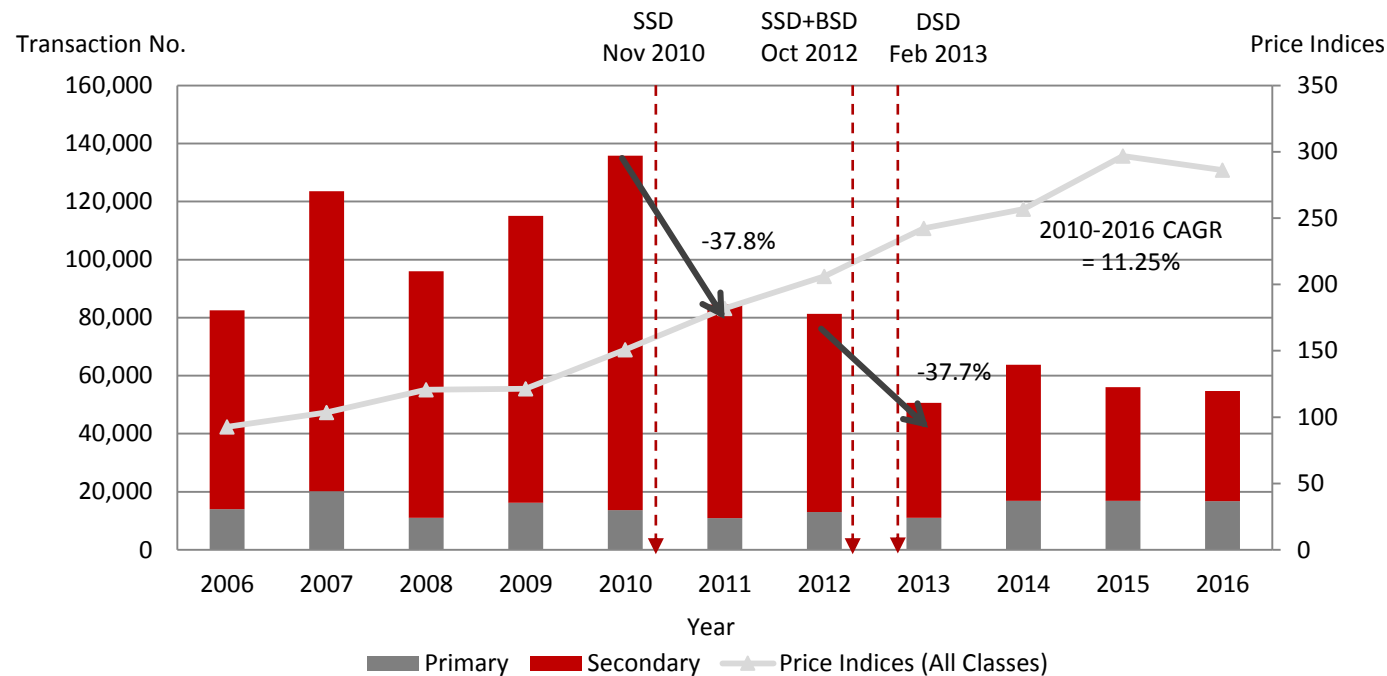
Current Situation

- Due to a severe housing demand-supply imbalance, low interest rates and the free market environment, Hong Kong is an attractive investment market which attracts speculative demand.
- Since 2010, on top of property tax and Ad valorem stamp duty (AVD), the Government introduced a Special Stamp Duty (SSD), Buyer Stamp Duty (BSD), and a Double Stamp Duty (DSD) in hopes of curbing investment demand.
- Below is the summary of the existing taxes stamp duties:

Type of Tax / Stamp Duty	Property Tax	Ad Valorem Stamp Duty ("AVD")	Special Stamp Duty ("SSD")	Buyer Stamp Duty ("BSD")	Double Stamp Duty ("DSD")
Objective			Curb speculative short-term resale transaction	Accord priority to home ownership needs of HKPR	Manage property market of non-first-homebuyers
Effective Date	Ongoing	Ongoing	First introduced in Nov 2010 and further enhanced in Oct 2012	Oct 2012	Feb 2013
Rates	15% of rental income	Up to 15% (subject to transaction price and no. of properties held)	10 - 20% (for resale within 3 years)	15% flat	15% flat

Are Existing Stamp Duties Effective?

Property Market Transaction Volume vs Property Price Index (2006 – 2016)



Observations

- There was a sharp drop in the number of transactions: 37.8% drop after SSD was first introduced in 2010 followed by a further drop of 37.7% after enhanced SSD and BSD were introduced in 2012.
- Secondary market transaction volume shrank significantly (2010-2011: -39.8% and 2012-2013: -42.0%)
- However, the price index went up from 11.25% CAGR from 2011 to 2016.

Stamp duties curbed short term speculative activities but prices continued to rise and secondary market shrank

Private Sector – 1) Curb Investment Demand Further

- The new stamp duties introduced since 2010 have led to an immediate reduction of the number of property transactions. However, the overall property prices maintained an upward trend over the past seven years.
- Rising prices suggest pent up / increasing demand. Therefore, it is proposed to **intensify the existing stamp duties to specifically target investment demand** in order to raise the overall transaction costs for this segment of buyers.

Recommendations			Why Effective?
Category	Local Buyers (first-time buyer exempted)	Non-local Buyers	
1. Double Stamp Duty	Drastic 10% increase (15% → 25%)		Further discourages purchase from non-first-time homebuyer
2. Buyers Stamp Duty	n/a	Drastic 10% increase (15% → 25%)	Further discourages purchase from non-local buyer and accord priority to HK Permanent Residents
3. Property tax	Increase 5% (15% → 20%)		Further raises cost of investment
4. Purchase price	n/a	Restrict purchase of units priced below HK\$20m	Increases entry price for non-local buyer and aims to discourage investment
5. Mortgage Loan-to-Value	Max LTV lowered by 10%	No mortgage is allowed	Reduces financial assistance for investment demand from non-local buyers

Private Sector – 2) Encourage Second-hand Market Supply

- While curbing investment demand helps to cool down the investment market and decelerate property price growth, prices are still high resulting in high entry barriers for end-users (e.g. average price of 40-69.9 m² flat = HK\$7 million).
- Therefore, **measures need to be taken to increase supply from the second-hand market** to meet demand and help slow down the property price growth.

Recommendation 1: Remove Special Stamp Duty (SSD)

Secondary Residential Market Transaction Volume

Calendar Year	2006-2010	2011	2012-2016
Avg No. of Transaction	95,577	73,582	39,726
% change	-	-23.01%	-58.44%

Observations

- There was an immediate 23% decline in secondary residential property transactions in 2011 after SSD was first introduced.
- There was a significant 58% decrease in the 5-year average number of transactions when comparing 2006-2010 with 2012-2016.

Suggestions and Effectiveness

- The removal of SSD can **reduce the transaction cost for resale** and immediately release property supply from second-hand market.
- Buy time for unlocking land supply in medium to long run.

