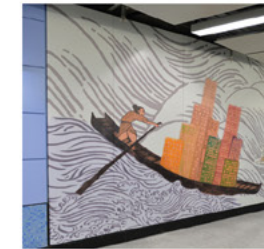


THE CITY UNLIMITED

Sustainability Report 2016



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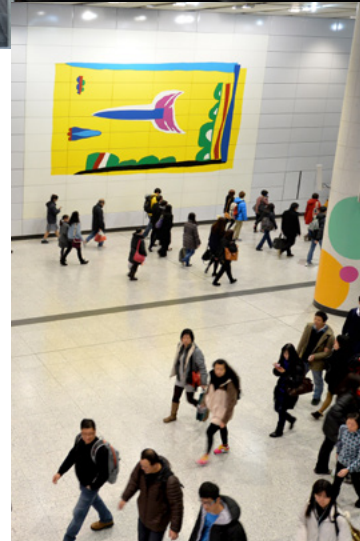
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INTRODUCTION

Our vision is to be a leading multinational company that connects and grows communities with caring service. We do more than just transporting people. As a corporate citizen, we leverage our assets, skills, and resources to connect, grow and support communities to help them thrive.



230.9 km

Total Route length
in Hong Kong.



1979

The year when
the first MTR
line opened in
Hong Kong.

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THE CITY UNLIMITED: SUSTAINABILITY REPORT 2016

Our cities are full of possibilities.

Possibilities of unexpected meetings that turn into life-long friendships, social meetings that strengthen our communities, educational opportunities that lead to successful careers.

But the possibilities our cities have to offer only matter if people are connected to them. For the first time, MTR is connecting all of Hong Kong's 18 districts. We enable our customers to seize the city's unlimited possibilities and unleash their potential, one smooth ride at a time.

In this year's report, we explore what it takes to connect the entire city to all the possibilities it has to offer.

Stories from subsidiaries outside of Hong Kong



[Melbourne](#) [Stockholm](#) [Shenzhen](#) [London](#)

Emily's Journey to Tsing Yi
[Read the story](#)

Hayes's Journey to Shek Kip Mei
[Read the story](#)

Isaac's Journey to HKU
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Annie's Journey to Jordan
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Keith's Journey to Lei Tung
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ABOUT THIS REPORT

How to Read This Report

This year we continue to report in two different but complementary ways to provide information to our stakeholders:

1. Our **printed pamphlet** features journeys of our customers to their favourite places – places that they are connected to by the MTR. There are highlights from behind-the-scenes to show how we make these connections possible. To us, this is our mission to connect and grow communities with caring services, in a responsible and sustainable manner.
2. The **dedicated report microsite and interactive PDF** provide full details regarding our management approaches, programmes and key performance indicators (KPIs) across a wide range of issues. You can also find additional topics, such as information about our future plans. While the report website mainly focuses on our businesses in Hong Kong, information on our overseas subsidiaries can be found in the [Mainland of China and International Business](#) section.

External Review Panel

We convened our third External Review Panel to provide both independent advice on our plans for sustainability reporting and also feedback on a draft of this report and our 2016 materiality matrix. The panel members, all based in Hong Kong, were chosen for their extensive experience across different aspects of sustainability reporting. We are grateful for the comments received, all of which have been carefully considered during the preparation of the final report.

This year's panel are:



Shirlee Algire

Executive Manager –
Sustainability, Hong
Kong Jockey Club



Mike Kilburn

Acting General Manager,
Sustainability, Hong Kong
Airport Authority



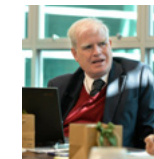
Jane Lau

CEO,
UNICEF Hong Kong



Jessica Robinson

Senior Advisor at Principles
for Responsible Investment
(UN PRI)



Robert Gibson

Fellow, Civic Exchange
and Adjunct Professor,
Hong Kong University of
Science and Technology



Calvin Lee Kwan

General Manager,
Sustainability, Link REIT



Simon Ng

Independent Consultant



Agnes Tai

Director, Great Glory
Investment Corporation



SK Wu

Risk Manager, Alliance
Construction Materials
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Sustainability Reporting Guidelines

Since we started our sustainability reporting journey in 2001, our report has made reference to the recognised reporting guideline. The current report has been prepared in accordance with the Global Reporting Initiative G4 Sustainability Reporting Guidelines (GRI-G4) Core option. We have provided a [GRI Content Index](#), which includes cross-references to the International Association of Public Transport (UITP) Sustainability Charter Reporting Guide 1.0 and ISO26000 Guidance on Social Responsibility. Please click [here](#) for a list of Identified Material Aspects and Boundaries.

We have also provided a [HKEx ESG Content Index](#) in order to demonstrate our current level of compliance with the 2015 Revision of the Hong Kong Stock Exchange Environmental, Social and Governance Reporting Guide (HKEx ESG Guide).

Independent Assurance

Deloitte Touche Tohmatsu has provided an [independent assurance report](#) for selected quantitative data.

SCOPE OF THIS REPORT

This report covers material issues arising from the Company's principal activities in Hong Kong during 2016 (1 January to 31 December) with reference to our Materiality Matrix and with particular focus on impacts arising from our railway operations, which are the core of our business and account for the major share of our revenues.

About Our Subsidiaries

We refer to subsidiaries as wholly or majority owned entities over which the Company has management control, and associates as entities over which the Company has significant influence but not control or joint control. Discussion of their sustainability management and achievements are included in the [Mainland of China and International Business](#) section, and quantitative KPIs are included in the [Performance Metrics](#) section.

In general, other chapters in this report do not address sustainability impacts arising from activities of our subsidiaries and associates outside of Hong Kong. The exception is when there is direct relevance for our businesses or stakeholders in Hong Kong. We are committed to working with our subsidiaries to promote disclosure of environmental, social and governance impacts.

We are also including KPIs from material aspects for Ngong Ping 360, a wholly-owned subsidiary in Hong Kong that operates the Tung Chung to Ngong Ping cable car system and Theme Village in Ngong Ping.

LEARN MORE...

Please refer to the [Annual Report](#) for data on the contribution from different businesses to total revenues ([Consolidated Profit and Loss Account](#)) and details of the Company's interest in subsidiaries and major associates ([Notes to the Accounts](#), (Note 27 and 28)).

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Professor Frederick Ma Si-hang became MTR's Chairman last year. One-year in, we review some of his reflections on the progress of and future opportunities for MTR.

MTR's most significant accomplishments last year...

I've really enjoyed my time at MTR thus far. It is clear to me that the company understands that in order to be successful over the long-term, we need to address the present while keeping an eye on what's important down the track. From everything I've witnessed this past year, this is what we have been doing, specifically by creating and adding value to Hong Kong's economy.

What do I mean by this? MTR creates economic value two ways: in financial terms, i.e. in the form of revenue generated from both within and outside of Hong Kong distributed throughout the city's economy; and in operational

terms, i.e. in the form of positive benefits on the economy which are generated as a result of our operations.

In financial terms, the economic value we create by operating our rail and property businesses is shared broadly with Hong Kong: with our employees in the form of wages, salaries and benefits, with our suppliers and contractors through products and services we procure, with the government in the form of income and taxes, and with our shareholders in the form of payment of dividends, noting of course our largest shareholder is the Hong Kong SAR government.

In operational terms, the value that MTR creates, particularly through our rail operations, is derived from the safety, efficiency, ease and environmental effectiveness of our operations, which connects Hong Kong through the delivery of world class service to our customers – which is what we as a company work together to deliver every day.

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[Introduction](#)[? Chairman's Message](#)[CEO Letter](#)[Safety](#)[Customers](#)[Community](#)[Environment](#)[Staff](#)[Supply Chain](#)[Financial and Economic Performance](#)[Corporate Governance](#)[Building Our Future](#)[Mainland of China and International Business](#)[Performance Metrics](#)**Our focus in the future...**

Our goal should always be to manage the challenges of the present while investing for the future. In this sense, we are investing in various ways to help enhance the future of MTR.

We've begun our transition to Rail Gen 2.0 by the successful opening of two new lines: the Kwun Tong Line Extension and the South Island Line (East); we are improving the accessibility and facilities of our stations; we are improving the energy and cost efficiency of our infrastructure; we are refurbishing our existing trains; we are upgrading our signaling systems. These investments will allow us to maintain our safety record and continue to improve the comfort and efficiency of our services.

These investments are significant in size and important to the long term success of MTR. They require us to think carefully about the long term impacts of our investments and how these will help MTR meet the needs of our customers far into the future. Decisions on these investments also often involve tradeoffs amongst competing demands. We do our best to communicate this fact to the community, because we cannot always satisfy everyone's wishes, and our ability to make these investment is predicated on a sustainable income flow made possible by the Fare Adjustment Mechanism (FAM).

We continue to engage our stakeholders...

It is very important that MTR continues to listen to our stakeholders and respond as best we can. The feedback from our customers, the engagement and liaison works we carry out as we plan and construct new lines, our dialogue with civil society - these and other programmes help us maintain contact with our stakeholders and identify what their priorities are. We work to hear their concerns and make decisions on the necessary improvements to continue to meet their needs and aspirations.

Opportunities ahead of us

At its core, everything that MTR does is related to its purpose: serving the public now and long into the future. The best opportunities are where MTR can grow, improve and help Hong Kong unleash its potential towards a more prosperous and thriving future.

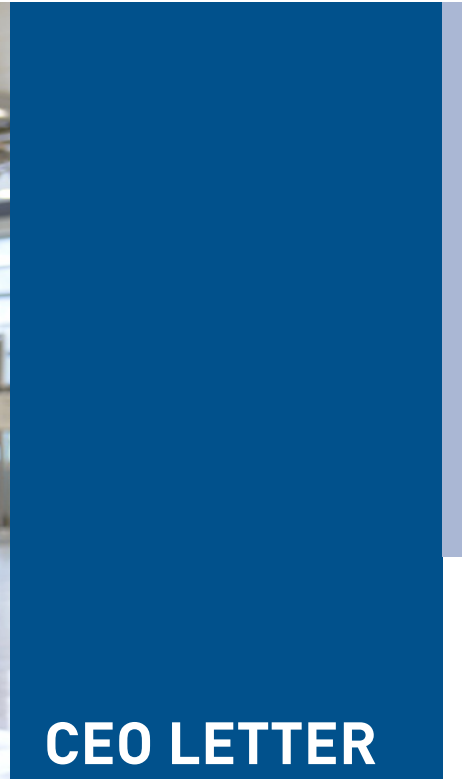
In addition to the two railway projects currently being developed, the Government's Railway Development Strategy 2014 has also identified new projects which will help further connect Hong Kong. We are carrying out the technical studies and preparing the project proposals on the first four of these new projects.

Outside of Hong Kong we are targeting opportunities in the Mainland China, Europe and Australia. Our international work allows us to seek growth markets, ensure we stay globally competitive and translate these back into Hong Kong.

In the many areas highlighted throughout this report, MTR is working to better the future. I'm honored to serve as the Chairman of this company and look forward to the many achievements that we will achieve together in 2017 and beyond.

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CEO LETTER

Looking back at MTR's performance in 2016, we at MTR are proud of what has been achieved. Whilst continuing to enhance our world class level of service, we have also opened the Kwun Tong Extension Line and the South Island Line (East) in Hong Kong, taken over the Pendeltåg concession in Sweden and, our associate company, Beijing MTR Corporation Limited, had opened Phase 1 of Beijing Metro Line 16 in the Mainland of China. We have invested in our people, deepened our dialogue within Hong Kong, continued our global business growth and are investing in our future.

Let's start with the opening of the 2.6-km Kwun Tong Line Extension in October, and the 7-km South Island Line (East) in December; these two lines with six new stations have increased our ability to connect Hong Kong. MTR is now present in all of Hong Kong's 18 districts. The two lines were completed after years of hard work, both in planning and construction, and represent the culmination of our local community dialogue as well as our technical construction capabilities. We are proud of the opening of these

two lines, and greatly treasure the opportunity to continue to connect the Hong Kong community.

As we expand our system, we continue to maintain our world class on-time performance as well as our constant focus on safety. To keep our customer needs at the forefront, we are continuing to improve our customer engagement to better understand and meet their current and future needs. Our Customer Vision 2030 study provides insights on how we aim to cater for the needs of different customer groups.

Riding on the opportunities offered by our new railway lines and our various asset replacement projects, we are looking further into the future to transform our services to meet Hong Kong's changing demographic needs, developing smart and resilient station features and design, and exploring opportunities to utilize new forms of digital technology to enhance services delivered by both our rail and property businesses.

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Such large investments require a sustainable financial model and the Fare Adjustment Mechanism (FAM) is an important part of this. We recognise that fare increases may be challenging for some communities in Hong Kong and we have a variety of offers in place to help these communities. At the same time, it is worthwhile to note that over the past years, our fare increases have been quite a bit lower than average increases in both inflation and salary and, when compared to other systems around the world, our current fares are one of the most affordable.

This year we were able to capitalize on MTR's inherent sustainability and our investments to save energy and increase efficiency through the launch of our Green Bond. The goal with this is to drive investment in service enhancements and environmental performance. As a low-carbon transport operator, we want to help Hong Kong develop as a regional green financial hub, as doing so will also enhance our sustainable financial model.

Our system is only as good as the people who run it and therefore our human resources strategy must ensure that we have the people we need for both current operations and future expansions. Toward these ends, we continue to focus on recruitment, training, mobility, and succession planning with the MTR Academy serving as an important element. The Academy will become our hub for rail and rail-related knowledge and through this we aim to enhance rail skill-sets and expertise not only for people in Hong Kong but also those from cities abroad including ones along the Belt and Road initiative.

An important aspect of our long term success is our global business, which benefits MTR not only financially but also enhances our brand reputation, allows us to learn from global best practices and sharpens our competitiveness. Our strategy, therefore, seeks to expand further our businesses both within and outside Hong Kong.

Overall, 2016 has been a successful year for MTR. In the coming years I'm sure that we will face new challenges as we continue to deliver the high performance standards expected of us in Hong Kong. A recent challenge was the arson incident in Tsim Sha Tsui in February 2017. Our colleagues responded robustly, professionally and speedily, working in partnership with the Police and Fire Services Department, enabling injuries and damages to be minimised. In addition to raising donations for those injured in the incident, we have formed a review panel to evaluate the incident, and are following-up on implementing the recommendations from the report which was released in April. We uphold the safety first culture and learn from each incident; with the people, investments and programmes we have in place, I'm confident of our collective ability to meet future challenges.

I look forward to continuing the journey with you all.

Lincoln Leong Kwok-kuen

Chief Executive Officer

9 May 2017

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ABOUT MTR CORPORATION

MTR Corporation Limited ("the Company") is a publicly-listed company (SEHK: 0066) headquartered in the Hong Kong Special Administrative Region ("Hong Kong").

In June 2000, the Hong Kong Government ("the Government") sold a portion of its issued share capital to private investors in an Initial Public Offering. Today, the Hong Kong Government holds a majority (76.5 %) of the shareholding while private investors, including institutional and retail investors, hold the remainder.

Our primary business is the construction and operation of mass transit railway systems in Hong Kong, which carried an average of more than 5.6 million passengers every weekday as at the end of 2016. While we are recognised as one of the best passenger railway transport providers in the world, we also engage in the development and sale of residential and commercial properties in partnership with property developers, and operate a property management service.

In addition to our Hong Kong rail operations, we also have a presence in the [Mainland of China](#), [Europe](#) and [Australia](#), where we provide operational and maintenance services directly or through joint ventures.

In 2016, we carried as many passengers on networks outside of Hong Kong as we did at home. In total, the Company and its subsidiaries and associates employ more than 37,700 people around the world, of which majority are locally-employed staff.

LIST OF AWARDS

Please click [here](#) for a list of awards received by the Company during 2016.



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Vision, Mission and Values

This concise statement of our Vision, Mission and Values (VMV) is integral to our management approach in all areas of our business. Our success of providing passenger rail transport reflects our consistent and conscientious pursuit of our Vision to be a leading multinational company that connects and grows communities with caring service.



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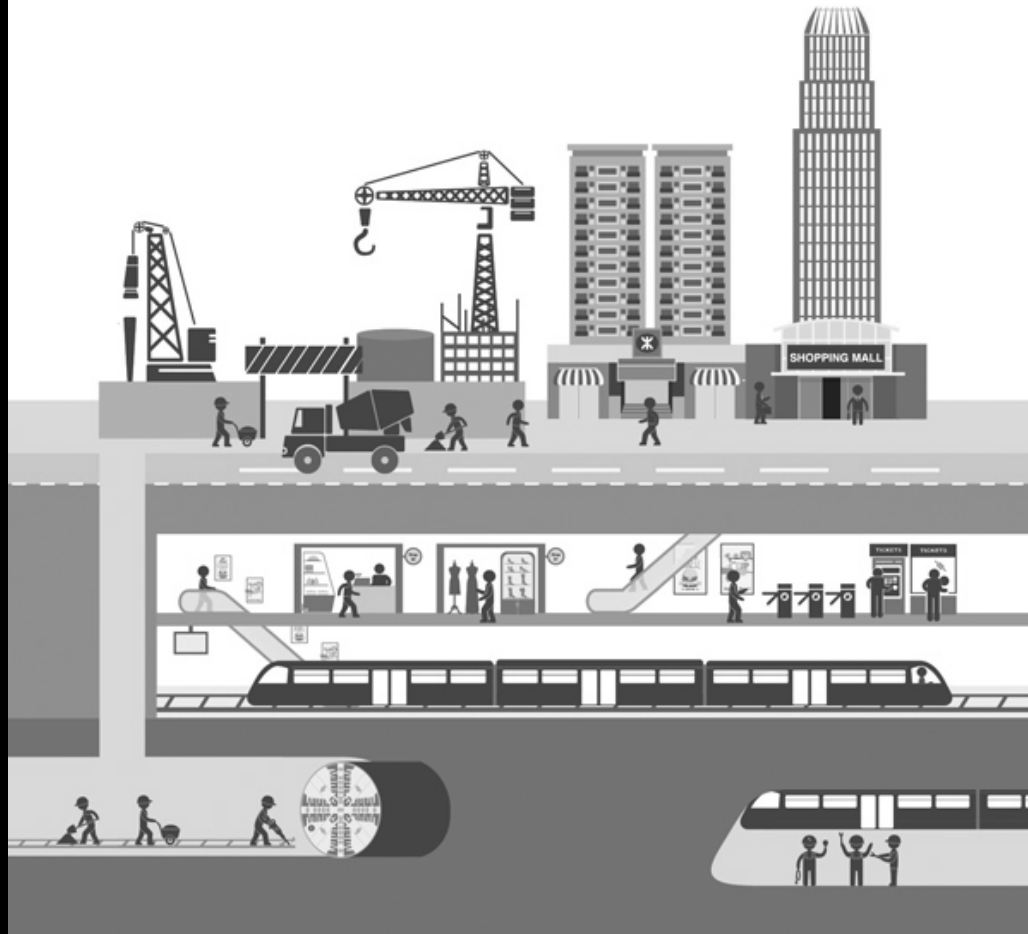
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Hong Kong Transport Operations



Hong Kong Network Expansion



Hong Kong Station Commercial Business



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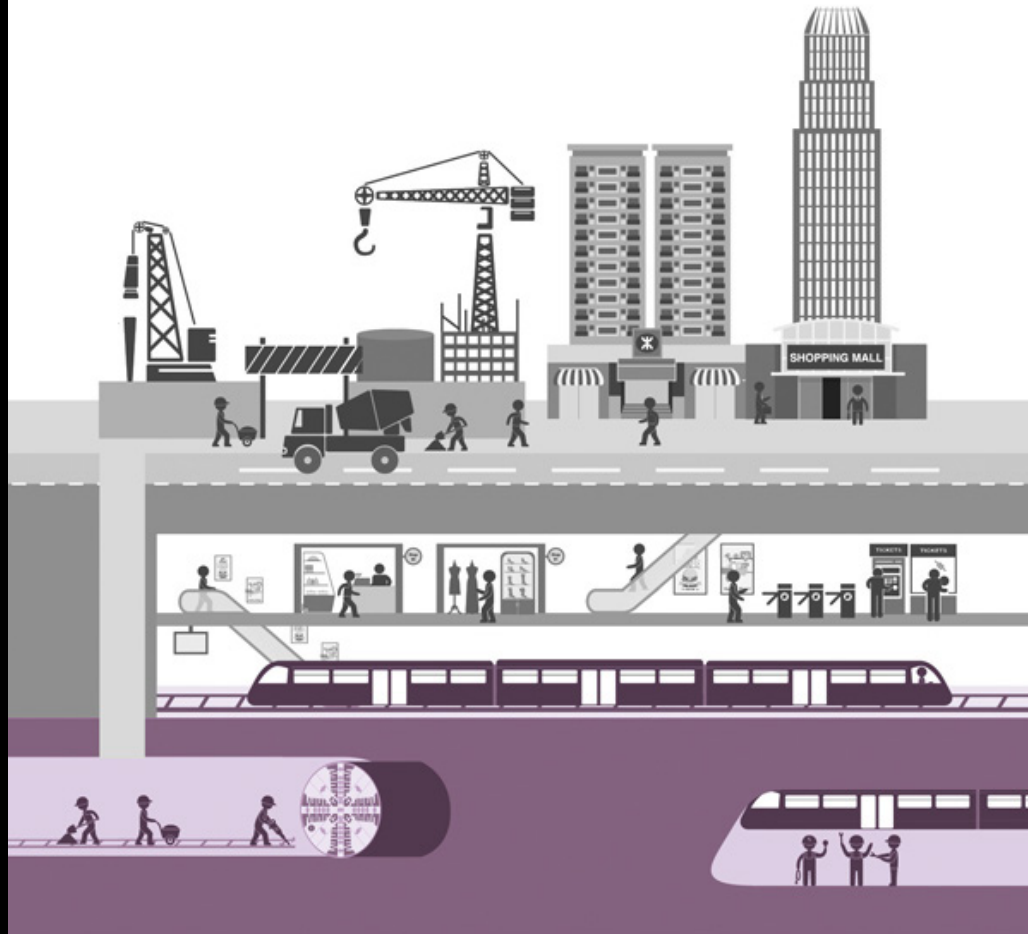
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Hong Kong Transport Operations



We operate an urban mass transit railway system with 11 heavy rail lines and a Light Rail system. The heavy rail network comprises domestic and cross-boundary services and a dedicated Airport Express link. We also provide intercity services to and from the Mainland of China as well as a small feeder bus service in Hong Kong.

Hong Kong Network Expansion



Hong Kong Station Commercial Business



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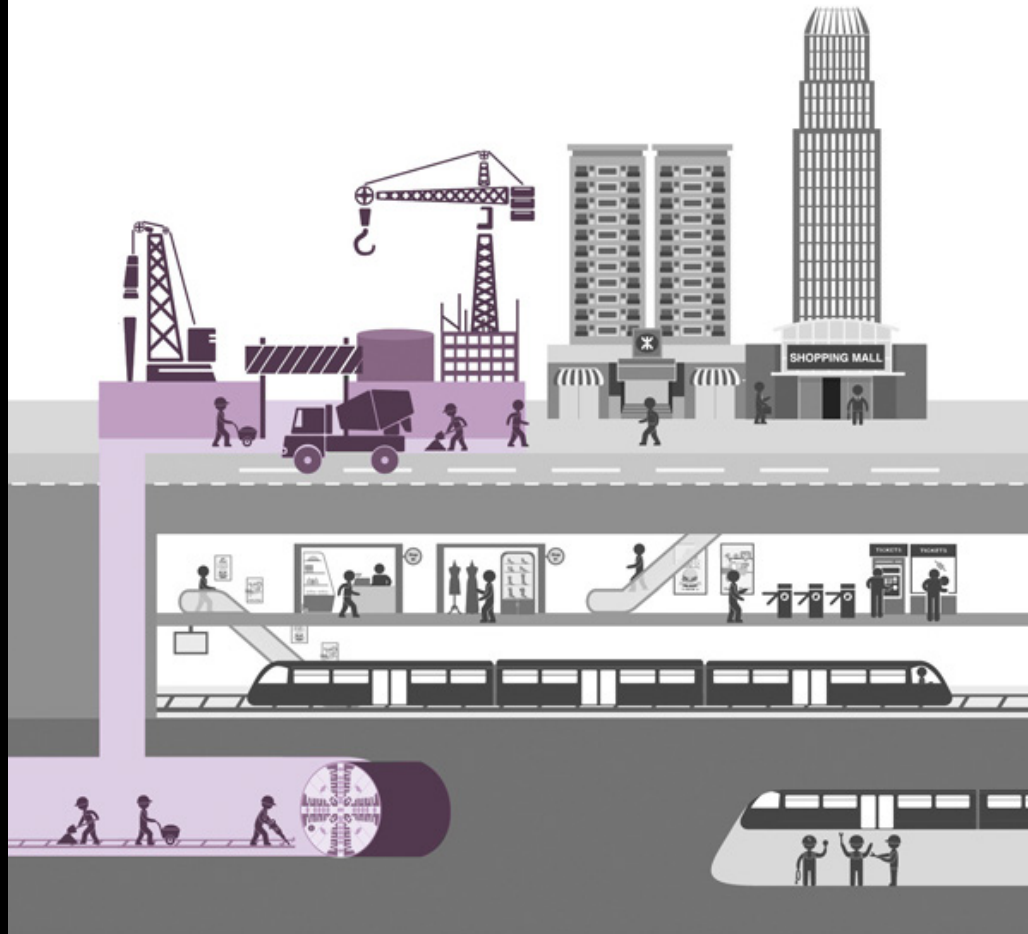
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Hong Kong Transport Operations



Hong Kong Network Expansion



We manage the design and construction of new railway extensions along with a multitude of other projects each year to upgrade and improve the operating railway network. The Kwun Tong Line Extension and South Island Line (East) were completed in 2016 and the Island Line Extension to Western District was completed in 2014. Two other projects, the Shatin to Central Link and the Express Rail Link, are still under construction. Together these five projects will increase the route length of our network in Hong Kong by 25 per cent.

Hong Kong Station Commercial Business



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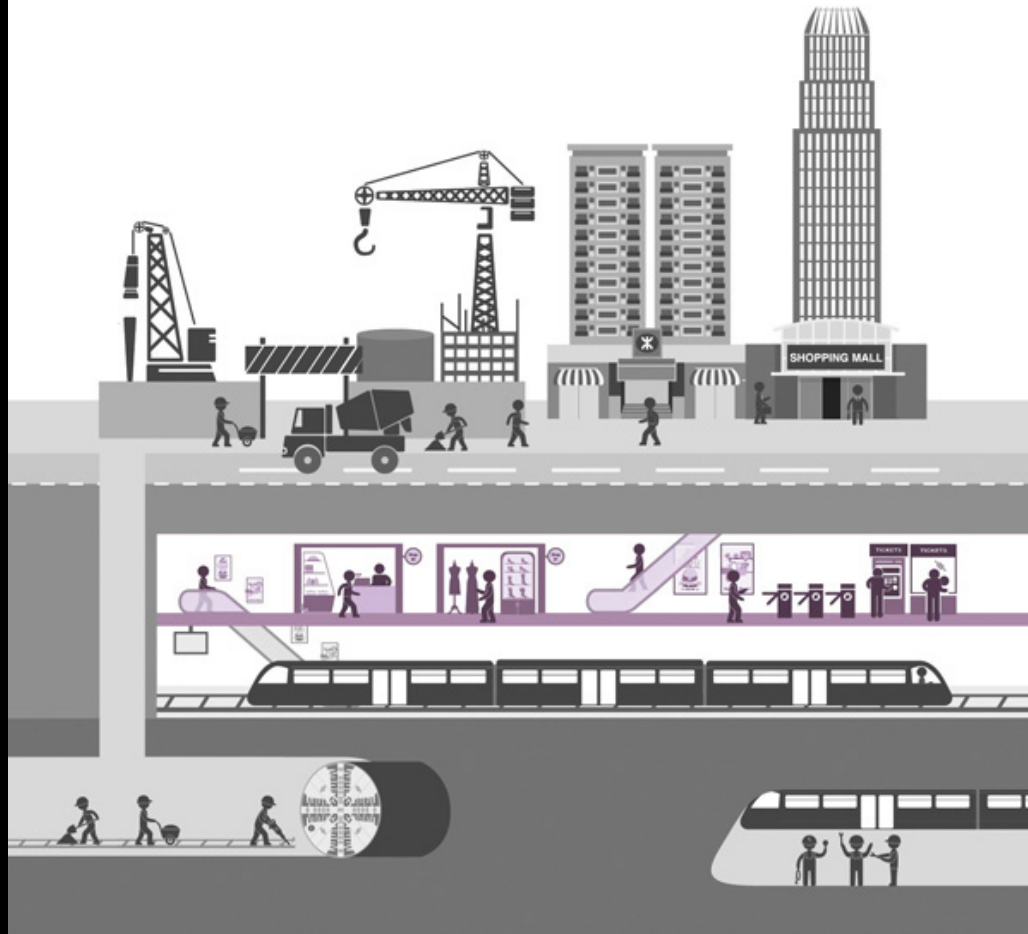
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Hong Kong Transport Operations



Hong Kong Network Expansion



Hong Kong Station Commercial Business



To make the most of our railway assets, we operate related businesses such as the leasing of station retail space, advertising in trains and stations, and fixed and mobile telecommunications systems.

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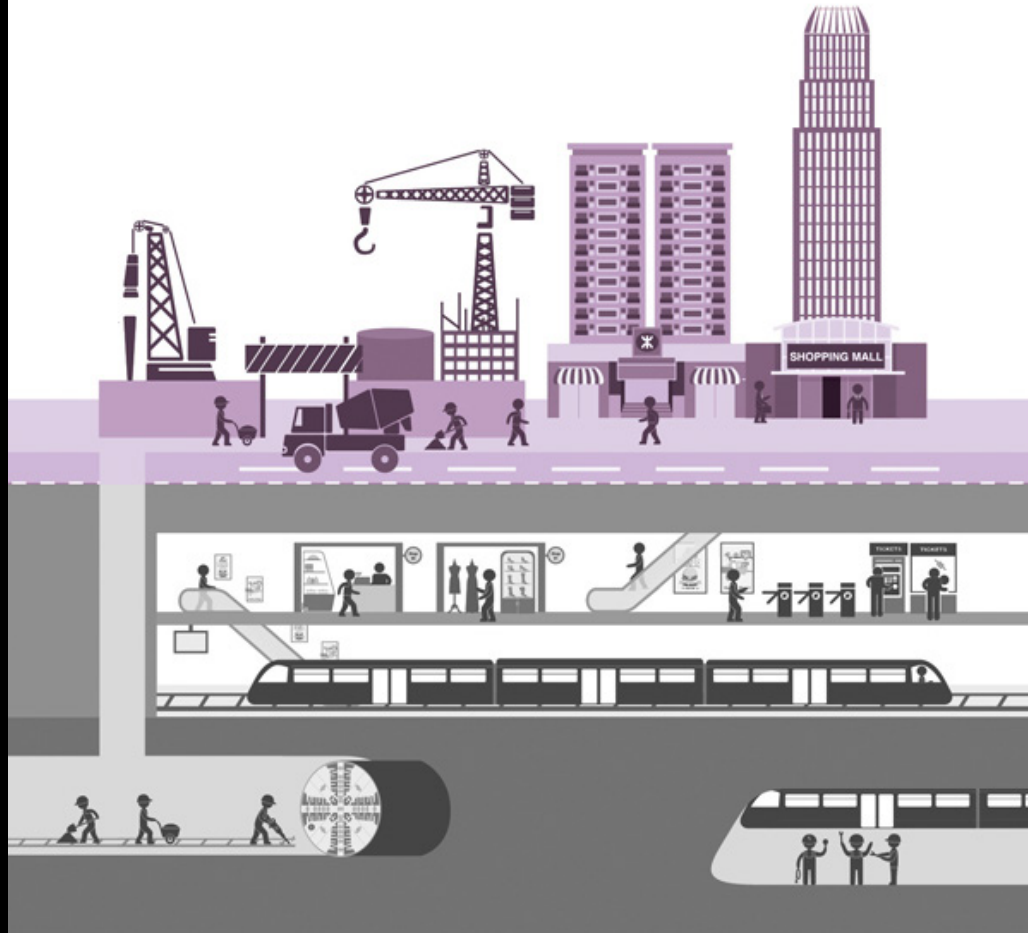
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Hong Kong Transport Operations

Hong Kong Network Expansion

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Property and other Businesses

We work with leading property developers to build properties above or near our stations. We also manage a portfolio of residential properties, office space and commercial space. Other businesses include rail-related consultancy, the Ngong Ping 360 cable car and associated theme village, and the Octopus card payments system.

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Hong Kong Transport Operations



Hong Kong Network Expansion



Hong Kong Station Commercial Business



Property and other Businesses



Mainland and International Business



Our subsidiaries and associates build, operate and maintain railway systems and provide related services in the Mainland of China, the United Kingdom, Sweden and Australia. In the Mainland of China, we are also involved in leasing retail space, providing estate management services and developing properties.

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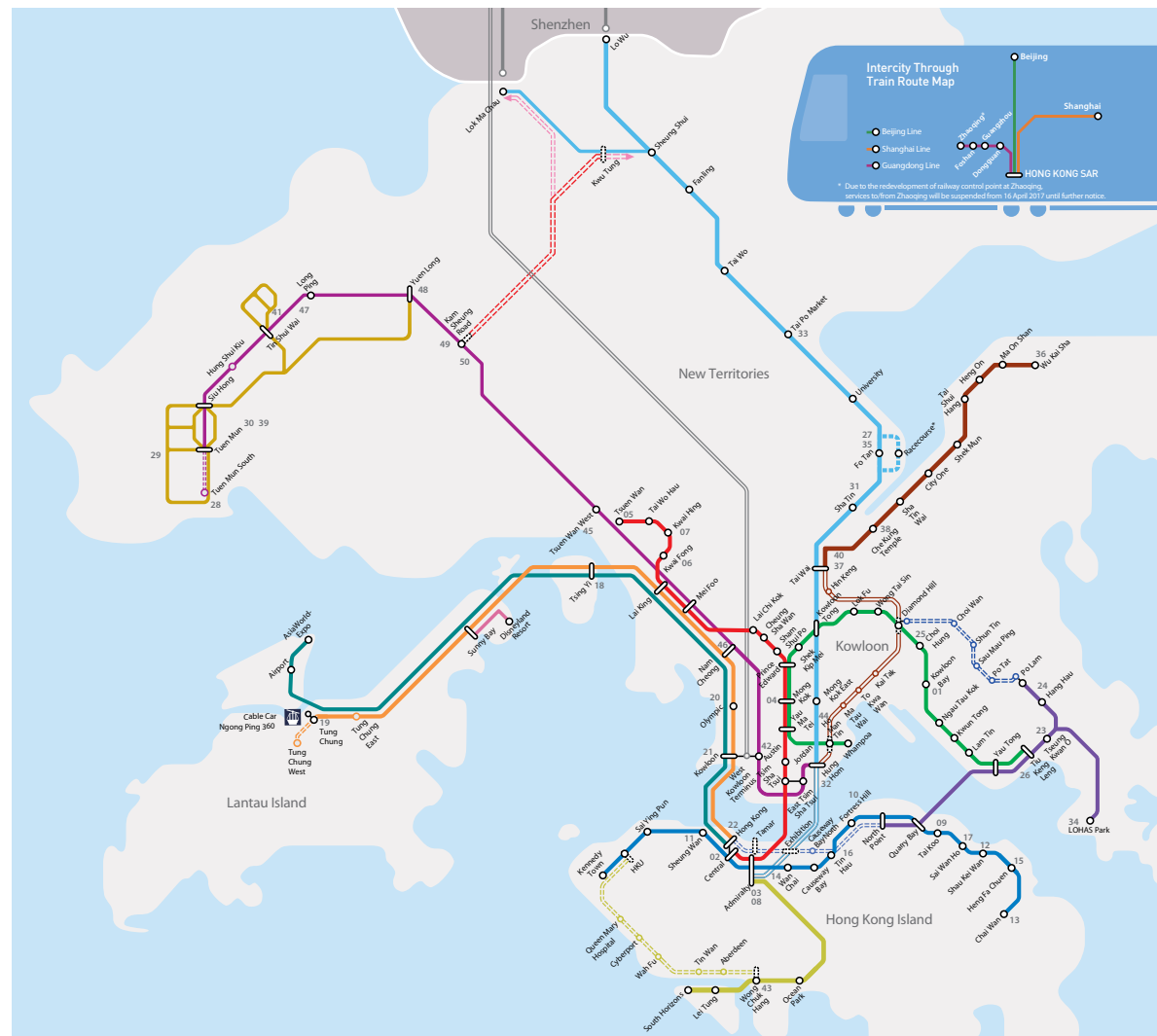
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Hong Kong Transport Operations and Network Expansion

- 11 heavy rail lines, total route length of 230.9km
- 93 stations and 68 Light Rail stops
- Average of around 5.6 million passengers per weekday
- Total patronage of more than 1.95 billion
- 2 rail projects completed in 2016; MTR is now present in all 18 districts in Hong Kong for the first time
- 2 rail projects totally 43 km under construction

MTR system and properties



Properties Owned / Developed / Managed by the Corporation

- 1 Telford Gardens / Telford Plaza I and II
- 2 World-wide House
- 3 Admiralty Centre
- 4 Argyle Centre
- 5 Luk Yeung Sun Chuen / Luk Yeung Galleria
- 6 New Kwai Fong Gardens
- 7 Sun Kwai Hing Gardens
- 8 Fairmont House
- 9 Kornhill / Kornhill Gardens
- 10 Fortress Metro Tower
- 11 Hongway Garden / Infinitus Plaza
- 12 Perfect Mount Gardens
- 13 New Jade Garden
- 14 Southern Garden
- 15 Heng Fa Chuen / Heng Fa Villa / Paradise Mall
- 16 Park Towers
- 17 Felicity Garden
- 18 Tierra Verde / Maritime Square
- 19 Tung Chung Crescent / Citygate / Novotel Citygate / Seaview Crescent / Coastal Skyline / Caribbean Coast
- 20 Central Park / Island Harbourview / Park Avenue / Harbour Green / Bank of China Centre / HSBC Centre / Olympian City One / Olympian City Two
- 21 The Waterfront / Sorrento / The Harbourside / The Arch / Elements / The Cullinan / The Harbourview Place / W Hong Kong / International Commerce Centre / The Ritz-Carlton, Hong Kong
- 22 One International Finance Centre / Two International Finance Centre / IFC Mall / Four Seasons Hotel / Four Seasons Place
- 23 Central Heights / The Grandiose / The Wings / PopCorn 1 / PopCorn 2 / Crowne Plaza Hong Kong Kowloon East / Holiday Inn Express Hong Kong Kowloon East / Vega Suites
- 24 Residence Oasis / The Lane
- 25 No.8 Clear Water Bay Road / Choi Hung Park & Ride
- 26 Metro Town
- 27 Royal Ascot / Plaza Ascot
- 28 Ocean Walk
- 29 Sun Tuen Mun Centre / Sun Tuen Mun Shopping Centre
- 30 Hanford Garden / Hanford Plaza
- 31 Citylink Plaza
- 32 MTR Hung Hom Building / Hung Hom Station Carpark
- 33 Trackside Villas
- 34 The Capitol / Le Prestige / Hemera
- 35 The Palazzo
- 36 Lake Silver
- 37 Festival City
- 38 The Riverpark
- 39 Century Gateway
- 40 The Austin / Grand Austin
- 41 City Point

Property Developments Under Construction / Planning

- 42 LOHAS Park Packages
- 43 Tai Wai Station
- 44 Tin Wing Stop
- 45 Wong Chuk Hang Station Packages
- 46 Ho Man Tin Station Packages

West Rail Line Property Developments (As Agent for the Relevant Subsidiaries of KCRC)

- 47 Century Gateway
- 48 Tsuen Wan West Station (TW5) Bayside / Tsuen Wan West Station (TW5) Cityside / THE PAVILIA BAY / City Point
- 49 Cullinan West
- 50 The Spectra / Long Ping Station (South)
- 51 Yuen Long Station
- 52 Kam Sheung Road Station Packages
- 53 Pat Heung Maintenance Centre

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Hong Kong Rail Network

Domestic Services refer to ten main commuter lines: Kwun Tong, Tsuen Wan, Island, South Island (East), Tung Chung, Tseung Kwan O, East Rail, West Rail, Ma On Shan and Disneyland Resort lines.

Cross-boundary Service refers to our service running to/from Hong Kong and Shenzhen via Lo Wu or Lok Ma Chau on the East Rail Line.

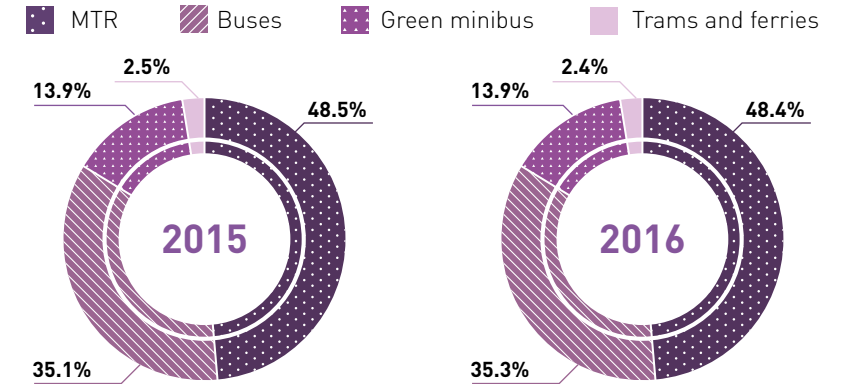
Airport Express refers to the direct service linking Hong Kong International Airport and Hong Kong Station in the Central business hub.

Light Rail and Bus refers to the Light Rail network in the northwestern New Territories and feeder bus services to/from many MTR stations in the New Territories.

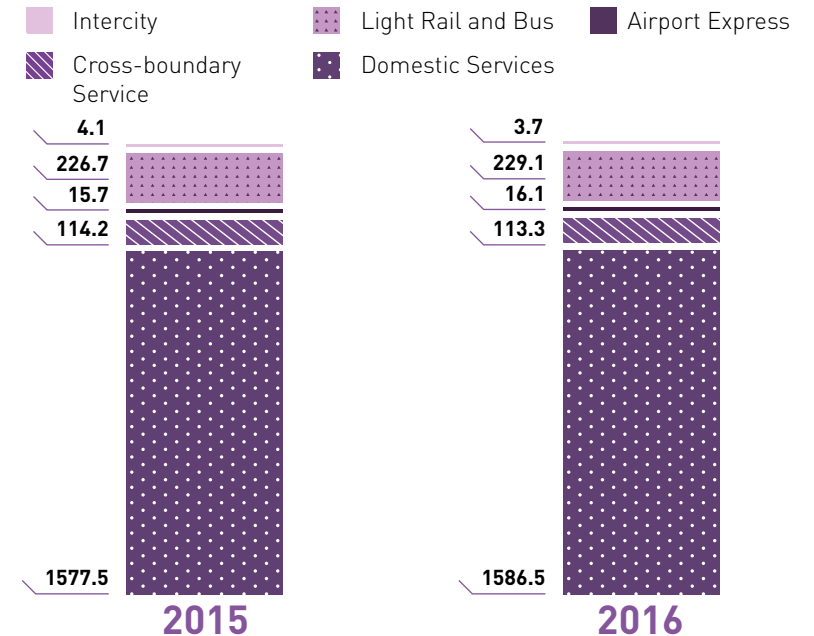
Intercity refers to three through train routes to/from cities in the Mainland of China, namely Beijing, Shanghai and Guangdong.

In 2016, our share of total franchised public transport boardings in Hong Kong was 48.4%, which has reduced marginally from the year before.

FRANCHISED PUBLIC TRANSPORT BOARDINGS IN HONG KONG (%)



TOTAL PATRONAGE FOR HONG KONG TRANSPORT OPERATIONS (MILLIONS)



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The Kwun Tong Line Extension (KTE), which extends the existing line to connect Yau Ma Tei with the Whampoa area, opened on 23 October 2016. And on 28 December 2016, we opened the South Island Line (East) (SIL(E)) as the first metro service to the Southern District, extending from Admiralty to the southern part of Hong Kong Island and reaching an estimated population of 350,000 residents and working commuters.

Both of these projects were financed by the Rail plus Property model. Read more about the considerations for the existing and future communities along these two lines in the [Community section](#).

Two new lines are currently under construction which, together with the KTE and SIL(E) and the Island Line Extension to Western District that was opened in 2014, will expand route length of our rail network in Hong Kong by about 25% to meet the future transportation needs of the people of Hong Kong.

Hong Kong Network Expansion Projects (and Completion Status of Rail Projects in 2016)

Express Rail Link — A 26km high-speed cross-boundary rail service connecting Hong Kong with Shenzhen, Guangzhou and the high-speed rail network in the Mainland of China. At year end, completion had reached 87%.

Shatin to Central Link — The 17-km Shatin to Central Link connects existing railway lines to form an East West Corridor and a North South Corridor. The lines will provide much needed new links across the New Territories as well as a new cross-harbour connection, serving an estimated residential and working population of 640,000 in 2021. At year end, completion had reached 68% overall.

LEARN MORE...

Express Rail Link

On 30 November 2015, the Company announced that it had entered into the "[XRL Agreement](#)" with the HKSAR Government. The XRL Agreement, which includes a proposal to resolve the additional funding for the Express Rail Link Project, was approved by the Company's independent shareholders on 1 February 2016 with 99.83% voting in favour. On 11 March 2016, the HKSAR Legislative Council also approved the additional funding requirement, whereupon the XRL Agreement has become unconditional and comes into full force.

We recognise that in order to continue to connect and grow communities in parts of Hong Kong that are currently underserved by an efficient mass transportation system, we must continue to explore [new opportunities to expand our network](#).

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Hong Kong Station Commercial Business

- 1,392 MTR Shops for passenger convenience
- 22,485 advertising units at stations, and 23,747 units on trains
- Enhanced mobile service through 4G access at all stations
- Speed up the upgrade and installation of mobile phone and WiFi system

To make the most of our railway assets, we operate related businesses such as leasing retail space and advertising in trains and stations, and fixed and mobile telecommunications services.

As at 31 December 2016, there were 1,392 shops inside stations covering 57,151 square metres of retail space, an increase of 913 square metres from 2015.

LEARN MORE...

More information about [MTR Shops and Malls](#).

For our telecommunications services business, the installation of a new mobile phone network offering increased data capacity and more 4G services has made good process. The project is scheduled for completion in 2018. We have also worked with a telecom operator to upgrade WiFi equipment to provide enhanced service.

Hong Kong Property Business

- 96,066 residential units; and
- 758,427 m² of commercial and office space under management
- Investment portfolio:
 - » 212,538 m² of retail properties
 - » 54,677 m² of lettable office space and other uses
 - » 120,620 m² of GFA to be added over the next 5 years

In Hong Kong, we work with leading property developers to build properties above or near our stations. We have a portfolio of investment properties comprising shopping malls and office space and other uses.

The Company also manages a portfolio of residential properties, office space and commercial space. As of the end of 2016, we had 96,066 residential units, and 758,427 square metres of commercial and office space under management. We are enhancing the assets of our existing shopping centre portfolio while making significant additions. These projects will add a total of about 120,620 square metres (gross floor area, "GFA") to the existing retail portfolio, increasing by approximately 40%.

Over the past three years, a number of new property development projects have been tendered out. Upon completion, they will add approximately 18,000 residential units to support the community's housing needs. More details of these projects and expansion of our shopping centre portfolio are available in [Building Our Future](#).

LEARN MORE...

More information about [MTR Properties](#) is available on our corporate website.

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Consultancy Services and Other Businesses

We offer worldwide consultancy and contracting services on railway planning, design management, system integration and assurance, project management, construction management, railway operations and maintenance, and non-fare revenue business. In recent years our consultancy business has provided services in cities across Asia, Australia and the Middle East.

DID YOU KNOW?

We served as technical consultant to Metro Barra for the Rio Metro Line 4, which was opened in 2016 as a key infrastructure project for the 2016 Olympic Games in Rio de Janeiro, Brazil. We also previously assisted Metro Rio for Metro Rio Lines 1 and 2.

More information about our [consultancy services](#) can be found on our corporate website.

We are engaged in other businesses in Hong Kong, including the Ngong Ping 360 cable car service and associated theme village, named as one of the "Ten Amazing Cable Car Rides Around the World" by the UK's Daily Telegraph newspaper in 2014. For the first time, we are including performance metrics of relevant sustainability issues from [Ngong Ping 360](#). We are also engaged in the Octopus card payment system, which is outside the scope of this report as we do not have operational control of the Company.

LEARN MORE...

Find out more about [Ngong Ping 360](#) cable car and the theme village on their website

Mainland of China and International Business

Outside of Hong Kong, we invest selectively in rail-related projects, including property developments, which we believe will generate sustainable returns within clear risk parameters.

Currently our subsidiaries and associates are involved in building, operating and maintaining mass transit railway systems and providing related services in the Mainland of China, the United Kingdom, Sweden and Australia. In the Mainland of China, subsidiaries and associates are also involved in the leasing of retail space, providing estate management services and developing properties.

The total number of passengers carried by our subsidiaries and associates in six cities outside of Hong Kong reached approximately 1.8 billion in 2016.

In 2016 we saw our overseas operations progress well:

- Australia: our consortium is implementing the Operations, Trains and Systems Contract for Australia's largest public transport project, the Sydney Metro Northwest, our first international Public-Private-Partnership ("PPP") project
- Beijing: The North Section of Beijing Metro Line 16 opened on 31 December 2016.
- Hangzhou: Maintained excellent safety and operational performance during the G20 Summit and was highly regarded by the municipal government.
- Sweden: Took over the Stockholm commuter rail (Stockholms pendeltåg) on 11 December 2016.
- Shenzhen: The first batch of sold units, in the low-rise buildings above the depot, were handed over to buyers in December 2016.

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SWEDEN

Stockholm Metro

- Operated by MTR Tunnelbanan AB*
- Rolling stock maintenance by MTR Tech AB*

MTR Express intercity train service

- Operated by MTR Express (Sweden) AB*

Stockholm commuter rail (Stockholms pendeltåg)

- Took over in December 2016
- Operated by MTR Pendeltågen AB*
- Rolling stock maintenance by Emtrain AB#

UNITED KINGDOM

TfL Rail / Elizabeth Line

- Operated by MTR Corporation
(Crossrail) Limited*

London Overground

- Until November 2016
- Operated by London Overground
Rail Operations Limited#

Stockholm

London

AUSTRALIA

Sydney Metro Northwest

- Operation will commence in 2019
- Operated by Metro Trains Sydney Pty. Limited#

Melbourne's Metropolitan Rail Service

- Operated by Metro Trains Melbourne Pty. Limited#

MAINLAND OF CHINA

Beijing Metro Line 4, Daxing Line, Beijing Metro Line 14 and 16 (Phase 1)

- Operated by Beijing MTR Corporation
Limited#

Hangzhou Metro Line 1 and extension

- Operated by Hangzhou MTR
Corporation Limited#

Shenzhen Metro Line 4 (Longhua Line)

- Operated by MTR Corporation
(Shenzhen) Limited*

Beijing

Hangzhou

Shenzhen

Sydney

Melbourne

* 100% owned subsidiary of MTR Corporation

Joint Venture/Consortium of which MTR Corporation is a shareholder

Please refer to [Mainland of China and International Business](#) for an introduction to the sustainability approach and performance of the railway operations conducted by our subsidiaries outside of Hong Kong. More information about our future plans outside of Hong Kong is available in [Building Our Future](#).

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VALUE CHAIN, MATERIALITY AND STAKEHOLDER ENGAGEMENT

We recognise that being a responsible and sustainable business cannot be done in isolation. We look for opportunities to collaborate with stakeholders to scale our positive impact. We are also committed to continually deepening our understanding of our stakeholders' needs through strategic and regular engagement.

Value Chain

Our value chain encompasses a wide range of activities from planning and construction through to delivery of rail, property, retail and other services.

Despite, or indeed because of this complexity, our value chain provides many opportunities to broaden, amplify and deepen the Company's contribution to society. In particular, our suppliers are a crucial component of our value chain; our [supply chain section](#) provides more details on our work with them. The table on the next page outlines how we respond to the concerns of our main stakeholders throughout the different phases of our value chain. This is linked and aligned with our materiality matrix, which is addressed in more detail in the relevant sections of this report.

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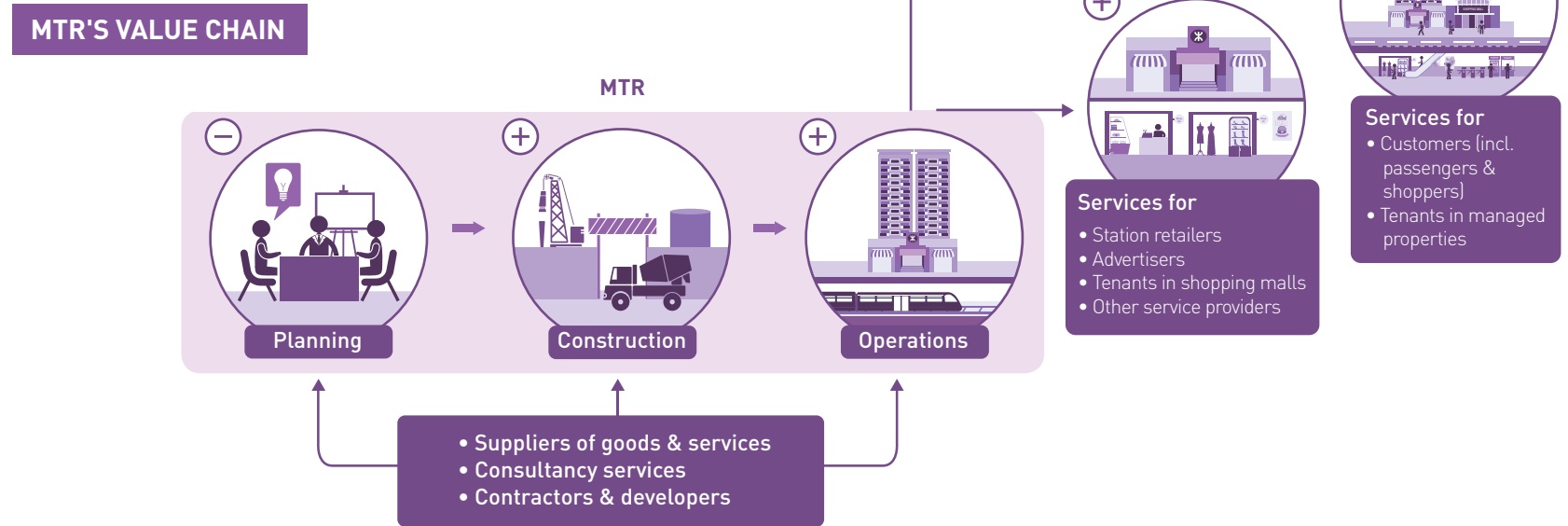
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What is a value chain?

A value chain is a set of activities performed by an organisation in order to deliver products and services. It is related to the idea of evaluating each organisation as a collection of various inputs, processes and outputs.



PHASE	MAIN STAKEHOLDERS	TOP MATERIALITY ISSUES OF CONCERN	HOW MTR RESPONDS
PLANNING	<ul style="list-style-type: none"> Regulators Political Interest Environmental Interest Communities Investors Staff 	<ul style="list-style-type: none"> Access to essential services Community involvement and development (engagement) 	<ul style="list-style-type: none"> Customers Building our Future Community

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Materiality

Sustainability reporting is one way that we engage with our stakeholders throughout our value chain on an annual basis. The infographic below presents an overview of our approach to materiality assessment, which integrates stakeholder engagement and risk management.



Stakeholder Engagement and Risk Management

Stakeholder engagement is a dynamic and evolving process that provides essential input into our business. Despite the enormous diversity of views and opinions that are represented, we want all of our stakeholders to feel heard and understood. For the purposes of our materiality assessment, we have created 10 categories of stakeholders. Definitions for each stakeholder group can be found in our interactive [Materiality Matrix](#). Learn more about our [Risk Management Approach](#) in our Corporate Governance Section.

Materiality Matrix

In the next two pages, please click on each of the sustainability reporting categories in the leader bar to see the position of relevant sustainability reporting issues in the Materiality Matrix and a description of the issues below.

Alternatively, you can click on the stakeholder headings in the side bar to learn about engagement channels and information resources that are relevant to each category of stakeholder. At the same time, key sustainability reporting issues (utilising the terms under the ISO 26000; refer to [Materiality Methodology](#) for more details) of importance to this category of stakeholders will appear in the Materiality Matrix.

