

# Building for the future

## Overview

Hong Kong invests heavily in infrastructure and other capital works to boost connectivity globally, with the Mainland and locally. These projects represent the vision for the city's long-term development. Hong Kong **ranked third globally for quality of infrastructure in the World Economic Forum's *Global Competitiveness Report 2019***. The 2021/22 budget allocates some \$84.1 billion (11.6%) for infrastructure. In the next few years, annual capital works expenditure is expected to reach \$100 billion (US\$12.8 billion) on average, and the annual total construction output will increase to around \$300 billion.

## Northern Metropolis

The Chief Executive's 2021 Policy Address outlined a far reaching plan to develop the northern part of Hong Kong, spanning about 300 sq/km, into a vibrant metropolitan area. The Northern Metropolis will be developed into a desirable metropolitan area for people to live, work and travel where the urban development and major population growth of Hong Kong in the next 20 years will take place. Through the formation of a spatial framework of "**Twin Cities, Three Circles**", social and economic collaboration between Hong Kong and Shenzhen in areas such as economic development, infrastructure, Innovation and Technology (I&T) and ecological conservation can be further improved to facilitate Hong Kong's integration into the overall development of the country, including the Greater Bay Area (GBA).

- Upon full development, the Northern Metropolis will be able to accommodate **a population of about 2.5 million** with the provision of some 905,000 to 926,000 **residential units**. The total number of **jobs** in the Northern Metropolis will increase to about **650,000**, including 150,000 I&T jobs.
- Optimising land, manpower, ecological, environmental and cultural resources, economic and social capital pools, and synergies between Hong Kong and Shenzhen, upgrading the Hung Shui Kiu/Ha Tsuen (HSK/HT) New Development Area (NDA) to become **the New Territories North Modern Services Centre** to echo and integrate with the Qianhai Shenzhen-Hong Kong Modern Service Industry Co-operation Zone, while the San Tin/Lok Ma Chau area can be developed into a **Technopole**, with I&T industry as the economic engine of the Northern Metropolis, facilitating the development of Hong Kong into an International Innovation and Technology Hub.
- Highlights of core action items of the Northern Metropolis:
  - **Five New Railway Projects** – The Northern Metropolis will be connected by a rail-centred transport system leading to the creation of the **Hong Kong-Shenzhen One-hour Cross-boundary Commuting Network**
    - Constructing the Hong Kong-Shenzhen Western Rail Link linking up Hung Shui Kiu/Ha Tsuen and Qianhai of Shenzhen
    - Extending the Northern Link, which is being planned, northwards to connect to the new Huanggang Port in Shenzhen via the Hong Kong-Shenzhen Innovation and Technology Park in the Lok Ma Chau Loop
    - Exploring the extension of the East Rail Line to Luohu, Shenzhen and the provision of co-location arrangement at the boundary control point on the Shenzhen side and provision of a new railway station for non-boundary crossing service between the existing Lo Wu Station and Sheung Shui Station, with a view to unleashing the development potential around Lo Wu/ Sheung Shui North and Man Kam To

- Extending the Northern Link eastwards from the Kwu Tung Station to connect with the areas of Lo Wu, Man Kam To and Heung Yuen Wai, and further southwards to Fanling via Ta Kwu Ling and Queen's Hill
  - Examining the feasibility of constructing an automated people mover system from Tsim Bei Tsui to Pak Nai to promote the development along the coast of Tsim Bei Tsui/Lau Fau Shan/ Pak Nai
- **Four Large-scale Housing Land Expansion Projects –**
    - Expanding the HSK/HT NDA in Lau Fau Shan and Tsim Bei Tsui
    - Examining development potential in areas from Lau Fau Shan to Pak Nai
    - Expanding the Kwu Tung North NDA to Ma Tso Lung area
    - Developing Lo Wu/Ma Kam To Comprehensive Development Node
- **Three Wetland Conservation Parks –**
    - Nam Sang Wai Wetland Conservation Park (about 400 hectares)
    - Sam Po Shue Wetland Conservation Park (about 520 hectares)
    - Hoo Hok Wai Wetland Conservation Park (about 300 hectares)
- **Two Outdoor Eco-recreation/tourism Projects –**
    - New Territories North Urban-Rural Greenway that traverses the countryside and urban areas
    - Coastal Protection Park and waterfront promenade from Tsim Bei Tsui to Pak Nai
- **One San Tin Technopole** - The Hong Kong-Shenzhen Innovation and Technology Park (HSITP) and areas around Lok Ma Chau/San Tin will be expanded and upgraded into the San Tin Technopole to form a complete ecosystem to embrace I&T industry with research and development, production, investment and financing services:
    - With an area of 1,100 hectares, it will be an integrated community attracting I&T talents to work and live
    - An **InnoLife Healthtech Hub** is proposed to be established in the HSITP to enhance life and health technology in the GBA