Recommendation 2: Introduce 25% Vacancy Tax

Year	No. of Vacant Units (% total)	Same Year Completed Units	Ratio
2012	47,997 (4.3%)	10,149	4.73x
2013	46,567 (4.1%)	8,254	5.64x
2014	43,263 (3.8%)	15,719	2.75x
2015	42,035 (3.7%)	11,280	3.73x
2016	43,657 (3.8%)	14,595	2.99x

Observations

- 3-4% of units (>40,000 units) left vacant in the past 5 years.
- In 2016, vacant units = 2.99 times the units completed in the same year.

Suggestions and Why Effective?

- **25% of rateable value should be charged as vacancy tax on properties vacant for over 1 year.** This increases the holding cost and thus encourages property owners to sell or rent out the property.

Private Sector – 3) Exempt Ad-valorem Stamp Duty for First-time Home Buyers

- Amid high property prices, measures should be introduced to reduce barriers to entry for first-time homebuyers. **Exemption of Ad-valorem stamp duty for first-time homebuyers is thus recommended.**
- While secondary market supply should be encouraged, speculative demand shall continue to be controlled.
- Since its introduction in 2012 and 2013, Double Stamp Duty and Buyers Stamp Duty have slowed down speculative activities and should be maintained to slow down the property price growth.

Property Value	Down Payment		Stamp Duty		Entry Cost		
	% (note 1)	\$	% (note 2)	\$	Current	Proposed	% Saved
HK\$4m	10%	\$0.4m	2.25%	\$90k	\$0.49m	\$0.4m	18.4%
HK\$6m	20%	\$1.2m	3%	\$180k	\$1.38m	\$1.2m	13.0%
HK\$7.5m	40%	\$3m	3.75%	\$281.3k	\$3.28m	\$3m	8.6%

Note 1: Based on current maximum Loan-to-Value ratios under Mortgage Insurance Programme

Note 2: Assuming Stamp Duty Rates at Scale 2 applies

First-time home buyers can be further supported through exemption of the Ad-valorem stamp duty

Private Sector – 4) Increase Access to Capital for First-time Home Buyers

To further assist first-time home buyers, increasing their access to capital through relaxing mortgage loan restrictions would facilitate their purchasing of property.

Extending the Mortgage Insurance Programme (MIP) to provide mortgages to properties valued up to \$7.5 million

- The average property value in 2017 for a flat in the range of 40–69.9 m² (430–752 sq. ft.) is over HK\$7 million.
- The existing MIP supports first-time home buyers by providing mortgage loans up to 80-90% of the property price. However, it is not applicable to properties valued over HK\$6 million.
- Extending MIP support to flats that are market price (up to HK\$7.5 million) could help more first-time home buyers

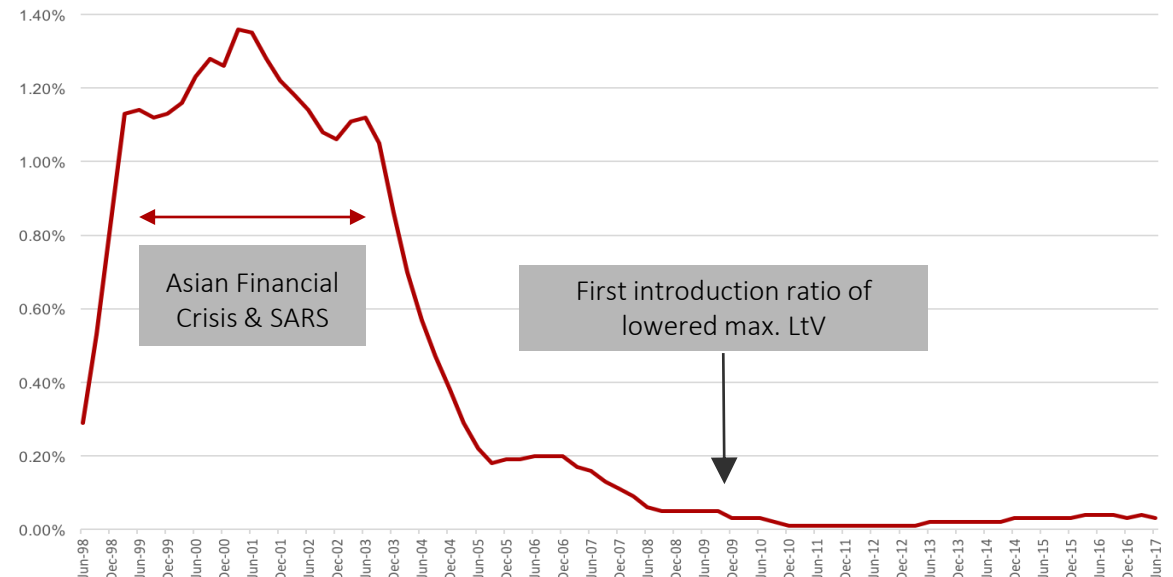
Raising the Maximum Loan-to-Value (LTV) Ratio

- Raising the maximum LTV ratio would not have a substantially negative impact on the existing mortgage delinquency conditions.
- The mortgage delinquency ratios have remained very low (below 0.2%) since 2005, long before the introduction of tightened mortgage measures.
- Instead, mortgage delinquency ratio is largely affected by the macro-economic environment.

Current Scheme

Property Value \$4.5 million to \$6 million	Property Value over \$6 million (No MIP)
20% Down payment	40% Down payment
20% Mortgage Insurance	
60% Bank Mortgage Loan	60% Bank Mortgage Loan

