

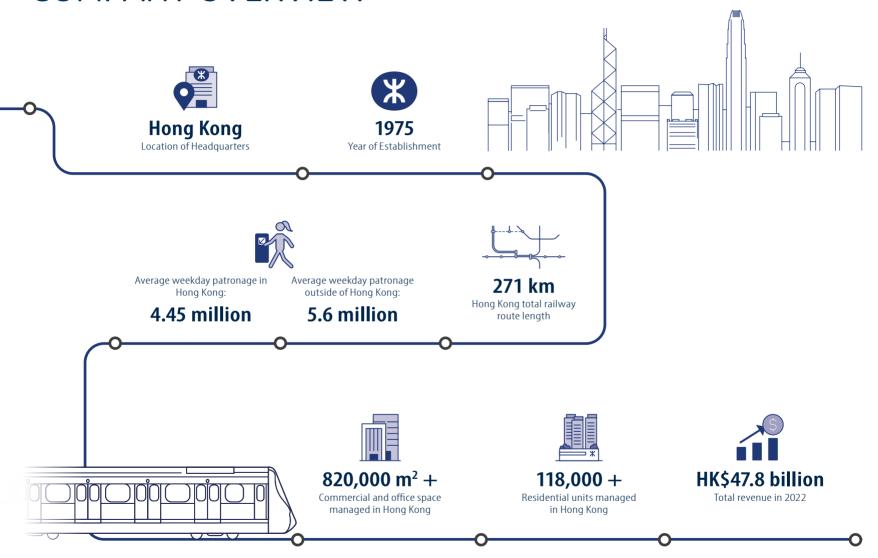


# **MOVING SUSTAINABLY**

Sustainability Report 2022

**Highlights** 

## **COMPANY OVERVIEW**



### MESSAGES FROM CHAIRMAN AND CEO

We have clearly defined our long term environmental, social and governance (ESG) strategy, with three objectives, ten commitments and a set of key performance indicators. From an ESG governance perspective, we revamped our Board Committee structure in early 2022. Our Board also approved an ESG investment framework with specific funding allocated to support our ESG goals, and updated our Board Diversity Policy to include a gender diversity target for the Board.

We are committed to setting science-based carbon reduction targets for the year 2030 for our railway and property businesses in Hong Kong, with the longer-term goal of achieving carbon neutrality by 2050. These 2030 targets have been submitted to the Science Based Targets initiative for validation. In addition, we have implemented the "Legacy Train Revitalisation Programme" to revitalise and upcycle our retired trains and their components to give them a second life.

In 2022, we launched a brand-new "MTR • Care" app to facilitate the travel needs of the elderly and passengers with special needs. We also continued to offer approximately HK\$2.1 billion in on-going fare concessions to customers.

To foster innovation, we have signed several agreements and Memoranda of Understanding with local universities and business partners to promote the application of innovative technology in railway and other services to build a smart and low-carbon community.

We are very concerned about the two train incidents in late 2022 and have carried out detailed investigations into each of them. We are in the process of reviewing our asset management and maintenance regime, making every effort to eliminate the potential risk of similar incidents.

ESG is a core part of our Corporate Strategy. We shall continue to demonstrate our leadership in ESG by embedding sustainability considerations into our business and operations to create long-term and sustainable value for all the communities we serve.

**Dr Rex Auyeung Pak-kuen** *Chairman*Hong Kong



Opened in May 2022, the East Rail Line extended its service to Hong Kong Island, increasing both options and convenience for our passengers commuting between Hong Kong Island and the New Territories.

During the year, we continued to implement various green initiatives including our large-scale chiller replacement project and installation of solar power facilities to reduce carbon emissions. Upon completion, the solar power system at Pat Heung Depot will be the largest flexible solar power system on a single building in Hong Kong. We also attained BEAM Plus Provisional Gold accreditation for our proposed Tung Chung East and Tung Chung West stations. We are working with The Hong Kong University of Science and Technology to develop a tool to calculate the embodied carbon of our new railway development projects.

In terms of our social objectives, we expanded our traditional safety month to a year-long Corporate Safety Campaign to reinforce our safety-first culture. We launched our first-ever Social Inclusion Week for our Hong Kong colleagues to raise the awareness of social inclusion among our staff.

