

HONG KONG NETWORK EXPANSION

Railway Development Strategy 2014

4 project proposals submitted

Express Rail Link

26km

target completion in
third quarter of 2018



Shatin to Central Link

17 km 10 stations

Tai Wai to Hung Hom Section
target completion in mid-2019

Hung Hom to Admiralty Section
target completion in 2021

Our Aims and Achievements

The expansion of our Hong Kong railway network contributes to our goals by enhancing connectivity and ensuring we meet future transport needs. All new railway projects owned by MTR and those entrusted to MTR by Government take years of careful planning and diligent execution to ensure they meet the community's expectations for safety, efficiency and the environment.

Following the opening of the Kwun Tong Line extension and the South Island Line (East) in 2016, our focus is the Express Rail Link and the Shatin to Central Link. These projects are particularly challenging in their scale and complexity. As they are of great importance to Hong Kong and generate much public interest, we communicate openly and effectively with a wide range of stakeholders. Both projects are making significant progress towards their scheduled openings.

We continue to work with Government on its strategy to continue using railway as the backbone in the development of Hong Kong's public transport network. Under RDS 2014, Government has identified seven additional rail projects. Project proposals for four of these lines have been submitted to Government and we are now preparing a fifth project proposal.

Our Challenges

- Carry out cross-boundary testing and commissioning of trains and systems, as well as the interface with the Mainland authorities, to complete statutory inspections in time for the scheduled opening of the Express Rail Link
- Ensure smooth transition of all systems and trains, so that the existing West Rail Line can be seamlessly connected to the existing Ma On Shan Line by the new Shatin to Central Link
- Adopt innovative design and technology in various aspects of construction projects. For example, West Kowloon Station has been designed to allow ample sunlight to penetrate through into different areas of the building
- Maintain knowledge and experience gained during construction projects so they can be applied to future opportunities under RDS 2014

Our Strategies

• **Delivery Targets:**

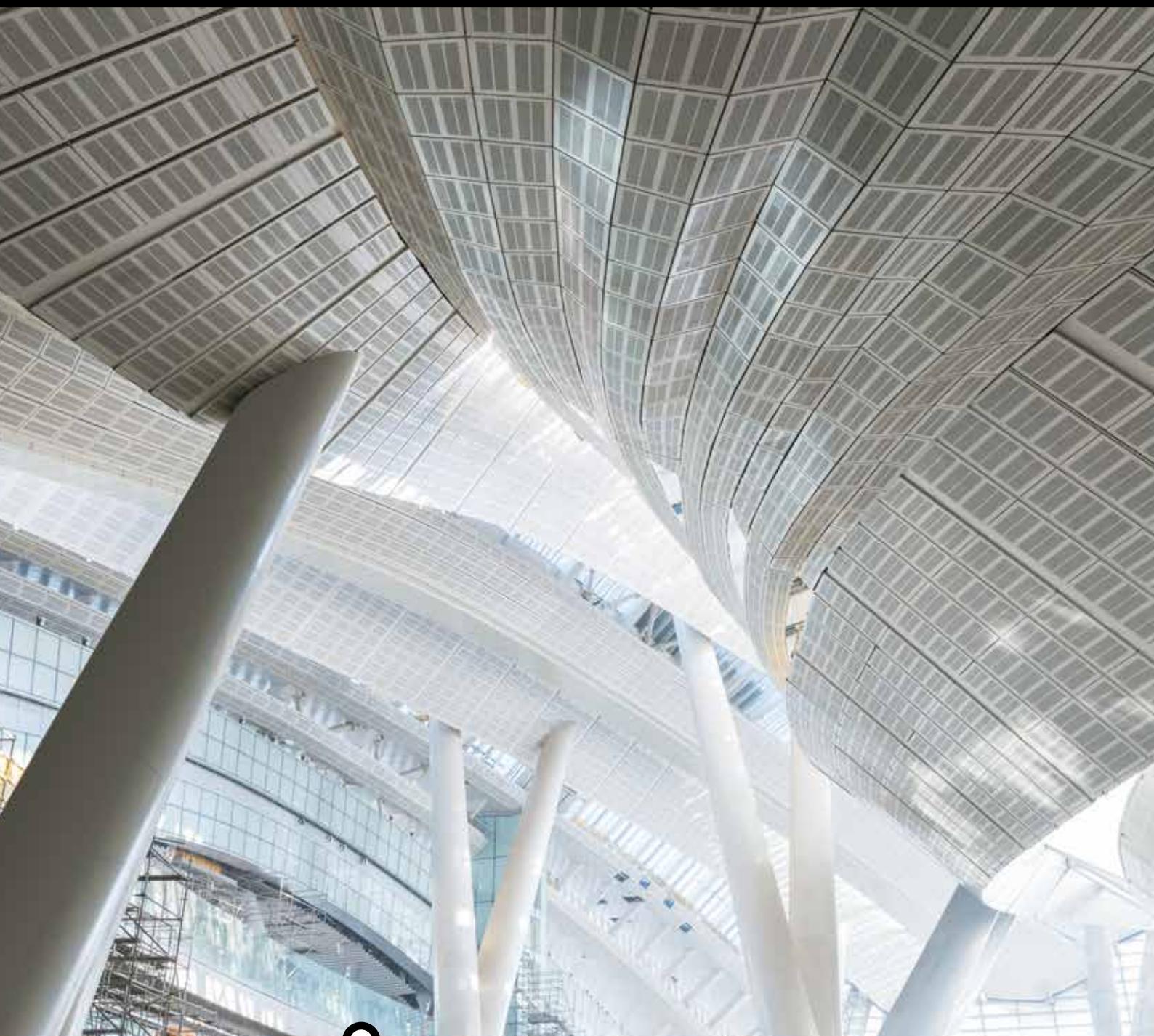
Implement good project management practices to ensure good progress on the two projects entrusted by Government. The Express Rail Link is scheduled to open by the third quarter of 2018. The Shatin to Central Link Tai Wai to Hung Hom Section and the Hung Hom to Admiralty Section are scheduled to open by mid-2019 and 2021 respectively