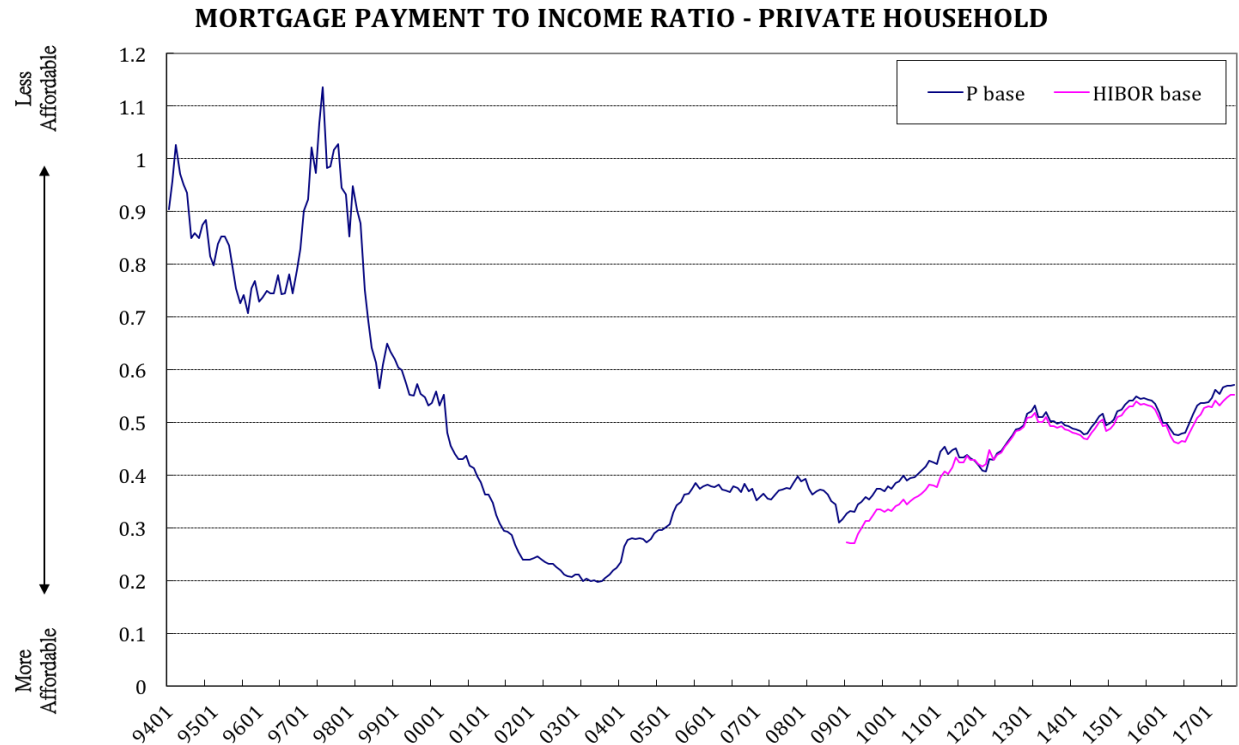
Mortgage Delinquency Ratio



Private Sector – 5) Offer Flat-rate Home Loans to First-time Home Buyers

To address the credit risk that may result from interest rate fluctuations, a flat-rate mortgage could be offered to first-time home buyers.

- Mortgage payments / income ratios vary substantially over time. One major reason for this is because of the fluctuation in interest rates.
- The government could provide **long-term, low and fixed interest rates** for local first-time home buyers through underwriting these home loans provided by financial institutions.
- Long term: 35 years, for example.
- Low and fixed interest rate: either fixed for the entire term or for a certain period (e.g. 10 years) followed by variable interest rates.



Research Department
Centaline Property Agency Ltd

Case study from Japan:

- The Japan Housing Finance Agency (JHF) was established by the Japanese government in 2007.
- The JHF purchases loans from banks and underwrites the credit risk.
- Banks then provide housing loan products (e.g. the “Flat 35” home mortgage rate) with long term fixed interest rate (1.48% in Feb 2016) for low and medium income households



Private Sector – 6) Home Starter Loan

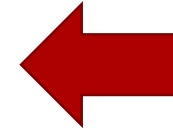
Resume Home Starter Loan for down payments to provide assistance to first-time home buyers

- Current property prices and low LTV ratios make purchasing property a heavy burden for first-time homebuyers. It may take years to save enough for the down payment.
- A Home Starter Loan may help households gain access to affordable housing and to meet the demand for home ownership by providing housing loans for the down payment to eligible lower and middle income families.
- Home Starter Loans will also help to free up Public Rental Housing (PRH) and allow the Housing Authority and Housing Society to reallocate rental flats to applicants on the waiting list for PRH.
- If the existing Mortgage Insurance Programme is not revised, then assistance on mortgage loans would not be applicable for properties over HK\$6 million. The Home Starter Loan could assist first-time home buyers more flexibly.

Property Value
(Assume: \$7.5 million)

40% down payment
(\$3 million)

60% bank mortgage
loan (\$4.5 million)



Home Starter Loan for
Down Payment



Public Sector – 1) Revising Income Eligibility for Home Ownership Scheme

- Under the current income cap scale for the government’s Home Ownership Scheme (HOS), there is a gap between the income of those eligible for HOS and income required to be able to afford private flats. This “sandwich class” are those that neither qualify for HOS, nor can afford housing in the private market.
- Currently, there is only one income cap for household size ranges from 2 to 9 persons and no income tiers to reflect the difference in income based on different household sizes.

Recommendations

- To impose a tiered income cap for families of different household sizes.
- To revise income eligibility by raising income cap based on median salary levels and imposing a minimum income requirement.

Eligibility of HOS

Household Size (Persons)	Current Income Cap (HK\$)	Recommended Income Cap (HK\$)	Recommended Min. Income (HK\$)
1	26,000	26,000	11,251
2 – 4	52,000	64,800	27,051
5 – 7		113,400	41,421
8 or above		129,600	46,321



Make HOS more inclusive by revising income caps and minimum income requirements

Public Sector – 2) Review the Well-off Tenants Policy

Current Well-off Tenants Policies (Effective in Oct 2017)

Criteria	<ul style="list-style-type: none"> Public Rental Housing (PRH) households with income exceeding 5 times of the PRH income limits (PRHIL) or PRH households with assets exceeding 100 times of the PRHILs or PRH households with private domestic property ownership in Hong Kong, irrespective of their levels of income or assets
Declaration	<ul style="list-style-type: none"> PRH Households who have been living in PRH for 10 years are required to make a declaration biennially Households who are granted a new tenancy under the Policy on Grant of New Tenancy and households with their applications under the Tenancy Management Policies for PRH approved are also required to make a declaration biennially, irrespective of their length of residence Items to be declared: income, assets and private domestic property
Vacancy period	<ul style="list-style-type: none"> Households exceeding the prescribed income and asset limits are required to vacate their PRH units within 12 months

It is recommended to enhance and enforce the Well-off Tenants Policies so that PRH resources can be better allocated

Income and Asset Limits:

- Evict all households exceeding income and asset criteria
- Revise the existing buffer to charge more rent from those that exceed income limits:
 - If household income is 2rent equivalent to 1.5 times the to 3 times of the PRHILs, they will still be required to pay the existing net rent plus rates
 - If household income is 3 to 5 times of the PRHILs, they will be required to pay rent equivalent to 2 times net rent plus rates

Declaration arrangements:

- Shortening the initial declaration period (currently 10 years after in-take into PRH)
- Shortening the declaration cycle to around 1 year

Impact of Revised Well-off Tenants Policies

- ~200,000 households subject to biennial declarations
- ~1,000 PRH households subject to annual declarations
- ~200 PRH flats to be reallocated

Revised Well-off Tenant Scheme

Rent paid	No. of households
1.5 times net rent plus rates	~20,000
2 times net rent plus rates	~2,400
Market rent	~30
Total	~22,500

Public Sector – 3) Provision of Transitional Housing

Transitional housing should be provided for those living in sub-divided units and who are waiting for public housing

- There are an estimated 88,000 sub-divided units (SDUs) in the city, housing 200,000 persons. Research suggests that 46% of SDUs contain only one essential facility inside the premises.
- Nearly 40% of SDU households (33,200 units or 85,000 persons) have applied for and are waiting public rental housing. The average wait time for public rental housing is 4.7 years.
- Current SDU living conditions are unsatisfactory, tend to have low hygiene levels and are very small.
- Transitional housing would provide a better living environment for those waiting for PRH and should be provided at a rent not exceeding SDU rentals.
- Transitional housing could take different forms, for example container homes, or renovated vacant GIC buildings such as vacant schools.

