



GOING FORWARD FOR YOU

Sustainability Report
2018-2019



About This Report

This is the second sustainability report released by Beijing MTR Corporation Limited. The Report discloses the company's concept, actions and achievements in sustainable development, and strengthens communication with stakeholders to jointly promote sustainable development.

Report Scope

January 1, 2018 - December 31, 2019, with some contents tracing back to previous years.

Report Boundary

The Report covers Beijing MTR Corporation Limited. For better readability, it is abbreviated as "BJMTR" "the Company" or "we" in this report.

Reporting Guidelines

Transforming our World: The 2030 Agenda for Sustainable Development issued by the UN
GRI Sustainability Reporting Standards (GRI Standards) issued by Global Sustainability Standard Board (GSSB)
ISO 26000: *Guidance on Social Responsibility (2010)* issued by the International Organization for Standardization
GB/T 36001-2015 *Guidance on Social Responsibility Reporting*

Data Sources

All data in this report is from BJMTR's statistical reports, official documents or public information.

Reliability Assurance

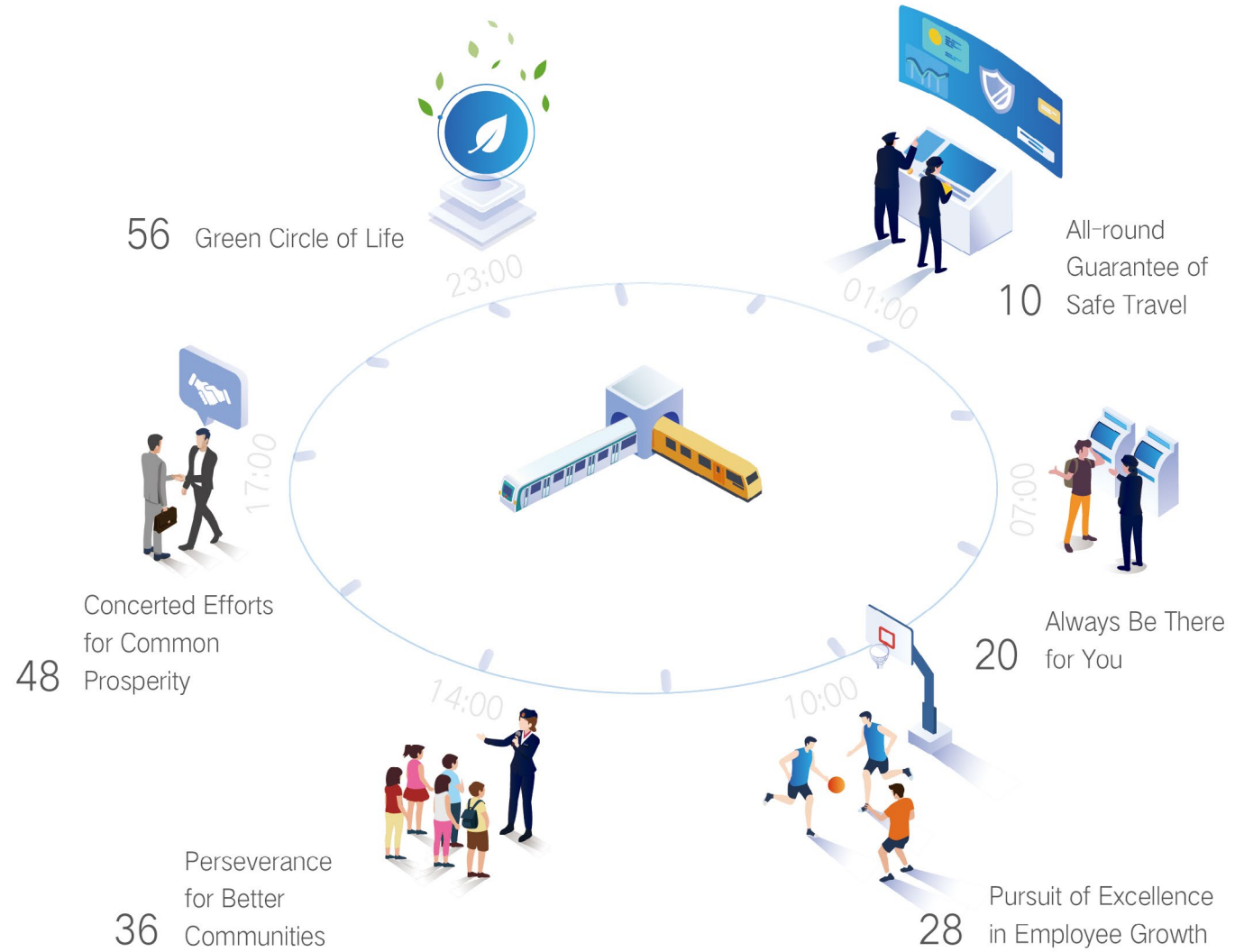
BJMTR assures that no fictitious record, misleading statement, or material omission are included in this report. BJMTR is responsible for the report's authenticity, accuracy and completeness.

Learn More

The report is available in both Chinese and English. In case of any inconsistency or ambiguity between the two versions, the Chinese version shall prevail. Please access the report's PDF version and more information about our CSR practice on the official website of BJMTR: <http://www.mtr.bj.cn>.

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Our Greetings



Dear stakeholders,

Thank you for reading this report. It is the second sustainability report which records our actions and achievements in fulfilling corporate social responsibility in 2018 and 2019. Over the past two years, we have strived with strong determination and effective measures to make travel and life easier for our passengers. We continued to strengthen safe operation, improve service quality, build intelligent metro, and empower employee development. Meanwhile, we have promoted community communication and green development, and worked with partners to deliver more convenient services and create better life.

2019 was the 10th anniversary of the opening of the first line of BJMTR. BJMTR participates in the investment, construction and operation of Beijing Metro Line 4 (BJL4), Line 14 (BJL14) and Line 16 (BJL16) by adopting PPP model, and is responsible for the operation and management of Daxing Line (DXL) and Line 17 (BJL17) (with rolling stocks lease). The total route length is 196.8 km, of which 113.4 km is now in service. In the past decade, we have shortened the headway for 17 times. The total car-km of train safety operation reached 0.77 billion, with a total passenger journeys of 5.22 billion. We have invested resources and innovated models in safety management, quality improvement, operation services, engineering maintenance, information and intelligent technologies, and metro culture with aims to forge modern travel space and deliver high-standard operation and service performance.

We have gained a deeper understanding that CSR practice is an important path to realize our values, achieve win-win results and promote sustainable development. In 2019, we released our first *Customer Service Pledge*. Through setting service indicators, renovating facilities and providing convenient services, we strived to deliver high quality services for customers. We continued to improve the safety management system by incorporating corporate risks, operation risks, security risks and information security risks into risk management, reducing predictable risks in a systematic manner. We implemented Total Quality Management and built Integrated Management System to optimize management and improve quality. Based on the talent development strategy, we improved the dual career development channels for technical and management talents at all levels and planned a tiered talents pipeline, and optimized remuneration and benefits system, so as to unleash infinite possibilities for employees. We worked with public interest partners to organize "Beijing and Hong Kong Middle School Students Metro Train Model Contest", in hope of nurturing their innovative and hands-on abilities, and facilitating cultural exchanges between teenagers in Beijing and Hong Kong. We promoted communication and cooperation in rail transit sector between Beijing and Hong Kong, contributing to the development of urban rail transit. We improved the environment management mechanism to create greener travel environment and respond to challenges posed by climate change. For example, we completed energy-efficient renovation of trains and stations and launched programs to improve air quality.

We embrace opportunities and challenges brought by the rapid development of emerging technologies such as artificial intelligence, the Internet of Things and 5G. In 2019, BJL16 became the first metro line in China with full coverage of 5G signals, allowing passengers to enjoy the convenience during commuting. All our stations were available to non-cash payment services, which further improved passengers' travel experience. We were the first to use projection on screen doors to play videos and create interactive experiences. A self-media matrix was launched with different media portals to offer more functions and diverse information to passengers. As passengers' expectations grow along with the advancement of technology, we will further develop and use the smart operation & maintenance platform and smart maintenance equipment, to provide better travel services for passengers. The technology-empowered rail transit will further boost the development of smart cities.

There is no end to the pursuit of CSR fulfilment and sustainable development. In the future, we will bring more advanced ideas and expertise from MTR with over 40 years of experience in construction, operation and management of urban rail transit. Centering on the United Nations' Sustainable Development Goals (SDGs), we are committed to fulfilling CSR in a more responsible and innovative way and promoting the coordinated development of the economy, society and environment. We will follow the Company's development strategy to strengthen our core business and expand into relevant fields, and join hands with other sectors to create comprehensive value for stakeholders and improve the quality of city life for people.

Wilson Shao
General Manager



About Us

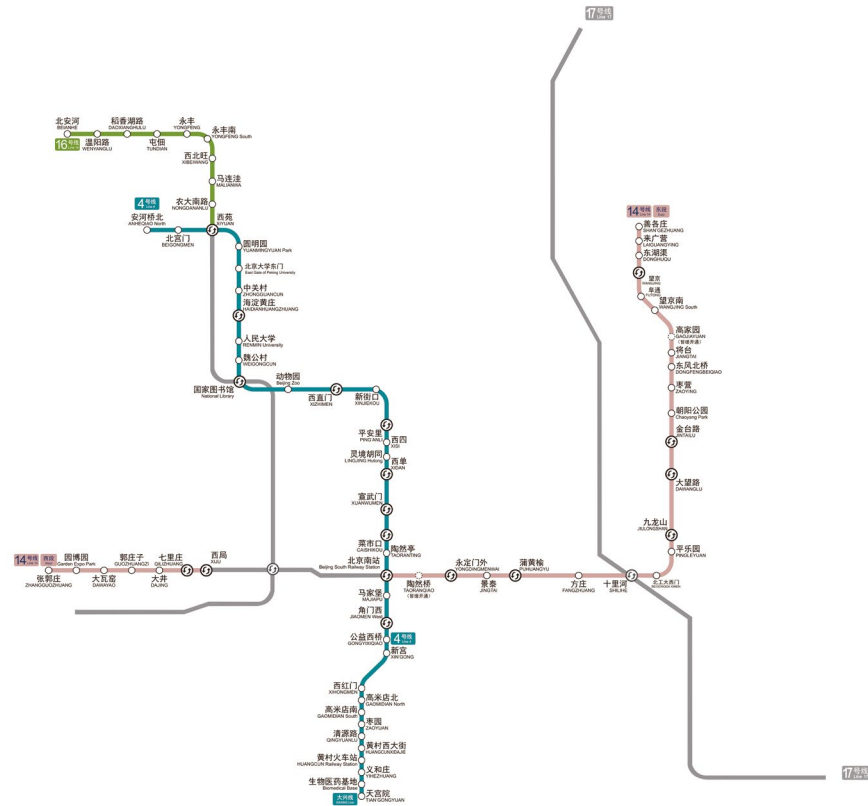
Company profile

Established on January 16, 2006, Beijing MTR Corporation Limited (BJMTR) is a joint venture company invested by Beijing Infrastructure Investment Co., Ltd., Beijing Capital Group and MTR Corporation. Based on the Transit Oriented Development (TOD) model, BJMTR envisions to become a world-leading city operator which connects communities and promotes community development with diversified, caring services, providing passengers with safe, reliable, comfortable and convenient transport services. At present, BJMTR has participated in the investment, construction and operation of Beijing Metro Line 4 (BJL4), Line 14 (BJL14) and Line 16 (BJL16) in PPP model, and is responsible for the operation and management of Daxing Line (DXL) and Line 17 (BJL17) (with rolling stocks lease), with total route length of 196.8 km, of which 113.4 km and 73 stations are now in service.

In 2018, the average daily patronage of lines operated by BJMTR was 1.974 million and the train service delivery and the punctuality were 99.99% and 99.98% respectively, compared to 2.038 million, 99.99% and 99.99% in 2019.

图例：
Legend

- 地铁四号线
- 地铁大兴线
- 地铁十四号线
- 地铁十六号线
- 地铁十七号线
- 换乘站



Corporate culture

Vision

- Based on the idea of Transit Oriented Development (TOD), facilitate diversified businesses, connect and promote community development with caring services, become a leading city operator in the world.

Mission

- Provide safe, reliable, comfortable and convenient services, create a civilized and friendly travel environment, improve the quality of urban life, and make BJMTR the customer's first choice.
- Encourage employees to learn and innovate, provide them opportunities to grow along with the company.
- Based on railway transportation construction and operation, realize sustainable development and provide good return on investment to shareholders.

Values

Safety First

- Mitigate foreseeable risks systematically and properly, safeguard the safety of public, client and staff.
- Possess enough knowledge and skill, secure the quality of work.
- Be abide by procedures, execute precisely according to the procedures, and let safe behavior become a habit.

Efficiency and Effectiveness

- Pursue holistic interest of the company.
- Be goal targeted, break through tradition and convention, solve problem with innovative ideas.
- Be cooperative to achieve synergy with staff's complementary strength.

Customer Focused

- Be customer focused, actively foresee, listen to and response to the demand of client.
- Keep service commitment, exceed the expectation of customer.
- Be professional at all the time, win the respect and trust of customers.

Can Do

- Self-initiated with strong career ambition, stand for high standard professionalism.
- Face challenge and be accountable, be good at solving problem with available resources to achieve the goal.
- Establish close inter-trusted and cooperative working relationship with internal and external partners.

CSR Management

Fulfilling corporate social responsibility is an important path to realize our own values, achieve win-win results and promote sustainable development. We integrate social responsibilities into our strategy and operation, and give full play to our core advantages. We improve safety management and service quality, care for employee growth, engage in community development, join hands with partners for common development and promote environmental protection, pursuing the harmony and unity of economic, environmental and social benefits with our stakeholders.

CSR management system

The SDGs encourage businesses to contribute to areas that are critical to people and the planet, ensuring a better future for all. As an enterprise committed to becoming a leading city operator in the world, we have identified three primary goals where BJMTR can play a significant part as a global citizen in furthering the SDGs, namely "industry, innovation and infrastructure", "sustainable cities and communities" and "responsible consumption and production". We strive to provide effective solutions to economic, social and environmental issues, so that more people could enjoy quality travel and a better life.



In response to SDGs, we have further improved our social responsibility management system to ensure the effective operation and continuous improvement of our practices in six major areas, including safe operation, quality service, staff care, community development, win-win partnership and environmental protection. This facilitates us to continuously create comprehensive value for our stakeholders. We also attach importance to employees' awareness of social responsibilities. Experts are invited to give special trainings so that employees could deepen understanding of the core concept of sustainable development.

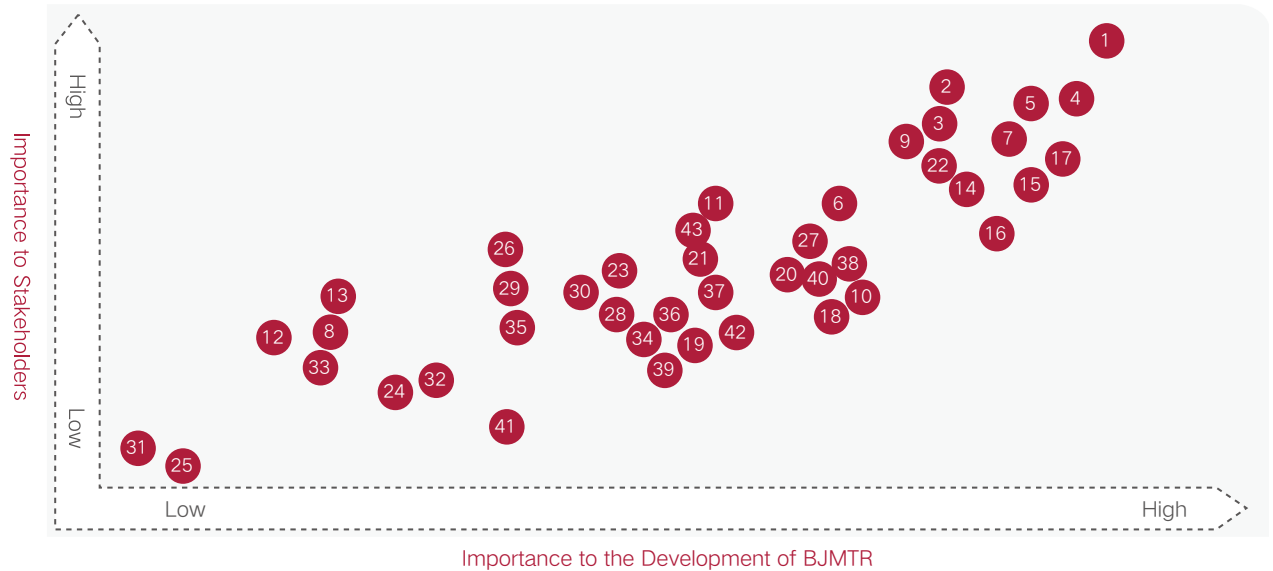


CSR management system of BJMTR

Material topics identification

To better understand stakeholders' expectations and concerns, and thus produce a more pertinent report, we conducted a materiality survey and collected 905 responses (879 valid ones). From two dimensions of "importance to the development of BJMTR" and "importance to stakeholders", we identified material topics for disclosure which signify the shared concerns of the Company and all our stakeholder groups. According to the assessment result, we focused on topics such as "ensuring safe metro operation", "improving passenger service experience" and "ensuring the health and safety of passengers" in the report.

