

= MTR =

The Mass Transit Railway ( MTR ) is the rapid transit railway system in Hong Kong . Opened in 1979 , the system now includes 218 @. @ 2 km ( 135 @. @ 6 mi ) of rail with 155 stations , including 87 railway stations and 68 light rail stops . The MTR system is operated by MTR Corporation Limited ( MTRCL ) . It is one of the most profitable systems in the world , with a high farebox recovery ratio of 186 % .

Under the government 's rail @-@ led transport policy , the MTR system is a common mode of public transport in Hong Kong , with over five million trips made in an average weekday . It consistently achieves a 99 @. @ 9 % on @-@ time rate on its train journeys . As of 2014 , the MTR has a 48 @. @ 1 % market share of the franchised public transport market , making it the most popular transport option in Hong Kong . The integration of the Octopus smart card fare @-@ payment technology into the MTR system in September 1997 has further enhanced the ease of commuting on the MTR .

Construction of the MTR was prompted by a study , released in 1967 , commissioned by the Hong Kong Government in order to find solutions to the growing road congestion problem caused by the expansion of the territory 's economy . Construction started soon after the release of the study , and the first line opened in 1979 . The MTR was immediately popular with residents of Hong Kong ; as a result , subsequent lines have been built to cover more territory . There are continual debates regarding how and where to expand the MTR network .

As a successful railway operation , the MTR has served as a model for other newly built systems in the world , particularly in mainland China .

= = Early development ( 1960 ? 2000 ) = =

= = = Initial proposals = = =

During the 1960s , the government of Hong Kong saw a need to accommodate increasing road traffic as Hong Kong 's economy continued to grow strongly . In 1966 , British transportation consultants Freeman , Fox , Wilbur Smith & Associates were appointed to study the transportation system of Hong Kong . The study was based on the projection of the population of Hong Kong for 1986 , estimated at 6 @, @ 868 @, @ 000 . On 1 September 1967 , the consultants submitted the Hong Kong Mass Transport Study to the government , which recommended the construction of a 40 @-@ mile ( 64 km ) rapid @-@ transit rail system in Hong Kong . The study suggested that four rail lines be developed in six stages , with a completion date set between December 1973 and December 1984 . Detailed positions of lines and stations were presented in the study . These four lines were Kwun Tong Line ( from Western Market to Ma Yau Tong ) , Tsuen Wan Line ( from Admiralty to Tsuen Wan ) , Island Line ( from Kennedy to Chai Wan Central ) , and Shatin Line ( from Tsim Sha Tsui to Wo Liu Hang ) .

The study was submitted to the Legislative Council on 14 February 1968 . The consultants received new data from the 1966 by @-@ census on 6 March 1968 . A short supplementary report was submitted on 22 March 1968 and amended in June 1968 . The by @-@ census indicated that the projected 1986 population was reduced by more than one million from the previous estimate to 5 @, @ 647 @, @ 000 . The dramatic reduction affected town planning . The population distribution was largely different from the original study . The projected 1986 populations of Castle Peak New Town , Sha Tin New Town , and , to a lesser extent , Tsuen Wan New Town , were revised downward , and the plan of a new town in Tseung Kwan O was shelved . In this updated scenario , the consultants reduced the scale of the recommended system . The supplementary report stated that the originally suggested four tracks between Admiralty Station and Mong Kok Station should be reduced to two , and only parts of the Island Line , Tsuen Wan Line , and Kwun Tong Line should be constructed for the initial system . The other lines would be placed in the list of extensions . This report led to the final study in 1970 .

In 1970 , a system with four lines was laid out and planned as part of the British consultants ' new report , Hong Kong Mass Transit : Further Studies . The four lines were to be the Kwun Tong Line , Tsuen Wan Line , Island Line , and East Kowloon Line . However , the lines that were eventually constructed were somewhat different compared to the lines that were originally proposed by the Hong Kong Mass Transport Study .

In 1972 , the Hong Kong government authorised construction of the Initial System , a 20 @-@ kilometre ( 12 mi ) system that roughly translates to the Kwun Tong Line between Kwun Tong and Prince Edward , Tsuen Wan Line between Prince Edward and Admiralty , and Island Line between Sheung Wan and Admiralty of today . Negotiations with four major construction consortia started in 1973 . The government 's intention was to tender the entire project , based on the British design , as a single tender at a fixed price . A consortium from Japan signed an agreement to construct the system in early 1974 , but in December of the same year , it pulled out of the agreement for reasons stemming from fears of the oil crisis .

= = = Modified Initial System = = =

Several weeks later , in early 1975 , a government agency called the Mass Transport Provisional Authority was established to oversee the project . It announced that the Initial System would be reduced to 15 @.@ 6 kilometres ( 9 @.@ 7 mi ) , and renamed it the " Modified Initial System " . Plans for a single contract were abandoned in favour of 25 engineering contracts and 10 electrical and mechanical contracts . In addition , the government @-@ owned Mass Transit Railway Corporation ( MTRC ) was established to replace the Mass Transport Provisional Authority .

Construction of the Modified Initial System ( now part of the Kwun Tong Line and Tsuen Wan Line ) commenced in November 1975 . The northern section was completed on 30 September 1979 and was opened on 1 October 1979 by Governor Murray MacLehose . Trains on this route ran from Shek Kip Mei Station to Kwun Tong Station , initially in a four @-@ car configuration . The first train drivers were trained on the London Underground . The route from Tsim Sha Tsui Station to Shek Kip Mei Station opened in December 1979 . The early stations were designed under the supervision of Roland Paoletti , the chief architect at MTR .

