



北京城建设计发展集团股份有限公司

BEIJING URBAN CONSTRUCTION DESIGN & DEVELOPMENT GROUP CO., LIMITED

(A joint stock company incorporated in the People's Republic of China with limited liability)

Stock Code: 1599



2019

ENVIRONMENTAL, SOCIAL AND
GOVERNANCE REPORT



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1 ABOUT THIS REPORT

1.1 Objective of the Report

This report is to provide the environmental and social performance of Beijing Urban Construction Design & Development Group Co., Limited during 2019, and to respond to issues which stakeholders are concerned about and that are related to sustainable development. This report should be read in conjunction with the "Corporate Governance Report" as set out on page 80 of the annual report for the year, so that all stakeholders are able to fully understand Beijing Urban Construction Design & Development Group Co., Limited's sustainable development concept, measures and relevant performance.

1.2 Scope of the Report

This report covers Beijing Urban Construction Design & Development Group Co., Limited and its member companies: Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd. (北京城建勘测设计研究院有限责任公司) and Beijing Urban Rail Transit Construction Engineering Co., Ltd. (北京城建轨道交通建设工程有限公司). Specific statistical scope of some environmental data will be illustrated in the "Environmental Performance" section.

Unless otherwise indicated, the reporting period is from 1 January 2019 to 31 December 2019 (hereinafter referred to as the "Reporting Period").

1.3 Reference

For the convenience of reading this report, Beijing Urban Construction Design & Development Group Co., Limited is referred to as "UCD". Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd. (北京城建勘测设计研究院有限责任公司), a member company, is referred to as "Exploration & Surveying Institute", while Beijing Urban Rail Transit Construction Engineering Co., Ltd. (北京城建轨道交通建设工程有限公司), another member company, is referred to as "Rail Company". In this report, UCD, Exploration & Surveying Institute and Rail Company are collectively referred to as "Group" or "we/us".

1.4 Responsibility of Directors

Through assessment of risks and opportunities related to environmental, social and governance (hereinafter referred to as "ESG") matters, the Board of the Group formulates ESG management principles, strategies, priorities and objectives, and defines the reporting scope of this report. In addition, the Board ensures that the Group sets appropriate and effective risk management and internal monitoring systems, reviews the disclosure content of this report and assumes overall responsibility for ESG matters of the Group.



1 ABOUT THIS REPORT (CONTINUED)

1.5 Preparation Basis

This report is prepared by the Group in compliance with the *Environmental, Social and Governance Reporting Guide* (hereinafter referred to as the “Guide”) set out in Appendix 27 to the *Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited* published by The Stock Exchange of Hong Kong Limited (hereinafter referred to as the “Hong Kong Stock Exchange”). This report has complied with all “comply or explain” provisions set out in the Guide, and has been prepared in accordance with the four reporting principles: materiality, quantitative, balance and consistency. The compliance with the *Environmental, Social and Governance Reporting Guide* is summarized in the “Contents Index to the Environmental, Social and Governance Report”. This report is also prepared with reference to *Sustainability Reporting Guidelines* of Global Reporting Initiative (GRI Standards).

1.6 Report Description

This report is published in Traditional Chinese and English. If there is any ambiguity in the content of the report, the Traditional Chinese version shall prevail. The electronic version of the report can be read and downloaded through the Group’s official website and the website of the Hong Kong Stock Exchange.

The data of this report is generated from the online platform system adopted by the Company or by manual sorting. This report adopts Renminbi as the measurement currency.