### **Other Railway Projects**

Railways are the backbone of Hong Kong's public transport system, carrying millions of passengers daily. Major new rail expansion projects include:

- The full **Tuen Ma Line**, the city's longest railway line with a total length of 56km, was commissioned June 2021.
- The "Hung Hom to Admiralty Section" Shatin to Central Link is expected to be commissioned in 2022.
- **New railway projects under the Railway Development Strategy 2014** are moving ahead:
  - Commenced the detailed planning and design of the **Tung Chung Line Extension, Tuen Mun South Extension, Northern Link** and **Hung Shui Kiu Station**.

### **Roads, Bridges and Cross-Boundary Projects**

There are currently 8 land crossings – 6 road-based crossings (including the Hong Kong-Zhuhai-Macao Bridge Hong Kong Port), and 2 rail-based crossings. Cross-boundary passengers can also take high-speed rail at the Hong Kong West Kowloon Station or MTR Intercity Through Trains at Hung Hom Station to the Mainland.

- The **Hong Kong-Zhuhai-Macao Bridge (HZMB)** was commissioned in October 2018. The 55km-long HZMB is the longest bridge-tunnel sea crossing in the world. It connects Guangdong, Hong Kong and Macao and brings the Western Pearl River Delta region to within a three-hour drive of Hong Kong.
- **The Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link (XRL)** commenced operation in September 2018, connecting Hong Kong to the 37,900km national high-speed rail network. The 26km XRL section runs from the terminus at Hong Kong West Kowloon Station to the Shenzhen boundary in 14 minutes and shortens traveling time to Guangzhou to 46 minutes.
- **Tuen Mun–Chek Lap Kok Link (TM-CLKL) Northern Connection** (including **Tuen Mun-Chek Lap Kok Tunnel**) was commissioned in December 2020. Together with the Southern Connection, the TM-CLKL in full provides an alternative land access between the airport and the urban area in addition to the Lantau Link.
- Other major new road projects under construction include:
  - **Route 6** (including Tseung Kwan O–Lam Tin Tunnel, Trunk Road T2 and Cha Kwo Ling Tunnel and Central Kowloon Route) plans for full completion by 2026.
  - **Cross Bay Link, Tseung Kwan O** plans for completion in 2022.

In light of unforeseen events including the COVID-19 pandemic, the Government will closely monitor the progress of works and assess the impact on the projects.

### **Hong Kong International Airport Expansion**

Hong Kong International Airport (HKIA), **one of the world’s busiest airports for air cargo and passengers**, connects to more than 200 destinations by around 120 airlines.

The Government has accepted a number of proposals for the development of the Hong Kong Port (HKP) Island put forward by the Airport Authority Hong Kong. The development, together with the HKIA's Three-runway System, the premium logistics centre, the SKYCITY project and the future development of AsiaWorld-Expo on the Airport Island, will transform Lantau into an **“Airport City”, strengthening and enhancing Hong Kong’s position as an international aviation, logistics and business centre.**

#### **Three-Runway System**

- A Three-Runway System (3RS) is being constructed at HKIA;
- Target to commission the Third Runway in 2022 and to complete the 3RS in 2024 to meet the long-term air traffic demand;
- HKIA’s annual passenger and cargo handling capacities are expected to increase to around 120 million and 10 million tonnes respectively in 2035.

#### **Airport City**

- **SKYCITY**, strategically located between HKIA’s passenger terminals and the HKP Island of the HZMB, will be **one of the largest commercial projects** in Hong Kong comprising retail, dining, hotels, entertainment facilities and offices, spread over about 350,000 square metres of floor space. The first stage of SKYCITY development projects will be completed in phases between 2021 and 2027.
- **Automated car parks** will be built on the **HKP Island of the HZMB** to enable self-drive visitors from Guangdong and Macao to drive via the HZMB and fly out from the HKIA or visit Hong Kong to park cars there.