In 1980 , the first harbour crossing was made by an MTR train as the Kwun Tong Line was extended to Chater Station , since renamed Central Station . Trains were extended to six cars to accommodate an increase in passenger numbers .

= = = Line extensions = = =

The government approved construction of the Tsuen Wan Line in 1977 , then known as the Tsuen Wan Extension , and works commenced in November 1978 . The project added a 10 @.@ 5 @-@ kilometre ( 6 @.@ 5 mi ) section to the MTR system , from Prince Edward to Tsuen Wan . The line started service on 10 May 1982 with a total cost of construction ( not adjusted for inflation ) of HK \$ 4 @.@ 1 billion ( US \$ 526 million ) . The plan was modified from that in the 1970 report Hong Kong Mass Transit : Further Studies , with Kwai Chung Station , Lap Sap Wan Station , and a planned depot at Kwai Chung next to Lap Sap Wan Station being replaced by stations at Kwai Hing and Kwai Fong and a depot at Tsuen Wan . Several stations also had names different to that during planning : So Uk Station became Cheung Sha Wan , Cheung Sha Wan became Lai Chi Kok , and Lai Chi Kok became Lai Wan ( later renamed as Mei Foo ) .

When service of this line started , the section of the Kwun Tong Line from Chater to Argyle ( since renamed Central and Mong Kok stations respectively ) was transferred to the Tsuen Wan Line . Thus , Waterloo station ( since renamed Yau Ma Tei Station ) became the terminus of the Kwun Tong Line , and both Argyle and Prince Edward stations became interchange stations . This change was made because system planners expected the traffic of the Tsuen Wan Line to exceed that of the Kwun Tong Line . This forecast proved to be accurate , necessitating a bypass from the northwestern New Territories to Hong Kong Island . The Tung Chung Line was therefore launched in 1998 with an interchange station at Lai King for that purpose .

Although land acquisitions were made for a station at Tsuen Wan West , beyond Tsuen Wan station , as part of the Tsuen Wan branch , the station was never built . This is not to be confused with the modern @-@ day Tsuen Wan West Station on West Rail Line , which lies on a newly reclaimed area near the former ferry pier .

Since opening in 1982 , the Tsuen Wan Line is the line whose alignment has remained the same for the longest time . For example , the Kwun Tong Line 's alignment has changed twice since its opening ? the taking over of Tsuen Wan Line from Mong Kok to Central , and the taking over of Eastern Harbour Crossing section by the Tseung Kwan O Line .

Government approvals were granted for construction of the Island Line in December 1980 . Construction commenced in October 1981 . On 31 May 1985 , the Island Line was opened with service between Admiralty Station and Chai Wan Station . Both Admiralty and Central Stations became interchange stations with the Tsuen Wan Line . Furthermore , each train was extended to eight cars . On 23 May 1986 , the Island Line was extended to Sheung Wan Station . Construction was delayed for one year , as government offices which were located over the station had to be moved before the construction could start .

In 1984 , the government approved the construction of the Eastern Harbour Crossing , a tunnel to be used by cars and MTR trains . The Kwun Tong Line was extended across the harbour on 5 August 1989 to Quarry Bay Station , which became an interchange station for the Kwun Tong Line and the Island Line . An intermediate station , Lam Tin , started operations on 1 October 1989 .

= = = Airport connection = = =

The Airport Express and Tung Chung Line started services in 1998 . The decision was made in October 1989 to construct a new international airport at Chek Lap Kok on Lantau Island to replace the overcrowded Kai Tak International Airport . The government invited the MTRC to build a train line , then known as the Lantau Airport Railway , to the airport . Construction started in November 1994 , after the Chinese and British governments settled their financial and land disagreements .

The new line was included in the financing plans of the new Hong Kong International Airport as the airport was not considered viable without direct public transport links . Construction costs were also shared by the MTRC , which was granted many large @-@ scale developments in the construction plans for the new stations .

The Lantau Airport Railway turned into two MTR lines , the Tung Chung Line and the Airport Express . The Tung Chung Line was officially opened on 21 June 1998 by Hong Kong Chief Executive Tung Chee Hwa , and service commenced the next day . The Airport Express opened for service on 6 July 1998 along with the new Hong Kong International Airport .

The Airport Express also offers flight check @-@ in facilities at Kowloon Station and Hong Kong Station ? the in @-@ town check @-@ ins offer a more convenient and time @-@ saving routine ; a free shuttle bus service transports travellers from these stations to their respective hotels as well . Porters are also available to help transport luggage from and onto trains . It is the second most popular means of transport to the airport after buses . In 2012 , it had a 21 @-@ 8 % of share of the traffic to and from the airport . However , this has drastically declined from a peak of 32 % in 1999 .

= = Recent projects ( 2000 ? 2010 ) = =

= = = Tseung Kwan O Line = = =

The Quarry Bay Congestion Relief Works extended the Hong Kong Island end of the Kwun Tong Line from Quarry Bay to North Point via a pair of 2 @-@ 1 @-@ kilometre ( 1 @-@ 3 mi ) tunnels . The project was initiated due to overcrowding at Quarry Bay and persistent passenger complaints about the five @-@ minute walk from the Island Line platforms to the Kwun Tong Line platform . Construction began in September 1997 and was completed in September 2001 at a cost of HK \$ 3 @-@ 0 billion ( US \$ 385 million ) . As with most earlier interchange stations , a cross @-@ platform

interchange arrangement was provided here in both directions .