Our stakeholders include any entity or individual who is significantly affected by our principal activities in Hong Kong and/or whose actions are expected to significantly affect the ability of the Company to achieve its objectives. By this definition, we have millions of stakeholders from all parts of our city, of all ages, all socio-economic groups, and all types of employment

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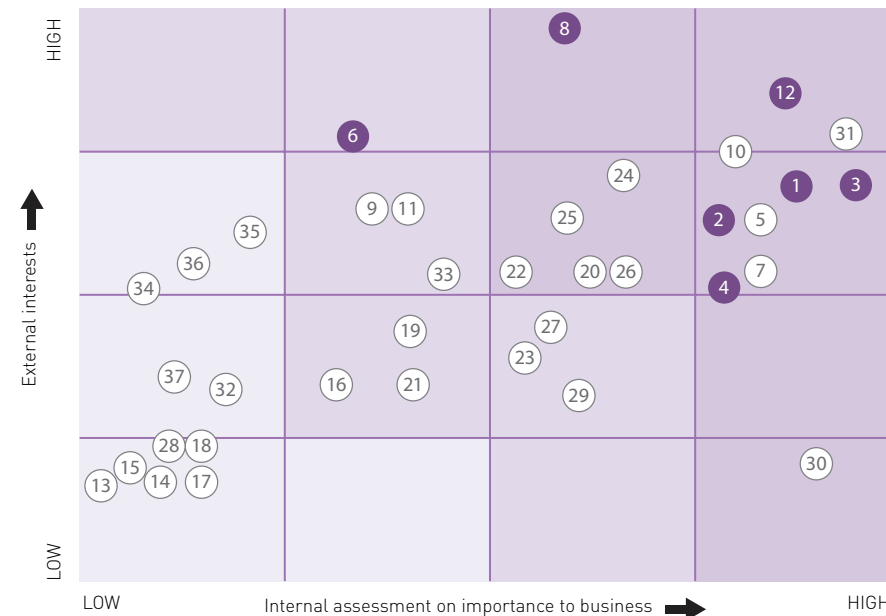
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Materiality Outcomes for Stakeholder Groups

Investors -	Business Partners +
Staff +	Regulators +
Environmental Interests +	Customers and Passengers +
Communities +	Political Interests +
Suppliers +	Media +

Description

Institutional / retail investors, other provider of capital and financial analysts



Engagement channels	Key interests	Materiality level	How MTR responds
<ul style="list-style-type: none"> Annual and interim reporting General Meeting Announcements and Circulars Investor meetings, conference and road shows MTR Hotline and email enquiry MTR Website Share registrar 	1 Organisational governance structure and process	High	Corporate Governance - Management Approach
	2 Fair operating practices (Ethical dealings with other organisations)	High	Fair and Ethical Business
	3 Anti-corruption	High	Anti-Corruption and Whistle-Blowing
	4 Responsible political involvement	High	Materiality
	6 Fair marketing (factual and unbiased information & fair contractual practices)	Medium	Not reported
	8 Customers' health & safety	High	Customer Safety
	12 Access to essential services (incl avoidance of service disruption)	High	Concessions and Discounts Train Service Performance New Railway Lines

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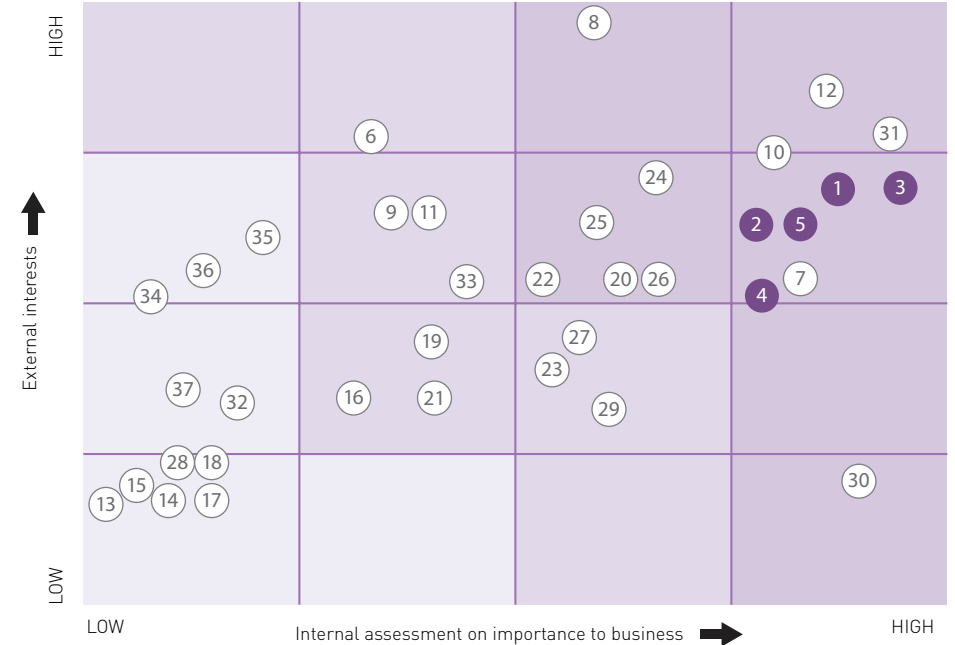
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Materiality Outcomes Arranged by Topic

- I. Fair Operating Practices −
- II. Consumer Issues +
- III. Human Rights Labour Practices +
- IV. The Environment +
- V. Supply Chain +
- VI. Community Involvement and Development +



	Materiality level	How MTR responds
1 Organisational Governance structure and process	High	Corporate Governance - Management Approach
2 Fair operating practices (including ethical dealings with other organisations)	High	Fair and Ethical Business
3 Anti-corruption	High	Anti-Corruption and Whistle-Blowing
4 Responsible political involvement	High	Materiality
5 Fair competition	High	Anti-Corruption and Whistle-Blowing

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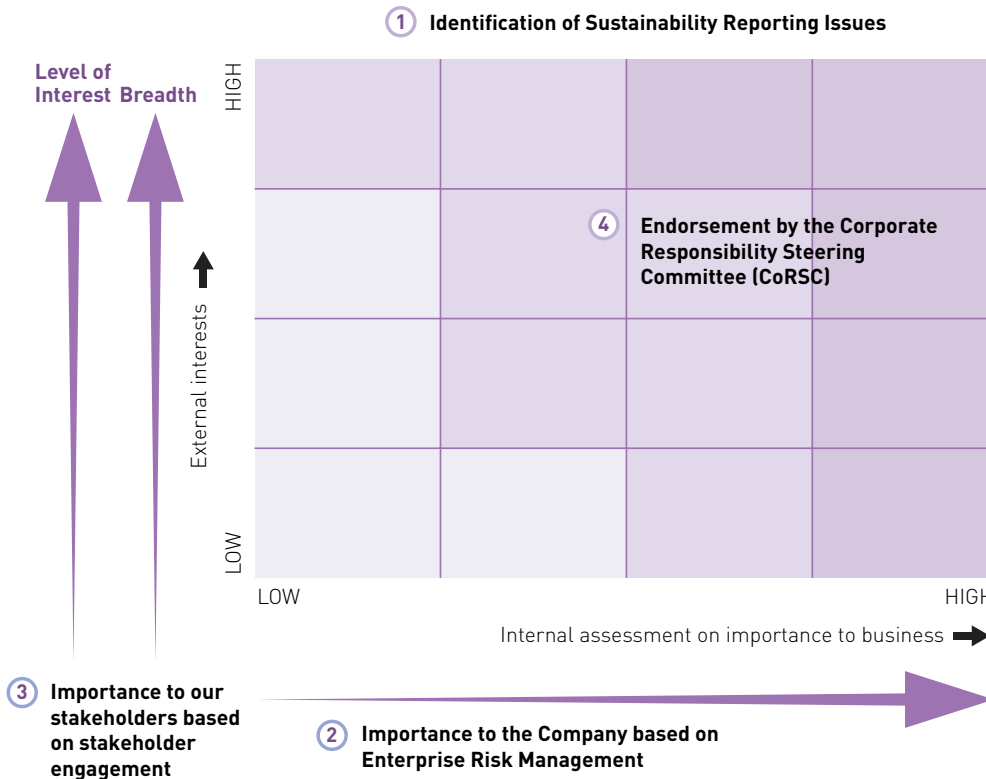
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Materiality Methodology

The principle of materiality states that our sustainability report should address topics that reflect the Company's significant economic, environmental and social impacts, and/or that substantively influence the assessments and decisions of our stakeholders, and it refers to the shared concerns of the Company and all stakeholders, not just investors. Our materiality assessment methodology involves four basic steps as summarised in the following graphic.

LEARN MORE...

ISO 26000 is an internationally recognised standard for clarifying what corporate responsibility is and translating its principles into best practices.



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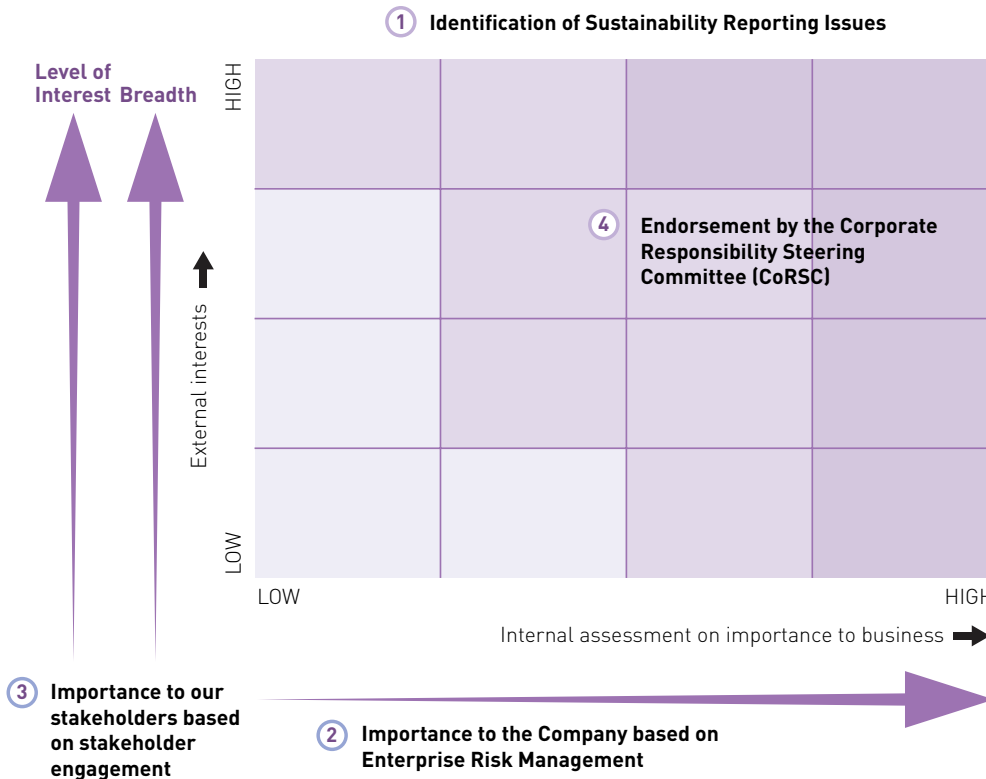
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STEP 1

Identification of Sustainability Reporting Issues

We refer to the ISO 26000 Guidance on Social Responsibility to identify the set of all possible issues that are relevant to sustainability reporting for our organisation. For the sake of convenience, we organise the issues into six categories:

- i. Fair Operating Practices
- ii. Consumer Issues
- iii. Human Rights and Labour Practices
- iv. The Environment
- v. Supply Chain
- vi. Community Involvement and Development

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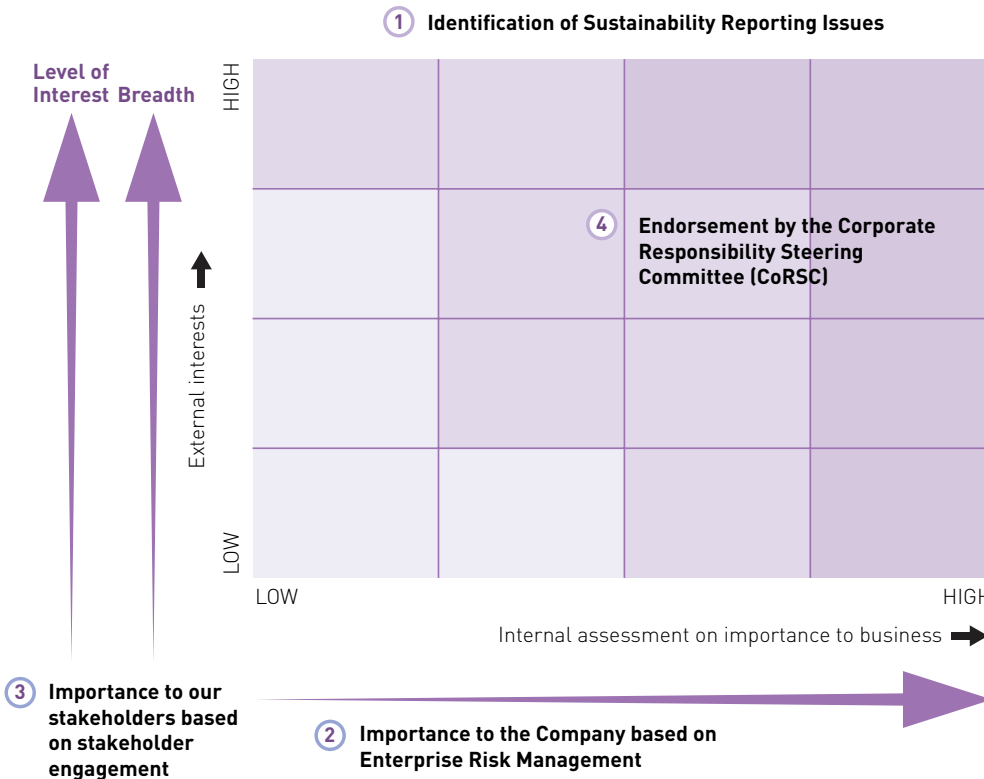
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Importance to the Company based on enterprise risk management system

The issues are positioned along the horizontal axis from left to right in order of increasing risk.

Our sustainability team assessed the relationship among all of the 37 issues that were identified in the ISO 26000 standard and the top 46 enterprise risks from our enterprise risk register in order to evaluate the relative importance of each of the issues to the Company. The outcome of this assessment is reflected in the position of each of the 37 sustainability issues along the horizontal axis of the Materiality Matrix.

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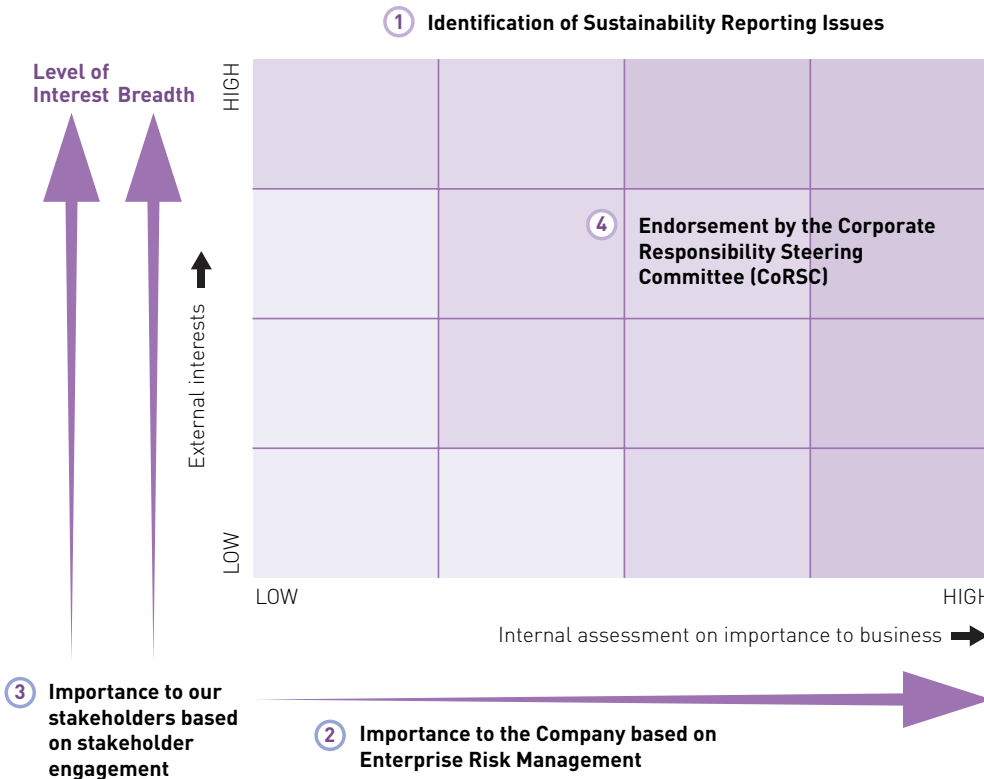
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Importance to stakeholders based on stakeholder engagement

The issues are positioned along the vertical axis from bottom to top in order of increasing stakeholder interest.

Our sustainability team synthesised the outcomes of engagement with all categories of stakeholders during the year in order to determine the relative importance of each of the 37 issues for them. Please note that the position of each issue moving towards the top of the horizontal axis reflects the level of interest (for example, intense interest expressed by some stakeholders) and/or breadth of interest (for example, large number of stakeholders expressing some interest). For 2016, the External Review Panel has also been invited to review and validate the results of the assessment and change to the position of one issue was recommended by the Panel and adopted by the Company.

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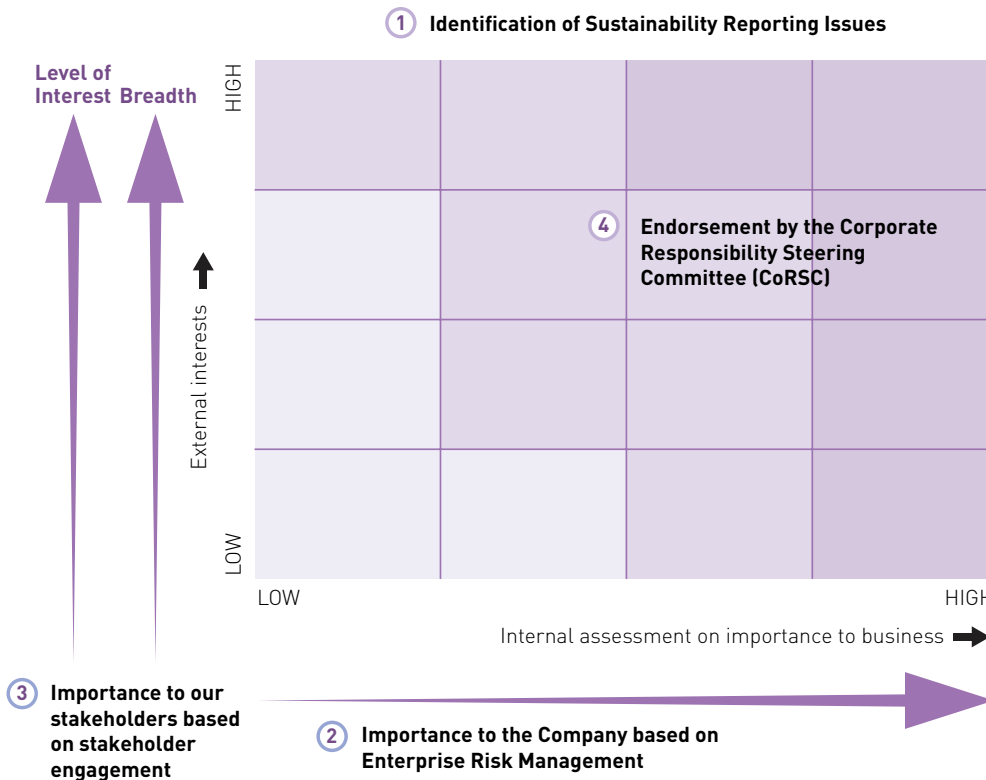
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Endorsement by the Corporate Responsibility Steering Committee

The overall position of each issue moving from the bottom left to the top right of the matrix determines its level of materiality. We have assigned low, medium and high materiality to each issue depending on its position in the matrix. The materiality assessment of all 37 issues was reviewed and approved by the [Corporate Responsibility Steering Committee](#) during 2016.

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Evaluation of Results

Since it is not feasible for us to report extensively on every issue, we have applied the principle of materiality to help us determine what information to disclose in this report. If you would like to provide feedback on the outcome of our materiality assessment, we [welcome your views](#).

As a result of our assessment in 2016, the following topics have been identified as outliers. This means that one party, either the Company or the collective assessment of our stakeholder groups, showed high interest in the topic but the other party considered it to be of relatively low importance. We also include topics where we believe there is an opportunity for us to work on, but are considered of relatively low materiality by both parties.

- **Payment from government/tax payment (issue #30)** relates to payment from Government in the form of subsidies or other contractual agreement as well as payment of taxes from the Company. Although our stakeholders did not appear to place high importance on this topic, it is important to us since we have entrustment agreements with Government on the Express Rail Link and the Shatin to Central Link, both of which are funded by the Government. While we do receive payments from Government, it should be noted that, for the significant majority of our businesses such as for our rail operations, it is crucial that we have a [sustainable financial model](#) to ensure that we can deliver world-class services to our customers for now and in the long term.
- Originally assessed to be of low materiality internally and externally, the position of **Wealth and income creation (#35)** has been moved up in external assessment per suggestion by the External Review Panel. While the opening of new lines and extensions brings greater convenience and development to the neighbourhood, some panellists perceived that the value created by new MTR stations has not been distributed fairly, and may result in gentrification. We seek to engage the local community during design, construction and operation stages to address local community needs. Many of the artworks in stations were also created in partnership with local residents to celebrate the history and unique characteristics of the local community. Find out more in the [Community](#) section.

- **Education and culture (#32)** and **Community investment (including staff volunteering) (#37)** while considered low materiality by stakeholders, we believe that there is an opportunity for us to leverage our skills, resources, and networks to contribute to community development, including our focus on youth, art, green and healthy living and safety. As such, we report on our related activities and programmes in our [Community](#) section and [Staff](#) section on staff volunteering.

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SAFETY

Safety is our first priority. We are proud to provide our customers with the safe and reliable public transportation option in every city where we operate. With decades of continuous attention by management, our uncompromising Safety-First culture—encompassing care for customers, staff, contractors and anyone else who legitimately enters our facilities — has become deeply ingrained in our corporate DNA.



Fatality is

0 heavy rail

1 light rail

1 bus

-11.6%

No. of reportable events involving escalators on the Hong Kong heavy rail network compared with 2015.

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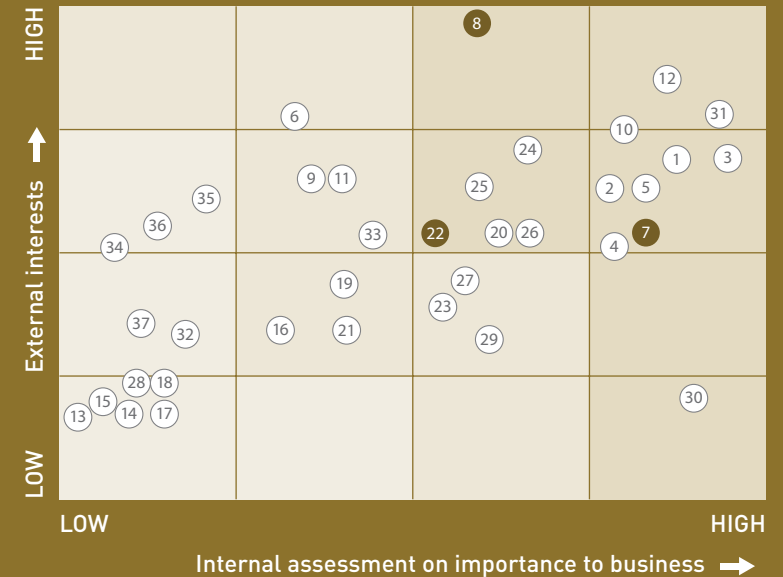
INTRODUCTION

Providing customers with a safe and reliable service is the bedrock of our operations; strong performance in this aspect of our business allows us to leverage our expertise and reputation into new areas of growth. We are responding to challenges in order to continue to prioritise safety in our operations:

- Carrying more customers has resulted in our network operating near capacity more often and leaves our frontline staff and maintenance teams with less room for error.
- Hong Kong's demographics are changing with a growing elderly population. We must adapt to the changing needs of our customers, especially elderly customers.
- The profile of our workforce is evolving. In particular, average age of workers on construction sites is increasing. Meanwhile operations in our expanding rail network also bring challenges associated with a new workforce. We must ensure that valuable skills and competence are developed and retained within our workforce and continually transferred to new joiners.
- Contractor staff is an integral part of the MTR's workforce and safety culture. Contractor safety management is a key factor in the safety performance of the Corporation. We strive to make a step change in safety management and safety engagement for contractor staff to enhance their safety awareness, competence, and supervision.
- As we are upgrading and expanding our network to further enhance service, there has been an increase in the number and complexity of works in or near the operating railway. Additional contingency plans and enhanced risk management measures have been developed to ensure safety of the railway is maintained.

However, we are deeply saddened to report two fatalities in our transport operations, and one in our construction activities. We will continue our efforts to raise safety awareness amongst our stakeholders, and to ensure that we learn from these events to prevent a reoccurrence. We will not compromise the safety of customers, staff and contractors in any area of aspect of our business.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



- ⑦ Customer education
- ⑧ Customers' health & safety
- ②② Employee and contractor health & safety

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Management Approach

GUIDING STRUCTURE

Corporate Safety Policy and Safety Governance

The Corporate Safety Policy and the Corporate Safety Governance Framework outline our approach and objectives for safety management. They ensure that safety is the responsibility of every director, manager, supervisor and all staff – it is essentially everyone's responsibility.

Corporate Strategic Safety Plan

We review and formulate our Corporate Safety Strategy every four years. After a series of Corporate-wide analyses and consultation, we have devised and published the Corporate Strategic Plan 2017-2020. While the scale of our business is continuing to increase, the Plan has been structured in a more strategic way to directly focus efforts towards the safety challenges faced by the Corporation as a whole. The Plan consists of three components, namely Safety Aspirations, Safety Goals and Strategic Focus Areas.

Safety Aspirations

- A1. To provide an environment that brings zero harm to people
- A2. To extend our safety excellence globally to uphold our reputation

Safety Goals

- G1. Zero fatalities every year
- G2. Zero major safety system incidents every year
- G3. Planned reduction in injuries year on year
- G4. To be amongst the very best in safety performance globally in all of our businesses
- G5. To be the safest mode of public transport in every place we operate

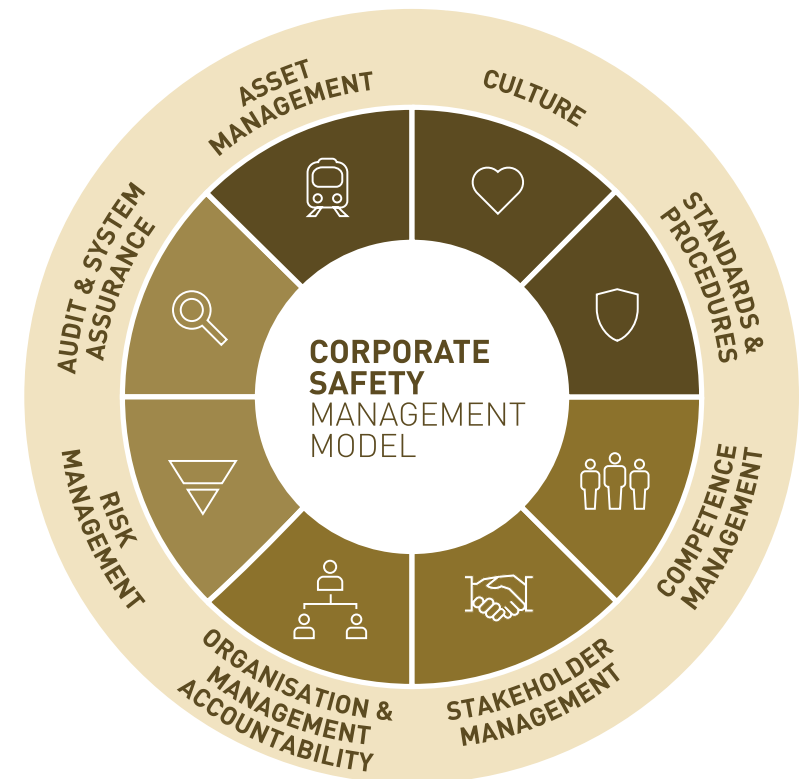
Strategic Focus Areas

- S1. Drive Safety-First culture further, both top-down and bottom-up
- S2. Enhance competence standards and human performance in safety

- S3. Bring contractors to our way of managing safety
- S4. Enhance effectiveness in safety management
- S5. Enhance safety standards and guidance for the Corporation
- S6. Drive safety risk management best practices into all parts of the business
- S7. Enhance resilience and crisis management

Corporate Safety Management Model

The Corporate Safety Management Model comprises eight core elements for implementing our management approach to safety. Fit-for-purpose safety management processes for each of the eight core elements have been established to manage safety performance across our businesses.



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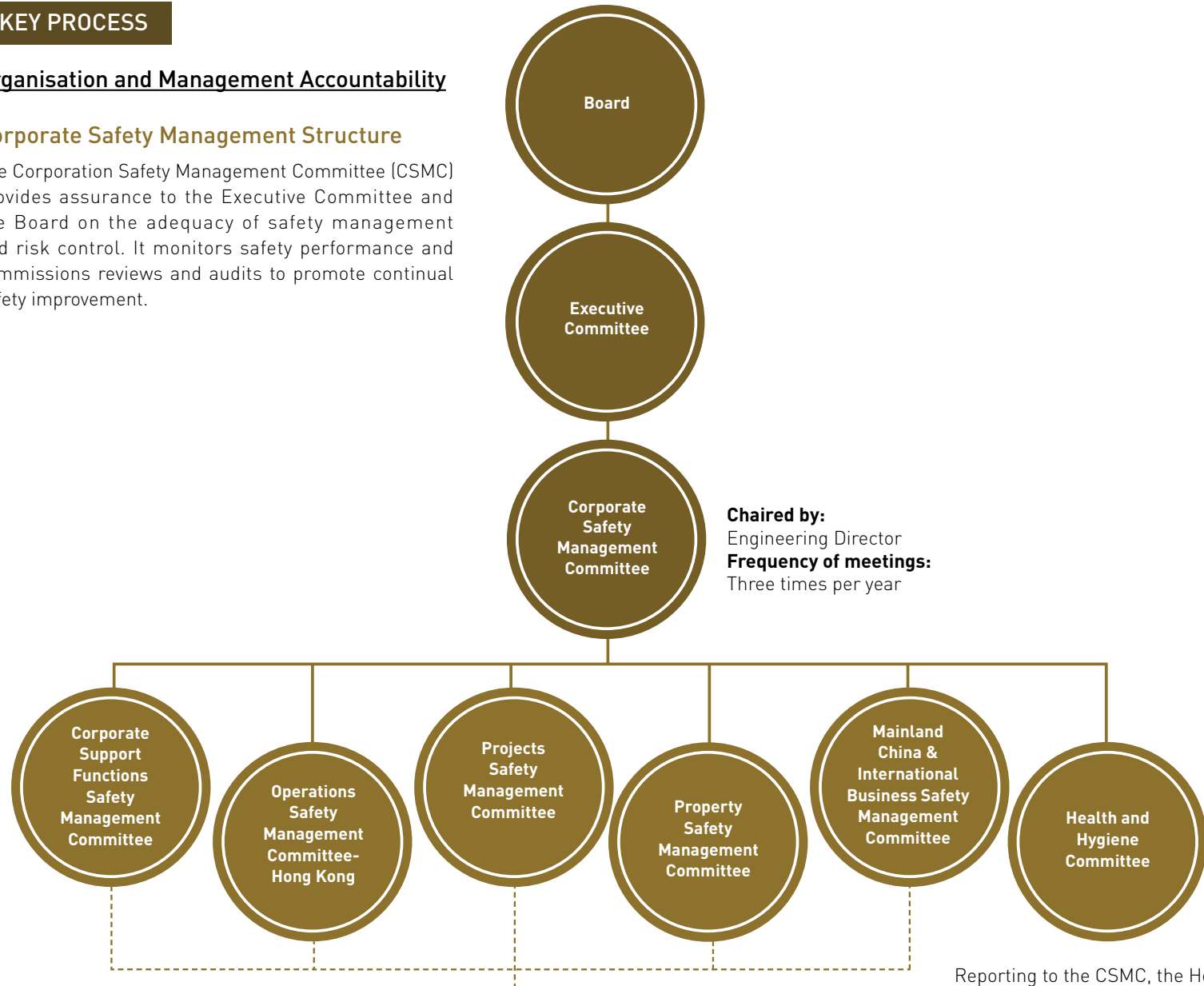
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KEY PROCESS

Organisation and Management Accountability

Corporate Safety Management Structure

The Corporation Safety Management Committee (CSMC) provides assurance to the Executive Committee and the Board on the adequacy of safety management and risk control. It monitors safety performance and commissions reviews and audits to promote continual safety improvement.



Chaired by:
Engineering Director
Frequency of meetings:
Three times per year

Supporting the CSMC are five Safety Management Committees, each of which oversees the work of line managers in discharging their safety responsibilities in their respective areas of the business.

Reporting to the CSMC, the Health and Hygiene Committee is responsible for health and hygiene issues that are relevant to all divisions.

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Culture

Safety leadership training

All of our managers are required to attend a mandatory corporate safety management training course to get familiar with the Corporate Strategic Safety Plan, understand their safety management responsibilities and develop skills for safety leadership. As at end of 2016, over 2,000 managers have completed the training.

Safety learning and sharing

As a learning organisation, we encourage information sharing and adoption of best safety practices among our own staff and among different businesses worldwide. We use a variety of channels to encourage staff to proactively report opportunities for continuous improvement, as well as to alert relevant teams on safety hazards so that they can be managed in a timely manner.

- **Facilitating reporting and monitoring** – A safety reporting scheme implemented by the Operations Division that utilises various means including a mobile app, *Anomaly • Alert • Action (AAA) iSPOTit*, to enable staff to report anomalies, hazards and near misses so that appropriate and timely actions can be taken.

The Projects Division also has a mobile app that allows frontline staff to view safety alerts, receive safety information and learn important lessons from accidents and experiences that are reported by their colleagues; another app provides senior management with accident and incident information and statistics from railway construction projects.

- **Safety Incidents sharing** – Internal and external safety incidents are regularly shared across the Corporation to learn important lessons. Railway incidents around the world are monitored continuously, and a worldwide railway incidents database has been established for building up safety knowledge for the Corporation.

- **Internal knowledge platforms** – Online portals that have dedicated safety sections; safety chats and sharing videos. "MTR Creators" is an online discussion and community of practice platform for knowledge sharing among staff, accessible via the intranet and by using a mobile app launched to staff in 2015.

- **Learning and sharing with our hubs** – To facilitate learning and sharing between MTR Hong Kong and the business units in the Mainland of China and overseas, safety topics are identified for benchmarking with the objective of sharing good practices and promoting continuous improvements in safety management and performance. A good practice database has been established for use by all businesses of the Corporation. The Safety Professionals' Community was also established to develop a communication network across the Company covering subsidiaries and associates inside and outside of Hong Kong to facilitate sharing on safety management and good practices.

External learning and benchmarking

It is important that we look beyond our own operation, to benchmark with other transport operations, and learn from other companies. This is achieved through various channels:

- **Joint Utilities Safety and Occupational Health Policy Group** – To provide enhanced consultation and liaison, as well as share good practices between the Government, Occupational Safety and Health Council (OSHC) and utility companies on safety and occupational health issues.
- **International Association of Public Transport (UITP)** – To provide a worldwide network to bring together all public transport stakeholders and all sustainable transport modes. MTR actively participates in UITP for sharing and learning with other transport operators.
- **CoMET Benchmarking** – We participate in safety performance benchmarking and information sharing with metro operators around the world through the Community of Metros.

DID YOU KNOW?

Find out how our safety performance benchmark against other metros from the [CoMET Benchmarking Result](#).

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Standards and procedures

Safety documents clearly states management's commitment to safety at work, and provides instruction for managing risk and for working safely. These documents include the Corporate Safety Policy, safety rules, procedures and work instructions. We have systems in place for safety document formulation, dissemination and regular review, with all staff having ready access to information relating to safety.

Safety targets and monitoring

We set targets for the safety of customers/public, staff and contractors and monitor our safety performance against these targets regularly throughout the year. The annual review of safety targets is based on a systematic approach that takes into account actual performance, new safety challenges and safety improvement initiatives, under the directive of reducing injuries year on year. Since the three modes of transport that we provide — Heavy Rail, Light Rail and Bus — have different operating environments and have adopted different types of safety controls and protection measures, safety targets for each type of transport are not directly comparable. Similarly, safety targets for other business types such as construction works and property management adopt different methodologies in their target setting.

Risk management

We proactively identify and register safety hazards, as well assess and control associated risks in a structured manner to a level that is as low as reasonably practicable. As such, ownership for risks and their controls are identified, regularly reviewed and prioritised.

Corporate Infectious Disease Continuity Plan

We work closely with the Government to monitor public health-related issues and concerns. This plan outlines our response to public outbreaks of serious infectious diseases and includes our approach to business continuity in the event of a pandemic.

Crisis Management Plan

To help ensure that the Company will respond to and recover from emergencies and crises in an organised and highly effective manner, including timely communication with principal stakeholders such as Government departments, we have established a mechanism since 1995 to activate the formation of the Crisis Management Team in the event of a crisis. The Crisis Management Team comprises relevant Members of the Executive Directorate and Executive Managers, and its operation is governed by a Crisis Management Plan which, among other things, sets out the duties of respective members. The Crisis Management Plan is kept in line with world-class standards and up-to-date through regular reviews. The operation of the Team is aided by an information system to keep track of the latest crisis situation, issues and strategic actions and to disseminate crisis related information. The Team conducts regular exercises to validate the crisis management organisation and arrangements and to provide practices for members. An exercise for the Crisis Management Team was conducted in August 2016 on a crisis scenario related to property development / railway operations interface. Exercises for the shadow team of the Crisis Management Team were conducted in December 2016 involving a cyber attack scenario.

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LEARN MORE...

Our "Safety First" culture was well demonstrated by our response to an arson incident that happened on one of our trains on 10 February 2017. Investigation revealed that an individual ignited flammable liquid and set fire in the compartment of a Tsuen Wan Line train traveling from Admiralty Station to Tsim Sha Tsui Station during the Friday evening peak hour. The train captain calmly brought the train to Tsim Sha Tsui Station having forewarned colleagues at the Operation Control Centre who had in turn alerted staff in the station. On arrival the train was evacuated and the injured attended to. The station was also quickly and orderly evacuated within a few minutes. Our colleagues responded robustly, professionally and speedily, working in partnership with the Police and Fire Services Department, enabling injuries and damages to be minimised.

We are deeply concerned over the incident, and have set up an Executive Review Panel to thoroughly examine the incident handling and safety procedures and to identify areas for improvement to further enhance the Corporation's response in emergency situations. The findings from the panel have been submitted to the Government in April 2017. Find out more from [here](#).

Asset management

Our capital assets are systematically managed, with continuous improvement principles, throughout the asset lifecycle, not only to achieve our corporate objectives, but also to ensure compliance with statutory obligations and adequate identification and mitigation of risks. The Asset Management System of the Operations Division has been certified to ISO 55001.

Ensuring quality of critical items

To meet our high standards of safety and service, we developed and implemented a robust assurance process to ensure that critical items conform to our specifications. Critical items are defined as items that are either associated with a high safety risk ("safety critical engineering spares") or may potentially lead to prolonged service interruption ("service critical engineering spares").

Audit and system assurance

Our structured audit programmes are in place to provide assurance that our plans in our Safety Management System are implemented and effective in meeting its intended objectives. These audits ensure that safety management processes are adequately implemented and identify opportunities for improvement. The system assurance process is applied where necessary to ensure that safety risks are and continue to be managed to as low as reasonably practicable throughout the system lifecycle with reference to the European Standard EN50126.

External safety management system review

An international review team of railway safety experts conducted the 8th External Safety Management System Review for the Operations Division in 2014. Such review, which is required under the terms of our Operating Agreement, provides additional assurance that our safety management is up to international standards. Visits to close out recommendations in 2015 and to review specific topics (e.g. safety reporting by staff) in 2016 were carried out. Conducted every three years, the next review will take place in 2017.

Safety system assurance in the new lines

For more than 20 years we have been implementing an established and robust system assurance process for the design, construction and commissioning of our lines, with reference to international standards such as EN50126. A risk based approach has been adopted and is aimed at optimising four focus areas: reliability, availability, maintainability and safety of the system.

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Competence management

We determine competence requirements systematically. A competence management model has been established. Arrangements for the selection, placement and qualification of people are in place to:

- ensure that staff has the physical and mental abilities required for their work;
- assess the competence of contractors, as part of contractor selection and as an on-going process;
- equip those working within the Company with the ability to work safely and manage risks; and
- confirm that changes to the business are planned for, over the medium to long term, to ensure the required distribution of skills and competence.

Human factors

Good safety performance is contingent upon people's behaviours in various situations. Understanding behaviour patterns in emergencies as well as repetitive actions in or around a specific work environment can be a crucial factor in reducing safety incidents.

Our Human Factors Programme makes use of information about human behaviour and performance characteristics to facilitate a safe, comfortable and effective work environment and practices. It aims to maximise staff safety and service performance, whether under normal circumstances where the same action is repeated many times, or in emergency situations when staff must respond quickly and correctly to a novel and sometimes changing situation. We are adopting "fingering procedure" (also known as "pointing and calling") in many areas of our operation, as it is proven to be effective in reducing human errors. We also encourage our staff to conduct peer-to-peer observations to identify at-risk behaviours under the "No Name, No Blame and No Sneak-up" principle.

Stakeholder management

Individuals and organisations have an effect on or can be affected by our safety performance, this is why we actively engage them to:

- inform, educate and raise the understanding of safety requirements and performance;
- establish areas of cooperation and involvement by listening to understand concerns and by responding to resolve them;
- promote understanding and ownership of safety responsibilities; and
- learn and improve through sharing lessons and knowledge.

Construction site safety

Close monitoring by our site teams maintains a high standard of safety on all construction sites. We have a number of schemes in place to promote safety of workers, including half-yearly safety conferences for contractors and major safety promotion activities over the year.

For more information, please refer to [Staff and Contractor Safety](#) and [Collaboration with our contractors](#).

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CUSTOMER SAFETY

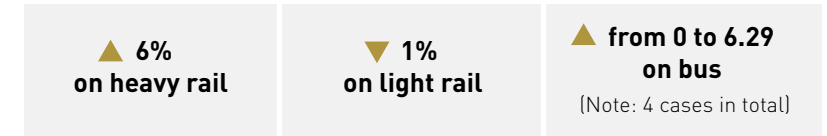
Customer Safety Performance

We are deeply saddened to report two customer/public fatalities in our transport operations:

- On 4 January at Light Rail: A man and woman on a bicycle went through the red traffic light signal, and were hit by an approaching light rail vehicle although the driver has applied emergency brake and sounded the horn. The man was certified after arriving at the hospital.
- On 12 June at Tin Shui Wai: A woman dashed out at the pedestrian crossing while the red traffic light for pedestrian was on. An approaching bus hit the woman even though the Bus Captain has applied the brake immediately. The woman was admitted to the hospital but passed away the day after.

In 2016, efforts to ensure continuous safety improvements saw a 9.1% reduction in reportable incidents on the Hong Kong heavy rail network compared with 2015. The customer injury rate (defined as "number of customer injuries requiring hospitalisation") also improved for our light rail operations. We have also seen a reduction of elderly injury rate. As the number of elderly customers continues to grow, we are organising targeted safety talks, visits and escalator safety campaigns to enhance safety awareness.

Changes in Number of Customer Injuries Requiring Hospitalisation Compared with 2015



Customer and Public Safety – Fatalities



Number of Injuries Requiring Hospitalisation (per 100 million customer journeys)

	2015	2016
Heavy Rail		
Target	9.72	9.48
Performance	7.91	8.39
Light Rail		
Target	12.67	13.66
Performance	14.76	14.55
Bus		
Target	7.48	6.88
Performance	0.00	6.29

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Escalator safety and other accidents on concourses

We are pleased with the reductions achieved in the most common types of accidents, when compared with 2015:

- reportable events involving escalators reduced by 11.6%
- door-related accidents reduced by 29%
- platform-gap related accidents reduced by 16%

We operate nearly 1,000 escalators across our railway network. To reduce safety risks to our customers as low as reasonably practicable, we set up a special task force at the end of 2012 to make our escalator operation safer. In addition to the previous years' effort in adding yellow escalator handrails and using safety reminder announcements on our escalators, for continuous improvement, escalator safety promotion booths were set up in designated stations to educate customers, especially the elderly, on the safe use of escalators. Station assistants have also been deployed at strategic locations to remind passengers to be aware of the train doors and the platform gap.

LEARN MORE...

Watch the [MTR Escalator Safety campaign video](#)

Customer Safety Initiatives

Suicide prevention

According to our internally collected statistics, there were 17 suicides and attempted suicides on our railway network during 2016. To try to reduce the number of these tragic events, we continued to collaborate with The Samaritan Befrienders to set up Emotional First Aid counters in Mong Kok East, Shatin, Tai Wai and University stations. Staffed by volunteer social workers, the counters displayed banners and provided leaflets with information about the emotional cycle and positive suggestions for handling emotional problems. We also introduced the Suicide Prevention team for critical stations and the Suicide Prevention roving team.

Crime prevention

Thanks to the continued efforts of the Hong Kong Police and our customers to remain vigilant against crime, we have successfully maintained crime rates at low levels and MTR is recognised as one of the safest urban passenger railways in the world. We have also stepped up promotions against sexual harassment and encouraged victims and witnesses to report incidents to station staff or police. We launched our annual MTR Crime Prevention Campaign in December 2016 co-organised with the Railway District of the Hong Kong Police. The theme of this year's campaign — Stay alert, watch out! Report crime! — was featured on station posters and customer information display systems across our network.

Light Rail safety

Maintaining safety on Light Rail can be a challenge. Unlike heavy rail, light rail vehicles run in manual mode on sections of track that are shared with other road users and cannot be totally partitioned. In addition to the continuous effort in refreshing drivers' safety awareness and educating the local community on safety around the system by Light Rail and MTR Bus Road Safety Campaign and Light Rail Junction Safety Promotion, we also seek to address the issue through improvements to our assets. We have carried out studies in widening platforms and providing additional lighting at junctions within the MTR boundary. Furthermore, zigzag barriers are put in place to guide pedestrians to keep an eye on approaching traffic before crossing the tracks.

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The Property Division places top priority on the safety of our customers, residents and the general public at our managed and investment properties. We continue to make every effort to eliminate the potential safety risks in our properties. In 2016, we engaged our food and beverage tenants to focus on prevention and preparedness to respond to incidents through various ways:

- Conducted more than 300 fire safety audits on our food and beverage tenants, and provided recommendations on fire safety enhancement. The safety check-list for assessment of fire hazards was also updated to include maintaining passage ways free of obstruction, and providing means of escape in the service areas of food and beverage shops
- Arranged a training session on fire safety
- Conducted more than 250 emergency drills in our residential estates and shopping malls

Within the Investment Property Department, we conducted the annual crisis drill, simulating a transformer failure, leading to blackouts and power suspension in our shopping mall that severely affecting the mall's operation. The drill covered crowd management and the safe evacuation of shoppers and tenants, and concluded with satisfactory results.

To continually raise safety awareness amongst our residents and tenants, we continue to regularly publish newsletters with safety related contents. These efforts have been recognised, and our shopping malls received the Safety Performance Award from the 15th Hong Kong Occupational Safety and Health Award organized by the Occupational Safety and Health Council.

Safety awareness initiatives in the community

To instil the importance of safe and courteous behaviour when travelling on the MTR in an engaging manner, the MTR x Hong Kong Repertory Theatre "Railway Safety School Tour Programme" was introduced in 2011. The performances are staged in kindergartens, primary and secondary schools, and special needs schools. Over the past five school years, the performance was seen by over 117,000 students.

We also organised a number of safety and courtesy talks in schools and with the elderly. At elderly centres we provided "elderly kits" to familiarise them with the facilities and safe usage of the MTR network. We also partnered with RTHK 5 on an elderly programme to visit the new Ho Man Tin and Whampoa stations and participated in interactive games with DJs and celebrities on railway safety and courtesy behaviour.

Safety learning made fun and easy

In 2015, together with People on Board, a social enterprise in Hong Kong, a board game was developed with the aim of helping children develop a better sense of railway safety and passenger courtesy from an early age. An updated version of the game was released during the Hong Kong Book Fair 2016 with information on the new lines and stations. Proceeds of the sales/profits of the board game went to People on Board, supporting youth development projects in Hong Kong.

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A Safe System for All

Ensuring quality of critical items

Our robust 5-stage assurance process, approved by the Board and Executive Committee, involves identifying all items to subsystem and component levels that are considered safety or service critical items by the relevant task force. Currently, there are defined service critical items for existing lines, while an identification exercise is underway for the new lines.



Safety system assurance in the new lines

The safety assurance process involves assessing operational safety impacts throughout the project lifecycle, with consistent checks at each milestone. For example, we work with different departments and contractors to interface the different safety systems and mitigate any impacts that may arise on the interfaces. We integrate, verify and validate safety requirements through both a top-down and bottom-up approach including contract requirements setting, safety integrity level assessments for safety-related and safety-critical systems and design as well as onsite verification and validation activities. We also employ independent safety assessors to check the adequacy and effectiveness of the development processes for our safety critical systems. These assessors are also involved at all stages of the projects.

Learn more about the preparation work that went into the opening of the [Kwun Tong Line Extension](#) and the [South Island Line](#) to ensure customer safety.

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STAFF AND CONTRACTOR SAFETY

Staff and Contractor Safety Performance

Fatalities on construction site

Despite our best efforts to implement safety practices across all our construction sites, and reinforcing these with our contractors and their subcontractors, we deeply regret the loss of one life in 2016 involving one of our contractors. At the Shatin to Central Link network expansion project site at Hung Hom, a worker fell from a height of approximately 4.5 metres into water at a cofferdam. An investigation panel was convened to identify the cause of the incident and made recommendations to prevent a recurrence.

Safety Performance

	2015	2016
Staff Safety – Fatalities	0	0
Contractor Safety – Fatalities	3	1

Lost time injuries for staff

Although we have seen improvements in staff lost time injuries (LTI) across our business in 2016. Projects Division has seen an increase in LTI frequency rate, to 0.25 per 100,000 man-hours. The majority of accidents were related to slips, trips or falls on same level and the injuries were minor in nature. Lesson learnt were shared with all contractors and staff. Safe Steps campaign and independent monthly inspection regime were introduced to improve housekeeping on site.

Safety Performance

	2015	2016
Corporate Support Functions	0.17	0.09
Operations Division	0.56	0.47
Projects Division	0.11	0.25
Property Division	0.14	0.09

Reportable accidents for contractors

The contractor reportable accident rate in Projects Division increased slightly to 0.49. The majority of accidents were related to slip, trip or fall on same level and manual handling. Safe Steps campaign and Hands Off campaign will feature again in our Safety Plan 2017.

In both our managed and investment properties, we observed slight improvements in the reportable accident frequency rates in 2016. Continuous effort was made to enhance staff safety awareness and manage work-related risks, including safety management training, review of method statements and risk assessments of high risk activities to seek for improved practices. In view of the planned major renovation, maintenance, addition and alteration (RMAA) projects, their risks were also adequately reviewed. A Clubhouse Safety Campaign took place to further explore the enhancement opportunities and share safety improvement practices concerning workplace safety.

In 2016, security guards accounted for more than half of our accidents, and over 60% of the accidents were related to slips, trips and falls. Hence, for 2017, we have planned a series of trainings and promotions targeted at security guards.

Contractor Safety – Reportable Accidents (per 100,000 man-hour)

	2015	2016
Corporate Support Functions	0.15	0.22
Operations Railway	0.16	0.16
Projects Construction – Railway Extension Projects	0.48	0.49
Property Development and Investment Projects	0.06	0.03
Investment Property	0.08	0.05
Management Property	0.15	0.12

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Staff Health and Well-being

Promoting health and well-being for our staff is always our focus. Initiatives such as on-site seasonal influenza vaccination provided to staff free of charge, health and hygiene talks and campaigns during the Corporate Safety Month and throughout the year, Health Walk Day in autumn every year, ICan mental hygiene programme, etc. are on-going.

Occupational Safety and Health Awards

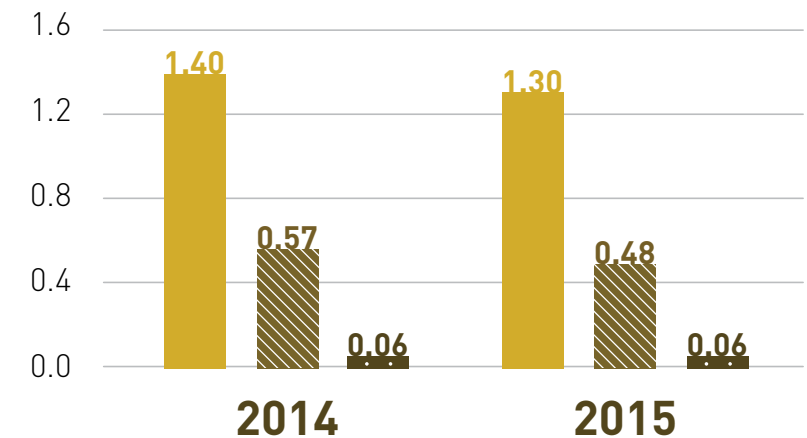
At the 15th Hong Kong Occupational Safety and Health Award by Occupational Safety and Health Council, our Sustainability Report 2015 received the Silver Award in Occupational Safety and Health (OSH) Annual Report Award and the Investment Property Department won the Safety Performance Award.

Contractor Safety in Context

Work on construction sites presents many safety challenges and hence we place special emphasis on promoting safety for workers on our network expansion, property development and investment projects. As a testament to our efforts and our various initiatives, the reportable accident frequency rate for our network expansion project sites continues to be well below the Hong Kong Construction Industry average.

Construction Industry Benchmarking for Reportable Accidents (per 100,000 man-hour)

- Hong Kong Construction Industry Average*
- Contractors – MTR Hong Kong Construction Project (Railway Extension Project)
- Contractors – MTR Hong Kong Property Development and Investment Projects



*2015 is the latest figure available.

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Contractor Safety Initiatives

We continue to implement new initiatives to ensure high levels of safety and welfare for all workers on our project sites. Please refer to [collaboration with contractors](#) for more information.

Projects Division Contractors

To strive to improve the safety and health standards of our contractors, we organised various promotion campaigns to raise the safety and health awareness. We also engaged directly with construction workers through training, multilingual workplace campaigns, mentoring and a variety of communication initiatives.

Safety Campaigns in 2016

- Four safety campaigns were launched to support contractors; focusing on site planning, hierarchy of control, safety culture and fire prevention.
- 'Hands Off' safety innovation award scheme were launched to encourage and recognise the elimination of the risk of hand and finger injuries by engineering control.
- The previous ISRS audit system was replaced with an independent inspection and audit system which focuses on high risk activities and measures compliance of legal and contractual requirements. Each main contractor is subject to an annual safety audit and a monthly safety inspection of high risk activities.
- A 'No Regrets' campaign was launched to influence the risk attitude of construction workers. In association with Lighthouse Club, videos with first-hand accounts of the victims of workplace accident were produced and promoted.
- In collaboration with the UK Institution of Occupational Safety and Health (IOSH), a high profile "No Time To Lose" campaign was launched to raise awareness of occupational health.

Looking forward to the future

We will continue our campaigns on improving housekeeping and turning to engineering solutions to avoid manual handling because they are the major contributors to workplace accidents. We will also focus on work at height and electrical safety which is highly prevalent in our 2017 construction programme.

Safety Plan 2017

- High risk focus areas - 2017, as we progress ahead with our works, we see an increase in works at height and energisation of power supplies. These two kinds of highly dangerous work may lead to severe consequences if they are not properly managed and monitored and therefore we remain vigilant to ensure planning has identified safe systems of work that have been robustly communicated and implemented on site.
- 'Hands Off' campaign - A campaign to promote engineering control measures to prevent hand injuries and to develop a continuous culture of innovation and ensure the idea for "hands off" are utilised throughout our works.
- 'Safe Steps' campaign - A campaign to rigorously enforce site housekeeping to provide safe and proper passageways and to prevent 'slip, trip and fall on same level' which is one of the most common accidents occurred on construction site.
- "No Regrets" campaign - A campaign to continue to positively influence the risk taking propensity of our workforce.
- Fatigue Awareness campaign - The impact of fatigue and its correlation to accident rates is widely known in the transport industry, but little information is available in the construction industry. In addition to increasing the chances for a safety lapse, fatigue can also have long term health implications, the performance of a fatigued worker will be reduced, and reflexes and decision-making can be impaired. This campaign reviews the impacts of fatigue and make practical recommendations to manage the observed issues.

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Property Development contractors

With the concerted efforts of the Company and our joint venture partners, our property development projects achieved an exceptional reportable accident frequency rate of 0.03 in 2016, 50% lower than the 2015 rate.

Numerous safety initiatives were implemented for safety excellence in 2016:

- Anticipated high risk activities were reviewed monthly, and detailed method statements and risk assessments were prepared. These were communicated to frontline staff on site through safety briefings before work could commence.
- Senior management site walks continued to demonstrate a top level commitment to safety.
- Regular safety workshops conducted with MTR project managers and resident safety managers to re-enforce their safety mind-set
- Monthly scaffold inspections with Competent Person were conducted, which was beyond statutory safety requirements
- Safety campaigns were conducted regularly, and covered a range of issues including work at height, electricity hazards, hot weather, fire, and plant and equipment safety
- Safety system reviews with a focus on temporary works safety, such as design loading, erection, and checking arrangement.
- Regular audits were conducted for individual development projects to ensure the safety management system is in place
- Engaged staff through a safety slogan competition. The winning slogan is being displayed on site to nurture a safety culture.

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CUSTOMERS

It is our aim to design, build and deliver services that are people-oriented, safe and meet customers' needs effectively. This means that we:

- Design and plan customer needs at the core
- Enhance service delivery, and
- Improve accessibility



5.59 million

Average weekday patronage



99.9%

Passenger journeys on time

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INTRODUCTION

With our heavy rail network now covering all 18 districts of Hong Kong, carrying an average of approximately 5.6 million passengers each working day, we recognise that our train services have a profound impact on the daily lives of many people in our city. Bearing this responsibility in mind, our staff comes to work committed to providing reliable and comfortable journeys for our customers.

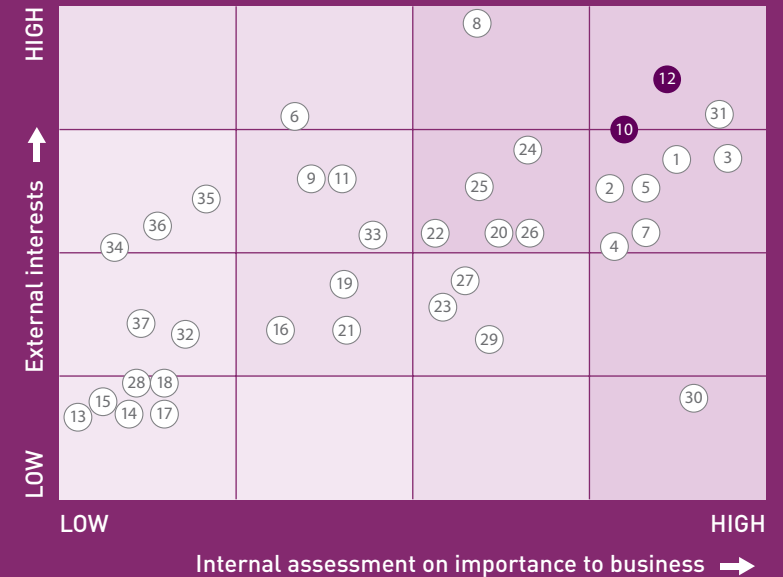
During 2016, economic slowdown has led to a reduction of patronage, in particular to our cross-boundary service in Lo Wu and Lok Ma Chau. But this has been partially offset by the opening of two new rail lines in Hong Kong. As a result, average weekday patronage on our rail and bus passenger services in Hong Kong increased by 0.6% to 5.59 million.

Underlying this headline figure, several long-term trends are putting increasing demands on our network as summarised in the following table.

	2012	2013	2014	2015	2016
Total number of passengers – domestic and cross-boundary (millions)	1,541	1,586	1,661	1,692	1,700
Average number of passengers - domestic and cross-boundary services (weekday average) (millions)	4.45	4.60	4.80	4.89	4.92
Average car occupancy – domestic and cross-boundary	63	65	67	65	64

In this section, you can read how we are responding to challenges associated with these trends in order to sustain and improve upon train service performance. We also continue to include information on customer service in our [managed properties](#) and our [station retail shops](#).

MATERIALITY ISSUES COVERED IN THIS CHAPTER



- 10 Customer service, support, and complaint handling
- 12 Access to essential services (incl avoidance of service disruption)

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Management Approach

Operating Agreement

The conditions of our license to operate are set out in our Operating Agreement with the Government. In our drive for excellence, we have set internal targets that meet or exceed the terms of this agreement.

Customer Service Pledge

The Customer Service Pledge is the primary document spelling out our service commitments to customers. It contains ambitious quantitative targets across 15 areas of performance, including punctuality, reliability, indoor environment, cleanliness and customer response. We update the pledge annually and publish it on our customer website.

LEARN MORE...

Please [download](#) updates on our performance against our pledge or click [here](#) to access more information from our customer website.

LEARN MORE...

Customer satisfaction, as recorded by our regular surveys, remained high during 2016. The [Service Quality Index](#) and the [Fare Index](#) that measure the level of customer satisfaction with fares can be found in our Annual Report.

Asset management framework

The Operations Division has an Asset Management Manual that sets out system requirements for asset management in alignment with best practices and uses a self-developed asset management system known as RailASSURE, providing a functional overview of equipment management, work management, maintenance planning, budgets and analysis. The Asset Management System of the Operations Division has also been certified to ISO 55001:2014.

Our operating railway has also been certified to ISO9001:2015 and ISO14001:2015 for quality and environmental management respectively, following the latest update.

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Key Principles and Processes

Hardware improvement/investment

Our ability to deliver the highest levels of service to our customers depends on continuous investment in more reliable, convenient and comfortable journeys. The amount of annual expenditure on maintenance and upgrading is expected to increase over time as our network continues to mature. Refer to [Upgrading our Asset](#) for more details.

Customer experience

We have carried out service enhancement initiatives based on the public's needs. In 2015 we established the Customer Experience Development Section to improve their end-to-end journey experience. We aim to deepen our understanding of what matters most to them and to formulate plans to continue improving our service — particularly in the following areas:

Customer service teams

We pledge to respond to 99% of written passenger enquiries within six working days. All legitimate enquiries are taken very seriously by relevant business units. Occasionally, if we are not clear on the meaning or significance of an enquiry, our customer care representatives will contact the customer concerned to ensure we have fully understood the situation.

Customer service training

To ensure excellent service as an integral part of our corporate culture, the Academy of Excellent Service (AES) provides comprehensive, competency-based customer service training programmes for staff at various levels to build up their skills and abilities. In addition, we also conduct regular refresher operations training courses such as incident response and safety awareness.

Enhancing mobile communication

We have developed a range of mobile apps to provide real-time information to our customers. The MTR Mobile app has been incorporated with accessibility design, quicker navigation and better audio information for visually impaired passengers. As a result of these initiatives, we received the "Most Favourite Mobile App Award", "Easiest-to-Use Mobile App Award", and two Gold Awards in 2016 from the Office of the Government Chief Information Officer and Equal Opportunities Commission in the Web Accessibility Recognition Scheme (Mobile App Stream).

LEARN MORE...