• **Interfacing Effectiveness:**

Strengthen collaboration among internal departments and with key external stakeholders. Enhance integration on the handover of railway extension projects to the operating railway

• **Growth and Development:**

Create a dynamic and interactive platform to develop effective project proposals for new railway projects through RDS 2014, and establish a pipeline of future project deliveries in Hong Kong. Leverage opportunities from such projects to grow competency that can contribute to the Company's business diversification and long-term sustainability



Express
Rail Link

98.6%
complete

Shatin to Central Link

Tai Wai to
Hung Hom Section
93.9%
complete

Hung Hom to
Admiralty Section
63.6%
complete

Rail Gen 2.0 encapsulates our near term rail business growth in Hong Kong which, in addition to the two new rail projects under construction, also covers major upgrades and replacements on the existing rail network, as well as initiatives to enhance customer experience through the use of technology. Beyond Rail Gen 2.0, with rail as the backbone of public

transportation, projects under Railway Development Strategy 2014 ("RDS 2014") will potentially increase the Hong Kong rail network by 35 km whilst in the long term, Government's "Strategic Studies on Railways and Major Roads beyond 2030" may add even further rail development.

RAIL GEN 2.0: NEW LINES UNDER CONSTRUCTION

Our Hong Kong rail network covers 230.9 km. Over the coming years, under Rail Gen 2.0, the two current railway projects under construction, namely the Hong Kong Section of the Guangzhou-Shenzhen-Hong Kong Express Rail Link ("Express Rail Link") and the Shatin to Central Link, will add another 43 km route length to the overall Hong Kong rail network.

Express Rail Link

The 26-km high-speed cross-boundary Express Rail Link will connect Hong Kong to Shenzhen, Guangzhou and the high speed rail network in the Mainland of China. It will be served by the approximately 400,000-square metre (usable floor area) West Kowloon Station, one of the largest underground high-speed rail stations in the world. MTR has been entrusted by Government to manage the construction of the Express Rail Link.

This key project was 98.6% complete overall as at 31 December 2017, with civil works at West Kowloon Station 97.8% complete, all tracks in tunnels laid and overhead lines energised. Statutory inspection of the station by the Fire Services Department commenced in May 2017, followed by other statutory inspections. The signalling and communication systems of the Hong Kong and Mainland sections of the line were connected on 5 July 2017. Installation of the glass panels for the iconic roof of the Station Entrance Building was completed in July 2017.

The structural work at West Kowloon Station is substantially complete. Architectural Builder's Works and Finishes and Building Services works

are underway. In particular, works in the Customs, Immigration & Quarantine ("CIQ") areas under the purview of the Corporation are in line with the programme, but the timely completion of all the CIQ facilities remains on the critical path.

In August 2017 all nine trains for the new line had arrived in Hong Kong from the factory in Qingdao and cross-boundary dynamic testing was completed in December 2017. To give members of the public a preview of the trains, XRL Train Open Days were held at the Shek Kong Stabling Sidings in October 2017, providing visitors with an in-train experience through guided tours.

The target opening date of the Express Rail Link remains the third quarter of 2018 and trial operations are expected to commence in the second quarter.