1 Identification	Sorting out the sustainability reporting issues of the Company and analyzing stakeholders' concerns
2 Prioritization	Carrying out internal and external stakeholder surveys to assess their concerns from two dimensions of "importance to the development of BJMTR" and "importance to stakeholders"
3 Review	Reviewing topics to determine the material topics for disclosure
4 Disclosure	Disclosing targeted material topics in the report



Materiality matrix

- | | | | |
|--|---|--|---|
| 1 Ensuring safe metro operation | 12 Passenger information and privacy protection | 23 Carrying out volunteer service | 34 Supplier evaluation |
| 2 Increasing metro capacity | 13 Handling of customer complaints | 24 Community skill training and promotion | 35 Supplier training |
| 3 Improving station facilities | 14 Transportation services for major events | 25 Contributing to targeted poverty alleviation | 36 Promoting social responsibility to the value chain |
| 4 Improving passenger service experience | 15 Assurance of basic rights of employees | 26 Waste management | 37 External exchange and strategic cooperation |
| 5 Ensuring the health and safety of passengers | 16 Employees training and development | 27 Energy saving and noise reduction | 38 CSR management |
| 6 Building smart metro | 17 Occupational health and safety of employees | 28 Coping with climate change | 39 Corporate governance |
| 7 Enhancing emergency management and rescue capabilities | 18 Balancing the work and life of employees | 29 Environmental protection training and publicity | 40 Fair operation practices and ethical dealings with other organizations |
| 8 Offering discount fare | 19 Employees' participation in corporate operation and management | 30 Purchase and use of ecofriendly materials | 41 Creating economic value |
| 9 Improving passenger satisfaction | 20 Advocating safe, courteous and green travel | 31 Biodiversity conservation | 42 Risk management |
| 10 Strengthening informationization construction | 21 Infusing metro with art and culture | 32 Green office | 43 Transparent operation |
| 11 Special passenger care | 22 Community communication and engagement | 33 Sustainable procurement | |



Stakeholder engagement

Stakeholder management provides great support to the Company's sustainable development. We actively expand communication channels with innovative interaction modes and carry out CSR communication, so as to better track and respond to the needs of stakeholders. Stakeholders' demands and expectations could then be incorporated into our operation and management, establishing mutual trust and promoting cooperation.

Stakeholders	Key Topics		BJMTR's Response	
Government and supervisory authorities	<ul style="list-style-type: none"> Ensuring safe metro operation Transport services for major events Enhancing emergency management and rescue capabilities 	<ul style="list-style-type: none"> Increasing metro capacity Ensuring the health and safety of passengers 	<ul style="list-style-type: none"> All-round safety Reliable transport services for major events during key periods Emergency drills 	<ul style="list-style-type: none"> Enhancing operational capability Passenger safety Total Quality Management
Investors	<ul style="list-style-type: none"> Risk management Transparent operation 	<ul style="list-style-type: none"> CSR management External exchange and strategic cooperation 	<ul style="list-style-type: none"> Corporate risks management Stakeholder engagement, community engagement 	<ul style="list-style-type: none"> CSR management Strengthening communication and cooperation
Passengers	<ul style="list-style-type: none"> Improving passenger service experience Increasing metro capacity Ensuring the health and safety of passengers 	<ul style="list-style-type: none"> Improving passenger satisfaction Improving station facilities 	<ul style="list-style-type: none"> Optimizing service details Enhancing operational capability Ensuring the safety of passengers 	<ul style="list-style-type: none"> Conducting satisfaction survey Providing diversified services Total Quality Management
Employees	<ul style="list-style-type: none"> Ensuring the health and safety of employees Staff training and development 	<ul style="list-style-type: none"> Ensuring rights and interests of employees Balancing the work and life of employees 	<ul style="list-style-type: none"> Employee safety Unblocking career development channels, supporting employee growth 	<ul style="list-style-type: none"> Protecting employee rights and interests Safeguarding employee happiness
Suppliers	<ul style="list-style-type: none"> External exchanges and strategic cooperation Supplier evaluation 		<ul style="list-style-type: none"> Growing together with suppliers Standardizing supplier management 	
Industry peers	<ul style="list-style-type: none"> External exchanges and strategic cooperation Building smart metro 		<ul style="list-style-type: none"> Promoting the development of the industry Building intelligent metro 	
Social organizations	<ul style="list-style-type: none"> Infusing metro with art and culture Community communication and engagement 		<ul style="list-style-type: none"> Culture, art and health Community engagement 	
Communities	<ul style="list-style-type: none"> Advocating safe, courteous and green travel Community communication and engagement Carrying out volunteer services 	<ul style="list-style-type: none"> Energy saving and noise reduction 	<ul style="list-style-type: none"> Culture, art and health, advocating green travel Community engagement, STEAM education Energy consumption management 	<ul style="list-style-type: none"> Volunteer services
Environment	<ul style="list-style-type: none"> Energy saving and noise reduction Waste management 	<ul style="list-style-type: none"> Purchase and use of eco-friendly materials 	<ul style="list-style-type: none"> Energy consumption management Carrying out responsible procurement 	<ul style="list-style-type: none"> Waste management
Media	<ul style="list-style-type: none"> Transparent operation Ensuring safe metro operation Improving passenger service experience Infusing metro with art and culture 	<ul style="list-style-type: none"> Ensuring the health and safety of passengers Increasing metro capacity 	<ul style="list-style-type: none"> Stakeholder engagement, community engagement Passenger safety Enhancing operational capability Culture, arts and health 	<ul style="list-style-type: none"> All-round safety Optimizing service details

Total Quality Management

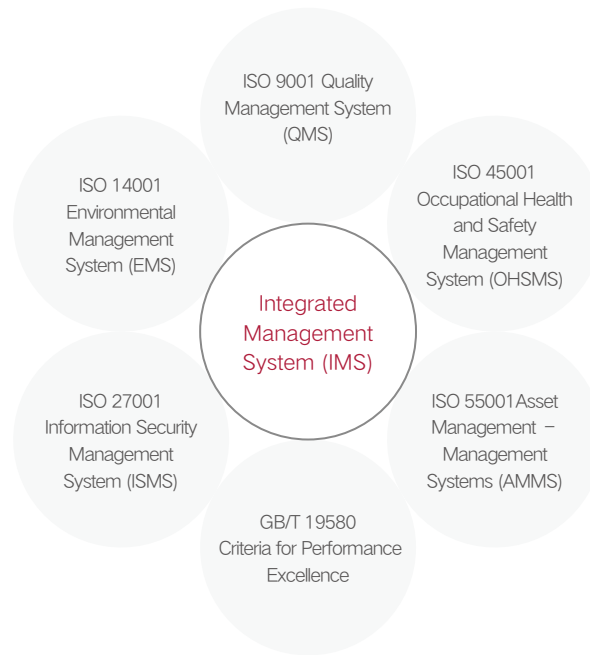
Guided by the Company's vision and mission, we have planned a path for mid-term strategic development. We have drawn up clear management guidelines with the Integrated Management System, and incorporated these guidelines into our businesses. Total Quality Management (TQM) is implemented at all levels. Through collaboration across the Company, work procedures improvement and employee engagement, we are able to improve our services and win the satisfaction of customers.



Framework of integrated management levels

Integrated management system

Since 2007, BJMTR has established multiple systems to manage its businesses in a scientific and systematic manner, and has constantly improved the effective implementation of these systems. In 2019, the Company further integrated and constructed the Integrated Management System, to promote integrated management and operation, and to fully identify and effectively deal with various risks, so as to ensure sustainable operation and better corporate management.



BJMTR integrated management system



The advancing process of BJMTR integrated management system

Train service reliability in 2018 and 2019

15.44 million car-km/time

21.58 million car-km/time

Number of passenger/employee/contractor death from accidents in 2018 and 2019

0

Number of passenger injuries per million passenger journeys in 2018 and 2019

0.33

0.25



All-round Guarantee of Safe Travel



The Opening Story

01:00

We guard safety with all our strength



At 1 AM, the last couple of trains arrive at MaJiaPu depot one after another. It is the busiest moment in a day for Zhang Xiaoliang, senior engineer at the Communication and Signaling Maintenance Office. Servers, exchanges, fire walls, AP, axle counters, sensors and other devices in metro system are like "neurons" of the human body. Underpinning the signaling system in a complex way, they enable the autopilot mode, monitoring and control of trains. Zhang is one of the "neurologists" who guard these "neurons". Every day, Zhang and his colleagues would maintain, check and fix trains as scheduled to secure their safe operation. The performance indicators differ from "neuron" to "neuron", but no abnormality could escape their notice.

Zhang used to work for a BJMTR contractor, mainly in charge of signal testing of B JL4. He joined BJMTR in 2009 as a technician, and then a senior engineer. Here he finds excellent development possibilities. BJMTR engraves the idea of "Safety First" on the mind of all employees by trainings, guiding their actions. "Thus safety is guaranteed in every detail at work. For example, we will hold a safety risks assessment meeting before track construction, and check electricity test, grounding, tools and materials stock-taking, to make sure no tools or spare parts are left on the construction site."

"'Safety First' is our fundamental principle, and 'Full Dedication' is our essential quality." In 2018, to better match the stopping train doors with the screen doors, Zhang and his colleagues spent over one year testing and validating, conducting more than 1,000 tests. After the renovation, the mismatch rate was 97% lower. This has effectively secured the safe operation of trains. Looking ahead, Zhang said, "BJL4 has been operated for 10 years, and our daily priority is gradually shifting from 'treatment' to 'prevention'. We will keep up with the latest technological advancement and spare no efforts to ensure that every train departs and arrives safely."



Zhang Xiaoliang

Senior engineer at
Communication and Signaling
Maintenance Office

"Safety First" is our fundamental
principle, and "Full Dedication" is
our essential quality.



Methodology and strategy

"Safety" is the top priority of the urban rail transit industry to achieve sustainable development. To this end, BJMTR incorporates the idea of "Safety First" into operation management by continuously optimizing the safety management system and mitigating foreseeable risks systematically. Therefore, safety is developed as one of our habits to safeguard the public, customers and staff members.

Safety management system

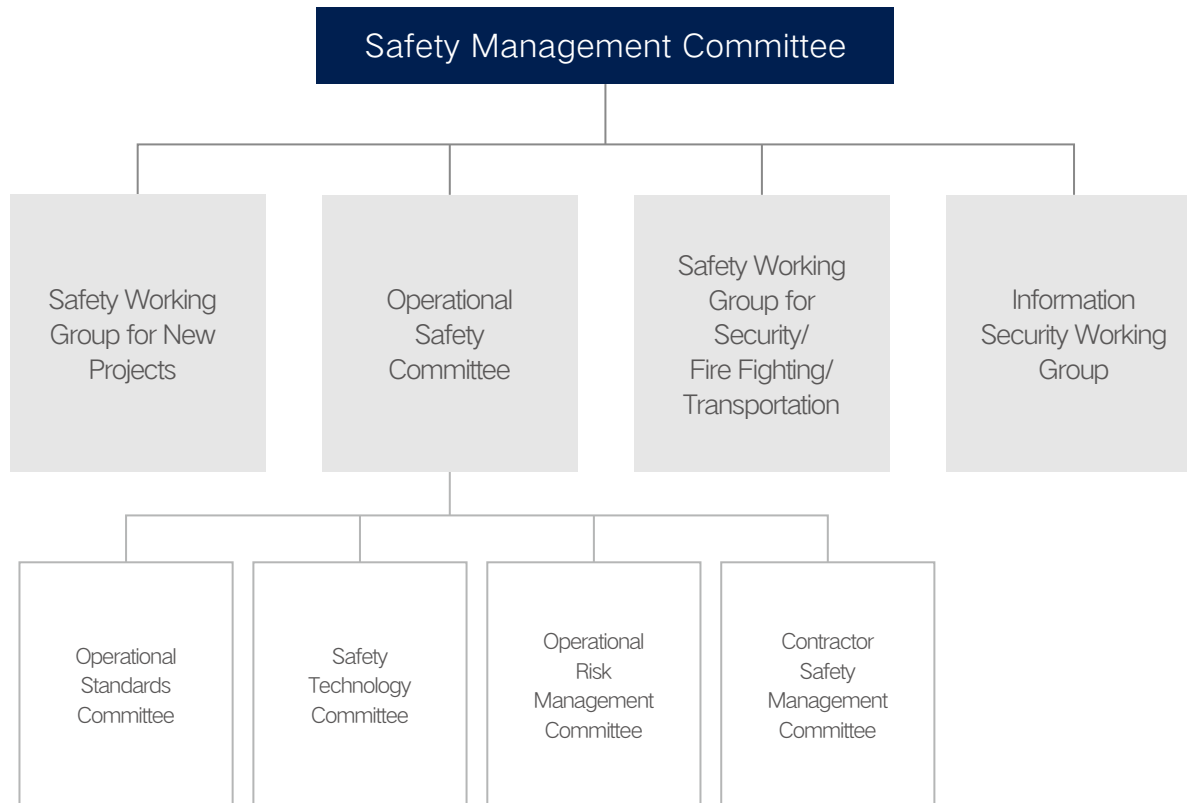
BJMTR has formed a safety management system featuring eight safety elements. We regularly organize third-party certification audits on ISO 9001:2015 (Quality Management System), OHSAS 18001:2007 (Occupational Health and Safety Management System) and ISO/IEC 27001:2013 (Information Security Management System). By comprehensively and systematically managing safety factors in all business areas and standardizing safety management, the Company continuously improves safe operation.

<p style="text-align: center;">Organization and Management Responsibility</p> <p>Establish safety management organizations at all levels, perform safety duties, sign the <i>Safety Responsibility Statement</i>, issue safety responsibility cards and conduct safety performance evaluation.</p>	<p style="text-align: center;">Risk Control</p> <p>Put in place a risk management system to manage risks throughout the life cycle of the metro with a forward-looking philosophy.</p>	<p style="text-align: center;">Standards & Procedures</p> <p>Establish effective document management to ensure that safety management standards, procedures and guidelines are formulated, issued, and regularly reviewed as required and ensure that employees have access to valid documents, procedures and information needed.</p>
<p style="text-align: center;">Stakeholder Management</p> <p>Fully consider and ensure that the safety expectations of stakeholders are reasonably and practically met, develop safety engagement plans for stakeholders, and keep improving communications with stakeholders.</p>	<p>Framework of the Safety Management System</p>	<p style="text-align: center;">Asset Management</p> <p>Implement a comprehensive asset management system, identify and declare asset management goals and policies to reduce life cycle cost and risk of assets, and manage aging assets.</p>
<p style="text-align: center;">Audit & System Assurance</p> <p>Conduct objective and systematic audits, carry out safety inspections and implement system assurance management regularly to promote the reliability, availability, maintainability and safety of the metro system.</p>	<p style="text-align: center;">Safety Culture</p> <p>Stay committed to promoting the culture of "Safety First", formulate and implement safety awareness publicity programs to guarantee the safety of the public, customers and staff members.</p>	<p style="text-align: center;">Competence Management</p> <p>Carry out tasks on competence development to facilitate metro safety; provide employees with comprehensive skills and knowledge training programs.</p>



Safety management structure

To strengthen safety management capability and ensure work safety, we have further optimized the safety management structure. Four sub-committees under the Operational Safety Committee, namely Operational Standards Committee, Safety Technology Committee, Operational Risk Management Committee and Contractor Safety Management Committee, have new roles and responsibilities after adjustment. They will manage operational safety issues and secure safe operation.



Safety management structure

Corporate risks management

We keep improving the risk management system. The original hazard registration system (HRS) has been upgraded to the risk management system (ASRisk). It includes corporate risks, operational risks, security risks, and information security risks, realizing the dynamic management of risks. We carry out hazards inspections, record and regularly follow up the rectification. Besides, we strive to verify the mitigation measures for high-level risks, low frequency-high severity risks, and high severity-low-level risks, reducing risks to the reasonable lowest level.

In 2018

The Operational Risk Management Committee set up

6

working groups to tackle risks in station operation, train operation, the operation control center, train, signaling and facilities, and another working group to manage human-caused risks.

The on-site inspections of

10

key safety projects in nine specific fields were completed, including screen door, trains and escalators.