Please click on each of the following for more information about our apps:

- [MTR Mobile](#) – Our umbrella mobile app with Train Trip Planner, information on station facilities, barrier-free facilities and station shops, tourist information and Airport Express information, as well as access to MTR Club and Traffic News
- [Next Train](#) – Provides real time information on Airport Express, Tung Chung Line, West Rail Line and Tseung Kwan O Line train schedules
- [Intercity Through Train](#) – Provides Timetable, fare, ticketing information and latest news on intercity services between Hong Kong and cities in China
- [MTR Malls](#) – A smart shopping platform for MTR malls, featuring shop directory and latest promotions

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Incident Response

We are prepared for service disruptions. We respond rapidly, and provide timely and accurate service information with proactive assistance to customers. At the same time, we have teams working on restoring service as soon as possible.

Rapid response teams and caring response

When train service disruptions occur, our Customer Service Rapid Response Unit as well as station staff is on the frontline to assist passengers by providing timely information about the situation and the impact on train services. They also manage arrangements for free shuttle bus services to transport affected customers to the nearest MTR station so that they can continue on their journey.

Specialised teams are mobilised behind the scenes as soon as a problem is detected. For example, the Infrastructure Maintenance Rapid Response Unit repairs railway infrastructure, the Rolling Stock Rapid Response Units rectify train faults, and the Infrastructure Engineering Control Centre uses its real-time monitoring and control system to integrate fault reporting centres that are located at depots across the railway network. Since the end of 2013, volunteers from various departments of the Company established our Customer Service Support Team (CSST). They provide extra support to frontline staff during incidents and are trained with the skills needed to handle these types of situations.

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TRAIN SERVICE PERFORMANCE

Performance Scorecard

Our service performance in Hong Kong in 2016 was one of our best since the rail merger in 2007 in terms of train service reliability despite being one of the most intensively used system in the world.

The following table summarises the key performance indicators (KPIs) that we track for train service quality on our heavy rail network.

TRAIN SERVICE PERFORMANCE (Heavy rail only)

	2015	2016
Passenger journeys on time	99.9%	99.9%
Revenue car-km operated	307,729,166	311,103,721
Total number of train trips operated	1,911,637	1,918,927
Total number of > 30 min delays*	7	6

* excluding the delays caused by external factor

Customer Service Benchmarking

Comparing the quality of train services provided by metro systems around the world, our Hong Kong heavy rail network performs well but there is still room for improvement. Based on the [CoMET Benchmarking Results 2015](#), the most recent data available, we maintained or increased in our performance on majority of the indicators.

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RESPONDING TO CHALLENGES

We are facing ongoing challenges for service delivery as our network continues to expand following completion of new lines, and patronage continues to increase. At the same time, some of our assets have been used for decades and requires upgrades and maintenance.

In 2016, we announced the launch of Rail Gen 2.0, a major programme to enhance travelling experience to prepare the “next generation” of railway transport in Hong Kong. Rail Gen 2.0 comprises four new rail projects, two of which have already completed; major interfacing works as well as major asset replacement, maintenance works and facilities upgrade to the existing network. Based on feedback from our passengers, we place emphasis on reducing congestion, upgrading facilities, and enhancing communication.

Enhancing the Customer Experience

Customer Experience Management Model

A Customer Experience Management Model was established in 2015, with journey mapping exercises conducted and regular customer user group meetings held. This helped to develop various customer service initiatives that have been implemented. To enhance communication during incidents, clear and accurate information is now being delivered to affected customers in a timely manner. A detailed survey is carried out after each major incident to collect feedback with a view to improving services.

Customer Service in Stations

Our Customer Service Centres provide information and assistance to customers within stations across our network. To better serve our passengers and improve our colleagues' working environment, we have been upgrading these centres with new designs since 2010. In some stations of the newly opened South Island Line (East) where there is no customer service counter, we have installed multi-function Self-Service Points for customers to contact staff in the control room for immediate assistance.

We have deployed over 2,700 station assistants to help ease passenger flow during peak hours or at major interchange stations. Caring Points at select stations during peak hour provide support to customers who require special assistance.

Courtesy Campaign

To make travelling on the MTR more enjoyable, we have been encouraging different courtesy behaviours in various channels regularly. In 2016 we promoted courteous behaviours such as “let passengers alight first” and “move inside the compartment”. These messages were delivered through a [music video](#) featuring the Bear Children's Choir.

LEARN MORE...

Registration of Oversized Musical Instruments and Sports Equipment

Balancing the needs and interests of our customers and safety and crowdedness concerns, we have launched the Registration Scheme for Carriage of Oversized Musical Instruments in 2015. In view of the Scheme's smooth operation, the Corporation expanded the Scheme from 1 August 2016 to facilitate passengers who need to carry sports equipment that exceeds normal size restrictions into the railway network. Find out more about the Scheme and register [online](#).

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Barrier-free access and caring for customers with special needs

To ensure equal access for all members of our community, including the elderly and the disabled, our standard design manual contains specifications for barrier-free access facilities that go beyond the Hong Kong regulatory requirements for our stations, and now have barrier-free access at all major stations. We strive to meet the needs of Hong Kong's changing demographics, and address the specific needs of people with disabilities, by installing external lifts, wide gates, braille signs, tactile toilet signs and guide paths and other such facilities. These provisions have been installed in all stations, including several Light Rail Customer Service Centres. Installation of tactile hazard warning tiles was also completed at Light Rail pedestrian crossings.

We have also been working with the Hong Kong Guide Dogs Association to allow potential guide dogs to be trained in the railway systems since October 2015.

Our website also complies with the latest standards for accessibility. In 2016, MTR received the Gold Award from the Office of the Government Chief Information Officer and Equal Opportunities Commission in the Web Accessibility Recognition Scheme.

LEARN MORE...

To learn more about the facilities available across our network, please refer to our "[Caring for Customers with Special Needs Booklet](#)" or [search through the barrier-free facilities](#) on our customer website or on our MTR Mobile app.

DID YOU KNOW?

Installing New Lifts

Constructing lifts in a busy urban environment is not an easy task with various challenges such as anti-flooding control measures, uncertainties over excavation during lift shaft construction and limiting the inconvenience to operations at busier stations. In particular, the installation or retrofitting of external lifts has been challenging for us in older stations where there is a need to seek regulatory approval for use of areas outside of MTR's remit.

Apart from the newly opened Kwun Tong Line extension and South Island Line (East), we have added six additional lifts in heavy rail stations in 2016. Together with wheel chair aid, stair lifts, and wide gate, now all except three of our 93 stations in the MTR heavy rail system are independently accessible by the mobility impaired. For the other three stations, station staff will provide assistance to those in need.

DID YOU KNOW?

Free Accessible-Car Service for Wheelchair Users

Trial for a free accessible-car service at MTR Lam Tin Station for wheelchair-bound passengers commenced on 9 September 2016 for one year. Lam Tin Station is situated in a hilly area, and barrier-free access is only available at Entrance C downhill. Two hillside entrances along Kai Tin Road and Sin Fat Road (Entrances A and D1) are challenging to passengers in wheelchairs. With the commencement on the trial, they can contact station staff upon their arrival at the station between 7am and 11pm, and transport between Entrances A or D1 and Entrance C will be arranged. The Corporation will review the scheme upon completion of the one-year trial.

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Upgrading our Assets

Delivering to 99.9% reliability does not happen without meticulous planning. Continuous investment and re-investments are vital to ensure that we can continue to deliver to our customers' high expectation, not only for today but also in the future. In 2016, we spent more than HK \$8 billion on maintaining, replacing and upgrading our existing network. Here are some highlights:

RAILWAY INFRASTRUCTURE AND TRAINS



- The **HK\$3.3 billion** signalling system replacement project for 7 urban lines have kick-started. The Tsuen Wan Line will be re-signalled first, targeted to complete by the end of 2018. For the Island, Kwun Tong and Tseung Kwan O lines, site surveys began earlier in 2016.



- Purchased a total of **93 8-car trains** at about HK\$6 billion to replace those on the Kwun Tong, Tsuen Wan, Island and Tseung Kwan O lines. The new trains will be delivered between 2018 and 2023.

- Modification on the East Rail line, the oldest line in the network, has commenced, including various **platform and station enhancements**.

- The existing **28 7-car trains on the West Rail Line are being converted to 8-car trains** to enhance existing train services and serve the future East-West Corridor of the Shatin to Central Link. All the converted trains are targeted to be in service by 2018.

- Lengthening platforms** on the Ma On Shan Line to prepare for capacity enhancement as 8-car trains replace existing 4-car trains in phases, starting from early 2017.

STATIONS AND IN-STATION FACILITIES



- Six more external lifts and six refurbished escalators** came into service in 2016



- We commit to installing **toilets** at all major interchanges as part of station improvement works. The latest additions was in Admiralty Station



- Refurbishment** of the Hung Hom Station concourse was completed in February 2017.



- At Ma On Shan Line, all the extended station platforms were opened in November 2016, and more stations are now equipped with **automatic platform gates**. Existing 4-car trains on the line are being replaced by 8-car trains starting from January 2017.

- Installation of new chillers at Wan Chai Station began in November 2016 and is targeted to complete in 2017. This will be followed by the replacement of **160 chillers** in our others stations and depots between 2017 and 2023 with energy efficient models.



- Free **mobile device charging service** is available at **13 MTR stations** starting in late February 2017

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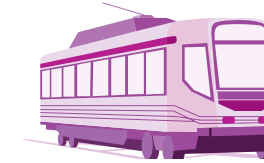
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LIGHT RAIL AND BUS FLEET



- Replaced all existing Light Rail Single Journey Ticket Issuing Machines with new **2-in-1 models**.



- Purchased **40 Light Rail Vehicles** (LRVs) at about HK\$ 745 million, with the first batch expected to be ready for passenger service in 2019. The new LRVs include an improved LED lighting system and more passenger seats.



- Invested about \$200 million to purchase **68 new double-decker buses** to replace existing buses that are being retired in 2016 and 2017. The new buses are fitted with Euro V engines, along with other energy saving features, and have larger carrying capacity. They are expected to be in full service before the end of 2017.

Reducing Congestion

We have taken steps to ease crowding in certain parts of our network by, for example, increasing the frequency of trains during peak periods.

As an intermediary measure, we have gradually added 599 weekly services on the Ma On Shan, Tseung Kwan O and Island Lines as well as on some Light Rail routes since March 2015, increasing overall capacity by about 420,000 passenger journeys per week. In 2016, 140 additional weekly services were added in Island, Tsuen Wan and Kwun Tong lines, and another 148 trips has been added since February 2017. Since March 2012, more than 2,700 extra train trips have been added per week to different MTR Heavy Rail lines, and more than 650 weekly train trips added to Light Rail routes.

The long-term solution to congestion involves construction of additional lines that will enhance the overall robustness of our network. Two examples are the Shatin to Central Link, which is currently under construction, and the North Island Line, which has been recommended for development under the Railway Development Strategy.

While the upgrade of the signalling system on East Rail Line as part of the SCL project is underway, the HK\$3.3 billion signalling system replacement project for 7 urban lines kick-started on the Tsuen Wan Line in 2015. The new system will allow trains to be run more frequently, and overall passenger capacity is expected to increase by 10% when project is completed in 2026.

LEARN MORE...

Please click [here](#) to access information about average train frequency and service hours for all lines.

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CUSTOMER SERVICES IN OUR PROPERTIES

MTR Malls

To provide a high quality shopping experience for our customers, MTR Malls endeavours to offer a wide array of services to enhance customers' comfort and convenience. We also continuously optimise our in-mall facilities to better cater for the different needs of our shoppers. For instance, baby care rooms with breast-feeding facilities have been extended across all MTR Malls in 2015. We have also started to improve the barrier-free facilities in the MTR Malls portfolio, some of which have gone beyond current statutory requirements. ELEMENTS, Telford Plaza, Maritime Square, PopCorn, Plaza Ascot, Ocean Walk, The Lane and Luk Yeung Galleria have received the Barrier Free Accessibility (BFA) Certification by the Hong Kong Quality Assurance Agency (HKQAA) since 2015. We are planning to obtain certification for other malls in the next 2 years. In 2016, PopCorn received the "Caring of Barrier-Free Facilities" Award for its barrier-free services to the community.

We have been operating a self-initiated quality service programme called Total Service Assurance Regime across MTR Malls for over 14 years. Advocating good customer service practices and consistent service quality throughout our malls, this programme engages our tenants through workshops as well as training and performance monitoring activities.

The outstanding performance of MTR Malls has been recognised in the various awards received in 2016, including the "Top Ten My Favourite Malls Awards" and "Best Customer Service Mall Award" from Apple Daily, "Hong Kong Service Award - Shopping Mall" from the East Week magazine as well as "Top 10 My Favourite Shopping Mall Awards 2016" from Hong Kong Economic Times.

Premier Plus

Premier Plus, the elite brand under our Property Management portfolio, provides management services to high-end developments including residential development, The Cullinan and office building, Two ifc. Integrating the hospitality of international five-star hotels, we provide a one-stop round-the clock concierge service to our tenants. To realise the culture of MTR on seeking continuous improvement, Two ifc obtained the certificates of ISO10002:2014 Complaints Handling Management System, and ISO22301:2012 Business Continuity management System, the first in MTR managed properties.

LEARN MORE...

To learn more about [MTR Malls](#) and [Premier Plus](#) please refer to their respective websites.

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CUSTOMER SERVICE IN STATION RETAIL SHOPS

At the end of 2016, there were over 1,392 MTR Shops. They consist of a wide variety of trades that cater to the daily needs of our passengers. The trades include convenience stores, food and beverages, health and beauty, fashion and accessories, and passenger services.

Optimal Trade Mix

In order to provide maximum convenience for passengers using our network, the mix of tenants in our MTR Shops is determined with reference to the Optimal Trade Mix Model, which takes into account our commercial team's assessment of the profile of passengers utilising each station. According to the model, prospective tenants can be assigned into one of three main groups:

- Core Trade — Convenience stores, cake and bakery, banking
- Edible Trade — Takeaway food and beverage, confectionery and grocery shops
- Retail Trade — Fashion, accessories, health and beauty, passenger services, etc.

At the same time, stations in our network are classified into four groups reflecting the main purpose of customer traffic through the station:

- Domestic — Varied purposes such as transport interchange and business
- Leisure — Sightseeing and shopping
- Residential — Daily commuting from and to home
- Cross-boundary — Tourist and business travel to and from the Mainland of China

With the aid of the Optimal Trade Mix Model, our commercial team evaluates the passenger profile and geographical location of each station and introduces an appropriate mix of tenants to best suit our customers' needs.

Support to Station Retail Tenants

We provide assistance to support new tenants in MTR Shops, including advice on shop design, guidelines on operations and management to facilitate their initial set-up at stations and a one-time free poster package within the MTR network for increased exposure to potential customers. In 2016, we launched the [NGO and Social Enterprise Support Programme](#) offering designated shop spaces along the West Rail Line to social enterprises.

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COMMUNITY

Our business is closely linked with the life of the communities in which we operate. Understanding the needs of the community is the first step in realising our Vision of connecting and growing communities with caring service. This is why we emphasise engagement with local communities directly impacted by our projects, and on supporting community programmes to improve the quality of life in our city for all.

**18**

districts in Hong Kong are now all served by MTR

**\$22.7 million**

spent on community investment (excludes fare concessions and in-kind donation)

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INTRODUCTION

Connecting and Growing Community

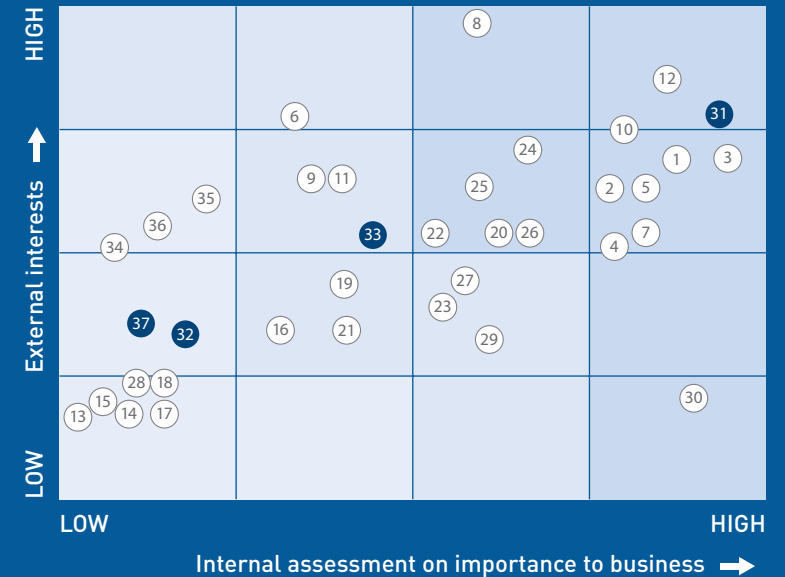
By integrating rail and property developments, we build sustainable community hubs along the MTR network. We design, build and deliver services to be people-oriented, safe, efficient, and conducive to a higher standard of living. We also make significant efforts to preserve natural habitats and heritage spaces and work towards offering the Hong Kong community a greener, more liveable urban environment. We cannot achieve sustainability of our city in isolation; this is why we work together with the Government and other organisations to address social, economic and environmental issues that are beyond our direct influence and control.

Both existing and developing communities benefit from the new facilities that come with the expanded MTR network, which in 2016, has reached all 18 districts in Hong Kong. The integration of transport and urban planning significantly reduces residents' dependence on cars: in Hong Kong, 90% of commuter trips are by public transport, with MTR playing a major role at 48.4% market share. This helps to reduce car accidents and injuries, traffic congestion, and transport-related carbon emissions, while encouraging walking and healthier lifestyles. It also allows more efficient use of valuable land resources.

For many years, our approach to transit-oriented developments (TOD) has enabled Hong Kong to maintain and enhance its reputation for moving people efficiently and reliably.

To us, transforming communities does not refer only to infrastructure, it also requires supporting the development of human capital. Complementing the way we build infrastructure for tomorrow, the focus of our community programmes is on youth – future leaders of societies. Our goal is to empower young people so that they have the skills, motivation, perspectives and opportunities to build and create a bright and sustainable future for themselves and their communities.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



- ③1 Community involvement and development (engagement)
- ③2 Education and culture
- ③3 Employment creation and skills development
- ③7 Community investment (incl staff volunteering)

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COMMUNITY ENGAGEMENT

In addition to engaging our [Customers](#) to understand their views on our services, we consult extensively with local communities on the impacts of new lines, property developments and other major works. We seek to engage with stakeholders to mitigate inconvenience due to noise, dust, traffic disruption and other considerations. To design and deliver our projects for the greatest possible benefit of local communities, we consider and incorporate their views as much as practically possible.

New Railway Lines

The diagram on the next page illustrates the typical oversight and control we exercise during construction of our network expansion projects. The two news lines showcase how we put these principles into practice.

Throughout project design, construction and preparation of its opening, we maintain close partnership with different government departments:

- **Planning consultations**

During the planning stage, we held a series of consultations with representatives of Government departments, District Councils, local communities and organisations to ensure the new railway could meet the needs of the city and local communities. We carefully considered all comments on the design of the extension, including rail alignment, station and entrance locations, works sites and other factors.

- **Progress reports**

When the project is underway, we submit regular progress reports to the Legislative Council Sub-committee on Matters Relating to Railways — covering construction progress and our efforts in community liaison. We also met with the relevant District Councils to keep members up to date on developments.

- **Ongoing cooperation**

We continued to work closely with Government departments from construction to commissioning of the new rail line, ensuring that necessary approvals could be granted in a timely manner. With assistance from the Highways Department's Railway Development Office, requirements and concerns raised by the relevant Government departments and the local communities could be addressed.

DID YOU KNOW?

Turning a tree nursery site into public park in South Island Line

As part of our efforts to preserve trees impacted by railway development, some trees are transplanted and "stored" at nursery sites. For transplanted trees from South Island Line (East), one of the nursery sites is located along Kellet Bay waterfront. To fully utilise the area, we have further transformed the nursery into a temporary public park providing extra recreational space for the local community's enjoyment.

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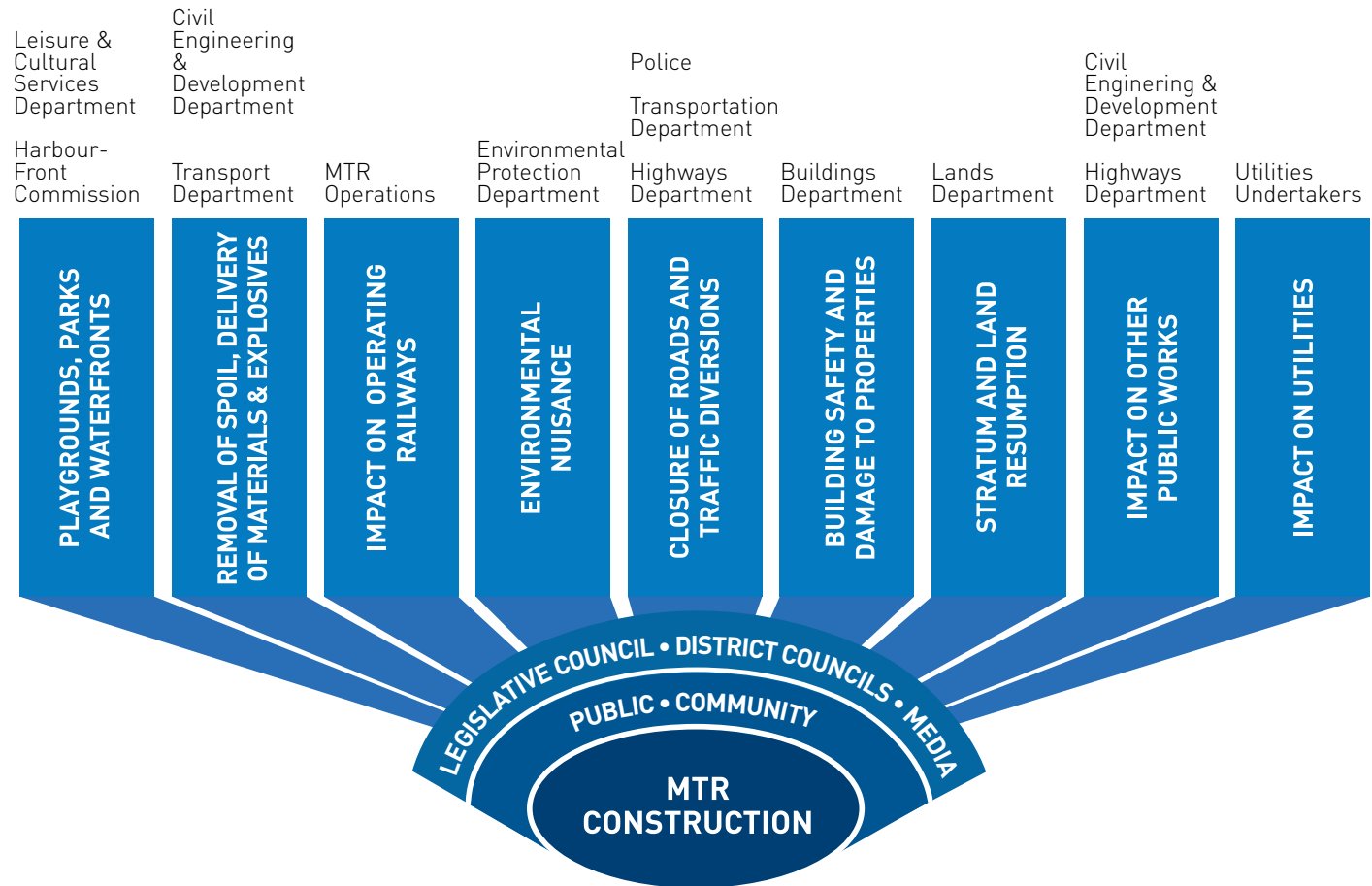
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Typical Oversight and Control of Construction Impacts on Stakeholders

MTR PROJECT MANAGEMENT, STAKEHOLDER ENGAGEMENT, COMMUNITY & MEDIA RELATIONS



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Rail Operations

MTR Society Link

MTR Society Link was established in 2009 as a platform for our Operations Division to exchange views and connect with professional groups and members of civil society through visits, gatherings, and e-newsletters. There are now 25 member organisations representing a range of societies, associations, professional institutes and NGOs in Hong Kong. In 2015, this initiative was awarded the "Outstanding Award for Social Inclusion" by the Hong Kong Council of Social Services for engaging a wide range of stakeholders and proactively exploring opportunities for continuous improvement in building community-friendly facilities.

Caring for customers with Special Needs

To make our transport system and other property services accessible by all, we engage and consult with different community groups to solicit their feedback and comments, especially during the design stage of our new assets. We regularly hold Communication Forum with Elderly Group and Communication Meeting with Disabled Group to capture their requirements. Refer to our [Customer](#) section for some of these outcomes.

Property Development and Management

Property development

We understand the changing lifestyle aspirations of the society, which has moved beyond functional considerations. We seek to meet community expectations in our property developments. For instance, during the development of the Maritime Square Extension, where we are converting a lorry park site on Tsing Tsuen Road near Tsing Yi Station into a commercial development, we have engaged in continuous consultation with local residents and the District Council.

The development will include the improvement of the existing Public Transport Interchange and will provide pedestrian connections as well as a podium landscape garden covering around 5,000 square metres. The promenade near the site is also designed and managed by the Corporation. This project also incorporates energy-efficient design features. These facilities address residents' aspirations to live in a more compatibly built environment by improving integration and providing a more pleasant townscape for the local community.

MTR Malls

MTR Malls are closely integrated with MTR railway stations across our network. We design and operate our malls to provide hubs for shopping and other recreational or social activities. Providing space for social activities, our malls serve as a platform for local communities to gather and enjoy arts and lifestyle events for better quality living. We supported over 100 Community Care programmes in 2016 covering a wide variety of activities including youth development, the arts, community service, charitable, and environmental protection activities.

Managed Properties

MTR managed residential estates held over 487 social activities during 2016. Our social activities included community relations events, environmental protection initiatives and charitable/fundraising initiatives that help to create a harmonious living environment for the residents and promote sustainability practices in the community. For example, we organised festive celebrations and educational activities on environmental protection such as cleaning the beach, used books recycling programme and household appliance recycling programmes and partnered with CLP to promote the energy saving programme "Power Your Love 2016".

All MTR managed offices organised a number of environmental campaigns and donation drives with the participation of our tenants.

LEARN MORE...

Check out the websites for the two network expansion projects
 – [Express Rail Link](#) and [Shatin to Central Link](#).

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COMMUNITY RAILWAY

The KTE and the SIL(E) continue to demonstrate our approach of developing a community railway that is built to respond to the needs of the people living and working in the communities it serves.

Case study: Kwun Tong Line Extension

Fast Facts	Addressing Community Concerns	Links with the Local Community	Preparing for Opening	Opening
-------------------	--------------------------------------	---------------------------------------	------------------------------	----------------

The Kwun Tong Line Extension is a 2.6km extension to the Kwun Tong Line, which was the earliest MTR line built in the 1970s. Construction of the new rail line commenced in 2011 and the Kwun Tong Line Extension came into service on 23 October 2016.

Alignment	Extends the existing Kwun Tong Line from Yau Ma Tei to Whampoa with an intermediate station at Ho Man Tin
Stations	Underground stations at Ho Man Tin and Whampoa
Route Length	Approximately 2.6 km
Estimated Journey Time	5 minutes (Between Whampoa Station and Yau Ma Tei Station)
Train Frequency	Approximately 2 minutes for Ho Man Tin Station and 4 minutes for Whampoa Station during peak hours
Fares	In line with the existing MTR fare structure



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Case Study: South Island Line (East)

Fast Facts

FAO and New Train Design

Addressing Community Concerns

Links with the Local Community

Preparing for Opening

South Island Line (East) (SIL) is a medium-capacity railway connecting the current MTR network from Admiralty Station to the Southern District of Hong Kong, via new stations at Ocean Park, Wong Chuk Hang, Lei Tung and South Horizons. This new rail line is designed with features responding to the transport needs of the community. It will also promote tourism development and economic activities in the Southern District.

The construction of the South Island Line (East) began in May 2011 and it opened for passenger service on 28 December 2016.



Alignment	From Admiralty to South Horizons, comprising underground and viaduct sections
Stations	Admiralty, Ocean Park, Wong Chuk Hang, Lei Tung and South Horizons. The train depot is located near Wong Chuk Hang Station
Route Length	Approximately 7 km
Train frequency	Approximately 3 minutes during peak hours
Fares	In line with the MTR fare structure
Interchange	Admiralty Station will serve as an interchange station for four MTR lines, namely the existing Island Line and Tsuen Wan Line as well as the new South Island Line and the future Shatin to Central Link.
Estimated Journey Time #	<ul style="list-style-type: none"> Between Admiralty and Ocean Park – Approximately 4 minutes Between Admiralty and South Horizons – Approximately 11 minutes Between Tsim Sha Tsui and Ocean Park – Approximately 12 minutes

Estimated journey time it should take to travel from the original station to the destination. Passengers' actual journey time may be longer than the estimate due to waiting time and other factors.

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INVESTING IN OUR COMMUNITIES

Given our geographic footprint and our reach across communities, we aim to be good corporate citizens and leverage our skills, resources, and networks to help communities thrive. In 2016, we invested \$22.7 million to various community activities. This is on top of our colleagues volunteering their own time, ongoing fare concessions and promotion, and other in-kind donations. Our intention is to enable the social and economic development of communities, enhance quality of life, and foster a thriving environment in which to live and do business. The ultimate goal of our community initiatives is to create long-term benefits for both the Company and society.

Community Connect



Launched in April 2016, the Community Connect platform houses a variety of initiatives that reflect our commitment in providing caring service through actively engaging in the communities that we live in and serve. The Community Connect platform comprises of 3 main areas namely Art and Culture, Community Outreach, and Green and Healthy Living.

Community Outreach	Art & Culture	Green & Healthy Living
<ul style="list-style-type: none"> • More Time Reaching Community • Society Link • Elderly talks • School talks • MTR x Hong Kong Repertory Theatre "Railway Safety School Tour" Programme • NGO and Social Enterprise Support Programme • MTR Safety and Courtesy Board Game 	<ul style="list-style-type: none"> • Art in MTR <ul style="list-style-type: none"> - Station artworks - Space for art exhibition - Art events in MTR Malls • Living Art Stage • Community Art Galleries 	<ul style="list-style-type: none"> • Step Your Way to Health • MTR x Youth.ROC (Run Our City) • MTR HONG KONG Race Walking

Selected programmes are highlighted below.

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Community Outreach

NGO and Social Enterprise Support Programme

Apart from supporting social enterprises by directly purchasing products or services from them, as we have done throughout the years, we are looking for opportunities where we can leverage our existing resources to support their efforts.

Under our “NGO and Social Enterprise Support Programme”, enterprises can apply to run their business in selected MTR shops along the West Rail Line. Qualified applicants whose projects have obtained funding from either one of the two social enterprise funding schemes, that is, the “Enhancing Self-Reliance Through District Partnership Programme” of the Home Affairs Department or the “Enhancing Employment of People with Disabilities Through Small Enterprise Project” of the Social Welfare Department, can enjoy a concessionary monthly licence fee of just HK\$1,500. The first tenant “CookEasy”, a new retail shop selling pre-packed food, was opened in MTR Tuen Mun Station under the programme in November 2016.

More Time Reaching Community

Read more about our staff-led volunteering programme [here](#).

Safety Awareness Initiatives in the Community

We have reached out to students and elderly to promote safety in our railway. Read more in the [Customer Safety Initiative](#) section.

Art in MTR

The Art in MTR initiative aims to enhance passengers’ life journeys — as well as their daily travelling experiences — by providing inspiration from artwork on display throughout our railway network.

We continue to support aspiring local artists to showcase their work at the temporary exhibition space in the Sheung Wan and Sai Wan Ho Stations, as well as our permanent mini gallery in Central Station near Exit J. At the Living Art Stage in the Central Subway of Hong Kong Station, we host live performances every Friday evening ranging from modern pop and hip hop music to classical performances, traditional Chinese music, theatre and dance. There are also special performances during festive periods in Hong Kong Station.

LEARN MORE...

Art in MTR – station artworks As part of our Art in MTR programme, we work with our Art Advisory Panel comprised of five art experts to assist in the selection of artists and the development of art concepts for our new lines.

The opening of Kwun Tong Extension and the South Island Line (East) has seen a significant expansion of the Art in MTR programme. A total of 11 new artworks were commissioned from local artists for the stations on the two new lines. Many of the artworks were created in partnership with local residents, such as in the work ‘Journeys along the South Island’ at Lei Tung Station. At Whampoa station, artist Lam Tung-pang worked with local schoolchildren to create the two-part mural at platform level that celebrates the history and unique characteristics of the local community.

[Download](#) our “art in mtr” leaflet, or [click here](#) to get in depth with some of the artists and stories about their creations, as well as to experience our collection of station artworks in motion through the “Virtual Art Gallery”.

LEARN MORE...

Art in MTR – exhibition in MTR malls

In May 2016, we hosted the first event under the Art in MTR – exhibition in MTR malls at ELEMENTS. Entitled “HK Design to Connect: DFA Awards Exhibition”, the event was held in collaboration with Hong Kong Design Centre (HKDC) to showcase the winning designs of the Design For Asia Awards. As a new initiative under the Art in MTR programme, our support to the art community forms part of our wider effort to connect and contribute to society by nurturing and giving exposure to emerging local designers while showcasing how innovative ideas are turned into practical products and services through the creative work of the design industry.

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Green and Healthy Living

MTR Hong Kong Race Walking

In promoting healthy living, the MTR Hong Kong Race Walking has been held annually since 2005. In 2016, this community health and charity event attracted 1,000 participants. With the support of participating individuals and organisations, we raised over HK\$1 million for the Hospital Authority Health InfoWorld to support its work on enhancing disease management skills and educating others on the importance of fostering healthy lifestyles and practices from an early age.

MTR x Youth.ROC (Run Our City)

With an objective of inspiring teenagers to systematically train to achieve their goals while improving health and developing a "can-do" attitude, MTR collaborated with Run Our City in a programme where over 320 students from 18 districts participated in a series of training sessions together with members of the MTR staff. Towards the end of the programme, students were able to not only complete their first 10-km challenge, but also expand their social circle and understand more about their communities through street-running.

A Focus on Youth

Young people are a key part of the community that we connect and we depend on them for the future of our communities. Thus, it is important that we invest in our future innovators, leaders, and caretakers of the infrastructure assets we are building today.

Our vision is to empower young people with skills, motivation and opportunities to create a bright and sustainable future for themselves and their communities.

We use a multi-faceted approach to provide young people, and those who engage closely with them, with support, knowledge and experience to unleash their potential. We leverage our network, resources and expertise to keep our communities informed of issues that are impacting youth, to better engage with and seek young people's input, and to provide youth with opportunities to develop themselves.

The table below summarises sample programmes on youth. Click on the name of the programme for more information on our Customer website.

	Our goal: Empowering Young People			MTR support provided		
	Increase understanding of Youth	Engaging with Youth	Providing new skills, opportunities and experiences	Company expertise	Resources (funds, space or facilities)	Access to our network
Youth Forum	✓	✓	✓	✓	✓	✓
Pathways to Employment Programme	✓	✓	✓	✓	✓	✓
'Train' for life's journeys		✓	✓	✓	✓	✓
Customer Service Ambassadors and Tourist Ambassadors		✓	✓	✓	✓	✓
MTR-CUHK Youth Quality of Life Index survey	✓				✓	
Youth Talks* (Internal programme)	✓	✓	✓			

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Youth Forum

In 2015, we launched our youth think tank, the Youth Forum, to seek young people's input on ideas that the Corporation is planning to roll out and gather their views on emerging issues. The Forum comprises both working youth and university students, who meet with our senior management quarterly to exchange views on a range of business initiatives and help us ensure their relevance to the wider community. To date, through the eyes of our young passengers, they have offered us valuable feedback on the way we communicate, helped us create the "Rail Gen 2.0" identity that was rolled out in 2016, supported our review of the Fare Adjustment Mechanism and MTR By-Laws, and offered suggestions on service enhancement for 2030.

Through the process, Youth Forum members gain valuable business experience as well as skills from the programme. In addition to the regular interaction with senior business leaders, they also receive behind-the-scenes site visits to MTR facilities and professional management training on topics such as innovation and creativity. Participants also have the opportunity to build relationships with peers and enhance their personal network. Our first cohort reported that they gained a better understanding of the multiple factors that the Corporation manages on a regular basis to meet various stakeholders' interests, and that their self-confidence and communications skills have improved as a result of the programme.

Pathways to Employment Programme

Hong Kong's competitiveness hinges on the next generation's ability to meet the demand for a highly effective and creative workforce. As one of the city's largest employers, we launched the Pathways to Employment programme in 2015 to facilitate the business and social sectors working together to bridge the gap between the skills and ambitions of Hong Kong's youth and the demands of an evolving economy.

Much like the way our trains bring people of different backgrounds together, we kicked off our programme with a cross-sector summit that gathered over 300 professionals from the education, social work, business, policy-making, and the NGO sectors, along with MTR staff, to share with the young people their journeys from education to work.

In 2016, we continued the dialogue and facilitated the co-creation of solutions to ease the transition from education to work through a series of in-person workshops and an online Community Innovation Platform. We invited young people and interested parties to apply 'design thinking'— a proven innovation process that combines creative and critical thinking — to develop user-centric solutions to inspire young people on their Pathways to Employment. We received 84 brilliant ideas and engaged some 600 individuals through this open innovation process. With the help of community advisors and public voting, five projects that aims to cultivate innovation, entrepreneurial and leadership skills as well as foster young people's interest in Science, Technology, Engineering and Mathematics ("STEM") subjects received funding from the Corporation and will be rolled out over the next three years.

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Supporting Secondary School Students

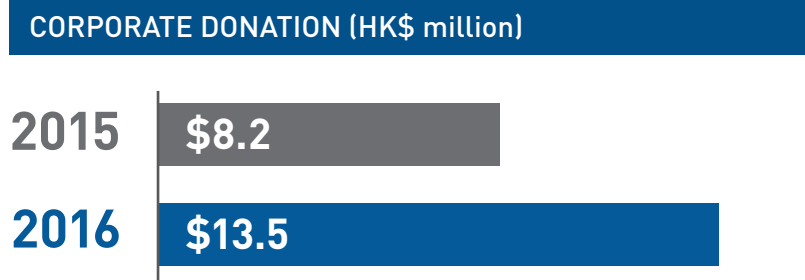
With young people feeling concerned about their economic well-being, we continue to run two major programmes that provide skills and personal development opportunities for secondary school students - 'Train' for life's journeys and 'Friend' for life's journeys - so that they can explore their interest and realise the potential career opportunities that lie ahead.

Since 2009, 'Train' for life's journeys has provided a 10-day multi-dimensional summer training programme opportunity to senior secondary 1 students. Through workshops, training camps, visits and work experiences at MTR facilities, the programme aims to broaden students' horizons as they acquire soft skills. Around 100 students completed the programme in the summer of 2016.

In May 2016, 135 students celebrated the end of a 6-month mentorship programme, 'Friend' for life's journeys. Launched in 2010, this programme pairs secondary school students with a young MTR staff as their mentor. Through one-on-one sharing and group activities, both mentor and mentee take part in new experiences and grow together.

Fundraising and Donations

Staff members' active participation in volunteering and fundraising activities is an important part of our corporate culture. In 2016, our staff raised over HK\$362,000 for donation to charitable organisations. In addition, the Corporation and our staff together have made a special donation of HK\$2 million to the families of the two brave fire fighters who died battling the Ngau Tau Kok blaze in Hong Kong in June 2016; another sum of HK\$2 million was donated to those injured and hospitalised in the arson incident in Tsim Sha Tsui Station happened on 10 February 2017. Our total corporate donation for 2016 was at HK\$13.5 million.



For our fundraising efforts, we received the President's Award from The Community Chest of Hong Kong, including the Diamond Award in the Community Chest Corporate & Employee Contribution Programme in 2015/2016.

In addition, we offered free use of our advertising spaces to over 50 organisations supporting causes ranging from community volunteering to elderly care services. We hope that we are able to support the work of these organisations by raising awareness on important issues affecting our society, as well as promoting their work to the wider community.

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ENVIRONMENT

We strive to become one of the most resource-efficient and ecologically sustainable railway and property service companies in the world. This means that we will:

- Increase energy efficiency;
- Use natural resources sustainably; and
- Adapt to climate change.



260

Number of species spotted in Lok Ma Chau wetland

1,355,381 tCO₂

Total GHG emissions

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INTRODUCTION

We focus our discussion on the railway system given its significant geographical footprint and resource consumption. What we build today may also have a long term impact on the environment. We also include discussion of our property and other businesses especially in relation to resources consumption.

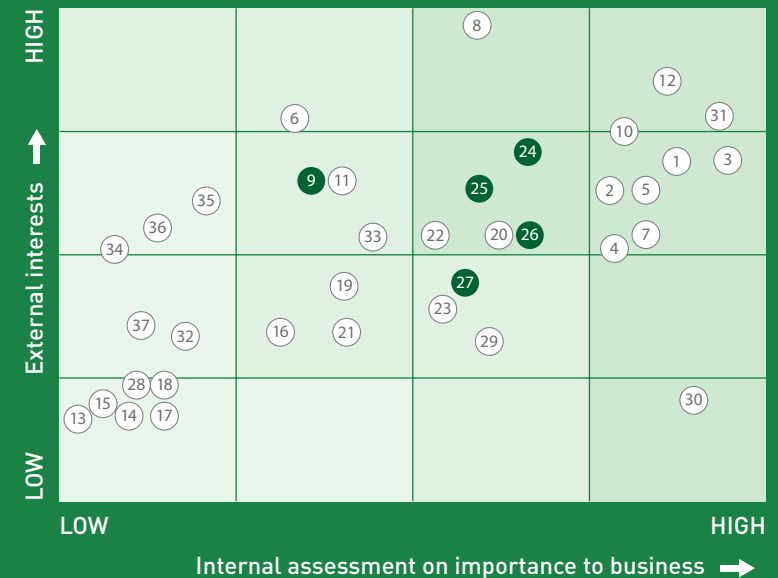
Electrically-powered mass railways are generally acknowledged to be the most environmentally sustainable way to transport the world's growing and urbanising populations. We believe that our most significant contributions to the environment arise from impacts that do not occur as a result of our services. Due to its large capacity, MTR has displaced much road transport with the benefits of cleaner air, less congested roads and makes better use of limited land resources than would otherwise be the case.

In support of this view, the International Association of Public Transport (UITP) and management consultancy Arthur D. Little concluded that Hong Kong has "the most advanced urban system in the world" and ranks first in terms of low carbon transport.

LEARN MORE...

Download a copy of [Future of Urban Mobility 2.0](#) to read more about the findings published by Arthur D. Little and UITP in January 2014, including an updated version of the Urban Mobility Index covering 84 cities.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



- ⑨ Sustainable products & services
- ②④ Prevention of pollution (air, water & waste)
- ②⑤ Sustainable resource use (resource efficiency & water use)
- ②⑥ Climate change
- ②⑦ Biodiversity

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DID YOU KNOW?

How many vehicles does it take to carry the same number of passengers in a MTR train at full capacity?

1 MTR Train



25 Buses



150 Mini-buses



1,500 Cars



Assumptions: 1-2 passenger per car; 16 passengers per minibus; 100 passengers per bus; and 2,500 passengers in 1 train

Management Approach

GUIDING STRUCTURE

Our Commitment and Policies

- Our **Climate Change Statement** – acknowledges that climate change is affecting Hong Kong and other locations where we operate. We are committed to mitigating climate change by providing low carbon transport and lifestyle opportunities for customers and communities, and also to adapting to climate change in order to ensure safe, reliable and efficient delivery of our services in years to come.
- Our **Corporate Biodiversity Policy** commits us to safeguarding ecologically sensitive areas. Under this policy, we have integrated biodiversity considerations into our Environmental Management Systems. An example is our management of the Lok Ma Chau wetland.
- Our **Green Procurement Policy** incorporates principles for responsible management of natural resources.

Managing risk

Risks associated with the environment are subject to regular assessment by our Enterprise Risk Committee. In the case of climate change for example, we distinguish between direct risks that impact service delivery, asset management, staff, and customers, and indirect risks that affect our supply chain, and the communities that we serve.

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Energy efficiency

We have been a signatory of the World Business Council for Sustainable Development (WBCSD) Manifesto for Energy Efficiency in Buildings since October 2012. When it comes to energy efficiency, we strive to go beyond regulatory compliance.

LEARN MORE...

According to the Electrical and Mechanical Services Department, buildings account for about 90% of total energy consumption in Hong Kong. The regulatory framework governing energy efficiency in Hong Kong comprises the [Building Energy Efficiency Ordinance](#) and [Building Energy Code](#).

DID YOU KNOW?

MTR's Inaugural Green Bond Issuance

In 2016, we issued our first ever Green Bond. The issuance of the green bond allows us to tap into a new and fast growing investor base, provides cost effective financing to invest in environmentally friendly service and network enhancement, and supports the development of Hong Kong as a regional green finance hub. Refer to the [Green Bond section](#) for more information.

KEY PROCESSES

Environmental Management Systems

Our Environmental Management Systems (EMS), which are designed and certified to the standard of ISO 14001:2004, support our teams ranging from the Operations, Projects and Property Divisions (through selected MTR managed properties) to estate management to identify environmental impacts and achieve continuous improvement. Our transport operations have achieved the new ISO 14001: 2015 certification; other business units will commence the transition as needed.

LEARN MORE...

[ISO 14001](#) provides a framework that any company or organisation can follow to set up an effective environmental management system, and improve their environmental performance. Amongst other changes, the latest edition issued in 2015, requires environmental management to be more integrated with the organisation's strategy, and focus on life-cycle environmental considerations.

Internal Working Groups

To ensure that we adequately minimise the environmental impact of our businesses, we have set-up relevant environmental working groups across the Company. For example, we have formal and ad hoc working groups on overall environmental management, energy, water, waste and food waste. On the construction of our new railway lines, we have specific environmental teams assigned to manage environmental issues for each line.

Environmental Impact Assessment

We follow a statutory process of Environmental Impact Assessment (EIA) for new projects involving impact avoidance, minimisation and mitigation recommendation. The process also involves public consultation, and expert review when needed. Based on the outcomes of this process, environmental permits issued by the Environmental Protection Department specify conditions that must be complied with throughout the lifespan of our projects, including control and monitoring of environmental impacts relating to noise, water quality, air quality, waste disposal and ecology, to name a few.

Working with Stakeholders on the New Lines

As part of our new railway lines engagement, our Continuous Environmental Improvement Programme (CEIP) provides a platform for knowledge sharing among our construction and environmental staff as well as our consultants, contractors, and relevant government officials.

We also conduct regular engagements with environmental NGOs to update them on the environmental aspects of the construction of the new lines.

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SUSTAINABLE RESOURCE USE

In 2016, we purchased over 1,940 GWh from Hong Kong's two electricity providers, representing about 4% of Hong Kong's total energy consumption. Heavy rail accounts for the vast majority, or about 76%, of the electricity that we consume, with our Property Division also representing about 21% of our total electricity consumption. This calculation includes all properties that we own and manage, but only takes account of energy use that we control in those properties (i.e. it does not reflect energy consumed by our tenants).

Electricity consumption (MWh)

	2015	2016
Total	1,954,893	1,948,421
Railway Operations	1,541,108	1,542,581
Heavy Rail (Share of total)	1,486,014 (76%)	1,487,354 (76%)
Light Rail and Bus (Share of total)	55,094 (3%)	55,227 (3%)
Properties (Share of total)	413,785 (21%)	405,840 (21%)

Energy efficiency

Purchased electricity represents our largest non-staff operating cost. Even without taking into account the environmental benefits of consuming less energy, the cost consideration alone provides an important incentive to seek out innovative ways to improve energy efficiency.

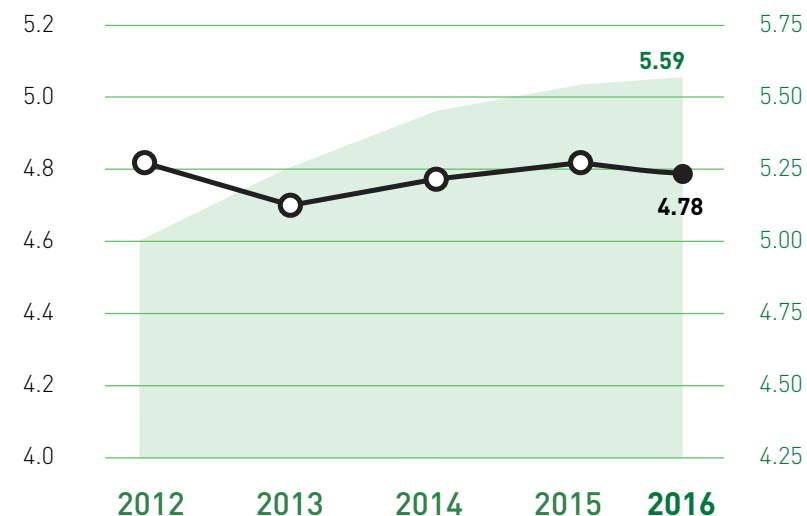
We normalise electricity consumption in two ways in order to evaluate our performance on energy efficiency:

- Electricity use per revenue car km (as illustrated in the chart)
- Electricity use per passenger km on heavy rail operations

ELECTRICITY EFFICIENCY RATIO OF RAIL ASSETS (HONG KONG)

Electricity consumption per revenue car km (KWh/car km)

Passenger trips (weekday average in millions)



By 2020, our target is to reduce by 21% the amount of electricity consumed per passenger-kilometre in our heavy rail network compared with 2008 levels, the first full year after the merger of the rail operations. While patronage in our heavy rail system continued to increase, train frequency has been increased and hence electricity consumption as well. We have now recorded a 16.1% reduction of electricity intensity compared with the baseline from 2008.

For our investment properties, we focus our energy efficiency improvements in older building stocks. In 2013, we set a target to reduce energy use for our investment properties portfolio by 12% by 2023. As of end-2016, we have achieved a reduction of 8% with 2013 as baseline.

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Trends in electricity supply

In Hong Kong, our choice of energy suppliers is restricted to two vertically-integrated companies that are regulated by the Government under a Scheme of Control Agreement (SCA) that is valid until 2033. We anticipate that in the coming years the cost of our electricity will rise on account of tariffs being adjusted to reflect developments in energy markets, including the impact of environmental policies.

During 2015, we participated in a consultation exercise organised by the Environment Bureau to consider the future arrangements of the SCA in Hong Kong. We reiterated our views for the Government to continue to find an appropriate balance between the objectives of safety, reliability, affordability, and environmental protection. To reinforce the introduction of renewable energy and demand side management measures, we also suggested that the Government provide more financial support to the private sector beyond tax incentives.

LEARN MORE...

Information about the regulatory framework governing the supply of electricity in Hong Kong is available from the [Environment Bureau](#).

Energy Saving Measures

We have implemented many initiatives to save energy over the years and continue to find new ways to reduce consumption in all areas of our business.

At the procurement phase of our new railway lines, we implement a lifecycle cost assessment with our potential suppliers. This assessment enables us to embed energy saving technologies as early as possible, ensuring energy efficient operations at the onset. Find out more in our [case study on train procurement](#).

In our railway operations, our Energy Management Working Group explores energy efficiency initiatives, including promoting energy conservation amongst staff. At our malls, comprehensive energy saving plans have been established including promotion of energy conservation with staff, tenants, contractors and the public. In 2016, we were awarded for our energy saving efforts with the GREEN PLUS Award in Hong Kong. The GREEN PLUS programme is a collaborative platform that recognises energy efficiency and conservation:

- Railway Operations and The Palazzo received the Grand Award
 - » Prestige Honour Awards for their initiatives; continuing efforts in implementing new energy saving initiatives;
- The Cullinan won the Gold Award in the Property Management (Residential category) and MTR malls received the Joint Energy Saving Award, which recognised the Company's efforts in energy saving.

We are also supportive of Government's initiatives, being amongst the pioneering signatory. These include:

- The Energy Saving Charter – voluntarily setting the average indoor temperatures at MTR Headquarters and common areas of office buildings and shopping malls under our management to 24–26°C during summer months
- Charter for External Lighting – switching off external non-essential lighting after midnight daily

This infographic on the next page brings together our initiatives into a concise summary. Please click on the different parts of the diagram to learn more about what we are doing in each area.

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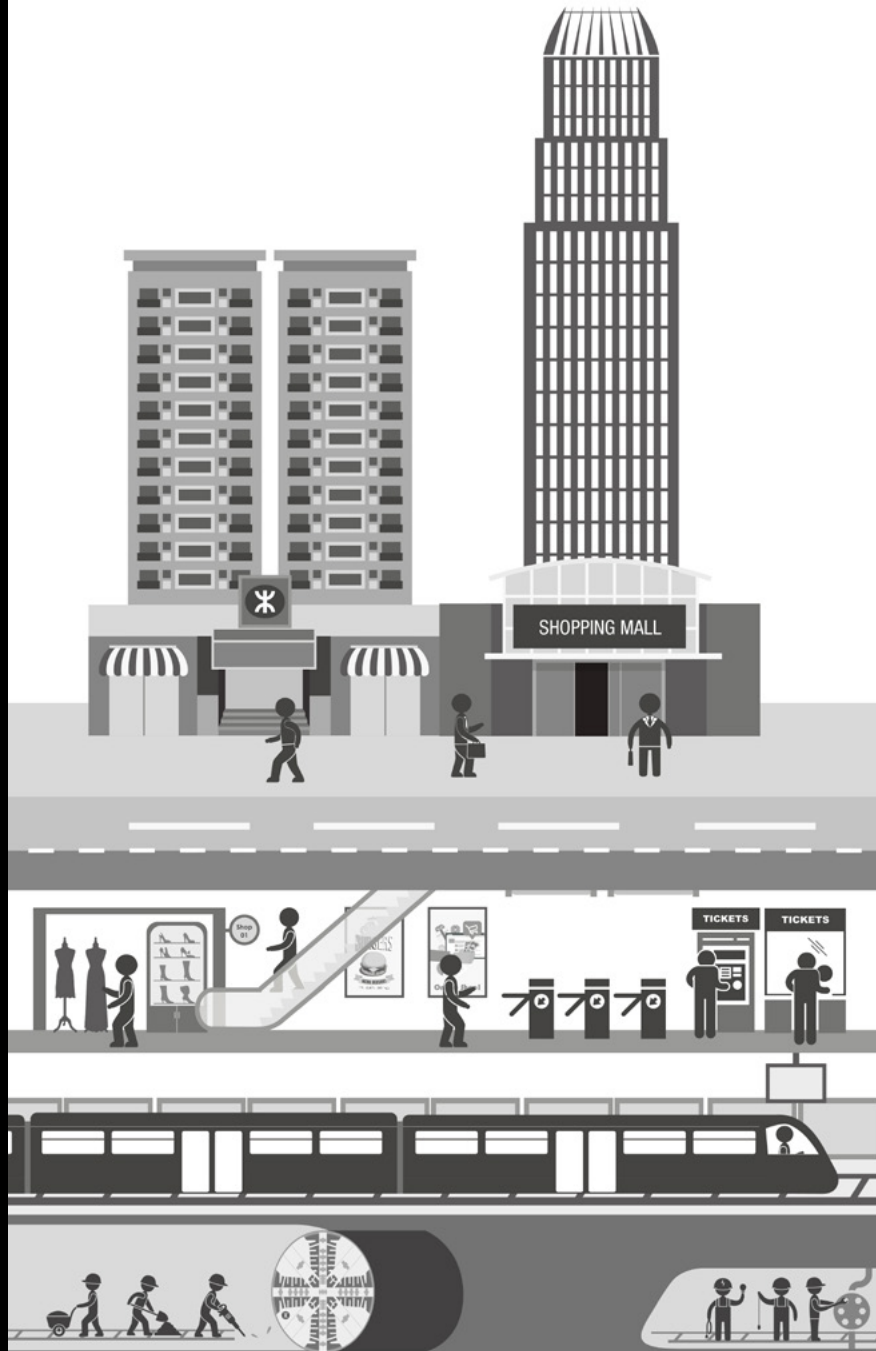
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Winter Full Exhaust Mode



Environmental Control System



Energy-saving Lighting



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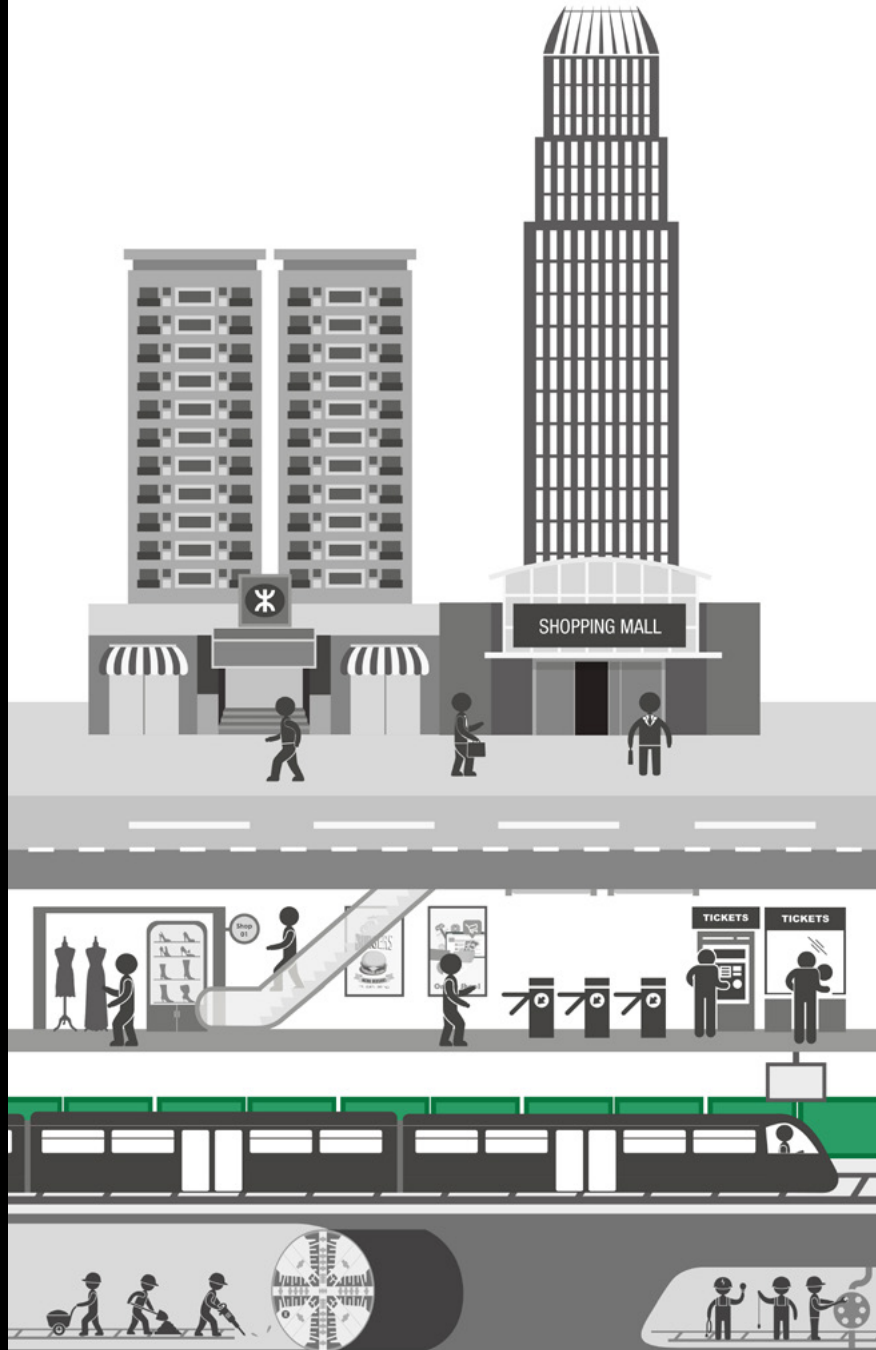
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Minimise the cooling volume on platforms and to reduce the piston effect, whereby moving trains pull cooled air from the station into the tunnel and push hot air from the tunnel into the station.

Winter Full Exhaust Mode

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Energy-saving Lighting

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[Winter Full Exhaust Mode](#)



When the outside temperature is below 22°C, exhaust fans are used to create negative pressure in the station, allowing cool ambient air to be drawn into the station through its entrances to reduce the overall cooling demand.