Once again, MTR has been selected as a constituent of the Dow Jones Sustainability Asia Pacific Index, FTSE4Good Index Series and the Hang Seng Corporate Sustainability Index. We are also included in S&P Global's "The Sustainability Yearbook" for the fourth consecutive year. In addition, we are commended as one of the top 100 Chinese listed companies in the New York Stock Exchange, Nasdaq, and Hong Kong Stock Exchange, with the highest ranking on ESG and low carbon emissions, in the research paper "2022 Carbon Rating Report of China's 100 Overseas Listed Companies".

As the world gradually gets back to normal in 2023, with a notable number of new extension projects on the horizon, I am confident that we will continue to achieve greater successes together.

**Dr Jacob Kam Chak-pui** *Chief Executive Officer*Hong Kong





#### SUSTAINABILITY AT MTR

Our Sustainability Website



At MTR, we aim to be an internationally-recognised company that connects and grows communities with caring, innovative and sustainable services. The Board-level Environmental & Social Responsibility Committee provides strategic oversight of the Corporation's environmental and social strategy and investments. The Committee is also responsible for tracking performance against the Corporation's environmental and social key performance indicators ("KPIs") and reporting to the Board on these issues.

We adopt a combined approach to disclosure of our sustainability management approach and performance. Long standing information such as our management approach to the identified material sustainability issues is available on our Sustainability Website, while annual updates on sustainability-related initiatives, performance and changes, together with our Task Force on Climate-related

Financial Disclosures (TCFD) disclosures, are communicated through our annual Sustainability Report. The Website and the Report complement information available from other publicly accessible sources such as our Annual Report and together explain how sustainability is considered and integrated into our business strategies and decision-making processes.

This pamphlet provides the highlights of the Corporation's achievements in 2022 in our three environmental and social objectives. Please visit our Sustainability Website at <a href="https://www.mtr.com.hk/sustainability/en/home.html">https://www.mtr.com.hk/sustainability/en/home.html</a> for more information. We value your feedback on our sustainability performance and disclosures. Please send your views and comments to <a href="main.com.hk">sdmngr@mtr.com.hk</a> or via the MTR website <a href="http://www.mtr.com.hk/en/customer/main/contact\_us.html">http://www.mtr.com.hk/en/customer/main/contact\_us.html</a>.

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## MTR'S ENVIRONMENTAL AND SOCIAL OBJECTIVES

With our corporate purpose being to "Keep Cities Moving", we strive to connect and grow communities with inclusive, innovative and sustainable services and have set forth three environmental and social objectives ("E&SO") which are both material to our business and to society.



#### **Environmental and Social Objective 2:**

#### **Advancement & Opportunities**

As we fulfil our vision to connect and grow communities, we create opportunities for others to develop themselves and grow alongside us.









#### **Employees**

We commit to helping employees grow personally and professionally through learning and opportunities for career advancement, and to fostering their well-being.



#### **Business Partners**

We commit to enhancing and rewarding the environmental, social and governance ("ESG") performance of our supply chain and increasing our spend on green procurement.



#### Future Skills & Innovation

We commit to collaborating with local schools and universities, as well as startups and the technology ecosystem to foster innovation.



#### **Environmental and Social Objective 1:**

#### Social Inclusion

As a provider of public transport services for all, social inclusion lies at the very heart of who we are and what we do











#### **Universal Basic Mobility**

We commit to providing access to a safe, affordable, accessible and sustainable transport system for all and ensuring our fare and other concessions target those who need them the most.



#### **Diversity & Inclusion**

We commit to eliminating discrimination in our practices and policies and to increasing the diversity of our workforce.



#### **Equal Opportunities**

We commit to helping excluded and underserved populations access their fair share of opportunity.



#### **Environmental and Social Objective 3:**

#### **Greenhouse Gas Emissions Reduction**

As a low-carbon transport provider, we are committed to managing our environmental footprint and achieving carbon neutrality.











#### **Carbon Emissions**

We commit to integrating low-carbon measures into our policies, strategies and planning as well as strengthening our resilience and adaptation to climate-related risks.



