

# 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. In coming years, annual capital works expenditure is expected to exceed \$100 billion (US\$12.8 billion), and the annual total construction output is expected to increase to around \$300 billion.

## Northern Metropolis

The Northern Metropolis is a new engine for Hong Kong to scale new heights. Spanning about 300 square kilometres, the Northern Metropolis will create space to enhance capacity for Hong Kong. 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
- **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
- **A System of Wetland Conservation Parks -**
    - Nam Sang Wai Wetland Conservation Park
    - Sam Po Shue Wetland Conservation Park
    - Hoo Hok Wai Wetland Conservation Park
    - Expansion of the Hong Kong Wetland Park
    - Sha Ling/Nam Hang Nature Park
- **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 56 kilometres, was commissioned in June 2021.
- The East Rail Line cross-harbour extension was commissioned in May 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**.
- **World No.1 public transit system** (Oliver Wyman Forum in partnership with University of California, Berkeley: Urban Mobility Readiness Index 2022)

### **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 26-km 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.
- **Tseung Kwan O-Lam Tin Tunnel** and **Cross Bay Link, Tseung Kwan O** were commissioned on December 11, 2022, providing a new route between Tseung Kwan O and Kwun Tong as well as the Eastern Harbour Crossing, and helping to divert the traffic to and from Tseung Kwan O.
- Tseung Kwan O-Lam Tin Tunnel, together with the Central Kowloon Route and Trunk Road T2 and Cha Kwo Ling Tunnel which are under construction, form the Route 6, providing an east-west express link between Tseung Kwan O and West Kowloon. Upon completion, the Route 6 will divert existing traffic between East Kowloon and West Kowloon and help relieve the traffic load on the existing major road links in Kowloon East.

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

Hong Kong International Airport (HKIA), **one of the world’s busiest airports for air cargo and passengers**, connects to around 220 destinations by about 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. The Third Runway commenced operation familiarisation for aircraft take-off and landing on July 8, 2022, which signified an important milestone for the Three-Runway System project. After more than four months of familiarisation period, the Third Runway was officially commissioned for operation with effect from November 25, 2022.
- The 3RS is expected to be completed in 2024, which will significantly increase HKIA's passenger and cargo handling capacities. After its expansion, HKIA's annual passenger and cargo handling capacities are expected to increase to around 120 million and 10 million tonnes respectively from 2035 onwards.

### 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

With opportunities brought by the National 14th Five-Year Plan and the GBA, Hong Kong can capitalise on its advantages in R&D capabilities, technology, infrastructure, legal system and intellectual property to act as a strategic bridge for innovative companies looking to access the Mainland market, thereby developing into an international innovation and technology centre. 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 square metres 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 have commenced operation, involving 7 local universities and research institutions as well as over 30 institutions from 11 economies.

- The Hong Kong Science and Technology Parks Corporation has kick-started **Stage 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 end-October 2022, more than 1.6 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 and the first 3D Visualisation Map dataset were opened to the public to use free of charge on December 29, 2022. .
- High-quality territory-wide **3D digital map** is rolling out in phases until end-2023.

#### Smart Mobility

- Providing funding support, through the \$1 billion **Smart Traffic Fund**, to local institutions and enterprises for conducting research and application of technology to enhance commuting convenience and efficiency of road network or space, and improve driving safety. Issuing toll tags to vehicle owners, in order to facilitate the gradual roll-out of the **Free Flow Tolling System** (known as "HKEToll") at the Tsing Sha Control Area and all government-tolled tunnels within 2023 for more efficient and convenient payment.

- Seven **automated parking systems** (aps) projects taken forward, with the aps projects in Tsuen Wan and Pak Shek Kok commissioned in November 2021 in December 2022 respectively.
- two of which in Tsuen Wan and 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. An additional \$200 million was injected into the GTF in the 2022-23 Budget.

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

- Formulate the first **Hong Kong Roadmap on Popularisation of Electric Vehicles** (EV) and take forward various relevant measures, including ceasing the 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** (EHSS) to subsidise car parks of existing private residential buildings to install EV charging-enabling infrastructure. The 2022-23 Budget set aside an additional \$1.5 billion to extend the EHSS for four years to the 2027-28 financial year.
- 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 9 **satellites** for external communications. Several submarine cable systems will be ready in the coming 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. The total length of the promenade has been extended to more than 25 kilometres by end 2022, providing people with vibrant and accessible 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 7.4kilometres.
- The **East Coast Park Precinct** (Phase 1) provides the first fence-free breakwater within Victoria Harbour, which allows locals and visitors to enjoy an unobstructed view of Victoria Harbour.
- \$6.5 billion has been allocated to **extend the promenade along Victoria Harbour** to 34 kilometres in 2028 and provide open spaces of about 35 hectares. Amongst others, a 2-km off-shore boardwalk has been planned for completion in phases between 2024 and 2025 under the Island Eastern Corridor to create a new experience for locals and visitors.

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 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 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.
- **Lyric Theatre Complex** – a centre of excellence showcasing the best of Hong Kong and international dance and theatre productions (expected to be completed after 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, 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 targeted for completion in the second half of 2024. 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, 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).
- Proposed 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, 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 kilometres) 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 **13km 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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