

**Legislative Council Panel on Transport
Subcommittee on Matters Relating to Railways**

**Progress update on enhancement of MTR facilities and
Customer Experience**

This paper briefs Members on the MTR Corporation limited (“MTRCL”)’s efforts in continuously enhancing station facilities and customer experience. In view of the epidemic and concerns of the public, this paper also covers various cleaning measures taken by the Corporation in stations and train compartments during the epidemic.

Expediting the recovery of vandalised station facilities

2. From June 2019 to early March this year, about 90% of the stations (85 out of 96 heavy rail stations and 63 out of 68 Light Rail stops) had been vandalised, bringing unprecedented pressure on railway operations. The MTRCL maintenance team has been carrying out repair works round-the-clock while at the same time sustaining the necessary daily routine maintenance duties. To speed up the recovery of damaged facilities, the Corporation has both employed maintenance contractors as well as re-deployed maintenance staff from other departments.

3. The MTRCL apologised for the inconvenience to our customers as longer lead time is required for the repair work for certain facilities. We appeal for passengers’ understanding that spare parts have been in shortage due to their sharp increase in demand arising from repeated damage of these facilities. The dearth of supplies from different places of origins (including Mainland China and Europe) as a result of the COVID-19 outbreak has added the difficulties of and lead time required for the repair work.

4. After months of efforts, all station entrances have already been reopened for use. Other major facilities such as ticket gates, ticket-issuing machines, lifts, escalators, customer service centres (except for some stations) etc., have largely resumed service. It is expected that by mid-2020, the overall repair work will largely be completed. Please refer to **Annex 1** for the details of recovery progress of major facilities.

5. As for Light Rail (LR) which is an open system, the relevant facilities are more vulnerable to vandalism. A large number of LR facilities have been suspended from service and it takes time for repair work, hence making it inconvenient for passengers. As we continue with the repair work, the Corporation also plans to introduce smart service on Light Rail such as ticketing and dissemination of passenger information with a view to minimising the impact of unexpected external factors on LR service.

Continuous improvement to station facilities

Improve station concourse layout

6. The Corporation plans to revise the layout of the concourse of certain stations with a view to improving passenger flow. For example, in Kwun Tong Station, in addition to installing additional ticket gates and relocating some ticket gates in some of the exits in late 2018, the Corporation, after carefully reviewing various proposals, plans to retrofit facilities including building an additional lift connecting station concourse and platform to alleviate passenger congestion at certain bottlenecks. Besides, the Customer Care Centre at Tseung Kwan O Station will be relocated, and with additional ticket gates installed to improve passenger flow. Such re-layout work is expected to be completed in 2021. The construction of an additional exit and widening of existing staircases at Hung Hom-bound platform of Sheung Shui Station is also underway to improve passenger flow.

Enhance accessibility to stations

7. Among the 96 stations (including the two new stations of Tuen Ma Line Phase 1 commissioned in February), two are yet to be installed with an external lift connecting station concourse and streets. The construction of a stair-lift and escalators in Tin Hau Station is in progress and is expected to be completed in 2021. As for Fortress Hill Station, the Corporation and the Government have been discussing the details of the proposed external lift project.

8. The Corporation has also been improving the accessibility of individual stations as necessary. Addition of external lift(s) or escalator(s) are being carried out at Mei Foo, Shau Kei Wan and Tung Chung Stations. Please refer to **Annex 2** for details.

Air-cooled chiller replacement and improvement of ventilation at stations

9. To provide passengers with a more comfortable station environment, the MTRCL continues to improve the ventilation at stations. We have been installing additional ventilation equipment at stations with open section including Kwai Fong, Kwai Hing, Heng Fa Chuen, and Chai Wan Stations. Since 2017, the Corporation also embarked on a large-scale air-cooled chiller replacement project at 36 stations along 7 rail lines and 4 depots. As in March this year, 87 chillers (around 60% of the entire fleet) had been replaced and the whole project is expected to be completed in 2022.

Other facility enhancement projects

10. The Corporation committed in 2015 to retrofit passenger toilets and baby-caring rooms at 10 interchange stations¹ alongside major renovation works. To date, new toilets at seven stations have already been opened for passenger use. The remaining works at North Point and Yau Ma Tei Stations are expected to be completed within this year, and that of Tsim Sha Tsui Station in 2021. Baby-caring rooms will be available in 8 interchange stations² of which 5 are now available for use. We endeavour to complete the works at the remaining stations, i.e. Yau Ma Tei, North Point and Tsim Sha Tsui Stations in 2021.