#### Clean Energy & Energy **Efficiency**

We commit to adopting suitable energy efficiency measures in our operations and increasing the generation of renewable energy.



#### **Waste Management**

We commit to reducing waste at source, increasing our recycling rates and upcycling our



#### Green and Low-carbon **Designs**

We commit to developing sustainable infrastructure with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies.

#### **Status of 2022 KPIs**

KPIs for 2022	Status
Objective 1: Social Inclusion	
Universal Basic Mobility	
A Social Inclusion App to better serve the needs of elderly and Persons with Disabilities ("PwD") will be launched in 2022	Achieved
10 key initiatives to improve age- and PwD-friendly facilities in our existing stations will be implemented in 2022	Achieved
No less than 750,000 average daily passenger trips will benefit from fare concessions in 2022	Achieved
Injuries requiring hospitalisation per 100 million passenger journeys in 2022  Heavy Rail: 5.67  Light Rail: 8.38  Bus: 6.85	Fell short (Heavy Rail Injury rate) Achieved (Light Rail and Bus)
100% of our new stations will be accessible (including barrier free entrances, wide gates, accessible toilet and baby care room)	On track
Diversity & Inclusion	
25% of our Board of Directors will be women by 2025	On track
3 initiatives aimed at enhancing workforce diversity will be carried out in collaboration with NGOs in 2022	Achieved
70 diversity, equity and inclusion ("DEI") training events for staff will be held in 2022	Achieved
8% of our summer interns will be ethnic minorities or PwD in 2022	Achieved
Workplace inclusiveness will be enhanced in 2022	Achieved
DEI clauses in our Code of Conduct and Equal Opportunities Policy will be reviewed in 2022	Achieved
Equal Opportunities	
HK\$100 million will be spent on direct local community investment and donations from 2022 to 2025	On track
200,000 people will benefit from our community programmes and volunteering projects from 2022 to 2025	On track

KPIs for 2022	Status
Objective 2: Advancement & Opportunities	
Employees	
At least 5 learning days will be provided to employees on average every year	Achieved
200+ employment and pre-employment opportunities will be provided for young talents in 2022	Achieved
Business Partners	
HK\$250 million will be spent on green procurement in 2025, rising to HK\$350 million in 2030	On track
50+ key suppliers will attend training sessions on ESG best practices in 2022	Achieved
Major contracts for New Railway Projects – an incentive scheme to measure and reward environmental and safety performance will be established by 2022	Achieved
A system to track spend with small and medium sized enterprises will be established in 2022	Achieved
Future Skills & Innovation	
50,000+ people will benefit from our future skills and innovation programmes (including those by MTR Academy) from 2022 to 2025	On track
HK\$300 million+ will be invested in startups from 2022 to 2025	On track

KPIs for 2022	Status	KPIs for 2022	Status
Objective 3: Greenhouse Gas Emissions Reduction			
Carbon Emissions		Waste Management	
Set 2030 science-based targets for our railway and property businesses in Hong Kong	Achieved	60% of our staff canteens will send food waste to O•PARK for treatment in 2022	Achieved
200+ additional EV charging stations will be installed across office buildings, malls and station carparks by 2025	On track	25% of our shopping mall food & beverage tenants will join our food waste reduction programme in 2022	Achieved
50,000+ people will actively participate in our low-carbon initiatives in 2022	Achieved	5 additional water dispensers will be installed in our stations in 2022	Achieved
Strive to achieve carbon neutrality by 2050	On track	Green and Low-carbon Designs	
Clean Energy & Energy Efficiency		1,400+ more bike parking spaces will be provided around	On track
1 million kWh of renewable energy will be generated by	On track	properties managed by MTR by 2025 (compared with 2020)	
2023		2.5% water will be saved in depots in 2022 with 2021 level	Achieved
00% shopping malls will engage tenants in energy-saving	Achieved	as baseline	
initiatives in 2022		2% water will be saved in 2022 with 2018 level as baseline	On track
A building energy management system will be piloted in	Achieved	for our shopping malls; rising to 5% reduction in 2025	
ur stations/ shopping malls in 2022		100% future new stations & new residential development projects aim to attain BEAM Plus Gold or above certification	On track