Construction of the Tseung Kwan O Line ( called the Tseung Kwan O Extension Line in the planning stage ) was approved on 18 August 1998 to serve new housing developments . Construction began on 24 April 1999 and the line officially opened in 2002 . It took over the existing Kwun Tong Line tracks running through the Eastern Harbour Tunnel , so that the full line stretches from Po Lam to North Point . When the line was opened , the Kwun Tong Line was diverted to Tiu Keng Leng on the new line . Construction costs were partly covered by the Hong Kong Government and private developers which linked construction of the Tseung Kwan O Line to new real estate and commercial developments .

= = = Interchange stations = = =

The interchange between the Tsuen Wan Line and the Kwun Tong Line , as well as that between the Kwun Tong Line and the Tseung Kwan O Line , are two stations long , allowing cross @-@ platform interchange wherein a passenger leaves a train on one side of the platform and boards trains on the other side of the platform for another line . For example , when passengers are travelling on the Kwun Tong Line towards Tiu Keng Leng , getting off at Yau Tong would allow them to switch trains across the platform for the Tseung Kwan O Line towards North Point . Whereas , staying on the train and reaching Tiu Keng Leng would allow them to board the Tseung Kwan O Line trains towards Po Lam / LOHAS Park . This design makes interchanging more convenient and passengers do not have the need to change to different levels . However this interchange arrangement is not available for all transferring passengers at Kowloon Tong , Central , Hong Kong , Quarry Bay , Nam Cheong ( except transfer between Tuen Mun and Hong Kong bound trains ) , Mei Foo , Tai Wai Station ( except alighting from Ma On Shan Line to change to southbound trains for East Rail Line ) and Sunny Bay ( except transfer between Tung Chung and Disneyland Resort bound trains ) stations , mainly because this service is available only when there are two continuous stations shared as interchange stations by two lines .

Two major works were undertaken to ease interchange between the Kwun Tong Line and East Rail Line . The modification of Kowloon Tong Station started in June 2001 . A new pedestrian link to Kowloon Tong Station southern concourse and a new entrance ( Exit D ) opened on 15 April 2004 to cope with the increase in interchange passenger flow . Modification to Tsim Sha Tsui Station involved upgrading station facilities and concourse layout to facilitate access from the East Tsim Sha Tsui Station via its pedestrian links . New entrances to the subway links were opened on 19 September 2004 ( Exit G ) and 30 March 2005 ( Exit F ) , with the whole scheme completed in May 2005 .

= = = Disneyland Resort Line = = =

The Disneyland Resort Line , previously known as Penny 's Bay Rail Link , provides service to the Hong Kong Disneyland Resort which was opened on 12 September 2005 . Service to Sunny Bay station on the Tung Chung Line started in 2005 . The new line and the Disneyland Resort station opened on 1 August 2005 . It is a 3 @. @ 5 @-@ kilometre ( 2 @. @ 2 mi ) single @-@ track railway that runs between Sunny Bay station and Disneyland Resort station . The Disneyland Resort station itself was designed to blend in with the ambiance of the resort . The line operates fully automated trains running every four to ten minutes without a driver . The carriages are refurbished M @-@ Train rolling stock to match the recreational and adventurous nature of the 3 @. @ 5 @-@ minute journey .

= = = Airport Express extension = = =

The AsiaWorld ? Expo Station is an extension of the Airport Express serving a new international exhibition centre , AsiaWorld ? Expo , at Hong Kong International Airport . The station opened on 20 December 2005 along with the exhibition centre . To cope with the projected increase in patronage ,

Airport Express trains were lengthened to eight carriages from the previous seven . Additional trains are also deployed on the Tung Chung Line during major exhibitions and events .

== Privatisation and merger ==

On 5 October 2000 the operator of the MTR network , MTR Corporation Limited ( MTRCL ) , became Hong Kong 's first rail company to be privatised , marking the beginning of the Hong Kong government 's initiative to dissolve its interests in public utilities . Prior to its listing on the Hong Kong Stock Exchange , the Mass Transit Railway Corporation ( MTRC ) was wholly owned by the Hong Kong government . The offering involved the sale of about one billion shares , and the company now has the largest shareholder base of any company listed in Hong Kong . In June 2001 , MTRCL was transferred to the Hang Seng Index .

MTRCL has often developed properties next to stations to complement its already profitable railway business . Many recently built stations were incorporated into large housing estates or shopping complexes . For example , Tsing Yi station is built next to the Maritime Square shopping centre and directly underneath the Tierra Verde housing estate .

On 11 April 2006 , MTRCL signed a non @-@ binding memorandum of understanding with the Hong Kong government , the owner of Kowloon @-@ Canton Railway Corporation , to merge the operation of the two railway networks in Hong Kong in spite of the strong opposition by the KCRC staff . The minority shareholders of the corporation approved the proposal at an extraordinary general meeting on 9 October 2007 , allowing MTRCL to take over the operation of the KCR network and combine the fare system of the two networks on 2 December 2007 .