We are in discussion with Government regarding the future operation and maintenance arrangements for this line.



HONG KONG NETWORK EXPANSION



We welcomed the announcement made on 25 July 2017 by Government regarding the proposed co-location arrangement for the Express Rail Link. The co-location arrangement will maximise the service convenience for passengers and help realise the line's full transport, social and economic benefits.

In accordance with the "Three-step Process" to implement these arrangements, on 18 November 2017 the Government of the HKSAR and the People's Government of Guangdong Province signed the Co-operation Arrangement between the Mainland and the HKSAR on the Establishment of the Port at the West Kowloon Station for Implementing Co-location Arrangement ("Co-operation Arrangement") to kick-start the necessary work to implement the future clearance procedures for the Express Rail Link. The Co-operation Arrangement was subsequently approved by the Standing Committee of the National People's Congress on 27 December 2017. We

welcome these two steps in the process and look forward to completion of the third and final step, which is the enactment of the necessary legislation by the Legislative Council of the HKSAR ("LegCo").

Shatin to Central Link

The ten-station 17-km Shatin to Central Link, which was entrusted to MTR by Government, will create vital new links across Hong Kong. It is a strategic railway that connects and extends the existing network. The first phase of the Shatin to Central Link is the 11-km Tai Wai to Hung Hom Section and the second phase is the 6-km Hung Hom to Admiralty Section. When the Tai Wai to Hung Hom Section is completed, it will extend the existing Ma On Shan Line from Tai Wai via six stations to the West Rail Line to form the "East West Corridor". When the Hung Hom to Admiralty Section is completed, it will extend the existing East Rail Line across the harbour

to Exhibition Centre Station (formerly known as Exhibition Station) and Admiralty Station through Hung Hom to form the "North South Corridor".

Upon completion, the Shatin to Central Link will connect several existing railway lines and enhance the connectivity of the entire Hong Kong railway network. Travelling time will be reduced significantly between New Territories North, Kowloon and Hong Kong. Alternative routes will also become available to travellers, which will provide customers with more route choices particularly in the busy cross-harbour section of the Tsuen Wan Line and the Tai Wai to Kowloon Tong section of East Rail Line.

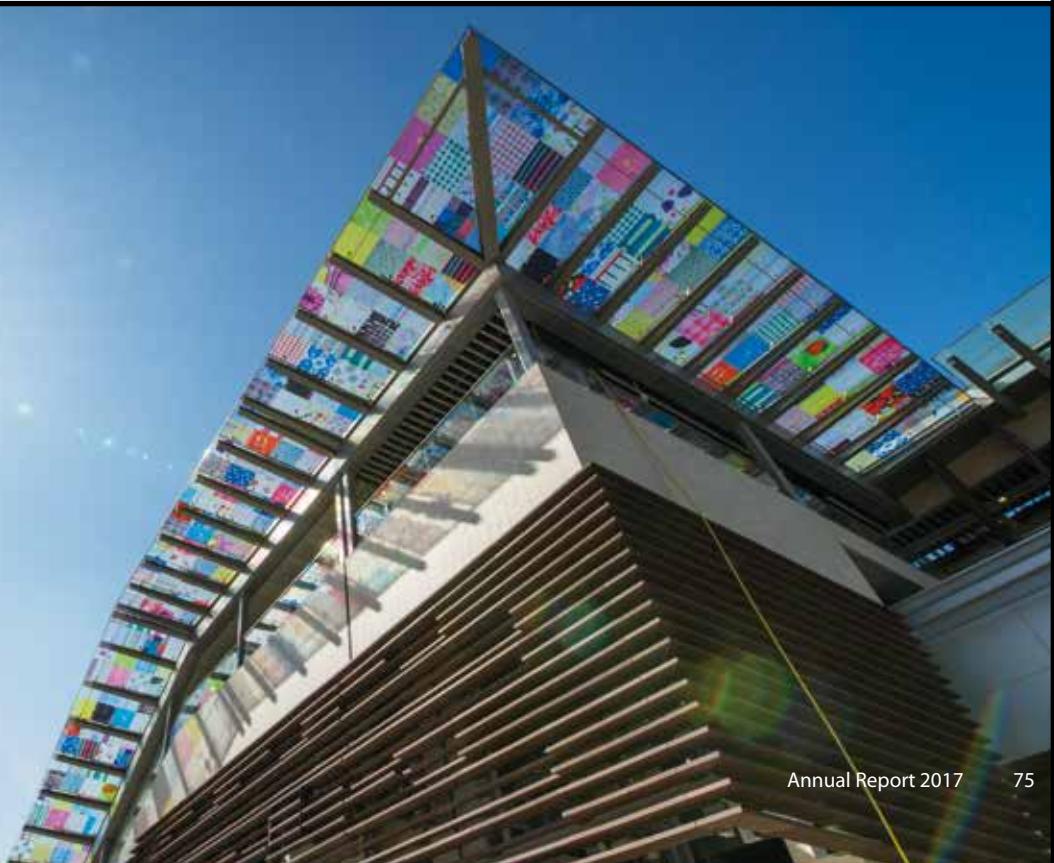
Overall, this project was about 81.2% complete by 31 December 2017, with the Tai Wai to Hung Hom Section and Hung Hom to Admiralty Section 93.9% and 63.6% complete respectively.