- Take forward the **Airport City Link project** connecting the SKYCITY and the HKP Island by constructing a bridge system and by applying **autonomous transportation system** to strengthen the overall transportation network and capacity, thereby connecting the SKYCITY, the HZMB HKP and the HKIA as one. As the next step, the Airport City Link project's autonomous transportation system will be extended to Tung Chung Town Centre, providing a **comprehensive and environment-friendly transport link** connecting the Tung Chung Town Centre, the Airport Island and the HKBCF Island.
- The **Hong Kong International Aviation Academy campus and student dorms** will be built on the HKP Island to strengthen talent training and attract more Hong Kong youth to the aviation industry.
- Land will also be reserved on the HKP Island for the development of **air cargo logistics and related supporting facilities for the airport community**.

### **I&T Infrastructure**

The current-term Government has committed over HK\$130 billion to promote I&T and smart city development along eight major areas. Key initiatives include:

#### Hong Kong Science Park

- The two buildings under Science Park Expansion Programme Stage 1 have been completed and commissioned to provide about 74,000 sq/m of floor space for leasing to I&T enterprises and the first two **InnoHK research clusters** (namely **Health@InnoHK** focusing on healthcare technologies and **AIR@InnoHK** focusing on artificial intelligence and robotics technologies), an incubation centre and a robotic catalysing centre. Twenty-eight research laboratories under *InnoHK* are commencing operation progressively.
- The Hong Kong Science and Technology Parks Corporation has kick-started **Phase 2 of the Science Park Expansion Programme** to explore both on-site and off-site development options. The Government earmarked \$3 billion for the Programme to sustain the momentum in building Hong Kong's I&T ecosystem.

#### Cyberport

- Commenced the **Cyberport 5 Project**, which will increase the gross floor area of Cyberport by more than 40 per cent within four years.

#### Hong Kong-Shenzhen Innovation and Technology Park (HSITP)

- The Government is taking forward the development of the HSITP in the Lok Ma Chau Loop (the Loop). A provision of about \$32.5 billion has been approved for the Main Works Package 1 and the Fire Station and Ambulance Depot with Departmental Accommodations in the Loop, as well as the Batch 1 development of the HSITP. The first batch of eight buildings is expected to be completed in phases starting from end-2024. Upon full development, the HSITP will be the largest-ever I&T platform in Hong Kong.

#### Digital Infrastructure

- Major telecom operators launched **5G services** in Hong Kong in Q2 2020.
- Open up more suitable government properties, bus shelters and telephone kiosks for operators to set up **5G base stations**.
- Subsidy scheme for mobile network operators to **expand optical fibre network** to remote villages.

### "iAM Smart" platform

- Launched in December 2020, the "iAM Smart" platform enables Hong Kong residents to login and use public and commercial online services with a single digital identity with their personal mobile phone.
- As of mid-November 2021, more than 1 million users have registered for "iAM Smart".

### Geospatial Data

- **The Geospatial Lab**, established in May 2021, helps raise public interest in spatial data, and **explores** together with the **community value and application of spatial data** in support of smart city development.
- The Common Spatial Data Infrastructure Portal will commence full operation by end-2022 tentatively.
- High-quality territory-wide **3D digital map** is rolling out in phases until end-2023.

### Smart Mobility

- The Smart Traffic Fund (STF), established with a \$1 billion Government allocation, was open for applications in March 2021. The STF provides funding support to local organisations or enterprises for conducting research and application of innovation and technology with the objectives of enhancing commuting convenience, enhancing efficiency of the road network or road space, and improving driving safety.
- The Government will issue toll tags to vehicle owners in mid-2022, with a view to gradually rolling out Free-Flow Tolling System at each of the government tolled tunnels and Tsing Sha Control Area from end 2022.
- Seven **automated parking systems** projects taken forward, one of which in Tsuen Wan commissioned in November 2021.
- Install by phases new on-street parking meters to support multiple payment means and provide real-time parking vacancy information. About 12,000 new meters will be in full operation by mid-2022;
- "HKeMobility" mobile app continues to provide real-time information on traffic, as well as vacant spaces in car parks.
- Promote **"Walk in HK"** with a view to creating a pedestrian-friendly environment, thereby encouraging people to walk more.
- Pedestrian facilities in various districts such as Admiralty, Wan Chai North, Kowloon Bay and Kwun Tong business areas are being improved and beautified with greening.