On 2 December 2007 the Kowloon ? Canton Railway Corporation ( KCRC ) granted a 50 @-@ year service concession ( which may be extended ) of the KCR network to MTRCL , in return for making annual payments to KCRC , thereby merging the railway operations of the two corporations under MTRCL 's management . At the same time MTRCL changed its Chinese name from " ?????? " ( Subway Limited Company ) to " ????????? " ( Hong Kong Railway Limited Company ) , but left its English name unchanged . After the merger , the MTR network included three more lines ? East Rail Line , West Rail Line , and Ma On Shan Line ? as well as the Light Rail network and Guangdong Through Train to Guangzhou .

On 28 September 2008 , fare zones of all urban lines , East Rail Line , Ma On Shan Line and West Rail Line were merged . A passenger could travel on these networks with only one ticket , except where a transfer is made between Tsim Sha Tsui and East Tsim Sha Tsui stations , where two tickets are required . Student discounts on Octopus Card were also issued .

== Tseung Kwan O Line extension to LOHAS Park ==

The LOHAS Park Spur Line is an extension of the Tseung Kwan O Line , splitting off after Tseung Kwan O Station . It serves the new residential development of LOHAS Park ( formerly " Dream City " ) , a 3 @, @ 550 @, @ 000 @-@ square @-@ foot ( 330 @, @ 000 m2 ) estate with fifty residential towers . The project is divided into 9 to 13 phases and is about halfway complete as of 2016 . These high rises will sit above LOHAS Park Station , which opened on 26 July 2009 .

== Newly built extensions ( 2010 ? present ) ==

== West Island Line ==

The West Island Line , first put forward to the government on 21 January 2003 , is an extension of the Island Line . It serves the Western District of Hong Kong Island . The construction of the West Island Line started on 10 August 2009 . Kennedy Town Station and HKU Station opened on 28 December 2014 . Sai Ying Pun Station opened later , on 29 March 2015 , due to construction delays .

## === Future expansions ===

Several future projects on the MTR have been put forward by MTRCL to the Hong Kong Government , with some already under construction . The network was expanded significantly with the merger of MTRCL and the government @-@ owned KCRC . A non @-@ binding Memorandum of Understanding was signed on the eleventh of April 2006 to grant MTRCL operation of the existing KCR network with a service concession of 50 years . The new Sha Tin to Central Link that was originally awarded to KCRC is also to be operated by MTRCL .

Provisions are made to upgrade the existing infrastructure of the MTR . New subway links to the stations are also being made for better access . A further proposal to extend the existing Kwun Tong Line to Whampoa Garden , together in a tie @-@ up with the Sha Tin to Central Link expansion have been made in April 2006 . In March 2008 , the MTR Corporation welcomed the Government 's decision for the Corporation to proceed with further planning and design for the Kwun Tong Line Extension and the Shatin to Central Link . The construction of the Kwun Tong Line Extension is expected to be completed at the end of 2016 . The Sha Tin to Central Link from Tai Wai to Hung Hom is expected to be completed in 2019 , and the section from Hung Hom to Admiralty is expected to be completed in 2021 .

The South Island Line , first put forward to the government by MTRCL on 21 January 2003 , only received approval on 30 June 2005 after its heavily modified fourth proposal . This consisted of the South Island Line ( East ) from Admiralty to South Horizons and the South Island Line ( West ) that connects HKU to Wong Chuk Hang . The South Island Line ( East ) is expected to be finished by the end of 2016 .

The Northern Link will be a new line which connects West Rail Line with the Lok Ma Chau Spur Line of East Rail Line . It also has Au Tau , Ngau Tam Mei , San Tin , a future interchange station between East Rail Line and Northern Link , Kwu Tung and finally Lok Ma Chau , which will become a terminus for both lines , just like Hung Hom nowadays .

The North Island Line is a planned extension of the Tseung Kwan O Line that will interchange at the future Tamar Station with the Tung Chung Line . It will alleviate traffic in the Northern part of Hong Kong Island . There will be three new stations : Tamar , Exhibition ( which will be an interchange between the North Island Line and the North South Corridor ) , and Causeway Bay North . Construction is expected to begin in 2021 and finish in 2026 . The cost is estimated to be HK \$ 20 billion in 2013 prices .

## == Infrastructure ==

### === Rail network ===

### === Station facilities , amenities and services ===

The architecture of MTR stations is less artistic , instead focusing on structural practicability . With the high level of daily passenger traffic , facilities of the MTR stations are built with durability and accessibility in mind . After extensive retrofitting , the MTR system has become , in general , disabled @-@ friendly ? the trains have dedicated wheelchair space , the stations have special floor tiles to guide the blind safely on the platforms , and there are extra wide entry and exit gates for wheelchairs as well . On board the rolling stock , there are also flashing system maps on select trains while Active Line Diagrams and traditional route maps are installed on the others . Infopanel as well as on Newline Express TVs onboard trains display important messages such as next station announcements as well as operational messages .

### === Telecommunications ===

A full GSM ( GSM @-@ 900 and GSM @-@ 1800 ) , CDMA and TDMA mobile phone network is in place throughout the MTR system of stations and tunnels allowing passengers to stay connected underground . Currently , full 3G network coverage in all stations and tunnels ( except underground section on East Rail Line and West Rail Line ) for the MTR system has been provided by 3 Hong Kong , SmarTone @-@ Vodafone and PCCW Mobile . Passengers with subscription services will be able to make video calls and access high speed video content on their mobile phones regardless whether the train is above ground or under ground . The MTR has already extended the Wi @-@ Fi service to all of the Airport Express trains and the expansion of the service to other MTR routes is still under consideration by MTR . As of 8 July 2013 , all 84 stations on the MTR offer free Wi @-@ Fi service to passengers with a limitation of 15 minutes per session and a maximum of five sessions per day .