For the Tai Wai to Hung Hom Section, track laying works have been completed, as have the structural works for the last two new stations, namely To Kwa Wan Station (formerly known as Ma Tau Wai Station) and Sung Wong Toi Station (formerly known as To Kwa Wan Station). This signifies the substantial completion of all civil and structural works on this section of the line. The final report of the archaeological works for the Sung Wong Toi Station works site was accepted by the Antiquities and Monuments Office in June 2017. Steady

progress is now being made on the electrical and mechanical ("E&M") works and interior fitting out works at stations. As the new section will connect to the existing West Rail and Ma On Shan lines, the commissioning and testing works of this rail corridor will be highly complex, involving multi-disciplinary interfaces and integration with various new and old systems in the operating railway. To ensure that normal operation of existing railway lines is not affected, some of the necessary works, including dynamic testing, are being carried out at night during non-traffic hours.

For the Hung Hom to Admiralty Section, all tunnel-boring excavation works have been completed. For the cross-harbour rail tunnel connecting the Hung Hom and Causeway Bay areas, nine of the 11 immersed tube units have been installed on the seabed of Victoria Harbour as at February 2018.

Exhibition Centre Station, which has been affected by late site handover, incomplete entrusted works by other parties and unfavourable ground conditions, was 54.8% complete by the end of 2017. Construction work for the diaphragm walls of Exhibition Centre Station is substantially complete and full excavation of the station is progressing. Due to space limitations in Wan Chai North, temporary traffic management schemes are being implemented at different stages along Convention Avenue, Fleming Road and Expo Drive to create additional works areas while reducing the impact on road users.



HONG KONG NETWORK EXPANSION



Admiralty Station will become a major interchange hub for the Shatin to Central Link, Island, Tsuen Wan and South Island lines. To cater for the Shatin to Central Link, in the extended part of the station, structural works and building service installation are well underway.

As part of the Hung Hom to Admiralty Section, the existing East Rail Line will be re-signalled. The dynamic testing of the new signalling systems with East Rail Line trains during non-traffic hours is now in full swing on the whole of the East Rail Line, and we target the works to be completed in mid-2019.

Despite reasonable construction progress, and as reported a number of times previously, the programme for delivery of the Shatin to Central Link has been impacted by certain key external events. For the Tai Wai to Hung Hom Section, the discovery of archaeological relics in the Sung Wong Toi Station area led to an 11-month delay. However, with hard work by the teams involved and the successful implementation of a number of delay recovery measures, the length of the delay has been reduced and the estimated completion of this section has been advanced by six months to mid-2019. For the Hung Hom to Admiralty Section, we had previously reported a six-month delay due to a number of external factors, including the late handover by a third party of construction sites for

the new Exhibition Centre Station. As a result of incomplete entrusted works handed over by another third party contractor at another site at Wan Chai North, the completion of this section has been further delayed by an additional three months (to a total expected delay of nine months). However, the Hung Hom to Admiralty Section is still targeted for completion in 2021.