#### KPIs for 2023

#### **Objective 1: Social Inclusion**

#### **Universal Basic Mobility**

Launch of **Social Inclusion App Phase 2** with the expansion of Visually Impaired function in 2023 and complete by 2025

**Continuous enhancements** (1-2) in each identified area (accessibility / mobility / visibility) for passenger groups with special needs in 2023

**No less than 1 million average daily passenger trips** will benefit from fare concessions in 2023

**Injuries requiring hospitalisation** per 100 million passenger journeys in 2023

- Heavy Rail ≤ 5.65
- Light Rail ≤ 7.31
- Bus ≤ 5.83

**100%** of our **new stations** will be accessible (including barrier free entrances, wide gates, accessible toilet and baby care room)

#### **Diversity & Inclusion**

**25%** of our Board of Directors will be **women** by 2025

**8 secondary schools with diverse student bodies** will be reached out for career sharing/job shadowing in 2023

A **DEI workshop** for all Executives will be conducted in 2023

**150 DEI training events** for staff will be held in 2023

An internship programme for 10 students who are Persons with Disabilities (PwD) or ethnically diverse will be launched in 2023

10% of our interns will be PwD or ethnically diverse in 2023

Workplace inclusiveness will be enhanced in 2023 through:

- (1) Conducting a corporate-wide survey on DEI, and
- (2) Reviewing recruitment requirement

#### **Equal Opportunities**

**HK\$100** million will be spent on direct local **community investment and donations** from 2022 to 2025

**200,000 people** will **benefit** from our community programmes and volunteering projects from 2022 to 2025

#### **Objective 2: Advancement & Opportunities**

#### **Employees**

At least 5 learning days will be provided to employee on average every year

**200+ employment and pre-employment opportunities** will be provided for young talents in 2023

At least **10 wellness related activities/events** will be organised for employees in 2023

Over **75% of our managed residential properties** will **sign** the **Heart Caring Charter** and organise **wellness activities** to promote healthy lifestyles for employees by 2024

#### **Business Partners**

**HK\$250** million will be spent on **green procurement** in 2025; rising to **HK\$350** million in 2030

**60+ suppliers** will attend training sessions on ESG best practices in 2023

15 supplier review audits will be completed in 2023

At least 15 supplier review meetings will cover ESG in 2023

Up to **55%** increase in number of **registered SMEs** in the supplier database in 2023

#### **Future Skills & Innovation**

**50,000+ people** will benefit from our **future skills and innovation programmes** (including those by MTR Academy) from 2022 to 2025

**HK\$300 million+** will be **invested in startups** from 2022 to 2025

Carbon Emissions	Waste Management	
Science-based Targets for 2030	Over 75% of our managed residential properties will collect glass	
200+ additional EV charging stations will be installed across office buildings,	containers for recycling in 2023	
malls and station carparks by 2025	100% shopping malls will collect glass containers for recycling in 2023	
At least <b>30 e-buses</b> will be introduced by 2026	8 additional water dispensers will be installed across stations in 2023-2024	
<b>50%</b> of executive private vehicles will be replaced by <b>EV</b> or be cancelled by 2024	Green and Low-carbon Designs	
Develop a <b>pilot battery energy storage system</b> for our diesel engineering wagons by 2024	<b>1,400+ more bike parking spaces</b> will be provided around stations and properties managed by MTR by 2025	
Strive to achieve <b>carbon neutrality</b> by <b>2050</b>	2.5% water will be saved in depots in 2023 with 2022 level as baseline	
Clean Energy & Energy Efficiency	<b>5% water</b> will be saved in 2025 with 2018 level as baseline for our <b>shopping</b> malls	
1 million kWh of renewable energy will be generated by 2023		
20% chiller energy saving expected after completing Batch 2 chiller replacement project in our stations by 2026	<b>100% future new stations &amp; new residential development projects</b> will aim to attain <b>BEAM Plus Gold</b> or above certification	
Around <b>20% chiller energy saving</b> expected after completing <b>chiller replacement programme</b> in Headquarters in 2024 as compared with 2019		
Over <b>70% of our managed residential properties</b> will conduct <b>energy audit</b> for the common areas and develop energy saving plan by 2025		
<b>100% existing shopping malls</b> (with full operation in 2022) will complete <b>energy audit</b> for the common areas and develop energy saving plan by 2025		
Conduct a <b>pilot programme</b> in a shopping mall to engage and assist tenants in identifying <b>energy saving measures</b> in 2023		