In late 2015 it was announced that all 400 payphones in the MTR system would be removed in early 2016 . The contract with the service provider , Shinetown Telecom , was expiring , and the MTR Corporation said that no one had tendered a proposal to take over the contract .

== == Announcements == ==

When the transport started , announcements of information including arriving stations were made in British English and in Cantonese . Since 2004 , in order to accommodate Mainland Chinese visitors under the Individual Visit Scheme , Standard Mandarin Chinese has been added to the repertory .

== == Public toilets == ==

Unlike many other metro systems around the world , " main line " MTR stations originally did not have toilet facilities available for public use . Passengers may use MTR staff toilets at all stations on request . In 2006 , MTRCL said it would not consider retrofitting existing underground toilets , because of the challenge of installing new piping and toilet facilities . Only stations on the Airport Express and Disneyland Resort Line had access to toilet facilities . All former KCR stations ( on the East Rail Line , West Rail Line , and Ma On Shan Line ) , merged into the MTR network in 2007 , have public toilets .

During Legco Rail Merger Bill discussions , MTR Corporation received criticism from Hong Kong Legislative Council Members for their unwillingness to install toilet facilities in main line stations . MTRCL indicated in rail merger discussions that it would carry out a review of the feasibility of installing public toilets at or in the vicinity of its above @-@ ground railway stations . Discussions between the Government and MTRCL have taken into account Legco members ' request for a stronger commitment by the corporation to the provision of public toilets on new railway lines . This resulted in MTRCL agreeing to include the provision of toilet facilities within , or adjacent to , stations in the overall design parameters for all future new railway lines , subject to planning and regulatory approval and any concerns raised by residents in the vicinity about the location of external ventilation exhausts .

Toilets have since been retrofitted into several existing MTR stations , including Sheung Wan Station , Ngau Tau Kok Station , Quarry Bay Station , Mong Kok Station , and Prince Edward Station . In addition , newly opened stations such as those of the West Island Line have toilets . The MTR plans to install public toilets at all interchange stations by 2020 .

== == Commerce and journals == ==

Prior to the privatisation of MTRC , MTR stations only had branches of the Hang Seng Bank , and Maxim 's Cakes stores , and a handful of other shops . Since then , the number and types of shops have increased at certain stations , turning them into miniature shopping centres . ATMs and convenience stores are now commonplace .

The MTR has contracted with publishers for the distribution of free magazines and newspapers in

MTR stations . Recruit was the first free magazine which was solely distributed in stations ( before railway merger ) since July 1992 , but the contract was terminated in July 2002 . Another recruitment magazine Jiu Jik ( ?? ) , published by South China Morning Post , replaced Recruit as the only free recruitment magazine distributed in MTR stations bi @-@ weekly . The Metropolis Daily ( ???? ) , published by Metro International , is the first free newspaper distributed free in MTR stations during weekdays ( except public holidays ) ; and in 2005 , there is another weekend newspaper Express Post ( ???? ) , distributed every Saturday except public holidays . The Metropop ( ???? ) , a weekly magazine featuring cultural affairs and city trends also published by Metro International , started its distribution in MTR stations every Thursday since 27 April 2006 , a few months after the termination of Hui Kai Guide ( ?? Guide ) in 2006 . MTR Stations on ex @-@ KCR lines feature two free Chinese @-@ language newspapers , namely am730 and Headline Daily . MTR promotes reading of these newspapers by adding special coupons and promotion offers inside the newspapers , for example , a free trip to Lok Ma Chau or a free keyring . On the Kwun Tong Line , East Rail Line , Ma On Shan Line and West Rail Line , Newslane Express is available .

= = = MTR Bus = = =

At various stations of the MTR network , the MTRCL ( which took over from KCR ) has set up feeder buses which enhance the convenience of taking the MTR . These bus routes , which normally consist of one to two stops , terminate at housing estates and go past major landmarks . The feeder bus routes on the East Rail Line are run under the MTR name but are operated by Kowloon Motor Bus .

= = = Rolling stock = = =

Six types of Electric Multiple Unit rolling stock operate on the MTR network and four generations of light rail vehicles operate on the Light Rail network . All utilise either 1 @, @ 432 mm ( 4 ft 8 3 ? 8 in ) rail gauge ( near standard gauge ) or 1 @, @ 435 mm ( 4 ft 8 1 ? 2 in ) ( standard gauge ) . Except for Airport Express trains , all trains are designed with features to cope with high density passenger traffic on frequently used services , for example , seating arrangements , additional ventilation fans , and additional sets of extra wide doors . These configurations allow the MTR to run at 101 @, @ 000 passengers per hour per direction ( p / h / d ) on its busy suburban East Rail Line and 85 @, @ 000 p / h / d on its urban metro network .

= = = = Metro Cammell EMU ( DC ) = = = =

Known as M @-@ Trains , the oldest model of MTR since its operation , M @-@ Trains can be divided into different " Stocks " . The M @-@ Stock ( or " CM @-@ Stock " ) of M @-@ Train are the oldest trains on the MTR , built originally by Metro Cammell ( now Alstom ) and refurbished by United Goninan . The M @-@ Train uses sliding doors , unlike K @-@ Stocks and Grupo CAF Trains which use plug doors . They are in service on Kwun Tong Line , Tsuen Wan Line , Island Line and Tseung Kwan O Line .