[Environmental Control System](#)



[Energy-saving Lighting](#)



[Escalator Energy Saving Mode](#)



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Winter Full Exhaust Mode



Environmental Control System



Variable Frequency Driven (VFD) air handling units are being installed at selected station ventilation systems enabling better energy efficiency. Implementing a life cycle cost assessment, we will also be rolling out our chiller replacement plan in stations from 2017 to 2023, which could reduce our electricity consumption by 30%.

Gradual changes of temperature from station entrances to the concourse and to platforms are designed to reduce overall cooling demand.

Energy-saving Lighting



Escalator Energy Saving Mode



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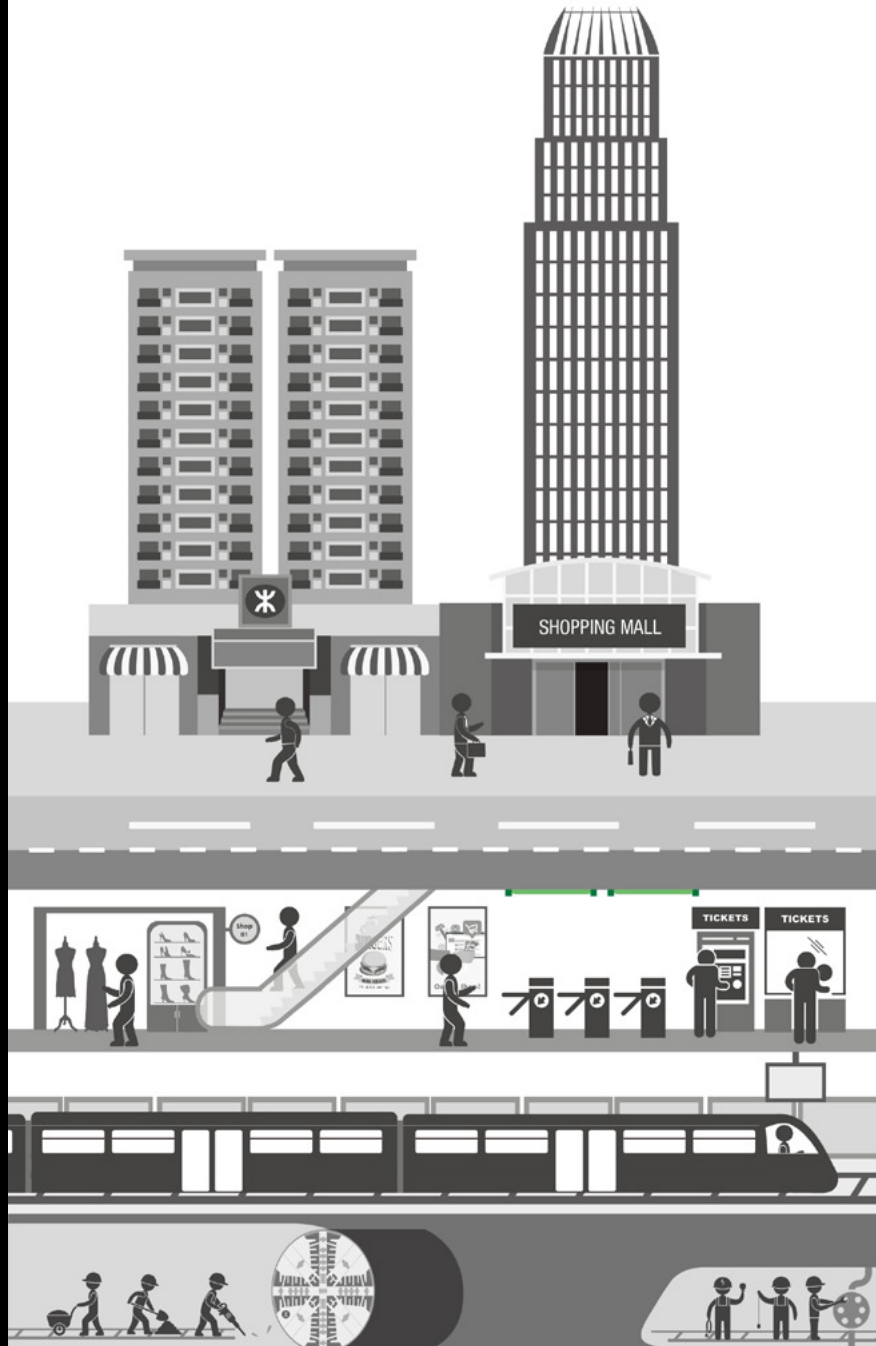
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[Environmental Control System](#)



[Energy-saving Lighting](#)




Installation of LED lights in stations, advertising panels, trains, tunnels, and managed properties is on-going. They can achieve energy savings of up to 40% compared to conventional light bulbs, and can last up to 50,000 hours, which is two and a half times longer than conventional bulbs. Our photo-sensor control systems require redundant lights to be switched off automatically on sunny days.

[Escalator Energy Saving Mode](#)



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Redundant escalators are turned off during non-peak hours.

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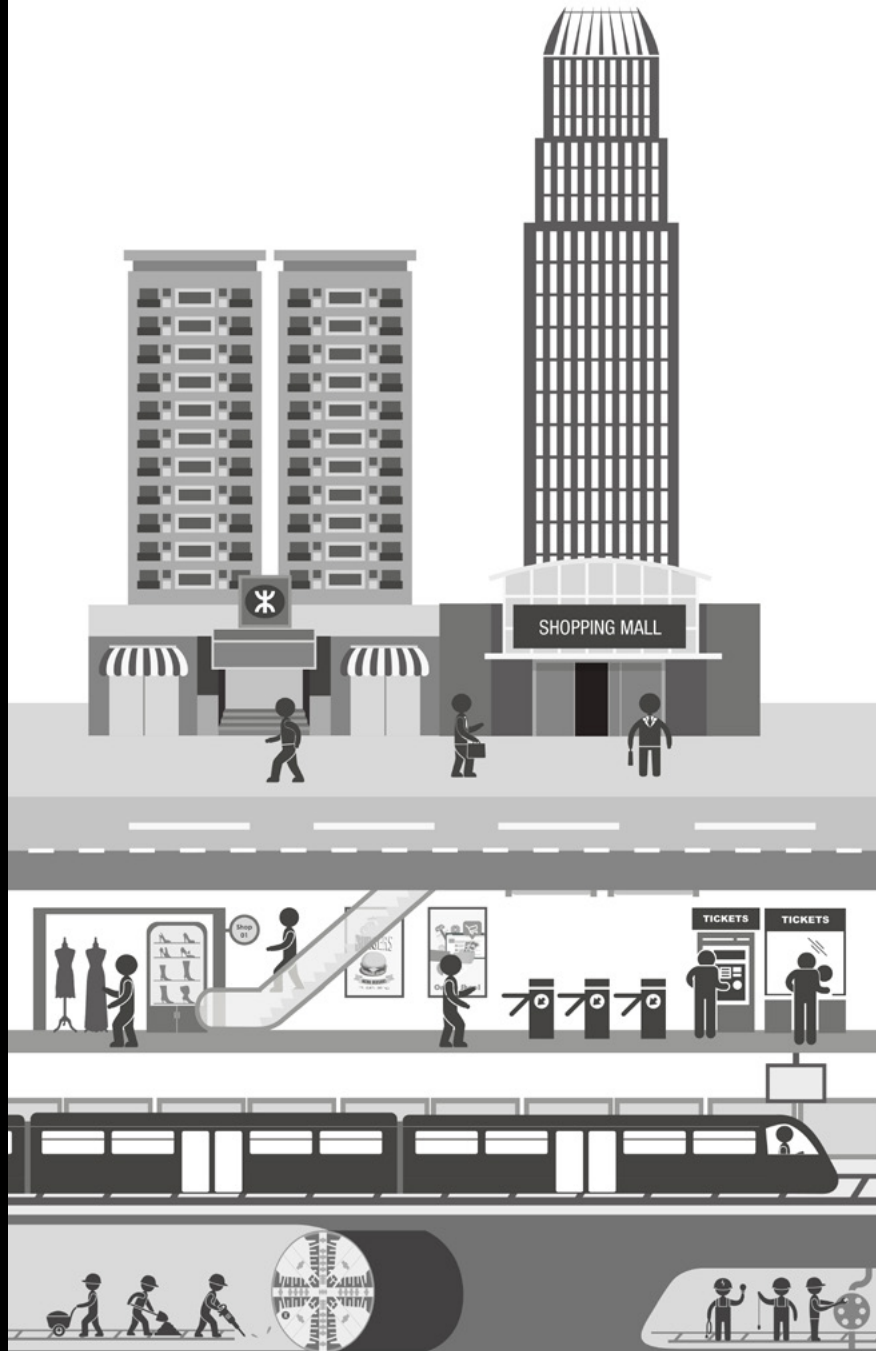
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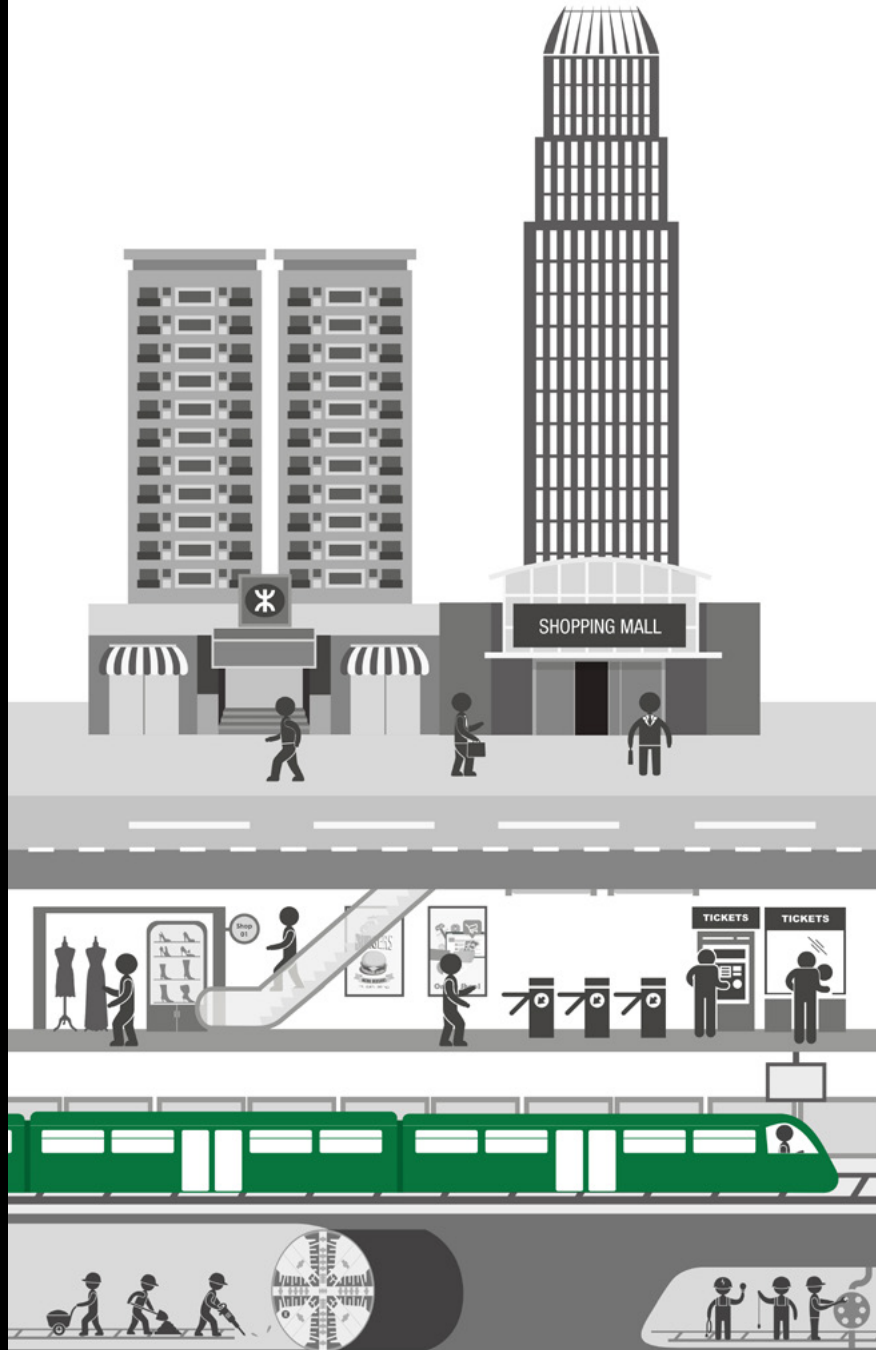
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Regenerative Braking



We convert kinetic energy from trains when they are braking into electrical energy and feed it back into the power supply network for use by other trains through the overhead power system.

Energy Storage



Train Coasting



Trackside Ventilation Fans



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Regenerative Braking



Energy Storage



New super-capacitor energy storage devices has been installed in the South Island Line (East). It can better utilise surplus energy produced by train regenerative braking.

Train Coasting



Trackside Ventilation Fans



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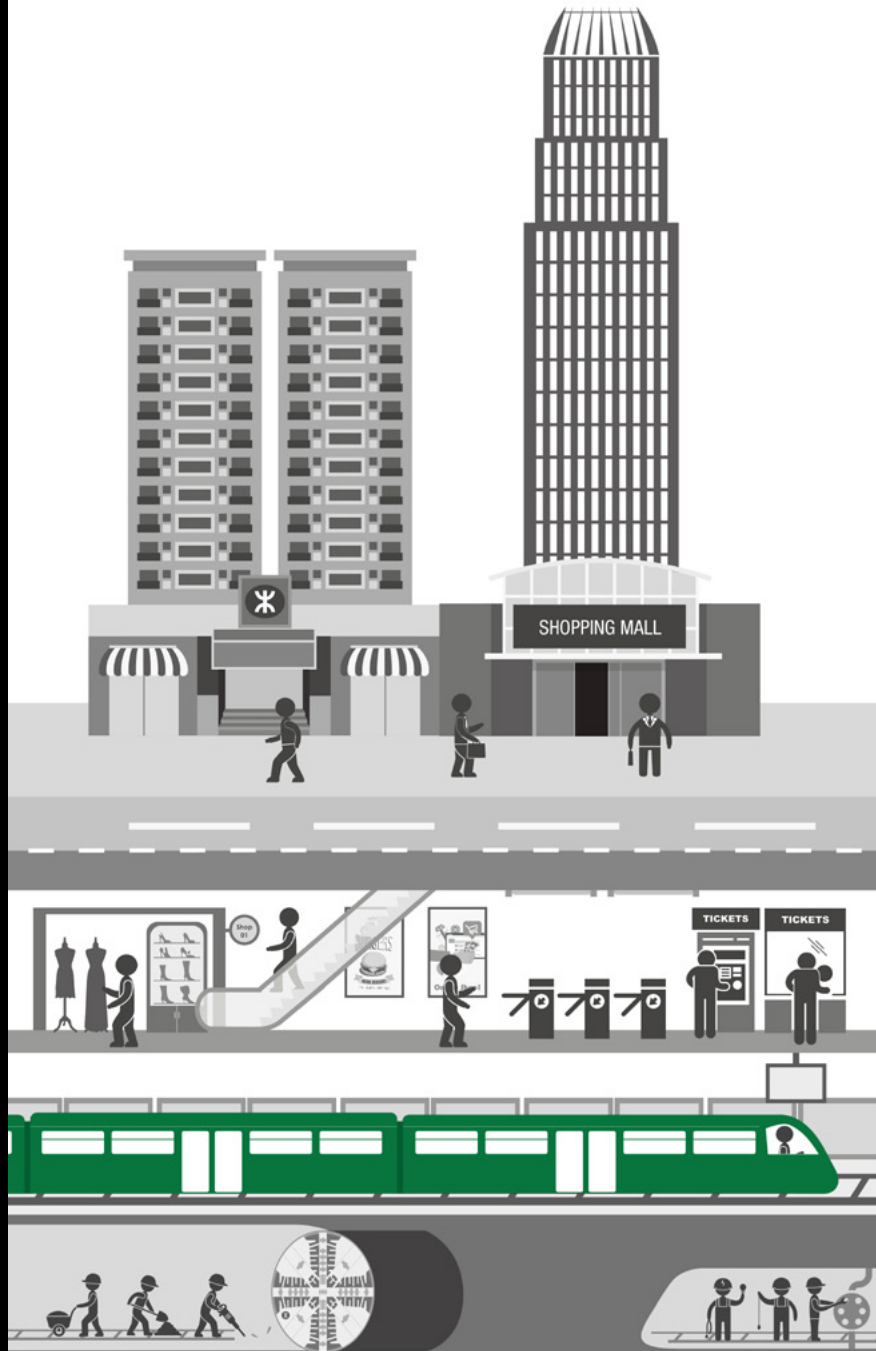
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Train Coasting



When trains are going downhill or preparing to slow down for upcoming stations, the driver puts the engine into neutral to save energy.

Trackside Ventilation Fans



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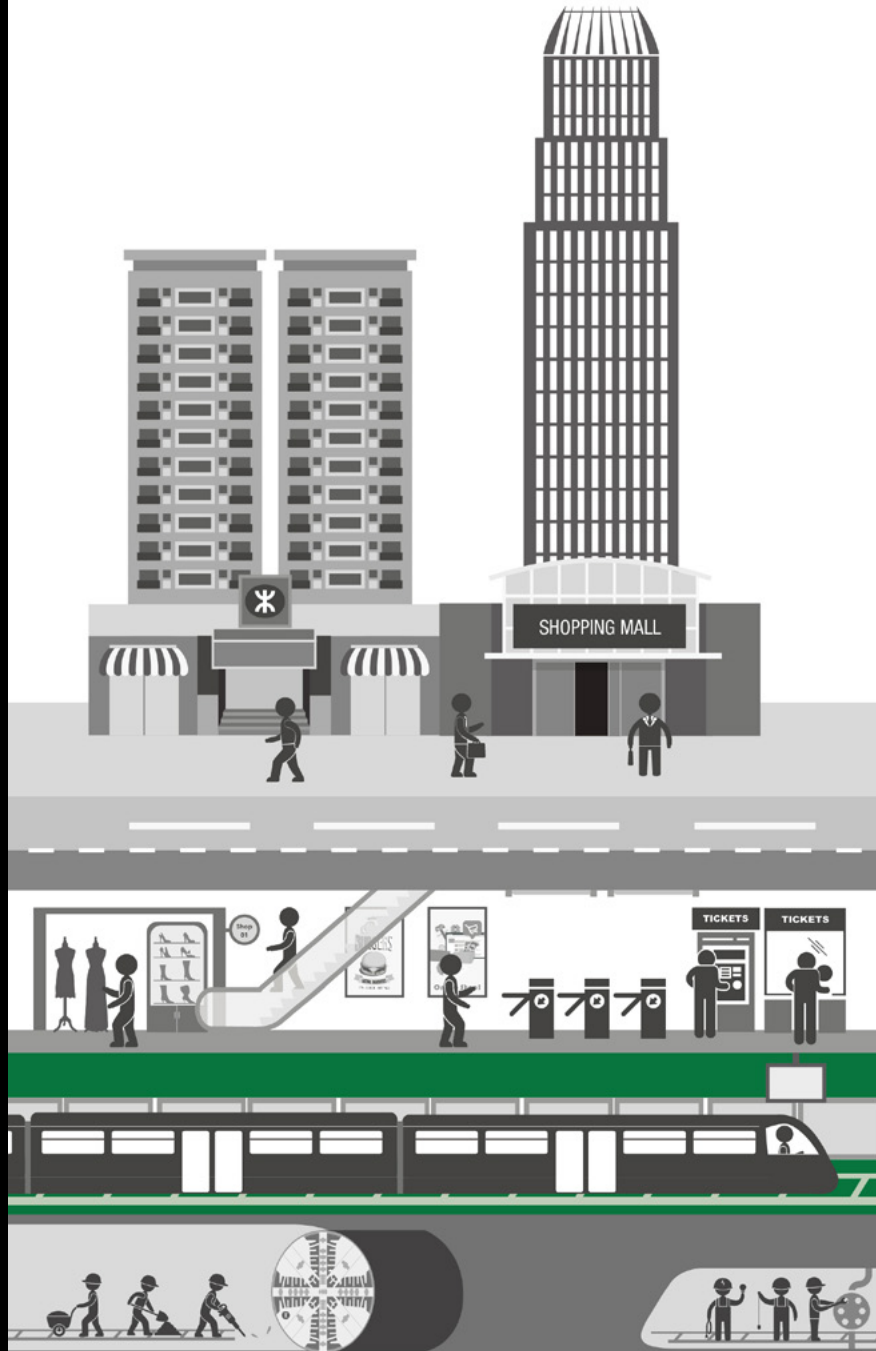
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Trackside Ventilation Fans



Optimised during peak and non-peak hours to maintain trackside temperatures suitable for train operation.

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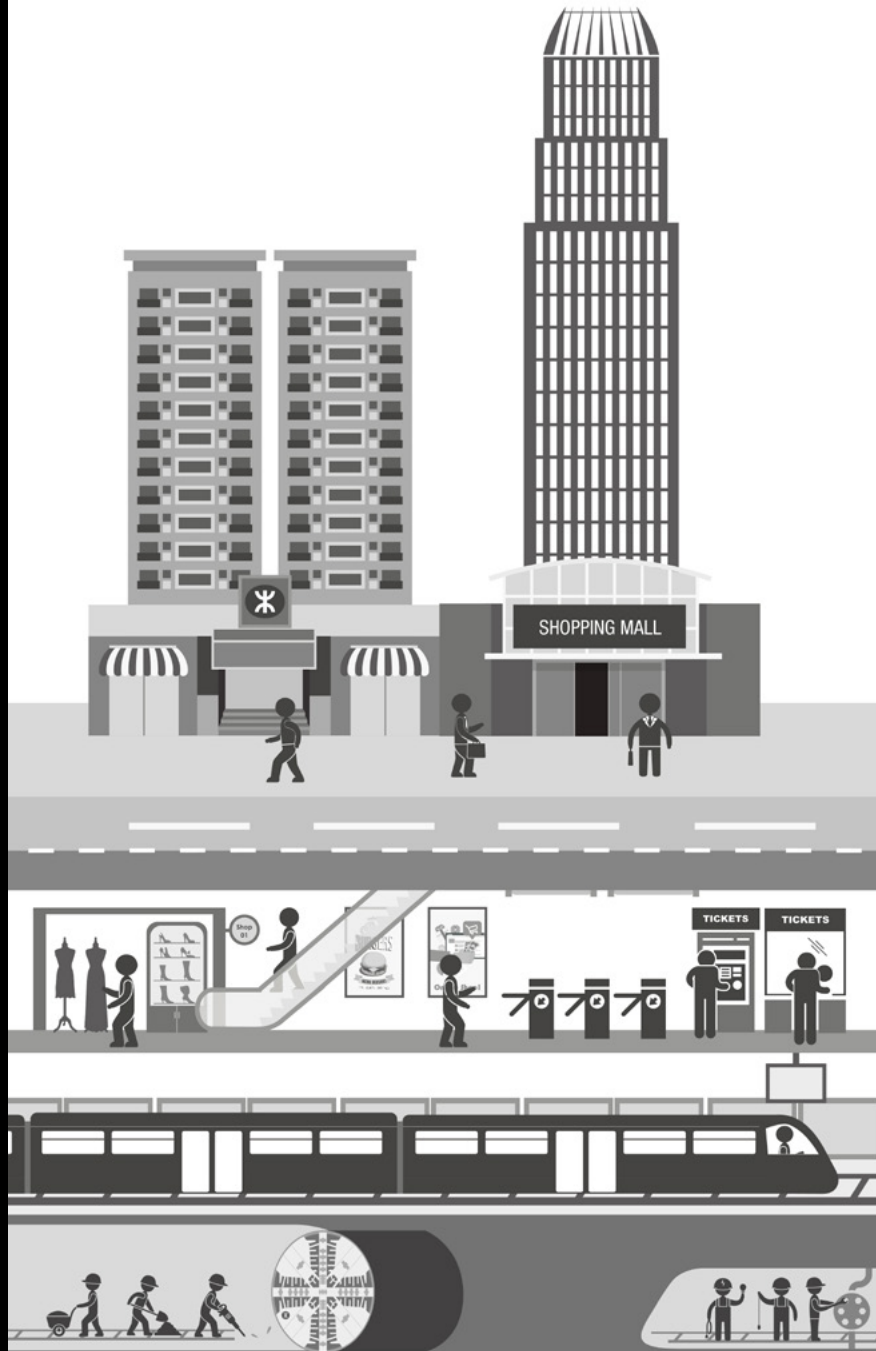
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Water-cooled air conditioning system with a combination of conventional and oil-free chillers



Air Lock Lobbies and Air Curtains



Adjustment of operating time for energy consumption equipment



Variable Speed Drives



Solar Film



Motion Sensors



Replacement of traditional lamps with LED energy saving lamps



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Water-cooled air conditioning system with a combination of conventional and oil-free chillers



They are more energy-efficient than traditional air coolers and can save up to 20% in energy use.

Air Lock Lobbies and Air Curtains



Adjustment of operating time for energy consumption equipment



Variable Speed Drives



Solar Film



Motion Sensors



Replacement of traditional lamps with LED energy saving lamps



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Water-cooled air conditioning system with a combination of conventional and oil-free chillers



Air Lock Lobbies and Air Curtains



Air lock lobbies prevent external hot air from entering and keeping lobbies cool more effectively.

Air curtains are installed to the air-conditioning fresh air unit to enable energy saving.

Adjustment of operating time for energy consumption equipment



Variable Speed Drives



Solar Film



Motion Sensors



Replacement of traditional lamps with LED energy saving lamps



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Water-cooled air conditioning system with a combination of conventional and oil-free chillers



Air Lock Lobbies and Air Curtains



Adjustment of operating time for energy consumption equipment



Re-adjust the operating time for lighting and chillers at common areas in managed residential estates.

Variable Speed Drives



Solar Film



Motion Sensors



Replacement of traditional lamps with LED energy saving lamps



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- Water-cooled air conditioning system with a combination of conventional and oil-free chillers ✓
 - Air Lock Lobbies and Air Curtains ✓
 - Adjustment of operating time for energy consumption equipment ✓
 - Variable Speed Drives ^
- Installed for air handling units (AHUs) in clubhouse areas and office buildings to save energy in part load conditions.
- Solar Film ✓
 - Motion Sensors ✓
 - Replacement of traditional lamps with LED energy saving lamps ✓

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Water-cooled air conditioning system with a combination of conventional and oil-free chillers



Air Lock Lobbies and Air Curtains



Adjustment of operating time for energy consumption equipment



Variable Speed Drives



Solar Film



Applied for large external glass windows in clubhouse areas to reduce solar heat gain.

Motion Sensors



Replacement of traditional lamps with LED energy saving lamps



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Air Lock Lobbies and Air Curtains



Adjustment of operating time for energy consumption equipment



Variable Speed Drives



Solar Film



Motion Sensors



The lighting level is kept at minimum acceptable level in rear staircases to save energy when there is no user.

Replacement of traditional lamps with LED energy saving lamps



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Energy Savings Initiatives



View by:

- ✓ STATIONS
- ✓ TRAINS AND TRACKS
- ^ PROPERTIES

Water-cooled air conditioning system with a combination of conventional and oil-free chillers



Air Lock Lobbies and Air Curtains



Adjustment of operating time for energy consumption equipment



Variable Speed Drives



Solar Film



Motion Sensors



Replacement of traditional lamps with LED energy saving lamps



Adopt energy efficient LED lightings in driveway uplight, lift lobby spot lights, exit signs, staircase lighting, car park lighting, etc.

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Green buildings

In 2010, we became the first company involved in property development in Hong Kong to implement voluntary environmental standards in a systematic way with a commitment that our new residential property developments would achieve at minimum the Hong Kong BEAM Plus Gold certification. This is the second highest level in a five-tier system. Where appropriate, we are also implementing BEAM or LEED standards in other properties and railway stations.

As we develop more properties in the coming years, and renovate our existing managed properties, we are planning to install and utilise equipment that will reduce the buildings' environmental impact.

LEARN MORE...

[BEAM Plus](#) is a comprehensive environmental assessment scheme for buildings in Hong Kong recognised by the [Hong Kong Green Building Council](#). The current version for new buildings, BEAM Plus version 1.2, has been available for formal registration since November 2012.

Leadership in Energy and Environmental Design ([LEED](#)) is a set of rating systems developed by the US Green Building Council (USGBC) for the design, construction, operation, and maintenance of green buildings.

Year	Property	Building Standard Awarded
2016	LOHAS Park P6 Site N Residential	BEAM Plus Gold (Provisional Assessment)
2016	LOHAS Park P5 Site G Residential	BEAM Plus Gold (Provisional Assessment)
2016	Tsuen Wan West Station Tsuen Wan 7 Residential	BEAM Platinum
2016	Maritime Square Extension	BEAM Plus Silver (Provisional Assessment)
2016	Austin Site C Residential	BEAM Plus Gold (Final Assessment)
2015	Tsuen Wan West Station Cityside Residential	BEAM Plus Gold (Provisional Assessment)
2015	Tsuen Wan West Station Tsuen Wan 6 Residential	BEAM Plus Gold (Provisional Assessment)
2015	LOHAS Park Site O Residential	BEAM Plus Gold (Provisional Assessment)
2015	Long Ping Station Long Ping North Residential	BEAM Plus Gold (Provisional Assessment)
2014	Tsuen Wan West Station Bayside Residential	BEAM Plus Gold (Provisional Assessment)
2013	Nam Cheong Station Residential	BEAM Plus Gold (Provisional Assessment)
2013	Two IFC	LEED Operations and Maintenance – Gold
2013	University Station Entrance	LEED Core and Shell – Silver
2013	Che Kung Temple Station The Riverpark, Shatin (Residential)	BEAM Platinum
2012	Austin Station Residential Development	BEAM Plus Gold (Provisional Assessment)
2010	West Kowloon Terminus	BEAM Silver

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Water Consumption

We recognise that consumption and availability of water are important issues for our stakeholders. Hong Kong is dependent on the Dongjiang River basin for up to 80% of its water supply, which is threatened by rapid urbanisation and climate change, among other factors.

All of our water is sourced from the mains supply provided by the Water Supplies Department. The most important uses of water in our railway operations are for cleaning trains, railway infrastructure, and stations. We are using recycled water for toilet flushing in some stations and for train washing in depots.

Water consumption in our Properties

Managed and investment properties account for about 60% of our total water consumption. In recent years, there has been a trend towards greater consumption of water in our properties due to the growing size of our property portfolio and more intensive use of water from landscaping and swimming pools.

Water consumption (m³)

	2015	2016
Total	2,023,116	2,067,096
Railway Operations	870,630	754,541
Cooling Towers in Stations	n/a	187,952
Managed and Investment Properties	1,152,486	1,124,603

We implement measures to conserve water in our managed properties. For example, a grey water recycling system at the LOHAS Park collects and treats up to 440,000 litres of water a day from The Capitol and Le Prestige. The system recycles some of the wastewater for re-use in landscaping and cleaning of outdoor public spaces. Pool covers were used in indoor swimming pools to reduce heat loss and water loss while the swimming pools were not in use at night time during winter.

DID YOU KNOW?

Chiller Replacement Plan – A Balancing Act

The installation of new chillers at Wan Chai Station marked the beginning of our large-scale chiller replacement programme taking place in the next seven years. Starting from the fourth quarter of 2017, a total of 160 chillers in 38 MTR stations and four railway depots will be replaced with more advanced and environmentally friendly systems by 2023.

These new chillers are equipped with variable frequency drive (VFD) inverter technology that can adjust the power capacity based on the actual temperature of the station environment. It will enhance energy efficiency and reach the new Energy Efficiency Grading Standards produced by the Electrical and Mechanical Services Department (EMSD).

In addition, 20 water-cooled chillers will be installed in 6 stations to replace the existing air-cooled chillers to further reduce energy consumption; the downside is that they will inevitably increase fresh water consumption. Water qualities in these chillers needs to be tested and monitored regularly with chemical dosing treatment. Water will be breed-off as needed to maintain hygiene and prevent the spread of infectious diseases. As with many other decisions made, when designing for these new chiller systems, we took these and other factors including energy efficiency, noise level, type of refrigerant used, spare capacity for future expansion, etc., into consideration, and selected the most appropriate chiller type.

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CLIMATE CHANGE

Our response to climate change is consistent with the latest recommendations from climate scientists, namely, that adaptation and mitigation are complementary strategies for reducing and managing expected risks.

We fully support the [UITP Declaration on Climate Leadership](#), which is an 11-point declaration outlining the impact of climate change, our responsibility to act, and our commitment to be Climate Leaders.

DID YOU KNOW?

Hong Kong's Climate Action Plan 2030+

On 4 November 2016, the Paris Agreement came into force, succeeding the Kyoto Protocol. The international agreement was adopted by the governments of 195 countries, and set an ambition to keep temperature rise below 2°C, and to make efforts to keep it below 1.5°C with countries to set emission reduction targets.

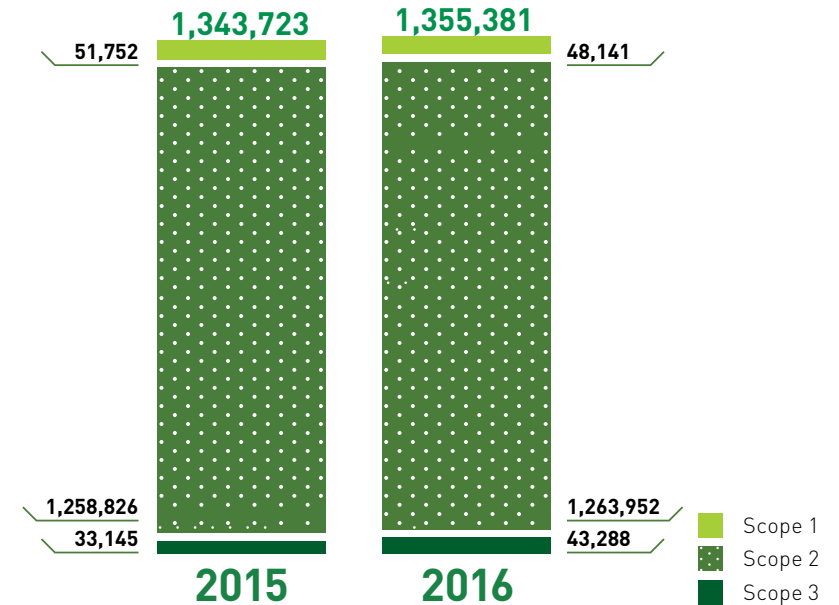
Hong Kong plays a part to help fulfil the obligations that China has under the Paris Agreement. As such, Hong Kong needs to review our climate change efforts every 5 years and align them with the submission timelines under the Paris Agreement. In January 2017, the Hong Kong Government announced its [Climate Action Plan 2030+](#).

The MTR Corporation applauds this milestone. In the past year, we have been supporting the Hong Kong Government's Post-COP 21 engagement sessions, including its discussions with the Hong Kong Building Sector. We will support the Climate Action Plan and promote MTR as an environmentally friendly mode of transport, continue to improve energy efficiency, set targets for our business units and report our progress.

Greenhouse gas emissions

We have been reporting on our Greenhouse Gas (GHG) emissions since 2002. We monitor Scope 1, 2 and 3 GHG emissions in accordance with the [Greenhouse Gas Protocol](#), and also make reference to [guidelines](#) published by the Environmental Protection Department and the Electrical and Mechanical Services Department in Hong Kong as well as other international sources.

GREENHOUSE GAS EMISSIONS (tCO_{2e})



Scope 1 emissions are direct GHG emissions from sources that are owned or controlled by the Company, such as emissions from fossil fuels burned on site.

Scope 2 emissions are indirect GHG emissions resulting from the generation of electricity, heating and cooling, or steam generated off site but purchased by the Company.

Scope 3 emissions include indirect GHG emissions from sources not owned or directly controlled by the Company but related to our activities.

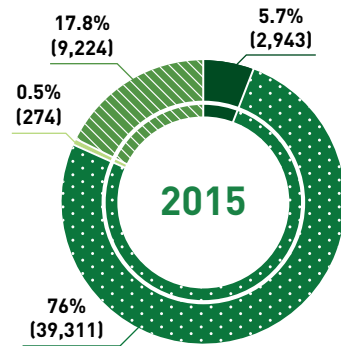
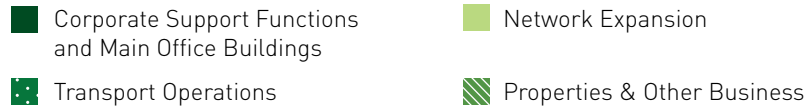
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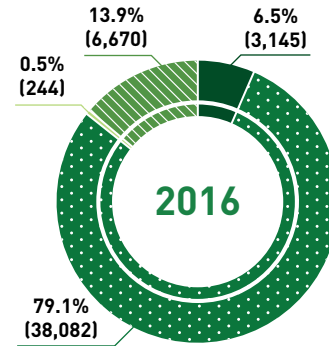

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BREAKDOWN OF SCOPE 1 EMISSIONS (tCO₂e)

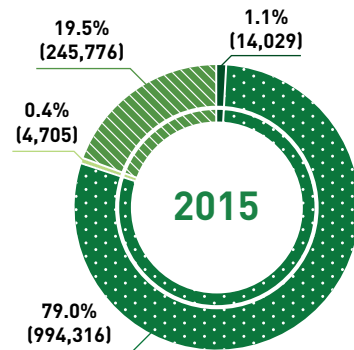
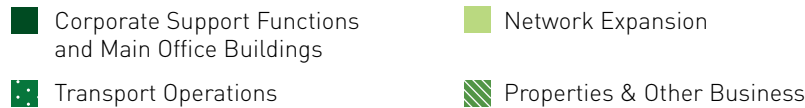


Total: 51,752

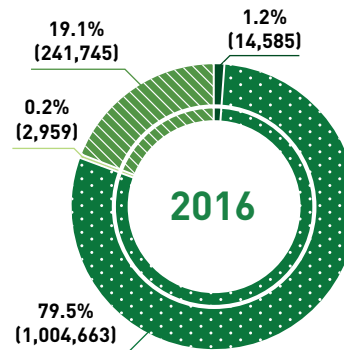


Total: 48,141

BREAKDOWN OF SCOPE 2 EMISSIONS (tCO₂e)

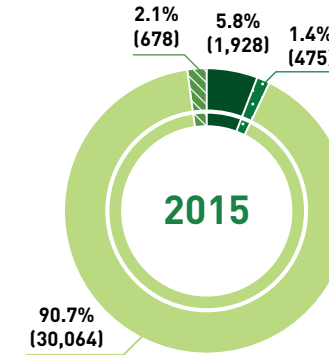
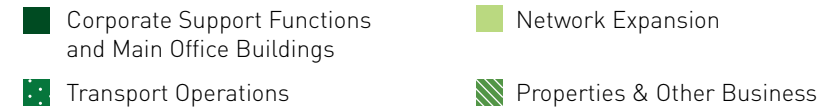


Total: 1,258,826

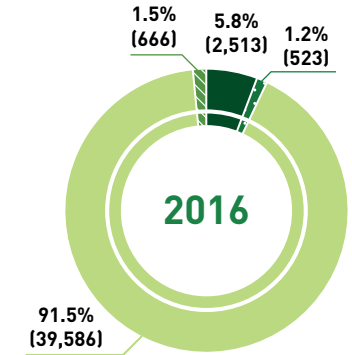


Total: 1,263,952

BREAKDOWN OF SCOPE 3 EMISSIONS (tCO₂e)



Total: 33,145



Total: 43,288

Climate risks

At the corporate level, the Company's Enterprise Risk Management (ERM) Framework also includes a yearly assessment of climate risks. When reviewing climate-related risks, we make reference to local and international organisations including the UITP and the Hong Kong-based Business Environment Council. Specific direct physical risks or other indirect risks related to climate change that may impact railway operations, property development, investment and management facilities are identified and managed at asset-level by respective departments. Potential regulatory changes are also being closely monitored.

LEARN MORE...

We have participated in the CDP Climate Change Programme each year since 2006. CDP is an organisation based in the United Kingdom, which works with investors and corporations to disclose the GHG emissions of major corporations around the world. It is possible to obtain a copy of the Company's response to the CDP's climate change questionnaire in 2016 from their website.

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Mitigation

The majority of our GHG emissions are indirect emissions arising from purchased electricity for transport operations, properties and other businesses. This electricity is supplied by two vertically-integrated suppliers and is generated from a mix of coal, natural gas and nuclear power. Since we exercise minimal influence over the source of electricity that we consume, our mitigation efforts focus on energy saving measures.

Lifecycle assessment

It is widely acknowledged that emissions associated with daily operations, such as environmental control systems and lights, account for up to 90% of the total lifecycle GHG emissions from buildings. Our pilot study confirmed that a similarly high proportion of total lifecycle GHG emissions arise during the operational phase of our railway projects, and the overall contribution to climate change from the construction and decommissioning phases of rail projects is relatively minor.

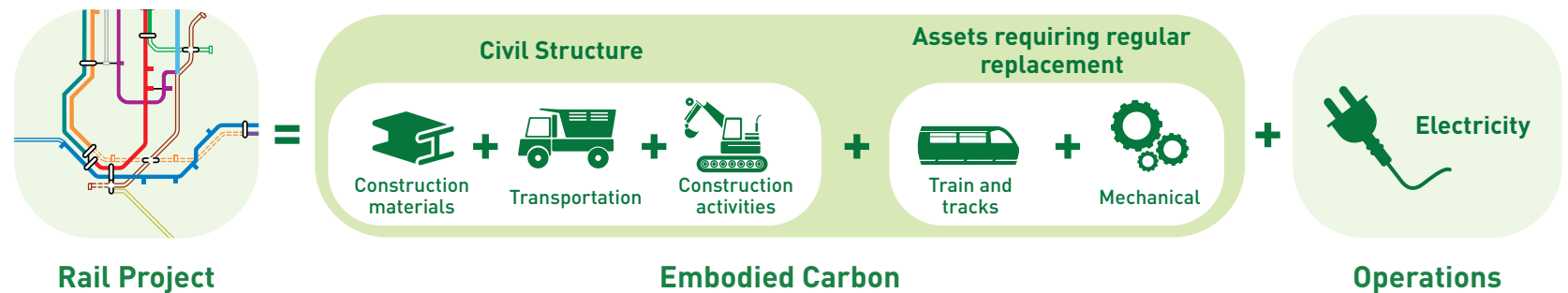
Nevertheless, we continue to explore the possibilities for greener materials. With approval from relevant government department, we have started to use ground granulated blast furnace slag (GGBS) in one of our Shatin-to-Central Link contracts in 2015, a first for private projects in Hong Kong. Compared to conventional cement, GGBS reduces embodied carbon by almost two-thirds.

Asset Replacement

With findings from the project life cycle assessment in mind, when replacing our assets, we emphasise lifecycle costs and take into account capital investment, operational resource use, maintenance, and spare part replacements to achieve an optimal result.

In early-2016, the first of 68 new buses procured to replace our old feeder bus fleet started services. These new buses are of Euro V standard, the latest and most stringent environmental standards at the time of purchase. These buses have increased carrying capacity, are equipped with energy efficient LED lighting, and efficient engines, reducing GHG emissions as well as other pollutants. This is the largest order of new buses, and all buses will commence service by the end of 2017.

SCOPE OF LIFE CYCLE ASSESSMENT



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Adaptation

Research by climate scientists around the world provides increasingly accurate information about the projected impacts of climate change over the next 20 to 100 years. If significant reductions in GHG emissions are not achieved in the short term, significant impacts may be experienced in Hong Kong over the coming decades. We are already responding to potential threats by implementing adaptation strategies to address the direct impacts of climate change on our business.

Heavy rain and flooding

The Hong Kong Observatory provides extensive information about climate change, including projections for Hong Kong's climate in the 21st century. In late-2015, we commissioned a study on risks from extreme weather events across the MTR railway network. Specifically, it includes an identification of stations at-risk to flooding or landslides due to heavy rainfall.

Railway structures are designed and built for a long lifespan. In preparation for the longer term effects of climate change, we regularly review our Design Standard Manual to ensure that new railway projects have appropriate protection for 1:200 year rainfall events. We also inspect and assess our existing railway infrastructure on a regular basis to ensure its robustness in extreme weather events. For instance, we are enhancing or retrofitting flooding protection at all stations with flood boards of increased heights to protect critical equipment.

Extreme weather has the potential to disrupt normal operations. To provide a safe and reliable service to our customers, our Operations Division will inspect slopes close to our stations before rainy seasons to assess and address the risk of landslides. We have developed special procedures and equipment for frontline staff in cases of extreme weather such as stronger typhoons and rainstorms. In 2016, we also launched our Customer Service Typhoon Support Team to assist in incidents during typhoons. Our Property Division has taken further steps to ensure the implementation of procedures, and that there is sufficient manpower and equipment to handle serious flooding situations.

Rising temperatures

Rising temperatures will have a direct impact on Heat, Ventilation and Air-Conditioning (HVAC) systems, leading to increased maintenance requirements and higher operational costs. Extreme heat also presents a direct risk to the well-being of staff and contractors, especially those working on construction sites. We have been implementing heat stress prevention measures and guidelines across all our sites during hot summer months in line with the advice published by the Hong Kong Labour Department.

LEARN MORE...

We published [MTR Typhoon Travelling Tips](#), a guide to promote safe travel for passengers during extreme weather.

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ENVIRONMENTAL PROTECTION

Noise

Rail operations

Noise generated by operations of our trains, and maintenance activities on our railway network is a major concern for affected stakeholders. During 2016, our Operations Division received 271 complaints about noise, accounting for 91% of all environment-related complaints received throughout the year.

We conduct regular surveillance on noise levels along our railway and monitor saloon noise inside our trains with reference to an internal benchmark that was established based on feedback from passengers. While our railway is kept in good condition, we are also continually making improvements to mitigate the effects of operational train noise on the community. In 2016, we have retrofitted a noise barrier along the Tung Chung Line for the Housing Authority.

Construction of new lines

When construction is in proximity to a densely populated area, we take extra care to control noise. As such, we have implemented a number of systematic initiatives to ensure consistent application of noise mitigation measures across the construction of new lines. These include:

- The employment of independent acoustic consultants to review and recommend noise mitigation measures
- Provision of a construction noise permit management plan as needed
- Establishment of a permit-to-work system to ensure equipment use meets specifications and users are trained in noise control compliance when working during restricted hours (i.e. Mon-Sat from 1900-0700, and all day Sun and public holidays)

Noise mitigation measures are typically developed through inter-departmental collaboration during the different project stages. This cooperation has enabled us to come up with innovative mitigation measures.

DID YOU KNOW?

Innovative noise mitigation measures on new lines

To minimise noise disturbance in the construction of our new lines, we developed a "mobile sound insulation booth" for the East Rail Line platform strengthening works. These mobile, full noise enclosures can be set up within 15 minutes to reduce noise by 25 dB(A). The flexibility provided by these noise enclosures means we are able to carry out the retrofitting works at night during non-traffic hours without disturbing neighbouring residents, and the platforms can be quickly restored to operational condition every morning.

Our noise mitigation measures are often designed to be aesthetically pleasing as well. The green noise enclosure/barriers around the viaduct section of the South Island Line (East) will be complemented by trees and shrubs planted under the viaducts to help structures blend in with the natural landscape in the area.

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Air Quality

Monitoring air quality in our trains and stations helps to ensure healthy and comfortable journeys for our passengers, whilst contributing to the wellbeing of our workers. We undertake regular indoor air quality monitoring in our railway system in accordance with the Government's guidance note for railway facilities.

The carbon dioxide levels at our stations and in our trains in 2016 are within 2,500 ppm during peak traffic hours.* During the monitoring periods, no measurements of carbon dioxide levels exceeding the EPD Level One hourly average criteria have been recorded. Air quality of this standard indicates "good air quality of a comfortable railway facility with no health concerns identified," and is defined as Level One Criteria by the Environmental Protection Department (EPD) of Hong Kong's Practice Note for managing air quality in air-conditioned railway facilities.

*Carbon dioxide is selected as a surrogate indicator as suggested in the practice note by the EPD, as its concentration in an indoor environment is a good indicator of the effectiveness of ventilation systems and the adequacy of ventilation. Reference: "[Practice Note for Managing Air Quality in Air-conditioned Public Transport Facilities.](#)"

DID YOU KNOW?

MTR was presented with a "Special Commendation Award" by the Environmental Protection Department for continuous efforts over the years to maintain a good and healthy indoor environment for staff and customers at our offices and properties. The following MTR properties were awarded:

- "Excellent Class": PopCorn, Citylink Plaza, Two ifc, The Cullinan, The Palazzo, Maritime Square, Ocean Walk, Paradise Mall (East Wing), Paradise Mall (West Wing), The Lane and MTR Hung Hom Building
- "Good Class": MTR Headquarters Building, Fo Tan Railway House, MTR Kam Tin Building, all of our 13 shopping malls and 6 managed properties.

Waste

In 2016, we have begun a comprehensive assessment to understand how we can implement effective approaches to waste management across our businesses. We aim to start implementing these approaches in the next year.

Reducing and recycling construction waste

Our new rail projects generate large amounts of construction waste and excavation materials. We adhere to a Government-regulated trip ticket system on all sites in order to keep track of waste and ensure proper disposal, while also continuously explore new ways to reduce waste, and reuse excavation materials on-site and on other projects.

We are able to reuse or recycle about 45% of excavation materials from our network expansion projects and try to reduce marine mud disposal with a new method, called Cement Stabilized Marine Mud (CSMM). It is a cement stabilizing process in which marine sediment is mixed with cement and general material to form CSMM for backfilling. A small portion of excavated marine sediment from Kai Tak area was used for a trial which has been successful, and the CSMM was backfilled to the Shatin to Central Link tunnel area in Kai Tak.

Waste and wastewater from railway operations

We generate a small amount of chemical waste from our railway operations consisting mainly of used batteries and spent lubricating oil. Our heavy rail stations and depots as well as bus depots are all registered with the Environmental Protection Department ("EPD") as chemical waste producers under the Waste Disposal Ordinance (Cap 354) ("WDO"). When any chemical waste requires disposal, the Corporation appoints chemical waste collectors, licensed under WDO, to collect such waste for proper transportation and disposal.

Apart from wastewater from Lok Ma Chau and Lo Wu stations which are equipped with its own sewage treatment plants, all of the water consumed by the Company in Hong Kong is discharged, with appropriate treatment, into the public storm drainage/sewage system, which is maintained by the Drainage Services Department.

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Influencing our tenants and customers

Every day, millions of customers pass through our stations and the properties we manage, and we collect a wide range of waste generated from them. We encourage recycling by equipping stations in our heavy rail network and shopping malls with recycling bins. We also provide waste recycling bins to separate waste for recycling at all common areas of our managed properties.

We are working to add more recycling bins in selected stations, and in 2016 we rolled-out directional signage to inform customers of the locations of these bins. We continue to work on the robust collection and reporting of our waste data (both recycled and general waste) in preparation for the Government's proposed regulation on waste.

At our managed properties, we join with the Owners' Committees and Incorporated Owners to promote waste separation programmes to residents. Where possible, we liaise with recyclable waste collection contractors and organise green visits for our residents. Through our "Green Train Initiatives" and the provision of special recycling bins in the common areas of our managed properties, we collect used clothes, ink cartridges, and CD discs for recycling or donation to charities. Under the "Glass to Brick" programme, we go one step further to collect and turn waste glass bottles into reusable materials. We also partnered with green organisations appointed by Environmental Campaign Committee on organising "Clean Waste Recyclables" workshops at some of our managed properties.

DID YOU KNOW?

Partnerships to reduce food waste

To contribute to tackling the issue of food waste, MTR joined the Food Wise Hong Kong Campaign as one of its first signatories and as a member of its steering committee to support the Government and other stakeholders. We strive to reduce the environmental impacts of food waste in the following ways:

MTR Malls — Under our self-initiated "MTR Malls Food Waste Reduction Pledge", we work with food and beverage tenants to minimise potential waste at source and to promote food-waste reduction practices in the shopping mall sector. In 2015, we partnered with Food Angel for a pilot programme to collect edible surplus food from our food and beverage tenants in ELEMENTS and Paradise Mall to benefit underprivileged communities in Hong Kong. Meanwhile, MTR Malls received a "Food Angel Thanksgiving 2016" trophy from Bo Charity Foundation, which recognised the Corporation's efforts and contributions in the food recovery programme over the year.

Managed residential estates — Under our "Central Food Waste Recycling for Improving Estate Environment" initiative, we have organised different promotional programmes, such as the festive food donation, seminar on "Cook for Green" to encourage residents to reduce their food waste by either donating to the underprivileged or by utilising the leftover in other dishes. We also have food waste composting machines at some of our managed properties also to convert food waste into compost.

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Ecology

We are committed to protecting the natural environment during the construction of new rail projects and take particular care on sections of the lines that impact natural habitats and areas with high ecological sensitivity. For instance, project teams working on the [Express Rail Link](#) are conducting works to avoid direct impact on the habitats located in the Mai Po Nature Reserve.

Tree Protection

We are committed to enhancing the urban environment by protecting existing trees and introducing new trees according to established guidelines. When planning and constructing new lines, we evaluate the impact of our projects on trees and determine whether they can be preserved in place or need to be transplanted. Where they have to be removed, we undertake compensatory planting of new trees after the project is completed.

Since late 2015, we began to step up measures to reduce the risk of fallen trees affecting train service by increasing large-scale tree survey frequency for over 33,000 trees along the open sections of the railway network from once every four years to once every two years. In addition to the adoption of a more stringent tree coding system, we also developed smart tags for trees along the railway network. Using radio-frequency identification (RFID) technology, information about tree species, height and condition can be retrieved in a simple and quick manner. This enables us to take better care of the trees and maintain safety along the railway network during the typhoon season.

DID YOU KNOW?

We have supported research project on the effects of wood decay on tree species. The research is led by the Tree Management Office of the Development Bureau, the Chinese University of Hong Kong and an arboriculture consultant firm. It is the first to investigate the strength of different tree species in Hong Kong and Southern China. Making use of data collected from trees removed along the Shatin to Central Link enhances our knowledge of trees in Hong Kong, and helps us improve our tree management practices.

Lok Ma Chau (LMC) Wetland

In 2002, the Sheung Shui to Lok Ma Chau Spur Line, part of the East Rail Line, became a Designated Project under the Environmental Impact Assessment Ordinance. The Environmental Impact Assessment (EIA) for this project identified the need for a 32-hectare ecological enhancement area to mitigate impacts from the construction and operation of the spur line on wetland fauna in this ecologically sensitive part of Hong Kong. Located on the eastern side of the Mai Po Inner Deep Bay Ramsar Site in the northwest New Territories, the LMC wetland has been operated since 2007 and helps to maintain biodiversity by providing habitat environments for target species. For the past 14 years, we have been working with a group of environmental professionals on the management of the LMC wetland. This arrangement is the first of its kind and an example of best practice in the region in terms of biodiversity management.

Conservation of migratory birds

The marshes and fishpond areas of the LMC wetland provide important nesting sites for migratory birds. During the 2016 breeding season, for example, 134 pairs of birds representing six different species including Little Grebe (*Tachybaptus ruficollis*) and White-shouldered starling (*Sturnia sinensis*), both of which are believed to have bred in the wetland successfully. Overall, more than 260 species have been spotted in the LMC wetland since 2007, about half of all species ever recorded in Hong Kong. The area also hosts a high number of Black-faced Spoonbills (*Platalea minor*), a globally-threatened species.

We are working to implement measures to improve the wetland habitat for local concern targeted species such as the Pheasant-tailed Jacana (*Hydrophasianus chirurgus*).

Conservation of other species

The EEA also provides various habitats for dragonfly, reptiles, mammals and amphibian species. There have also been regular sightings of the Chinese Soft-shelled Turtle (*Pelodiscus sinensis*), which is a threatened species, and the Eurasian Otter (*Lutra lutra*), which is a near-threatened species.

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The dedication and commitment of our staff is at the heart of the Company's success. Their can-do attitude enables us to meet our customers' expectations and this contributes to a corporate culture that encourages everyone to take pride in providing caring service for our customers and the community. Guided by our Vision, Mission and Values (VMV), we strive to inspire, engage and develop our staff to achieve excellence.



37,721

Global Staff Strength
(Full Time Employee)

7.1 days

Average Training Days
per Employee

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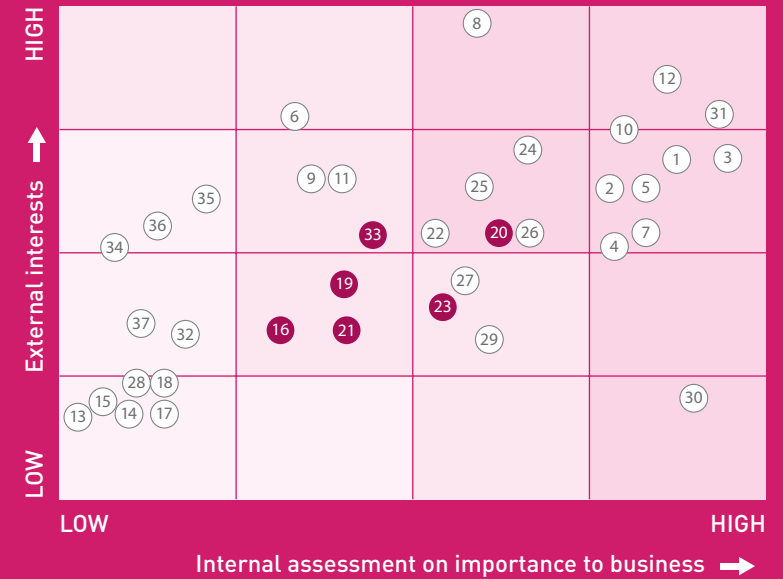
INTRODUCTION

In recognition of MTR's dedication to human resources management, development and staff engagement, MTR was selected the employer of choice and received recognition in various surveys:

- "Best Companies to Work For in Asia 2016" by HR Asia Magazine;
- First Runner-up of the "Most Attractive Employers in Hong Kong 2016" by Randstad Group;
- The top three most attractive employers under the field of "Engineering / Natural Sciences" in Hong Kong in the 2016 Universum Employer Study;
- The second most preferred company in jobsDB's 2016 Hong Kong Top 10 Companies survey.

Although it is gratifying to receive recognition for our achievements, as our business expands within Hong Kong and across the globe, we also recognise that we are facing a number of challenges in our management of human resources (HR). These include increasing demands for manpower due to network expansion and service enhancement. As many of our first generation of staff are retiring in recent years, the associated issues of succession planning, staff movements and workforce transition are posing challenges, especially in relation to knowledge transfer. Responding to the need for nurturing future railway professionals, not only in Hong Kong but in the industry worldwide, we launched MTR Academy in November 2016, seeking to establish Hong Kong as a training and development hub of railway experts.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



- ①⑥ Diversity and equal opportunity
- ①⑨ Employment practices
- ②⑩ Conditions of work & social protection
- ②① Staff consultation and engagement (incl freedom of association and collective bargaining)
- ②③ Employee development & training
- ③③ Employment creation and skills development

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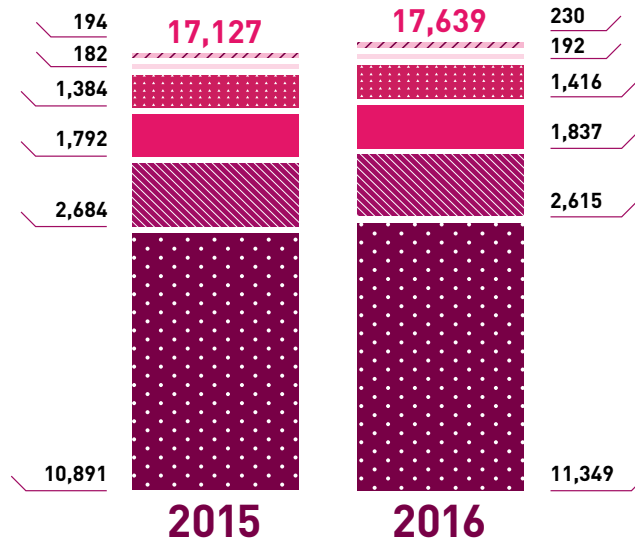
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Our People

Our businesses are commonly associated with physical assets, such as rails and tracks, stations, depots and buildings. Ultimately, however, we depend on the strength and versatility of our workforce to design, build, operate and maintain this infrastructure, bringing it to life each day.