### Decarbonisation and Green Technologies

- The Green Tech Fund (GTF), established with a \$200 million Government allocation, was open for applications in December 2020. The GTF aims to provide better and more focused **funding support to research and development projects** which can help Hong Kong **decarbonise and enhance environmental protection**. This will give new impetus to deep decarbonisation and the development of green technologies, and can help Hong Kong pursue the target of striving to achieve carbon neutrality before 2050 as announced in the 2020 Policy Address.

### Promoting the use of electric and other new energy vehicles

- Formulate the first **Hong Kong Roadmap on Popularisation of Electric Vehicles** and take forward various relevant measures, including leasing new registration of fuel-propelled and hybrid private cars in 2035 or earlier and announcing the strategies for and targets of installing charging facilities, with a view to attaining zero vehicular emissions and zero carbon emissions from the transport sector before 2050.
- Continue to press ahead with the **\$2 billion EV-charging at Home Subsidy Scheme** to subsidise car parks of existing private residential buildings to install EV charging-enabling infrastructure.

- Promote the development of **electric and other new energy public transport and commercial vehicles**, including conducting trials for hydrogen fuel cell double-deck buses within three years, with a view to formulating a roadmap and timetable in 2025 for concrete use of new energy transportation.

#### Submarine cable links

- Being a **leading digital economy**, Hong Kong has 12 **submarine cable systems** and operates 10 **satellites** for external communications. Several submarine cable systems will be ready in the coming two to three years, enhancing the city's connectivity with other parts of the world.

#### Lantau Tomorrow Vision

Among the many **land supply** options, the Lantau Tomorrow Vision is the largest in scale and could provide the greatest amount of land, including creating new land and increasing housing supply. Among it, the artificial islands in the Central Waters, the studies of which commenced in June 2021, offers other benefits:

- **Optimise the transport network** of Hong Kong as a whole and relieve traffic congestion in the Northwest New Territories by linking up the roads and railways on Hong Kong Islands, North Lantau and the coastal areas of Tuen Mun.
- Develop a **liveable and carbon-neutral** community;
- Boost the **commercial development** potential of North Lantau;
- **Address environmental issues** by absorbing local public fill instead of sending it to sites outside Hong Kong for reclamation.

#### Vibrant Harbourfront

Hong Kong's Victoria Harbour has iconic appeal. With the concerted efforts of the Harbourfront Commission and the Government, a total of 15 harbourfront sites have been opened within the period from October 2020 to the end of 2021, further extending the promenade along the Victoria Harbour to 25 km, providing people with attractive, vibrant, accessible and sustainable quality open spaces. Highlights include:

- **Connecting the harbourfront from Shek Tong Tsui to the East Coast Park Precinct** to create **the longest waterfront promenade** of about 7.4 km.
- The Government has earmarked \$6.5 billion to **extend the promenade along Victoria Harbour** to 34km in 2028 and provide open spaces of about 35 hectares. Amongst others, a 2km off-shore boardwalk has been planned for completion in phases between 2024 and 2025 underneath the Island Eastern Corridor to create a new experience for locals and visitors.
- The **East Coast Park Precinct** (Phase 1) provides the first fence-free breakwater officially open to the public within Victoria Harbour, which allows locals and visitors to sit by the sea and enjoy an unobstructed view of Victoria Harbour, as promulgated in the 2021 Policy Address.

The Government is actively pursuing the redevelopment of the three government towers in Wan Chai North and Kong Wan Fire Station into convention and exhibition facilities, offices and a hotel. The sites are expected to be vacated by 2026 at the earliest for demolition and redevelopment.

#### West Kowloon Cultural District

West Kowloon Cultural District (WKCD) is one of the world's largest cultural infrastructure projects. Blending traditional local culture with international and contemporary elements, WKCD showcases the unique identity of Hong Kong as a metropolis where East meets West, and establishes Hong Kong as **one of the most vibrant arts and cultural hubs in the world**.