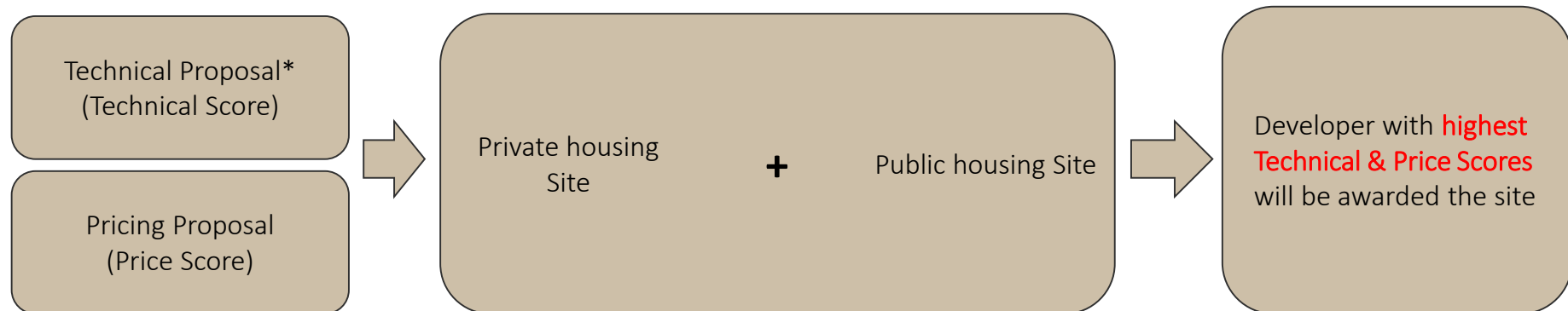


Public Sector – 4) Bundling Land Sale to Increase Subsidised Ownership Supply

- There is a strong demand for government subsidized Home Ownership Scheme (HOS) flats
 - In April 2017, there were **79,000 applicants for 2,093 HOS units** supplied, an over-subscription of **37 times**
 - In March 2016, there were **43,500 applicants for 3,684 HOS units**, an over-subscription of **11 times**

Recommendations

- To bundle private housing land sale in prime locations together with a site for subsidised housing development, the developer would be required to construct both the private and public housing;
- To ensure quality and suitability of development, developers are required to submit a Pricing Proposal as well as a Technical Proposal;
- To shorten the lead-time for provision of subsidised units by making use of private sector resources and taking advantage of economies of scale.



*Remark: Subject to review of Government Procurement Regulations

Make use of synergy with private sector to improve quality and speed up development of HOS projects

Increase Transparency of Land Sale Process

- The current land sale process by application list and tender process lacks transparency. Only the winning price is released, and this may not be reflective of the price that most bidders valued the land at (fair market value). The lack of transparency has fueled speculative and aggressive bidding.
- Land costs are a major part of the property development costs.
- As more non-local developers try to enter the Hong Kong property market, there has been a notable increase in land sale prices. This has been particularly evident in the past two years as Mainland developers have bid aggressively to secure prime sites.
- The growing land prices inevitably drives up property prices.

Recommendations

- Enhance transparency of the land sale process, thereby reducing overheating in the market, by disclosing the second and third highest bidding prices.
- Reactivate land auctions, which were more transparent than the current tendering process.
- Improved transparency will provide an indication of the “hope value” of the highest bidder and provide a benchmark of the actual fair market value of the land.
- This will lead to a more stable land market.





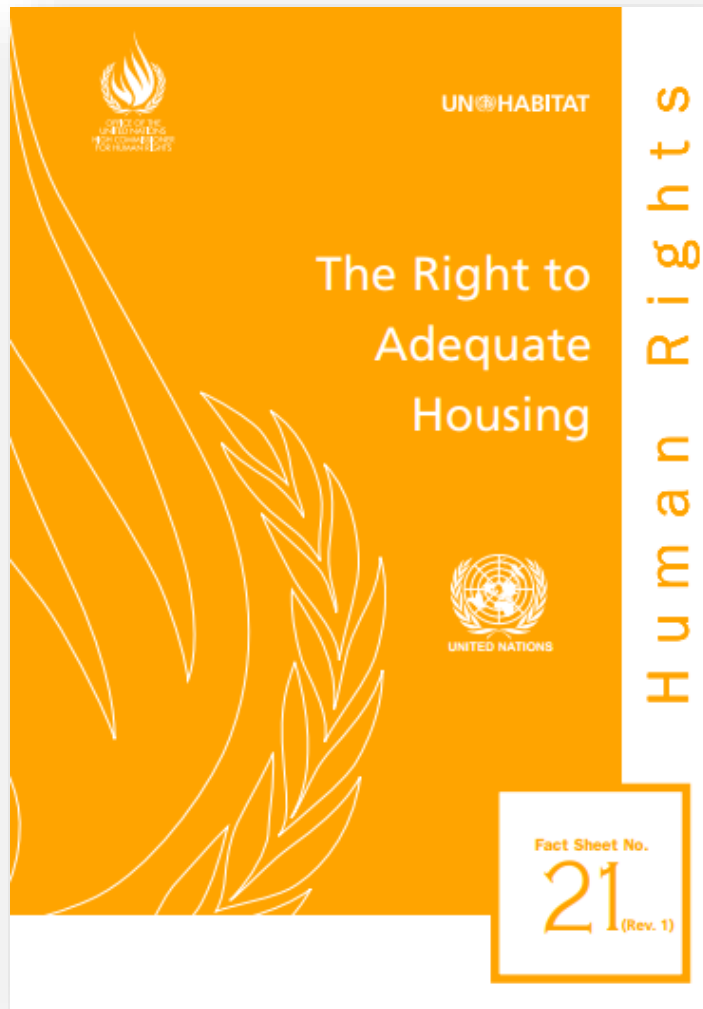
Quality of Homes

Summary

- The quality of a home depends on more than just four walls and a roof. **The right to adequate housing, inscribed within the United Nations' Declaration of Human Rights, is recognised as absolute, similar to health or education.**
- A number of conditions must be met before particular forms of shelter can be considered decent, including adequate space, protection from threats to health, safe drinking water, adequate sanitation, energy for lighting, cooking and heating, refuse disposal and be free of structural hazards. The availability and accessibility of services and facilities in residential areas are also important for liveability.
- High home prices and lack of government regulation has led to shrinking home sizes in the private sector as well as poor living conditions in sub-divided units. Measures need to be taken to regulate private developments and provide support to those living in sub-divided units.
- As the population of Hong Kong continues to age, schemes to support the elderly to maintain a decent quality of life and to age in place will become more important.
- With the ageing of Hong Kong's buildings, especially those in urban areas, new measures such as the proposed Redevelopment Fund are required to increase the speed and scale of redevelopment and to ensure community services are adequately provisioned.