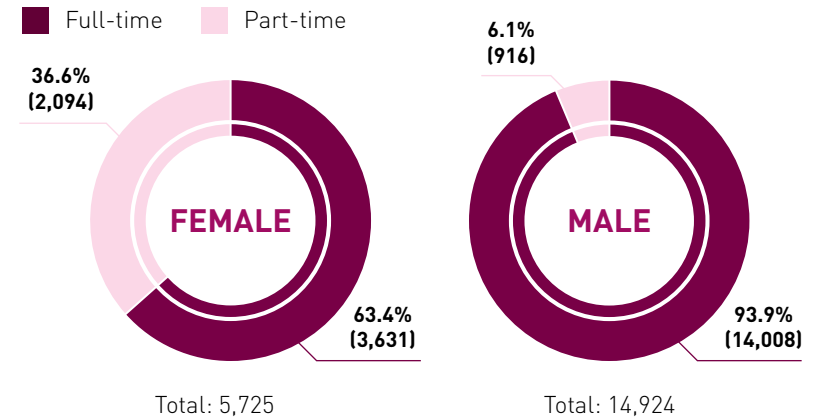
The following tables introduce the composition of our workforce in Hong Kong.

BREAKDOWN OF FULL-TIME EMPLOYEES BY EMPLOYMENT AREA IN 2016



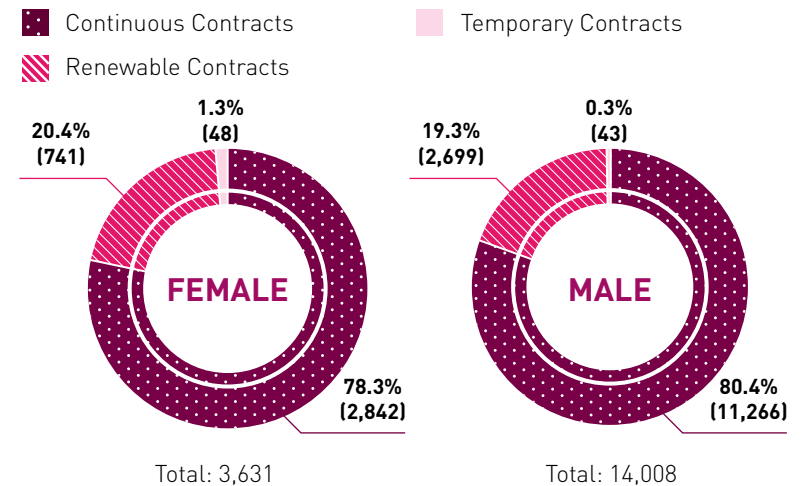
- Mainland of China and international businesses
- Corporate management and support departments
- Station commercial businesses
- Projects
- Property and other businesses
- Operations

COMPOSITION OF OUR WORKFORCE BY GENDER AND EMPLOYMENT TYPE IN HONG KONG IN 2016



Total Number of Full-time and Part-time Employees of the Company based in Hong Kong, excluding subsidiaries outside of Hong Kong: 20,649

BREAKDOWN OF FULL-TIME EMPLOYEES BY GENDER AND EMPLOYMENT CONTRACT IN 2016



Total Number of Full-time Employees of the Company based in Hong Kong, excluding subsidiaries outside of Hong Kong: 17,639

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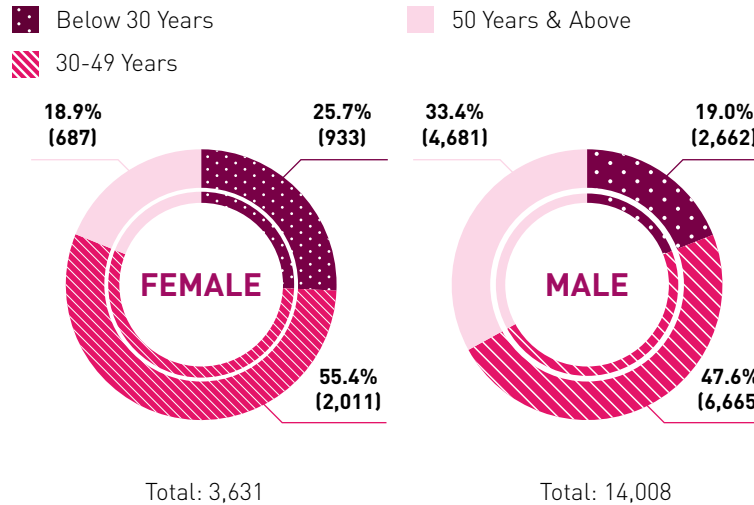
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BREAKDOWN OF FULL-TIME EMPLOYEES BY AGE AND GENDER IN 2016



In some business areas, particularly construction of new lines and properties, we rely extensively on contractors who work on our behalf but who are not directly employed by the Company. Please read more about working with contractors in [Safety](#) and [Supply Chain](#) sections.

Length of Service

The ability of our organisation to attract and retain skilled, motivated and experienced people is reflected in the length of service of our employees. In 2016, the average length of service for full-time employees in Hong Kong was 12.8 years. 889 staff who have been working for 10 to 40 years with the Corporation received Long Service Awards in recognition of their long-term commitment to the Company, 3 of them have attained 40 years of service.

Rate of voluntary turnover

The rate of voluntary turnover for our staff, at 3.5% in 2016, is low when compared to other employers in Hong Kong and the railway industry worldwide.

OUR VOLUNTARY STAFF TURNOVER RATE IN HONG KONG

2015

3.7%

2016

3.5%

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GUIDING FRAMEWORK

Executive responsibility

Our Human Resources Director oversees all matters relating to manpower resourcing, staff relations, reward management, talent management, training, organisational development, security and office administration.

Code of Conduct

Together with other corporate policies and guidelines governing the behaviour of employees, the Code of Conduct ("the Code") underlies our success by reinforcing the trust placed in us by our stakeholders. It is a guide for staff at all levels to uphold our VMV, containing practical advice about responding to situations that may arise in our daily work. Please [download](#) a copy of the latest version of the Code.

Staff consultation

We comply with legal obligations concerning collective bargaining and union membership where applicable in all countries and regions where we operate. In Hong Kong, we engage in open and regular consultation with our staff through a well-established Staff Consultation Mechanism. As a result, we have successfully maintained stable and harmonious relations with staff.

Over 900 staff representatives have been elected by their colleagues to serve in Joint Consultative Committees (JCCs) for handling matters of concern at departmental or sectional level. The Staff Consultative Council (SCC) is the platform for consultation on corporate-wide affairs, including pay and benefits. It is chaired by the Human Resources Director and made up of 48 elected SCC Councillors and 10 representatives from senior management of different business areas. In the past 35 years since establishment of SCC in 1981, trust and support from SCC Councillors have contributed to overcoming various challenges including the Rail Merger. Regular meetings with seven staff unions also provide additional channels for communication between staff and management.

KEY PRINCIPLES AND PROCESSES

Equal opportunity

We do not tolerate any form of discrimination on the grounds of gender, sexual orientation, disability, age, race, national or ethnic origin, family status or other personal characteristics that are protected by law. All employment activities and HR related matters are handled based on an objective assessment of every individual's competencies, experience, skills and qualifications.

We provide support for employment of persons with disabilities. For the third year, we collaborated with the Hong Kong Council of Social Service and local universities in 2016 to provide summer internship opportunities for 10 university students with disabilities or special educational needs.

DID YOU KNOW?

In 2016, we employed 300 people with disabilities, representing 1.7% of full-time employees.

Career development

Our training programmes are designed to meet the organisation's long-term requirements for skills and management succession. We aim to recruit the right individuals and then retain and develop them through different stages of their careers with us.

Work Improvement Team

In place for more than 28 years, the Work Improvement Team (WIT) is an activity designed to motivate staff members to apply their own initiative, innovative thinking, and organisation, planning, problem-solving and decision-making skills. Each team is formed voluntarily by four to ten members who perform the same or similar type of work. They meet at least once a month to develop work improvement projects and are supported by a facilitator.

The WIT concept has been adopted by subsidiaries and associates in Shenzhen, Beijing, Hangzhou, Melbourne and Stockholm. There are now nearly 350 teams established outside of Hong Kong, involving nearly 3,000 participants. In 2016, these teams submitted nearly 420 work improvement projects.

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Global HR Strategy

We are committed to replicating our success in Hong Kong to our overseas operations. To achieve this, we encourage knowledge sharing and best practice transfer among Mainland of China and International hubs. Currently we have over 140 Hong Kong staff working in projects overseas on a full-time basis and some staff on a travelling basis. Throughout their offshore assignments and upon their return, staff members are encouraged to share their experiences and learnings. Through these means, we are able to ensure that knowledge and experience are shared mutually and adapted in a local context.

To allow for the right people, culture and working environment in our overseas operations, the HR departments also organises regular meetings with our global teams to ensure that our overall strategy and global initiatives can be reviewed and launched effectively locally.

Tailored approaches

In the Mainland of China, we focus on recruiting local talent and developing the skill sets that we need for existing operations and future expansion. We have partnered with a number of educational institutions in different parts of Mainland of China to recruit and develop trainees.

In the more established markets of Australia and Europe, we provide support to strong, existing local teams. In these regions we look to build on our experiences in Hong Kong in strengthening operational processes and enhancing business opportunities.

Strategic HR framework

Our global framework provides three clear objectives for our human resources strategy over the coming years, focusing on the corporate cultural development, talent management, and human capital mobility and development. Since 2013, we have started to implement structured programmes in pursuit of these objectives.

Staff mobility

A Global Mobility Policy was also established in 2016 to facilitate global resource deployment and provide consistent relocation terms across global offices.

In line with our Corporate growth strategy with expanding business opportunities, we have established a Global Resource Pool. This pool of talent, integrating potential resources from International subsidiaries with the Mobile Resource Team from Hong Kong and Mainland of China, is previously established with the support of management and HR from Mainland of China and International hubs.

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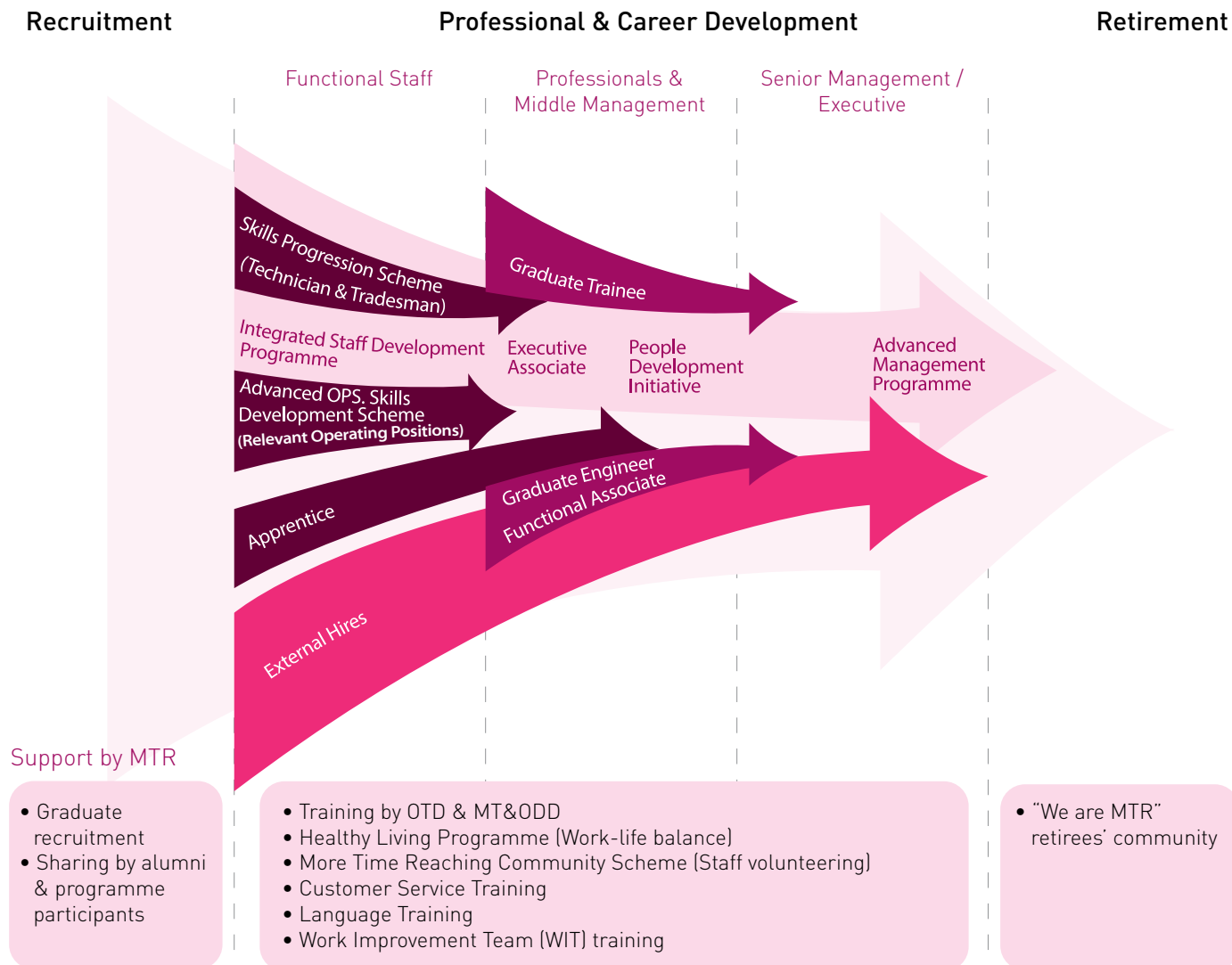
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RECRUITMENT IN HONG KONG

In order to meet the manpower demands of our expanding businesses, we are continuously looking to recruit new people who have a can-do attitude – ready to embrace challenges and respond proactively in face

of rapid changes, demonstrate commitment to excellence, and are highly motivated to develop themselves for a rewarding career with us.



A variety of career choices across our businesses are available for the right candidates.

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Opportunities for Graduates and Young Professionals

Many of our staff began their careers with us as part of a Graduate Development Programme. Through this leadership pipeline we identify and groom talented young people so that they are capable of assuming senior management positions. In 2016, we recruited 30 Graduates including 6 Graduate Trainees, 18 Graduate Engineers and 6 Functional Associates with prospects for succession into managerial positions in the future. We now have a total of more than 100 trainees in training.

Our accelerated graduate development programmes offer trainees the opportunity to experience up to four intensive cross-functional job rotations over a two-year period to gain in-depth knowledge and hands-on experience relevant to their chosen area of expertise. The objective is to identify and nurture talented young people who may one day become leaders of the Company. Through separate streams focusing on general management or professional expertise, opportunities are available in all areas of our businesses.

DID YOU KNOW?

What kind of person works for MTR?

Our staff members tend to share some common characteristics such as a willingness to work harmoniously with others, enthusiasm for completing every task to a high standard, and a can-do spirit to proactively seek improvement and overcome challenges. Our people demonstrate a deep respect for the trust placed in us by our customers and the drive for excellence in providing caring services to them. From Hong Kong to the Mainland of China, Australia and Europe, MTR employees around the world share our commitment to our [Values](#).

Executive Associate Programme

We also identify and select young professionals into our Executive Associate Programme, developing high potential middle managers through cross-functional or geographical job rotations, mentoring by cross-divisional senior managers and cross-border experiential group learning.

Apprentices and Technician Associates

In 2016, we recruited a record high 184 Apprentices and Technician Associates to fulfil our operational requirements for the future. We also launched two new schemes including a one-year Junior Tradesman Associate Training Programme in collaboration with the Labour Department and a four-year Craft Apprentice Training Scheme organised by the Vocational Training Council to groom more youngsters in technical and maintenance disciplines.

Apprentice Training Scheme

Originally established in 1978 under the Apprenticeship Ordinance, our Apprentice Training Scheme has provided training to more than 1,400 young people to date. Apprentices receive systematic on-the-job training, access to technical knowledge and guidance on career development. They may also have the opportunity to attend designated Vocational Training Council programmes to acquire recognised academic qualifications. Many graduates go on to hold senior engineering and management positions both within our own organisation and elsewhere.

In 2016, several of our recent graduates received the Outstanding Apprentice/Trainee Awards from the Vocational Training Council, the 19th consecutive year our apprentices have received the award.

Technician Associate Scheme

We have offered a two-year training programme named the Technician Associate Scheme since 2011, which is targeted at higher diploma holders from engineering disciplines. Our Technician Associates receive a wide range of on-the-job and professional training opportunities relating to railway maintenance. In 2016, we recruited 30 associates to join this scheme.

LEARN MORE...

For more information about recruitment opportunities in Hong Kong, please refer to [Careers at MTR](#) on our corporate website.

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TRAINING AND DEVELOPMENT

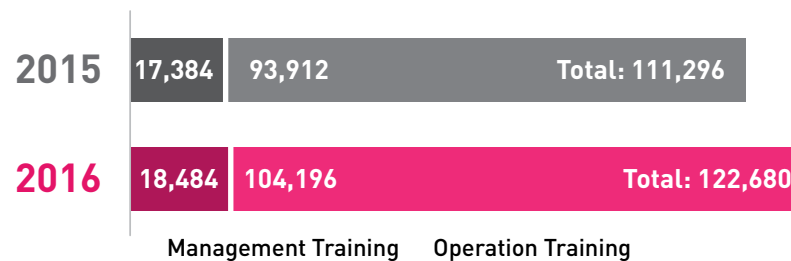
We invest in training programmes for our staff so that they can keep pace with changes in their professions, manage advances in technology and respond to constant evolution in our business environment.

With a commitment to develop our staff and strive for service excellence, we are honoured to have received recognitions from local and overseas professional associations in 2016 including an "Excellence in Practice Award" from the Association for Talent Development in the U.S. and three honours from the Hong Kong Management Association in the "Award for Excellence in Training and Development".

AVERAGE TRAINING DAYS PER EMPLOYEE



TOTAL STAFF TRAINING DAYS (MAN DAY)



Staff Training and Development Programmes

We design our training and development programmes to suit our staff's different training needs at different stages of their careers, for a new joiner to a supervisor to becoming a manager. Training is also an important aspect of our management approach to safety and customer service, with all members of our staff undergoing training that is appropriate to their area of work and level of responsibility.

In addition to offering a range of management skills training courses dedicated to staff at supervisory levels or above, other management training programmes include:

- **The Integrated Staff Development Programme** – provides future leaders the opportunity to gain supervisory experience and develop a network of colleagues to support them as they progress in their careers.
- **The Executive Continuous Learning Programme** – provides managers a comprehensive and tailored training programme which promotes effective leadership by supporting them to improve professional competencies and management skills.
- **Strategic Change Leaders for Success** – develops influential change leaders to master the skills of enhancing team's agility in adapting to change and how to focus on the right priorities to realise the corporate strategy.

To help us maintain a high level of training quality, the **Operations Training Network** serves as an interactive learning and sharing platform for trainers. It is designed to connect training units from across all business units so that ideas and strategies to improve training services can be shared and members of the network can gain access to best practices and the latest training technologies.

Self-learning resources

To further cultivate a corporate wide self-learning culture and create an interactive personalised learning environment, a wide range of mobile resources are now available as a one-stop learning platform - 'Mobile Learning Hub'. In 2016, we launched the divisional-based practical mobile learning modules including tailor-made Putonghua learning for property staff, BBC Business English Course, etc.

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NURTURING OUR CORPORATE CULTURE

As part of our corporate culture, it is important that we align the professional conduct of our people with our VMV, creating a working environment where all members of staff are inspired, engaged and fulfilled in their roles. Other sections of this report also touch on key aspects of our corporate culture:

- Safety is our priority and will not be compromised in anything that we do
- We seek to understand and serve the needs of our Customers, both in the present and into the future.
- We seek to contribute positively to the Communities where we operate in, with sincere and meaningful engagement embedded in our approach to designing and constructing new projects.

Engagement and Recognition

Staff consultation and communication

We value the views of every member of our staff. In addition to the Staff Consultation Mechanism, we reach out through a variety of other staff communication channels. An example is the Enhanced Staff Communication Programme, with 8,650 communication sessions organised in 2016, including departmental meetings, communication and sharing sessions, skipped-level informal sessions, etc. to encourage two-way communication between line management and employees to gauge staff sentiment.

The CEO Message on our intranet engages staff in Hong Kong as well as our overseas operations on corporate developments. Forums for dialogue between executives and general managers have strengthened communication and interaction, and site visits conducted by the CEO and other executives to meet and exchange ideas with staff have helped to improve understanding about our challenges.

With our continuous business expansion outside Hong Kong, the first global Staff Engagement Survey was conducted in November 2016 to solicit valuable feedback from staff in Hong Kong, the Mainland of China and international business hubs. The overall response rate was very high at over 94%. After we have consolidated and reviewed the findings, follow-up actions are being developed to respond to staff feedback.

Communications with our overseas operations

We introduced a multinational internal communication platform in January 2014 called MTRconnects, to engage staff members worldwide. It provides updates about the latest developments affecting our global operations, corporate news and encourages staff members to get to know each other by sharing work experiences and MTR people stories.

Staff Suggestion Scheme

Our staff are creative and innovative, and we thank those who participate in our Staff Suggestion Scheme to suggest new ways to make their work effective. In 2016, we received 624 suggestions, 11% of which were awarded and implemented in the workplace including ideas on resource saving initiatives, enhancing operational reliability, specially designed tools to improve work efficiency and more effective safety measures in property areas.

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Motivation and reward

We recognise outstanding performance of staff members. In addition to annual performance reviewed and performance-associated salary review and bonuses, we have a number of motivational schemes in place such as the Living the MTR Values Award Scheme, through which managers and supervisors show appreciation for staff members who exemplify our core values through their work. We continued to produce a series of short motivational videos titled MTR People Making a Difference, featuring stories about the work of our staff.

In support of staff with children, we also provide a number of scholarships to eligible children of staff studying in local schools and educational institutions. The "Caring for Community" Awards is also established to recognise students who show care to our communities by actively participating in volunteering activities. Each year around 80 students benefit from this programme.

DID YOU KNOW?

MTR Grand Awards for Outstanding Contribution

The MTR Grand Award for Outstanding Contribution is the highest form of recognition for members of our staff. Nominations are open to all individuals and teams across our businesses in Hong Kong, subsidiaries and associates outside of Hong Kong. They are submitted through department heads or local management, and the winners are selected in a stringent selection process by a cross-divisional vetting committee.

In 2016, we received a record 104 nominations across the Company. The winners were acknowledged at a yearly presentation ceremony held in October. This year's top award went to the Island Line Underpinning Team. A 59m wide, 20m wide underpinning work is required in the Admiralty station, which will become a first four-line mega interchange station after the Shatin-to-Central Link completes. The Team has delivered the complex underpinning while ensuring there was no disruption to the Island Line which is operating as usual. The project has also received external recognitions, including the Specialist Tunnelling Project of the Year Award 2015 at the NCE International Tunnelling Awards in London.

Work-life Balance

We offer a wide range of programmes to ensure our employees lead balanced and healthy lifestyles.

Family-friendly Employment Practices

Family-friendly employment practices offer further support to our staff and their families. Marriage leave, maternity leave, paternity leave, compassionate leave and study leave with full pay, as well as the recently-launched lactation rooms and related support, are provided to staff in Hong Kong to create an inclusive environment for them.

Metro Recreation Club

Annual events and social activities, such as singing contest and Christmas Children's Day, are organised for staff and their families and friends to enjoy the time together. For a nominal fee, employees and retirees can join our Metro Recreation Club (MRC) to enjoy a range of recreational and sports facilities and activities together with their families and friends.

Healthy Living Programme

We offer a range of programmes to ensure our employees lead balanced and healthy lifestyles as part of the "Healthy Living Programme" (HLP). This initiative emphasises a holistic approach to wellbeing that includes physical, mental, intellectual and social wellness.

We reach out to our staff by organising seminars and activities on popular topics such as tips for restful sleep, workplace hygiene and minimising stress levels. Additionally, a dedicated 24-hour counselling service hotline manned by professional counsellors is available to all MTR employees and their eligible dependants. Stress relief provisions such as recreational games are also provided at workplaces for some frontline staff.

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“We are MTR” Retirement Community

Over the course of their working lives, many of our staff members develop strong ties with their colleagues so we understand that retirement can mark a big and sometimes difficult transition. Leading up to retirement, staff members receive helpful information and newsletters to prepare them for this next step. Following retirement, the “We are MTR” programme has been launched in 2013. We strive to maintain our people’s sense of pride in MTR, keep them abreast of the Corporation’s latest development and enable them to build a close network with other retirees and former colleagues. The programme is now connecting with over 1,200 retirees.

Staff Volunteering

Staff members from all parts of our organisation are encouraged to reach out to the community by volunteering their time and skills. Under our *More Time Reaching Community Scheme*, staff members and retirees can initiate, organise and participate in volunteering activities.

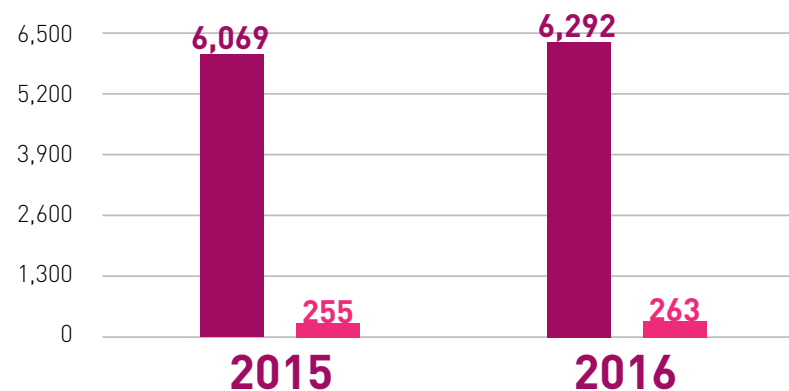
In 2016, a total of 263 volunteering projects were organised, involving over 6,200 participating headcounts. A total of 60 awards were presented to staff and retiree volunteers in recognition of their outstanding contributions to the community.

LEARN MORE...

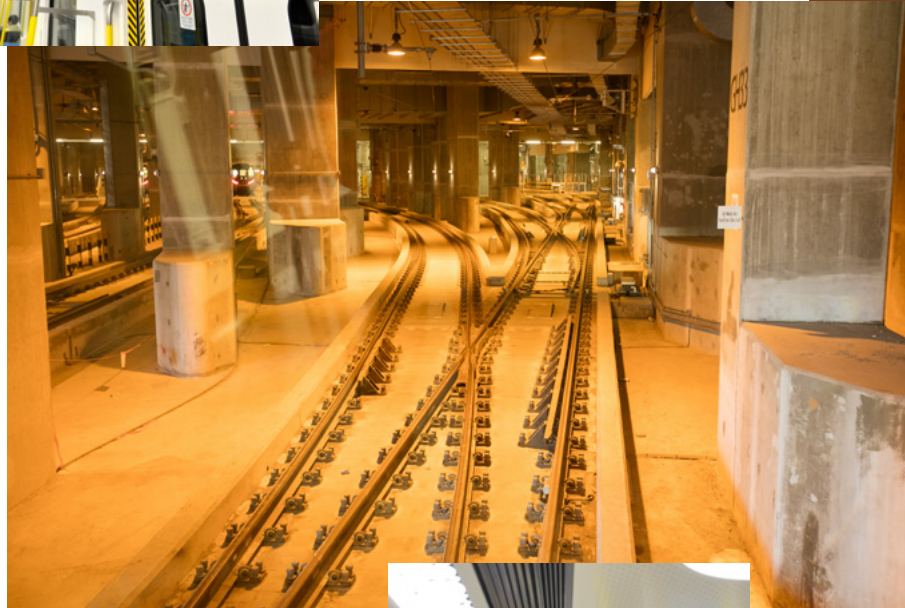
Read more about the [More Time Reaching Community Scheme](#) in our customer website

STAFF VOLUNTEERING

■ Number of Participating Headcounts
 ■ Number of Volunteering Projects



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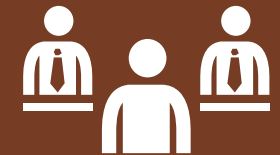
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SUPPLY CHAIN

Considering the wide range of products and services involved in the different categories of spending for railway construction projects, transport operations, property management and other businesses, we contribute significantly to the economy of Hong Kong and other places through our diverse supply chain.



HKD 8bn
Spent in railway
maintenance and
upgrades in 2016



715
Trainees under
the Contractor
Cooperative Training
Scheme since 2012

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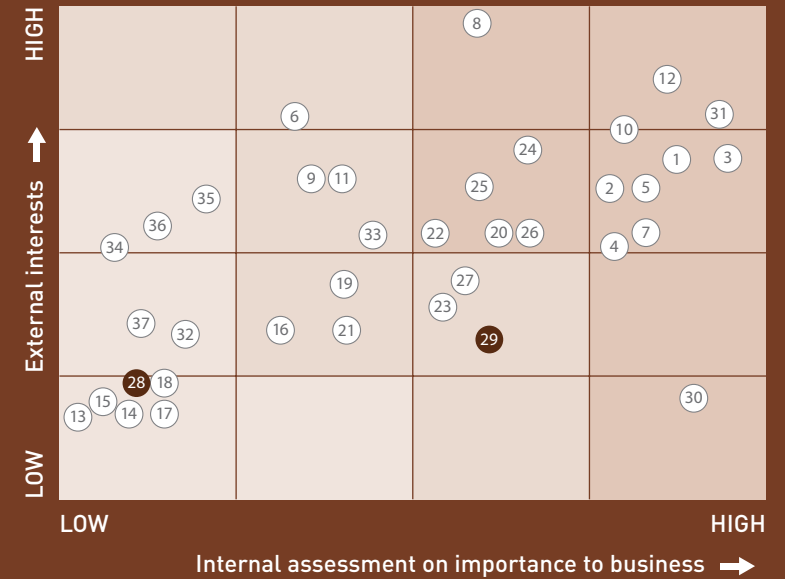
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We are in a position to build upon a strong foundation of working with stakeholders in our supply chain to promote quality, safety, reliability, business ethics and a commitment to being a responsible and sustainable business. Our reputation as a fair and equitable business partner is well established and we find that this helps to maintain ongoing collaborative working relationships.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



②⑧ Supply chain human rights risk

②⑨ Promoting social responsibility in the value chain

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Supplier Code of Practice

The Supplier Code of Practice (SCoP) was launched in 2008. It provides a basic, compulsory behavioural framework for ethical standards, human and labour rights, and supply chain management. Full compliance with the SCoP is a requirement of all procurement contracts entered into by the Company, with any violation considered to be a material breach of contract. Suppliers are also responsible for ensuring that their own suppliers comply with the SCoP.

LEARN MORE...

Download a copy of our [Supplier Code of Practice](#).

Promoting Transparency in our Procurement Process

The Company has a transparent and independent procurement process based on principles of good governance. The key objectives of this process are to serve the interests of our shareholders and other stakeholders by promoting competition, providing value for money to the Company, and ensuring compliance with our policies on being a responsible and sustainable business.

We publicise information about contracts and tenders on our corporate website according to our policy and in the interests of transparency.

LEARN MORE...

Our latest [Tender Notices](#), [Invitation for Tender/Expression of Interest](#), [Notice of Contract Awards](#) and [Supplier/Contractor Registration and Administration](#) can be found on our website.

Promoting Fair Competition

Our success depends on the trust placed in us by our stakeholders. It is therefore the responsibility of all members of our staff to uphold our reputation as a fair and ethical business at all times. In 2015, in line with the full operation of the Competition Ordinance on 14 December 2015, we reviewed our business arrangements and practices, released a new compliance manual and organised seminars to increase staff awareness of this topic.

Our Staff Code of Conduct has also set out clear guidelines on business ethics. We are committed to ensuring fair, open and honest competition, and we strive to be fair, transparent and competitive in our procurement activities. We conduct competitive tendering and ensure that fair opportunities are provided to capable, qualified suppliers, contractors and consultants who are interested in conducting business with us, wherever they may operate.

For example, in our tendering process, tenderers are not allowed to submit independent tenders for the Contract if they intend to act as a supplier, sub-contractor or sub-consultant for another tenderer, or if they are a partner of another joint venture established to tender for the Contract. In addition, tenderers having linkage to each other, e.g. subsidiaries, holding or sister companies, shall not submit tenders for the same Contract, whether on their own or as a partner of a joint venture. Tenderers having linkage to each other shall determine which company will submit a tender.

Furthermore, during tender submissions, all tenderers are required to declare that they have not entered into any agreement, arrangement or understanding with any other tenderer which involves collusion in tendering, inflation of tender prices, the provision of compensation if unsuccessful or any other related collusive activities.

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Green procurement

Our Green Procurement Policy encourages our procurement teams to promote sustainability in our supply chain. We are a founding member of the Hong Kong Green Purchasing Charter and apply green specifications for a range of procured items, including energy efficient equipment such as LED lights and Forest Stewardship Council (FSC) certified products for stationery supplies, to name a few. Likewise, lifecycle assessment approach is adopted in the procurement of capital assets such as trains, air conditioning chiller units. We also encourage our suppliers to adopt eco-labelling where appropriate and possible.

LEARN MORE...

The [Hong Kong Green Purchasing Charter](#) is an initiative of the Green Council, a non-profit environmental association formed in 2000 to encourage environmental protection measures in the industrial and commercial sectors of Hong Kong.

Sustainable Procurement Taskforce

The Sustainable Procurement Task Force of the Procurement and Contracts Department was established in 2012. In 2016, we have reviewed and strengthened the governance structure of the Taskforce. It reports to the Engineering Director and comprises colleagues who look into the implementation of sustainable procurement initiatives across the Company.

The work of the Taskforce focuses on the following key areas:

- Supplier Survey & Compliance: surveys of the Supplier Code of Practice
- Green Procurement: share green procurement initiatives and practice
- Events & Promotion: coordinate awareness raising and sharing activities with suppliers, as well as promotion of the sustainability initiatives of the Company
- Training & Development: organise and recommend sustainability related training to Task Force members for capability building

Supply chain sustainability benchmark exercise

In 2015 we completed an independent study to benchmark MTR's supply chain sustainability. In some aspects we are already on par with best practices in the railway and properties industries, but in other aspects we are considering how to refine our approaches in order to meet and exceed market norms.

We recognise the growing need for all corporations to strengthen their supply chain management practices to bring about greater product responsibility and efficiency, while minimising environmental and social impacts. Going forward, we aim to continue integrating sustainability considerations into our procurement process in a strategic manner, while spearheading other improvement initiatives.

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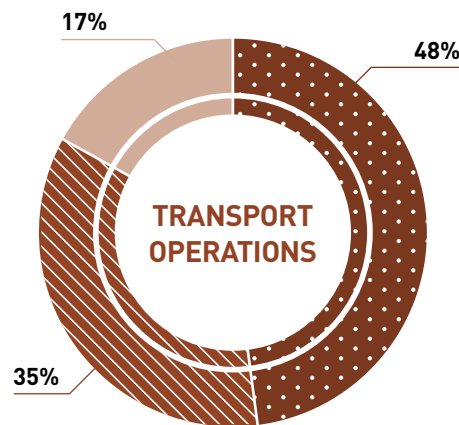
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SUPPLY CHAIN ASSESSMENT

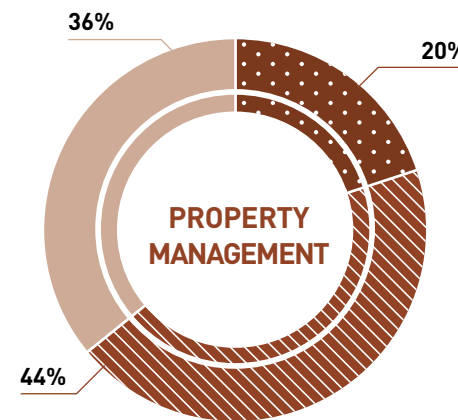
These diagrams show the breakdown of our spending on products and services during 2016. Owing to the growing diversity of suppliers and service providers for our different business units, we assess three separate groups of suppliers, for transport operations, property and

railway extension projects, by procurement category as a proportion to their total spend. We also identify the relevant sustainability risks for each supplier category, and the strategic focus areas for supplier engagement by division and category of spending.

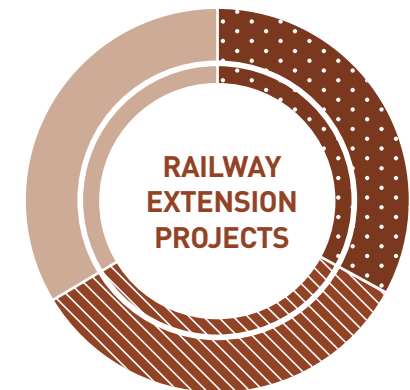
PERCENTAGE OF SPENDING BY MAJOR CATEGORIES IN 2016



- Works & Maintenance Services
Worker safety and health
- Goods, Services & Spares
Human rights and labour practices
- General Goods & Services



- Works & Maintenance Services
Worker safety and health
- Cleaning, Security & Clubhouse Services
Human rights and labour practices
- Other Goods & Services



Proportional spend data is not shown due to the cyclical nature of spending

- Civil Works
Human rights and labour practices
Worker safety and health
- Consultancies & Others
- Engineering & Mechanical Works
Human rights and labour practices
Worker safety and health

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Supply Chain Risk Management

Spending on our transport operations continue to be the largest amongst the three categories. This year we have spent more than HK \$8 billion on maintaining, replacing and upgrading our existing network. This annual spending is expected increase significantly over time. The quality of the service we provide, and of the infrastructure that we build, are dependent on the reliability and quality of products and services delivered by our suppliers. Risks in our supply chain, similar to our other enterprise risks, are therefore subject to regular assessment through the Enterprise Risk Management System.

For example, we anticipate that flooding and other extreme weather events associated with climate change could have major impacts on our supply chain, including delays to production and delivery of goods, while our infrastructure and property assets will be subject to higher insurance premiums. Hence, we have put in place risk mitigation measures such as working closely with suppliers to ensure the continuity of supply for goods and services. It is essential that they keep safety and service critical spares at sufficient levels in stock, and investigate ways in which they may develop alternative sources of supply for proprietary spares and to keep up with technology advancements to avoid obsolescence.

DID YOU KNOW?

Model management practices in our supply chain

Since 2009, we have committed a total of HK\$9.7 billion towards procurement of trains for our new railway lines. Given the huge scale of this investment, we have put a lot of effort in recent years into refining our lifecycle assessment approach for this kind of equipment. Our decisions take into consideration future energy use and maintenance costs of our trains over an average lifespan of 40 years, in addition to upfront capital costs. We also monitor the performance of equipment purchased that has undergone a lifecycle assessment in its initial period to check the accuracy of performance. In some cases, we incentivise suppliers that are able to meet their stated performance range.

Furthermore, in order to meet our high standards for quality we maintain close working relationships with manufacturers who fabricate our trains. Our model practice for quality management of trains grew out of an enhanced partnership that has developed with one of our major suppliers. We work closely with this supplier through a joint project office located at the manufacturing base to ensure all performance indicators for quality are achieved, including complete traceability of all major components, with particular attention to service and safety critical parts. We have also stationed full-time staff at the factory to ensure the quality of the manufacturing and assembly process. We have implemented this approach across all our train purchases for the new lines, including the tendering process of the 93 new 8-car trains we announced in 2015.

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ENGAGEMENT AND COLLABORATION WITH SUPPLIERS

The work that we do to engage with contractors is an aspect of our value chain. We invite suppliers to participate in regular forums, seminars and site visits to benchmark performance and share best practices. Our procurement teams also participate in regular visits to suppliers' facilities. Overall, we aim to foster a culture of cooperation and mutual support by working with suppliers to promote the principles of being a responsible and sustainable business beyond contractual compliance. Focusing on worker safety and health, human rights, labour practices and community engagement, our Operations, Projects and Property Divisions have identified specific parts of the supply chain in which to deliver strategic engagement on these issues.

Supplier Survey

We survey our suppliers periodically to collect information about the status of their policies, initiatives and monitoring systems relating to:

- ethical standards
- human and labour rights
- environmental protection
- consumer protection
- supply chain management
- conflicts of interest

In our most recent survey in 2014, we received information from 660 suppliers in response to our Corporate Responsibility Questionnaire. Compared with the baseline from 2011, we have observed an overall increase in the proportion of suppliers indicating they have corporate responsibility policies initiatives and monitoring systems in place – from 27.6% to 46%. There was an average improvement of 4.6% across all other indicators.

Findings from the questionnaire help us to understand how our suppliers are aligning with the Supplier Code of Practice and the maturity of their sustainability practices. In our next survey, scheduled for mid-2017, we will also seek to understand their priority sustainability areas, comparing these results with our own assessment. This will guide areas for improvement and collaboration, as well as note the feasibility of introducing enhanced sustainability requirements in the future.

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Collaboration with our Contractors

In addition to their own staff, contractors may also hire sub-contractors and specialist contractors. Securing buy-in from contractors is integral to our strategy and objectives of being a responsible and sustainable business.

Contractors are obliged to comply with a set of stringent safety specifications and requirements in the contract; however, we also strive to establish non-contractual partnering relationships that will lead to joint efforts to improve project deliveries.

DID YOU KNOW?

Material Testing Laboratory for Railway Extension Projects

First established in 1975, the MTR Materials Testing Laboratory developed a computer-based Material Management System and automated the testing process in 2009. Since then, the Laboratory has completed testing of 738,000 concrete cubes and 152,000 reinforcing bars ("rebar") to ensure stringent material standards for 70 MTR railway extension contracts, averaging 700 cubes and 100 rebars every day.

To meet statutory and our own requirements at each batch of concrete and rebar used needs to be tested on a number of parameters, including strength, mass and failure mode. The sampling and testing process was previously time-consuming and largely manual, relying on the circulation of hardcopy documents. Contractors used to prepared concrete samples on site, which were then transported by a clients' member of staff to a third party laboratory for testing. It was not uncommon for the whole testing process to take more than two weeks.

When construction of the five new rail projects commenced in late-2000, we sought to streamline the testing process. Developed in-house, the Material Testing System (MTS) makes use of multiple QR codes, Radio Frequency Identification (RFID) and mobile phone technology to capture and transfer information of each concrete and rebar sample. The automated process has reduced the risk of human error or mishandling of data significantly.

Testing equipment was also improved, and the process automated to allow test results to be available online for approval by Hong Kong Laboratory Accreditation Scheme (HOKLAS)'s approved signatories and then shared with site engineers and contractors immediately. As a result, the formal report turnaround time has been reduced to 24 hours in a now paper-less environment. By conservative estimates, 11 sheets of paper are saved for each testing sample.

During the development of MTS, there was close consultation and collaboration with our material suppliers and trade unions, contractors and construction engineers on site to understand their needs and concerns. With feedback from users provided through annual customer satisfaction surveys, and with advances in technology enabling incremental improvements through the years, we have continued to improve on the user-friendliness and effectiveness of the system.

Contributing to industry best practice

The mobile platform of the MTS remains an open system, this is to encourage collaborative solutions and industry advancement of automated and reliable testing systems. The Hong Kong Construction Materials Association (previously Concrete Producer's Association), for example, has now adopted mobile technologies and QR code concrete tickets. In 2014, the Government's Buildings Department began to accept electronic reports generated from the MTS – unprecedented acknowledgement of the system's success.

As a major infrastructure provider in Hong Kong, we take pride in continuing to play an instrumental role in developing innovative technology for the industry.

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DID YOU KNOW?

Awards for Excellence in Quality, Safety, Environmental Management & Stakeholder Engagement

Launched in 2010, our Project Division's annual awards scheme aims to promote continuous improvement in these areas during delivery of new railway projects for Hong Kong. In 2016, the Award scheme was extended to also cover our subcontractors in addition to our main contractors, to commend and encourage their outstanding performance.

The Gold winner for different award categories are listed below:

- **Gold Quality Award:** Beijing HollySys Co., Ltd. of both Contract 841A: Signalling System – Trackside Equipment, and Contract 841B: Signalling System – Trainborne Equipment
- **Gold Safety Award:** jointly won by Samsung - Hsin Chong Joint Venture of Contract 1109: Sung Wong Toi and To Kwa Wan Stations and Tunnels, and Shinryo Corporation of Contract 816C: West Kowloon Terminus - Electrical Installation.
- **Gold Environmental Award:** Vinci Construction Grands Projets of Contract 1103: Hin Keng to Diamond Hill Tunnels
- **Gold Stakeholder Engagement Award:** Samsung - Hsin Chong Joint Venture of Contract 1109: Sung Wong Toi and To Kwa Wan Stations and Tunnels

DID YOU KNOW?

Graduate trainee programmes in our new lines

The shortage of skilled construction workers has been a challenge faced by our railway extension projects in the last few years. To attract new recruits to construction industry, we initiated the Shatin to Central Link Contractors Cooperative Training Scheme (SCL CCTS) in 2012. The Scheme provides training and internship programmes for various trades in the construction industry aimed at those who wish to work in the field. The SCL CCTS requires all contractors of SCL civil works contracts to recruit a specified number of trainees, provide training for them and offer 12-month employment contracts to graduate trainees who pass relevant trade tests. Up to the end of 2016, 715 trainees have received training with 455 of them having completed the programme and are re-continuing their careers in 17 trades including tunnel workers, carpenters and steel fixers.

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FINANCIAL AND ECONOMIC PERFORMANCE

In 2016, on average we carried approximately 5.6 million passengers each weekday across our rail network and bus passenger services in Hong Kong. We also have hundreds of thousands of people living, working and shopping in properties we develop or manage. Therefore, our performance impacts not only our shareholders but also a wide range of stakeholders.



HK\$257,340 million

Total assets as at
31 Dec 2016



8.4%

Increase in total
revenue

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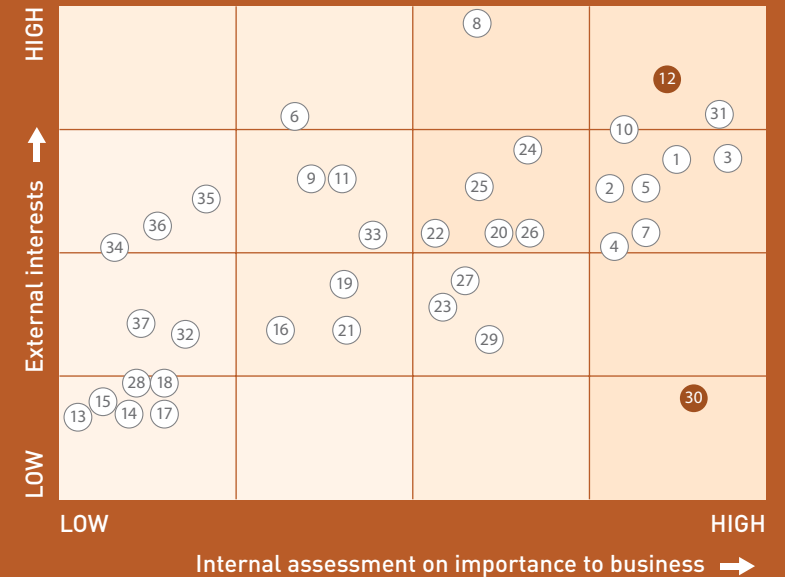
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The capital intensive nature of our industry has traditionally made it difficult for railway companies to secure the financing that they need to operate and grow. For us to consistently deliver the world-class service that our customers expect, it is crucial that we have sufficient financial capability to fund the investments, maintenance and upgrades that take place across our businesses today and into the future. Hence, sustainable financial health is of utmost importance.

In this section, we highlight the need for a stable fare revenue which is one of most important sources of recurrent income for the Company. We also use a number of proven financing models such as the Rail plus Property model, Public-Private Partnerships, and service concessions and cash grants to support the delivery of high quality railway services over the long term. For the first time, we have issued a green bond in November 2016 to fund projects that enable us to continue to provide green transport and property services. These will be discussed in detail in this section.

In other sections of this report, you can read about how we invest continuously to maintain, improve and expand our services for customers; and future trends that may impact or contribute to our future trends.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



12 Access to essential services (incl avoidance of service disruption)

30 Payment from government / tax payment

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Economic and Financial Performance Highlights

Since our establishment in 1975, we have developed along with Hong Kong. We connect and grow communities with caring service, providing safe and reliable transport to link people with what matters to them most; at the same time, the growth of the Company was enabled by a booming economy and a well-rounded education system in Hong Kong, which together provided the capital, skilled labour force, as well as a sizable market for our services.

Our contribution to Hong Kong is beyond the profit we generated for our shareholders. To illustrate, we have prepared a value added and distributed statement this year. Revenue is the economic value we created for the transport, property and other services we provide to our customers; these are then distributed to our stakeholders – suppliers, employees, lenders, shareholders, government and the community at large. The retained profit represents the reinvestment we made to maintain and upgrade our current assets, as well as the capacity to fund new projects.

VALUE ADDED AND DISTRIBUTION STATEMENT IN 2016 (HK\$ million)

Economic Value Generated

Revenue from Hong Kong Transport Operations
\$17,655

Revenue from Hong Kong Station Commercial businesses
\$5,544

Revenue from Hong Kong Property Rental and Management Businesses
\$4,741

Revenue from Mainland of China and International Subsidiaries
\$ 14,826

Revenue from Other Businesses
\$2,423

Profit from Hong Kong Property Development¹
\$ 337

Total: 45,526

Economic Value Distributed

Staff Costs



Employees²
\$ 13,671

Operating Costs³



Suppliers & business partners
\$13,332

Fixed and Variable Annual Payments



KCRC
\$ 2,537

Interest & Finance Costs



Lenders⁴
\$297

Taxes⁵



Government
\$1,240

Ordinary Dividends⁶



Shareholders
\$6,238^{6,7}

Community Investment (excludes fare concessions and in-kind donation)



Community
\$23⁸

Economic Value Retained⁹

8,188

Total: 45,526

Notes:

- Before taking into account staff costs of HK\$26 million.
- Excludes staff costs capitalised for asset creation of HK\$1,385 million.
- For simplicity reason, operating costs include interest income and share of profit or loss of associates, netted with profit attributable to other non-controlling interests.
- Excludes interest expenses capitalised for asset creation of HK\$632 million.
- Represents current income tax but excludes deferred tax for the year.
- Represents ordinary dividends payout during the year.
- Includes ordinary dividends paid to the Financial Secretary Incorporated of the HKSAR Government of HK\$4,701 million, but excludes the payment of the first tranche of special dividend under the XRL Agreement of HK\$12.9 billion.
- Includes donations, sponsorships and other community engagement contributions, but excludes ongoing fare concessions and promotions of HK\$2,536 million and in-kind donations of HK\$22 million.
- Economic value retained for reinvestment to generate future economic values. This represents underlying business profit attributable to shareholders of the Company (before depreciation, amortisation and deferred tax) for the year retained, after the amount distributed to our stakeholders, but before payment of the first tranche of special dividend under the XRL Agreement of HK\$12.9 billion.

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Financial Highlights

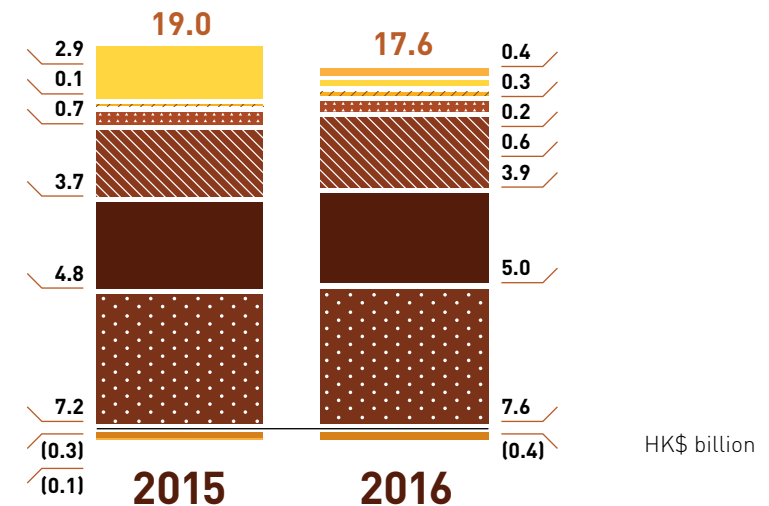
(HK\$m)	2015	2016	Change
Total revenue	41,701	45,189	▲ 8.4%
Total EBITDA ⁽¹⁾	16,120	17,313	▲ 7.4%
EBITDA ⁽¹⁾ margin	38.7%	38.3%	▼ 0.4%pt
EBITDA ⁽¹⁾ margin (excluding Mainland of China & int'l subsidiaries)	53.3%	53.9%	▲ 0.6%pt
Total EBIT ^(2, 3)	10,622	11,399	▲ 7.3%
EBIT ⁽²⁾ margin ⁽³⁾	25.5%	25.2%	▼ 0.3%pt
EBIT ⁽²⁾ margin ⁽³⁾ (excluding Mainland of China & int'l subsidiaries)	34.8%	34.8%	--
Profit from recurrent businesses ⁽⁴⁾	8,565	8,916	▲ 4.1%
Post-tax profit from property development in Hong Kong and Mainland of China	2,329	530	▼ 77.2%
Profit from underlying businesses ⁽⁴⁾	10,894	9,446	▼ 13.3%
Investment property revaluation	2,100	808	▼ 61.5%
Reported net profit attributable to shareholders of the Company ⁽⁴⁾	12,994	10,254	▼ 21.1%
Reported EPS (HK\$) ⁽⁴⁾	2.22	1.74	▼ 21.6%
Underlying businesses EPS (HK\$) ⁽⁴⁾	1.87	1.61	▼ 13.9%
Ordinary dividend per share (HK\$)	1.06	1.07	▲ 0.9%

Note: 1 - EBITDA represents operating profit before Hong Kong property development, depreciation, amortisation and variable annual payment.
 2 - EBIT represents operating profit before interest and finance charges.
 3 - Excluding Hong Kong property development.
 4 - Net of non-controlling interests.

OPERATING PROFIT* CONTRIBUTION

- Mainland of China property development subsidiary
- Hong Kong property rental and management businesses
- Hong Kong property development
- Hong Kong station commercial businesses
- Other businesses
- Mainland of China and international railway, property rental and management subsidiaries
- Hong Kong transport operations
- Project studies and business development expenses

* Representing operating profit before depreciation, amortisation and variable annual payment



Consolidated data on [financial and economic performance](#) is available in the Performance Metrics section of this report.

DID YOU KNOW?

Financial Performance Benchmarking

According to [CoMET Benchmarking](#), we consistently outperform all other participating metros on financial performance measures by capacity provision and utilisation. This result reflects some attributes of the situation in Hong Kong, such as high population density, as well as the success of our Rail plus Property model, which allows us to operate on a self-sustaining basis while maintaining fares at an affordable level.

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FARES FOR HONG KONG TRANSPORT OPERATIONS

Fares are a sensitive issue for many of our stakeholders, particularly those living on low incomes or who depend on our services for convenient transportation to and from remote parts of our city; on the other hand, fare income is one of our major revenue sources that is sustainable and stable, which ensures we can support the significant investments required to maintain, replace and upgrade our assets over the long term.

The Fare Adjustment Mechanism (FAM) was agreed with the government at the time of our merger with KCRC in 2007, after extensive discussion, and approved by minority shareholders. It is designed to enable fair, objective and transparent fare adjustments. We seek to address the public's concern about the affordability of our services by providing different on-going and fixed term promotions and concessions to targeted groups of customers.

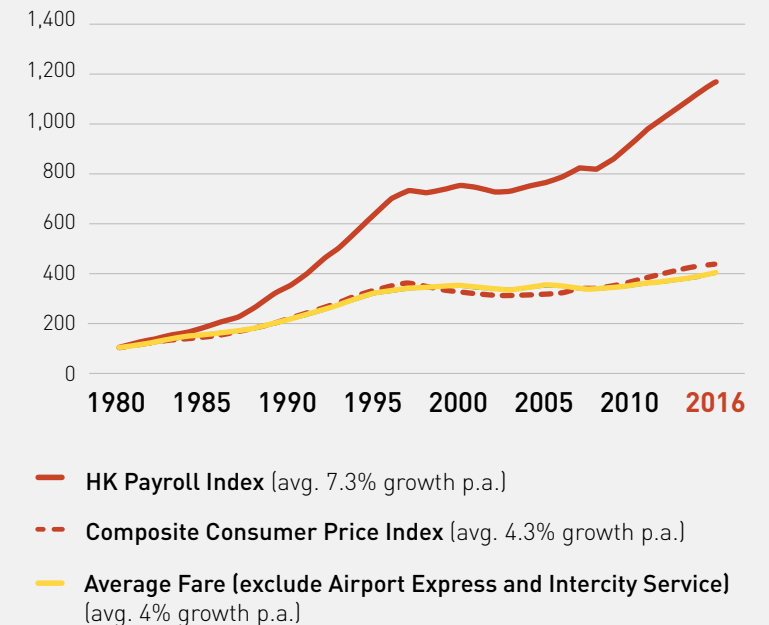
DID YOU KNOW?

Under the FAM, between 2008 and 2016, our fares have increased at a rate much lower than both average annual consumer price inflation and the average annual increase of salaries.



- Average MTR fare increase
- Average annual increase price inflation (as recorded by the Composite Consumer Price Index)
- Average annual increase in salary (as measured by the Hong Kong Payroll Index)

This chart shows that adjustments to our fares have been in line with long-term consumer price changes and consistently lagged behind wage growth in Hong Kong.



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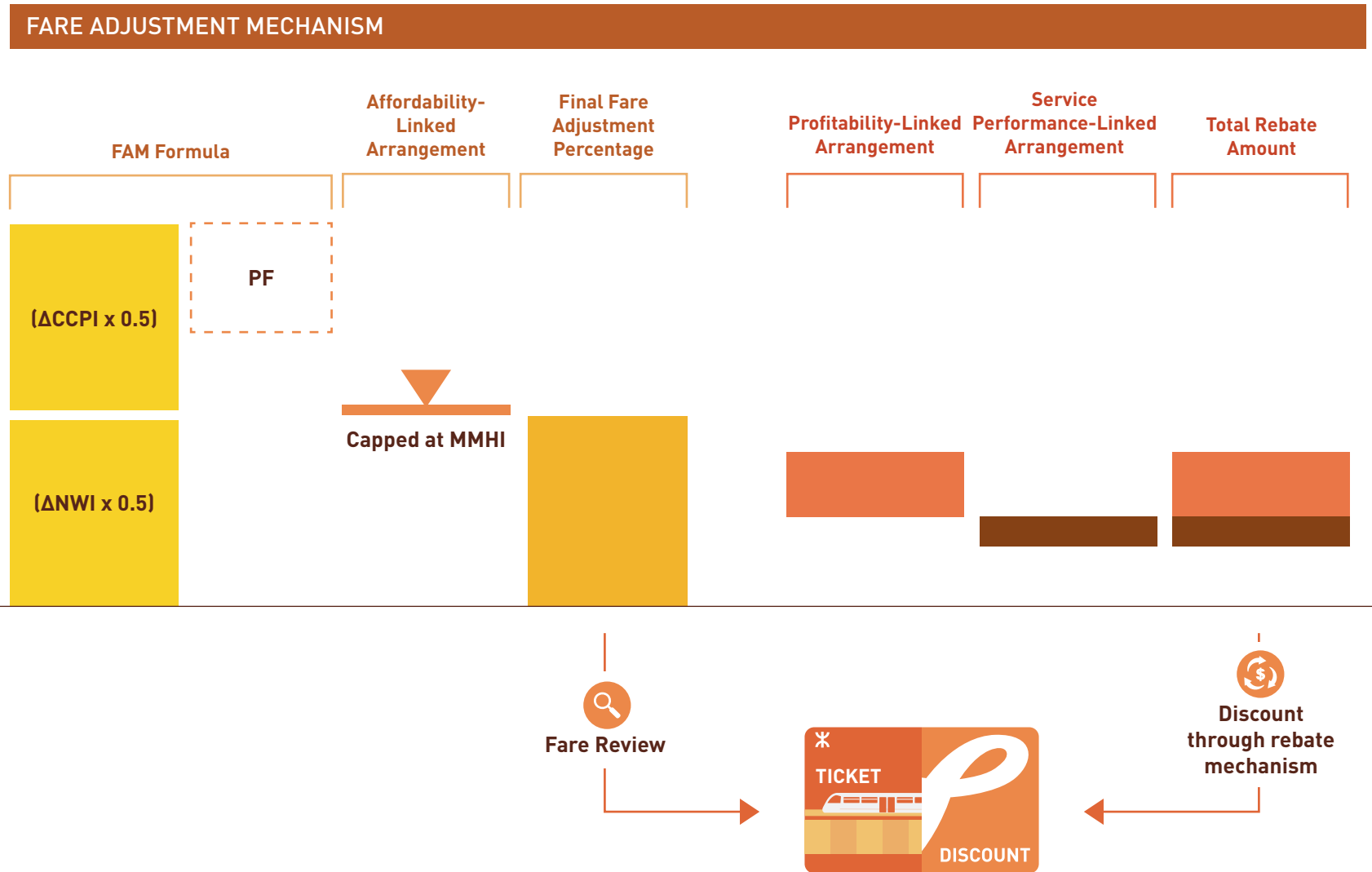
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Fare Adjustment Mechanism

FAM formula

The FAM is based on an objective, transparent and direct drive formula that allows us to set fares according to the economic situation, with a measure of predictability, and to balance our financial obligations to shareholders

while addressing the community's expectations. It is applicable to fares for our heavy rail, light rail, MTR buses, as well as fares charged for airport staff travelling on the Airport Express.