In 2018 and 2019

Hazard management and control were continuously deepened, realizing

1,975

hazards were rectified

99.80%

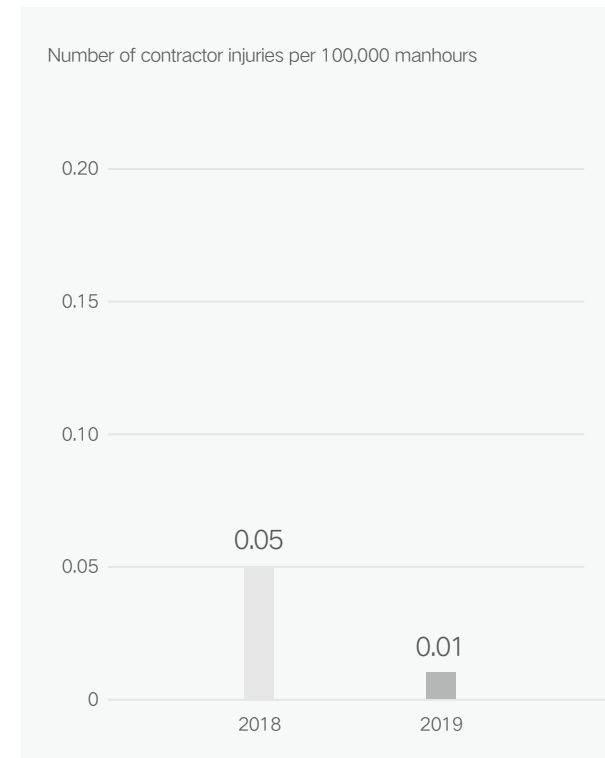
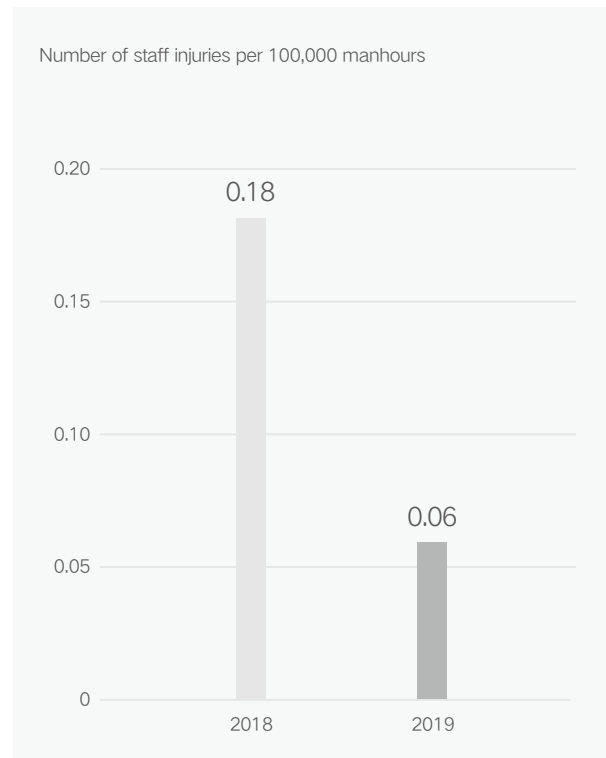
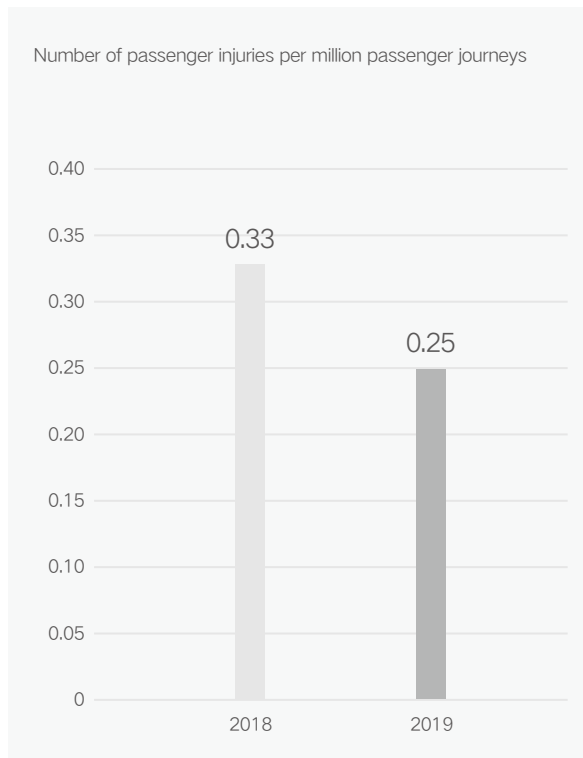
of hazard elimination.



All-round safety

Centering on human safety, BJMTR strives to a safe, reliable and convenient metro environment to guarantee the safety of the public, customers and staff members. In 2018 and 2019, there were no passengers, staff and contractors death or serious injuries.

Statistics about injuries of passengers, staff and contractors in 2018 and 2019



Note: To better improve safety and management quality, we take account of passenger injuries not caused by BJMTR.

Passenger safety

Passenger safety is our first priority. We continue to improve safe operation, and carry out emergency drills regularly to prevent all kinds of accidents and secure passenger safety.

Operational safety

We strengthen equipment maintenance, safety critical system modifications, and prevent and control hazards caused by human factors, in order to provide safe and reliable metro services. Besides, we increase publicity on safe travel, and care about the safety of disadvantaged groups and public health security, so as to secure every step of passengers.

In 2018 and 2019

4,140

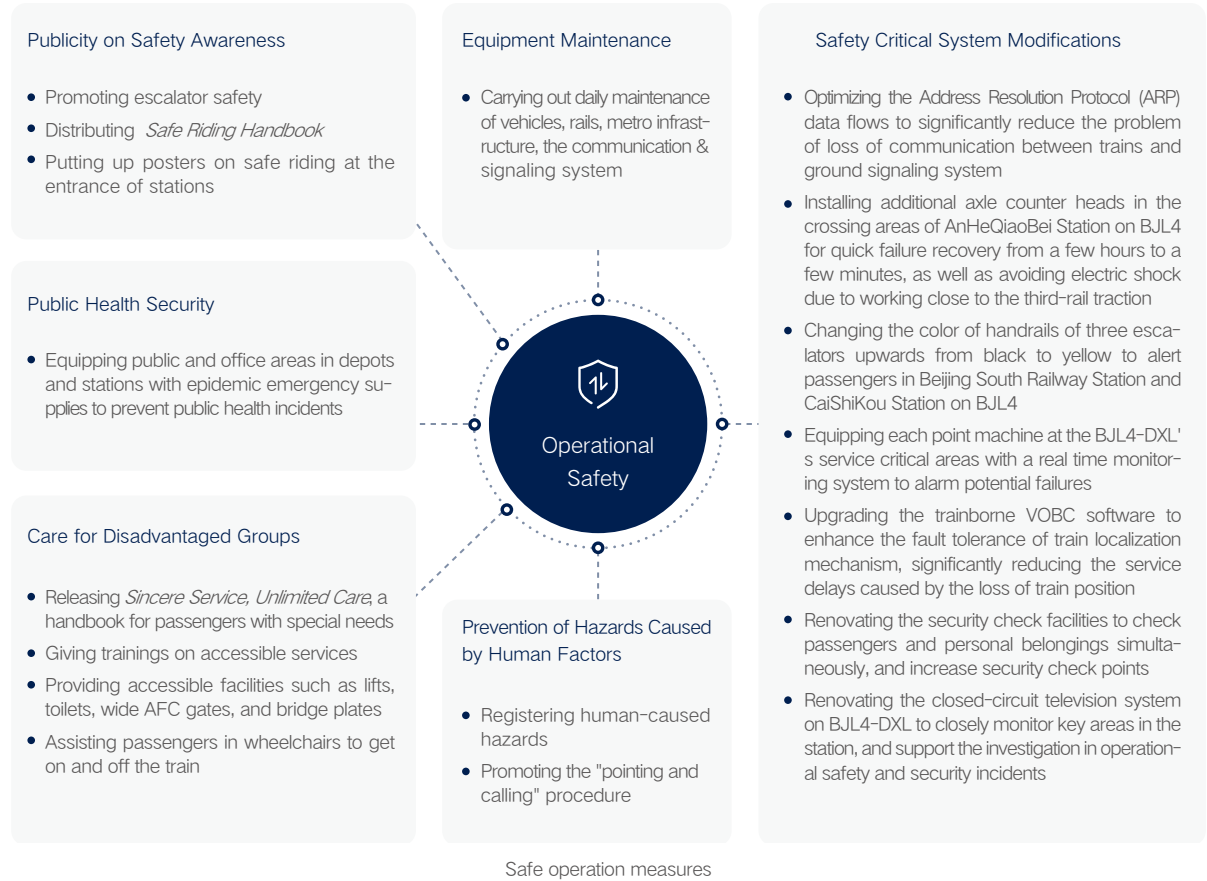
security inspectors on duty

269,534

hazardous articles confiscated

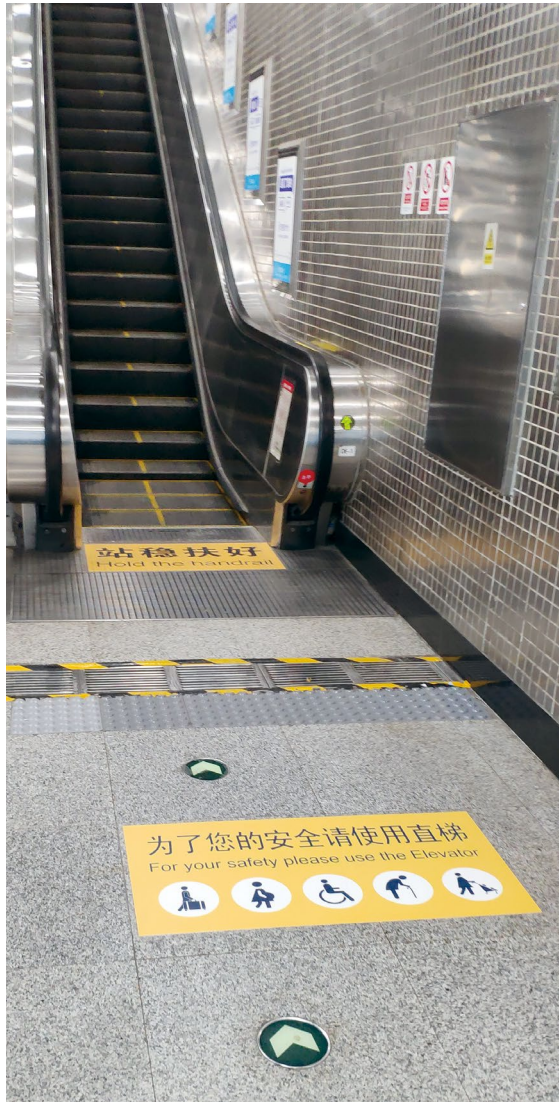
19

safety critical system modified



Note

In a modern urban rail transit system, human is the main body of decision-making and control of the operation of the system. Humans are the most active and conscious influence factor in operational safety, but also the most unmanageable factor. Therefore, avoiding human-caused accidents is an effective means to improve safe operation.



Setting up clear guiding signage

Case *Guiding signage for safe travel*

To mitigate the unsafe behavior of passengers on the escalator, we have designed a new version of guiding signage based on the circulation of passengers. Passengers will see signage at key locations, such as at the entrance, on the way to the security check, after passing through the entrance gate, standing on an escalator, or taking a lift down to the platform and up to the exit. From September 18, 2018 to the end of 2019, we posted 366 new directional signs in 21 stations along BJL4-DXL, BJL14 and BJL16. Monthly escalator accidents in these stations were thus reduced by 35.7%.

Along the BJL4-DXL, BJL14 and BJL16

366

new directional signs posted in 21 stations

Monthly escalator accidents in these stations reduced by

35.7%

Case *Optimized ARP data flows to resolve the loss of communication between trains and ground signaling system*

The BJL4-DXL signaling system is in operation over ten years and now facing the equipment aging problems, trending a declining system reliability performance and increasing failure rates. After a thorough study and investigation, we have initiated a resolution of optimizing the Address Resolution Protocol (ARP) broadcast data flows which has effectively reduced the loss of communication between trains and ground wireless communication system. After having 86 trains, 482 wireless AP switches, 24 trackside security devices, and two firewalls modified, the loss of communication has been decreased by 85%, significantly mitigating the loss of communication problem to secure a sound service performance.

BJL4-DXL

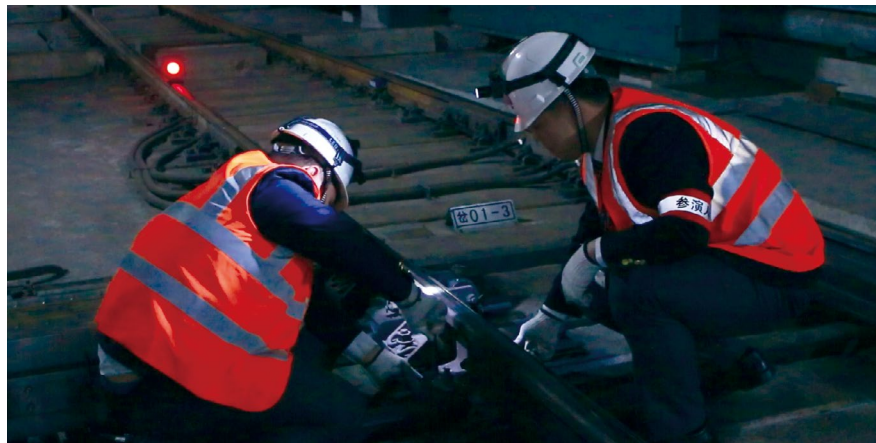
The loss of communication between trains and ground wireless communication system has been decreased by

85%

Emergency drills

We highly value precaution measures and continuously improve our emergency management system. We actively promote assessment of emergency rescue capability and investigation of emergency resources. Impromptu drills are organized on a regular basis to raise employees' emergency awareness and improve their response capacities, so as to effectively secure passenger safety. In 2019, MaLianWa Station of BJL16 and WangJing Station of BJL14 were rated as "Star Fire Fighting Station of 2019" by the Rail Transit Fire Response Division of Beijing Municipal Fire Brigade.

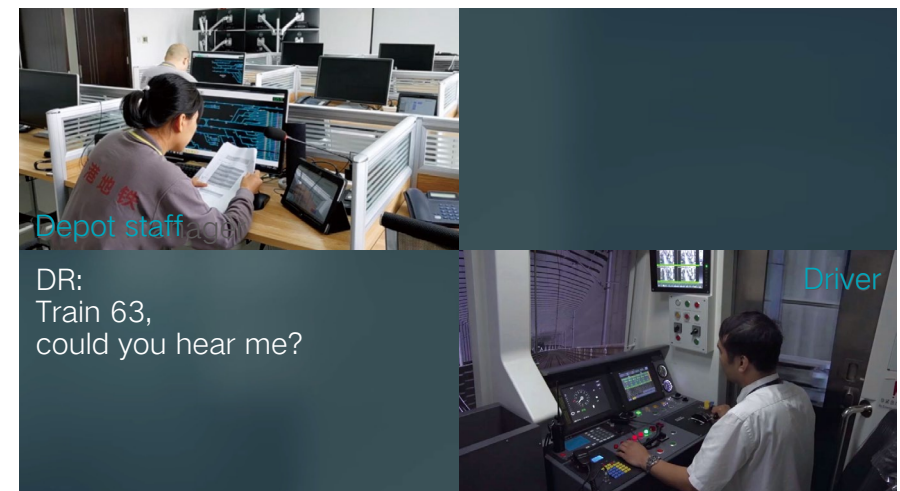
	2018	2019
Number of large-scale emergency drills	587	541
Number of emergency drill participants	8,781	7,710
Number of issues rectified in drills	90	176
Number of contingency management procedures optimized after drills	10	19



Emergency drill for signaling system

Incident replay session

Besides precaution, we focus more on lessons learnt from incidents. To review and analyze an incident, we organize incident replay sessions comprised of incident replay, standard operating procedures (SOPs), and contingency procedures. Staff involved in the incident are invited to help employees better understand SOPs.



DR:
Train 63,
could you hear me?

Incident replay session



Employee safety

We emphasize employee safety and keep optimizing the occupational health and safety management scheme. We organize safety trainings and accident analysis, and strengthen the management of metro safety qualifications. In addition, we strictly control occupational diseases, provide occupational health and safety risk assessments, and strive to raise employees' safety awareness and capability.

In 2018 and 2019

7,660 hours

of company-level safety training

Occupational health checks for

all employees



Measures to protect employees

Contractor safety

BJMTR is dedicated to developing its culture of "Safety First" into contractor management for a better safety management system. Experience sharing, training and safety promotions are organized regularly. Since 2018, lean management in contractor safety has been enhanced, with efforts on prevention and control. For example, we organized training programs and set safety standards to help contractors reduce risks of storing hazardous chemicals. Ten training sessions on hazardous chemicals were held for 202 chemical management staff and managerial personnels.

In 2018 and 2019

1,135

contractors received safety training

100%

70 contractor safety inspections were carried out with 71 issues identified and 100% rectification rate.

	Contractor Safety Management System	Improving the institutional system by compiling <i>Contractor Safety Management Manual</i> , revising <i>Contractor Safety Management Agreement</i> , and formulating <i>Safety Management Plan</i>
	Contractor Safety Management Meetings	Reviewing contractors' safety performance, and inviting contractors to report incidents and rectification progress, and share safety management experience at safety management meetings
	Contractor Safety Management Training	Strengthening the promotion of the <i>Contractor Safety Management Manual</i> , introducing basic requirements, safety management documents, hazard identification and hazardous chemicals management to trainees
	Contractor Safety Promotion Campaigns	Carrying out safety promotions including "Encouraging Contractors to Report Minor Injuries and Near Misses" to help contractors identify and rectify unsafe behaviors and hazards on site, and raise their safety awareness

Contractor safety management measures

Reliable transport services for key periods and major events

BJMTR is well prepared for peak passenger flows on occasions of holidays & festivals, extreme weather and major events. In 2018 and 2019, thanks to early response, contingency plans, rounds of communication and on-site supervision, we had successfully secured transport services during key periods such as the Spring Festival holiday, May Day holiday, flood season, and National Day holiday. We also provided transport services for major events, such as NPC and CPPCC, the Second Belt and Road Forum for International Cooperation, and the grand celebration honoring the 70th founding anniversary of the PRC.

Case *Going all out to secure transport services during the National Day Holiday*

On the 70th founding anniversary of the People's Republic of China, BJMTR dispatched 46 exclusive train trips for a total of 42,000 parading performers, achieving accurate cross-dispatch of exclusive and ordinary trains. To ensure transport capacity during the National Day holiday, the Company added 21 temporary trains for B JL4-DXL, and 5 temporary trains for the East Section of B JL14 from September 30 to October 7, 2019. The operating time of B JL4 during October 5 to October 7 was extended, with 60 mins longer for trains going from south to north and 30 mins longer for trains going from north to south. Thanks to the extended operating hours, B JL4 added 18 temporary train trips and transported 12,464 passengers, fully meeting the transport demand. During the holiday, the train service delivery and punctuality rates were both 100%, securing the safe and smooth travel of passengers.