Defining Quality of Homes



- The definition of an adequate quality of a home must include more than a roof with four walls and cover a number of elements which are fundamental to meet the needs of living instead of merely a shelter to provide security.
- According to the United Nations High Commissioner for Human Rights (OHCHR), it is a human right to gain and sustain a safe and secure home and community in which to live in peace and dignity. “The Right to Adequate Housing” Toolkit provided by the OHCHR crystallises the elements of the right to adequate housing, and what they entail.

- **Habitability**
- **Affordability**
- **Availability of Services and facilities**
- Security of Tenure
- **Accessibility**
- Location
- Cultural Adequacy

Adequate space, protection from the cold, heat and other threats to health, structural hazards and diseases

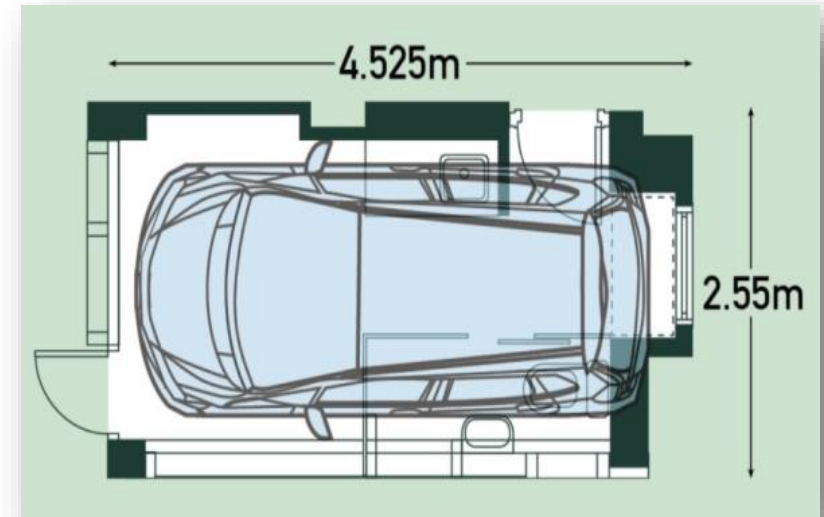
Safe drinking water, adequate sanitation, energy for lighting, cooking and heating, washing facilities, refuse disposal

Specific needs of disadvantaged and marginalized groups accounted for

Habitability, affordability, service availability and accessibility should be the priorities for providing housing in Hong Kong

Issue with Quality of Homes in Hong Kong

- High property prices have a knock-on effect on rents. Rent accounts for a significant portion of the income of those renting in the private market. The median rent to income ratio for this group in 2017 was 31%, higher than 25% ten years ago.
- As home buyers look for smaller flats which are still affordable, property developers have shifted toward building ever smaller flats to meet the emerging demand - "Nano Flats" - with unit usable floor area as low as 12 m² (130 sq. ft.). According to the Rating and Valuation Department, the new supply of flats with less than 40 m² (461 sq. ft.) increased from 1,511 in 2012 to 2,927 in 2016. Almost half of all apartments completed in 2018 will be under 40 m².
- There are roughly 88,000 rented sub-divided units (SDUs) in Hong Kong. On average, a unit is divided into 3.5 sub-divided units, in which the average area occupied per person was 5.8 m² (62.4 sq. ft.). The government has found it difficult to identify all sub-divided units in Hong Kong and only takes action on sub-divided units that have violated the Buildings Ordinance upon receipt of complaints. Generally, the safety and liveability standard of sub-divided units are very low.
- Population ageing is expected to continue in Hong Kong. The number of elderly persons aged 65 or above will increase from 1.16 million (17% of the total population) in 2016 to 2.37 million (31%) in 2036. There is a pressing need for elderly-friendly housing and community services to facilitate "Ageing in Place". Other community services to help households, such as childcare services for single-parent families, are also lacking.
- Hong Kong is facing an issue of ageing buildings. There are around 4,000 buildings which are 50 years or older and that number will increase by 500 buildings every year over the next decade. Old buildings often lack proper maintenance and basic provisions, they attract low-income tenants and contribute to the poor living conditions of many. Currently, the mechanisms in place for urban redevelopment may not be able to cope with the speed of urban decay.



(Source : HK01)



(Source : HK Oriental Daily)

Existing Policies on Residential Housing Standards

- The Buildings Ordinance (Cap. 123) and other relevant legislations and guidelines are in place to regulate residential housing building standards.
- There is no legislation aimed at regulating sub-divided units in Hong Kong. Sub-divided units are not illegal as long as there is no contravention of the Buildings Ordinance. The Buildings Ordinance deals with the building design and construction standards such as fire safety, structural safety, drainage works and accessibility, etc.
- Building works that do not involve the structure of the building, such as subdividing an apartment unit, are exempted building works under Buildings Ordinance and do not require approval.
- There is a clear absence of regulations and minimum standards for living space for sub-divided units that results in very poor and overcrowded living conditions.
- The Government does not mandate the minimum room space for private housing but they have such requirements for public housing units. The minimum internal floor area of a unit in public rental housing is no less than 7 m² (75 sq. ft.).



Absence of minimum standard for living space in sub-divided units results in poor and overcrowded living condition

Improve Liveability (1/2)

Impose a statutory minimum unit size

- Imposing a statutory minimum unit area for private residential developments provides regulation in the market and ensures that developers abide by rules that guarantee a basic quality of living space for home buyers. It will prevent flat sizes from getting any smaller.
- Measures:
 - To consult relevant stakeholders (e.g. Housing Authority, Hong Kong Housing Society, developers, the general public at large) on developing a minimum unit area applicable to Hong Kong's housing situation and impose a statutory minimum unit area for future private housing developments through legislation.

Improve conditions in sub-divided units

- Provide incentives to landlords to improve their existing sub-divided units to the minimum requirements on safety and hygiene and explore measures to control and stabilise rents of sub-divided units.
- Measures:
 - To establish the minimum unit size of sub-divided units as well as improved standards applicable to sub-divided units in terms of fire safety, structure, internal facilities (water, energy) and hygiene.
 - To set up a funding scheme providing financial assistance to incentivise landlords to carry out improvement works on sub-divided units in compliance with the standards.
 - To explore rent control measures on sub-divided units to regulate the rents at rates affordable to low-income tenants.
 - To review the government's rent assistance scheme with a view to relieving the financial burden of sub-divided units tenants.
- Benefits:
 - Mitigates the risks of fire safety and hygiene hazards in sub-divided units.
 - Improves the liveability and affordability of subdivided units to meet short-term residence needs.