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There are several components in the FAM formula. The changes in Composite Consumer Price Index (CCPI) and Nominal Wage Index (Transportation Section) (WI), both of which are published by the Government's Census and Statistics Department, reflect the changes in our operating cost. With the introduction of the Productivity Factor (PF), customers can enjoy a share of the productivity gains of our business.

Review of the FAM

Under our Operating Agreement, the FAM is normally reviewed once every five years. The first review was completed in 2013, resulting in revisions to the pre-set "Productivity Factor" and the introduction of three factors:

- **Productivity factor:** In the five years from 2008 to 2012, after the MTR rail operations merger, a productivity gain of 1.2% was achieved. This was shared with our customers with the PF set at 0.6% in the first FAM review.
- **Affordability-linked Arrangement:** After the overall adjustment rate has been calculated, it is checked against, and capped at, the Median Monthly Household Income (MMHI) provided by the government for the 4th quarter of the preceding year. If the MMHI is 0 or negative, fares will be frozen. This arrangement provides fare relief during difficult economic times. When an affordability discount is offered, it will gradually be withdrawn over two years.
- **Service Performance-linked Arrangement:** For each train service disruption for more than 30 min attributable to equipment fault or human error, a pre-determined amount based on a sliding scale referencing the length of delay will be set aside to provide rebates to customers in the following year through a set mechanism.
- **Profitability-linked arrangement:** A pre-determined amount based on a sliding scale referencing the amount of profit generated by MTR's underlying business is set aside for profit-sharing discounts provided to customers through rebate mechanisms.

LEARN MORE...

Early Review of FAM in 2016/17

Under our Operating Agreement, the FAM is normally reviewed once every five years and the next scheduled review was due in 2017/18. After receiving a request from the government in March 2016, and based on a mutual agreement reached in April 2016, we advanced the forthcoming review by one year conducted jointly with the government. The result was released in March 2017.

Building on the foundation of the FAM formula, which remains unchanged, we will be implementing new arrangements which will benefit all passengers, while ensuring the financial sustainability of the Corporation to support safe, reliable and efficient railway services. We have also developed an attractive package that will benefit all passengers on all journeys.

Read more about the [result of the FAM review](#), which was conducted jointly by MTR and the Government FAM.

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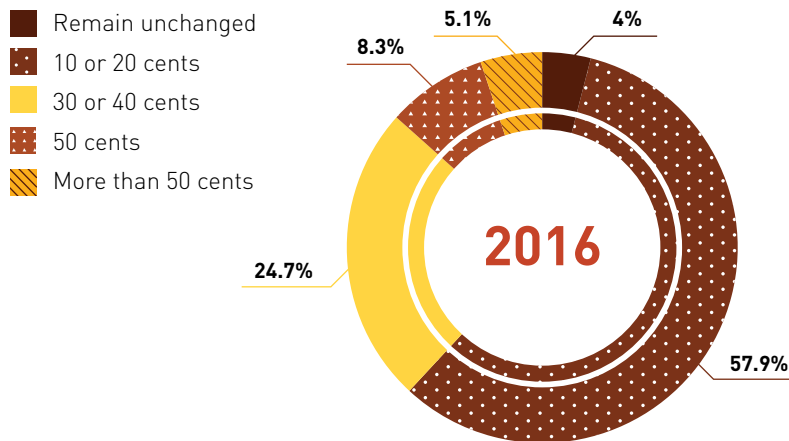
Fare adjustment in 2016

The latest fare adjustment came into effect in June 2016 with an Overall Fare Adjustment Rate of +2.65%, reflecting:

- a year-on-year increase in the Nominal Wage Index of 4.1%;
- a year-on-year change in Composite Consumer Price Index for December 2015 of 2.4%; and
- a Productivity Factor of 0.6%.

The 2016 adjustment is lower than the 3.33% year-on-year increase in the Median Monthly Household Income for the fourth quarter of 2015.

FARE INCREASE IN 2016 UNDER FAM



Concession and Discounts

On-going Fare Promotions and Concessions

We provided over \$2,500 million worth of ongoing fare concessions and promotions in 2016, to targeted groups which we believe would benefit most from a reduced fare. These include:

- Discounts for Elderly and Eligible Persons with Disabilities
- Student Travel Scheme
- Intermodal discounts

Fare concession schemes agreed under FAM

As part of the FAM review in 2013, we agreed to share our commercial success with passengers through schemes that give back a portion of our profits in the form of time-limited fare concessions.

The amount specified under the service performance- and profitability-linked arrangements were given to customers of our rail transport services through the 10% Same-Day Second Trip Discount in 2016.

Discounts in 2016

In 2016, we announced additional, enhanced or extended fare promotion packages worth over HK\$500 million. These are:

- **Promotion extension of the MTR City Saver** - For regular commuters making medium to long distance cross-harbour journeys within urban areas, they can enjoy an 11% to 25% discount on fares. This was extended for one year to 30 June 2017.
- **Fare Savers** - We have installed Fare Savers to encourage customers to travel on the MTR network. Simply by tapping their Adult Octopus over the reader, they can enjoy a standardised offer of \$2 off their next MTR ride.

LEARN MORE...

Find out where the [Fare Savers](#) are.

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- **Promotion extension of the Early Bird Discount** - If commuters exit gates between 7:15am and 8:15am, they can receive a 25% fare discount. The offer applies to adult passengers on ordinary weekdays at 35 designated stations. It was extended for one year to 31 May 2017.
- **Designated Saturday Offer** - From November 2016 to March 2017, on the first Saturday of each month, Adult Octopus holders enjoy concessionary fares equal to Child Octopus fares while other concessionary Octopus holders pay \$1 per domestic journey.

Other discount schemes in 2016 included Monthly Pass Extra and Day Pass. We also offered free travel for elderly and disabled passengers in support of Senior Citizen's Day and the International Day of Disabled Persons, respectively.

LEARN MORE...

Please refer to our customer website for the latest information about [Tickets, Fares, Special Schemes, and Frequent User Passes](#)

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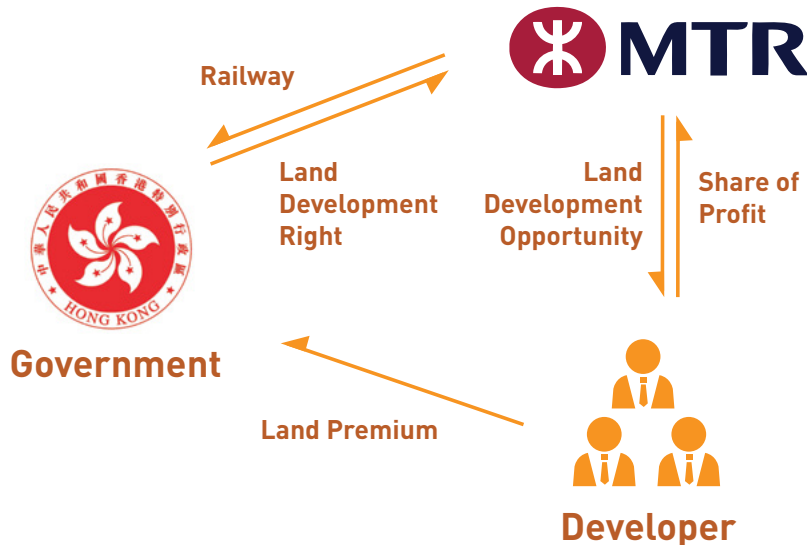
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RAIL PLUS PROPERTY MODEL

Our ability to provide a reliable world-class railway service is made possible through our Rail plus Property model. Established around 40 years ago for financing our first railway line, this model continues to be the foundation of our business in Hong Kong today. We are granted land development rights alongside railway alignments, upon payment of the relevant land premiums. We build integrated communities incorporating residences, offices, shops, schools, green spaces and other community facilities in association with our stations, depots and developments, with stakeholders benefitting from the additional value brought to the vicinity by the MTR system.

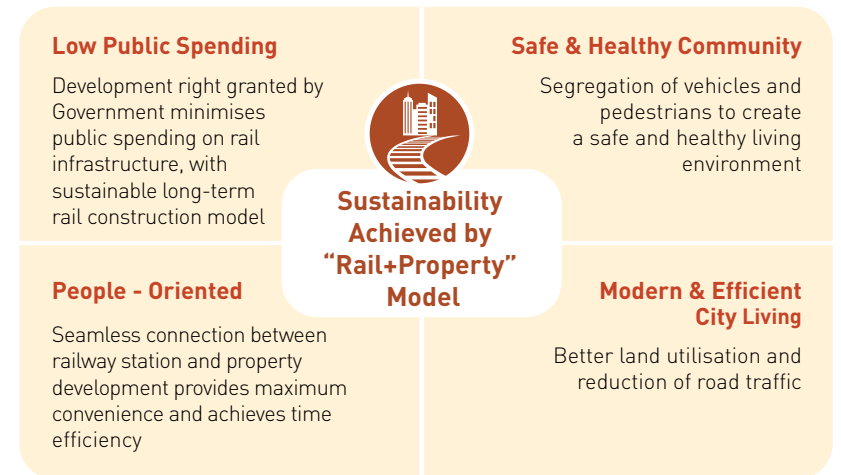
Rail plus property model



Note: This is a simplified model, only meant to illustrate and explain the general framework of the Rail plus Property Model. Actual implementation may vary.

In addition to providing resources for railway operations through income generated by Rail plus Property assets such as investment properties, the model helps to fill funding gaps when building new railway lines. The system also benefits local residents by providing convenient access to railway services and other facilities.

Summary of the sustainability benefits of rail plus property model in Hong Kong



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Transit-oriented Development

Transit-oriented development (TOD) is an initiative of the Government that has railway at its core. In accordance with this strategy, the framework for public transport in Hong Kong has set rail as the backbone. One key objective is to utilise Hong Kong's limited land resources in a prudent way by promoting development near railway stations. It also aims to facilitate efficient mass transportation of Hong Kong's population in an environmentally-friendly way and to make optimal use of land with railway facilities.

As a result of the Rail plus Property model, we have supported TOD at stations all over our network. This infographic illustrates a few examples of our success stories.



Examples of MTR's Rail plus Property Success Stories in Hong Kong

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LOHAS PARK

TAI WAI STATION DEVELOPMENT

HO MAN TIN STATION DEVELOPMENT

REGENERATION OF WONG CHUK HANG

LEARN MORE...

Find out more about our new property developments in the [2017 and Beyond](#) section, or click [here](#) to access our corporate website for more information about property developments along our railway lines.

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TELFORD GARDENS

One of the earliest examples of how TOD has succeeded is the Kowloon Bay Station and Depot on the Kwun Tong Line. Completed in the early 1980s, it comprises residential towers with a regional shopping mall and several open spaces well connected to the station.

DEVELOPMENTS ALONG THE TUNG CHUNG LINE

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TELFORD GARDENS

DEVELOPMENTS ALONG THE TUNG CHUNG LINE

The International Finance Centre above Hong Kong Station has expanded Hong Kong's Central Business District by adding world-class Grade A office space. On the other side of the harbour, the International Commerce Centre in West Kowloon – previously an inconvenient area to travel to – is now only a ten-minute journey from Central via the Tung Chung and Airport Express lines. Maritime Square and Tierra Verde have become new focal points in Tsing Yi after their completion, and the new railway line has enabled the development of various residential properties in Tung Chung by providing convenient links to the city centre. These have helped support the continuing economic development and growth of Hong Kong.

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Examples of MTR's Rail plus Property Success Stories in Hong Kong

TELFORD GARDENS

DEVELOPMENTS ALONG THE TUNG CHUNG LINE

LOHAS PARK

As one of our biggest developments to date, LOHAS Park is being developed as a comprehensively planned and integrated community. The station itself, which opened in 2009, serves as the principal transport hub for the area, connecting approximately 68,000 residents via a network of covered walkways. In 2016, we awarded an additional tender for the development's further expansion.

TAI WAI STATION DEVELOPMENT

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LEARN MORE...

Find out more about our new property developments in the [2017 and Beyond](#) section, or click [here](#) to access our corporate website for more information about property developments along our railway lines.

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LOHAS PARK

TAI WAI STATION DEVELOPMENT

As the interchange station for the East Rail Line and the Ma On Shan Line, Tai Wai Station is expected to serve as the main transport hub of the district. The future integration of the station, public transport interchange, retail and residential spaces, as well as, a post-secondary college will provide a good example of a sustainable TOD concept.

HO MAN TIN STATION DEVELOPMENT

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HO MAN TIN STATION DEVELOPMENT

Ho Man Tin and Whampoa Stations are the newest addition to the Kwun Tong Line, the first MTR line in Hong Kong. Ho Man Tin Station is the largest station in the MTR network. Supported by footbridges linking nearby housing estates to the station, it will also be the interchange station to the future Shatin to Central Link. New property developments above the Ho Man Tin Station will add about 1,400 to 1,800 residential units in phases, bringing new energy to the area.

REGENERATION OF WONG CHUK HANG

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Our planned large-scale development at Wong Chuk Hang will act as a catalyst to enhance the transformation of the Southern District. It will create a focal point providing convenience and vitality to the community while promoting tourism in the area. Our master plan for the former public housing estate accommodates a station; a rail depot; Government, Institution and Community facilities; retail property of 47,000 square metres, and about 4,700 residential units.

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Looking Beyond Hong Kong

We believe that the Rail plus Property model can be adopted in other cities around the world to suit different market conditions. For example, our own development on top of Shenzhen Longhua Line Depot, Tiara, has received a positive from the market. The first batch of units in the low-rise buildings on top of the depot were handed over to buyers in December 2016, and the high-rise units are on schedule to hand over by mid-2017.

We are exploring other opportunities in the Mainland of China, in Tianjin as well as in Beijing. In November 2016, we signed a Cooperation Framework Agreement with Beijing Infrastructure Investment Corporation Limited (BIIC) and Beijing MTR Corporation Limited (BJMTR), to jointly conduct preliminary studies on the integrated development of selected existing station and depot sites along Beijing Metro Line 4 and the Daxing Line. Studies have commenced with a focus on an above depot development. We have also signed a Memorandum of Understanding with BIIC in January 2017 to extend the strategic cooperation to other predominantly rail-related property development projects in Beijing.

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GREEN BOND

To integrate MTR's environmental, social and corporate governance into its financing and decision-making process, we decided to issue a Green Bond and, in October 2016, established our Green Bond Framework, which is in line with the core components of the Green Bond Principles set out by the International Capital Market Association, to guide our future issuance.

The Green Bond helps us diversify and tap into a new and fast-growing bond investor base. It provides the same cost effective financing as a traditional bond for our environmentally friendly service and network enhancements envisaged in Rail Gen 2.0. The Green Bond also helps promote the local green bond market in line with the Hong Kong Government's Climate Action Plan 2030+, which supports the Financial Services Development Council's recommendations to establish "Hong Kong as a regional green finance hub".

LEARN MORE...

Following the Paris Agreement, the HKSAR Environment Bureau launched the [Hong Kong Climate Action Plan 2030+](#) in January 2017. The report sets out Hong Kong's new carbon emissions reduction target for 2030 – which is equivalent to 36% absolute reduction by 2030 using 2005 as baseline – and the concerted plans for meeting it.

The Plan also supports the recommendations from the Hong Kong Financial Services Development Council to develop Hong Kong into a regional leader in green finance. This would play a significant role during the transition from a "brown" to "green" economy. Find out more about the Council's recommendations from its [report in May 2016](#).

Inaugural Green Bond Issuance

We issued our debut US\$600 million 10-year Green Bond in November 2016. Launched in late October at US\$500 million, the issue met with strong interest from institutional investors from across Asia and Europe, many of whom are dedicated green bond investors. This resulted in an order book in excess of US\$1.4 billion, allowing the deal to be upsized to US\$600 million and priced at 80 basis points, at the tight end of the indicated price range, over the benchmark 10-year US Treasury yield of 1.737% p.a. for an overall yield of 2.537% p.a. The bond was awarded "Best Green Bond" deal in the "FinanceAsia Achievement Awards 2016".

Issuance Details

Issuer:	MTR Corporation (C.I.) Limited
Guarantor:	MTR Corporation Limited
Nominal Principal Amount:	US \$600 million
Issue Price:	99.675%
Net Proceeds:	US \$598.05 million
Pricing Date:	24 October 2016
Issue Date:	2 November 2016
Maturity Date:	2 November 2026
Coupon:	2.50% per annum payable semi-annually in arrears
ISIN Code:	XS1509084775
Listing:	Hong Kong Stock Exchange

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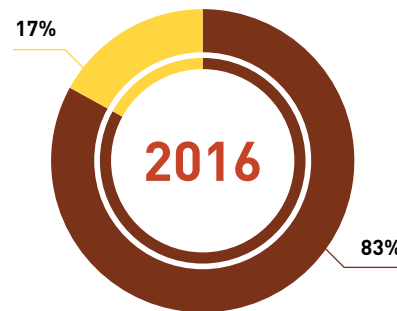
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ALLOCATIONS & DISTRIBUTION STATISTICS

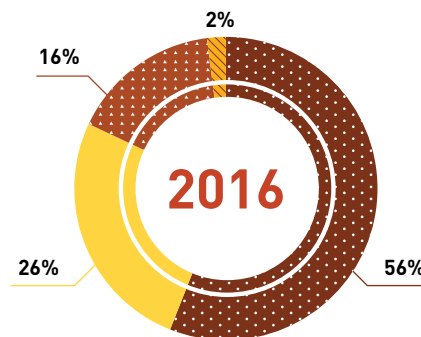
By Geography

- Asia
- Europe



By Investor Type

- Asset Manager
- Bank
- Insurance
- Other/PB



DID YOU KNOW?

Green Bond Indices

MTR's first green bond has been included in the following green bond indices:

- Barclays MSCI Green Bond Index
- BofA Merrill Lynch Green Bond Index
- Solactive Green Bond Index
- S&P Green Bond Index

MTR Green Bond Framework

Our [Corporate Responsibility Policy and Framework](#) specifies our broad environmental objectives. The MTR Green Bond Framework was developed to provide guidance specifically on the issuance, use of proceeds and reporting of the Green Bond.

MTR Green Bond Framework

- Established in October 2016
- Proceeds of MTR Green Bonds will be used to fund or refinance, in whole or in part, Eligible Investments
- Proceeds of MTR Green Bonds may be used to repay borrowings under MTR's general credit facilities pending allocation to Eligible Investments
- Eligible Investments include projects in the following sectors:
 - » Low Carbon Transportation
 - » Energy Efficiency
 - » Sustainable Transit Stations and Real Estate Properties
 - » Adaptation to Climate Change
 - » Biodiversity and Conservation
 - » Water Management
 - » Waste Management
 - » Pollution Prevention

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Download the [MTR Green Bond Framework](#)

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Alignment with Green Bond Principles

MTR's Green Bond Framework aligns with the Green Bond Principles (GBP) of the International Capital Market Association.

The GBP, updated as of June 2016, are voluntary process guidelines that recommend transparency and disclosure, and promote integrity in the development of the Green Bond market by clarifying the approach for issuance of a Green Bond.

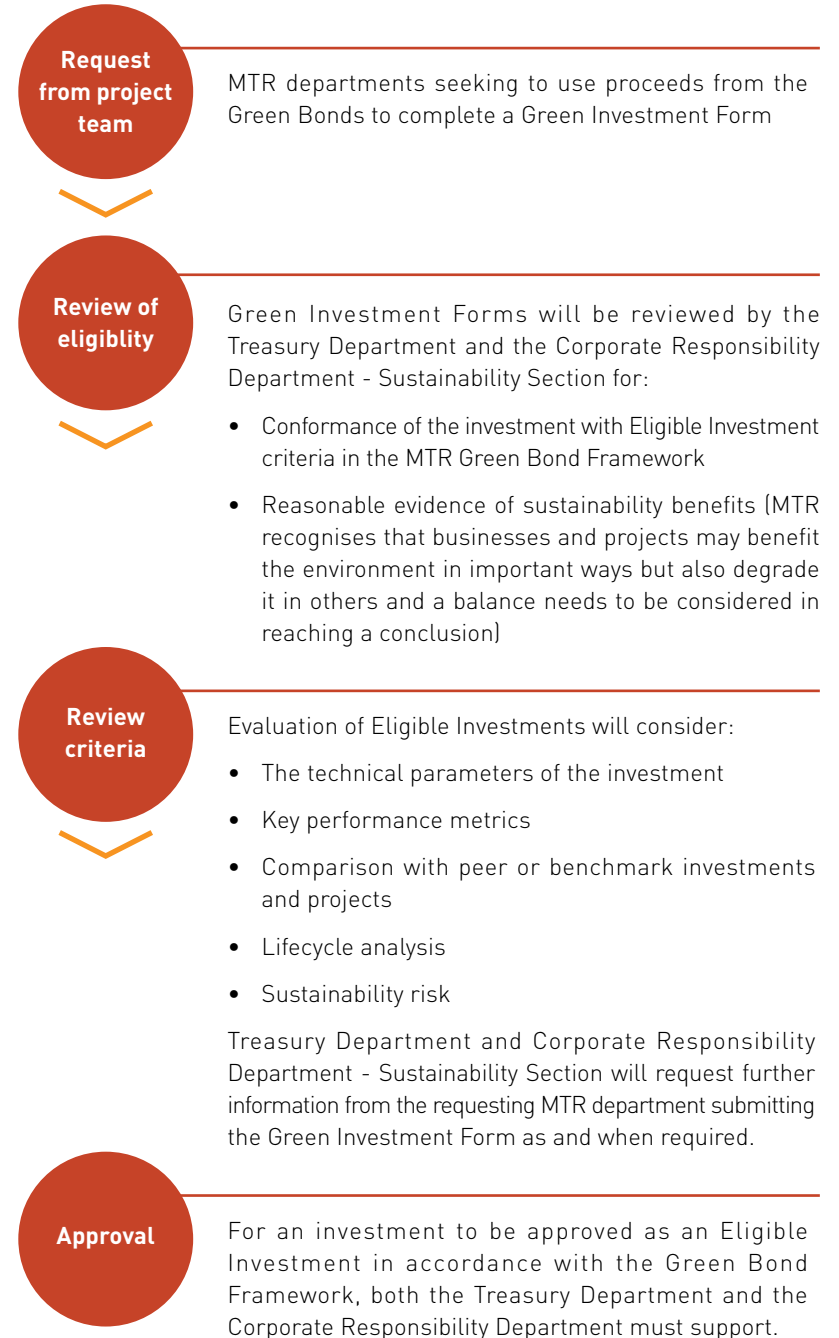
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Framework Overview and Second Opinion

[Sustainalytics](#) has [provided a second opinion](#) on MTR's Green Bond Framework, and has determined that it aligns with the four pillars of the GBP and is credible and robust.

Process for identification and determination of eligibility of use of proceeds

Potential uses of proceeds of MTR Green Bonds will be reviewed and earmarked in accordance with the following process:



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Use of Proceeds and Green Bond Project Update

The net proceeds from the Green Bond have been fully earmarked against capital expenditure spending under two major projects as summarised below. Updates on each of these projects can be found on the next two pages.

Investment	Amount Earmarked	Category
Kwun Tong Line Extension	US\$167.74 million	Low Carbon Transportation
South Island Line (East)	US\$430.31 million	Low Carbon Transportation Energy Efficiency
Total	US\$598.05 million	
Balance of earmarked proceeds:	Nil	

LEARN MORE...

Assurance for MTR Green Bond

Deloitte has provided an [assurance report](#) on the earmarking of proceeds and selected environmental KPIs of MTR's debut Green Bond.

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Green Bond Project Update

Name of Investment 1	Kwun Tong Line Extension
Total Investment Amount	HK\$6.9 billion
Investment Amount Funded by Green Bond	HK\$1.3 billion (US\$167.74 million)
Category of Eligible Investment	Low Carbon Transportation
Description of Investment	<p>On 17th May 2011, the Company entered into a project agreement with the Hong Kong SAR Government for the financing, design, construction and operation of the Kwun Tong Line Extension. This 2.6-kilometre Kwun Tong Line Extension commenced service on 23rd October 2016 and is an extension of the existing Kwun Tong Line from Yau Ma Tei Station to Whampoa Station with one intermediate station at Ho Man Tin.</p> <p>With the completion of the Kwun Tong Line Extension, Whampoa Station is now the terminus of Kwun Tong Line, while Ho Man Tin Station will be an interchange station for the Shatin to Central Link currently under construction.</p> <p>With the extended MTR Kwun Tong Line, it takes only about 5 minutes to travel between Whampoa and Yau Ma Tei stations, which would otherwise take about 15 to 20 minutes using other public road transport. The new MTR extension is expected to significantly alleviate road traffic congestion in the areas of Ho Man Tin and Whampoa.</p>
Beneficial Environmental Impact Estimate	<ol style="list-style-type: none"> 1) 19,000 tons of CO₂ emissions avoided per year 2) Other beneficial impacts: <ul style="list-style-type: none"> Reduction of road traffic and congestion leads to lower environmental impacts from ground vehicles such as roadside air pollution. The Hong Kong Government has identified poor roadside air quality and worsening congestion as one of the reasons for air quality challenges in Hong Kong, including impacts on public health 3) In all our new underground stations including those along this extension, we have implemented initiatives such as regenerative braking, full platform screen doors and efficient chiller equipment, which have energy saving and pollution reduction features

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Name of Investment 2	South Island Line (East)
Total Investment Amount	HK\$17.2 billion
Investment Amount Funded by Green Bond	HK\$3.3 billion (US\$430.31 million)
Category of Eligible Investment	Low Carbon Transportation and Energy Efficiency
Description of Investment	<p>On 17th May 2011, the Company entered into a project agreement with the Hong Kong SAR Government for the financing, design, construction and operation of the South Island Line (East). Construction commenced immediately thereafter. The 7-kilometre South Island Line (East) commenced service on 28 December 2016 and is a medium-capacity metro line connecting the current MTR network from Admiralty Station to the Southern District of Hong Kong via new stations at Ocean Park, Wong Chuk Hang, Lei Tung and South Horizons. This new line is designed with features responding to the transport needs of the community. It will also promote tourism and economic activities in the Southern District.</p> <p>It takes about 4 minutes to ride between Admiralty and Ocean Park stations and 11 minutes between Admiralty and South Horizons stations. The South Island Line (East) is expected to significantly alleviate road traffic congestion in the Aberdeen Tunnel.</p>
Beneficial Environmental Impact Estimate	<ol style="list-style-type: none"> 1) 18,900 tons of CO₂ emissions avoided per year 2) 629,600 kWh of electricity saved with the regenerative braking and trackside energy storage system annually(Note 1) 3) Initiatives such as upgrading and extending noise barriers in selected areas to accommodating special needs of the neighbourhood, green roof and wall design, as well as providing green open space in Kellett Bay for the public, have also been implemented 4) Other beneficial impacts: <p>Reduction of road traffic and congestion leads to lower environmental impacts from ground vehicles such as roadside air pollution. The Hong Kong Government has identified poor roadside air quality and worsening congestion as one of the reasons for the air quality challenges in Hong Kong, including the public health of its residents</p>

Note 1: Annual savings projected based on on-site measurement during Q1 2017.

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CORPORATE GOVERNANCE

We believe good corporate governance forms the backbone of building trust in an organisation. Members of our Board and Executive Committee are strongly committed to the collective responsibility of ensuring that the Company is well-managed in the interests of all its stakeholders. Our Board Members oversee the strategic vision and direction while Executive Committee Members formulate and implement the necessary policies and systems. This firm belief drives our continuous effort to seek and adopt best practices that enable good corporate governance.



21%
Female on the Board



13 INED
5 NED
1 ED

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INTRODUCTION

Since our Annual Report details our corporate governance activities, this section will focus on our corporate governance approach in relation to corporate responsibility.

Corporate responsibility is one of the principles that guides our corporate behaviour and supports the delivery of our corporate strategy. Grounded on our Vision, Mission and Values (VMV) and informed by our established Enterprise Risk Management and Stakeholder Engagement processes, it is our aim to grow sustainably as a Company while contributing to the development of our communities.

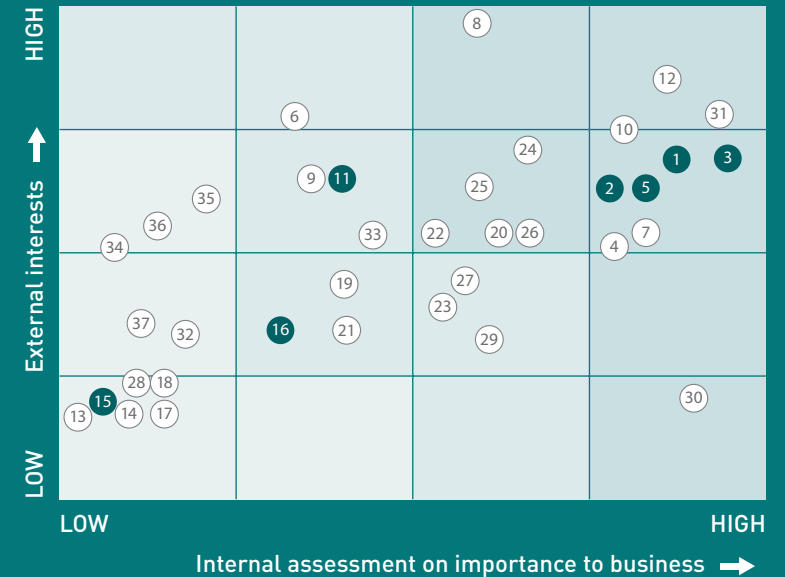
LEARN MORE...

Each year, we publish the [Corporate Governance Report](#) as part of our Annual Report. It describes the best practices we have adopted with reference to the Corporate Governance Code from the Listing Rules of The Stock Exchange of Hong Kong Limited.

What does corporate responsibility mean to us?

Our rail and property services are closely linked to the lives of the people and communities we serve. Here at MTR, underpinned by our sustainable financial model, corporate responsibility is about maintaining the sustainability of this model while at the same time, operating safely and responsibly in all aspects of our business and contributing positively to the development of the communities in which we operate.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



- ① Organisational governance structure and process
- ② Fair operating practices (ethical dealings with other organisations)
- ③ Anti-corruption
- ⑤ Fair competition
- ⑪ Customer data protection & privacy
- ⑮ Human rights grievances mechanism
- ⑰ Diversity and equal opportunity

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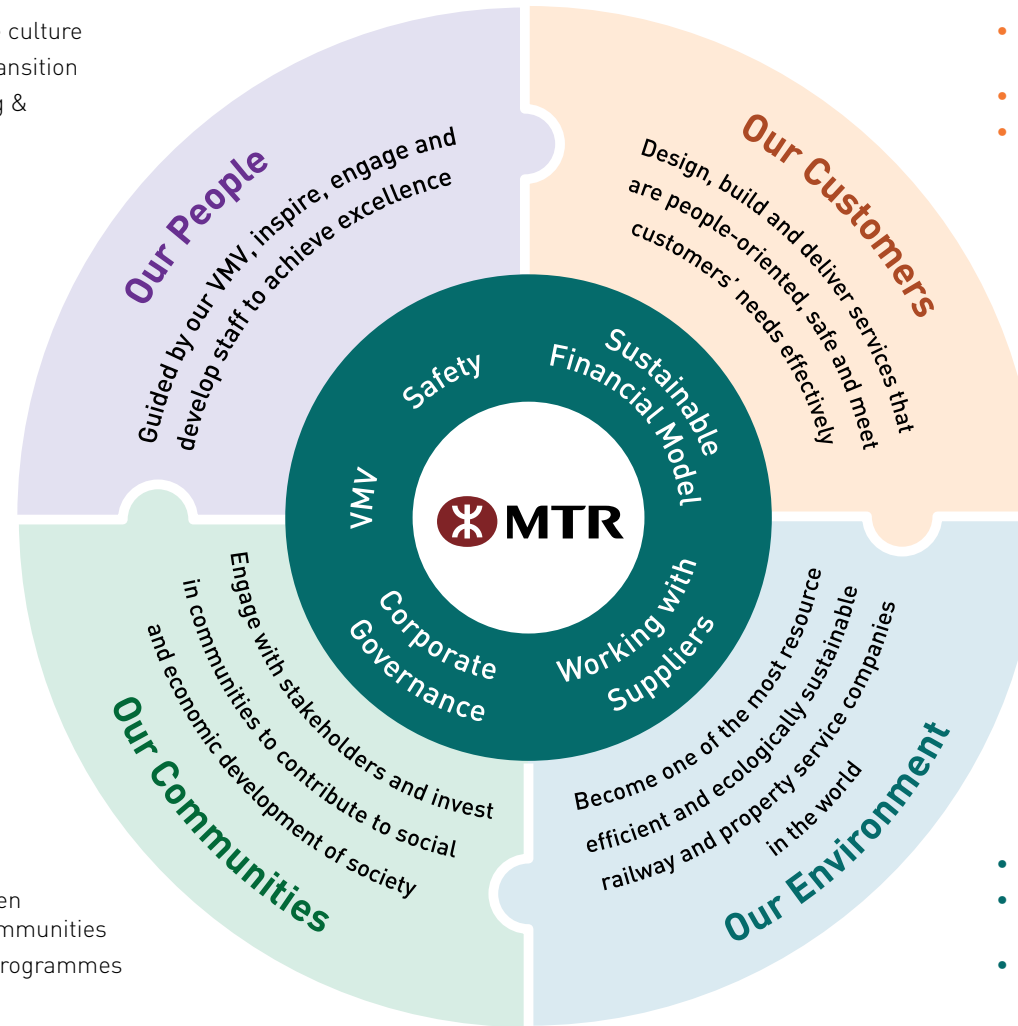
Enabling the social and economic development of communities, enhancing quality of life and fostering a thriving environment in which to live and do business

- Strengthen corporate culture
- Support workforce transition
- Invest in staff training & development

- Design and plan for customers' needs
- Enhance service delivery
- Improve accessibility

- Enable progress
- Engage and strengthen relationships with communities
- Deepen community programmes

- Increase energy efficiency
- Use natural resources sustainably
- Adapt to climate change



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Management Approach

Ensuring that we act responsibly as a Corporate is every employee's concern, we established a governance structure at the board and executive levels to ensure that it is embedded within the organisation. The Corporate Responsibility Committee and Risk Committee at the Board, as well as the Executive Committee, work hand-in-hand to ensure that risks and opportunities arising from corporate responsibility issues are identified and addressed proactively and effectively.

Board of Directors

The Board of Directors is our highest governing body. Led by the Chairman, it focuses on overall strategic policies and corporate governance.

Appointment of Members of the Board is based on merit. At the same time, due consideration is also given to board diversity, to ensure that the Board Members have the appropriate balance of skills, experience and diversity of perspectives that are required to support the execution of the Company's business strategy so that the Board is kept effective.

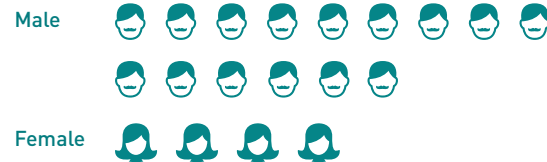
As an integral part of good corporate governance, the Board has established a total of six Board Committees to oversee different aspects of the Company's affairs.

LEARN MORE...

Please refer to [Terms of Reference of our Board Committees](#) and our [Board Diversity Policy](#) on our website.

BOARD DIVERSITY

Gender



Number of Years as Board Members (Years)



Designation



Outside Directorships (Number of companies)



Age Group



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Executive Committee

The Board has delegated the day to day management of the Company's business to the Executive Committee. Led by the Chief Executive Officer and since 1 May 2016, this Committee is made up of all the Members of the Executive Directorate, of which five new positions were created between 2015 and 2016 as a result of the reorganisation of the Executive Directorate. They are the Managing Director - Operations and Mainland Business, the Legal and European Business Director, the Corporate Affairs Director, the Engineering Director, and the President of MTR Academy.

LEARN MORE...

Find out more about our [Members of the Board](#) and [the Executive Directorate](#).

Corporate Responsibility (CoR) Committee

Reports to: Board of Directors
 Chaired by: Chairman of the Board
 Frequency of meetings: Twice a year
 Composition:

- One Non-Executive Director (being the Chairman of the Board)
- Three Independent Non-Executive Directors (since 1 January 2016)
- Three members of the Executive Directorate, including the Chief Executive Officer, the Human Resources Director and the Corporate Affairs Director (since 1 January 2016).

LEARN MORE...

Please refer to [Terms of Reference](#) for the Corporate Responsibility Committee.

Corporate Responsibility Steering Committee (CoRSC)

Reports to: Executive Committee
 Chaired by: Corporate Affairs Director
 Frequency of meetings: Three times a year
 Composition: Executive Directors and senior managers representing all major business units.

The CoR Steering Committee provides input to and cascades initiatives related to corporate responsibility and sustainability across all divisions of the Company.

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Corporate Policies

Our management approach to corporate responsibility comprises a number of corporate policies, particularly on issues that are considered to be highly material to our stakeholders and/or that require extensive cross-departmental coordination.

Please refer to the following policies, which can be downloaded from this site:

[Corporate Responsibility Policy](#)

[Sustainability Policy](#)

[Safety Policy](#)

[Whistle-blowing Policy](#)

[Corporate Board Diversity Policy](#)

[Green Procurement Policy](#)

[Climate Change Statement](#)

[Biodiversity Policy](#)

External charters and memberships

We endorse externally developed charters, principles and initiatives, and participate in associations and advocacy organisations. To download a list, please click [here](#).

Governance of Our Subsidiaries and Affiliates

The Company continues to grow outside of Hong Kong, with an increasing number of subsidiaries and affiliates incorporated locally, in the Mainland of China and overseas. To ensure good corporate governance and management of financial and other risks, the Company exercises certain control and oversight over its subsidiaries and affiliates, and require them to adopt appropriate management practices and policies relevant to the local context.

Refer to the [Mainland of China and International Business](#) section for more information.

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FAIR AND ETHICAL BUSINESS

Code of Conduct

The Code of Conduct is reviewed and updated periodically to ensure appropriateness and compliance with corporate and regulatory requirements. After a comprehensive review of our Code in 2015, a regular review to update the content is underway, and the revised Code will be released to all staff by end of 2017. Promotional events and education programmes are also planned to raise staff awareness. Together with other corporate policies and guidelines, the Code reinforces the trust placed in us by our stakeholders. It aligns with our VMV and supports our goal to enhance transparency. Staff members at all levels are required to uphold the highest standard of business ethics and respect principles of fairness, impartiality and integrity in all locations where we do business.

LEARN MORE...

Please refer to the latest version of our [Code of Conduct](#).

Anti-Corruption and Whistle-Blowing

As an organisation with high ethical standards, all staff members are required to uphold the anti-bribery and anti-corruption regulations in all places where we do business, which means zero tolerance for all forms of bribery or corruption. The Company's values and expected ethical behaviours are guided by our Code of Conduct, and supplemented by internal policies on the Prevention of Bribery and Illegal Acceptance/Offer of Advantages, and on Conflict of Interests. On top of briefings to new recruits during staff induction programmes, there are also regular seminars with guest speakers from the Independent Commission Against Corruption (ICAC).

The Corporation's Whistle-blowing Policy concerns complaints raised in relation to fraudulent acts, unethical acts or non-compliance with laws and regulations and/or the Corporation's policies which have or could have significant adverse financial, legal or reputational impact on the Corporation. We encourage and assist whistle-blowers to raise grievances without fear of reprisal. Our Whistle-blowing Policy applies to all members of staff and to anyone who has dealings with the Company, including customers, business partners and suppliers.

All reports of misconduct are treated with the utmost urgency, confidentiality, and respect. Members of the Whistle-blowing Panel, chaired by Head of Internal Audit, include the Legal & European Business Director and the Human Resources Director. During 2016, our Whistle-blowing Panel evaluated 60 cases and concluded 45 of those did not meet the definition of "whistle-blowing". Of the 15 whistle-blowing cases, follow-up investigations were completed: 1 substantiated, 1 partially substantiated and 8 unsubstantiated cases. The remaining 5 cases were under investigation as of 31 December 2016. Appropriate follow-up actions, including disciplinary actions, were taken by management in response to the substantiated and partially substantiated cases.

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RISK MANAGEMENT

Risk management works hand in hand with sustainability in taking a forward-looking view of the business.

Integrated into the Company's day-to-day operations, our ERM framework provides a simple and effective management process to identify and review risks across all business units of the organisation, and prioritise resources to manage those risks that may arise. It also gives management a clear view of the significant risks facing the Company and is used to support decision making and project execution, which in turn helps to deliver better business performance.

Each risk is evaluated by the likelihood of the identified risk and the consequence of the risk event, taking into consideration the control measures in place. A risk matrix is used to determine risk ratings (E1 – E4), E1 being a very high risk and E4 being a low risk. The risk ratings reflect the required management attention and risk treatment effort.

The Company takes proactive measures to identify, evaluate and manage significant risks arising from its recurrent and growth businesses and from the constantly changing business environment. The Enterprise Risk Committee, the Executive Committee and the Risk Committee review the enterprise risk profile and brainstorm emerging risks quarterly to ensure significant risks are captured. Identified significant risks are then evaluated using the risk matrix, and risk control owners are identified to follow through the implementation of risk controls. Significant risks currently being managed are set out in our Annual Report.

In 2016, the Company conducted a foresight study and workshop, to understand how social, technological, economic, environment and political changes could potentially affect our operating environment, and the associated impact and opportunities that could be brought to our business. Refer to [2017 and beyond](#) for a more detailed discussion.

LEARN MORE...

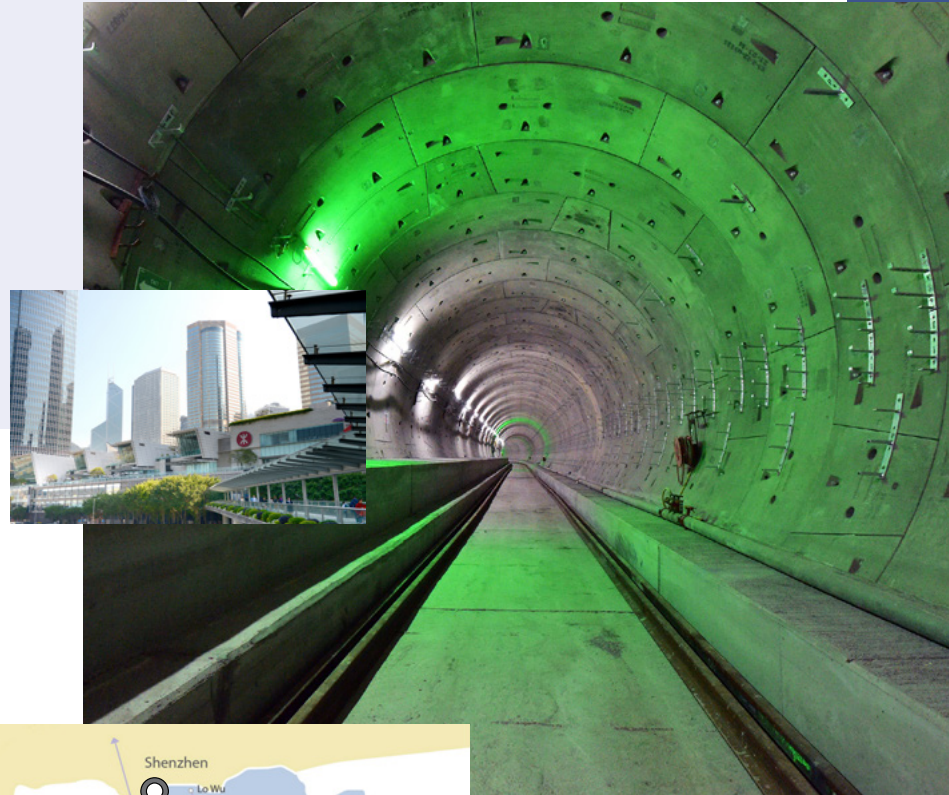
Refer to the [Risk Management](#) section in our Annual Report for a detailed discussion of our risk management system and process, as well the significant risks currently being managed.

Click here for the [Terms of Reference for the Risk Committee](#).

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Railway Projects Proposed in the Railway Development Strategy 2014

- Station
- Interchange Station
- Existing or Committed Railway
- New Railway Scheme (Preliminary Concept) (Shown in different colours)



BUILDING OUR FUTURE

Our approach to being a responsible and sustainable business requires that we take a long-term view of our operations. Given the long asset lives of our railway and our properties, what we build today will have lasting implications for decades to come. While it is impossible to predict the future, having a perspective of how the future will look, and building the flexibility around our operations so that we can respond or adapt to the possible changes is of utmost importance. Furthermore, being part of the community, we are concerned about the well-being of our stakeholders at present and in the future.



4

Number of Project Proposals the Government has invited the Corporation to Submit



About 18,000

Number of residential units to be completed over the next four to six years

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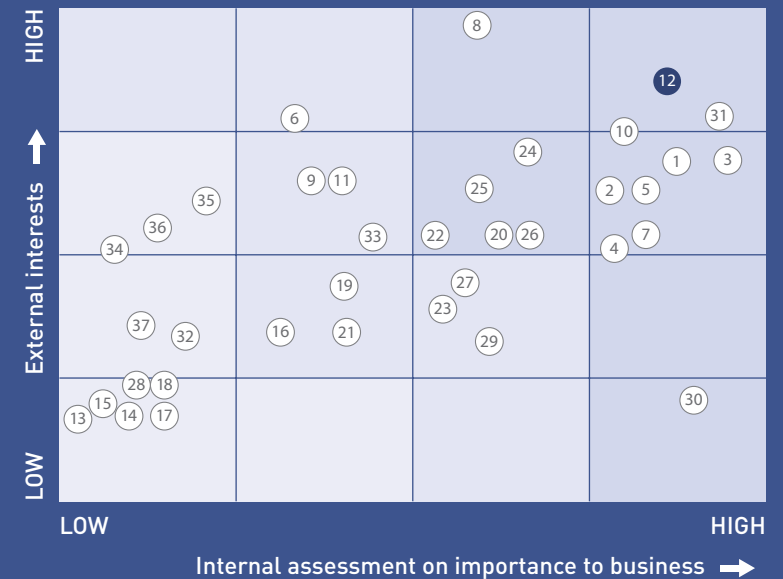
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INTRODUCTION

In this section, we provide an introduction to the planned improvements of our current services, new railway projects and property developments underway in Hong Kong, and new opportunities for business expansion in the Mainland of China, Europe and Australia. We will also discuss some of the findings and implications from our Foresight study.

MATERIALITY ISSUES COVERED IN THIS CHAPTER



12 Access to essential services (incl avoidance of service disruption)

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Global Context

In a recent study launched in 2016, about 54.5% of the world's population lived in urban areas, but this proportion is expected to increase to 60% by 2030. According to the 2016 edition of a United Nations Department of Economic and Social Affairs (UN DESA) biennial study the majority of population growth is expected to take place in and around the cities of Asia and Africa. While there were 10 mega-cities with 10 million inhabitants worldwide in 1990, there could be as many as 41 mega-cities of this size by 2030.

In this context, the UN points out that sustainable urbanisation—involving the creation of appropriate urban infrastructure, such as public transport and housing—is key to continued economic and social development in many regions of our planet.

This is why in 2016, we identified alignment with three of the 17 United Nation's Sustainable Development Goals (SDGs), and informed the Sustainable Development Goal Secretariat of our overall support of these goals.

We believe that as a company providing rail and property services, we contribute to the sustainability of the communities in which we operate by fulfilling our vision to connect and grow communities. We focus on three SDGs at the moment as we believe these are areas where we can play a significant role:

- SDG #8: decent work and economic growth; refer to [Finance](#) and [Staff](#) section
- SDG #9: industry, innovation and infrastructure; refer to [Customer](#) and this section
- SDG #11: sustainable cities and communities; refer to [Community](#) and [Environment](#) section

LEARN MORE...

For more on the Sustainable Development Goals, refer to [this website](#)

With the impacts of climate change being felt globally and in Hong Kong, and as a result of the landmark agreement reached on climate change in Paris at the 21st Conference of Parties, the demand for investment in sustainable public transport has never been more urgent. We support the Hong Kong Climate Action Plan 2030+. With our Vision to be a leading multinational company that connects and grows communities with caring service, our Rail plus Property model and a strong performance record in operating rail services in one of the most densely populated cities in the world, we believe that we are well placed to continue to succeed in the context of these global developments.

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2017 AND BEYOND

Future of Railway in Hong Kong

Growing patronage combined with a maturing and expanding network will invariably place greater strain on our assets and on our ability to continue to surpass the important safety and service criteria in our transport operations in the future. With this in mind, we are carefully planning measures to meet the long-term needs of stakeholders as well as our business.

Optimising Our Assets

We manage our railway assets with a stringent Asset Management System. Our medium and long term asset plans are updated regularly to incorporate information about all assets owned by the Company, including their condition and performance records, operating and maintenance cost trends, and asset replacement strategies. By continuously improving the asset management processes, it helps us minimise the life cycle cost of railway assets, and maximise their societal and business value.

Railway Service in the Future

We are implementing a plan that looks holistically at the systems, processes and skills that we will need to effectively respond to the changing needs of our passengers in the future. Planning ahead, in 2016, we completed a comprehensive study to develop the “2030 Customer Experience Vision Blueprint” which provides a framework for service enhancement initiative and asset management planning to further improve the travel experience for our key customer segments, namely commuters, tourists and elderly, over the coming years.

All these require collaboration amongst different divisions and openness as to how the future could look. Part of this plan is leveraging big data, new technologies and innovation to better predict, prevent, respond and recover from disruptions, further enhancing our service to passengers.

Building new lines with technology

To assist us in building new lines for Hong Kong, we have been adopting the use of Building Information Modelling (BIM) processes and technologies on our current railway projects.

BIM presents the construction industry with an opportunity to enhance the quality and coordination of complex projects and realise the efficiencies seen in other countries and in other industries. Similar sectors are already taking advantage of improved collaboration, quality, coordination and efficiency in their project and production cycles using digital technologies.

We recognise these benefits and industry trends and will be utilising BIM at the heart of our design process on new railway projects. The BIM process will deliver a digital representation of the asset being built, in our case, a railway. This will provide improved information management early in the design process ready to be leveraged throughout each stage of each project. But BIM will also allow us to manage the final asset better due to the accurate, data-rich model created, with every element of the railway identified and with critical operational and maintenance data built into the model.

BIM is a game changer to the traditional practices of asset delivery and operation. As we develop our next generation of railway projects, we will be working together with the Hong Kong industry and our design partners to improve project delivery and grow our ability and competence.

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We recognise that in order to connect and grow communities in parts of Hong Kong that are underserved by an efficient mass transportation system, we must continue to explore opportunities to expand our network. For this reason, we will continue to provide technical and operational responses to Government to support the planning and implementation of further rail network expansion plans in Hong Kong.

Railway Development Strategy

To meet Hong Kong's growing public transport needs, Government's strategy is to continue using railway as the backbone in the development of our public transport network. The Government has identified seven new rail projects to be implemented under Railway Development Strategy 2014. Government has invited us to submit project proposals for four of these projects, namely the Tuen Mun South Extension, the Northern Link (and Kwu Tung Station), East Kowloon Line and Tung Chung West Extension (and Tung Chung East Station). The project proposal for the Tuen Mun South Extension was submitted to Government in December 2016. Technical studies for Northern Link (and Kwu Tung Station) and East Kowloon Line are now underway in preparation for submission of project proposals in 2017. The project proposal for Tung Chung West Extension (and Tung Chung East Station) will be submitted thereafter.

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Railway projects proposed in the Railway Development Strategy 2014

PROJECT
Northern Link and Kwun Tung Station
DESCRIPTION
<ul style="list-style-type: none"> • a major regional line formed by linking the Kam Sheung Road Station on the West Rail Line to a new station at Kwu Tung on the Lok Ma Chau Spur Line • a route length of about 10.7km • indicative implementation schedule for planning purpose: 2018 to 2023
PURPOSE
<ul style="list-style-type: none"> • improve network robustness and east-west connectivity • divert passenger flow of the East Rail Line • serve the New Development Areas and other strategic growth areas depicted in New Territories North of the "Hong Kong 2030+" territorial development strategy • enhance cross-boundary movement



Railway Projects Proposed in the Railway Development Strategy 2014



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New Property Developments

In 2016, two new property development projects were rolled out to respond to the community's housing needs. Over the past three years, 11 MTR property development packages have been tendered out and are now in various stages of planning and construction. They will provide about 18,000 residential units when completed over the next four to six years. We look forward to bringing this supply of housing to the market.

To respond to the need for more housing supply in Hong Kong, over the next 12 months or so, subject to market conditions, we are looking at tendering out six more property development packages. These packages are likely to be our eleventh and twelfth packages at LOHAS Park, our second and third packages at Wong Chuk Hang Station, our second package at Ho Man Tin Station and, subject to rezoning and other statutory approvals, the Yau Tong Ventilation Building site. As agent for the relevant subsidiary of Kowloon-Canton Railway Corporation (KCRC), subject to market conditions, we plan to tender out the first package of the Kam Sheung Road Station site during 2017.

We continue to look for possible property development sites along our railway lines. One is above our depot in Siu Ho Wan on Lantau Island where, with the necessary zoning and other statutory approvals, around 14,000 residential units could be built. MTR is close to completing the Environmental Impact Assessment for the Siu Ho Wan site and the statutory planning procedures are expected to commence in 2017. Another site is above the Yau Tong Ventilation Building, where around 500 residential units could be built. The site is currently undergoing rezoning. At this preliminary stage there can be no assurance that either project would be commercially viable.

New Property Developments in Hong Kong

	Tender Awarded	Developer
LOHAS Park Package 6	January 2015	Nan Fung Group Holdings Limited
Tin Wing Stop (Light Rail) Property Development	February 2015	Sun Hung Kai Properties Limited
LOHAS Park Package 7*	June 2015	Wheelock and Company Limited
Yuen Long Station Property Development**	August 2015	Sun Hung Kai Properties Limited
LOHAS Park Package 8	October 2015	Cheung Kong Property Holdings Limited
LOHAS Park Package 9	December 2015	Wheelock and Company Limited
LOHAS Park Package 10	March 2016	Nan Fung Group Holdings Limited
Ho Man Tin Station Package 1 Property Development	December 2016	Goldin Financial Holdings Limited
Wong Chuk Hang Station Package 1 Property Development	February 2017	Road King Infrastructure Limited and Pingan Real Estate Capital Limited

* Apart from profit sharing in the residential component, we will also contribute HK\$4.98 billion to the development, retain ownership of and fit out the shopping centre.

** As agent for the relevant subsidiaries of KCRC.

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New Investment Projects

We are enhancing the existing assets of our current shopping centre portfolio while making significant additions. These projects will add a total of about 120,620 square metres (gross floor area, "GFA") to the existing retail portfolio, increasing the attributable GFA by approximately 40%.

	GFA (SQ M)	Target Opening Date
Key Additions		
Tai Wai	60,620	2nd half of 2022
LOHAS Park	44,500	2nd half of of 2020
Extensions/Enhancements		
Maritime Square	12,100	2nd half of 2017
Telford Plaza (2 floors of offices converted to retail use)	3,400	2nd half of 2017

Future Plans Outside of Hong Kong

Hong Kong is our home but we also see opportunities for expansion of our businesses in the Mainland of China and overseas markets. There are a number of projects currently in progress and will be in operation in the years ahead.

Beijing

Beijing MTR Corporation Limited (BJMTR) signed a Concession Agreement for the investment, operation and maintenance of a new line, Beijing Line 16, on 28 November 2015. This 50km line will run from Beianhe to Wanping and will have 29 stations. The North Section of the line was opened in December 2016.

We signed a Cooperation Framework Agreement with Beijing Infrastructure Investment Corporation Limited (one of our partners in BJMTR) and BJMTR to conduct joint preliminary studies on the integrated development of selected existing station and depot sites along Beijing Line 4 and the Daxing Line.

Shenzhen

In August 2016, our consultancy company in Shenzhen entered into project management agreement with Shenzhen government to supervise the construction of the Northern Extension of Shenzhen Line 4.

Stockholm, Sweden

MTR Stockholm was awarded a six-year extension from 2017 to 2023 on the Stockholm Metro operations and maintenance (O&M) concession and we have taken over the O&M concession for the Stockholm commuter rail (Stockholms pendeltåg) for an initial period of 10 years, starting from December 2016, that the government could extend for a further four years. It is the second largest railway concession in Sweden after Stockholm Metro.

Sydney, Australia

In 2014, Northwest Rapid Transit Consortium (NRT) was awarded the Operations, Trains and Systems Public-Private Partnership (PPP) contract for the Sydney Metro Northwest, our first international PPP project. NRT will design and deliver the rail systems, and MTR's subsidiary Metro Trains Sydney (MTS) will operate and maintain the system for 15 years after service opening.

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MTR Academy – Nurturing Future Railway Professionals

To support our growth both within and outside of Hong Kong, it is of utmost importance that we nurture professionals in engineering and technology, especially in relation to railway in the community, regardless of whether they are working for the Company. As our wholly owned subsidiary, MTR Academy (“the Academy”) aims to become a globally recognised railway management and engineering centre that offers high quality programmes for MTR employees, the Hong Kong community and the railway industry in the Mainland of China and overseas. The Academy officially opened in November 2016, with its campus at renovated space in the MTR Hung Hom Building.

We reach out to the community by providing stand-alone short courses. For professionals to share experience and exchange best practices, our courses on topical areas provide a platform for discussion and dissemination. For general public to satisfy its curiosity on railway operation and technology, bite-sized Railway Introductory sessions are also on offer. The Academy’s short courses have aroused considerable interest among the local community and railway enthusiasts alike.

For those who are interested in developing a career in the rail industry, we also offer award-leading programme. The Academy successfully attained accreditation on its first such programme ‘Advanced Diploma in Railway Engineering’ in parallel to its opening. The first cohort of the programme, upon an overwhelming number of applications from the public, commenced its study in January 2017. Further accredited programmes are in the pipeline, with the aim to facilitate knowledge enrichment and career development of railway professionals at different levels.

Beyond Hong Kong, we ride on our track record of providing consultancy service and training for railway companies and authorities, as well as our best-in-class operational performance, the Academy offers signature training programmes for railway executives and management globally. Currently three Corporate Programmes are developed for delivery in the second quarter of 2017, focusing on planning, reliability, operations and maintenance management. The programmes are facilitated by the MTR’s experienced senior managers and operators on respective areas. It is expected these programmes will further confirm the Academy’s position as a recognised international learning hub on railway operation and management.

DID YOU KNOW?

The Rail Transit Excellence Community (RTEC)

The MTR Academy will also host the Rail Transit Excellence Community (RTEC), a multi-faceted platform for railway operators and authorities in the Belt and Road countries to network and exchange their know-how on rail transit best practices, management systems and operational expertise to pursue service and operational excellence. RTEC will form Centres of Excellence on safety, asset management, system engineering, customer service and operations training.

LEARN MORE...

Find out more about the [MTR Academy](#) and the courses and programmes on offer.

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PREPARING FOR A CHANGING WORLD

Perspectives on 2030

We are operating in an increasingly diverse and volatile environment. In 2016, we conducted a Foresight study. Through research by external experts and a series of workshops with the Executives, and subject matter experts from different business units, we seek to understand the trends shaping our operating environments in the time horizon leading up to 2030. We focused on the strategic trends shaping the future of transport and property globally, identified implications and priorities, and developed actions to better prepare the Company for the future.