# PROMOTING SOCIAL INCLUSION

**Universal Basic Mobility** 

**Diversity and Inclusion** 

**Equal Opportunities** 

As a provider of public transport services for all, social inclusion lies at the very heart of who we are and what we do



#### **Universal Basic Mobility**

We commit to providing access to a safe, affordable, accessible and sustainable transport system for all and ensuring our fare and other concessions target those who need them the most.

#### **Hong Kong**

- Expanded the traditional "Safety Month" to a year-long "Corporate Safety Campaign" to further strengthen the safety culture across the Corporation.
- Organised a three-day **Global Safety Hackathon 2022**, with over 700 on-site and online attendees to think of solutions to enhance the Corporation's safety performance.
- Set up a **Community Vaccination Centre** in Tsing Yi Station to support the Government's plan to boost the vaccination rate in Hong Kong.



- Deployed **95** "Little Whale" and "Big Whale" cleaning robots to conduct deep cleaning and decontamination in stations.
- Defibrillators (AEDs) at concourses and platforms of all heavy rail stations and Hong Kong West Kowloon Station of the High-Speed Rail (Hong Kong Section).
- Hosted the "MTR Safety Experience Zone" exhibition booth at the Hong Kong Book Fair to promote railway safety and courteous behaviour.



- Launched a brand-new "MTR · Care" app to facilitate the travel needs of the elderly and passengers in special need.
- Launched the "Caring for Dementia" programme to assist in locating missing persons through the automatic fare collection system of the MTR network.
- Offered approximately **HK\$2.1 billion-worth** of on-going fare concessions to customers, with a target of benefitting no less than 1 million average daily passenger trips in 2023.

#### **Outside Hong Kong**

#### MTR (Macau)

Installed **easy-access facilities** including lifts at all Macao Light Rapid Transit stations and portable ramps for boarding and alighting of wheelchair passengers.





#### MTR Elizabeth line

Ran several security, safety and safeguarding campaigns including **5 joint engagements with The Samaritans** providing information on suicide prevention and mental health at stations, **24 customer confidence engagement sessions** to discuss hate crime, sexual harassment and safe travel, and **2 "Violence Against Women and Girls" engagements** to promote women's safety.



Hosted a number of **engagement sessions** with local disability groups before the opening of new stations to ensure they were satisfied with the service from our staff.

#### Metro Trains Melbourne

Plan to set out the accessibility and inclusion vision for the network and the workplace. Developed a **bespoke training module** to educate frontline staff on the meaning of the lanyards and wristbands that passengers with hidden disabilities may choose to wear.



#### **Diversity and Inclusion**

We commit to eliminating discrimination in our practices and policies and to increasing the diversity of our workforce.

#### **Hong Kong**

- Reviewed the diversity, equity and inclusion ("DEI") clauses in the Code of Conduct.
- Signed the **Racial Diversity & Inclusion Charter for Employers** initiated by the Equal Opportunities Commission.
- Conducted over **230 DEI training events** for staff to foster social inclusion and promote equality.
- Developed the **"Eldpathy"** programme which helps participants recognising the value of a diverse and inclusive workforce.
- Launched our first **Social Inclusion Week** to raise staff awareness of social inclusion and enable them to embrace diversity, inclusion and equal opportunities in their daily life.

#### **Outside Hong Kong**

#### **MTR Nordic**

Partnered with the Global Village to **conduct sharing sessions for local citizens** and **hired over 100 new employees** for work at MTR Nordic under the Järvaveckan initiative since 2018.

#### Metro Trains Melbourne

- Commenced a 12-month partnership programme with Work180 to promote organisational standards that raise the bar for women in the workplace and endorsed by Work180 as an employer in the **top 101 organisations** in Australia that **support women**.
- Launched the **second Reflect Reconciliation Action Plan** ("RAP") in support of Aboriginal and
  Torres Strait Islander Peoples.