Except for Airport Express and Disneyland Resort Line trains , all trains are designed with features to cope with high density passenger traffic on frequently used services . The Disneyland Resort Line uses driverless M @-@ Trains with their appearance overhauled to suit the atmosphere and theme of the line . Windows on each carriage and the handrails inside are made into the shape of Mickey Mouse 's head , and there are bronze @-@ made Disney characters decorating the interior of the carriages .

= = = = Adtranz @-@ CAF EMU = = = =

The Tung Chung Line and the Airport Express are operated by CAF Trains specified to their respective lines . Initially run in seven @-@ car formations , they have now been lengthened to eight



cars . These two variations are built jointly by Adtranz ( now Bombardier Transportation ) and Grupo CAF ( CAF ) between 1994 ? 97 . Since 2006 , K @-@ Stock has also been used on the Tung Chung line .

===== Rotem EMU =====

The K @-@ Stock are built jointly by Mitsubishi Heavy Industries and Hyundai Rotem , first put into service on the Kwun Tong Line . Subsequently in 2006 , four additional sets joined the Tung Chung Line to cope with the increasing passenger traffic . K @-@ Stock trains have come under criticism when it was first put into service due to delays and door safety issues . There have been incidents where passengers have been injured by its doors and other service reliability issues have led to MTRCL " minimising the number of Korean trains for passenger service until a higher reliability of the systems concerned is achieved " .

===== CNR Changchun EMU =====

The contract ( C6554 @-@ 07E ) for 10 new sets of trains was awarded to Changchun Railway Vehicles Co . Limited in October 2008 with a further 12 trains ordered in the summer of 2011 . These MTR trains were delivered to Hong Kong between 2011 and 2013 to enhance train frequency on the existing lines to cater for ongoing patronage growth on the existing Island Line , Kwun Tong Line , Tsuen Wan Line and Tseung Kwan O Line . These trains will feature new 22 " LCD TVs , like their counterpart trains on former @-@ KCR lines equipped with Newsline Express , offering better infotainment such as news and announcements . The first of these trains entered revenue service on 7 December 2011 on the Kwun Tong Line . They are tested service on Tsuen Wan Line and Tseung Kwan O Line . They have also been tested running on the Island Line , but have not been in service yet .

===== SP1900 / 1950 EMU =====

Both East Rail Line and West Rail Line use the SP1900 while Ma On Shan Line uses SP1950 , a shorter model of the SP1900 . The electrification system used on these lines is 25 kV AC , 50 Hz , as opposed to the 1 @. @ 5 ? kV DC used on the urban lines . Should the need arise in the future , dual voltage trains such as those utilised on Oresund Bridge would be required .

These two models of rolling stock are from the former KCRC network ( KCR East Rail , West Rail and Ma On Shan Rail ) . They did not receive major changes after the merger of the two companies except for the updated route map , the exterior company logo and such . The capability of this EMU fleet is similar to those on the urban network .

===== Metro Cammell EMU ( AC ) =====

The older Metro Cammell EMUs are also used on East Rail Line . There are 351 cars which have been built ( 29 sets + 3 surplus cars ) since 1982 .

===== Light Rail vehicles =====

Rolling stock running on the Light Rail system were ordered from three different manufacturers : Commonwealth Engineering ( Comeng ) , Kawasaki Heavy Industries and United Goninan . They are designed to run on the standard gauge and utilize 750 V DC through overhead lines . Trams are usually operated with one or two carriages while the second carriage functions as only a trailer . The arrangement allows each car to load approximately 300 passengers with 26 seats , while four sets of poach seats provide flexible riding for passengers .

In addition , the Light Rail will be modernised as part of a 20th Anniversary Activity according to the MTR . Trains will include better disabled facilities as well as a totally new interior . The MTR will

refurbish 69 older trains and buy 22 new ones . The first trains have been completed and were scheduled to be put into service in November 2009 . The whole project is expected to be completed in 2011 .

= = Fares and tickets = =

After the rail merger , there are three different fare classes on the MTR : Adult , Students and Concessionary . Only children below the age of 12 and senior citizens 65 years or older are eligible for the concessionary rate on all lines . Full @-@ time Hong Kong students between the ages of 12 and 25 qualify for the concessionary rate using a personalized Octopus Card on all lines except on Airport Express , or travel to or from cross @-@ border stations ( Lo Wu / Lok Ma Chau ) . Children below the age of 3 travel free ( unless they exceed the height range ) .

The fare of MTR between any two particular stations is not calculated using a particular formula , and must be lookup up from the fare table . Fares for the Airport Express Line are significantly higher . Services to checkpoint termini are also more expensive than ordinary fares . Adult fares range from HK \$ 3 @.@ 6 to \$ 52 @.@ 6 ( US \$ 0 @.@ 46 ? 6 @.@ 74 ) . Concessionary fares are usually half the adult fare , and range from HK \$ 1 @.@ 50 to \$ 27 @.@ 00 . Student fares are the same as child and elderly fare on the urban lines , but are the same as the Adult fares for journeys to or from checkpoint termini , and range from HK \$ 1 @.@ 50 to \$ 51 @.@ 00 . The fare is subject to adjustment in June every year .