Starting with the mega trends, we discussed and debated their relevance based on the potential implication and urgency on the Corporation's businesses; prioritised and consolidated into a number of strategic themes which were considered important for further investigations:

- **Ageing Population**

It is foreseen that the percentage of ageing population will increase considerably by 2030 and beyond. The impact on the operations of our railway network, property business and our workplace need to be considered in light of these demographic changes.

- **System Resilience for Climate Change**

With the expected adverse effects of climate change in the future, our services will be increasingly affected by extreme weather events. Our railway system design needs to be more resilient and adaptive to accommodate the impacts brought about by climate change; as well as the need to be more "tuned in" to the changing environment.

- **Digital Transformation**

The expansion of digital technology will continue to facilitate the transformation of a broad range of sectors. Riding on the advancement of technology, there will be more opportunities to enhance our services and to engage with our customers, to develop new business models, and enhance efficiency of our workforce.

We will continue to investigate and monitor the development of the mega trends under each of the above strategic foci so as to better prepare ourselves for the future.

Preparing for the future

Referencing the findings from the workshop, as well as our regular risk review and emerging risks identified, a number of challenges that have implications on how we deliver our services have been recognised and discussed throughout the report, and are summarised below.

Safety — As new joiners replace more experienced staff who are approaching retirement, we must address the risks that will inevitably arise in our workplaces. We must also respond to changing passenger demographics, especially an increase in the number of elderly passengers and visitors to Hong Kong who are not familiar with our network, both of which pose challenges for customer safety in the future.

Financial Performance — We recognise that we must balance the expectations of shareholders to receive reasonable investment returns with the needs of other stakeholders to maintain train fares at affordable levels while investing in safe, comfortable and convenient journeys. Understanding that new property development projects are a significant source of income, in order to ensure the continued success of our Rail plus Property model, we are working to identify untapped opportunities within our existing portfolio of businesses.

Environment — Among other significant environmental challenges such as waste management, we are mitigating emissions of greenhouse gases that increase the threat of climate change by using energy and other resources more efficiently. We are also developing an infrastructure strategy and design guide for our assets to adapt to direct impacts from climate change and enhance system resilience.

Staff — As some of the more experienced members of our workforce are retiring, we are stepping up training and development opportunities to equip new joiners and promotees with the knowledge and skills that they need to perform their duties. We are also working to identify opportunities of using automation to relieve workload of our staff, enhance work efficiency and flexibility in providing customer service. On the other hand, the younger generation of staff may have different expectations of the workplace. We will strengthen cross-generation communication and engagement, training and development for digital skills and capabilities, and enhance work-life balance.

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Community — As the aspirations of the community evolve, we will continue to invest in the communities we serve, looking for innovative ways to increase engagement with our stakeholders and to work with partners to support the development of a socially sustainable city in Hong Kong as well as other locations where we operate.

Customers — Continued growth of our patronage places increasing demands on our services. In addition to maintaining world-class levels of train service performance amidst the various asset upgrades and replacement projects, and relieving congestion on our network, we must address the needs of an ageing population, not only by improving barrier-free facilities in our facilities, but also by exploring new business opportunities leveraging on our integrated transport and property systems. Technology has also opened up possibilities for more personalised customer services and engagement. Better data analytics also helps to reveal customers' behavioural patterns, which in turn helps us to improve services or develop new businesses.

Supply Chain — The quality of the service we provide depends on that of our suppliers. We also recognise our impact reaches beyond our own premises and operations. Therefore we continually monitor the sustainability risks in our suppliers, and encourage sustainable practices throughout our value chain, including our suppliers, contractors, tenants and passengers.

DID YOU KNOW?

Crowd-sourcing innovative ideas through HackTrainHK

What would 48 hours on the MTR network and Ngong Ping 360 result in? Nothing less than innovative ideas with the potential to enhance customer experience and railway operations efficiency.

As the first railway hackathon event in Hong Kong and Asia, HackTrainHK, sponsored by the Corporation and organised by Hack Partners Limited, 40 programmers, designers and entrepreneurs from around the world experienced first-hand the challenges and opportunities for service enhancement. Followed by intensive brainstorming, hacking and coding, the teams presented their diverse and well-researched ideas. The winning concept was "Osmosis" which combines real-time imaging and signage to divert passengers to less crowded escalators. Along with other novel ideas, HackTrainHK has crowdsourced ideas from creative and start up communities and injected energy into the community.

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MAINLAND OF CHINA AND INTERNATIONAL BUSINESS

From our base in Hong Kong, we have expanded into the Mainland of China and taken on a range of railway-related projects and operations internationally, with presence in Australia, Sweden and the United Kingdom. Based on the successful "rail plus property" development model in Hong Kong, we have expanded into the Mainland of China with property businesses in Beijing, Shenzhen and Tianjin.

**9**

Number of rail services in operation outside of Hong Kong

**> 960 km**

Total operating route length outside of Hong Kong

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INTRODUCTION

We are exercising prudence in our approach to the expansion of our global footprint. When considering future plans outside of Hong Kong, we have a strong preference for consolidating our position in countries and cities where the Company already have a presence.

LEARN MORE...

Refer to our [Annual Report 2016](#) for detailed information on our Mainland of China and International Businesses.

In this section, we highlight the key sustainability performance of major railway operating subsidiaries around the world by location. Key performance indicators (KPIs) for these railway operations are also [available](#).

Average weekday patronage by region:

- Mainland of China – +2.9m,
- Europe – (+1.8m)
(incl LOROL LOROL but not Stockholm commuter rail which concession only starts in December 2016)
- Australia – +800k

SWEDEN

Stockholm Metro

- Operated by MTR Tunnelbanan AB*
- Rolling stock maintenance by MTR Tech AB*

MTR Express intercity train service

- Operated by MTR Express (Sweden) AB*

Stockholm commuter rail (Stockholms pendeltåg)

- Took over in December 2016
- Operated by MTR Pendeltågen AB*
- Rolling stock maintenance by Emtrain AB#

UNITED KINGDOM

TfL Rail / Elizabeth Line

- Operated by MTR Corporation (Crossrail) Limited*

London Overground

- Until November 2016
- Operated by London Overground Rail Operations Limited#

AUSTRALIA

Sydney Metro Northwest

- Operation will commence in 2019
- Operated by Metro Trains Sydney Pty. Limited#

Melbourne's Metropolitan Rail Service

- Operated by Metro Trains Melbourne Pty. Limited#

MAINLAND OF CHINA

Beijing Metro Line 4, Daxing Line, Beijing Metro Line 14 and 16 (Phase 1)

- Operated by Beijing MTR Corporation Limited#

Hangzhou Metro Line 1 and extension

- Operated by Hangzhou MTR Corporation Limited#

Shenzhen Metro Line 4 (Longhua Line)

- Operated by MTR Corporation (Shenzhen) Limited*



* 100% owned subsidiary of MTR Corporation

Joint Venture/Consortium of which MTR Corporation is a shareholder

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Management Approach

GUIDING FRAMEWORK

Governance of subsidiaries and associates outside of Hong Kong

The Chief Executive Officer is responsible for oversight on governance of subsidiaries and associates. He is supported by the Managing Director – Operations and Mainland Business, the Legal and European Business Director and the Deputy Director – Australian Business.

Notwithstanding these subsidiaries and associates are separate legal entities, the Company has implemented a management governance framework (the "Governance Framework") to ensure that it exercises an appropriate level of control and oversight as a shareholder of these subsidiaries and associates.

In 2016, we undertook a review of the Governance Framework to refine the management governance requirements and enhance the implementation process, promoting increased collaboration of the corresponding functions at the Company on the one hand and the subsidiaries and associates on the other hand.

Pursuant to the Governance Framework, the Company exercises its control and oversight through formulation of a governance structure that is tailored for individual subsidiaries and associates through adoption of management practices and policies that are appropriate to the business nature and local situation, taking into account of the management governance requirements of the Company. The governance structures of the subsidiaries and associates, as a result, will ensure adequate internal controls, consultation with and notifications to the Company on important matters, and complemented by regular reporting and assurance. Compliance with the relevant management practices and governance structure is reported by subsidiaries and associates with significant operations on an annual basis.

Management Directives

In order to ensure good corporate governance and management of financial and reputational risks, we exercise oversight over our subsidiaries and associates. Beyond this, we are committed to promoting best practices in all areas where we have substantive control or influence.

Our wholly-owned and majority-owned subsidiaries are mandated to adopt a set of management directives relating to internal controls, consultation and reporting:

- Internal controls — implement appropriate procedures and management systems to ensure compliance with relevant laws and regulations, as well as the Company's specific requirements on safety, enterprise risk and asset management, among other issues.
- Consultation — headquarters must be consulted on matters relating to material variation of the concession or franchise agreement, appointment of senior managers, litigation and non-compliance with relevant laws and regulations, amongst others.
- Reporting — provide timely reporting on financial, operational and safety performance.

Operating Agreements

Our subsidiaries and associates participate in various forms of agreements with local authorities, including Operations & Maintenance (O&M), Public-Private Partnerships (PPPs), and Build-Operate-Transfer (BOT) arrangements. Our ability to influence the environmental, social and governance impacts through the activities of our subsidiaries and associates is largely determined by the specific terms of these agreements as well as the local conditions and circumstances.

Fair and ethical business

We promote a culture of fair and ethical business practices. With respect to prevention of bribery and illegal practices, whenever the laws or customs of another country impose stricter standards than our own anti-bribery regime in Hong Kong the higher standard always prevails.

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Code of Conduct

All members of staff, irrespective of their location of employment, are expected to abide by the Code of Conduct. They should not only conduct themselves in accordance with the highest ethical standards at all times, but also to identify and address any instances of behaviour by other members of staff that are not in accordance with the Code.

KEY PRINCIPLES AND PROCESSES

Risk Management

We require subsidiaries and key associates to establish Enterprise Risk Management ("ERM") system as an integral element of the corporate governance framework. Measures are taken to identify, evaluate and manage significant risks arising from recurrent and growth businesses and from the constantly changing business environment, and covers a range of categories from financial and business environments, safety and health, security, service and business performance, environment, reputation as well as political issues. Risks are captured in risk registers for regular review and monitoring.

We collaborate and communicate with Risk Managers from different business units through the annual in-house "Audit & Risk Forum" held in Hong Kong, and periodic teleconference meetings for cross-learning of the latest developments in risk management and risk management challenges.

Assurance and audit

We conduct thorough assurance and regular audits, including a safety assurance assessment and enterprise risk management review, before the start of operations and following any substantive change in operational or business activity.

Local talent

In general, our subsidiaries and associates are run by local teams; whenever possible, we bring on board people who share our values and contribute to fostering our unique corporate culture in their local context.

Learning and sharing

In order to promote the flow of information and development of an open, trusting relationship, staff across the Company are encouraged to develop relationships with their counterparts and implement a culture of sharing and learning.

Safety

We have an enhanced corporate safety governance framework based on a benchmarking study of international best practices. The resulting enhancements to the framework include providing independent risk assessment from headquarters to cover major operational changes, and requiring businesses to plan and achieve specified maturity levels.

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MTR IN THE MAINLAND OF CHINA

The table below summarises our main businesses in the Mainland of China. Click on the name of each line for more information about the operation.

Our Main Businesses in The Mainland of China at a Glance

Railway Construction, Operation and Maintenance

	MTR Corporation Shareholding	Business Model	Commencement of Franchise/Expected Date of Commencement of Operation	Franchise/Concession Period (years)	Number of Stations	Route Length (km)
Projects in operation						
<u>Beijing MTR Corporation Limited</u>						
Beijing Metro Line 4 ("BJL4")	49%	Public-Private-Partnership ("PPP")	September 2009	30	24	28.2
Daxing Line of BJL4	49%	Operations and Maintenance ("O&M") Concession	December 2010	10	11	21.8
Beijing Metro Line 14 ("BJL14")	49%	PPP	Phase 1 West Section: May 2013 Phase 2 East Section: December 2014 Phase 3 Middle Section: December 2015	30 ^{Note 11}	Phase 1 West Section : 7 Phase 2 East Section : 12 ^{Note 1} Phase 3 Middle Section : 11 ^{Note 1}	Phase 1 West Section : 12.4 Phase 2 East Section : 14.8 Phase 3 Middle Section : 16.6
Beijing Metro Line 16 ("BJL16")	49%	Operations and Maintenance ("O&M") Concession	Phase 1 : Dec 2016	Until full line opens ^{Note 2}	Phase 1 : 10 ^{Note 2}	Phase 1 : 19.6
<u>MTR Corporation (Shenzhen) Limited</u>						
Shenzhen Metro Longhua Line	100%	Build-Operate-Transfer ^{Note 3}	Phase 1 : July 2010 Phase 2 : June 2011	30	Phase 1 : 5 Phase 2 : 10	Phase 1 : 4.5 Phase 2 : 16

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	MTR Corporation Shareholding	Business Model	Commencement of Franchise/Expected Date of Commencement of Operation	Franchise/Concession Period (years)	Number of Stations	Route Length (km)
<u>Hangzhou MTR Corporation Limited</u>						
Hangzhou Metro Line 1 ("HZL1")	49%	PPP	November 2012	25	31	48
HZL1 Extension	49%	O&M Concession	November 2015	End together with HZL1 concession	3	5.7

Projects In Progress

Beijing Metro Line 14, Mainland China	49%	PPP	Full Line: After 2018	30 Note 11	Full Line : 37	Full Line : 47.3
Beijing Metro Line 16, Mainland China	49%	PPP	Full Line: After 2018	30 Note 12	Full Line : 29	Full Line : 49.8

Property Development, Rental and Management

Properties	MTR Corporation Shareholding	Business Model	Award land use right/ Commencement of services	Gross Floor Area (sqm)
<u>MTR Property Development (Shenzhen) Company Limited</u>				
Tiara	100%	Property Development and Management services	2011	~206,000
<u>MTR (Beijing) Commercial Facilities Management Co. Ltd.</u>				
Ginza Mall	100%	Property rental and management services	2006	~30,000

Note 1: BJL14 Phase 2 East Section has 12 stations, 11 opened (1 are currently bypassed). BJL14 Phase 3 Middle Section has 11 stations, 9 opened (2 are currently bypassed).

Note 2: The O&M concession of BJL16 Phase 1 will run until full line opens, now has 10 stations and 9 opened (1 is currently bypassed).

Note 3: Shenzhen Metro Longhua Line Phase 1 assets are owned by the Shenzhen Municipal Government and MTR Corporation (Shenzhen) Limited took over the operation of Phase 1 in July 2010.

Note 11: BJL14 PPP concession started on 31 December 2015.

Note 12: BJL16 PPP concession will start after full line opens.

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Shenzhen Metro Line 4 (Longhua Line)

Introduction

MTR Corporation Shenzhen (MTR (SZ)), a wholly-owned subsidiary, has operated Line 4 of the Shenzhen metro network since July 2010. On 16 June 2016, MTR (SZ) celebrated its fifth anniversary. Also known as the Longhua Line, our service runs north-south from an interconnection with the East Rail Line in Hong Kong at the Futian Checkpoint to Qinghu in the Longhua New District. It intersects with six other lines in the Shenzhen metro network that are managed by other operators.

Following the rapid expansion of Shenzhen's population and the overwhelming popularity of the metro network with the city's residents, the Shenzhen Line 4 has experienced a steady growth in patronage, which account for 17% of the total patronage of the Shenzhen metro network.

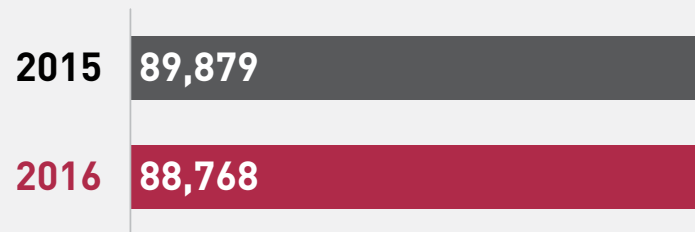
KEY FACTS AND FIGURES FOR LINE 4 (LONGHUA LINE) IN 2016

- 1 rail line
- 15 stations
- Total route length 20.5 km



Total passenger trips
199 million

TOTAL ELECTRICITY CONSUMPTION (MWh)

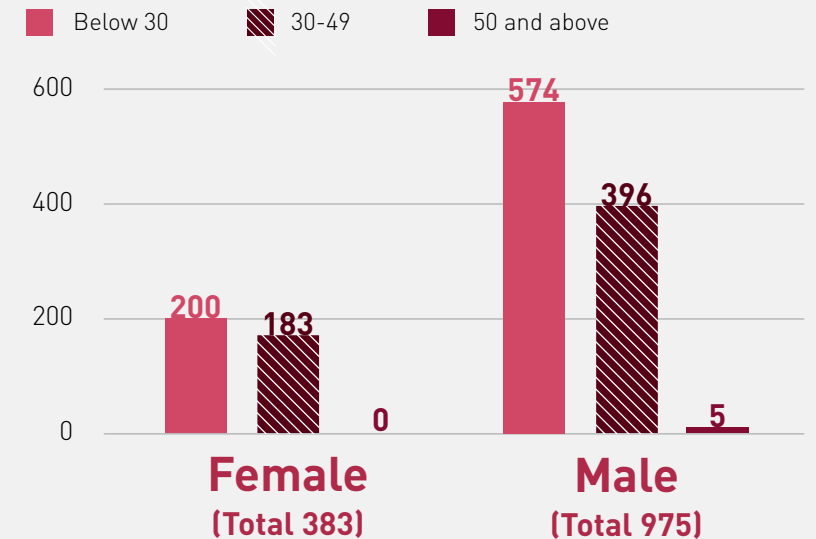


Year-on-year decrease of **1.2%**

INCIDENCE OF LEGAL NON-COMPLIANCE

NO health & safety cases **NO** corruption cases **NO** environmental fines

TOTAL WORKFORCE BY AGE GROUP



28.2%
are female

57.0%
are aged below 30 years

0.4%
are aged 50 and above

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Management Highlights

Traditionally a less developed part of the city, Longhua New District is becoming popular as a residential area due to rising living costs in the Central Business District (CBD) and good connectivity with the rest of the city using the Shenzhen metro network. Line 4 is primarily a commuter service for workers moving in and out of Shenzhen's CBD at rush hour. As a consequence, our challenges are mostly associated with the weekday customer travelling pattern and their demography.

Conversion from 4- to 6-car Service Initiative

In 2015 we completed the conversion to 6-car trains to ease congestion during rush hours. The project was a technical and customer service success with all trains having been converted safely, ahead of schedule and with minimal disruption to passengers. The conversion has been pivotal in easing crowding on board during peak hours.

Operational Performance

In 2016, MTR (SZ) achieved 99.99% of passenger journeys on time, 99.95% train punctuality and 99.96% train service delivery.

We introduced a number of customer service improvement initiatives in 2016, such as:

- Adding 60 train trips per month since June 2016, increasing overall carrying capacity by some 110,000 passenger journeys per month;
- Adding 60 train trips per week since October 2016, further increasing overall carrying capacity by some 500,000 passenger journeys per month;
- Shortened train intervals during peak hours, the shortest headway has been reduced to 2.5 minutes

Operational Performance for Line 4 (Longhua Line)

Service performance Item	2015	2016
Passenger Journeys on time	99.99%	99.99%
Train punctuality	99.91%	99.95%
Train reliability	19,565,412 revenue car-km/incident	4,986,119 revenue car-km/incident
Train service delivery	99.95%	99.96%

Investing in our stations

MTR (SZ) is responsible for the maintenance and upkeep of stations along Line 4. We also work together with other operators of the Shenzhen metro network to ensure smooth management of Line 4 platforms in interconnecting stations. During 2016, MTR (SZ) continued to invest in sustaining a high standard of general appearance and good facilities in all its stations, including signalling system renewal, installation of additional gate, and improvement to the ticketing system.

Commitment to Customer Service

Building on a strong foundation, we continue our efforts in enhancing customer service, including installing queuing guides, enhancing signage and the ticketing system, streamlining passengers flow. We have also increased the number of platform assistant during peak hour and provided more customer service training. To demonstrate our commitment to customer service, in 2016, we have reviewed our procedures on how to respond to incidents, including how to provide better assistance and better information to affected customers. In addition to direct engagement, we also collect feedback from our customers through the annual customer satisfaction survey. Scrutiny by our customers drives us to improve continually.

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Customer Service Review Mechanism

An internal review of our customer service mechanism put forward to frontline staff in 2015 helped to identify areas for providing better service quality. We have introduced "secret passengers" survey in stations, and in 2016, the survey has been expanded to cover more job roles in stations. All the findings were provided to stations for follow-up, and shared with MTR(SZ) senior managers. The "afternoon tea time" and "transparent train" are two new initiatives that open the dialogue between customers and MTR(SZ) representatives. It provides a platform to directly listen to our customers, and drives us to improve continuously.

Safety Engagement

We have developed a range of programmes to engage with customers to promote safe and comfortable journeys. We have posters in stations warning our customers of different risk areas, such as gates, train doors and staircases. A series of videos on escalator safety is broadcasted in stations and on trains. Along with other safety promotion campaigns in the community and in schools, our "Little Station Master" programme has been upgraded to "Little Professionals", to educate children on how to travel in safe and courteous manners, and encourage them to share their learnings with their friends and family.

Safety Performance

	2015	2016
Passenger Fatalities	0	0
Staff Fatalities	0	0
Contractor Fatalities	0	0
Passenger Injuries (per million passenger journeys)	1.11	1.21
Staff Injuries (per 100,000 man hours)	0.21	0.08
Contractor Injuries (per 100,000 man hours)	0.12	0.23

In collaboration with local government departments and other stakeholders in the community, we held two emergencies drills in 2016. These drills rehearsed how to collaborate with other departments including the Fire Department and the Police, and prepared our staff on train and station evacuation. It also helped us review the existing procedures and identify room for improvements.

Staff

We continued our partnership with a Shenzhen-based training institute to provide internship opportunities for young people. In addition to helping us develop a pool of talented young people for recruitment into our business, we hope this initiative will also provide valuable learning opportunities for young members of our community.

Full-time Employees

1,358

Voluntary Staff Turnover

11.9%

Training Days per Employee

8.9

Environment

As the operator of a single line in the Shenzhen metro network, MTR (SZ) has minimal direct impact on the environment. In 2016, in spite of 5.3% passengers increase, we reduced our electricity consumption by 1.2%. This is achieved through various energy-saving initiatives, such as turning off the standby train air conditioners and standby escalators, switching off station fans during non-operation hours, etc.

Over the past three years, water consumption has increased by 5% with the rise of the passenger numbers. In 2016, we promoted waste sorting at office building. The Environmental Management Committee also organized site visit to the waste incineration power plant and relevant lecture to raise general awareness amongst staff.

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ENVIRONMENTAL PERFORMANCE FOR LINE 4 (LONGHUA LINE) Greenhouse Gas Emissions (Tonnes CO₂e)

SCOPE 1

2015 315

2016 310

SCOPE 2

2015 85,286

2016 84,232

TOTAL WATER CONSUMPTION (m³)

2015 185,935

2016 195,709

Community

Our community plan underscores that we are operating a community railway and focuses on youth development, community outreach and public art.

In October, we launched an open day and invited public to join the "role play" as MTR (SZ) staff. Of over 500 overwhelming registrations, 60 passengers were selected to play three different roles - customer service staff, train attendants and railway protection team member. Through the trainings and communications, they have the chance to understand and recognize our efforts in delivering good customer services, commitments to upholding safety procedures and other hard works behind the scene.

In 2016, our employee volunteering scheme has organised several activities to help those in need. Volunteers donated curtains to primary schools in rural areas and helped with the installation as well. They also sent warmth to those travellers during peak season at spring festive. In addition, volunteers paid site visit to special orphans, bringing birthday parties and clothes to them.

MTR (SZ) introduced the "Little Station Master" programme working with several primary schools along the line to promote safety education to children. In 2016, the programme was upgraded to "Little Professionals" which comprised of three sections - "Little Station Master", "Little Policeman" and "Little Banker" in collaborations with local police and bank. After receiving trainings on sense of responsibility, safety tips, courteous behaviours and the emergency handling, 60 primary children accompanied by the station frontline staff worked as "Little Station Master". The programme aims to educate children more on the importance of responsibility and safety behaviours.

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MTR IN EUROPE

It has been ten years since we started our first rail operations in Europe. Since then, we have grown our presence with two main hubs comprising our Europe railway business:

- United Kingdom: MTR Crossrail (for the concession of Elizabeth Line) and LOROL (for the concession of London Overground, which ended in Nov 2016).
- Sweden: MTR Nordic AB, which holds 100% control in MTR Stockholm AB, MTR Tech AB (rolling stock maintenance for Stockholm Metro), MTR Express AB, MTR Pendeltågen AB (the operating entity for Stockholm commuter rail), and 50% control in Emtrain AB (rolling stock maintenance for Stockholm commuter rail).

European Railway Businesses at a Glance

Railway Construction, Operation and Maintenance

	MTR Corporation Shareholding	Business Model	Commencement of Franchise/Expected Date of Commencement of Operation	Franchise/Concession Period (years)	Number of Stations	Route Length (km)
Projects in operation						
<u>MTR Corporation (Crossrail) Limited</u>						
TfL Rail/Elizabeth Line, United Kingdom	100%	O&M Concession	May 2015	8	40 (28) ^{Note 4}	118
<u>MTR Tunnelbanan AB</u>						
Stockholm Metro, Sweden	100%	O&M Concession ^{Note 5}	November 2009	14 ^{Note 6}	100	110
<u>MTR Express (Sweden) AB</u>						
MTR Express, Sweden	100%	Open Access Operation	March 2015 ^{Note 7}	N/A ^{Note 8}	5 ^{Note 9}	455

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	MTR Corporation Shareholding	Business Model	Commencement of Franchise/Expected Date of Commencement of Operation	Franchise/Concession Period (years)	Number of Stations	Route Length (km)
<u>MTR Pendeltågen AB</u>						
Stockholm commuter rail (Stockholms pendeltåg), Sweden	100%	O&M Concession ^{Note 10}	December 2016	10	53	241

Note 4: MTR Crossrail will manage 28 out of the total 40 stations in the Elizabeth Line network.

Note 5: Rolling stock maintenance is provided by our subsidiary MTR Tech AB.

Note 6: In September 2015, the eight-year operating concession of Stockholm Metro was extended for another six years (from 2017 to 2023) to a total of 14 years by the Stockholm authority.

Note 7: MTR Express initial service commenced on 21 March 2015 with full schedule starting in August 2015.

Note 8: The train path allocation is subject to renewal.

Note 9: MTR Express is not responsible for the management of these stations.

Note 10: Rolling Stock maintenance is provided by Emtrain AB, a 50:50 associate jointly owned by MTR and Euro Main Rail AB.

DID YOU KNOW?

TBT was established as a 50:50 joint venture between MTRS and Mantena AS to provide rolling stock maintenance for MTR Stockholm. In February 2016, MTR Nordic completed the acquisition of Mantena's 50% share and renamed the company to MTR Tech AB, a MTR wholly-owned subsidiary.

DID YOU KNOW?

MTR Nordic was also awarded the concession for the Stockholm commuter rail (Stockholms pendeltåg) for an initial period of 10 years, that the government could extend for a further four years. It is the second largest railway franchise in Sweden after Stockholm Metro. We began operating the service in December 2016.

MTR Express

2016 was the first year of full operation of MTR Express on the 455km route between Stockholm and Gothenburg, Sweden's two largest cities, with 90 weekly services. MTR Express had a very high level of operational performance with punctuality consistently above market performance. Passenger numbers have continued to increase and customer satisfaction remains at high level. Overall in 2016, MTR Express was rated as the best rail operator in Sweden by an independent survey. Furthermore, MTR Express continued to strengthen cooperation with infrastructure owner Trafikverket.

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Performance Metrics

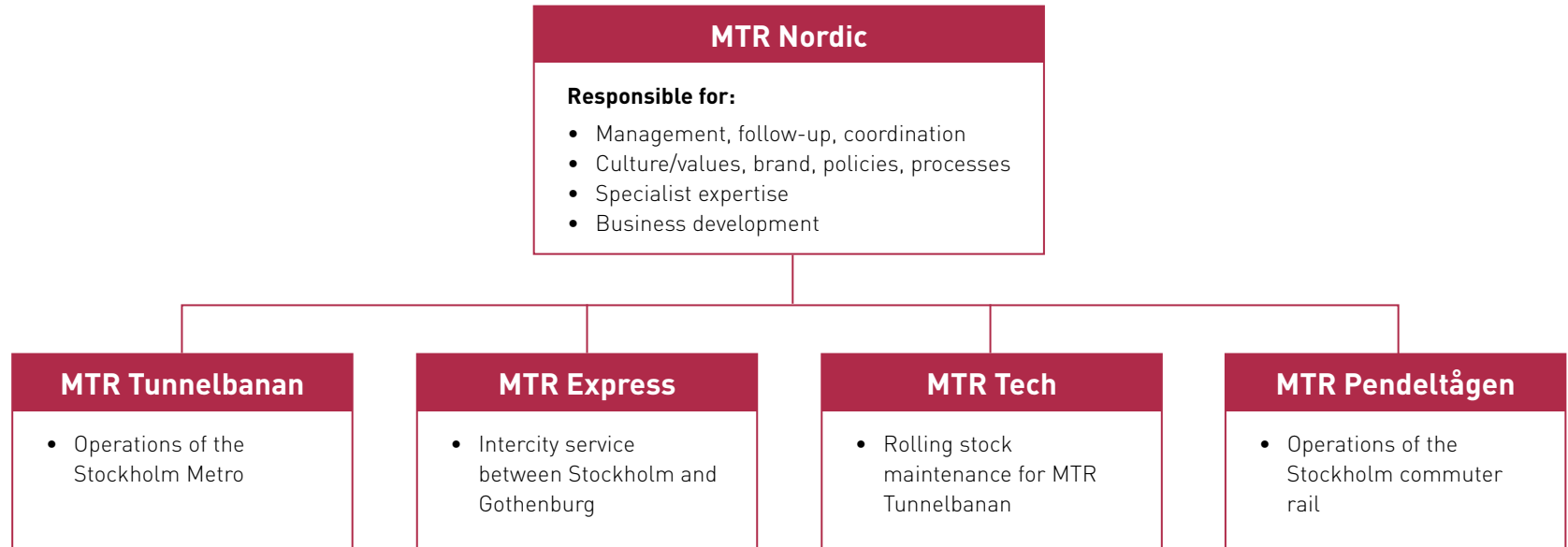
The Stockholm Metro



Introduction

We have experienced significant growth in Sweden in 2016: our presence in Stockholm is deepened as our operations of the Stockholm commuter train commenced in December 2016; MTR Tech AB, renamed from TBT, which provides rolling stock maintenance for MTR Stockholm, has also become a fully-owned subsidiary of MTR Nordic through acquisition.

This year's report will focus on the Stockholm Metro, operated by MTR Tunnelbanan, and supported by MTR Nordic and MTR Tech AB.



MTR Tunnelbanan (MTRS), has operated the metro system in Sweden's capital city since November 2009. According to our O&M agreement with Stockholm's public transport agency, AB Storstockholms Lokaltrafik (SL), we have full responsibility for passenger experience with the metro. Our scope of work covers railway operations, stations, in-station services, and related projects. Fleet maintenance is handled by MTR Tech AB, formerly known as TBT.

Stockholm's population is increasing at the rate of 40,000 residents per year, making it one of the fastest growing cities in Europe. In order to satisfy the transportation demands of this dynamic and expanding city, we are committed, under the terms of our operating franchise, to achieve high standards for safety, punctuality, cleanliness and customer service. We also work closely with SL to procure new technology for upgrading the metro system and to receive regular feedback on our performance.

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Since taking over the operation of the metro in 2009, MTR has introduced a range of operational and customer service enhancements, including increasing the service punctuality from 92% to a record high of more than 97% this year. On the 11th of December 2016 we added a new business, the Stockholm Commuter Trains, to our portfolio. Preparation and mobilisation for the operations begun a year in advance. The existing management team and additional resources from MTR worked intensively during 2016 to

enable a smooth and successful takeover. We delivered the service without disruption on the first day of operations, and migrations of all systems and connections went according to plan. Main challenges for us going forward are to stabilise the IT-environment and ensure vehicle availability due to a general unfavorable fleet situation at the time of the takeover. The Public Transport Authority, SL, and the Swedish Transport Administration congratulated MTR Pendeltågen for the most successful takeover since the deregulation.

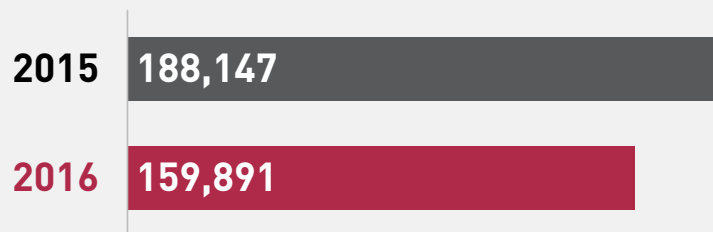
KEY FACTS AND FIGURES FOR STOCKHOLM METRO IN 2016

- 3 rail lines
- 100 stations
- Total route length 110 km



Total passenger trips
349 million

TOTAL ELECTRICITY CONSUMPTION (MWh)

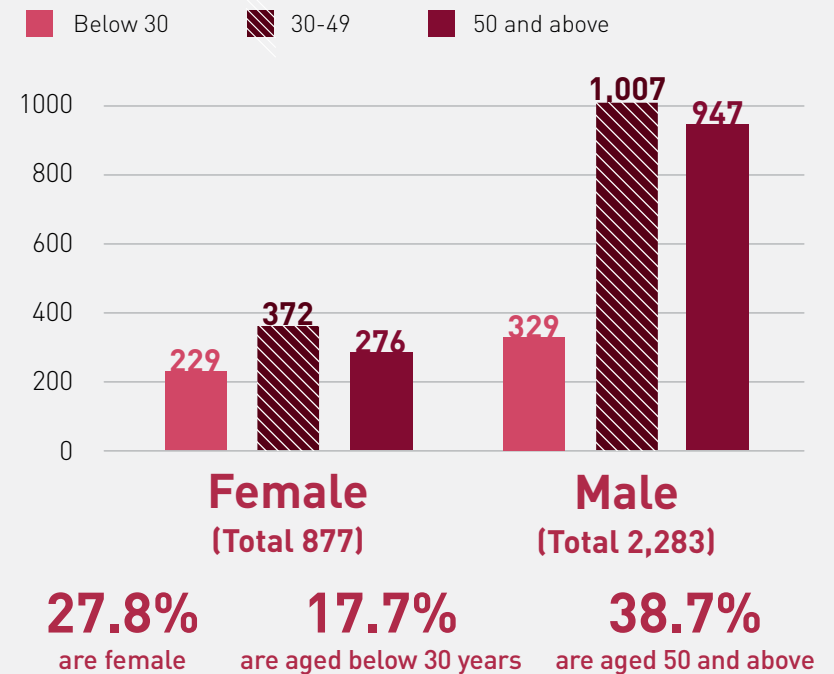


Year-on-year decrease of **15.0%**

INCIDENCE OF LEGAL NON-COMPLIANCE

NO health & safety cases **NO** corruption cases **NO** environmental fines

COMPOSITION OF OUR WORKFORCE BY AGE (YEARS)



Note: Part-time staff is included in this composition.

CHARITABLE CONTRIBUTIONS

Equivalent to approx. **HK\$116,000**

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Performance Metrics

LEARN MORE...

For more information about sustainability at MTRS, please refer to the [MTRS and MTR Tech sustainability report](#).

Management Highlights

MTR Tunnelbanan is making significant progress in several key aspects of our business. Perhaps most importantly, feedback from our customers regarding overall journey experiences continues to improve, in 2015, at 81%. As a result of focused management attention, we are achieving better cross-functional coordination between teams within our own organisation and with MTR Tech. In 2016, we were deeply gratified to learn through the results of our annual staff survey that staff morale is improving again, now to 93%.

Safety performance

Each year, MTRS develops a comprehensive safety plan with targets for key performance indicators based on the previous year's result. We are encouraged that during 2016, there were no passenger fatalities.

Safety Performance for Stockholm Metro

	2015	2016
Passenger Fatalities	3	0
Staff Fatalities	0	0
Contractor Fatalities	0	0
Passenger Injuries (per million passenger journeys)	1.47	1.15
Staff Injuries (per 100,000 man hours)	0.32	0.29
Contractor Injuries (per 100,000 man hours)	n /a	n /a

* Note: MTRS does not monitor contractor injuries. Please refer to Performance Metrics for details.

Suicide prevention

Two of the key safety challenges that we face are to prevent and to respond to suicide attempts on our railway network, particularly during winter months when the overall trend for suicide increases. We continue our programme for suicide prevention with Karolinska University Hospital and working in partnership with not-for-profit organisation SOS Alarm, providing direct contact with ambulance services.

Ensuring security

The security of all passengers travelling on our trains and passing through our stations is a high priority for MTRS. During 2016 we have participated in a number of activities together with the Municipality, the Police and other local stakeholders to highlight the security issues connected to the subway and surrounding areas. Also, we have been working with a new Security Policy that has been implemented since early-2017.

Operational performance

MTRS has stringent targets for train service delivery — 100% of scheduled train services should operate and at least 95.5% of trains should arrive on time. We also closely monitor the level of customer satisfaction with our services and the quality of passenger information that we provide.

In 2016, we continued to achieve the best performance for train punctuality in the history of Stockholm's metro system. This is a result of additional measures implemented throughout the year, such as a new analysis tool and cross-functional approach to quality control. Looking to the future, one of the biggest operational challenges that we face is how to cope with increasing congestion on our platforms and trains due to growing demand for our services.

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Performance Metrics

Operational Performance for Stockholm Metro

Service performance Item	2015	2016
Passenger Journeys on time	Not available	Not available
Train punctuality	97.7%	97.7%
Train reliability	52,562 revenue car-km/incident	51,939 revenue car-km/incident
Train service delivery	99.4%	99.4%

Engaging with our staff

MTRS fosters an open and caring culture among all staff. During 2015, we continued to roll out the "Our Joint Journey" initiative that was launched in 2013, now also involving structured dialogue within MTR Express and MTR Tech. We have also planned and made the set up for the journey of MTR Pendeltågen. To be launched in Q1 2017. We conducted dialogue on core values, strategy and goals led by team managers, and conduct workplace meetings with discussion on continuous improvement to promote better job satisfaction and stronger commitment to our vision. We have also started a work with VMV Awards including all five companies

In 2015, we announced our vision for the Work Improvement Team (WIT) for 2020 involving fortifying the culture of continuous improvement, to support our goal of becoming known as a world-class operator in Sweden. We want to make WIT the natural way of how we improve our daily work in all parts of the company. In 2016 we took a significant step towards the vision by educating manager at all levels and subsidiaries of our organization in the method and tools. This contributed significantly to increasing the use of the method as well as employee involvement.

Social Performance for Stockholm Metro

Full-time Employees	Voluntary Staff Turnover	Training Days per Employee
2,252	3.6%	2.4

Leader in green transportation

The Stockholm Metro is unique among our subsidiaries and associates because it is powered 100% by renewable electricity generated from water and wind. This means that our railway operations in Stockholm produce nearly zero greenhouse gas emissions and can truly be described as the greenest mode of transport.

ENVIRONMENTAL PERFORMANCE FOR Stockholm Metro Greenhouse Gas Emissions (Tonnes CO₂e)

SCOPE 1



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Vision for the future

Sweden's population is one of the fastest growing in Europe. It reached 10 million in 2016 and is expected to surpass 11 million by 2024. In response to the rapid growth, an estimated 700,000 new housing units are needed before 2025, while at the same time the Parliament has committed to a target of achieving a fossil fuel-free transport sector within the next 15 years.

MTR Nordic strives to support meeting these challenges in line with our vision to connect and grow sustainable communities. During the Swedish political week in Almedalen, Gotland, in July 2016, we arranged a final seminar on the joint-project Vision Gothenburg 2070. The vision has thereafter been used in relevant fora, when discussing the future development of Gothenburg.

As a consequence of the imminent challenges with a lack of available housing, not least in the Stockholm area, we established a new partnership with Skanska, WSP and Scania, three multinational companies based in Sweden. The joint task for the partnership was to develop a realistic concept on how to build new cities along existing public transport systems or in connection to new infrastructure investments. We will apply our experience from transport hubs and property development, and we aspire to play a key role in making this concept a reality in the near future.

We engaged further in other Nordic markets in 2016. For the first time, we arranged a seminar during the Danish political week, which have opened up new contacts that were followed up with individual meetings during the fall.

In Norway, the government continued the deregulation process within the railway sector with the first tenders of railway "packages" expected during the spring of 2017. In anticipation of the tenders, we initiated dialogues with relevant stakeholders.

LEARN MORE...

[Stockholm 2070](#) is our sustainable development plan for Stockholm formulated in partnership with Skanska and Sweco.

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TfL Rail/Elizabeth Line



Introduction

On 30 July 2014, MTR Corporation (Crossrail) Limited ("MTR Crossrail"), a 100% owned subsidiary of MTR Corporation, was awarded the concession to operate the new Elizabeth Line (initially referred to as "Crossrail") train service across London.

MTR Crossrail commenced services on 31 May 2015 between Liverpool Street and Shenfield under the interim brand banner of "TfL Rail", MTR Crossrail initially runs existing trains that operate on that route. Additional Elizabeth Line services will be introduced in phases as work proceeds

on the building of the new tunnels and stations, existing stations are upgraded and new trains brought into service. Fully integrated Elizabeth Line services are scheduled to commence by December 2019 on a 118km route with 40 stations through London, providing inter-urban and metro passenger services connecting the City, Canary Wharf, the West End and Heathrow to commuter areas east and west of London.

Since 31 May 2015, the business has grown from 350 employees to over 850, including our contractors who are integral to our workforce. We have had two successful employee surveys with high return rates. We had a return rate of 87% in our 2016 employee survey.

KEY FACTS AND FIGURES FOR TfL RAIL/ELIZABETH LINE IN 2016

- 1 rail line
- 14 stations



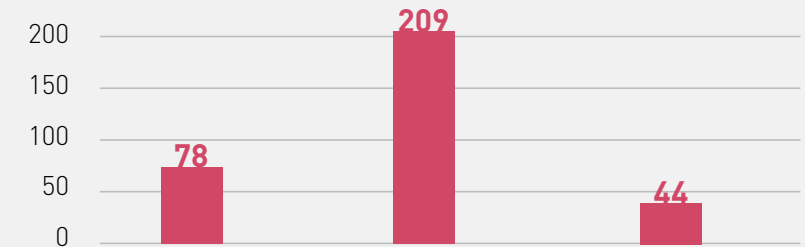
Full service expected to commence in December 2019

118KM
Total Route Length

TOTAL ELECTRICITY CONSUMPTION (MWh)

2016 **43,769**

COMPOSITION OF OUR WORKFORCE BY AGE (YEARS)



Note: Part-time staff is included in this composition.

* excludes 528 contractors staff

INCIDENCE OF LEGAL NON-COMPLIANCE

NO health & safety cases **NO** corruption cases **NO** environmental fines

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Management Highlights

Operational Performance

As a business, we have been recognised in the industry with a variety of awards for performance, recruitment and engineering.

In 2016, we were recognised at the London Transport Awards in March for our partnership with Network Rail in delivering the London Liverpool Street to Shenfield line and showing fantastic collaboration across both businesses. This partnership was further recognised at the National Transport Awards where both MTR Crossrail and Network Rail were highly commended.

The hard work and persistence of our Engineering team was recognised shortly afterwards at the 2016 National Rail Awards for their work as part of the Fleet Refreshment Programme, which took place throughout 2015. Within the first six months of the MTR Crossrail concession in 2015, the Engineering team, alongside Ever sholt Rail Group and Bombardier Transportation successfully completed the programme which fully refreshed and rebranded the existing Class 315 fleet, including visible modifications such as exterior livery design, new interior panels, seat cushions and overall train presentation improvements.

Additionally, fleet reliability had increased significantly by eliminating long-term inherited faults and identifying the root cause of incidents to prevent re-occurrence.

In addition to the National Rail Award, the Fleet team also picked up the award for Depot Team of the Year at the 2016 Rail Staff Awards for their improvements to fleet reliability.

When considering performance, MTR Crossrail have overseen an impressive improvement to service and punctuality on the Liverpool Street to Shenfield line. In addition to the consistently higher PPM numbers, TfL Rail finished the last three periods (8,9 &10) as the best performing TOC in the country for PPM, 6.3% higher than the national figure. These numbers led to a Silver Whistle Award for Operational Performance in London & the South East at the 2016 Golden Whistle Awards.

The combination of an improvement in the upkeep and maintenance of the fleet and improved performance culminated in significant improvements to scores in the Spring National Rail Passenger Results, which lifted from 77% overall in Spring 2015 to 79% in Spring 2016.

Main areas of improvement in 2016 Spring National Rail Passenger Survey:

- Punctuality and reliability of trains – improved by 10%
- Cleanliness of train – improved by 17%
- Upkeep and repair – improved by 18%
- How we dealt with delays – improved by 25%

Service Performance for TfL Rail/Elizabeth Line

	2015	2016
Train punctuality	Not available	94.1%
Train service delivery	Not available	96.9%

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Engaging with Staff

At MTR Crossrail, we recognise that people are our biggest asset and employee recognition is a key driver in ensuring that a high level of engagement and satisfaction remains.

In May 2016, MTR Crossrail held its first internal awards ceremony, 'Celebrating You'. This event recognises individuals and teams throughout the business who have delivered over-and-above their role, gone the extra mile, demonstrated the company values and delivered excellent customer service with an evening of entertainment and recognition among their colleagues.

MTR Crossrail also has an internal employee recognition scheme called 'Shout Outs'. The Shout-Out recognition scheme is an instant way for colleagues to recognise each other's hard work and commitment as well and demonstration of the MTR values. Shout-Outs are issued weekly and communicated via the internal communication channels. In one year, we received over 400 shout outs commending colleagues within the business.

We also launched our first ever Sustainability Month which included Health and Well-being Roadshows including cholesterol and blood pressure checks as well as training sessions on sleep, nutrition, alcohol and exercise.

Safety Performance

We are pleased that there has been no fatality in our operation in 2016, and we have achieved our passenger safety target.

We are working to improve our safety performance continually. Stringent safety standard has been adopted for the construction of the project, as health and safety are the key concerns. Crossrail operates a health and safety management system which is certificated to BS OHSAS 18001:2007. The Crossrail health and safety management system sets out the arrangements to manage the health and safety risks to its employees as well establishing minimum standards for its contractors. In addition to this standard, Crossrail along with its industry partners have signed an HSE agreement setting out key leadership behaviours that will be demonstrated by Crossrail and its Industry Partners. Contractors working for Crossrail are also asked to sign the agreement. As the train operating company that will manage the Elizabeth Line, we are applying the same management principles that Crossrail has set up for the operation phase of Crossrail project.

Safety Performance for TfL Rail/Elizabeth Line

		2016
Passenger Fatalities	Target	0
	Performance	0
Staff Fatalities	Target	0
	Performance	0
Contractor Fatalities	Target	0
	Performance	0
Passenger Injuries (per million passenger journeys)	Target	3.03
	Performance	2.75
Staff Injuries (per 100,000 man hours)	Target	0.70
	Performance	0.86
Contractor Injuries (per 100,000 man hours)	Target	n / a
	Performance	0.33

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Environmental Performance

We went through the process of implementation an Environmental Management System according the ISO 14001:2015 standard. In June 2016, we successfully achieved the certification demonstrating we have processes in place to reduce our environmental impact, reduce environmental accidents and manage and improve our environmental performance. Considering the constraints of being a new company, with less than a year of operations and still defining the process and activities, it was a challenge and a huge achievement recognised by staff and also external auditors. We will continually improve our processes and are working on the integration of the energy management system with the environmental management system.

Community Performance

Community Ambassadors

To create a personalised service by listening and responding to the views of passengers is one of the aims of MTR Crossrail. Early on, they recruited a number of Community Ambassadors who will work on developing relations with local communities in and around every station. In doing so, it aims to strengthen not only crucial relationships within the communities, but also to transmit a sense of unity, pride and ownership with stakeholders. In 2016, we held a number of community roadshows, such as in Romford, to respond directly to queries raised by residents in that area. These community roadshows also provide us with the opportunity to talk about barrier-free access facilities, planned closures, scheduled works and rail safety. We found these initiatives help build stronger relationships with our local stakeholders, as well as enable us to keep our customers engaged and informed.

Strategic Labour Needs and Training: Supporting London

Initiated by the Greater London Authority to tackle skills shortages such as youth unemployment, MTR Crossrail's operating agreement includes provisions related to these four areas:

- Apprenticeships: Offer apprenticeship opportunities over the next eight years in various departments. Currently six apprentices work with us.
- Worklessness: Opportunities available to unemployed candidates where we provide wider awareness on the topic; develop partnerships with relevant agencies and attend recruitment fairs and provide pre-employment training.
- Educational/career support: Offer placement days over the concession period to enable individuals to learn, develop or enhance their knowledge and skills in relation to the employment market. As part of our School Engagement Plan to deliver school engagement days with specific reference to Science Technology Engineering Maths Network (STEMNET) subjects.
- Job creation: Vacancies advertised through the corporate website and published in local and diverse press.

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Australian Railway Businesses at a Glance

Railway Construction, Operation and Maintenance

	MTR Corporation Shareholding	Business Model	Commencement of Franchise/Expected Date of Commencement of Operation	Franchise/Concession Period (years)	Number of Stations	Route Length (km)
Projects in operation						
<u>Metro Trains Melbourne Pty. Ltd.</u>						
Melbourne's Metropolitan Rail Service	60%	O&M Concession	November 2009	8	218	390
Projects in operation						
<u>Metro Trains Sydney Pty. Limited</u>						
Sydney Metro Northwest, Australia	Mixed	PPP (Operations, Trains & System)	2019 Note 13	15	13 Note 14	36 Note 14

Note 13: Subject to arrangement of the government of New South Wales, Australia.

Note 14: Sydney Metro Northwest has eight new stations and five retrofitted stations, and a 13-km existing line extended with a 23-km new line construction.

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Melbourne's Metropolitan Rail Services

Introduction

Metro Trains Melbourne (MTM), a majority-owned subsidiary, took over the franchise for operations and maintenance of Melbourne's Metropolitan Rail Services in November 2009. Under the terms of our O&M Agreement with the Government of the State of Victoria, we have achieved complete vertical integration in our management of rolling stock, infrastructure, stations and facilities. Our franchise is being re-negotiated for an extension of another 7 years, and the result is expected to be available by middle of 2017.

Originally opened in 1854, Melbourne's railway network is one of the world's oldest systems, but it is now one of the busiest railways in Australia. We deliver 14,000+ weekly services, with over 2,000 of these being added during the current franchise.

Our ability to meet the increasing demands on public transport, and in maintaining the metro system relies on our strong culture of safety and innovation. In 2016, we were named among the top 50 innovative companies in the country by the Australian Financial Review.

The Victorian government is investing heavily in major projects to upgrade and expand the city's rail network. Together with our consortium partners, we have enhanced our project delivery capability to play a significant role in the delivery of a huge project pipeline. Our Projects and Planning Division has grown considerably in size, complexity and expertise.

In 2016, we received several accolades and certifications. We also received certifications to the new ISO 9001:2015 on Quality, ISO 14001:2015 on Environment, as well as the current AS4801:2001 on Occupational Health and Safety Standards.

DID YOU KNOW?

The Melbourne rail network contains 30 sites listed on the Victorian Heritage Register, a status that has statutory significance under the Heritage Act 1995. Many places of Aboriginal cultural significance can also be found around the network. In addition, there are also many places or objects protected by local councils including trees, vehicles, gardens and parts of buildings. All of these require care and consideration during upgrades to the rail network in order to ensure that we preserve our historic railway for future generations.

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KEY FACTS AND FIGURES ABOUT MTM IN 2016

- 15 rail lines
- 218 stations
- Total route length 390 km



Total passenger trips
233 million

TOTAL ELECTRICITY CONSUMPTION (MWh)

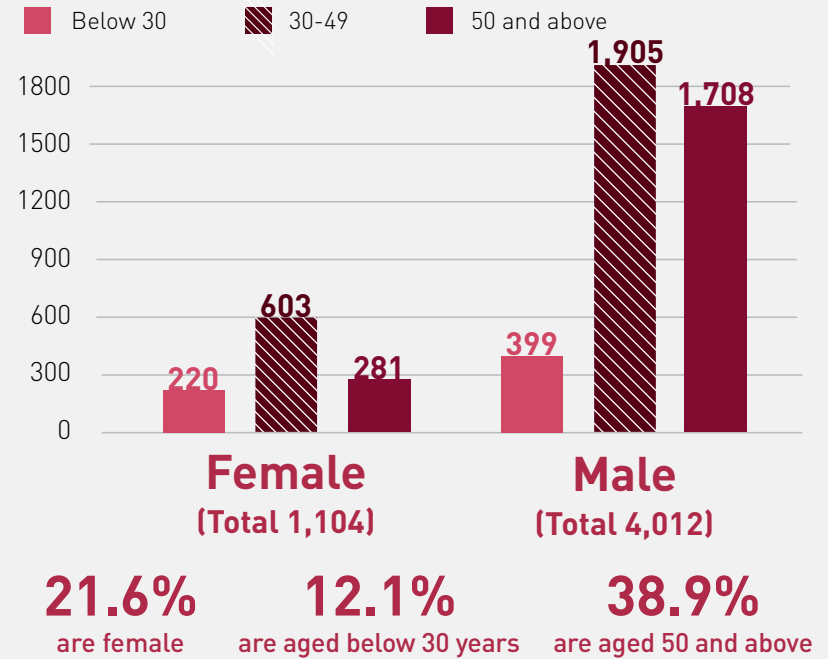


Year-on-year increase of **0.3%**

INCIDENCE OF LEGAL NON-COMPLIANCE

NO health & safety cases **NO** corruption cases **NO** environmental fines

COMPOSITION OF OUR WORKFORCE BY AGE (YEARS)



Note: Part-time staff and contractor are included in this composition.

CHARITABLE CONTRIBUTIONS

Equivalent to approx. **HK\$61,972**

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Management Highlights

Customer and Service Delivery

We recognise the real value of a strong performance in punctuality and delivery of services, which helps to drive the economic prosperity of Melbourne. MTM's customers primarily want to see continued improvement in the quality and reliability of train services.

Punctuality was solid across the calendar year, registering a twelve month average of 92.00%. Overall, the on-time performance of the railway is now consistently exceeding 90%, well above the franchise target of 87%. Delivery of timetable services also remained above target, averaging out at 98.6%.

Service Performance for MTM

Service performance Item	2015	2016
Passenger Journeys on time	Not available	Not available
Train punctuality	92.51%	91.99%
Train reliability	69,738 revenue car-km/ incident	27,688 revenue car-km/ incident
Train service delivery	98.75%	98.61%

Customers' journeys start before they leave the door and end when they are safely delivered to their destinations. Together with Public Transport Victoria, our Customer Experience Team has mapped every aspect of the journey and is striving for continuous improvement. Some of the recent initiatives include new customer service standards, mystery shopping, improvements in platform and on-board announcements, deep cleaning and graffiti removal programs. The concerted effort by MTM has been acknowledged by our customers, with passenger satisfaction score sitting at 63.3 at the start of the franchise and peaking at 73.5 within the last year.

We have also enhanced communications through the Metro website and our Twitter feed. The metroNotify app also provides passengers with real time updates when services to their lines are delayed or disrupted. To date, the app has generated more than 100 million push notifications and attracted over 220,000 downloads. A new Customer Control Centre has been set up to manage information during disruptions. In 2016 we rolled-out the "OnTrack" app for staff, supporting effective cross-functional management of unplanned disruptions. Frontline employees are now equipped with smart devices, enabling them to provide quick and accurate information to our passengers.

DID YOU KNOW?

Making Metro accessible for all

Ongoing efforts are underway to make Melbourne's metropolitan rail system truly accessible for all. In 2016, we conducted a series of focus groups and familiarisation sessions with key disability groups including Guide Dogs Victoria, Vision Australia and Scope. Our "Stop Here" app helps people with a sensory disability to navigate the rail network independently, enabling them to receive alerts in a range of ways when approaching a nominated station. In 2016, the app won a Victorian Disability Award for 'Excellence in Accessible Communications and Technology'. This award recognises people and businesses who are able to make outstanding contributions to empowering people with a disability in an effort to create an inclusive community.

DID YOU KNOW?

Record Low Fare Evasion

Fare evasion, which peaked at over 11% early in the franchise, reached a record low of 2.3% in 2016. This is an outstanding achievement in revenue protection. The record low figure has been largely accomplished through strategic deployment of resources, promoting touch-ons at the start of the journey rather than targeting non-compliance at the end of the journey. This has been complemented by education in ticketing, improved customer service, a more visible staff presences and a doubling of tickets checked on the network.

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Safety Performance

We are encouraged to see our passenger injury rate continues to decrease, although it still falls short of the stringent target we set for ourselves. We are saddened by 5 passenger fatalities on the metropolitan network. Please refer to Performance Metrics for details.

	2015	2016
Passenger Fatalities	2	5
Staff Fatalities	0	0
Contractor Fatalities	0	0
Passenger Injuries (per million passenger journeys)	2.07	1.01
Staff Injuries (per 100,000 man hours)	0.52	0.35
Contractor Injuries (per 100,000 man hours)	0.22	0.08

Customer Safety initiatives

MTM works with a national not-for-profit organisation called TrackSAFE to engage with the public on railway safety, including reducing rail-related suicide and minimising level-crossing risks. MTM also works closely with the Salvation Army, which sends volunteers out onto the rail network to engage with vulnerable people. We also partnered with the media to generate safety reminders and messages during Rail Safety Week.

We are assisting the Victorian Government as it prepares to deliver a safety and security upgrade in the City Loop over the next three years. Better trespasser detection and fire prevention systems will be installed in the four underground tunnels and in three underground stations. Sprinkler systems will also be upgraded and a smoke management system will be installed at three busy stations.

MTM is also working with the Level Crossing Removal Authority (LXRA) and the State Government of Victoria to remove 50 level crossings, which is expected to generate better performance and increase the safety of customers and local communities.

DID YOU KNOW?

Dumb Ways to Die Launches in USA

Dumb Ways To Die, our record-breaking rail safety message, is an international phenomenon with over 200 million online views and more than five billion game sessions played worldwide. Now the safety campaign has been successfully licensed to the Regional Transportation District in Denver, Colorado, USA. It's the first time that the safety campaign has been licensed in the USA to another operator and will be used to target bus and train passengers, as well as becoming the backbone of a school-based safety education programme.

Staff Safety initiatives

To help employees and their families manage their mental health after experiencing a potentially traumatic event, MTM & TrackSAFE have developed a new Trauma Management Framework. This framework seeks to lessen the impact of traumatic events by tackling the problem from a holistic view. The "MetroSafe Hotline" was launched for employees, ensuring they have a quick and simple way of reporting safety issues, with feedback sent directly to the responsible department or team.

MTM also rolled out a Fatigue Risk Management Program to provide supervisors with the tools to manage fatigue in the workplace. We are continually seeking to provide better equipment to enhance the safety and efficiency of our staff as they carry out their duties. For instance, a custom-built elevated work platform (EWP), three elevated scissor platforms and three cherry pickers will be provided to the Electrical Overhead team to aid the safe delivery of vital maintenance on the network.

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Environment

When it comes to consumption of electricity, which is largely generated by coal-fired power in the State of Victoria, the metro system indirectly generates sizeable greenhouse gas emissions. Under the terms of our O&M Agreement, our role is to identify and propose initiatives to save energy.

MTM has a comprehensive environmental management system in place with strategies to mitigate significant environmental impacts, such as recycling material waste from offices and depots, introducing water tanks to collect water at stations and depots, and using recycled water to wash trains. We continue to raise awareness about environmental issues in day-to-day operations.

Responding to climate change

Australia is experiencing impacts from climate change. The Victorian Climate Change Adaptation Plan 2013, for example, highlights immediate risks from more days with temperatures exceeding 35°C and increased frequency and severity of bushfires. In response to these challenges, MTM has implemented new planning and procedural measures for extremely hot weather.

In 2015, we deployed real-time rail temperature monitoring technology to remotely monitor the temperature of substations, alerting our electrical control centre to potential hazards. This is particularly important across hot summer months, as very high temperatures within our substations have the potential to adversely affect their performance.

ENVIRONMENTAL PERFORMANCE FOR MTM OPERATIONS Greenhouse Gas Emissions (Tonnes CO₂e)

SCOPE 1

2015 464

2016 5,204

* scope in 2016 revised.