11. Furthermore, as an environment-friendly initiative and to further enhance passenger experience, the MTRCL installed on a trial basis a drinking water dispenser at Tung Chung Station in 2018 and expanded its coverage to Tsuen Wan, Prince Edward and Tiu King Leng Stations afterwards. In view of the positive outcome, the Corporation will extend the installation plan to other stations with appropriate locations and subject to technical feasibility. Having regard to the epidemic, all water dispensers have currently been suspended from service to reduce the risk of transmission of virus. The Corporation would take into account the development of the epidemic in resuming such service as well as extending the installation plan.

¹ The 10 stations include Mong Kok, Prince Edward, Admiralty, Tiu Keng Ling, Yau Tong, Lai King, Central, Yau Ma Tei, North Point and Tsim Sha Tsui Stations.

² The 8 stations include Yau Tong, Tiu Keng Leng, Lai King, Central, Yau Ma Tei, North Point, Tsim Sha Tsui and Diamond Hill Stations.

Installing of Automatic Platform Gates (APGs) for East Rail Line (EAL) stations

12. The Corporation understands that the public are concerned about the progress of the APG installation works along EAL stations. Given that EAL was built a long time ago, the Corporation has to overcome substantial technical challenges when retrofitting APGs along existing station platforms. Preliminary works required before the installation including the strengthening works of EAL platform foundations, the installation of trackside equipment and facilities of the new signalling system have been completed. Moreover, as the APGs must tie in with the door position of the new trains, the installation work itself would have to start after full commissioning of the 9-car train operations along EAL.

13. It is anticipated that, when the new 9-car train operation with new signalling system of EAL commence service, the exiting 12-car trains will gradually be replaced by the new trains in the following 18 months. The project team is finishing off some advanced works of the installation of APG and upon the replacement of new trains, the MTRCL will speed up the progress of the relevant installation work.

Making use of IT to promote “Smart Mobility” and enhance passenger experience

14. To promote “Smart Mobility”, echoing the development of smart city, and bringing greater convenience to our passengers, the MTRCL strives to apply digital technology into our various services such as launching more personalized services in MTR Mobile Apps to facilitate passengers in journey planning. These measures mainly include:

- a) the MTRCL has launched a single mobile app in May 2020 by integrating various MTR service-related apps and incentive programmes to achieve the vision of “Smart Mobility with One Mobile App”, providing convenience to customers travelling on railway or shopping in MTR Shops and MTR Malls. The functions of the new mobile app have also been fully enhanced. On top of personalised travel information such as journey time, suggested transportations for connecting journey, the new app has also include information on MTR Malls and MTR Shops. An Enhanced “Trip Planner” will also be launched;

- b) new functions will be added to the MTR Mobile App such as purchase of Monthly Pass Extras and renewal of Student Travel Scheme. These new functions enable passengers to save time and facilitate their journey. Besides, “Light Rail Next Train Information” showing real-time arrival schedules of LR will also be introduced to the new MTR Mobile App. The MTRCL expects to launch these new functions in Q3 of 2020;
- c) Currently free Wi-fi hot spots are available at all MTR stations and free in-train Wi-fi service is available to passengers travelling on Airport Express and High Speed Rail. Taking into account the opinions of Members and the public, the MTRCL will make available Wi-Fi service at the concourses and platforms of all MTR stations starting from July this year and passengers can enjoy free Wi-Fi anywhere without the need of hot spots. The Corporation is also discussing the introduction of 5G service with telecom companies, and HKT has started providing 5G service at Tai Koo Station. Besides, the MTRCL has added free wireless charging facilities in 16 additional stations since late March, apart from the iCentres and free mobile charging service which are available in 13 MTR stations; and
- d) QR code-based payment service at ticket gates will be gradually made available to provide passengers with an additional payment option. The MTRCL has started the procurement of new ticket gates and ticket-issue machines in that respect. At the same time, the Corporation is exploring the feasibility of other payment methods such as credit cards³. Currently, mobile payment is available at 24 designated ticket-issuing machines in the heavy rail network.

³ MTRCL would make reference to the “Guidelines on the introduction of a new electronic payment system for the collection of fares in the public transport sector” issued by Transport Department in June 2017 and take into account the system reliability, user friendliness and efficiency when implementing new e-payment services. The Corporation also has in place a policy to ensure e-payment products as well as services are implemented strictly according to relevant guidelines and regulations.