Prior to May 2009 , MTR did not provide concessionary fares for the disabled . Legislators such as social welfare constituency legislator Fernando Cheung Chiu @-@ hung and those from Hong Kong 's Association for Democracy and People 's Livelihood had for years demanded that such concessions be put in place . In May 2009 , MTR eventually agreed to offer the disabled concessionary fares with HK \$ 2 million sponsorship from Transport and Housing Bureau and under the condition that Legislative Council amends the Disability Discrimination Ordinance .

Single journey tickets and Octopus card reloads can be purchased at vending machines while tourist passes , Octopus cards and other special tickets must be purchased at the ticket counter . Credit cards are only accepted to purchase Airport Express tickets .

= = = Octopus cards = = =

The Octopus card is a rechargeable contactless smart card used in an electronic payment system in Hong Kong developed by Australian company ERG Group . It was launched in September 1997 for use on the MTR ( and KCR , now operated by MTR ) and now is the most widely used electronic cash system for transactions in Hong Kong as many retailers ( including supermarkets , car parks and fast food outlets ) are fitted with readers . The technology used was Sony 's Felica line of smartcard . The Octopus card uses radio frequency identification ( RFID ) technology so that users need only hold the card in front of the reader , without taking it out of handbags and wallets .

Except for the Airport Express , MTR fares are slightly lower when using an Octopus card compared to using single journey tickets . For example , the cost of the three @-@ minute journey from Admiralty to Tsim Sha Tsui across the Victoria Harbour is ( as of September 2015 ) HK \$ 9 @.@ 4 using the Octopus card , compared with HK \$ 10 @.@ 0 for a single @-@ journey ticket .

= = = Tourist pass = = =

The Tourist Day Pass gives tourists unlimited MTR rides for one day ( with the exception of MTR Bus routes , the First Class of the East Rail Line , the Airport Express , as well as journeys to and from Lo Wu , Lok Ma Chau and Racecourse stations ) . Each pass costs HK \$ 55 and are available at all the MTR Customer Service Centres . Tourist Day Pass must be used within 30 days upon the day of issue . The Airport Express Tourist Octopus Cards are also available . Cardholders may enjoy three days of unlimited rides on the MTR ( except Airport Express , East Rail Line First Class , Lo Wu and Lok Ma Chau stations ) refundable deposit of HK \$ 50 and choice of either a single ( HK

\$ 220 ) or round trip ( HK \$ 300 ) on the Airport Express .

= = = Other fares = = =

A touchless smart card system is used for single journey tickets . These tickets are pre @-@ paid for between pre @-@ determined stations , and are good for only one trip . There are no return tickets , except on the Airport Express . As of mid @-@ 2013 , less than 5 per cent of MTR customers travelled on single journey tickets .

Fares for the Airport Express are substantially different from main line fares . Apart from single tickets , same @-@ day return tickets ( same price as a single ) , and one @-@ month return tickets are also available .

A one @-@ day pass can be used for unlimited travel to and from Hong Kong Disneyland within the same day , and costs HK \$ 50 . This pass can be purchased from any MTR Customer Service Centres or Airport Express Customer Service Centres .

= = Performance = =

Since the merger in 2007 , MTR has consistently achieved a 99 @. @ 9 % on @-@ time rate , meaning out of the 5 @. @ 2 million passengers on average each working day , 5 @. @ 195 million passengers arrive within 5 minutes of scheduled time . This makes MTR one of the most efficient rapid transit systems on the planet . MTR must report all delays of more than eight minutes to the government . There were 143 reportable incidents in 2013 . MTR is fined HK \$ 1 million for having delays of 31 minutes to an hour , with higher fines for longer delays .

= = Regulations and safety = =

According to the Mass Transit Railway By @-@ Law , eating or drinking , and smoking are not allowed in the paid area of stations or in trains . Offenders will be fined up to HK \$ 5000 .

Various campaigns and activities are taken to help ensure that the MTR is a safe system to travel on . Poster campaigns displaying information on topics such as escalator safety are a common sight in all MTR stations , and announcements are made regularly as safety reminders to travelling passengers . Bylaws were also introduced to deter potentially dangerous actions on the MTR , such as the ban on flammable goods on the MTR and rushing into trains when the doors are closing . Penalties ranging from fines to imprisonment have been imposed for such offences .

Police officers patrol the trains and stations , and police posts are available at some stations . The Hong Kong Police Force has a Railway District responsible for the MTR . Closed @-@ circuit television cameras are installed in stations and on some of the newer trains .

The entire Tung Chung Line and Airport Express , as well those stations added by the Tseung Kwan O Line , has platform screen doors ( PSDs ) , ordered from Swiss glass door manufacturer Kaba Gilgen AG , installed upon construction . So does the entire West Rail Line ( except Hung Hom Station ) , inherited from KCR . These doors make platforms safer by preventing people from falling onto the rails , even though MTRCL did not heavily promote it directly . However , the primary motivation was to separate the stations from the tunnels , hence allowing substantial energy savings on station air @-@ conditioning and tunnel ventilation . Automatic platform gates ( APGs ) have also been installed at the Sunny Bay and Disneyland Resort stations . Their heights are half of the PSDs and only prevent people from falling onto the rails . MTR has finished installing the APGs on all of the above @-@ ground stations of the MTR except on the East Rail and Ma On Shan lines ; they will be installed there as part of the Sha Tin to Central Link project .