#### MTR Elizabeth line

- Continued to **reduce** the **gender gap** and celebrated its female drivers' achievements with the first two trains running on the central operating section launch day driven by **female drivers**.
- Partnered with a number of railway companies to support the production of a new children's book, 'My Mummy Is a Train Driver' and 3 MTR Elizabeth line female train drivers participated in the development of the book.



#### **Equal Opportunities**

We commit to helping excluded and underserved populations access their fair share of opportunity.

#### **Hong Kong**

Offered free advertising space to **68 NGOs**, rented **10 station shops to NGOs** along Tuen Ma Line at nominal rate and sponsored venues at MTR Malls for **20 events** organised by NGOs.

Contributed over **9,500 volunteer hours** in 111 projects, offered in-kind donations valued at **HK\$29 million** and invested **HK\$25 million** in various community programmes.

Donated retired train parts to Fortress Hill Methodist Secondary School to set up a **train-themed classroom** as part of the "Legacy Train Revitalisation Programme" ("LTRP").



Offered nominal rate to **support underserved businesses** including Dignity Mama Hong Kong to open the Dignity Mama Bookstore at Tsing Yi Station to provide job opportunities to families with special needs, and The Zubin Foundation to open the Zubin's Family Centre at Austin Station to serve special needs of ethnically diverse women and children.



Launched the MTR Volunteering Month under the theme of "Go Green Grow Love", including a series of volunteering activities with the participation of over 130 staff volunteers, enablers and project leaders.



Donated **food vouchers** to **over 1,500 eligible underprivileged families** through Food Angel and offered designated areas at Tai Wo Hau Station, Ocean Walk and Luk Yeung Galleria for installing an **Automated Food Dispenser** to provide food assistance for eligible families.



#### **Outside Hong Kong**

#### Metro Trains Melbourne

Impacted over **17,000 people** through community investment and education activities and provided around **AUD\$280,000** of direct financial support for the community.

#### MTR Flizabeth line

Continued to work with St Ann's School in Hanwell, a special needs school for 11 to 19-year-old students to arrange a **tour on the Elizabeth line** to these students, visiting Hanwell to Paddington.





# FOSTERING ADVANCEMENT AND OPPORTUNITIES

**Employee Development and Wellness** 

**Enabling Development of our Business Partners** 

**Future Skills and Innovation** 

As we fulfil our vision to connect and grow communities, we create opportunities for others to develop themselves and grow alongside us.



# **Employee Development** and Wellness

We commit to helping employees grow personally and professionally through learning and opportunities for career advancement, and to fostering their wellbeing.

#### **Hong Kong**

Achieved an average number of **6.1 training** days per employee in Hong Kong.

Recruited **73 high potential talents** as Graduate In-takes to be developed as fast-track general management and professional talents for the Corporation.



Conducted **2 high potential programmes** for 45 junior managers and senior supervisors and provided over **350 employment and preemployment opportunities** for young talents.

- Set up a **24-hour dedicated medical hotline** and provided **virtual medical consultation** for our staff and their eligible family members who have been infected with COVID-19.
- Set up a **"Pandemic Caring Team"** with over 300 staff volunteers to deliver anti-pandemic supplies and medications to infected staff with emergency needs.

#### **Outside Hong Kong**

#### **MTR Nordic**

Launched different schemes and programmes to **grow talent pipeline** including the Talent Management Scheme, Internal Apprenticeship, "Växa" (a 6-month programme for operative staff who has the potential to groom for a managerial position), Summer Internship and Graduate Programme.

#### MTR Elizabeth line

Held the **Wellness Week** featuring various activities and seminars for colleagues and participated in **Mental Health Awareness week**, **International Women's Day** and **International Men's Day**.



We commit to enhancing and rewarding the environmental, social and governance performance of our supply chain and increasing our spend on green procurement.