Reference of minimum housing space standards in other countries

Country	Minimum housing space standards	Remarks
Alberta, Canada	9.5 m ² (habitable room); 3 m ² / person (bedroom)	1 habitable room and 1 bedroom
New York State, United States	20.4 m ²	Efficient dwelling unit
South Korea	12.2 m ² (for 1 person); 20 m ² (for 2+ persons)	1 living room, 1 bedroom and 1 kitchen
Germany	9 m ² per person aged 6+; 6 m ² per person aged 2 to 6	
Taiwan	13.1 m ² for 1-person household; 17.4 m ² for 2-person household; 21.8 m ² for 3-person household	

Source: <最低居住水準訂定與實施作業報告> (2008), 台灣內政部委託中華民國住宅學會研究

Improve Liveability (2/2)

Retrofitting aged residential buildings

- Providing financial assistance to landlords to maintain and retrofit existing aged residential buildings will make them more liveable for longer and accessible to those with special needs, such as elderly.
- Measures:
 - Government to provide funding to incentivise landlords to carry out retrofitting works on common facilities and building services installation of aged residential buildings.
 - Relax the permitted Gross Floor Areas (GFA) to facilitate enhancement of the aged buildings (for example, allow external elevators to be built).
- Benefits:
 - Retrofitting works can extend the longevity of aged residential buildings and enhance its safety and liveability.
 - Does not create issue of rehousing tenants during renovation or due to demolition.
 - Reduce waste generated from demolition of entire buildings before their usable life is up.

Before installation of elevator



After installation of elevator



Retrofitting works enhance the liveability and prolongs the life of aged residential buildings

Ageing in Place

- Hong Kong has an ageing population. Census statistics project that by 2036, 31% of the city's population will be aged 65 or above (compared with 17% in 2016).
- A rising elderly population leads to special housing requirements and community support networks to ensure a decent quality of life for the aged.
- **Ageing in Place (AIP)** refers to empowering elderly to live in the residence and community of their choice, for as long as they are able to, with the goal to maintain and/or improve their quality of life as they age.
- In order to ensure a quality living environment and enhance the well-being of the elderly, access to services and support they may need over time include:
 - Housing options that allow family members to live in close proximity to make it easier to care for older family members
 - Barrier-free/elderly friendly housing to allow elderly to live independently
 - Social and community programmes to provide continued care
 - Health care services near elderly communities to facilitate access for elderly to get the healthcare they need



Measures to Support Ageing in Place

Expansion of the “Ageing in Place (AIP) Scheme” developed by the Hong Kong Housing Society (HKHS)

- HKHS has implemented the AIP Scheme in numerous public and private housing estates managed by the organization. The goal is to render a safe, healthy and joyful living environment for the elderly, building on neighbourhood relationships, volunteer networks and collaboration with NGOs.

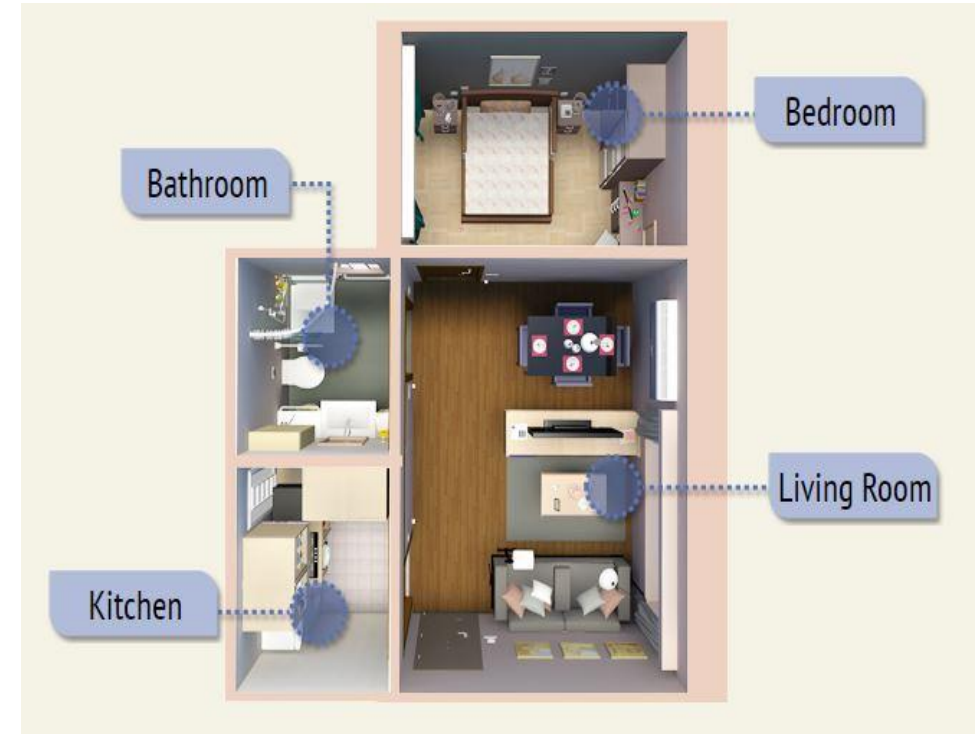
Develop comprehensive functional centres (a “Super Clubhouse” or SCH) in public and private housing estates that have more elderly occupants to provide them with more assistance in daily life, such as health services.

- This idea combines independent living with an assisted living community, bridging housing and long-term care. It can ensure provisions of community services and daily necessities such as meals, fitness, recreation, education, laundry, transportation and even direct healthcare.
- This scheme would allow elderly persons to spend time at the SCH and have their needs met during the day, while returning to their own home at night.

Introduce “Inter-generational Housing Scheme” to allow children to live near their parents to enhance support for the elderly

- Provide a mix of “elderly-friendly” flats and ordinary flats in a building/estate. Home-based and community-based services can be targeted at the elderly living in these schemes.
- Monetary incentives or discounts can be provided to children to buy/rent flats in the same building/estate where their parents reside.
- The Scheme can be implemented in both the primary and secondary markets given the right government incentives.