In June 2000 , MTRCL proceeded with its plans to retrofit 2 @, @ 960 pairs of platform screen doors at all 30 underground stations on the Kwun Tong Line , Tsuen Wan Line , and Island Line in a six @-@ year programme . The programme made MTR the world 's first railway to undertake the retrofitting of PSDs on a passenger @-@ carrying system already in operation . A prototype design was first introduced at Choi Hung Station in the 3rd quarter of 2001 . The whole installation scheme

was completed in October 2005 , ahead of the forecast completion date in 2006 . MTRCL said that part of the cost had to be assumed by passengers . HK \$ 0 @. @ 10 per passenger trip was levied on Octopus card users to help fund the HK \$ 2 billion retrofit programme . This levy was ended in 2013 after raising more than HK \$ 1 billion .

= = Visual identity = =

The MTR visual identity , which includes logo , vehicle livery , signage , route maps and passenger information , was updated in 1995 ? 1998 by Lloyd Northover , the British design consultancy founded by John Lloyd and Jim Northover .

= = MTR Service Update = =

MTR Service Update is an online service that provides MTR service information through Twitter and Facebook . It was founded by a group of post @-@ 80s MTR employees and passengers . Messages are provided in Traditional Chinese and English . Although some of the founders are MTR employees , the service is not officially provided by MTR .

The service was founded because of the dissatisfaction of the MTR on handling the message of service disruptions . The service was based on one provided for the London Underground . Because the service is user @-@ driven , the involvement of passengers is very important . The MTR Service update team are now facing the problem on no data source in the areas which have a low level of participation , such as Tseung Kwan O.

Aside from providing a service to Twitter , the team have also developed mobile applications for popular mobile platforms . For Android , there is TrainBoard and Swiftzer MetroRide .

= = Social outreach = =

= = = Art promotion = = =

With the objective " not only bring MTR passengers more time for life , but also more time for art " , the Art in MTR Initiative has been a success since its reception in 1998 , where the Airport Express Artwork Programme was the pioneer project . Thereafter , live performances , art exhibitions , display of artwork by established and emerging artists , students and young children have been brought into the MTR stations . MTRCL have even made art part of the station architecture when building new stations or renovating existing ones . Artworks are exhibited in different forms on the network , including " arttube " , open art gallery , community art galleries , roving art , living art , and art in station architecture .

= = = MTR HONG KONG Race Walking = = =

MTR and Hong Kong Amateur Athletic Association have jointly hosted MTR HONG KONG Race Walking annually in spring since 2005 . The race walking competition aims at promoting healthy living in Hong Kong . The race begins and ends on the ground above Central MTR Station , namely Chater Garden , Chater Road , Ice House Street and Des Voeux Road Central in Central . There is a fun walk apart from the regular competition . The event attracted over 800 participants in 2005 and 1 @, @ 500 in 2012 . Other than Hongkongers , the event also attracts athletes from various countries . The race raises fund for Better Health for a Better Hong Kong , a Hospital Authority project for the working population .

= = Controversies = =

= = = Destruction of conservation area in Yuen Long = = =

The MTR Corporation came under fire in June 2011 after their work on the cross @-@ border high @-@ speed railway line encroached on a conservation area in Pat Heung , Yuen Long . 34 trees were felled and an entire slope was concreted over in the conservation area . The Hong Kong Environmental Protection Department issued summonses to the corporation for offences under the Environmental Impact Assessment Ordinance . In September 2011 , a fine of HK \$ 15 @,@ 000 was imposed by the court . The MTR Corporation admitted that 34 trees were felled by mistake ; all were common native woodland species and no rare tree species were affected . The corporation said owing to a technical misalignment of relevant drawings , the plan submitted to the Environmental Protection Department did not include the part of the Conservation Area which was included in the gazettal plan of their works . The corporation became aware that part of the approved tree removal works may have encroached onto the Conservation Area during construction , and proactively reported the situation to the government . Evaluation and measures have been taken to prevent similar incidents from happening again .

= = = Tree felling and failure to preserve indigenous species = = =

The MTR Corporation came under fire again in September 2011 after felling dozens of trees in Admiralty as part of construction work for the South Island Line . Green activists denounced the tree felling as " unprofessional " , and Ken So Kwok @-@ yin , chief executive of the Conservancy Association and a certified tree arborist , said that the explanations offered by the MTR Corporation as to why the trees were felled were " unacceptable " . The MTR Corporation is felling approximately 4 @,@ 000 trees in connection with the construction of the South Island Line , raising concerns from environmental groups and the public about its commitment to protecting Hong Kong 's natural environment .

= = = Limits on oversized luggage = = =

The corporation has limits on the size of items allowed on trains . The MTR system is facing pressure from the increasing number of passengers transporting goods and other oversized baggage , and is apparently overwhelmed by parallel traders , and was criticised for allowing parallel traders to board trains with their exports . It was accused of double standards in enforcement when while images of passengers pushing overladen trollies are appearing on social network sites on a regular basis , whilst students carrying large musical instruments are reported to have been stopped and issued with written warnings . Leading musicians also joined in the criticism of MTR 's unreasonable stance on large instruments ; some citizens invited players of celli and other large instruments to congregate on 3 October 2015 with their equipment at Tai Wai Station , where the majority of these instances occurred . Following the public uproar , MTR issued a press release in the early hours on acknowledged societal discontent and announced a one @-@ month review of the policy on oversized items to see whether there was room for fine @-@ tuning that would not compromise on passenger safety . The corporation said that staff would continue executing existing policy until any revisions are made .