#### **Hong Kong**

- Completed a study to assess our **supply chain risk management framework** and recommended a detailed roadmap to develop a new comprehensive framework to manage all types of supply chain risks systematically.
- Completed an analysis to define the green procurement items and established a MTR Green Procurement List.
- Completed a study to **identify the number of local SMEs** that we are using and our current expenses on local suppliers.
- Launched a new retail business, **LOUDER**, to provide an integrated Online-to-Offline retail platform for local designers and young entrepreneurs to promote local brands.



- Supported the **Women In Work** to open its first Gift Shop at Tsim Sha Tsui East Station by offering a nominal rate under the station shops rental programme to empower female founders and startups.
- Organised a **training session** to promote and raise awareness on ESG along our supply chain.
- Conducted 5 supplier audits to review the operations, quality, safety and ESG performance of our suppliers.

#### **Outside Hong Kong**

#### Metro Trains Melbourne

- Established the first **Social Procurement Framework and Strategy** with a focus on supplier diversity with Indigenous businesses and target outcomes including diversity, equality, environment, under-represented workers and workplace practices.
- Completed and published its third **Modern Slavery Statement**, outlining the actions to reduce the risk of modern slavery activity within Metro Trains Melbourne and along its supply chain.



#### MTR Elizabeth line

Held a **Property and Projects Supplier Day** to introduce the future pipeline of works and invite existing SMEs and others who expressed interests in working with MTR Elizabeth line to bid for the works.



We commit to collaborating with local schools and universities, as well as startups and the technology ecosystem to foster innovation.

#### **Hong Kong**

Attracted over 300 enrollments with 66 students selected participants, including ethnically diverse students, for the 'Train' for Life's Journeys summer programme.



Collaborated with various institutions and organisations through **scholarship**, **virtual Career Expo** and **career talk**.



- Organised the **Low Carbon Smart Community workshop** with The Hong Kong University of Science and Technology ("HKUST") to identify specific areas of collaboration.
- Signed an agreement with Hong Kong Science and Technology Parks Corporation to set up a three-year collaboration framework focusing on the application of innovative technologies, data collaboration and co-investment on tech ventures.



Signed a Memorandum of Understanding ("MOU") with Hong Kong Cyberport Management Limited to set up a two-year collaboration framework for joint investment in digital technology startups.



Signed an MOU with HKUST on the establishment of the "HKUST-MTR Joint Research Laboratory" to further enhance Hong Kong's research and development capacity in smart city and sustainable development and contribute to the city's carbon neutrality goal.



Signed an MOU with the MTR Academy and The Hong Kong Polytechnic University on a three-year collaboration to explore advanced and innovative railway technologies and to facilitate smart railway asset and operations management, as well as intelligent maintenance.



#### **Outside Hong Kong**

#### MTR (Shenzhen)

Developed **7 new computer fault simulation scenarios**, covering topics from train incident handling to station operations procedural training, enhancing the diversity and effectiveness of training to relevant staff.

#### **MTR Nordic**

Worked with Luleå Technical University to **review training plans** offered by the Higher Vocational Education programme to enhance the contents and to ensure that the training plans are up to date according to recent research.



#### MTR Elizabeth line

Supported 'Women into Transport and Engineering' programme, a four-week preemployment programme opened to women of all ages, to support women entering into transport and engineering work or returning from a career break.





# REDUCING GREENHOUSE GAS EMISSIONS

**Carbon Emissions** 

**Clean Energy & Energy Efficiency** 

**Waste Management** 

**Green and Low-carbon Designs** 

As a low-carbon transport provider, we are committed to managing our environmental footprint and achieving carbon neutrality.





#### Reducing Carbon Emissions, Adopting Clean Energy and Enhancing Energy Efficiency

We commit to integrating low-carbon measures into our policies, strategies and planning as well as strengthening our resilience and adaptation to climate-related risks. We are also commit to adopting suitable energy efficiency measures in our operations and increasing the generation of renewable energy.

#### **Hong Kong**

- O Submitted our commitment letter and technical documents to the **Science Based Targets initiatives** ("SBTi") for our 2030 carbon reduction targets.
- Commenced a 2-year project with HKUST to develop a **quantification tool** to track and benchmark **embodied carbon** of our new railway development projects and to explore the use of blockchain technology for carbon footprint reporting in our new railway construction projects.
- Completed replacement of 154 chillers with 133 new chillers of more energy efficient models and the second phase of replacement of 31 chillers in our stations will be completed by 2026.