Scan the QR code to watch the video clip themed "Going All out to Secure Transport Services during the National Day Holiday".

Safety culture

BJMTR actively fosters the culture of "Safety First". The Company has carried out diversified safety campaigns to create a safe working environment. In 2018, by virtue of its performance in safety promotion, management and standardization, the Company was awarded "Beijing Safety Culture Construction Demonstration Enterprise" by Beijing Emergency Management Bureau.



Case *Identifying unsafe behaviors by the Behavior-Based Safety (BBS) Project*

We have rolled out a Behavior-Based Safety (BBS) Project across the Company. Specifically, we spread the BBS idea, train observers, observe and analyze unsafe behaviors, and urge improvement accordingly, thus raising the safety awareness of employees. PW 2nd Line has implemented the project since 2017. It has incorporated observation and improvement into the work routine to change employees' attitudes and create a safe working environment. The number of work-related injuries started decreasing since 2017, and reduced to zero in 2019.

Average daily patronage
in 2018 and 2019

1.974 million
2.038 million

Train service delivery
in 2018 and 2019

99.99 %

Number of days that
extend operating time
in 2018 and 2019

226

BJL16 scored full mark for

32 consecutive months
in Beijing metro lines KPI rating (in a
hundred-mark system), continuously
refreshing domestic records



Always Be There for You



The Opening Story

07:00

Dream and companionship make everyday a good day



Xiaolan has been living in Beijing for six years. Every morning at seven o'clock, she leaves home and rushes to catch the train of DXL departing from XIN'GONG Station. It has become a daily routine.

As a market analyst, she works on a huge volume of data every day, which requires rigor and self-discipline. "The journey on the metro can relax me and get the steam off. So when I arrive home, my family will see me smiling." Xiaolan likes to read on the metro. "Reading is a way to relax myself. For me, books are like a spiritual garden in the hustle and bustle of daily life." She follows the same route every day, so any change to the lightbox in the metro station would catch her attention. In April 2019, M-Library launched a new reading campaign. "I resonated with the slogan 'Man is Young but Once; Books Can be Read Again'. It reminded us that we need to slow down sometimes in the fast-paced life, and enjoy light reading. In M-Library, I re-read *Gone with the Wind*, *The Little Prince*, and *Miracles of the Namiya General Store*. It felt like the old college days."

During peak commuting hours, Xiaolan often sees station staff diverting the traffic and giving safety reminders in an orderly manner. "BJMTR distributes free raincoats to passengers when it rains, a benefit I've received for several times." She finds BJMTR's station announcements heart-warming, such as "Please stand still and hold the handrail." and "Please be careful, the floor is slippery." In August 2019, BJMTR launched the non-cash payment service. She felt the difference instantly. "It saves time, especially no worries if you have no cash with you."

Life is never easy for a "Beijing drifter" (a person who leaves hometown and works in Beijing), but Xiaolan is optimistic about the future. "This city is full of love. The free raincoats make rainy days less gloomy. The kind safety reminders ease our anxiety during rush hours. Thank you, BJMTR, for warming the heart of dream chasers like me."



Xiaolan
 A passenger of R14 - DXL
 Every small, considerate action warms the heart of a dream chaser.



Methodology and strategy

Putting customers first, we constantly improve the management model and operational capability to build intelligent metro. We optimize service details and offer diversified services, in order to create a warmer, more comfortable and modern travel space for passengers.

01

Releasing the first *Customer Service Pledge*: We have formulated four key service indicators as "high levels of train operation performance", "reliable equipment and facilities", "creating modern urban transportation environment" and "listening to the voice of customers" in the first Customer Service Pledge, to effectively improve safety, reliability and smoothness of the passenger travel.

02

Developing a customer service model: With the aim of meeting customer needs, we have developed a BJMTR customer service model, based on the characteristics of the transportation industry and service quality theories. We stand in the shoes of passengers to set standards for improvement.

03

Carrying out passenger satisfaction surveys: Based on business characteristics of the Company, we have developed a passenger satisfaction indicator system as an effective tool for assessing service quality and analyzing the quality of operation.

04

Providing tailor-made services: We have made targeted measures for each station and each train door to guide passengers to wait for trains, get on and off, and enter and exit the station in order, according to locations of stations, passenger flow, entrance layout and routing, and the internal structure of stations.

05

Further advancing the first-inquiry stewardship: We have improved passenger services under the principle of "Shouldering responsibilities, and fulfilling tasks with high efficiency and tangible results". We have also provided value-added services and improved work efficiency to reduce passenger complaints.

Measures to improve passenger services

Enhancing operational capability

In 2019, the average daily patronage of Beijing rail transit network reached 10.8553 million, and the passenger flow intensity of lines operated by BJMTR reached 18,000 passenger journeys per km day. The maximum section passenger flow of BJL4-DXL reached 58,700 passenger journeys per hour. The large passenger flow during peak hours posed challenges to the operation. To ensure passenger safety, we have assigned more staff and resources to maintain order. We have improved the transport capacity to ease the pressure of passenger flow and ensure fast travel through shortened headway, extended service hours, optimized passenger transportation management, multifunctional areas and increased capacity of trains.

Shortening headway

We have adopted full-length and short-turn routing and added temporary train trips in recent years. The shortest headway of BJL4-DXL during morning peak hours on workdays has been kept less than 2 minutes. In 2019, the minimum headway of the East Section of BJL14 during peak hours on workdays was shortened from 4 minutes to 3 minutes 30 seconds, increasing the peak-hour transport capacity by 13%. For BJL16, the minimum headway during peak hours on workdays was shortened from 8 minutes to 6 minutes, increasing the peak-hour transport capacity by 13%.

In 2019

The passenger flow intensity of lines operated by BJMTR

18,000 passenger journeys per km day

The maximum section passenger flow of BJL4-DXL

58,700 passenger journeys per hour

In 2019

The minimum headway of the East Section of BJL14 during peak hours on workdays was shortened from

4 minutes to **3** minutes **30** seconds

The minimum headway of BJL16 during peak hours on workdays was shortened from

8 minutes to **6** minutes



Extending service hours

To strengthen the connection between Beijing South Railway Station and the metro station and improve metro services at night, BJMTR extends the two-way service hours of BJL4-DXL every Friday and Sunday, with 60 minutes extended for the last up-track train and 30 minutes for the last down-track train. In 2018 and 2019, the extended operating time was up to 226 days.



Optimizing passenger transportation management

BJMTR adopts full-length and short-turn routing to flexibly and effectively respond to the changing passenger flow. We also add temporary train trips and dispatch empty trains at intermediate stations to alleviate passenger traffic during morning peak hours on workdays. In 2018 and 2019, 1,258 up-track and 99 down-track temporary train trips were added to BJL4-DXL. For the East Section of BJL14, totally 427 temporary up-track train trips were added and 409 empty trains were dispatched from intermediate stations.

In 2018 and 2019

1,258

temporary train added on the up track of BJL4-DXL

99

temporary train added on the down track of BJL4-DXL

427

temporary train added on the up track of east section of BJL14

409

empty trains dispatched

Adding multifunctional areas and Increasing capacity of trains

We have removed seats in some carriages of trains on BJL4-DXL to add multifunctional areas for the convenience of passengers in wheelchairs, taking baby strollers and large pieces of luggage. In this way, the transport capacity could be increased to some extent, relieving the pressure of passenger traffic and improving travel experience. By the end of 2019, we had carried out seat-removal pilots on three trains on BJL4-DXL. The original grab handles and handrails in doorways and aisles were kept for passengers to hold and stand firm.





Building intelligent metro

We have introduced a bunch of measures to improve metro operation and passenger experience, including innovating an intelligent cloud platform, realizing the full coverage of 5G signals in BJL16, providing non-cash payment services, introducing screen door media, and launching WeChat Mini Program. While promoting intelligent operation and maintenance, we offer convenient and diversified services for passengers in a smart way.

Innovating an intelligent cloud platform

To realize full-trip and full-coverage intelligent management and control of the rail transit system, BJMTR has actively developed an intelligent cloud platform to support the operation of the Company's information system and resource management, realizing resource sharing and dynamic dispatching.

Based on the intelligent cloud platform, we incorporate the advanced management model of MTR and have built an information management system integrating the Operation and Management Information System (OMIS), Maintenance and Management Information System (MMIS), and Upgrading and Renovation Management System. In the future, we will leverage the intelligent operation and maintenance system to deliver multiple functions through collecting, analyzing and processing data, including intelligent fault analysis, fault locating, health management, and fault prediction, thus further improving maintenance and safe operation.

BJL16 takes the lead to realize 5G signal full coverage

5G network infrastructure is the technological foundation for the development of smart rail transit. The interconnected 5G network makes rail transit more intelligent and more convenient. In May 2019, BJL16 took the lead to realize the full coverage of 5G signals. In August 2019, National Library Station on BJL4 finished the construction of as 5G pilot station. In the coming days, BJMTR will continue to realize 5G coverage in BJL4, DXL and BJL14.



Based on the test result, the speed of the 5G mobile service at the platform of BJL16 is much faster than that of the current 4G service, making it possible for live streaming and playback of HD videos, HD video call and real-time VR monitoring.

Providing non-cash payment services

With the rapid development of information technology, mobile payment has penetrated into all walks of life. Starting from August 10, 2019, non-cash payment service was piloted in 55 stations across the Beijing rail transit network, including 13 stations of BJMTR. During the pilot period, we checked and optimized our equipment systems and timely fixed any problems found in pilot. The system, software programs, business rules and operating procedures were all well-tuned, thus laying a solid foundation for non-cash payment services in all stations. On August 31, 2019, Beijing rail transit commenced the non-cash payment services across the entire network, including four lines and 73 stations operated by BJMTR. Passengers could use WeChat and Alipay to purchase tickets, pay upon arrival and recharge transport cards, enjoying a more convenient payment service.



Non-cash payment services

Introducing screen door media

Since January 2019, BJMTR was the first to launch the screen door media in metro stations. Using cold light source, the projector projects clear images on the screen. With this, short video programs and operation information could be displayed on screen door. To secure passenger safety and meet operation requirements, the screen door turns transparent automatically when the train arrives, so that drivers, station staff and passengers are not distracted. The media is resumed after the train departs. In the future, we will introduce screen door media to more stations, and offer more diversified video programs and interactive experience. Passengers could thus enjoy more informed and convenient travel experience.



Screen door media

Launching WeChat Mini Program

We have launched BJMTR WeChat Mini Program to deliver better passenger services. Passengers could plan their journey and even send their resume via the Mini Program. If passengers have left something on a metro train, they can go to "Lost & Found" in the Mini Program to check lost items.






User interface of BJMTR WeChat Mini Program



Optimizing service details

BJMTR always stands in the shoes of passengers to provide comfortable and reliable facilities and meets diversified needs of different groups. We constantly improve the environment of metro stations and provide more convenient, high-quality and heart-warming services. At the same time, we listen to passenger needs through hotline, official website and other channels, and improve our services accordingly.

 Before entering station	<ul style="list-style-type: none"> In June 2019, we installed canopy in the front square of Entrance A of Beijing Zoo Station on B JL4 to protect passengers from the burning sun and rain. A waiting area and information bulletin are provided under the canopy. The station is accessible via ramps for the convenience of children and passengers with large pieces of luggage.
 Before getting on board	<ul style="list-style-type: none"> We provide barrier-free access with at least one wide AFC gate at the entrances of all our stations to facilitate passengers in wheelchairs or with large pieces of luggage. Some stations are equipped with one or several accessible lifts. All stations are equipped with accessible toilets for passengers with special needs. We have added floor signs, larger ground signage in interchange stations, and lift signs for elderly and pregnant passengers, so as to guide passengers to the platform in an orderly manner.
 During the journey	<ul style="list-style-type: none"> We have adjusted the light temperature in carriages of B JL16 to create a more relaxing environment, relieving eyestrain and keeping passengers in good spirits. We have launched the "Love Pack" program to provide passengers with stationary sets, wet wipes, disposable slippers, ointment, and other emergency supplies.

Measures to optimize service details

Note

BJMTR has established a sound "Lost & Found Management System" which could post found or lost items in the system. The system could automatically match found items with passenger inquiries based on descriptive information, thus increasing the return rate. In 2018 and 2019, 3,504 lost items were found and returned with the help of the system.

Passenger satisfaction rating in 2018

91.62

Passenger satisfaction rating in 2019

90.95

JinTailu Station on B JL14 was awarded by Ministry of Transport in 2018

"Model Service Unit in the Transportation Sector of China"

In 2019

We compiled *Sincere Service, Unlimited Care*, a handbook on the accessible facilities and services of BJMTR, and distributed

120,000

 copies

Since the opening of the first line of BJMTR

166

accessible lifts installed

80

accessible toilets installed

257

Wide AFC Gates installed

Providing diversified services

We have conducted an in-depth study of the characteristics of passengers' daily travel, and introduced facilities in stations to meet their needs for food, daily supplies, travel and culture. When BJL4, DXL, BJL14 and BJL16 commenced service, we took the lead to introduce vending machines, ATM and automatic photo-taking machines. In 2019, we also introduced fresh flower vending machines and POP MART vending machines to create fashionable travel space, providing more convenient services for passengers.

In metro stations, the Passenger Information System (PIS) is important to deliver information and announcements, and improve passengers' visual experience. In 2018 and 2019, according to the characteristics of passengers' travel, we rescheduled the video streams of the PIS to shorten the rotation length of the video playback from 1 hour to 30 minutes, which provided passengers with more timely and diversified news, cultural & sports information, meeting passengers' different needs.

- 1 POP MART vending machine
- 2 Fresh flower vending machine
- 3 Vending machine
- 4 ATM
- 5 Automatic photo-taking machine

1	3
2	4
5	5



Number of employees
by 2019

7,759

Employee training hours per capita
in 2018 and 2019

100.04

114.28

Number of employees passed
occupation skill appraisals
by 2019

3,042



Pursuit of Excellence in Employee Growth



The Opening Story

10:00

A platform to make dreams come true; an attitude to underpin service quality



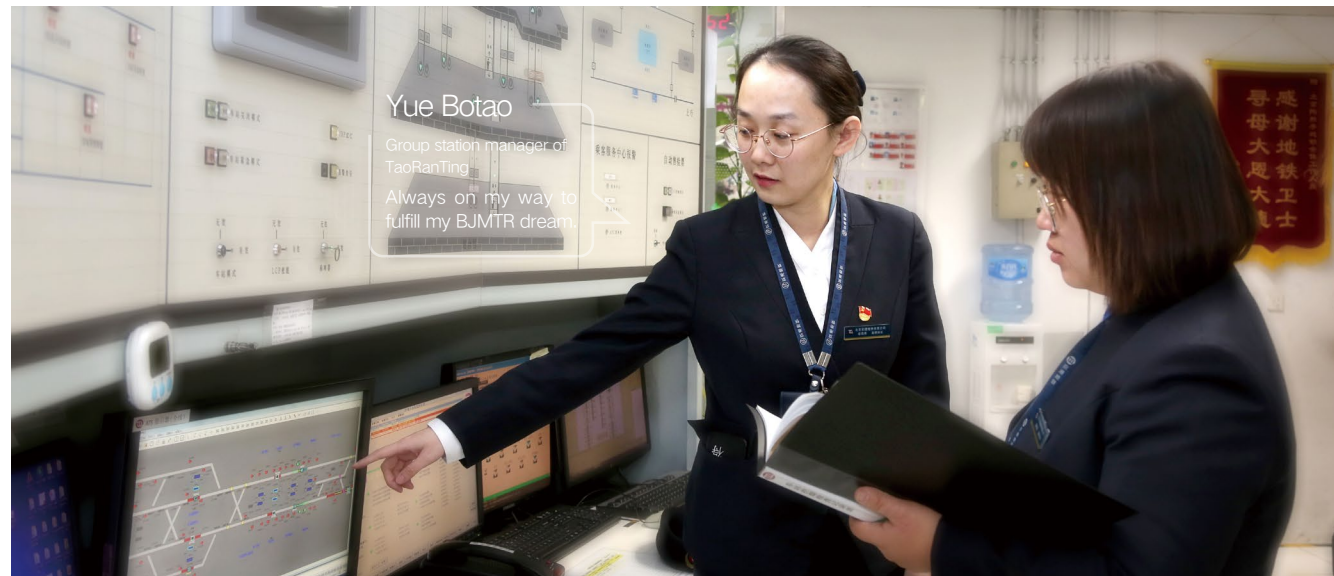
At 10 AM, the morning peak is coming to an end, but TaoRanTing group station is still busy with heavy traffic. Yue Botao works as a group station manager here. She needs to stay focused to ensure stable and orderly operation. "I joined BJMTR as a fresh graduate. Here is where I started my career." In July 2012, with a passion for the rail transit industry, Yue joined the BJMTR family through the management trainee program.

Even as a rookie, Yue had a clear career path in mind. "BJMTR designed a well-structured training scheme for management trainees. Besides regular theoretical learning and trainings, we would rotate between Station Operation, Train Operation, OCC, Operation Support and other functional departments. The arrangement helped us get a comprehensive understanding of the responsibilities of each department and how

they coordinate with each other. Meanwhile, a seasoned mentor was appointed to give us 'one-on-one' tutoring. The executives would meet us regularly to field our questions. Job rotations, mentorship, and phased evaluation... all these stages enabled us to move forward steadily." Now, Yue becomes a mentor herself. "I would tailor-make learning plans for the trainees based on their personalities, skills and strengths. I hope to boost their growth, prepare them for frontline work, and equip them with hands-on skills as soon as possible. When they are competent enough, they can take managerial positions."