Anti-epidemic measures across MTR network

15. As MTR is one of the busiest public transportation services in Hong Kong, the MTRCL attaches great importance to the cleaning and precautionary measures across the railway network amid the COVID-19 outbreak. Since the very beginning of the epidemic, the Corporation has strengthened the overall cleaning and disinfection measures at all stations and inside train compartments, such as enhancing the cleaning of facilities with high public accessibility, carrying out deep cleansing inside train compartments, enhancing station ventilations, etc. Hand sanitisers are also available in unpaid areas at all heavy rail stations for passenger use. Earlier on, the Corporation has introduced a “Vapourised Hydrogen Peroxide Robot”, co-invented by the MTR and a local biotechnology company, to automatically spray atomised hydrogen peroxide of a specific concentration so that the disinfectants would penetrate in the small gaps that are difficult to reach, hence providing extra protection for passengers and staff (please refer to [Annex 3](#) for details). The Corporation will continue to closely monitor the development of the epidemic and upkeep the various cleaning work for stations and train compartments.

Conclusion

16. MTR has been walking hand-in-hand with Hong Kong people for over 40 years. We have been facing unprecedented challenges in the past year. As a member of this community, the Corporation will continue to serve with unswerving dedication in providing reliable and safe railway service for the community. We will also continue liaison with various stakeholders to listen to their views in improving facilities and passenger experience, connecting and moving forward with the community.

MTRCL
June 2020

**Progress of the Recovery of Vandalised Station Facilities during
Public Order Events in 2019**

Major facilities (Network-wise)	Progress	Target date of full recovery
Station entrances	All station entrances have been reopened except for individual entrances at Austin and Airport Station	Mid 2020
Exit / Entry gates	About 2 200 out of some 2 400 ticket gates have resumed normal operations. Some 200 gates are operating with certain parts (such as display screens and card insertion slots) still out-of-service.	Mid 2020
Ticket issuing machine / add-value machine / enquiry machine / customer service centre equipment	More than 1 100 out of around 1 350 machines have resumed normal operations.	Mid 2020
Passenger Information Display System (PIDS)	Around 1 600 out of 1 800 PIDS have resumed normal operations.	Mid 2020
CCTV Cameras	Over 90% of some 5 000 CCTVs have resumed normal operations.	Mid 2020
Lifts	All station lifts have resumed normal operations except for the lift at University Station (LT9) ⁴ .	Mid 2020
Escalators	All have resumed normal operations	N.A
Light Rail Platform Octopus Processor	Over 900 of some 1 300 Octopus Processors have resumed normal operations.	Q1 of 2021

⁴ The rebuilt lift at University Station (LT9) can be re-opened after the completion of statutory inspection which is pending.

Major facilities (Network-wise)	Progress	Target date of full recovery
Light Rail ticket issuing machines	We are carrying out works to enhance the durability of ticket issuing machines and they have been resuming services gradually at Light Rail stops.	A ticket issuing machine will be available at each stop by end of 2020
Heavy Rail Trains	Two seriously damaged EAL trains were dismantled and reassembled into two trains with the use of components from some other train. The two trains had been put into service.	N.A
Light Rail Vehicles	Completed.	N.A

Progress of providing barrier-free facilities

Stations	Progress
Fortress Hill	MTR has been discussing with the Government on the way forward of the proposed external lift project.
Tin Hau	The construction of a stair-lift (for wheelchair users) and three escalators in Tin Hau Station is in progress and is expected to be completed in 2021.
Mei Foo	An additional lift connecting station concourse and the street level will be retrofitted at Entrance A of Mei Foo Station, serving as an additional barrier-free access to the station. The project is expected to be completed in about three years' time.
Shau Kei Wan	Two additional escalators will be built at Entrance A3. The project is expected to commence in 2021 with the target completion date in 2023.
Tung Chung	An additional escalator connecting platform and the concourse will be built near Entrance A of Tung Chung Station to ease the congestion of passenger flow. The project is expected to be completed in 2021.



新聞稿

Press Release

PR020/20
11 March 2020

**MTR Deploys New “Vapourised Hydrogen Peroxide Robot”
to Further Enhance Disinfection of Stations and Trains**

The MTR Corporation is committed to providing a safe and comfortable environment for passengers, with continuous enhancement by introduction of new technologies and equipment. Recently, the Corporation has deployed a new automated “Vapourised Hydrogen Peroxide Robot” (“VHP Robot”) to conduct deep cleaning and decontamination in train compartments and stations, further enhancing hygiene and health protection for passengers and staff under the current epidemic.