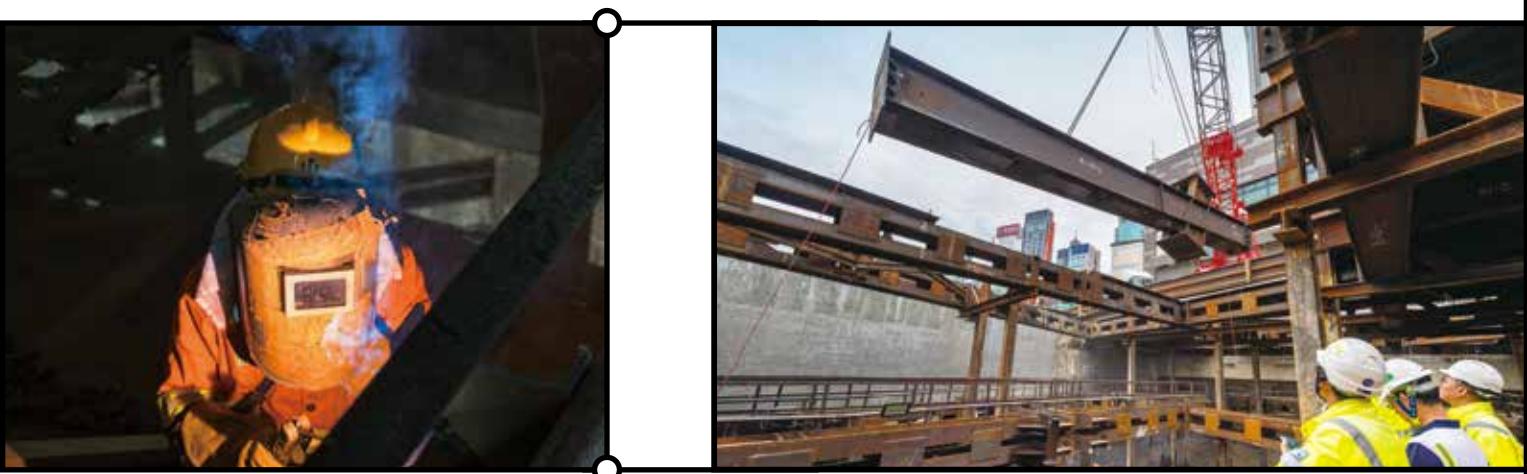
For both the Tai Wai to Hung Hom Section and the Hung Hom to Admiralty Section, our project teams continue to work diligently to explore and implement measures to improve progress and recover delays caused by external events and third parties.

The amount entrusted to the Company by Government for the advance works under the 2011 Entrustment Agreement for Advance Works Relating to the Shatin to Central Link ("SCL Advance Works Entrustment Agreement") was HK\$7,350 million. In January 2017, Government submitted to the LegCo Public Works Subcommittee the application for additional funding needed in excess of amounts retained by Government from the original funding. The additional funding of HK\$848 million was approved by LegCo Finance Committee in June 2017.

The sum entrusted to the Company by Government for the main construction works under the 2012 Entrustment Agreement for Construction and Commissioning of the Shatin to Central Link ("SCL Entrustment Agreement") was HK\$70,827 million. The Company has previously announced that, due to the continuing challenges posed by external factors and difficulties similar to those encountered by most major infrastructure projects in Hong Kong, the Shatin to Central Link Cost to Complete ("CTC") would need to be revised upwards significantly.

The Company completed a detailed review of the estimated CTC for the main construction works under the SCL Entrustment Agreement and the latest estimate was submitted to Government for review on 5 December 2017. Taking into

account a number of factors, including issues such as the archaeological finds, Government requests for additional scope and late or incomplete handover of construction sites, the Company has increased the latest estimate of the main construction works of the Shatin to Central Link by HK\$16,501 million from HK\$70,827 million to \$87,328 million, representing an increase of 23% of the cost of the main works. In our assessment, around 70% of the increase (net of contingencies) is attributable to additional costs arising from external factors, such as the handling of archaeological finds at the work sites of Sung Wong Toi Station, the late or incomplete handover of construction sites in Wan Chai North, as well as unbudgeted additional scope (including foundation works for a future topside development at Exhibition Centre Station).



NEW RAIL PROJECTS BEYOND RAIL GEN 2.0

Beyond the two new Rail Gen 2.0 projects under construction, Government has identified seven additional rail projects to be implemented under RDS 2014 and has invited us to submit proposals for five of these projects, namely the Tuen Mun South Extension, the Northern Link (and Kwu Tung Station), the East Kowloon Line, the Tung Chung West Extension (and Tung Chung East Station) and the North Island Line.

We are now in discussion with Government on the submitted project proposals for the Tuen Mun South Extension, the Northern Link (and Kwu Tung Station) and the East Kowloon Line. We have also submitted the project proposal for the Tung Chung West Extension (and Tung Chung East Station), while that for the North Island Line will be submitted in the second half of 2018. We await Government's invitation in

respect of the remaining two projects, namely Hung Shui Kiu Station and the South Island Line (West).

Government is conducting the planning study, "Hong Kong 2030+: Towards a Planning Vision and Strategy Transcending 2030" to examine Hong Kong's future development. To meet the longer term demand for transport with rail as the backbone of public transport, Government is planning to take forward the related "Strategic Studies on Railways and Major Roads beyond 2030" in 2018. This study will examine the strategic transport infrastructure network (including rail) required to satisfy transport needs beyond 2030, including the demand arising from the two strategic growth areas, the East Lantau Metropolis and New Territories North.