SCOPE 2

2015 520,511

2016 501,868

TOTAL WATER CONSUMPTION (m³)

2015 171,078

2016 207,249

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Staff

Metro has continued to maintain a low rate of voluntary staff turnover, indicating that overall job satisfaction among our staff remains high. We seek to engage our staff continually, establishing long term collaboration through a series of open conversations across all divisions. In our latest pulse survey in 2016, employee engagement has reached 70%. MTM was recently recognised as one of the top training organisations in the nation by winning the Large Employer of the Year title at the National Training Awards. This followed our success at the state-based awards, winning both Large Employer of the Year and the Employee Award for Apprenticeship Development.

Social Performance for MTM

Full-time
Employees

4,431

Training Days per
Employee

6.2

At MTM, we are determined to address gender balance and entice more women into the industry. Gender balance remains top of mind for all executives and our progress is regularly reported in visualisation rooms across the business. Today, we are actively pursuing a 50:50 gender target for all new recruitments. To achieve this target, we have aligned key aspects of our recruitment strategy, talent management, policy and procedure, parental leave payments, as well as facilities and amenities. We have also been active in schools and universities to promote the rail industry and attract a diverse workforce. The number of fully qualified female drivers on the network has grown to 154. Meanwhile, the number of females in the trainee driver ranks has also grown significantly, peaking at 50.6% in 2015/2016.

Community

Melbourne's railway continues to be a vital part of the city's socio-economic fabric. MTM supports a wide range of not-for-profit organisations in a variety of ways including fundraising stations, community artworks, corporate sponsorships, community festivals, plus station activities and performances in partnership with local councils.

MTM's Corporate Social Responsibility programme has three core pillars:

- **Supporting vulnerable customers:** The Salvation Army-Metro Transit Teams are deployed six days a week to help protect vulnerable people on the rail network. We also find rewarding careers for young people through our graduate and apprenticeship programs.
- **Bringing railway stations to life:** We seek to give back to the city of Melbourne through a series of partnerships and activities including the Keep Victoria Beautiful Stationeers Program, Diwali Dancing at Flinders Street, the Multicultural Express featuring live musicians on the Frankston line, the Salvation Army's Carol-A-Thon, the Substation Contemporary Art Prize at Newport, major sponsorship of the Melbourne International Film Festival (MIFF) and many other more activities.
- **Educating those who interact with the railway now and in the future:** Our Community Education Unit (CEU) works with many schools and disability groups to educate rail users, improve behaviours around level crossings and tracks, and reduce the risk of injuries and fatalities on the network. The team has visited over 300 schools to deliver a tailored safety message to students of all ages. The team also reaches out to seniors, disability groups, community groups and more.

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Collaborating to build the future

The city's rail system is benefitting from massive investment by the Victorian Government in the form of landmark works such as the Level Crossing Removal Project, Melbourne Metro Rail Tunnel, Cranbourne-Pakenham Line Upgrade, Line Extension to Mernda, Comeng Life Extension Program, High Capacity Trains and High Capacity Signalling.

In time, these projects will reshape the metropolitan rail system, giving MTM the opportunity to showcase the expertise of its people and our shareholders in MTR Corporation, John Holland Group and UGL Rail. We are working with a broad spectrum of stakeholders to ensure that this huge program of works is delivered efficiently and safely.

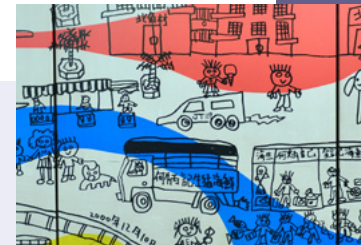
MTM has increased its project delivery capability significantly. Our Projects & Planning division has grown considerably in size, complexity and expertise. The division has sharpened its skills on dozens of value-adding projects including new station builds and upgrades. The division has also delivered savings of over 10% through efficient contracting models on projects such as the Calder Park Stabling Yard and multiple station car parks.

Today we work ever more closely with key stakeholders and government agencies including Public Transport Victoria, Level Crossing Authority and Melbourne Metro Rail Authority. Our continued involvement with many government and franchise projects has given rise to the development of innovative solutions such as station modular construction methods, returning great value with exceptional results. Over time, we have increasingly taken the lead as principal contractor on complex projects and remain perfectly positioned to make a major contribution to the future of the railway in Melbourne.

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PERFORMANCE METRICS

This section provides consolidated information about our sustainability performance and data management, including definitions for key terms and the basis of calculation for Key Performance Indicators (KPIs).



Independently Assured



Compliance with HK Stock Exchange ESG Reporting Guide

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INTRODUCTION

This section provides consolidated information about our sustainability performance and data management, including definitions for key terms and the basis of calculation for Key Performance Indicators (KPIs). Please refer to [CoMET Benchmarking Results 2015](#) to learn how our operations compare with other metros globally.

This section is also available in Traditional Chinese, however for any differences in definition in the translation, the English version will prevail.

Content Index

This report has been prepared in accordance with the Global Reporting Initiative G4 Sustainability Reporting Guidelines (GRI-G4) Core option. We have provided a GRI Content Index, which includes cross-references to the International Association of Public Transport (UITP) Sustainability Charter Reporting Guide 1.0. We have also provided a HKEx ESG Content Index in order to demonstrate our current level of compliance with the 2015 Revision of the Hong Kong Stock Exchange Environmental, Social and Governance Reporting Guide.

Please refer to [Appendix I – Scope of this Report](#) for a list of Identified Material Aspects and Boundaries.

Please refer to [Appendix II – Content Index for our alignment to GRI-G4 and HKEX ESG Reporting Guide](#).

Learn more...

The [Global Reporting Initiative](#) promotes sustainability reporting as a way for organisations to become more sustainable and contribute to sustainable development. [G4 Online](#) presents the G4 Sustainability Reporting Guidelines (GRI-G4) in a dynamic and easy-to-navigate format.

Learn more...

Hong Kong Exchanges and Clearing Limited (HKEx) has published the revised [Environmental, Social and Governance Reporting Guide](#). This guide outlines the currently recommended practice for listed companies and has been updated to include several changes to the guide.

UITP is a non-profit international association that brings together all public transport stakeholders and sustainable transport modes in a worldwide network. The [UITP Charter on Sustainable Development](#) is available from the association's website.

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Data Management

The following components of our robust data management system ensure the integrity of data disclosed in this sustainability report:

- The Audit Committee of the Board of Directors monitors the integrity of all financial information, and the Company has engaged KPMG as its External Auditor.
- Our Human Resources Management system contains all data relating to our staff.
- Our centralised sustainability data collection system provides an audit trail and helps to identify errors or data gaps for other quantitative data.
- Regular assessments and internal monitoring programmes ensure compliance in accordance with our Corporate Guideline and Instruction (CGI) on Compliance with Statutes and Regulations.
- Bureau Veritas Certification Hong Kong provides assurance for selected customer service performance data relating to our Operating Agreement and [Customer Service Pledge](#). The assured data have been marked with "*" in Social Performance.
- Deloitte Touche Tohmatsu (Deloitte) provides independent limited assurance for other selected quantitative data (see page 172). The assured data have been marked with "#" in Performance Data Tables.

Learn more...

Please refer to our [Annual Report](#) for more information about the work of our Audit Committee.

We provide details of the scope of our financial and economic performance, environmental performance, social performance as well as safety target and performance in Hong Kong, together with performances in our Mainland of China and international businesses, namely MTR Corporation (Shenzhen) Limited (MTR(SZ)) in the Mainland of China which operates [Shenzhen Metro Line 4](#), MTR Tunnelbanan AB and MTR Tech AB, 100% owned subsidiaries by MTR Nordic AB which operates and manages maintenance works respectively for [Stockholm Metro \(MTRS\)](#) in Sweden, MTR Crossrail Limited which operates [TfL Rail/Elizabeth line](#) in London and [Metro Trains Melbourne Pty. Ltd. \(MTM\)](#) that operates Melbourne's metropolitan rail services in Australia.

Starting from 2016, we also disclose relevant performance data in our wholly-owned businesses in Ngong Ping 360.

For the scope of the KPIs in Hong Kong and our Mainland of China and international businesses, please refer to [Appendix III - Data Management](#)

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INDEPENDENT ASSURANCE REPORT

Deloitte Touche Tohmatsu (Deloitte) has provided independent limited assurance for selected quantitative data. The Assurance Report is presented in English only. If there is any inconsistency or ambiguity between the English version and the Chinese version of the Sustainability Report, the English version shall prevail as the limited assured content of Deloitte. This Assurance Report is presented in the following pages.



To the Board of Directors of MTR Corporation Limited

We have been engaged by the Directors of MTR Corporation Limited (the "Company") to perform a limited assurance engagement in relation to certain sustainability performance data (the "Subject Matter") for the year ended 31 December 2016 (the "Reporting Period") and contained in its Sustainability Report 2016 (the "Sustainability Report"), as set out below.

Subject Matter

The details of the Subject Matter selected by the Company are as follows:

Hong Kong

Environmental Performance

GHG Emission Inventory

- Total GHG Emissions (tonnes CO₂e)
 - Scope 1 (tonnes CO₂e)
 - Scope 2 (tonnes CO₂e)
 - Scope 3 (tonnes CO₂e)
- GHG Emissions - Corporate Support Functions and Main Office Buildings (tonnes CO₂e)

- GHG Emissions - Transport Operations (tonnes CO₂e)
 - Scope 1 (tonnes CO₂e)
 - Scope 2 (tonnes CO₂e)
 - Scope 3 (tonnes CO₂e)
- GHG Emissions - Network Expansion (tonnes CO₂e)
- GHG Emissions - Properties and Other Businesses (tonnes CO₂e)
 - Scope 1 (tonnes CO₂e)
 - Scope 2 (tonnes CO₂e)
 - Scope 3 (tonnes CO₂e)

Waste Management

- Metals recycled from railway operations (tonnes)
- Total hazardous waste (tonnes)
- Total hazardous waste in liquid (litres)

Social Performance

- Total employees in Hong Kong (number)
- Voluntary staff turnover rate (%)
- Vacant posts filled internally either by promotion or transfer (%)
- Percentage of employees trained by management (%)
- Training days per employee (days)
- Training days per employee by gender (days)
- Training days per employee by management (days)
- Total staff training days (man-day)

Safety Performance

- Passenger and Public Safety - Fatality performance
 - Heavy Rail
 - Light Rail
 - Bus
- Passenger and Public Safety - Number of injuries requiring hospitalisation per 100 million passenger journeys performance
 - Heavy Rail
 - Light Rail
 - Bus

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- Staff Safety - Fatality performance
 - Corporate support function
 - Operations division
 - Projects division
 - Property division
- Staff Safety - Lost time injuries per 100,000 man-hour performance
 - Corporate support function
 - Operations division
 - Projects division
 - Property division
- Contractor Safety - Fatality performance
 - Corporate support function
 - Operations railway
 - Hong Kong property development and investment projects
 - Hong Kong investment property
 - Hong Kong management property
 - Hong Kong project construction - railway extension projects
- Contractor Safety - Reportable accidents per 100,000 man-hour performance
 - Corporate support function
 - Operations railway
 - Hong Kong property development and investment projects
 - Hong Kong investment property
 - Hong Kong management property
 - Hong Kong project construction - railway extension projects

Supply Chain Management

- Number of suppliers by geographical region (number)

Mainland of China and International Business

(The Subject Matter, presented as follows, applies to

- Shenzhen Metro Line 4, managed by MTR Corporation (Shenzhen) Limited ("MTR(SZ)");
- Stockholm Metro, with operations and/or maintenance works being performed by MTR Tunnelbanan AB and MTR Tech AB (collectively named as "Stockholm Metro"); and
- Melbourne's metropolitan rail services, managed by Metro Trains Melbourne Pty. Ltd. ("MTM"),

unless otherwise specified.)

Environmental Performance

GHG Emission Inventory

- Total GHG Emissions (tonnes CO₂e)
 - Scope 1 (tonnes CO₂e)
 - Scope 2 (tonnes CO₂e)
- Total electricity consumption – heavy rail (MWh)
- Total water consumption (m³) (only applicable to MTR(SZ) and MTM)

Waste Management

- Metals recycled from railway operations (tonnes)
- Total hazardous waste (tonnes) (only applicable to MTR(SZ) and Stockholm Metro)
- Total hazardous waste in liquid (litres) (only applicable to MTR(SZ) and Stockholm Metro)

Social Performance

- Total employees (number)
- Total employees by gender (number)
- Total employees by employment type (number)
- Total employees by age (number)
- Voluntary staff turnover rate (%)
- Voluntary staff turnover rate by gender (%)
- Voluntary staff turnover rate by age (%)
- Percentage of employees trained by gender (%) (only applicable to MTR(SZ) and Stockholm Metro)
- Percentage of employees trained by management (%) (only applicable to MTR(SZ) and Stockholm Metro)
- Training days per employee (days)
- Training days per employee by gender (days)
- Training days per employee by management (days)

Safety Performance

- Passenger and Public Safety - Fatality performance
- Passenger and Public Safety - Number of injuries per million passenger journeys performance
- Staff Safety - Fatality performance
- Staff Safety - Lost time injuries per 100,000 man-hour performance
- Contractor Safety - Fatality performance
- Contractor Safety - Lost time injuries per 100,000 man-hour performance (only applicable to MTR(SZ) and MTM)

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Train Service Performance

- Train punctuality (%)
- Train reliability (revenue car-km/ incident)
- Train service delivery (%)

Supply Chain Management

- Number of suppliers by geographical region (only applicable to Stockholm Metro and MTM)

Reporting criteria

The Subject Matter is presented in accordance with the "Performance Metrics" and "Data Management" set out on Page 170 and in the Appendix III of the Company's Sustainability Report which is contained in its website (in PDF) respectively (the "Reporting Criteria").

Responsibilities

Deloitte Touche Tohmatsu

It is our responsibility to express a conclusion on the Subject Matter based on our work performed and to report our conclusion solely to you, as a body, in accordance with our agreed terms of engagement and for no other purpose. We do not assume responsibility or accept liability to any other person for the contents of this report.

MTR Corporation Limited

The Directors are responsible for the preparation and presentation of the Subject Matter in accordance with the Reporting Criteria. This responsibility includes designing, implementing and maintaining internal controls relevant to the preparation and presentation of the Subject Matter, applying an appropriate basis of preparation, making estimates that are reasonable in the circumstances and ensuring the accuracy and completeness of the Subject Matter.

Reporting Framework

We conducted our work in accordance with the International Standard on Assurance Engagements 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information, and the International Standard on Assurance Engagements 3410, Assurance Engagements on Greenhouse Gas Statements (the "Standards"), issued by the International Auditing and Assurance Standards Board. The Standards require that we comply with ethical requirements, and plan and perform the engagement to obtain

limited assurance as to whether any matters have come to our attention that cause us to believe that the Subject Matter does not comply in all material respects with the Reporting Criteria.

Objectives

The overall objectives of our procedures were to assess:

- Whether the Subject Matter was prepared, in all material respects, in accordance with the Reporting Criteria;
- The consistency of the information presented with the findings of our work.

Procedures performed

Our work comprised the following limited procedures:

- Interviews with relevant management and personnel involved in providing information relating to the Subject Matter for inclusion in the Sustainability Report;
- Sample testing of documentary evidence at the Company's corporate-level and subsidiary-level;
- Analytical procedures; and,
- Recalculation.

We have not performed any procedures in relation to other data included in the Sustainability Report. In addition, our work performed is not for the purposes of expressing an opinion on the effectiveness of the Company's internal controls.

Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that caused us to believe that: 1) the Subject Matter has not been prepared, in all material respects, in accordance with the Reporting Criteria, and 2) that relevant sections in the Sustainability Report relating to the Subject Matter are not consistent with the findings of our work.

Deloitte Touche Tohmatsu

Certified Public Accountants
Hong Kong
9 May 2017

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PERFORMANCE DATA TABLES

The tables in this sub-section provide data on key economic, environmental, social and safety performance trends for our businesses in Hong Kong, as well

as sustainability performance trends for subsidiaries outside of Hong Kong. The tables contain links to more information about the KPIs in the body of this report.

Consolidated Financial and Economic Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Turnover	HK\$ million		35,739	38,707	40,156	41,701	45,189
Total EBITDA	HK\$ million		12,895	14,399	15,423	16,120	17,313
Profit on property developments	HK\$ million		3,238	1,396	4,216	2,891	311
Profit for the year attributable to equity shareholders from underlying businesses before property developments (recurrent business)	HK\$ million		6,914	7,437	8,024	8,565	8,916
Reported net profit attributable to equitable shareholders	HK\$ million		13,375	13,025	15,606	12,994	10,254
Dividends per share	HK\$		0.79	0.92	1.05	1.06	1.07
Total assets	HK\$ million		206,687	215,823	227,152	241,103	257,340
Loans, other obligations and bank overdrafts	HK\$ million		23,577	24,511	20,507	20,811	39,939
Total equity attributable to equity shareholders of the company	HK\$ million		142,904	152,577	163,325	170,055	149,461
EBITDA margin (including railway subsidiaries outside of Hong Kong)	%	Economic and Financial Performance Highlight	36.1	37.2	38.4	38.7	38.3
EBITDA margin (excluding railway subsidiaries outside of Hong Kong)	%		53.6	53.4	53.1	53.3	53.9
Return on average equity attributable to equity shareholders arising from underlying businesses	%		7.0	5.8	7.3	6.5	5.9
Net debt-to-equity ratio	%		11.0	11.8	7.6	11.3	20.2
Interest cover	times		13.0	11.5	15.2	14.4	12.7
Current tax paid							
Hong Kong profits tax paid	HK\$ million		-1,699	-1,183	-954	-1,800	-2,271
Mainland of China and overseas tax paid	HK\$ million		-100	-160	-173	-369	-355
Expenses relating to Hong Kong Transport Operations							
Energy and utilities	HK\$ million		-1,200	-1,293	-1,409	-1,482	-1,511
Maintenance and related works	HK\$ million		-1,112	-1,177	-1,361	-1,324	-1,379
Staff costs and related expenses	HK\$ million		-4,067	-4,198	-4,450	-4,906	-5,191
Stores and spares consumed	HK\$ million		-477	-514	-540	-557	-538

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Environmental Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Energy Use for Railway Operations							
Total electricity purchased	MWh		1,423,108	1,424,953	1,471,301	1,541,108	1,542,581
Heavy rail	MWh		1,369,518	1,371,918	1,417,339	1,486,014	1,487,354
Light rail and bus	MWh		53,590	53,035	53,962	55,094	55,227
Electricity consumption per revenue car-km	kWh per revenue car-km	Energy Saving Measures	4.83	4.70	4.78	4.84	4.79
Heavy rail	kWh per revenue car-km		4.82	4.69	4.77	4.83	4.78
Light rail and bus	kWh per revenue car-km		5.13	5.03	5.03	4.99	4.95
Water Consumption							
Water consumption from railway operations	m ³		841,671	846,709	851,639	870,630	754,541
Total water consumption from station cooling towers (2016 onward)	m ³	Water Consumption	n/a	n/a	n/a	n/a	187,952
Water consumption from managed and investment properties	m ³		994,540	1,214,050	1,108,946	1,152,486	1,124,603
Waste Management							
# Metals recycled from railway operations	tonnes		3,990	2,843	3,034	3,724	3,247
# Total hazardous wastes (2015 onward)	tonnes		n/a	n/a	n/a	223	186
# Total hazardous wastes in liquid (2015 onward)	litres	Waste	n/a	n/a	n/a	98,104	96,599
General wastes from railway extension projects	tonnes		26,267	58,967	187,831	83,091	89,022
Total construction wastes recycled (2014 onward)	tonnes		n/a	n/a	6,288,912	5,656,010	14,030,460
Climate Change Management							
Annual review of climate change - risks assessment and continuous risk management action	Text	Climate Change	Completed	Completed	Completed	Completed	Completed

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Environmental Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
GHG Emission Inventory							
# Total GHG emissions	tonnes CO ₂ e		1,255,123	1,359,996	1,497,435	1,343,723	1,355,381
# Scope 1	tonnes CO ₂ e		53,567	51,963	58,342	51,752	48,141
# Scope 2	tonnes CO ₂ e		1,171,763	1,242,449	1,354,625	1,258,826	1,263,952
# Scope 3	tonnes CO ₂ e		29,792	65,584	84,468	33,145	43,288
Corporate Functions and Main Office Buildings							
# Total	tonnes CO ₂ e		19,231	21,059	21,493	18,900	20,243
Scope 1	tonnes CO ₂ e		2,840	2,943	2,895	2,943	3,145
Scope 2	tonnes CO ₂ e		14,750	16,268	16,645	14,029	14,585
Scope 3	tonnes CO ₂ e		1,641	1,847	1,953	1,928	2,513
Transport Operations							
# Total	tonnes CO ₂ e		944,361	991,629	1,103,799	1,034,102	1,043,268
# Scope 1	tonnes CO ₂ e		40,709	41,183	47,116	39,311	38,082
# Scope 2	tonnes CO ₂ e	Climate Change	903,177	949,969	1,056,204	994,316	1,004,663
# Scope 3	tonnes CO ₂ e		475	476	479	475	523
Network Expansion							
# Total	tonnes CO ₂ e		30,600	67,113	86,457	35,043	42,789
Scope 1	tonnes CO ₂ e		421	433	278	274	244
Scope 2	tonnes CO ₂ e		3,097	4,143	4,804	4,705	2,959
Scope 3	tonnes CO ₂ e		27,083	62,537	81,375	30,064	39,586
Properties and other Businesses							
# Total	tonnes CO ₂ e		260,930	280,196	285,686	255,678	249,081
# Scope 1	tonnes CO ₂ e		9,598	7,404	8,053	9,224	6,670
# Scope 2	tonnes CO ₂ e		250,740	272,069	276,972	245,776	241,745
# Scope 3	tonnes CO ₂ e		593	724	661	678	666

Notes

these KPIs have been assured by Deloitte.

'n/a' represent it is not applicable under the KPI in this context.

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Social Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Total number of passenger trips	Weekday average in million	Customers - Introduction	5.07	5.25	5.46	5.56	5.59
Total number of passenger trips - Hong Kong passenger services	million		1,767	1,819	1,900	1,934	1,949
Share of franchised public transport in Hong Kong	%	About MTR Corporation	46.4	46.9	48.1	48.5	48.4
Total Workforce							
# Total employees	number		15,200	16,158	16,624	17,127	17,639
Total workforce by age							
Aged below 30	number		n/a	n/a	3,103	3,335	3,595
Aged 30-below 50	number		n/a	n/a	8,561	8,635	8,676
Aged 50 & above	number		n/a	n/a	4,960	5,157	5,368
Total workforce by gender							
Female	number	Our People	n/a	n/a	3,375	3,465	3,631
Male	number		n/a	n/a	13,249	13,662	14,008
Total workforce by employment type							
# Full time	number		n/a	n/a	16,624	17,127	17,639
Part time	number		n/a	n/a	2,507	2,698	3,010
Persons with disabilities employed	number		199	223	256	271	300
Persons with disabilities employed (%)	%		1.3	1.4	1.6	1.6	1.7
Women employees	%		19.7	20.3	20.3	20.2	20.6
Women on the Board	%	Corporate Governance	17	27	25	21	21

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KPI	Unit	Links	2012	2013	2014	2015	2016
Voluntary Staff Turnover							
# Total voluntary staff turnover rate	%		4.2	4.2	4.4	3.7	3.5
Voluntary staff turnover rate by age (2015 onward)							
Aged below 30	%		n/a	n/a	n/a	8.2	7.6
Aged 30-below 50	%		n/a	n/a	n/a	3.3	3.5
Aged 50 & above	%		n/a	n/a	n/a	1.6	0.9
Voluntary staff turnover rate by gender (2015 onward)							
Female	%		n/a	n/a	n/a	5.6	4.5
Male	%		n/a	n/a	n/a	3.2	3.2
#Vacant posts filled internally either by promotion or transfer	%	Our People	48	49	59	59	67
New Employee Hires							
New employee hires rate by age							
Aged below 30	%		n/a	n/a	n/a	n/a	35.4
Aged 30-below 50	%		n/a	n/a	n/a	n/a	5.2
Aged 50 & above	%		n/a	n/a	n/a	n/a	1.3
New employee hires rate by gender							
Female	%		n/a	n/a	n/a	n/a	14.3
Male	%		n/a	n/a	n/a	n/a	9.1
Employee Training							
Percentage of employees trained (2015 onward)							
Percentage of employees trained by gender							
Female	%		n/a	n/a	n/a	80.3	82.6
Male	%		n/a	n/a	n/a	90.6	88.1
Percentage of employees trained by management							
# Managers	%	Training and Development	n/a	n/a	n/a	92.9	76.8
# Non-managers	%		n/a	n/a	n/a	88.0	88.3

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KPI	Unit	Links	2012	2013	2014	2015	2016
Employee training days							
# Total staff training days	man-day		94,401	103,517	112,831	111,296	122,680
Management training	man-day		23,211	22,133	18,784	17,384	18,484
Operations training	man-day		71,190	81,384	94,047	93,912	104,196
# Training days per employee (overall)	days		6.3	6.5	6.9	6.6	7.1
Training days per employee by gender (2015 onward)							
# Female	days	Training and Development	n/a	n/a	n/a	4.8	5.2
# Male	days		n/a	n/a	n/a	7.1	7.5
Training days per employee by management (2015 onward)							
# Managers	days		n/a	n/a	n/a	2.4	2.3
# Non-managers	days		n/a	n/a	n/a	7.2	7.7
Charitable Contributions							
Cash donations	HK\$ '000	Investing in our Communities	3,800	6,700	15,400	8,200	13,500
Gifts in kind	HK\$ '000		17,300	27,520	20,490	19,100	22,000
Employee fundraising	HK\$ '000		399	398	274	515	362
Employee volunteering (number of projects)	number	Staff volunteering	239	239	245	255	263
Employee volunteering (number of participating headcounts)	number		5,800	6,000	6,000	6,069	6,292
Legal Compliance (Number of Convicted Cases)							
Cases of corruption	number		0	0	0	0	0
Cases involving health and safety	number		n/a	n/a	1	0	2^[1]
Cases involving labor standards	number		n/a	n/a	0	0	0
Cases involving product responsibility (including customer privacy)	number	Fair and Ethical Business	n/a	n/a	0	0	0
Cases involving working conditions	number		n/a	n/a	0	0	0
Cases involving environmental regulations							
MTR Corporation	number		0	0	2	0	0
Main contractors	number		4	4	1	2 ^[2]	2^[3]

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Social Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Customer Service Pledge items achieved							
Train service delivery (%)							
* Island, Kwun Tong, Tseung Kwan O, Tsuen Wan, South Island (since 2016), Tung Chung and Disney Resort lines and Airport Express	%		99.9	99.9	99.9	99.9	99.9
* East Rail Line (including Ma On Shan Line)	%		99.9	99.9	99.9	99.9	99.9
* West Rail Line	%		99.9	99.9	99.9	99.9	99.9
* Light Rail	%		99.9	99.9	99.9	99.9	99.9
Passenger journeys on time (%)							
* Island, Kwun Tong, Tseung Kwan O, Tsuen Wan, South Island (since 2016), Tung Chung and Disney Resort lines	%		99.9	99.9	99.9	99.9	99.9
* Airport Express	%		99.9	99.9	99.9	99.9	99.9
* East Rail Line (including Ma On Shan Line)	%		99.9	99.9	99.8	99.9	99.9
* West Rail Line	%		99.9	99.9	99.9	99.9	99.9
Train punctuality (%)							
<u>Train Service Performance</u>							
* Island, Kwun Tong, Tseung Kwan O, Tsuen Wan, South Island (since 2016), Tung Chung and Disney Resort lines	%		99.8	99.8	99.7	99.8	99.7
* Airport Express	%		99.9	99.9	99.9	99.9	99.9
* East Rail Line (including Ma On Shan Line)	%		99.9	99.9	99.9	99.9	99.9
* West Rail Line	%		99.9	99.9	99.9	99.9	99.9
* Light Rail	%		99.9	99.9	99.9	99.9	99.9
Train reliability (revenue car-km/incident)							
East Rail Line (including Ma On Shan Line) and West Rail line	revenue car-km/incident		7,113,301	4,412,228	4,747,878	7,386,248	7,327,371
Island, Kwun Tong, Tseung Kwan O, Tsuen Wan, South Island (since 2016), Tung Chung and Disney Resort lines and Airport Express	revenue car-km/incident		4,203,807	3,474,269	3,585,340	2,861,014	3,964,527

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KPI	Unit	Links	2012	2013	2014	2015	2016
Temperature and ventilation							
Trains, except Light Rail: to maintain a cool, pleasant and comfortable train environment generally at or below 26°C	%		99.9	99.9	99.9	99.9	99.9
Light Rail: on-train air-conditioning failures per month	times		0	0	0	0	0
Stations: to maintain a cool, pleasant and comfortable environment generally at or below 27°C for platforms and 29°C for station concourses, except on very hot days	%	Train Service Performance	99.9	99.7	99.9	99.9	99.9
Northwest transit service area bus service							
Service Delivery	%		99.8	99.5	99.7	99.7	99.7
Supply Chain							
By continent (2015 onward)							
# Number of suppliers in Africa	number		n/a	n/a	n/a	0	0
# Number of suppliers in Asia	number		n/a	n/a	n/a	1,865	1,792
# Number of suppliers in Europe	number		n/a	n/a	n/a	154	143
# Number of suppliers in North America	number	Supply Chain	n/a	n/a	n/a	29	29
# Number of suppliers in Oceania	number			n/a	n/a	26	24
# Number of suppliers in South America	number		n/a	n/a	n/a	0	0

Notes

[1] One case involved that the water quality in Le Prestige swimming pool did not meet the required bacteriological quality standard and the Corporation was fined HKD2,500. The other case involved the violation of fire regulations at No.8 Clear Water Bay Road and the Corporation was fined HKD4,000.

[2] Figure restated.

[3] One case related to water pollution control involving a contractor of the Express Rail Link Project, who was fined HKD20,000.

The other case related to the violation of construction noise permit of a worker of a contractor of the Shatin-to-Central Link who was fined HKD15,000.

these KPIs have been assured by Deloitte.

* these KPIs have been assured separately by Bureau Veritas Certification for the year 2016.

'n/a' represent it is not applicable under the KPI in this context.

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Safety Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Passenger and public safety							
Fatality							
Heavy rail							
	Target	number	0	0	0	0	0
#	Performance	number	0	2	0	1	0
Light rail							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	1	1^[4]
Bus							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	0	1^[5]
No. of injuries requiring hospitalisationi per 100 million passenger journeys							
Heavy rail							
	Target	number	9.72	9.72	10.02	9.72	9.48
#	Performance	number	9.72	10.25	8.12	7.91	8.39
Light rail							
	Target	number	8.59	11.50	12.08	12.67	13.66
#	Performance	number	13.76	15.73	8.61	14.76	14.55
Bus							
	Target	number	9.60	9.12	8.66	7.48	6.88
#	Performance	number	5.07	4.91	4.68	0.00	6.29

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Safety Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Staff safety							
Fatality							
Corporate support functions							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	0	0
Operations Division							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	0	0
Projects Division							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	0	0
Property Division							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	0	0
China and International Business Division (up to 2015)							
	Target	number	0	0	0	0	n/a ^[6]
	Performance	number	0	0	0	0	n/a ^[6]

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KPI	Unit	Links	2012	2013	2014	2015	2016
Lost time injuries per 100,000 man hours							
Corporate support functions							
	Target	number	0.10	0.14	0.13	0.13	0.15
#	Performance	number	0.19	0.23	0.17	0.17	0.09
Operations Division							
	Target	number	0.49	0.49	0.50	0.45	0.44
#	Performance	number	0.54	0.67	0.40	0.56	0.47
Projects Division							
	Target	number	0.10	0.10	0.10	0.10	0.10
#	Performance	number	0.07	0.08	0.11	0.11	0.25
Property Division							
	Target	number	0.33	0.30	0.30	0.30	0.30
#	Performance	number	0.24	0.29	0.10	0.14	0.09
China and International Business Division (up to 2015)							
	Target	number	0.00	0.00	0.00	0.00	n/a^[6]
	Performance	number	0.00	0.00	0.00	0.00	n/a^[6]

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Safety Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Contractor Safety							
Fatality							
Corporate Support Functions							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	0	0
Operating railway							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	0	0
Hong Kong property development and investment projects							
	Target	number	0	0	0	0	0
#	Performance	number	0	1	1	0	0
Hong Kong investment property							
	Target	number	0	0	0	0	0
#	Performance	number	0	1	0	0	0
Hong Kong management property							
	Target	number	0	0	0	0	0
#	Performance	number	0	0	0	1	0
Hong Kong project construction - railway extension projects							
	Target	number	0	0	0	0	0
#	Performance	number	0	2	1	2	1^[7]
China and International Business Division (up to 2015)							
	Target	number	0	0	0	0	n/a^[6]
	Performance	number	0	0	0	0	n/a^[6]

Staff and Contractor Safety

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Safety Performance

KPI	Unit	Links	2012	2013	2014	2015	2016
Reportable accidents per 100,000 man-hour							
Corporate support functions							
	Target	number	0.16	0.18	0.17	0.23	0.15
#	Performance	number	0.18	0.17	0.08	0.15	0.22
Operating railway							
	Target	number	0.21	0.21	0.21	0.21	0.21
#	Performance	number	0.21	0.24	0.16	0.16	0.16
Hong Kong project construction - railway extension projects							
	Target	number	0.30	0.30	0.30	0.30	0.30
#	Performance	number	0.47	0.56	0.57	0.48	0.49
Hong Kong property development and investment projects							
	Target	number	0.38	0.38	0.35	0.30	0.30
#	Performance	number	0.17	0.04	0.06	0.06	0.03
Hong Kong investment property							
	Target	number	0.20	0.22	0.22	0.22	0.22
#	Performance	number	0.15	0.16	0.15	0.08	0.05
Hong Kong management property							
	Target	number	0.20	0.22	0.22	0.22	0.22
#	Performance	number	0.17	0.13	0.13	0.15	0.12
China and International Business Division (up to 2015)							
	Target	number	0.00	0.00	n/a	0.00	n/a ^[6]
	Performance	number	0.00	0.00	n/a	0.00	n/a ^[6]

Notes

- [4] A man and woman on a bicycle went through the red traffic light signal, and were hit by an approaching light rail vehicle although the driver has applied emergency brake and sounded the horn. The man was certified after arriving at the hospital.
- [5] A woman dashed out at the pedestrian crossing while the red traffic light for pedestrian was on. An approaching bus hit the woman even though the Bus Captain has applied the brake immediately. The woman was admitted to the hospital but passed away the day after.
- [6] Due to the change of the organization structure, this KPI is not reported separately.
- [7] At the Shatin to Central Link network expansion project site, a worker fell from a height into water at a cofferdam and was certified dead later.
- # these KPIs have been assured by Deloitte.
- 'n/a' represent it is not applicable under the KPI in this context.

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		Shenzhen Metro Line 4			Melbourne's Metropolitan Rail Services			Stockholm Metro			TfL Rail/Elizabeth Line		
		MTR[SZ]			MTM			MTRS ^[8]			MTR Crossrail ^[9]		
KPI	Unit	2014	2015	2016	2014	2015	2016	2014	2015	2016	2015	2016	
Environmental Performance													
#	Total electricity consumption - Heavy rail	MWh	73,987	89,879	88,768	437,821	450,867	452,093	182,288	188,147	159,891	n/a	43,769
#	Total water consumption from railway operation	m ³	183,813	185,935	195,709	143,890	171,078	207,249	n/a	n/a	n/a^[10]	n/a	n/a
#	Metals recycled	tonnes	7.5	9.4	29.2	30.1	45.0	53.6	278.0	365.0	309.0	n/a	n/a
#	Total hazardous wastes (2015 onward)	tonnes	8.1	18.1	28.8	n/a	n/a	n/a^[10]	338.0	46.2	49.0	n/a	n/a
#	Total hazardous wastes in liquid (2015 onward)	litres	n/a	n/a	6.5^[11]	n/a	n/a	n/a^[10]	n/a	236	145	n/a	n/a
#	Total GHG emissions	tonnes CO ₂ e	77,635	85,601	84,542	450,556	520,975	507,072	280 ^[12]	264 ^[12]	190	n/a	19,284
#	Scope 1 emissions	tonnes CO ₂ e	289	315	310	661	464	5,204	280 ^[12]	264 ^[12]	190	n/a	62
#	Scope 2 emissions	tonnes CO ₂ e	77,346	85,286	84,232	449,895	520,511	501,868	n/a	n/a	n/a	n/a	19,222
Social Performance													
Total Workforce													
#	Total employees	number	1,331	1,347	1,358	4,521	4,784	5,116^[13]	2,519	2,718	3,160^[14]	n/a	859^[15]
Total workforce by gender													
#	Female	number	402	396	383	834	950	1,104^[13]	739	807	877^[14]	n/a	78
#	Male	number	929	951	975	3,687	3,834	4,012^[13]	1,780	1,911	2,283^[14]	n/a	209
	Unspecified	number	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		44
Total workforce by age													
#	Aged below 30	number	839	828	774	495	534	619^[13]	442	499	558^[14]	n/a	n/a
#	Aged 30 - below 50	number	488	515	579	2,200	2,317	2,508^[13]	1,129	1,214	1,379^[14]	n/a	n/a
#	Aged 50 & above	number	4	4	5	1,826	1,933	1,989^[13]	948	1,005	1,223^[14]	n/a	n/a

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			MTR[SZ]			MTM			MTRS ^[8]			MTR Crossrail ^[9]	
KPI	Unit		2014	2015	2016	2014	2015	2016	2014	2015	2016	2015	2016
Total workforce by employment type													
#	Full time	number	1,330	1,347	1,358	4,060	4,260	4,431	1,797	1,805	2,252	n/a	n/a
#	Part time	number	1	0	0	461	524	576	722	913	908	n/a	n/a
Voluntary Staff Turnover													
#	Total voluntary staff turnover rate	%	8.3	11.4	11.9	4.1	n/a	5.1	4.2	5.0	3.6	n/a	n/a
Voluntary staff turnover rate by age (2016 onward)													
#	Aged below 30	%	n/a	n/a	16.7	n/a	n/a	4.9	n/a	n/a	8.5	n/a	n/a
#	Aged 30 - below 50	%	n/a	n/a	5.4	n/a	n/a	5.2	n/a	n/a	4.5	n/a	n/a
#	Aged 50 & above	%	n/a	n/a	0	n/a	n/a	5.1	n/a	n/a	1.7	n/a	n/a
Voluntary staff turnover rate by gender (2016 onward)													
#	Female	%	n/a	n/a	9.7	n/a	n/a	5.3	n/a	n/a	3.4	n/a	n/a
#	Male	%	n/a	n/a	12.6	n/a	n/a	5.1	n/a	n/a	3.7	n/a	n/a
	Vacant posts filled internally either by promotion or transfer	%	92.0	28.6	22.1	46.0	n/a	33.5	n/a	n/a	17.0	n/a	n/a
Employee Training													
Percentage of employees trained by gender (2016 onward)													
#	Female	%	n/a	n/a	96.9	n/a	n/a	n/a^[10]	n/a	n/a	54.3	n/a	n/a
#	Male	%	n/a	n/a	96.9	n/a	n/a	n/a^[10]	n/a	n/a	55.8	n/a	n/a
Percentage of employee trained by management (2016 onward)													
#	Managers	%	n/a	n/a	96.4	n/a	n/a	n/a^[10]	n/a	n/a	84.8	n/a	n/a
#	Non-managers	%	n/a	n/a	96.9	n/a	n/a	n/a^[10]	n/a	n/a	54.0	n/a	n/a
#	Training days per employee	days	1.8	1.8	8.9	13.0	13.8	6.2	2.8	3.0	2.4	n/a	n/a
Training days per employee by gender (2016 onward)													
#	Female	days	n/a	n/a	5.4	n/a	n/a	6.2	n/a	n/a	2.5	n/a	n/a
#	Male	days	n/a	n/a	10.3	n/a	n/a	6.2	n/a	n/a	2.4	n/a	n/a

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		MTR[SZ]			MTM			MTRS ^[8]			MTR Crossrail ^[9]		
KPI	Unit	2014	2015	2016	2014	2015	2016	2014	2015	2016	2015	2016	
Training days per employee by management													
#	Managers	days	n/a	n/a	6.2	n/a	n/a	2.0	n/a	n/a	3.2	n/a	n/a
#	Non-managers	days	n/a	n/a	9.0	n/a	n/a	7.1	n/a	n/a	2.4	n/a	n/a
Operations Performance													
	Total number of passenger trips	million	169	189	199	222	230	233	330	338	349	n/a	n/a
	Passenger journeys on time	%	99.99	99.99	99.99	91.40	n/a	n/a	n/a	n/a	n/a	n/a	n/a
#	Train punctuality	%	99.86	99.91	99.95	92.81	92.51	91.99	96.10	97.70	97.70	n/a	94.10
#	Train reliability	revenue car-km/incident	15,852,883	19,565,412	4,986,119	63,372	69,738	27,688	50,783	52,562 ^[12]	51,939	n/a	n/a
#	Train service delivery	%	99.95	99.95	99.96	98.83	98.75	98.61	99.00	99.40	99.40	n/a	96.90
Charitable Contributions													
	Cash donations	HK\$ '000	0	0	0	526,415	184,190	61,972	150	115	116	n/a	n/a
Legal Compliance (Number of Convicted Cases)													
	Cases of corruption	number	0	0	0	0	0	0	0	0	0	n/a	0
	Cases involving health and safety	number	0	0	0	0	0	0	0	0	0	n/a	0
	Cases involving labor standards	number	0	0	0	0	0	0	0	0	0	n/a	0
	Cases involving product responsibility (including customer privacy)	number	0	0	0	0	0	0	0	0	0	n/a	0
	Cases involving working conditions	number	0	0	0	0	0	0	0	0	0	n/a	0

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		MTR[SZ]			MTM			MTRS ^[8]			MTR Crossrail ^[9]	
KPI	Unit	2014	2015	2016	2014	2015	2016	2014	2015	2016	2015	2016
Cases involving environmental regulations												
MTR subsidiary	number	0	0	0	0	0	0	0	0	0	n/a	0
Main contractors	number	0	0	0	0	0	0	0	0	0	n/a	n/a
Supply Chain												
By continent (2016 onward)												
#	Number of suppliers in Africa	n/a	n/a	0 ^[10]	n/a	n/a	0	n/a	n/a	0	n/a	n/a
#	Number of suppliers in Asia	n/a	n/a	547 ^[10]	n/a	n/a	1	n/a	n/a	1	n/a	n/a
#	Number of suppliers in Europe	n/a	n/a	0 ^[10]	n/a	n/a	12	n/a	n/a	290	n/a	n/a
#	Number of suppliers in North America	n/a	n/a	0 ^[10]	n/a	n/a	4	n/a	n/a	1	n/a	n/a
#	Number of suppliers in Oceania	n/a	n/a	0 ^[10]	n/a	n/a	990	n/a	n/a	0	n/a	n/a
#	Number of suppliers in South America	n/a	n/a	0 ^[10]	n/a	n/a	0	n/a	n/a	0	n/a	n/a
Safety Targets and Performance												
Passenger and Public Safety												
Fatality												
	Target	0	0	0	0	0	0	0	0	0	n/a	0
#	Performance	0	0	0	8	2	5 ^[16]	1	3	0	n/a	0
No. of injuries per million passenger journeys												
	Target	1.47	1.47	1.47	2.00	2.00	2.00	0.98	1.40	1.35	n/a	3.03
#	Performance	1.07	1.11	1.21	2.32	2.07	1.01	1.49	1.47	1.15	n/a	2.75

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		MTR[SZ]			MTM			MTRS ^[8]			MTR Crossrail ^[9]		
KPI	Unit	2014	2015	2016	2014	2015	2016	2014	2015	2016	2015	2016	
Staff Safety													
Fatality													
	Target	number	0	0	0	0	0	0	0	0	0	n/a	0
#	Performance	number	0	0	0	0	0	0	0	0	0	n/a	0
Lost time injuries per 100,000 man-hour													
	Target	number	0.27	0.26	0.25	0.60	0.50	0.50	0.63	0.60	0.60	n/a	0.70
#	Performance	number	0.18	0.21	0.08	0.61	0.52	0.35	0.46	0.32	0.29	n/a	0.86
Contractor Safety													
Fatality													
	Target	number	0	0	0	0	0	0	0	0	0	n/a	0
#	Performance	number	0	0	0	0	0	0	0	0	0	n/a	0
Lost time injuries per 100,000 man-hour													
	Target	number	0.45	0.44	0.42	0.40	0.40	0.40	n/a	n/a	n/a	n/a	n/a^[17]
#	Performance	number	0.07	0.12	0.23	0.38	0.22	0.08	n/a	n/a	n/a^[18]	n/a	0.33

Notes

[8] Environmental KPIs include the activities in MTR Tunnelbanan AB and MTR Tech AB of the reporting year; KPIs relate to human resources, comprising of staff numbers, staff trainings and staff safety are the aggregated staff number in MTR Tunnelbanan AB, MTR Tech AB and MTR Nordic AB; KPIs relate to service performance, comprising of train punctuality, train reliability and train service delivery reflect the performance of Stockholm Metro which is operated by MTR Tunnelbanna AB.

[9] KPIs for MTR Crossrail are not reported before 2016 since it only started operations on 31 May 2015. Year 2016 is the first full year of operations for reporting period and all the reported KPIs are not assured by Deloitte.

[10] These KPIs are not assured by Deloitte.

[11] This KPI is presented in tonnes.

[12] Figures restated.

[13] The KPI includes both full-time and part-time employees.

[14] The KPI includes full-time, part-time employees and contractors.

[15] The KPI includes contractors.

[16] Two cases were caused by trespassing and resulted with three fatalities. One case was related to two females in a motor vehicle, which was drove over an operating level crossing and struck by an express passenger train.

[17] MTR Crossrail does not set target for contractor injuries at the moment.

[18] MTRS does not monitor contractor injuries because this KPI is not relevant to its business nature needs.

these KPIs have been assured by Deloitte.

'n/a' represent it is not applicable under the KPI in this context.

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NP360 Cable Car

KPI	Unit	2016
Total Workforce		
Total employees	number	378^[19]
Total workforce (full-time) by age		
Aged below 30	number	95
Aged 30-below 50	number	165
Aged 50 & above	number	32
Total workforce (full-time) by gender		
Female	number	124
Male	number	168
Total workforce by employment type		
Full-time	number	292
Part-time	number	86
Operation Performance		

KPI	Unit	2016
Cable car system reliability	%	99.87
Safety Targets and Performance		
Customer Safety		
Fatality		
Target	number	0
Performance	number	0
Number of injuries per 100,000 visits		
Target	number	0.31
Performance	number	0.12
Staff Safety		
Fatality		
Target	number	0
Performance	number	0
Number of injuries per 100,000 manhours		
Target	number	1.79
Performance	number	0.99
Contractor Safety		
Fatality		
Target	number	0
Performance	number	0
Number of injuries per 100,000 manhours		
Target	number	1.64
Performance	number	2.35

Notes

[19] The KPI includes both full-time and part-time employees.

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CoMET BENCHMARKING RESULTS 2015

The Community of Metros (CoMET) programme collects data from large metro system operators around the world in order to compare performance and improve standards across the industry. The 2016 benchmarking exercise assessed data for 2015 for 17 metro systems from 16 cities including Beijing, Berlin, Delhi, Guangzhou, Hong Kong, London, Mexico City, Madrid, Moscow, New York, Paris, Santiago, Singapore, Shanghai, São Paulo and Taipei. Performance is measured across six categories, including growth and learning, customers, internal processes, safety and security, financial performance and environmental performance.

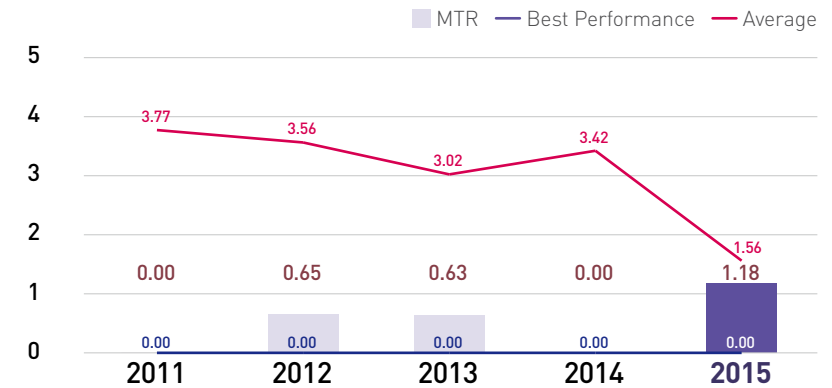
We have participated in the CoMET programme for years to benchmark our railway performance and seek further improvement.

Learn more...

CoMET and Nova are metro benchmarking groups currently comprising 32 large and medium-sized metro systems from 30 cities. The groups are jointly owned and steered by their members, and are facilitated by the Railway and Transport Strategy Centre (RTSC) at Imperial College London.

Safety

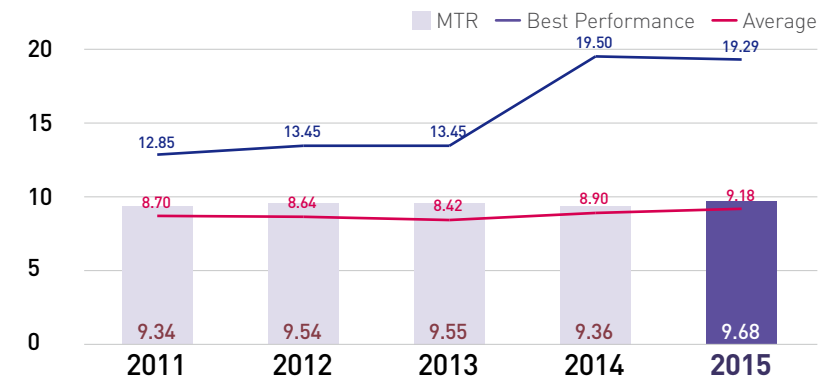
DEATHS FROM ACCIDENTS PER BILLION PASSENGER JOURNEYS* — a measure of passenger safety



*Please note that this KPI is slightly different from Fatalities per billion passenger journeys, which is the KPI that we reported in previous years.

Staff

CAR KM PER STAFF AND CONTRACTOR HOURS



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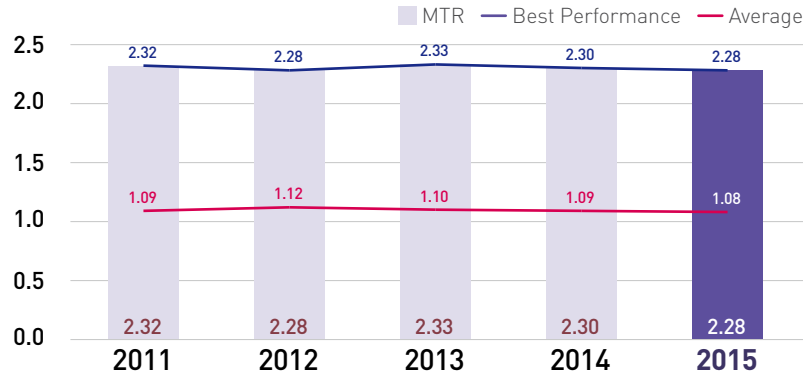
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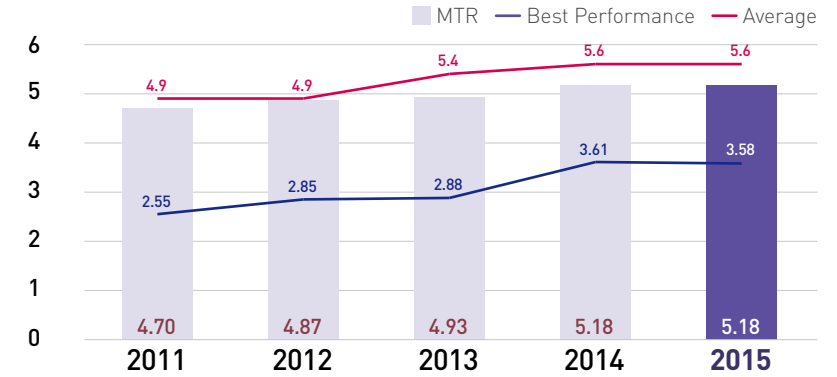
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Financial performance

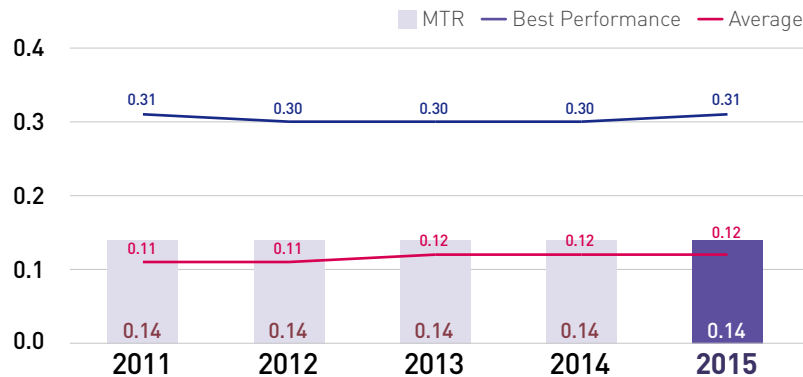
TOTAL COMMERCIAL REVENUE PER OPERATING COST — a measure of capacity provision and utilisation



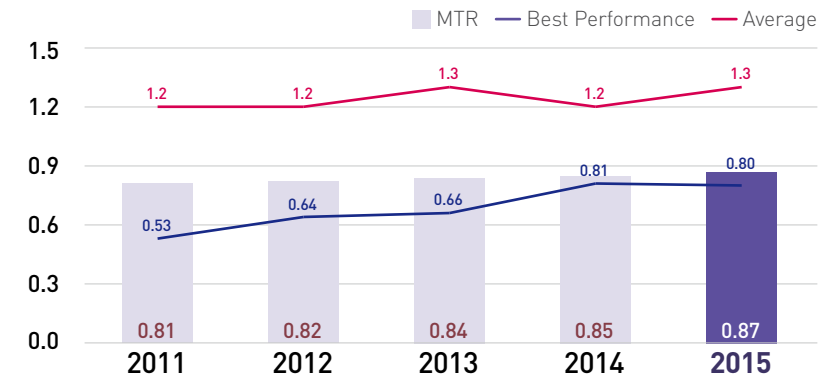
OPERATING COSTS PER CAR KM (US\$PPP)



FARE REVENUE PER PASSENGER KM (US\$PPP) — a measure of the level of our fares



OPERATING COSTS PER PASSENGER JOURNEYS (US\$PPP)



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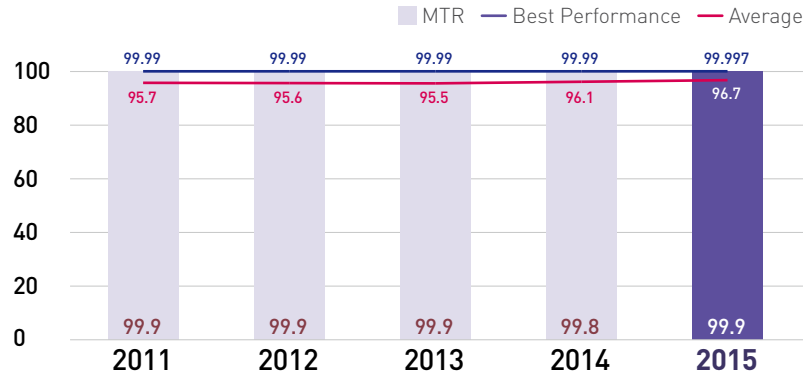
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Performance Metrics

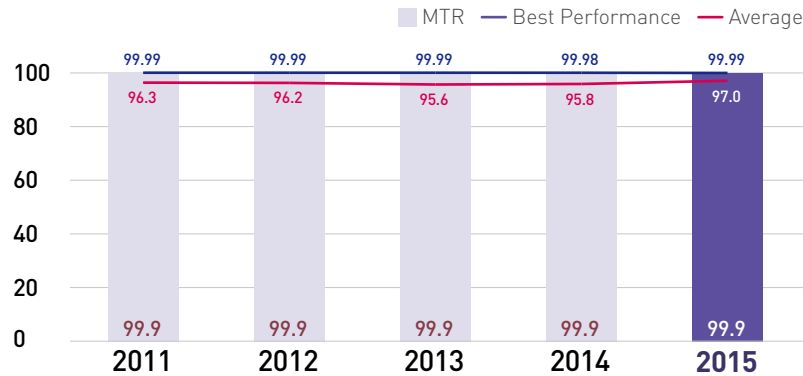
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Customer service

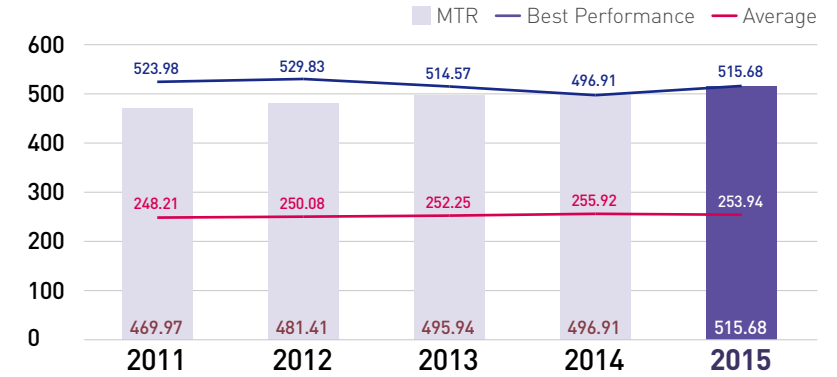
% PASSENGER JOURNEYS ON TIME — a measure of service performance



% TRAIN TRIPS ON TIME — a measure of service performance



CAPACITY KM PER ROUTE KM — a measure of asset utilisation



Definitions

Passenger journeys — the total number of passenger trips on our trains during the year

Passenger km — the total number of kilometres travelled by passengers on our trains during the year

Car km — the total number of kilometres which were operated by our trains in revenue (passenger carrying) service during the year

MENU

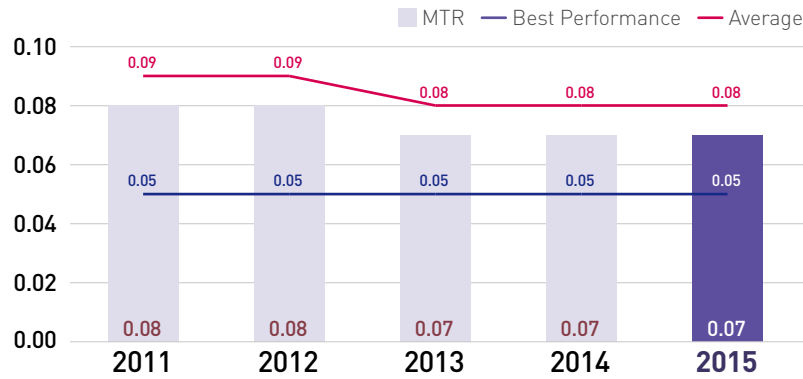
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Performance Metrics

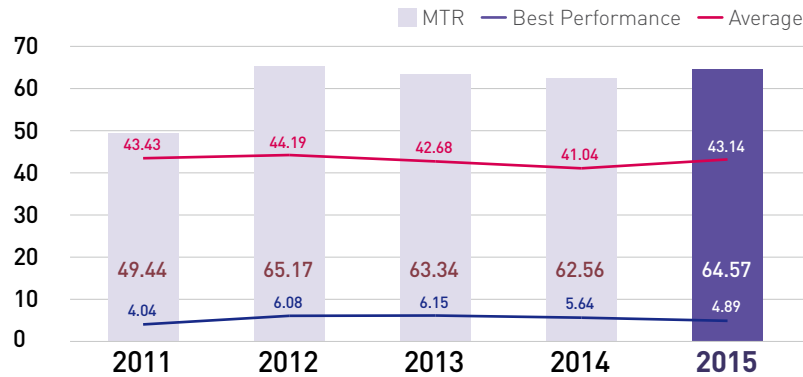
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Environment

TOTAL ENERGY CONSUMED PER PASSENGER KM — a measure of energy efficiency



CO₂ PER PASSENGER KM — a measure of contribution to climate change



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APPENDICES

Please access the follow documents online for details:

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