Spanning 40 hectares along the shore of Victoria Harbour, WKCD offers **world-class integrated arts and cultural facilities**:

- **Xiqu Centre** – a new landmark offering a superb platform for the production, education, preservation and promotion of Cantonese opera and other forms of Chinese traditional theatre.
- **Freespace** – a creative venue for multiple forms of contemporary performing arts, where artists and audiences can exchange and explore new ideas.
- **Art Park** – a quality open green space and a vibrant venue for open-air performances and other cultural programmes.
- **M+** – Asia’s first global museum of contemporary visual culture exhibiting visual art, design and architecture, moving image, and Hong Kong visual culture of the 20th and 21st centuries.
- **Hong Kong Palace Museum** – displaying invaluable artefacts from the Palace Museum that represent 5,000 years of historical Chinese art from the imperial courts (expected to open in July 2022).
- **Lyric Theatre Complex** – a centre of excellence showcasing the best of Hong Kong and international dance and theatre productions (expected to be completed in 2024).

### **Energizing Kowloon East**

The Energizing Kowloon East initiative sets out to facilitate transformation of old industrial areas and the former Kai Tak Airport into **Hong Kong’s second core business district** and a desirable place to work, live and enjoy a high-quality lifestyle:

- Covering over 500 hectares, **Kowloon East** comprises the **Kai Tak Development Area (KTD), Kwun Tong, Kowloon Bay and San Po Kong Business Areas**.
- Since the launch of the initiative, the commercial floor space in Kowloon East has increased from 1.7 million square metres by 70% to about 2.9 million square metres, and will further increase to 3.5 million square metres in two years, progressively getting closer to the scale of the core business district in Central.
- **Kai Tak Sports Park**, covering 28 hectares, is scheduled for completion in 2023. The Sports Park includes a world-class, 50,000-seat main stadium with a retractable roof, a 10,000-seat indoor sports centre, a 5,000-seat outdoor public sports ground, landscaped open space as well as retail and F&B facilities.
- **East Kowloon Cultural Centre**, to be commissioned in 2023, will comprise five facilities of various sizes for music, drama and dance performances. A testbed studio will be provided to pioneer the convergence of arts and advanced technology (arts tech), and serve as an indicator to support the development of arts tech in Hong Kong.
- The Government will put forward and consult the public on a **multi-modal Environmentally Friendly Linkage System**, including the development of a travellers network and an elevated landscape deck to connect the Kwun Tong MTR Station, so as to enhance the accessibility of Kowloon East.

### **Invigorating Island South**

The Invigorating Island South initiative aims to develop the Southern District into a vibrant place for people to work, live, explore new ideas and have fun. Key projects include:

- **Implementation of Ocean Park future strategy**: Following the official opening of the Water World at Ocean Park in 2021, the Ocean Park Corporation is identifying partners for the development of new themed zones of the Park. Technical studies on proposed pier projects at Deep Water Bay and Tai Shue Wan will also commence in 2022.
- **Exploring new marine tourism routes** with Ocean Park as the core to link up with other districts and islands.
- **Enhancing cultural and leisure facilities** in Wong Chuk Hang, Aberdeen and Ap Lei Chau.

- Exploring the development of a **water sports centre** at the rehabilitated Shek O Quarry site.
- Expediting the redevelopment or conversion of old industrial buildings in Wong Chuk Hang to provide more **operating space for arts and culture**.
- Exploring **redevelopment or consolidation of the existing "Government, Institution or Community" sites or facilities** in the district to promote "single site, multiple use".
- Studying the expansion of **Aberdeen Typhoon Shelter** to provide more space for vessels to berth.

### **Improving the Cycle Track Network**

- The **cycle track** from Ma On Shan to Tuen Mun, **totalling to about 60 kilometres**, has been fully open since September 2020; and the Tsuen Wan waterfront section of about 2 kilometres was opened in July 2021.
- Implementation of the remaining track (about 20-km) between **Tsuen Wan and Tuen Mun** will complete the cycle track network connecting the eastern and western New Territories, while a section of the approximately **13-km GreenWay** for shared use by pedestrians and cyclists is under construction in the Kai Tak Development Area.
- **Cycling related elements** will be suitably incorporated into **13 major harbourfront development projects**.

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