- Installed two Station Energy Saving Inverter systems at Lai King Traction Substation at Airport Express and Tung Chung Line and at HKU Station on the Island Line
- Installed an additional 40 electric vehicle charging stations across office buildings and malls carparks.
- Completed the hardware installation of solar facilities in Hin Keng Station and the solar panel installation works at Pat Heung Depot, Chai Wan Depot, Sunny Bay Station and Siu Hong Station are underway.



- Conducted a trial project to apply a fully automated Al system to control a chiller plant at station to optimise energy performance in real time while maintaining a level of passenger comfort that suits each station's environment.
- Implemented a cloud-based big data analytic software platform at Two International Finance Centre ("Two ifc") and commenced a pilot project to develop an integrated Al solution combining system energy efficiency and occupancy monitoring to achieve energy savings at Flements

Reached over 80,000 downloads for our Carbon Wallet app, capturing green actions that saved 470,000 kg CO₂e since its launch in March 2021.



Caunched our Green Ambassador "Green T Baby" to promote MTR's commitments and efforts to achieve carbon neutrality by 2050.





#### **Outside Hong Kong**

#### MTR (Shenzhen)

Signed a cooperation agreement on the distributed solar demonstration project in Longhua District with CLPe Solutions for the installation of over 2,000 solar panels on the roof of Longhua Depot.



#### **MTR Nordic**

- Committed to setting a **science-based target** and endorsed by the SBTi to decrease Scope 1, Scope 2 and Scop3 GHG emissions by **25.2% by 2025** from a 2019 base year.
- Implemented 100% renewable energy for railway operations since 2019 and 100% renewable fuel in replacement buses since 2021.

#### **Metro Trains Sydney**

Offset its operational electricity use for the entire network through purchasing large-scale generation certificates under the Green Products Purchase Agreement with the Beryl Solar Farm at Gulgong New South Wales.



We commit to reducing waste at source, increasing our recycling rates and upcycling our waste.

#### **Hong Kong**

- Installed **18 water dispensers** at various MTR stations, reducing the use of over 1 million pieces of single-use plastic beverage containers.
- Upcycled **approximately 8,300 tons of waste ballast** for making about 4.4 million pieces of eco-paver since the launch of ballast replacement project in February 2021.



Collaborated with more than 20 NGOs, social partners and government departments to jointly turn **over 400 pieces of decommissioned train parts** into different uses through the "Legacy Train Revitalisation Programme".

Supported the first-ever closed loop reusable food packaging pilot programme to encourage users to choose reusable containers and return them after use through the smart collection machines placed at World-wide House and Admiralty Centre.



#### **Outside Hong Kong**

**Metro Trains Melbourne** 

- Collected train parts such as seats, cushions, pneumatic valves, gauges and other components for reuse in other trains.
- Recycled approximately 6,000 kg of corflute signage for pelletishing for material reuse in the production of new corflutes.





We commit to developing sustainable infrastructure with increased resource-use efficiency and greater adoption of clean and environmentally sound technologies.

#### **Hong Kong**

- Attained **BEAM Plus Provisional Gold accreditation** for our proposed Tung Chung
  East and Tung Chung West stations.
- Achieved **Final Gold accreditation** under the Hong Kong Green Building Council's **BEAM Plus** for three properties in our property portfolio.
- Received Leadership in Energy and Environmental Design (LEED) Platinum certification for Operations and Maintenance: Existing Buildings v4.1 for Two ifc, becoming the first project in Hong Kong obtained the highest standard in this certification programme.



- Spotted over **110 pairs** of birds representing **9 different species** at **Lok Ma Chau wetland** during the 2022 breeding season.
- O Developed a **Tree Intrusion Detection System** using 3D mapping technology, Light Detection And Ranging and Al platform to monitor tree conditions more effectively.
- Enhanced bird protection at Mei Foo Station through applying anti-bird collision window films on over 100 window facades.





### RAIL SERVICES AT A GLANCE