The VHP Robot is a co-invention arising from a joint project of MTR and Avalon Biomedical (Management) Limited (“Avalon”), a Hong Kong biotechnology company. By automatically spraying hydrogen peroxide solution that is atomised to a specific concentration, the VHP Robot ensures that disinfectants penetrate in the small gaps that are difficult to reach during normal cleaning work. In this way, it can eliminate viruses and bacteria, including staphylococcus aureus, Escherichia coli and so on. The effectiveness of the VHP Robot has passed relevant tests and achieved the desired results.

When there is a need to conduct disinfection, the operator can preset the VHP Robot to operate automatically by pre-setting the floor plan of the designated area, or remotely control the robot manually with a mobile device within a distance of 20 metres. In general, it takes about 4 hours to complete the cleaning of an 8-car train in automatic mode. If there is a special situation, such as a passenger vomiting on a train, MTR staff will deploy the VHP Robot to perform deep cleaning on top of the regular cleaning with diluted bleach water. Recently, the robot was dispatched to disinfect the back-of-house area at Mong Kok East Station, including staff changing rooms, staff toilets and mess room, as well as the passenger lifts at the station after a staff member there was diagnosed with COVID-19.

“We fully understand our passengers’ concerns about hygiene in their travelling environment, especially amid the current COVID-19 outbreak,” said Dr Tony Lee, Operations Director of MTR Corporation. “While MTR has comprehensively strengthened cleaning and disinfection work in the railway network, we have also continued to actively explore feasible enhancements.”

“We plan to deploy a total of 20 VHP robots for train cleaning in depots and hope this helps to ensure the comfort of passengers’ journeys by providing ever greater health protection for our colleagues and our customers alike. We are very happy to be collaborating with Avalon and are very encouraged by the results,” Dr Lee added.

The collaboration between MTR and Avalon also includes the introduction of a dedicated surgical face mask manufacturing facility for MTR, which can produce masks that are capable of blocking PM 2.5 particles with nanofibre technology developed by experts of Hong Kong Polytechnic University. The manufacturing facility has been delivered to MTR and the setting up of a clean production room is underway. Production is expected to start in the second half of this year at the earliest, and the ultimate production rate should meet the daily consumption rate of MTR staff.

“As MTR staff will wear face mask when they carry out customer-facing duties during the current epidemic, the production can help ensure its smooth operations with stable supply of face masks,” said Dr Lee.

Furthermore, MTR and Avalon are also testing the use of air filters made by nano-air filtration technology to further improve the air quality of stations.

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About MTR Corporation

Every day, MTR connects people and communities. As a recognised world-class operator of sustainable rail transport services, we are a leader in safety, reliability, customer service and efficiency.

MTR has extensive end-to-end railway expertise with more than 40 years of railway projects experience from design to planning and construction through to commissioning, maintenance and operations. Going beyond railway delivery and operation, MTR also creates and manages dynamic communities around its network through seamless integration of rail, commercial and property development.

With more than 40,000 dedicated staff*, MTR carries over 13 million passenger journeys worldwide every weekday in Hong Kong, the United Kingdom, Sweden, Australia and the Mainland of China. MTR strives to grow and connect communities for a better future.

For more information about MTR Corporation, please visit www.mtr.com.hk.

*Includes our subsidiaries and associates in Hong Kong and worldwide

Photo caption

1. The “Vapourised Hydrogen Peroxide Robot” can carry out automatic deep cleaning & disinfection in train compartments, which helps enhance the efficiency and effectiveness of such tasks.



2. Operations Director Dr Tony Lee showcases MTR’s new face mask manufacturing facility. Face masks will be produced by using nanofibre material to provide high protection & excellent permeability. The surgical face masks will mainly be supplied to MTR staff.



3. MTR Corporation, Avalon Biomedical (Management) Limited and experts from the Hong Kong Polytechnic University are working together in various research and development projects and are making encouraging progress. (Left: Professor Johnson Lau, Co-Founder of Avalon BioMedical (Management) Limited; Middle: Dr Tony Lee, Operation Director of MTR Corporation; Right: Professor Wallace Leung, Chair Professor of Innovative Products and Technologies, Department of Mechanical Engineering, The Hong Kong Polytechnic University)