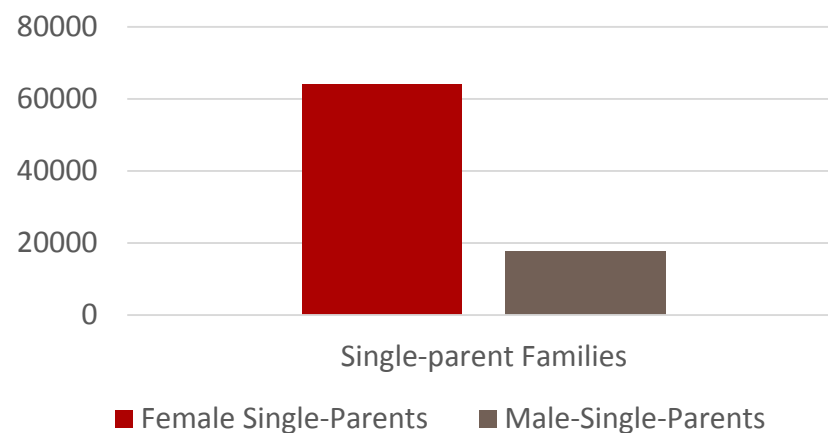
Layout of an AIP Scheme flat



Co-Living Homes

- Among poor households, the prevalence of single-parent households living in poverty is significant.
- The poverty rate of single-parent households (35.8% live in poverty) is higher than that of the general household in Hong Kong (14.3% in poverty).
- The last population census on single parents conducted by the Census and Statistics Department for the year 2011, revealed that there were 81,705 single parents in Hong Kong, with single mothers accounting for 78.3% of all single-parent families.
- Since women in poverty often need to look after their families, particularly children and the elderly, they are usually unable to go to work and as such their labour force participation rate is lower than general households. For this reason, the median monthly income for female single-parent households is HK\$13,880 compared to HK\$25,000 for all households.
- High rent and insufficient childcare services are two major factors that lock underprivileged groups in poverty and prevent them from improving their quality of life.
- Introducing Co-living Homes for single parent families can lessen the burden of rental expenses and enable cross-support from other families.
 - Collaborate with NGOs, developers, Urban Renewal Authority and flat owners to provide decent units for single parents to live together. Single mothers can potentially find jobs if their children can be cared for by elder children / other mothers in the home.
 - Comprehensive functional centres (a Super Childcare Service Centre or “SCSC”) could be established in low income areas to provide child care services and social service support for single parents.

Number of female-single parent families to male



Co-living is an alternative form of affordable housing that can provide added support to low-income families

Decaying Urban Areas

- Many urban areas in Hong Kong were developed over a century ago. There are many dilapidated buildings that have not been properly maintained. These Hong Kong 'slums' pose safety and health hazards to those who live there.
- The poor living conditions makes rent lower than in other buildings and many flats are subdivided for low income tenants. Redevelopment can provide an opportunity to people living in these buildings to improve their standard of living.
- Decaying urban areas adversely affects liveability. Usually old buildings do not have basic facilities and services like elevators, building management and garbage collection.
 - Lack of property management leads to security issues and poor maintenance of common areas. Lack of repair to drainage and wiring can cause fires and water seepage leading to further deterioration of the building and risk of building collapse.
 - Lack of community facilities can lead to social isolation and the inability to access health and social care services.
 - Lack of building services like elevators means that some elderly people living in high floors seldom leave their units.
- Existing Redevelopment Mechanisms:
 - Urban Renewal Authority (URA): 710 buildings redeveloped since its establishment in 2001. However, it cannot catch up quickly enough with the problem of urban decay due to limited financial resources.
 - Property developers: profit-oriented and choice of redevelopment depends on profitability rather than the condition of buildings. Relying on them is not a comprehensive solution of managing decaying urban areas.

Some facts about decaying urban areas

Hong Kong has over 6,200 buildings over 50 years old

Each year, 500 buildings become 50 years old

Life of a reinforced concrete building is 50 years

Source: Buildings Department and Urban Renewal Authority



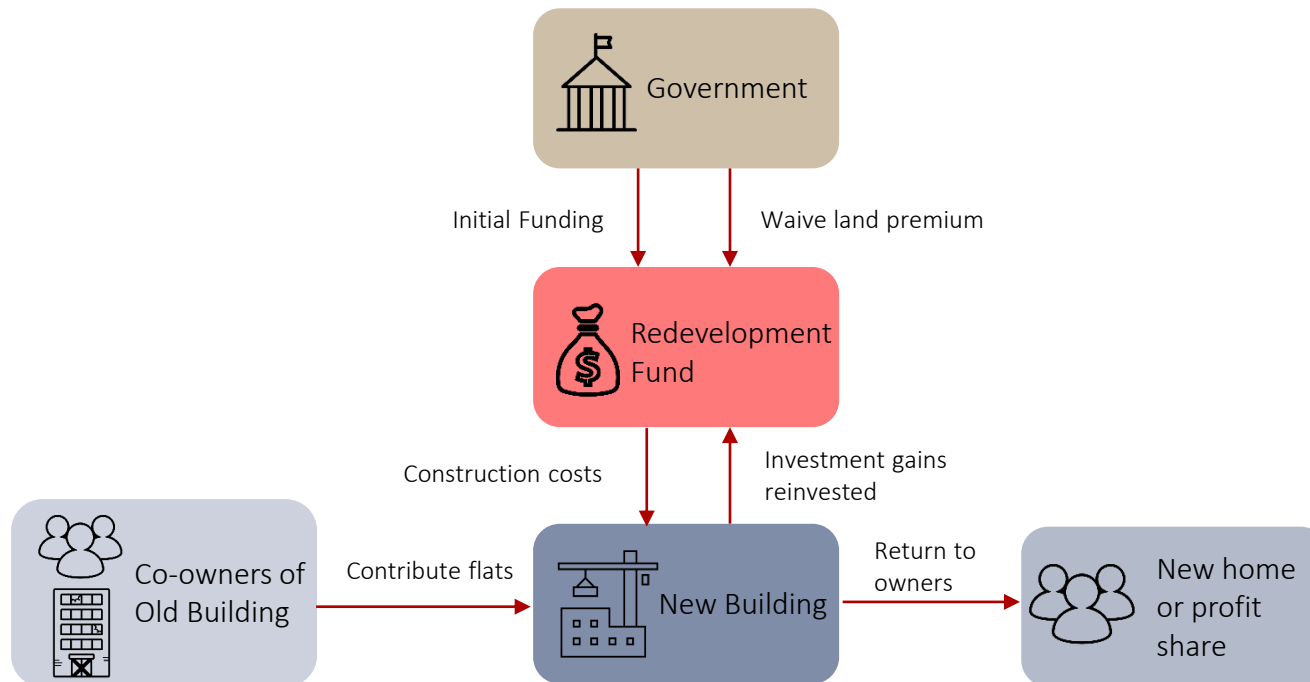
Existing means of urban renewal cannot cope with the imminent problem of ageing buildings and decaying urban areas

Redevelopment Fund for Urban Renewal (1/2)

Developing a new Redevelopment Fund to enable urban renewal projects

How the fund works to enable redevelopment:

- a) The government provides initial funding, proposed injection of minimum HK\$2 billion, and waives payment of premium if lease modification is required.
- b) Instead of acquiring all units in an old building by way of acquisition, it is a **joint investment scheme** by all co-owners of the building
- c) The Fund invests in the project by paying the construction costs, the co-owners invest by contributing their flats
- d) Return to Owners
 - o Option A : a new flat in the redevelopment (interim housing shall be provided to these owners).
 - o Option B: a pre-agreed share in the profit of the redevelopment
- e) Investment gains for the Fund from the project will be reinvested back into the Fund for additional redevelopment projects.