In November 2019, Yue was promoted to the group station manager of TaoRanTing. As one of the key group stations operated by BJMTR, this one houses Beijing South Railway Station, CaiShiKou Station and XuanWuMen Station, all among the busiest stations in Beijing metro network. She needs to pay close attention and respond promptly to all kinds of emergencies. "Facing the huge passenger flow, we feel both pressure and responsibilities."

As a group station manager, she is busier than before, but she enjoys being "needed". "I heard people saying that, 'when you feel fatigue and painful, you are going uphill.' Although the work is energy-consuming, I hope I could shine in my field of expertise, contribute my share, and grow along with the Company."



Yue Botao
 Group station manager of
 TaoRanTing
 Always on my way to
 fulfill my BJMTR dream.



Methodology and strategy

Talents are the foundation of BJMTR. We value every employee and create an open, transparent, and people-oriented workplace for them. We fully support employees' career development, and sincerely recognize and encourage their contributions to the Company, thus providing them with clear path for career growth to unleash full potential.

Protecting Employee Rights and Interests	<ul style="list-style-type: none"> Diversified recruiting channels Fair employment Competitive remuneration and benefits Democratic engagement
Realizing Employee Values	<ul style="list-style-type: none"> Dual career development channels Diversified training Corporate culture building
Safeguarding Employee Happiness	<ul style="list-style-type: none"> Better work environment Support employees in need Care for women employees Carry out diversified recreational activities

Protecting employee rights and interests

BJMTR attracts talents through open, fair, just and diversified recruiting channels. We strive to create a better life for every employee. We encourage democratic engagement and offer competitive remuneration and benefits, so as to protect employee rights and interests.

Diversified recruiting channels

To attract more professional and outstanding talents, we adopt the advanced talent management method and recruit talents through campus and society recruitment, school-enterprise cooperation and collaboration with talent centers in local communities, laying a solid foundation for sustainable development. A rewarding employee referral program is also launched to encourage employees to recommend qualified candidates from their personal networks.

<p>Campus Recruitment Campaign</p> <ul style="list-style-type: none"> Organizing job fairs in seven universities, including Beijing Jiaotong University and Southwest Jiaotong University Organizing online job fairs for Wuhan University of Technology and Central South University Organizing a joint campus recruitment campaign with MTR, Hangzhou MTR and MTR Shenzhen facing Dalian Jiaotong University 	<p>School-enterprise Cooperation</p> <ul style="list-style-type: none"> Setting up tailor-made classes with 18 schools to cultivate talents in Engineering, Operation and other specific fields Launching a "Firefly Program" to build a supervision talent pool and recruit targeted students from five schools 	<p>Social Recruitment Campaign</p> <ul style="list-style-type: none"> Cooperating with Zhaopin, 51 job, Liepin and other job search websites 	<p>Collaboration with Talent Centers in Local Communities</p> <ul style="list-style-type: none"> Cooperating with district-level human resources public service centers in eight urban districts and three suburban districts in Beijing, and nearly 30 street-level social security centers in Daxing District, Fengtai District and Haidian District
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Diversified recruiting channels

In 2018 and 2019

1,347 and **1,625**

employees recruited

In 2018 and 2019

444

employees who joined the Company through the school-enterprise cooperation channel

In 2018 and 2019

Honors awarded

[China's Top 30 Employers 2018](#)

[China's Top 100 Employers 2019](#)

[Excellent Case of Shaping Employee Pride in Building a Happy Enterprise 2019](#)

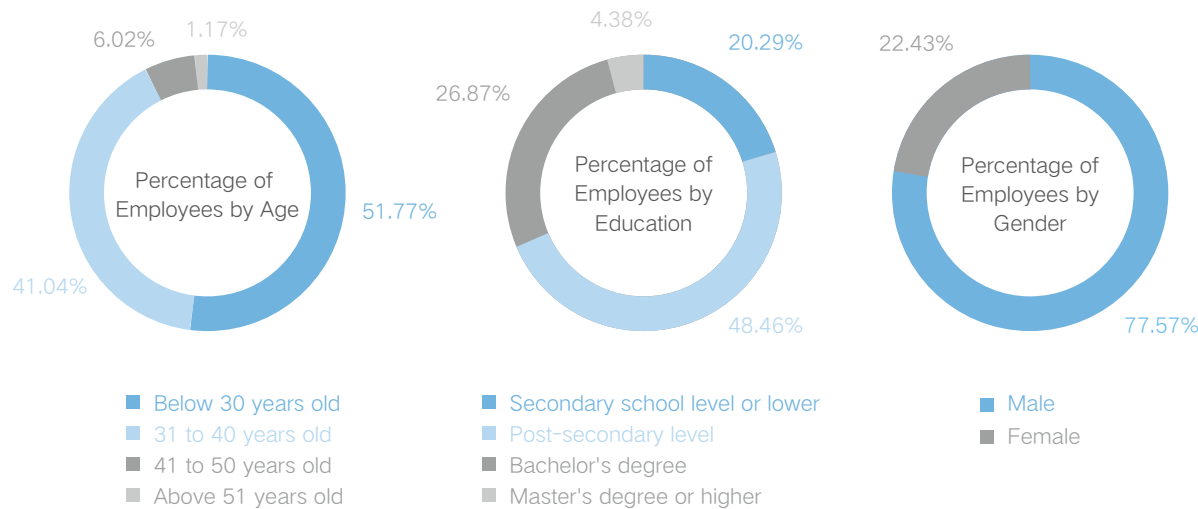


Safeguarding employee rights and interests

We strive to create harmonious labor relations. We provide employees with equal development opportunities, competitive remuneration and benefits, and unblocked communication channels, so that every employee is equally respected while pursuing career development.

Fair employment

We stick to equal employment without any forms of discrimination or forced labor, so as to create a just, equal and harmonious work environment. The labor contract coverage reached 100% in 2018 and 2019. By the end of 2019, employees from ethnic minority groups accounted for 6.81% of the total workforce, and 24.77% of intermediate and senior managerial positions were held by women.



Remuneration and benefits

We pay social insurance and housing fund for all employees in accordance with laws and regulations. Besides mandated benefits, we provide additional benefits to employees, including supplementary pension, commercial insurance, paid sick leave, holiday allowance, high-temperature allowance, and heating fee. In 2018 and 2019, the social insurance and housing fund coverage is 100%.

Democratic engagement

We hold Workers' Congress on a regular basis to safeguard employee democratic rights. We expand communication channels, including the Labor Union, Workers' Congress, staff meetings, Labor Union Mini Program and the Suggestion Box, to keep employees engaged in corporate management. In 2018 and 2019, all employees joined the Labor Union, and 162 staff meetings were convened with 7,352 participations, fully ensuring employee rights to know, to participate in and to supervise.

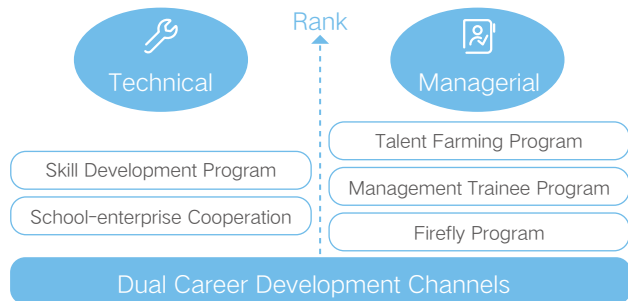


Realizing employee values

Employees are our most valuable asset, so we are dedicated to supporting their growth. We provide employees with diversified learning resources, fair and just workplace and vast career development opportunities. We spark employees' creativity to help them achieve career goals.

Unblocking career development channels

To boost our talents' professional and diversified growth, we have established the dual-channel career development model for managerial and technical talents at all levels. In terms of managerial talents, we have launched Talent Farming Programs to cultivate managers in the mid and longterm, implemented a Management Trainee Program to build a talent pool of managerial competence, and initiated the Firefly Program to support frontline managers. Concerning technical talents, we have carried out the school-enterprise cooperation and the Skill Development Program to cover employee training needs at different stages.



The dual-channel career development model

Supporting employee growth

Supported by an industry-leading management and technical training system, we constantly try innovative approaches for talent development and organize colorful and diversified training programs, unleashing the potential of employee growth.

Management training

Management trainings are business-oriented. We keep improving the training system and offer differentiated trainings for managers at different levels. Focusing on the practicality, we explore effective resources and approaches to implement talent back-up and development programs. Managers can learn methodology and hands-on experience, and get motivated and enlightened, thus facilitating their behavior changes and enhancing their competitiveness.

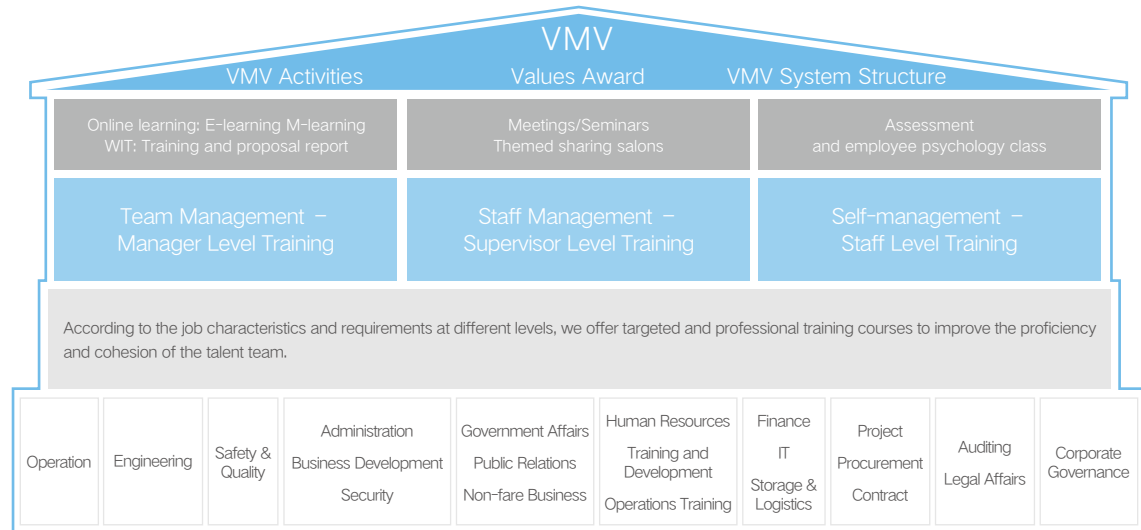
In 2018 and 2019

124,440

total training hours of management training



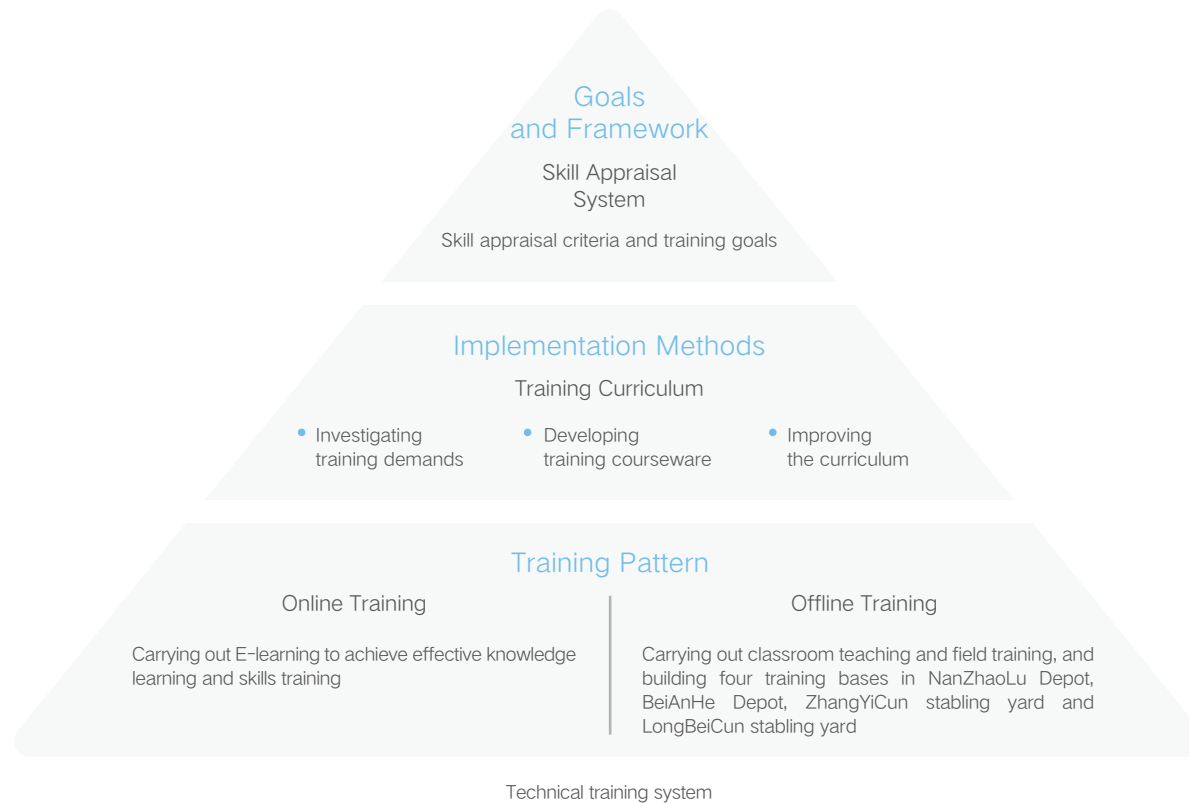
"Voyage" manager training program



Management training system

Technical training

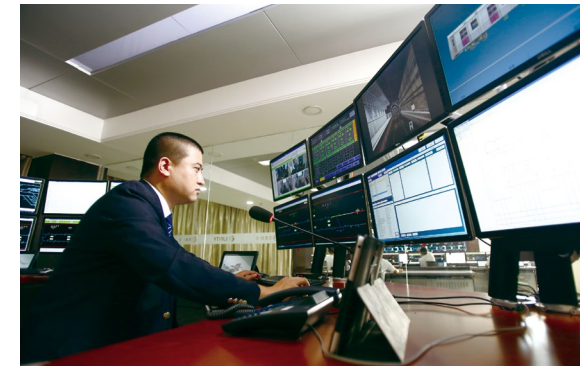
More than 85% of posts in metro operation are on the frontline. To meet employees' demands for skill training, we have built a professional training team and developed a systematic training and assessment system, matching training goals with post requirements and skill appraisal criteria. We organize the Employee Microlecture Competition and build the database of employee training cases and a knowledge base. The online and offline, internal and external training model has empowered employees in an all-round way. Experienced employees are encouraged to become part-time trainers, so as to motivate their initiative and cover all specific positions in the training team.



In 2018 and 2019

591,269

total training hours of technical training



Training with the train simulation system



Award ceremony of the 1st "BJMTR Microlecture Competition"



Upgrading corporate culture

To align employee values and dream with those of BJMTR, we have upgraded our corporate culture to the version 2.0. We organize Work Improvement Team (WIT) activities to encourage employees to stick to values they uphold to, so as to strengthen corporate culture.

Corporate culture 2.0

Taking the Company's strategic transition as an opportunity, we actively upgrade corporate culture. We have carried out diversified culture promotions and training camps, and launched the "Can Do" program, striving to create an ecosystem of corporate culture. In 2018, our "Can Do" program won the Gold Prize of the 3rd CSTD National Learning Design Competition, and "China Talent Development Awards".

Case *"Can Do" Program applies "ripple model" to promote corporate culture*

BJMTR adopted the concept of "ripple model" to create an interrelated and interconnected network, promoting corporate culture in a radiating manner. The 30 corporate culture ambassadors motivated 300 culture vanguards of the "Starlight Group", and then spread the influence to all employees in the Company. This "ripple model" enhanced employees' understanding and recognition of the corporate culture.



BJMTR 2.0 starlight meeting

"WIT"

We encourage employees in Engineering, Operation and non-operation to team up for WIT promotion and proposals review. In 2018 and 2019, 340 WITs were formed, with a total of 2,867 employees involved and 348 work improvement proposals formulated. The "Inclusiveness Team" won the Innovative Proposal Award of China Association for Quality, "Song'ao Team" won Best Proposal Award in MTR WIT Annual Presentation Ceremony for the 4th time in a row, and "Gardener Team" won the Best Presentation Award (Mainland businesses) and Audience's Favorite Proposal Award in 2019 at the MTR WIT Annual Presentation Ceremony.



"Gardener Team" presented at the 2019 MTR WIT annual presentation ceremony



Safeguarding employee happiness

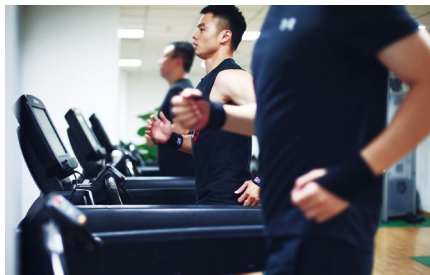
BJMTR is committed to bringing happiness to every employee in work and life. We care about not only work issues, but also employees' life quality. We support employees in need and enrich their life after work, so as to build up cohesion.

In 2018 and 2019

BJMTR Labor Union "Staff Home" was awarded as
 "Outstanding Staff Home in Beijing"

Care for employees

We organize featured activities for our employees. We create favorable work environment for frontline employees and protect the rights and interests of women employees. While scaling up our efforts in supporting employees in need, we provide regular rehabilitation and trainings to help employees release work pressure. These activities make every employee feel at home.



Fitness centre



Stress management courses



Culture, arts and sports activities



Supporting employees in need

We support employees in difficulties and have increased the amount of support fund for hospitalized and poverty-stricken employees due to sudden illness. In 2018 and 2019, we visited 126 hospitalized employees and their 26 family members.

Care for women employees

We have signed *Women Employees Protection Contract* with over 1,740 women employees to protect their legitimate rights, including equal opportunities, social insurance, benefits and promotion channels. Special care is given to those during special periods. We provide electronic health guides to help women employees get through pregnancy, perinatal and nursing periods and get back to work smoothly. We also set up lactation rooms in the workplace, so that women employees could better balance work and family.

Carrying out recreational activities

We advocate healthy and pleasant work and life styles. We provide all kinds of interest classes and recreational activities to encourage employees to work efficiently and enjoy life after work.

Number of students benefited
from BJMTR Safety Camp Program by 2019

18,000

Number of volunteer activities organized
in 2018 and 2019

62

Volunteer hours

20,000



Perseverance for Better Communities



The Opening Story

14:00

My story with BJMTR Safety Camp



At 2 PM, in a classroom at Beijing National Day School, Geng Shuai was hosting the "BJMTR Safety Camp" with other volunteers. This was his 23rd training camp since he joined this program three years ago. "As the Station Control Officer, I was already buried in work. But I love kids and arts, and I'm a good moderator, so I didn't hesitate to sign up for the BJMTR Safety Camp."

The job, however, is easier said than done. "At first, I was at loss about how to get along with kids of different ages, and how to explain facts to them in plain language. Fortunately the program organized special training for us on how to make an opening, how to control the rhythm of the lecture, how to organize a speech, how to explain facts, and how to interact with children." Trained and seasoned by more than 20 activities, Geng Shuai is now an expert in this, familiar with every part of the course. He can now easily engage the kids and work the atmosphere in his favor. "The kids are the great encouragement to me. Apart from volunteering, I also help train volunteers. I hope to pass on the volunteer spirit to others."

The innocent smiles of children never fail to satisfy Geng Shuai and other volunteers from the bottom of heart. "BJMTR Safety Camp helps raise the safety awareness of children. From time to time, the kids would come to me after class, proudly, saying that they are going to 'teach' their grandparents and parents about the safety tips. I feel encouraged when I see our efforts pay off, bringing safety not only to kids but also to their families."

Talking about the future, Geng Shuai says, "Our responsibility grows as the patronage increases. Yet what will never change is the beginner's mind, patience and sincerity of volunteers. I hope to share my knowledge with more kids, and to bring along more people to join volunteer team."



Geng Shuai

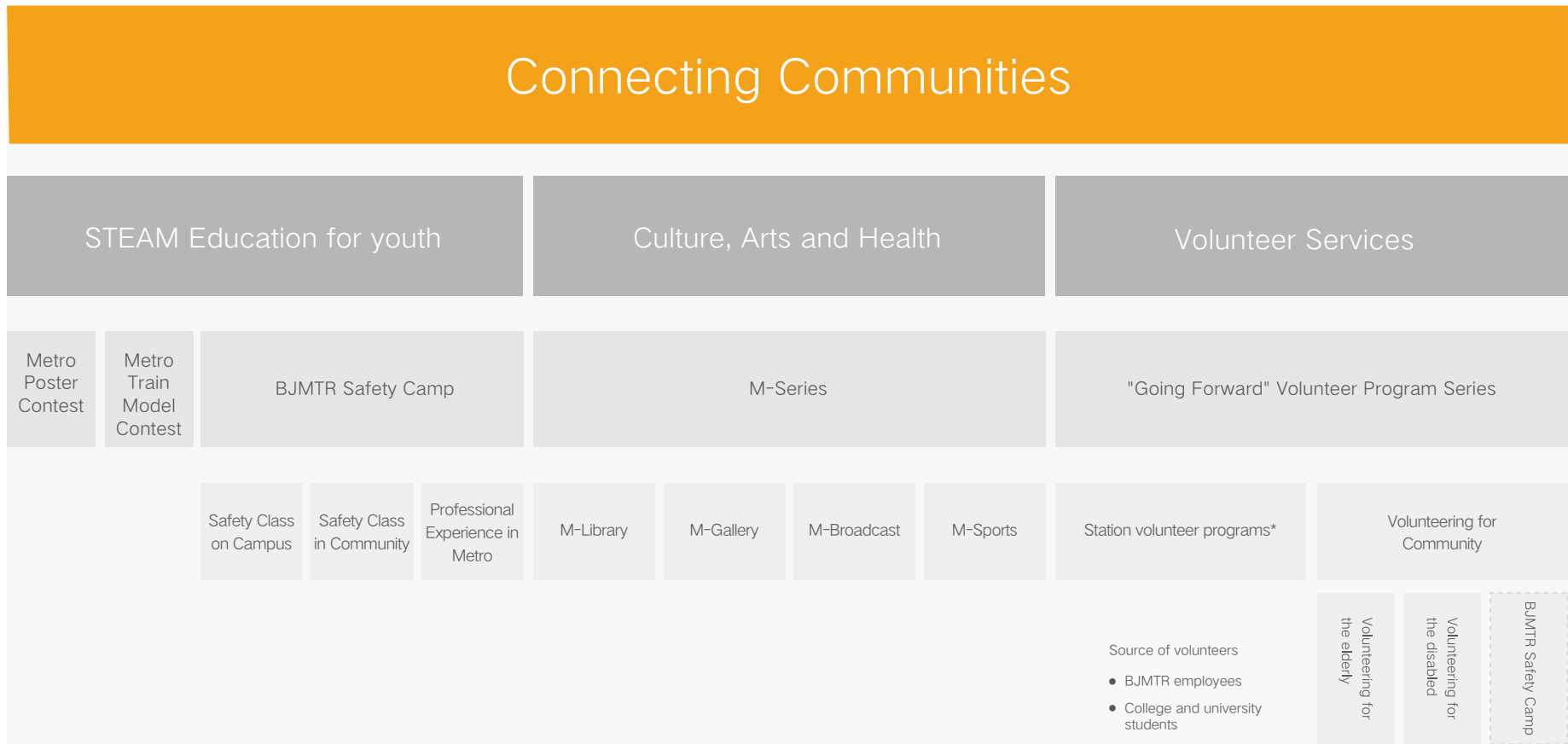
A volunteer of BJMTR Safety Camp

What will never change is the beginner's mind, patience and sincerity of volunteers.



Methodology and strategy

As a responsible corporate citizen, BJMTR has always been committed to promoting community development and actively practicing social responsibility. The STEAM education for youth, culture, arts and health programs and volunteer activities have strengthened communication and integration with communities along the metro lines. Upholding the vision for common prosperity, we leverage our expertise to seek cooperation with partners from other sectors. We also encourage employees to contribute to creating a favorable environment for the Company's development and addressing social issues, promoting the harmonious development of communities.



BJMTR CSR priority areas



Community engagement

BJMTR cannot achieve sustainable development without the understanding and support from communities. Better communication and mutual understanding are the basis for our healthy and stable development. We listen to the voice of community residents, identify their needs and participate in community development through multi-platform interaction and face-to-face communication.

Online communication

We have expanded our online communication channels through self-media including the official website, Weibo account, WeChat Subscription Account, WeChat Service Account, WeChat Mini Program, and accounts on Tik Tok, Toutiao, Open Media, and Yidian Zixun. These channels can meet the needs of the government, passengers, community residents, institutions, media and other stakeholders for obtaining information timely.



BJMTR new media matrix



Community communication

We actively facilitate the communication between passengers and the Company. The Customer Service Pledge Release Ceremony and Depot Open Day are our ways of direct communication with communities, through which we invite passenger representatives to visit the train maintenance with AR technology and to exchange views with the General Manager.



1

2

1 General Manager Wilson Shao talking with passenger representatives in the *Customer Service Pledge Release* ceremony

2 BJMTR Depot Open Day on the 10th anniversary of the first line opening of BJMTR



STEAM education

The innovative and hands-on abilities are vital to spark teenagers' creativity and improve their comprehensive capabilities. Over the years, we have given full play to our strength and provided high-quality metro resources to the public, which provides a platform for teenagers to explore, innovate and exchange ideas. Teenagers have broadened their horizons and grown up in learning and practice.

The Beijing and Hong Kong Middle School Students Metro Train Model Contest inspires imagination of the youth

Teenagers are the future and hope of scientific development. BJMTR worked with partners to organize the "Beijing and Hong Kong Middle School Students Metro Train Model Contest". Contestants were registered in three events, including creative design, build & assemble and operation of metro train model. The contest aimed to nurture students' innovative and hands-on abilities, help them gain a deeper understanding of the urban rail transit system, and facilitate exchanges between students in Beijing and Hong Kong.

135

secondary schools in Beijing and Hong Kong participated in the event

146

entries received



Beijing and Hong Kong Middle School Students Metro Train Model Contest

“ Taking the Metro Train Model Contest as the platform, it can stimulate the enthusiasm and innovation passion of middle school students for urban rail transit, and combine science and technology with transportation, so as to contribute to the construction of modern comprehensive transportation system in Beijing, the alleviation of traffic congestion and the construction of smart transportation. —An official of Beijing Municipal Commission of Transport ”

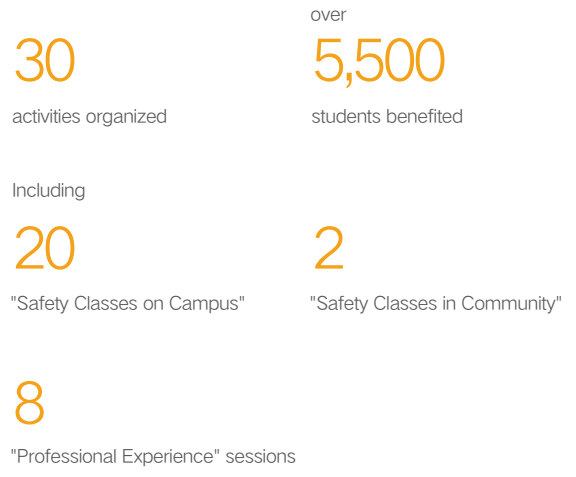
“ Giving full play to high-quality education resources, the Contest helps teenagers broaden horizons in learning and practice, develop an innovative mindset, and raise awareness for innovation in urban development. —An official of Beijing Municipal Education Commission ”



BJMTR Safety Camp enables kids to learn travel safety tips in joy and laughter

We have organized a series of BJMTR Safety Camp activities with diverse content and expanded education resources. We combine interactive science experiments with safety courses to promote knowledge of safe travel, raising students' safety awareness. In 2018, we became the first metro operation enterprise qualified as "Social Classroom Resource Enterprise for Primary and Middle School Student in Beijing". We were also awarded as "CSR CHINA TOP 100" in the "CSR China Education Award".

In 2018 and 2019



Case *Live stage show prompts attention of everyday safety*

In a special session of BJMTR Safety Camp in Longfor Paradise Walk, the parent-child live show debuted. Through a costume show and science experiments interaction, performers presented travel safety tips vividly to neighborhood families, such as "passing the AFC gate after kids", "do not bring along prohibited articles", and "drinking and eating are prohibited on the train". The audience learned the importance of safe travel in interactions with performers.



Safe travel show





- 1 Safety class on campus
- 2 Safety class in community
- 3 Professional experience in the station
- 4 Professional experience in the operation control center





Culture, arts and health

An artistic underground space could make people feel the unique beauty of the city. BJMTR utilizes its strength to carry out M-Series public interest programs. By injecting arts into the metro journey, we aim to create a modern urban travel space with humanistic features so that passengers can enjoy the culture and charm of the city during their journey.

Sharing delightful reading times —M-Library

To meet passengers' needs for mobile reading and create a cultural atmosphere in metro stations, we organize creative M-Library events on a regular basis, such as collecting reading lists, sharing reading stories, and launching a "Family Reading Contest" to bring the charm and fun of reading to passengers. Since the launch of M-Library, a total of 14 themed activities have been held and more than 100 electronic books have been provided to passengers for free.



Introducing an audio book sharing platform to enrich the existing e-book library



Launching the "Family Reading Contest" to invite passengers to enjoy happy reading time



Feeling the charm of light and shadow —M-Gallery

We give full play to media resources to build M-Gallery into a place showcasing pictures in metro stations, so that passengers could taste different cultures during their journeys and have a unique travel experience. To improve the interaction between M-Gallery and passengers, we have set up a communication platform for photography lovers to display their works, thus enriching the travel space for passengers.



M-Gallery "Our 10 Years" exhibition showcasing the stories of passengers and metro over the past 10 years

Advocating healthy lifestyle

We organize and participate in health promotion events regularly to advocate healthy lifestyles, encouraging more people to take and enjoy exercises. In 2018, three years after the smoking ban in Beijing, BJMTR joined the "China Corporate Pledge Event on Smoke-Free Workplaces" initiated by WHO and China's Center for Disease Control and Prevention, where we shared our smoking control ideas and practices in metro. We also participated in the advertising video and poster of the "Your Right My Responsibility" campaign to advocate for creating smoke-free workplaces.



General Manager Wilson Shao at China Corporate Pledge Event on smoke-free workplaces



Volunteer services

Volunteers are the cultural envoys of a city. BJMTR practices the volunteer spirit of "dedication, friendship, mutual help, and progress", and sets up the volunteer service platform "Going Forward" Volunteer Program Series to encourage employees and the public to join volunteer services, making volunteerism a fashion and a habit.

Volunteer management

BJMTR deeply recognizes the volunteer culture and actively promotes the standardized and professional development of volunteer services.

Professional volunteer services

Adhering to the concept of combining volunteer service with professional skills, representatives of various departments and stations are encouraged in volunteer management. This could motivate employees and give full play to their professional skills, making volunteer services more targeting, valuable and sustainable.

Volunteer empowerment

We have trained volunteers for station services, BJMTR Safety Camp and programs helping the elderly and the disabled, so as to enhance volunteers' overall competence and improve the service quality.



"Going Forward" volunteer training for helping the elderly and the disabled



Volunteer services

BJMTR has set up an open volunteer service platform to encourage its employees, social volunteers and college students to be engaged in volunteer services in metro stations and communities, thus connecting and promoting community development.

In 2018 and 2019

17

volunteer activities organized in metro and community

20,000

volunteer hours contributed

Metro volunteer services

To facilitate passenger travel, we set up volunteer posts in key stations with high passenger flow during holidays, and organize volunteers to guide passengers to buy tickets, enter and exit quickly, and get on and off orderly at ticket vending machines, AFC gates, transfer passages and platforms.



Volunteers help passengers buy tickets.



Volunteers help passengers pass the AFC gate.

Community volunteer services

We collect the needs of communities along the lines and listen to residents' suggestions on our services. We give full play to employees' professional skills to help communities address problems, promoting common prosperity of the communities and the Company.



Volunteers introduce the non-cash payment service to community residents.



Volunteers listen to community residents' demands and suggestions for metro services.

Number of suppliers
in 2018

603

Localization rate

67.16 %

Number of suppliers
in 2019

605

Localization rate

63.47 %



Concerted Efforts for Common Prosperity



The Opening Story

17:00

Let's join hands and grow together



Ke Nan is the manager of the Key Engineering Project Centre, Engineering Construction Department, China Mobile Beijing. He was in charge of the whole-process management of the BJL16 5G project."5G is the future. It empowers high-speed and low-latency data transmission. More smart services can be delivered based on it. We work with BJMTR to launch the program in this field, providing passengers with faster and more intelligent communication services."

The BJL16 5G project is a milestone in the cooperation between BJMTR and China Mobile. "In the past few years, we have established a sound partnership with BJMTR in the 4G rollout." Ke said, "At that time, we reserved space for the upgrade to 5G in the future. This 5G project will bring enormous social benefits. It can create a better riding experience, and help metro companies improve operation and maintenance efficiency by intelligent means. For us China Mobile, it accumulates experience in building the 5G network for metro lines and other scenarios. This is truly win-win for all."

"We encountered a number of setbacks in the construction process. The huge passenger flow raised much more

demanding requirements for the equipment performance and network quality than ordinary stations. Thus, it required repeated testing. In addition, to ensure main track operation during the day, we had only three hours a day after midnight. The tight schedule and laborious task were challenging to both parties. For smooth progress, we invested equipment and workforce. The workers were divided into different groups to carry out construction simultaneously. BJMTR assigned security and operational staff to each group to facilitate the whole construction process, including the review of project proposal, scheduling, troubleshooting and optimization testing. With concerted efforts, we finished the project in only half a month, far ahead of the original three-month schedule."

Following the BJL16 5G project, BJMTR and China Mobile opened a 5G zone at National Library Station on BJL4 at the end of October 2019. Passengers could try 5G themselves and feel the change there. "Face recognition, fast entry, and unconscious payment, AI-driven real-time monitoring of passenger flows, malfunction detection, and intelligent traffic diversion in a station, high-speed information transmission and HD video playing in the train... All of these would come true with 5G technology in the near future." Ke filled with anticipation, "I hope we can deepen our cooperation to explore a smarter and more modern way of travel."





Methodology and strategy

As a rail transit company, we deepen cooperation with stakeholders to create value for the development of rail transit industry and the construction of smart city, based on the idea of Transit Oriented Development (TOD). To create an open, mutually-beneficial, coordinated and win-win value chain, we further improve supplier management system and supplier cooperation mechanism, thus continuously improving suppliers' sustainable development capability. We take an active part in the communication and cooperation with industry peers, so as to jointly promote the healthy and rapid growth of the industry. The TOD model based on 5G technology application has been promoted to provide one-stop services and create livable and intelligent urban life.