Assumptions for initial funding of HK\$2 billion:

- There are no current statistics indicating the number of buildings over 50 years of age that require immediate redevelopment. URA is currently undergoing a district study in Yau Mong area.
- Using the scale of redevelopment works by URA as reference, over 16 years an average of 44 buildings were redeveloped annually. Assuming these are 9-storey buildings with 2 units on each floor, there are 18 units in a building.
- At minimum, the same number of units demolished will be rebuilt with a size of 500 sq. ft. (or 46 m²) each.
- Taking the highest average construction cost of HK\$5,000 per sq. ft.
- The initial funding shall cover the construction cost of redevelopment for one year. The Fund may obtain additional funding through building loans and partnering with developers.

Redevelopment Fund for Urban Renewal (2/2)

The Redevelopment Fund is a more viable mechanism than existing redevelopment methods:

- The Redevelopment Fund mechanism is less capital intensive as the only investment required is for construction.
 - As home prices surge, the cost to acquire units of old buildings increases. Acquisition costs and construction costs tend to make up a majority of the investment costs of a redevelopment project.
 - In addition, URA / developers are required to first pay all stamp duties when they acquire strata-titled flats. While this will be refunded after consent is obtained to start works, the interest cost of these extra stamp duties is an added burden and raises the costs of acquisition.
- The current process of acquisition pits URA / property developer against the flat-owner, leading to longer processes and lower chances of success.
 - Flat owners are looking to maximise their profit from the sale of their property and will often hold the flat until they achieve this result.
 - URA / property developers are looking to minimise their acquisition cost. The cost to URA is based the current market value of the flat plus a compensation amount based on comparables of 7 year-old vacant flats of similar size. Added to it any land premiums payable, the chance of profit for URA is very low.
 - The private sector therefore has little incentive to initiate redevelopment projects if the site will not generate a sufficient return.
 - Government waiver of premium would further enhance the financial model of the Redevelopment Fund.
 - The chance of profits and mutual gain via the Redevelopment Fund model is higher than under the current model.



K11 – A redevelopment project with owners participation

Comprehensive Redevelopment Scheme for GIC Facilities

- The Comprehensive Redevelopment Scheme aims to rectify the current lack of and unsatisfactory provisions of Government, Institution or Community (GIC) facilities in decayed urban areas.
- There are sites in urban areas used by different organisations for GIC purposes, some that are low density like churches and schools. These could be redeveloped by rezoning the land use to incorporate GIC use with residential or commercial developments above. This is more efficient land usage and allows for new housing developments to be supported by GIC facilities.
- Existing statutory bodies like the URA could facilitate the implementation of the scheme. URA assisted the Hong Kong Playground Association to redevelop the McPherson Stadium by rebuilding the stadium with a residential development above.
- Other successful cases include Lechler Court above Kau Yan School on High Street and the Methodist Church at Hennessey Road.



Lechler Court above Kau Yan School



Methodist Church



McPherson Place and McPherson Stadium

Redeveloping community facilities to incorporate housing provides community services and is more efficient use of land



Conclusion

Implementation of Recommendations

	Institutional Change	Unlocking Land	Construction Cost and Technology	Managing Market	Quality of Housing
Short Term (1-3 years)	<ul style="list-style-type: none"> New Housing Policy Commission New Housing Bureau 	<ul style="list-style-type: none"> Public-Private Partnership Short-term tenancy Vacant School Premises 	<ul style="list-style-type: none"> Robotic & Machinery Assistance Building Information Modeling 	<ul style="list-style-type: none"> Increase BSD & DSD Increase property tax Removal of SSD Introduce vacancy tax Restrict purchase of flats < HK\$20M and no mortgage for non-local buyers <p>For first-time homebuyers:</p> <ul style="list-style-type: none"> Exemption of AVD Relax max. LTV ratio Offer flat-rate home loan Offer home-starter loan <ul style="list-style-type: none"> Widen income eligibility of HOS Improve transparency of land bidding process 	<ul style="list-style-type: none"> Statutory minimum unit area Improvement in conditions of Subdivided Housing Units Expansion of AIP Scheme “Co-living Home” for single-parents
Medium Term (3-7 years)		<ul style="list-style-type: none"> Brownfield sites Release land reserved for Disneyland expansion 	<ul style="list-style-type: none"> Training local young people Labour importation Restricting multiple layers of subcontracting Modular construction Streamline pre-construction planning procedure 	<ul style="list-style-type: none"> Provision of transitional housing Bundling of land sale Enhance enforcement on well-off tenants 	<ul style="list-style-type: none"> Redevelopment fund Intergenerational Housing Scheme Comprehensive Functional Centres Comprehensive Redevelopment Scheme for GIC facilities Retrofitting the aged buildings
Long Term (Over 7 years)		<ul style="list-style-type: none"> Port relocation “Ding” Building Policy 	<ul style="list-style-type: none"> 3D printing 		

Critical Drivers for Success

- Housing is Hong Kong's single most important policy concern and with housing prices at all-time highs, it is more important than ever for the government, private sector and civil society to come together to create new, holistic solutions to the challenge.
- Most importantly, it is necessary to understand why the housing market is so unaffordable, and simply looking at land supply as the key to all the answers is insufficient. The proposed **new "Housing Policy Commission"**, made up of a representative spectrum of Hong Kong society, will review the current situation from a holistic viewpoint and propose recommendations to the government. Supported by the public, it will empower the government to act and help to neutralise vested interests.
- The government must also review its mandate. As the city's largest landlord, its heavy reliance on land-related revenue contradicts its mission to provide affordable housing for all. Restructuring the departments that are responsible for housing so they work together under a single **Housing Bureau** will ensure decisions related to land and residential development are consistent and well-balanced.
- Correcting the supply and demand imbalance in the housing market will require a combination of different solutions including unlocking land supply, controlling construction and development costs, and managing the housing market so that first-time home buyers are supported.
- There is also an opportunity to review what constitutes as decent housing and to develop benchmarks to ensure that Hong Kong is a liveable city, despite its high density. Housing development should not be done at the expense of housing quality, living space and availability of community services.

Key drivers for success include:

- Reviewing the government mandate and revising the existing structure for better coordination between departments and stakeholders to address the crisis.
- Overcoming vested interests and providing the right incentives to release currently under-utilised land efficiently for residential use.
- Enabling policies to encourage modern construction technology to reduce development costs, support first-time home buyers and low-income groups to get access to decent homes and ensure all housing developments provide quality housing in liveable communities.
- Engage and collaborate with key stakeholders such as developers, URA, Heung Yee Kuk, civil society organisations and others to bring them together as part of the multi-faceted solution.
- Strong political will is the key to driving the implementation of policies and overcoming stakeholder divisions.

Contact



For more information on the proposed housing policy recommendations or the Hong Kong Young Leaders Programme please contact GIFT at enquiry@global-inst.com