Carrying out Responsible Procurement

- Acquiring supplier resources through multiple channels in a fair, just and open manner
- Integrating social responsibility performance such as "health and safety" and "environmental protection" into the assessment when selecting and managing suppliers, so as to build a sustainable supply chain
- Evaluating and managing suppliers' performance through qualification review, regular assessments and re-evaluation
- Establishing a cooperation platform to explore in-depth cooperation in areas of R&D, service innovation, management reform and talent cultivation



Promoting Industrial Growth

- Actively participating in the compilation of standards, and driving the improvement of the technical and theoretical level of rail transit industry
- Expanding the interaction platform for communication and exchange with partners, and promoting resources sharing
- Participating in events organized by industry associations to offer advice for the development of the industry
- Serving as a bridge for deepening cooperation in rail transit between Beijing and Hong Kong



Contributing to Urban Development

- Promoting the idea of TOD based on 5G technology application, achieving resource integration through overall planning, driving the integrated development of urban functions and transportation functions along the rail line, and facilitating the construction of smart city

Carrying out responsible procurement

BJMTR adheres to the "fair, just and open" procurement principle, and incorporates sustainable development into the entire procurement process. We improve and standardize the supplier selection and management mechanism, raise suppliers' social responsibility awareness and encourage them to reduce the negative impact of their operations on the environment and society. Meanwhile, we keep expanding areas and ways of cooperation with suppliers, enhancing their capability of sustainable growth.

Standardizing supplier management

Centering on the supplier information management, we have developed a standardized procurement procedure and enhanced its transparency through information sharing, mutual supervision and building complaint channels. Before we cooperate with suppliers, in addition to factors such as technology, quality and price, the "Environmentally Friendly" and "People-Oriented" concepts are included for consideration in the procurement specification. We require new suppliers to fill in a *Supplier Questionnaire* and sign *EHS Compliance Statement*, guiding them to practice social responsibilities. In 2018 and 2019, most of our new suppliers were certified to ISO 14000 Environmental Management System, OHSAS 18001 Occupational Safety and Health Management System, and ISO 9001 Quality Management System.

Growing together with suppliers

To foster a mutually-supportive, harmonious and friendly relationship with suppliers and contractors, we have carried out in-depth collaboration with them in managerial innovation, R&D, talent cultivation and industry co-construction. These efforts facilitate us to complement each other in advantages and resources, boost industrial innovation and enhance service efficiency, leading to mutual growth and win-win outcomes.



Case *Working together to develop DC live-line tester for win-win results*

While entering the track areas or power supply equipment room for maintenance, the maintenance staff need to confirm the power cut with a live-line tester before performing any maintenance work. Staff found that the structure of the tester had defect that sometimes prevented the buzzer from alarming. After careful analysis and research, we redesigned and modified the circuit of tester to ensure the alarm worked right. In order to commercialize the upgraded tester, we cooperated with live-line tester manufacturers. After rounds of revisions and testing conducted by both parties, the tester was finalized and ready for commercialization. For the first time, the full-circuit self-detection function of the DC live-line tester was realized in China, and the utility model patent certificate was obtained.



Working with the upgraded DC live-line tester



The development and prosperity of BJMTR is inseparable from the efforts and cooperation of contractors. To ensure the contractor's employees enjoy their work and maintain their enthusiasm, we assist the contractor to improve their management level. For example, we carry out safety and service training programs, improve staff meals and provide psychological counselling, so as to help safety inspectors stay motivated at work. In 2018 and 2019, we organized 97 dialogue meetings for safety inspectors and provided psychological counselling for all safety inspectors.

“ During the three-year cooperation with BJMTR, BJMTR provided us with training materials, improved our service quality and accommodated our safety inspectors well. Thanks to their support and care, we witnessed great improvement in the quality of staff and an obvious decline in the turnover rate.

——Representative of the BJL16 Project Department, Beijing Jing'an Jinshan Security Service Co., Ltd. ”

Asiaray Media Group Limited is BJMTR's metro media partner. Guided by sustainability and social responsibility, Asiaray Media has cooperated with us in public interest communication, and provided a certain proportion of media resources for the publicity of public interest projects such as green travel and reading promotion, so as to make positive impact on the society. Meanwhile, BJMTR and Asiaray Media work together for the energy conservation and management of content presentation of lightbox media, to improve passengers' media experience.



Training meeting for safety inspectors

In 2018 and 2019

Average play count of public interest advertisement on the Passenger Information System (PIS) is

2,035 times/week

Average number of light boxes displaying public interest advertisement per week			
	12-sheet	4-sheet	Escalator Crown
2018	256	110	229
2019	496	56	559



Promoting the development of the industry

BJMTR has carried out in-depth dialogue and cooperation with the industry. We have actively shared experience, participated in standard compilation, and joined hands with upstream and downstream industry chains, industry associations and research institutions to contribute to the safe, high-quality and rapid development of China's rail transit industry.

Participating in standard development

With an aim to drive the technical and theoretical improvement of the rail transit industry, we give full play to our technical and managerial expertise in the development of national, regional and industrial standards, boosting the scientific and standardized development of the industry.

National Standard	<i>Operational Monitoring and Evaluation Method for Urban Rail Transit Facilities Part 3: Tunnel</i>
Regional Standard	<i>Update of Beijing Municipal Administrator & Communication Card System Access Specification for ACC-AFC System</i>
	<i>ACCMA5-XQ-006 Beijing ACC System Ticket Reform Phase II - ACC and Mobile Internet Service System Interface Specification</i>
	<i>Safety Evaluation Specification on Urban Rail Transit Operating Lines (DB11T 1510-2018)</i>
Industrial Standard	<i>The Administrative Measures for the Classification and Control of Urban Rail Transit Operational Safety Risks and Hidden Dangers</i>

Strengthening communication and cooperation

We actively carry out communication and cooperation with MTR and its subsidiaries, joint ventures, industry peers, associations and chambers of commerce, so as to strengthen resource sharing, complement each other and deepen collaboration.

Joining associations to expand influence

To continuously increase our influence and make our voice heard, we actively participate in exchange and discussion sessions, expert nomination, project discussion, innovation achievement declaration and other activities organized by industry associations and chambers of commerce, such as Hong Kong Chamber of Commerce in China (HKCCC), China Association of Metros (CAMET), and Beijing Association of Enterprises with Foreign Investment (BAEFI). In 2018 and 2019, we participated in 45 opinion soliciting events and 222 conferences and forums.

Serving as a bridge to deepen cooperation

In June 2018, serving as a bridge to facilitate the comprehensive cooperation between Beijing and Hong Kong in rail transit, we organized the Conference for the Comprehensive Cooperation Between Beijing Infrastructure Investment Co., Ltd, MTR and BJMTR to discuss cooperation opportunities in property development, industrial cooperation (rental of rolling stocks, etc.), domestic and foreign cooperation, and talent development. In October 2018, Beijing Municipal Commission of Transport and Beijing Infrastructure Investment Co., Ltd. signed with MTR and BJMTR *Memorandum of Understanding on Cooperation to Deepen Cooperation and Upgrade Services in Metro Sector between Beijing and Hong Kong* at the 22nd Beijing-Hong Kong Economic Cooperation Symposium, so as to further deepen cooperation in rail transit between Beijing and Hong Kong. The Memorandum aims to improve the operational safety and quality of Beijing rail transit with the advanced concepts and experience from Hong Kong and other international metropolises.



Signing Memorandum of Understanding on Cooperation to Deepen Cooperation and Upgrade Services in Metro Sector between Beijing and Hong Kong

In December 2019, Dr. Jacob Kam, CEO of MTR, was honored as "Advisor for the Mayor of Beijing", becoming the first entrepreneur in the field of urban public transport management and operation in the consultant team. As the "Advisor for the Mayor of Beijing", he will actively provide advice for the healthy development of Beijing urban transport and introduce MTR's mature experience in global rail transit to Beijing, supporting the development of Beijing transport in the new era.



On April 19, 2018, officials of Dongcheng CPPCC visited BJMTR.



On December 18, 2018, students majoring in Automotive Engineering at Beijing University of Civil Engineering and Architecture attended a training program in BeiAnHe Vehicle Training Base.



On May 17, 2019, Chongqing City Transportation Development & Investment Group Co., Ltd., and its subsidiaries of Chongqing Rail Transit Group and Chongqing Railway Group visited BJMTR.



On May 30, 2019, a delegation from Lingnan University visited BJMTR.



Carrying out all kinds of exchanges activities to share experience

We actively establish experience sharing platforms to exchange with educational institutions, research institutes and industry associations, thus promoting interconnectivity and integrated development.

On July 29, 2019, faculty and students from Navamindradhiraj University visited BJMTR.



BJMTR have received delegations from Hong Kong Public Servant Training Program of National Academy of Governance for visits and exchanges.



On August 15, 2019, trainees in the 2019 Seminar on Financing & Financial Cooperation (including PPP and BOT) Management for Developing Countries visited MaJiaPu Depot.

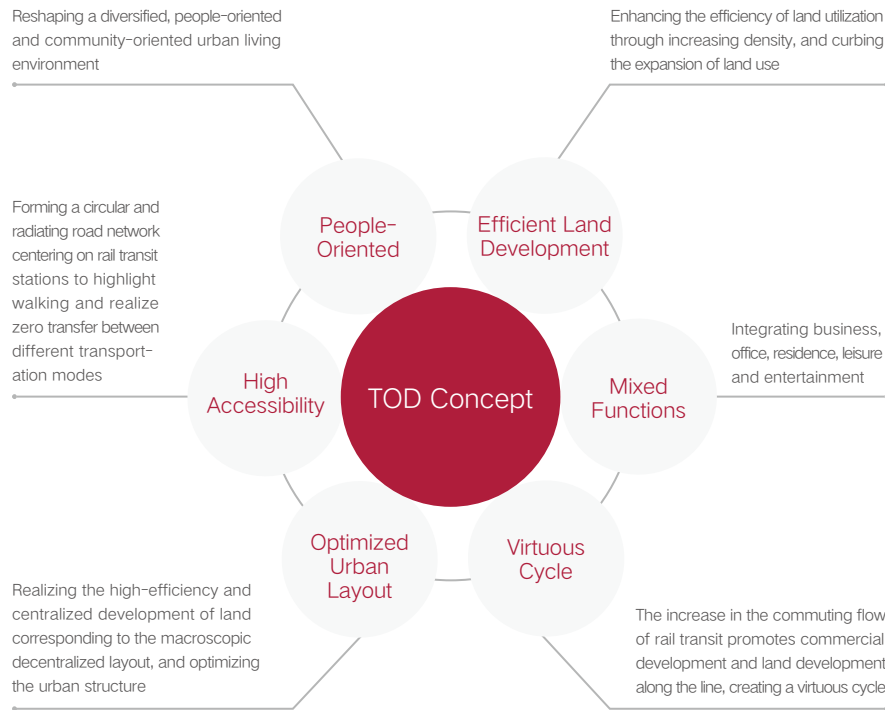


On October 22, 2019, Governor of Victoria, Australia was invited to visit the station under construction on BJL16.

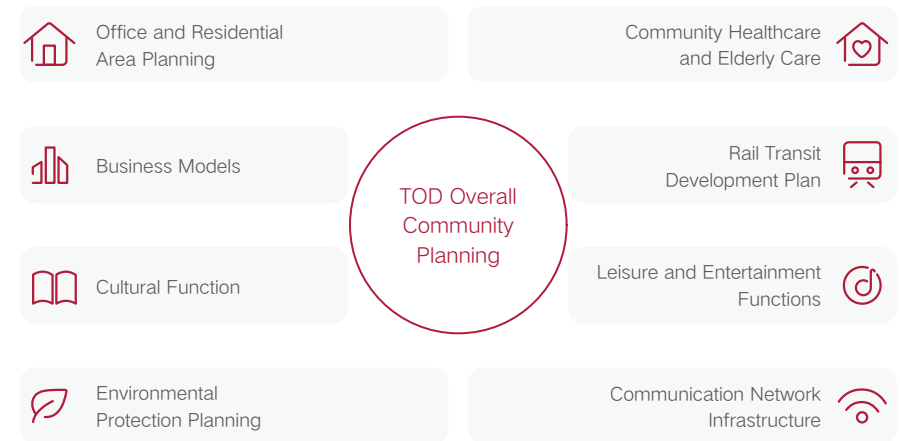


Contributing to urban development

The "People-Oriented" Transit Oriented Development (TOD) promotes the establishment of multi-functional integrated urban communities centered on public transit stations, so as to construct a diversified, humanized and community-based urban life circle.



As communication network infrastructure, 5G can be used together with emerging technologies such as Cloud Computing, Internet of Things, Big Data, and Artificial Intelligence, realizing the intelligent upgrade of operations, passenger service, maintenance and other aspects of the rail transit. Based on the TOD model in 5G technology application, we will integrate resources through overall planning and empower the integrated development of urban and transportation functions along the lines.



As a rail transit company, the mission of BJMTR is to become a city operator that pursues sustainable development. We are actively promoting the implementation of TOD in Beijing. By drawing on the experience of MTR, we cooperate with partners in relevant fields, so as to promote the comprehensive utilization of stations and depots along the lines. This helps to create a one-stop, multifunctional and eco-friendly city complex, which integrates high-quality office, residential areas, and commercial facilities, thus facilitating the construction of smart city.

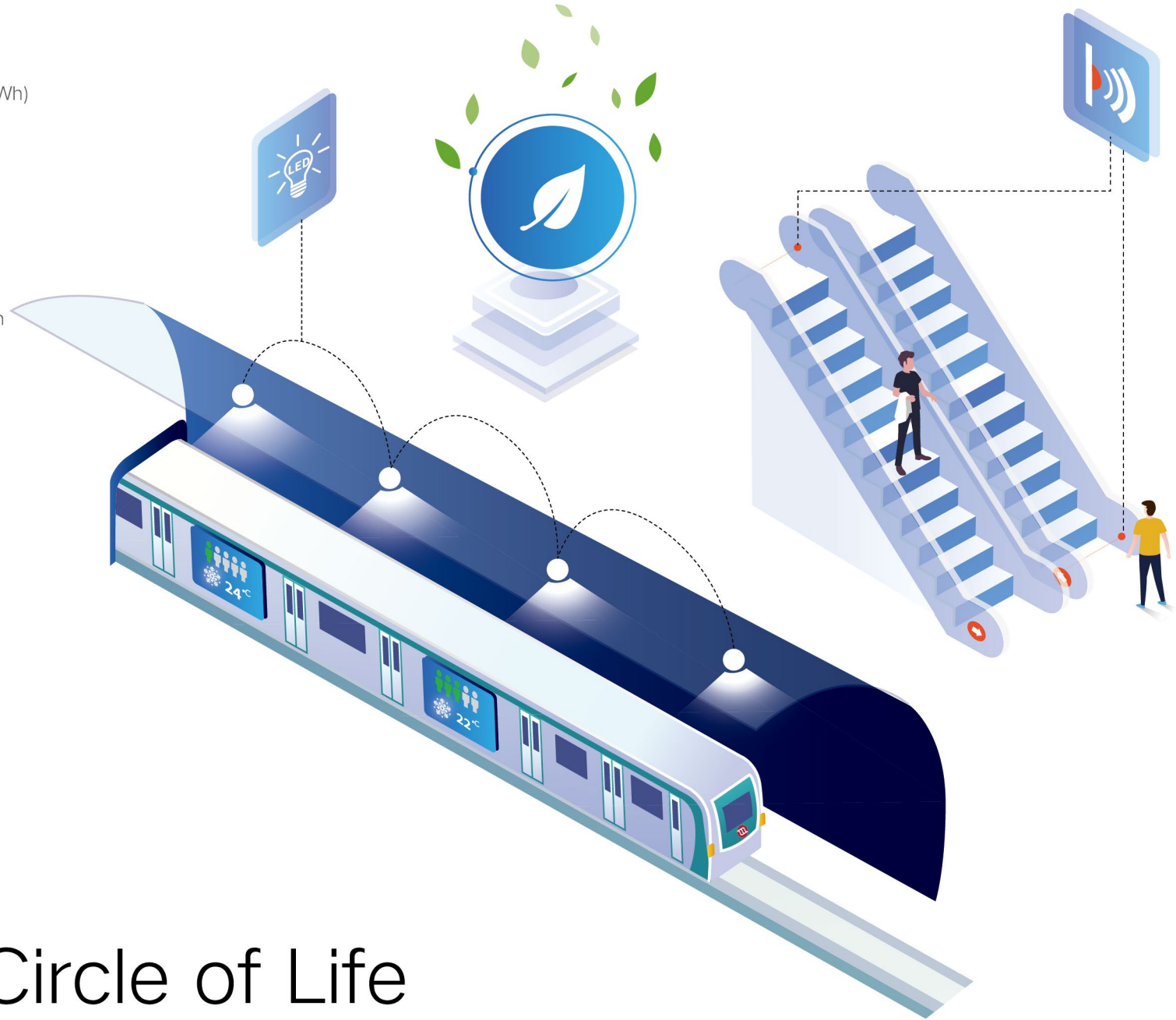
In 2019, BJL16 became the first metro line in China with full coverage of 5G signals, enabling live streaming and playback of HD videos, HD video call and real-time VR monitoring. BJMTR will continue to realize 5G coverage in BJL4, DXL and BJL14 in the future.

Electricity consumption (10⁴kWh)
in 2018 and 2019

39,718
39,038

Number of energy conservation
projects implemented
in 2018 and 2019

8



Green Circle of Life



The Opening Story

23:00

Secret in the train



It's 11 PM. Cai Guosheng was walking out of MaJiaPu depot. He wore a white dust-proof gown and a face mask, revealing only his bright, attentive eyes. "I joined BJMTR as a fresh graduate in 2010. Starting from a frontline technician, now I am the Train Control Supervisor, mainly in charge of crew management, work arrangements and training." Cai introduced himself as he took off the face mask.

"We hope to integrate energy conservation and environmental protection into every step of our routines. Optimizing the energy consumption of trains is one of our daily tasks. In 2018, we noticed that the train temperature was high on BJL4-DXL during peak hours, and then fell during off-peak hours. It wastes energy and affects riding experience." To seek a solution, Cai and his colleagues launched a research project on smart temperature control right away.

Cai's team carried out preliminary investigation, and based on the investigation results, they determined key technical indicators and formulated the renovation plan. All the team members were trained on relevant theories and techniques in advance. Besides, they estimated risks

and formulated contingency plans accordingly. During the beta phase, they carried out on-site tests repeatedly to ensure the designed function could be delivered. Cai recalled that, "In the renovation process, all network modules on the train needed upgrading. All the work was done after midnight to ensure normal main track operations in the daytime. It was painstaking, but it's worth the efforts. We made it for the coming summer."

In March 2019, the air conditioning system was upgraded and the train became more intelligent. While running, it can automatically adjust the internal temperature according to the passenger load, with higher operating and energy efficiency. The air feed is also more balanced, improving rider experience. Talking about the future, Cai said, "In the past few years, new technologies and equipment have been introduced to secure passenger safety and save energy. In the future, we hope to provide a more eco-friendly way of travel with the help of smarter and greener technologies."



Cai Guosheng

Vehicle Control Supervisor

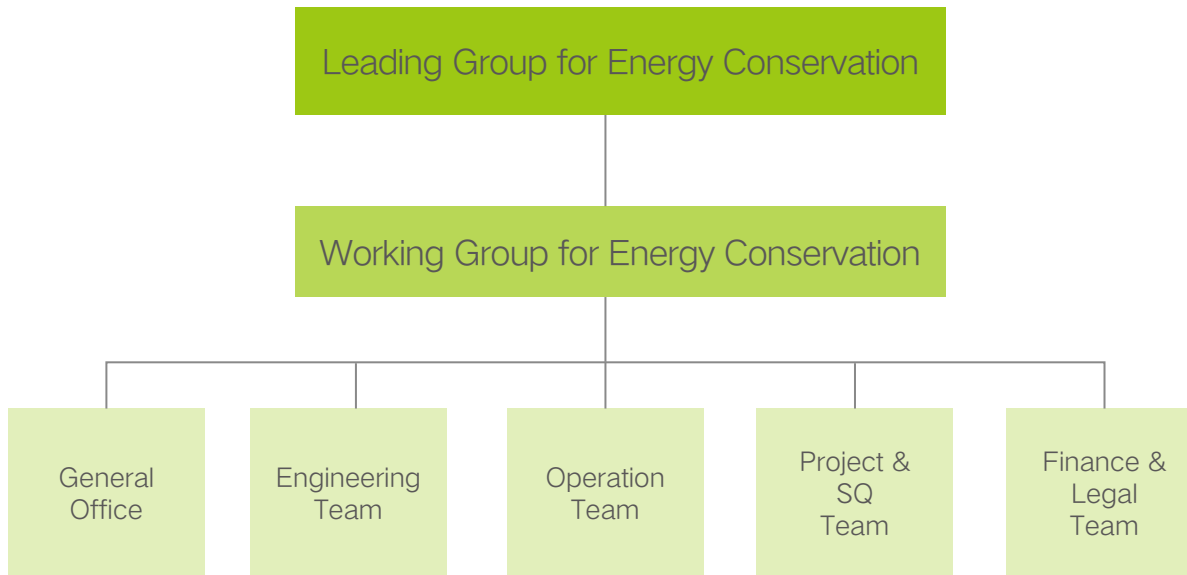
We keep striving towards green operation.



Methodology and strategy

Green production is not only the requirement for building a beautiful China, but also the foundation for companies to achieve sustainable development. BJMTR incorporates environmental protection into corporate operation. In the whole life cycle of operation and management, we take effective measures to control and reduce the negative impact on the environment, and thus provide passengers with greener travel choices, contributing to the development of the low-carbon and circular economy and the construction of ecological civilization.

- BJMTR strictly abides by the laws and regulations such as *Energy Conservation Law of the People's Republic of China*, and *Environmental Protection Law of the People's Republic of China*, and the requirements of ISO 14001 Environmental Management System. We improve environmental management mechanism, and establish a leading group and a working group on energy conservation to ensure that energy management can be carried out effectively in the long run.



Organization structure for energy conservation management

- We promote green operation and incorporate environmental protection strategies into business operations such as operational services and supply chain management, realizing the quantitative monitoring of performance in environmental safety.
- We implement the full life-cycle management of assets to realize sustainable utilization of resources in the long run.
- We optimize inventory structure for lower cost, guarantee the balance of supply and demand and improve the efficiency of resource utilization.
- We participate in industry exchanges and seminars to jointly foster green and sustainable development of the rail transit industry.
- We promote green office, and carry out training and promotion campaigns on environmental protection, striving to motivate every employee and even every community resident and passenger to take sustainable actions.

Practicing green development

Being responsible for the environment, BJMTR strives to address climate change, reduce environmental impact and cut resource consumption. To achieve these, BJMTR has implemented an efficient, energy-saving, and green operation method. In 2019, BJMTR was awarded the Environmental and Ecological Contribution Award of "2019 Yicai Corporate Social Responsibility Ranking in China".

Energy consumption management

Environmental protection is a prerequisite for a company to achieve sustainable development. At BJMTR, electricity consumption accounts for about 89%, natural gas for about 10%, and gasoline and diesel for less than 1%. Electricity consumption takes up the majority of energy consumption in metro operations, of which 55-60% from train traction, and 40-45% from lighting. Therefore, we have actively carried out energy-saving renovation projects for trains and stations to realize win-win outcomes for the economy and the environment.

Stations

As a leader, practitioner and advocator of green travel, we take energy conservation measures in management and technology, such as lean management and the application of advanced technologies, to tap the potential of energy conservation.

- **Escalators:** After analysis and trials, we have upgraded escalators with frequency conversion technology in most of our stations, except those stations with super high passenger flow. The upgraded escalators at the entrance have saved about 17.7% of electricity, and escalators in the concourse and by the platform have saved 8.3%.
- **LED lighting:** More than 30,000 lighting devices in stations on DXL have been replaced with high-efficient LED lighting, saving over 45% of electricity.

Trains

We strictly implement the national policy of energy conservation, and reduce traction energy consumption to the greatest extent while ensuring safe and stable operation, so as to cut carbon emissions and cope with climate change.

- **Optimized train driving mode:** Automatic Train Operation (ATO) energy-efficient mode is adopted to reduce traction/braking electricity consumption on the premise of meeting the timetable. In the follow-up, we will conduct research on the matching between train operation modes and regenerative braking to achieve further energy saving.
- **Track geometry fine tuning:** By ensuring track alignment in both static and dynamic conditions, we enhanced train stability and reduced impacting force and lateral frictional force over wheel-rail interaction, thus effectively minimizing energy loss for train running.
- **Renovated air-conditioning control system:** We have renovated the air-conditioning control system for trains on B JL4-DXL. With smart control technology, the air-conditioning load could be automatically adjusted according to the real-time passenger load, saving energy and enhancing passenger experience.



In 2018 and 2019

Electricity consumption per car-km (excluding commercial electricity consumption)

0.062 kWh/person-km

0.060 kWh/person-km

In 2018 and 2019

Greenhouse gas emissions

248,500 tons

244,100 tons

Case *The industry's highest track quality on BJL14*

Energy loss occurs due to resistance factors such as friction, impact and abnormal line conditions during train operation. Therefore, reducing train operation resistance to cut energy loss is an effective approach for energy conservation. Track Quality Index (TQI) is a globally-recognized comprehensive indicator and evaluation method for track quality. In China's rail transit industry, BJMTR was the first to introduce the concept of mean value management to use TQI to control track quality. On February 10, 2018, it was evaluated and confirmed by Urban Rail Transit Center, China Academy of Railway Science that all the lines operated by BJMTR reached or outperformed the TQI standard (no more than 14.51) for Beijing rail transit network. More than 60% of lines operated by BJMTR reached less than 8 in TQI. The TQI value of BJL14 was 7.67 and 7.74, up-track and down-track respectively, ranking the first in rail transit industry.

Water resources management

To minimize the impact of our operation on water resources in communities, we have adopted efficient and safe water resources management measures to protect water quality and reduce waste of water in communities.

- We have formulated management standards for water resources target indicators and compiled the water resources analysis report. No wastewater should be discharged from depots and stations without reaching standards.
- We have organized environmental emergency drills, knowledge contests and other activities at the sewage treatment stations of depots to help employees learn environmental emergency response and handling procedures and operating requirements.
- Reclaimed water has been used to irrigate gardens and flush toilets.

In 2018 and 2019

9,400 tons

Reclaimed water used



Waste management

BJMTR strictly implements national laws and regulations. There are temporary storage rooms for hazardous waste in MaQuanYing Depot and ZhangYiCun stabling yard on BJL14, and BeiAnHe Depot on BJL16. We cooperate with qualified suppliers to collect and dispose of hazardous waste. General industrial waste such as abandoned equipment or facilities is recycled to regain value and maximize resource utilization.

- We have built a training and testing base for Communication & Signaling Maintenance Department by using waste electric enclosures, control panels, point machines, axle counters, rails and other materials, creating another real training environment for switch control in addition to the company-level training base. This base can be used for spare parts testing and practical training, further improving efficiency and training quality.



Training and testing base for Communication & Signaling Maintenance Department

- Waste overhead wires were used in training and exercise of the power supply maintenance department.
- We have repaired worn-out air conditioners, and used them for training and spare parts testing in the Air Conditioning/Pumping and Drainage (AC/P&D) Department, so as to improve the operability and practicability of training equipment. From 2018 to 2019, 308 employees participated in 31 training sessions on AC/P&D equipment, covering all frontline employees of the AC/P&D Department.

Air quality improvement

To provide a safer and more comfortable travel and working environment, we carry out annual tests on air quality and air conditioning hygiene in public and office areas of stations, trains and office areas of depots. We have also launched renovation projects for air conditioning and ventilation system to continuously improve air quality.

In 2018 and 2019, we have improved the operation and maintenance mechanism of air conditioning system in public areas of stations. For example, we have increased the cleaning frequency, improved maintenance quality, and optimized the operation modes in different seasons.

Advocating green travel

While providing safe, reliable, comfortable and convenient metro services, we advocate green travel and encourage passengers to practice low-carbon travel. We have carried out a series of theme events such as "Step by Step towards Green Travel", and launched green initiatives through multiple channels including self-media in stations, news media, WeChat official account, and news APP, in hope of raising people's awareness of green travel and jointly building healthy, civilized, smooth and green transport, and a better living environment.

Key Performance

All-round Guarantee of Safe Travel

KPI (Unit)	2016	2017	2018	2019
Train service reliability (10,000 car-km/time)	1,278	∞ *	1,544	2,158
Number of passenger death from accidents	0	0	0	0
Number of passenger injuries per million passenger journeys	0.23	0.21	0.33	0.25
Number of staff death from accidents	0	0	0	0
Number of staff injuries per 100,000 manhours	0.11	0.13	0.18	0.06
Number of contractor death from accidents	0	0	0	0
Number of contractor injuries from accidents per 100,000 manhours	0.01	0.01	0.05	0.01
Number of relatively large-scale emergency drills conducted	331	560	587	541

*Train delays of more than five minutes in 2017 is 0.

Always Be There for You

KPI (Unit)	2016	2017	2018	2019
Revenue car-km operated (10,000 car-km)	8,922.02	10,430.56	10,805.94	10,792.07
Total passenger journeys (10,000 passengers journeys)	63,348.5	69,597.8	72,065.6	74,388.0
Average daily patronage (10,000 passengers journeys)	173.1	190.7	197.4	203.8
Train service delivery(%)	99.99	99.99	99.99	99.99
Train punctuality(%)	99.99	99.99	99.98	99.99
Number of days that extend operating time(day)	34	103	112	114
Passenger satisfaction (point in a 100-point system)	/	/	91.62	90.95

Pursuit of Excellence in Employee Growth

KPI (Unit)	2016	2017	2018	2019
Number of employees	7,072	7,225	7,359	7,759
Employee training hours per capita**	96.84	107.24	100.04	114.28
Social insurance coverage(%)	100	100	100	100

**The employee training hours per capita from 2016 to 2019 take department level training and external training into calculation.

Perseverance for Better Communities

KPI (Unit)	2016	2017	2018	2019
Volunteer hours	8,628	9,723	9,774	10,539
Number of students benefited from BJMTR Safety Camp	over 3,000	over 5,000	over 3,000	over 2,500

Concerted Efforts for Common Prosperity

KPI (Unit)	2016	2017	2018	2019
Number of suppliers	637	646	603	605
Supplier localization rate(%)	63.4	62.5	67.16	63.47

Green Circle of Life

KPI (Unit)	2016	2017	2018	2019
Electricity consumption(10 ⁴ kWh)	32,117	38,209	39,718	39,038
Electricity consumption per person-km (kWh/person-km) (excluding commercial electricity consumption)	0.057	0.061	0.062	0.060
Greenhouse gas emissions (10,000 ton)	20.06	23.99	24.85	24.41

Outlook

Looking forward, BJMTR will continue to improve sustainable development model with more responsible concepts and measures, and actively respond and live up to expectations of stakeholders. We will join hands with stakeholders, make the city a better place, grow along with employees, foster harmonious relations with communities, share win-win outcomes with partners, and coexist in harmony with the environment. These efforts will make urban life and travel more convenient, intelligent and low-carbon, and facilitate the sustainable development of the economy, society and environment.

- We will improve the organization structure of safety management and clarify safety management responsibilities at all levels. We will continue to strengthen risk management and improve safety measures for stakeholders including the public, customers and staff members. We will enhance employees' capabilities of safety management and promote safety culture, thus improving safety operations.

- We will improve the public interest program management system and innovate in public interest activities. We will continue to launch M-Series public interest programs and BJMTR Safety Camp, host rail transit science and technology innovation contests for middle school students, and use our expertise to provide volunteer service based on stakeholders' demands.

- We will fulfil *Customer Service Pledge* and perfect service model, so as to enhance passenger experience and service quality. We will set up a metro+ smart cloud platform with the characteristics of the rail transit industry, and an integrated smart operation & maintenance platform. We will also develop "new retail" model with BJMTR characteristics to provide more convenient and considerate metro services.

- We will attract high-quality suppliers to create a more open and transparent environment for fair competition. We will communicate and cooperate with partners to share experience. We will work with stakeholders to boost the sustainable development of the rail transit industry, creating more value for urban development. We will promote the TOD model based on 5G technology application to deliver more livable and intelligent urban space.

- We will improve the employee-oriented training system and promote talent farming and empowerment programs. We will organize innovative corporate culture events to better promote the "BJMTR 2.0" among employees. We will improve performance assessment and incentive mechanism to motivate employee. We will adopt the concept of "Internet+" to innovate in working methods of the Labor Union through WeChat mini program and APP development, thus creating a high-quality Home of Staff.

- We will carry out full-life-cycle environment management, conduct energy conservation and emission reduction projects, take effective measures to prevent pollution, and enhance resources recycling. We will strengthen environment and hygiene tests and analysis in public areas, and explore to optimize public environment and sanitation management measures, thus contributing to the green and sustainable development of the Company, industry and society.

We have made unremitting efforts to forge ahead. Responding to the call of mission and responsibility in a new era, we will take the initiative to solve major social issues in a responsible and creative way. We are dedicated to building a safe, convenient, highly-efficient and green rail transit operation and management system, so as to promote sustainable and high-quality urban development, and contribute to building China into a transport powerhouse and realizing SDGs.

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Feedback

Dear stakeholders,

Thanks for reading our *2018-2019 Sustainability Report*. In order to better understand your expectations and improve our sustainable development, we sincerely look forward to your insightful comments and suggestions.

1. What type of stakeholder are you?

- Government and supervisory authorities Investor Passenger
 Employee Supplier Industry Social organization Community
 Environment Media Others (Please specify)_____

2. What do you think of BJMTR's fulfillment of social responsibility in general?

- Very good Good Average Poor

3. To what extent does this report cover the information you concern?

- Very good Good Average Poor

4. To what extent does the report truthfully reflect BJMTR's CSR practice?

- Very good Good Average Poor

5. What do you think of the accuracy, clearance and completeness of the information disclosed in the report?

- Very good Good Average Poor

6. Can you find the information that you concern easily in this report?

- Very good Good Average Poor

7. What do you think of the layout design of this report?

- Very good Good Average Poor

8. What suggestion do you have for BJMTR's sustainability report?
(Multiple choices)

- More innovative report topic More innovative report content
 More convenient access to report More reader-friendly page layout
 More reader-friendly language Other suggestions (Please specify)_____

9. What suggestion do you have for BJMTR's CSR practice?
(Multiple choices)

- Formulate a five-year social responsibility plan
 Strengthen the organization structure of CSR management
 Include CSR-related performance into management assessment
 Plan new and influential public interest projects
 Join in domestic and international organizations/declarations/initiatives that promote CSR development
 Carry out stakeholder management and strengthen stakeholder communication
 Other suggestions (Please specify)_____



Contact Information:

Address: Depot of Beijing BJL4, Jiayuan Rd, Fengtai District, Beijing, PRC.

Postal code: 100068

Contact person: Wang Shen

E-mail: shen1.wang@mtr.bj.cn

Tel.: 86-010-88641188

Fax: 86-010-88641000

Joint venture of Beijing Infrastructure Investment Co., Ltd., Beijing Capital Group and MTR Corporation