1.7 Response to this Report

Readers are welcome to give opinions and suggestions on this report by completing the Feedback Form for Readers at the end of this Report. Please feel free to contact us via the following methods:

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2 MESSAGE FROM THE MANAGEMENT

In 2019, we have been fully implementing Xi Jinping's Thought on Socialism with Chinese Characteristics for a New Era, bearing in mind General Secretary Xi's ardent expectations towards city builders, inheriting the responsibility and loyalty of generations of urban construction designers to the motherland and people in a bid to forge ahead constantly. This year, we seized market opportunities and momentum; this year, we went all out to fight the battle of improving quality and efficiency, and deepened comprehensive reform; this year, we promoted the construction of key projects with high quality and high efficiency, focused on key developments with a firm strategic determination throughout the Group, adhered in expanding designs and strengthening general contracting to actively explore new businesses, and completed the year-round tasks in high quality with a winning determination, efficient organization and strong execution; this year, we joined the key Olympic projects and became a "dual Olympic" design company; this year, we carried out in-depth employee care projects, focused on the comprehensive development of employees, resulting in the continuous enhancement of employees' sense of happiness; this year, we actively fulfilled social responsibilities, intensified targeted poverty alleviation efforts, and actively organized rescue, as a result, our corporate responsibility was widely recognized.

As a leading company in urban rail transit construction, UCD always takes its responsibility as a practitioner, promoter and leader of corporate social responsibility. We have set up a scientific, standardized, systematic and effective corporate social responsibility management system since listing. We conduct social responsibility planning from managing enterprise according the law, quality service, creating benefits, employee development, safety supervision, technological progress, environmental protection, targeted poverty alleviation, public welfare undertakings, win-win cooperation, overseas responsibility and other aspects. We organize a series of social responsibility management practice activities in the Company headquarters and each subsidiary, in order to achieve social responsibility goals with comprehensive coverage, full performance, daily improvement and industry-leading position, and continue to make irreplaceable contributions to society.

Adaptive to the rapid development mode of the city, we have actively contributed to the construction of urban public transportation network, pursued optimal design and management, and responded to the long-term needs of society with our own expertise and advantages. Adhered to the corporate core values of "customer first, fighting will as the foundation, integrity and pragmatism, pursuit of excellence", UCD will seize the opportunity arise from the national trend of green development and continue to create values for the community.

In different business segments of urban construction, we strictly abide by the requirements of various national environmental protection laws and regulations, and take measures in each business to achieve green construction, civilized construction, and safe construction.

We have established clear systems and guidelines, and protected the well-being and interests of our employees through pragmatic dialogues and exchanges, in a bid to create a satisfactory working environment. In addition, UCD strives to build a development platform for employees and establish a solid corporate culture, thereby enhancing the overall ability to achieve sustainable development.

We always maintain a harmonious and mutually beneficial cooperative relationship with stakeholders, insist on actively responding to the important issues concerned by stakeholders from the perspective of stakeholders, and strive to establish a smooth, standardized, and distinctive stakeholder communication mechanism in order to achieve common development, harmony and win-win with all stakeholders.

We understand that we have to undergo a long process with heavy responsibilities in order to advance our efforts in sustainable development. We look forward to sharing the challenges and opportunities thereof and discussing the action plan with stakeholders through periodic publication of ESG reports and organization of liaison activities for sustainability development. In 2020, UCD will continue to faithfully fulfill its corporate mission, continue to explore new ways to benefit society, and strive to make new contributions to the realization of the Chinese Dream of national rejuvenation.





3 GROUP PROFILE

UCD, formerly known as Beijing Urban Engineering Design & Research Institute Co., Ltd., was established in 1958 to provide design and survey services for the construction of the first subway of China. After more than 60 years of development, the Group has developed from a subway design company to a engineering contractor that featured urban rail transit, integrated transportation hubs and underground space, and provides professional, high-quality full-services including pre-project consulting, planning, surveying and mapping, design, construction and project management to customers in fields of industrial and civil buildings, municipal engineering, bridges and roads.

In 2019, the Group has an established business presence in more than 60 cities of China and has set up branches or offices in more than 50 cities. Furthermore, we have also expanded our business in other countries, such as Angola, Vietnam, Russia, Pakistan, Kazakhstan, Mozambique, Ethiopia and Maldives.



4 ESG MANAGEMENT

4.1 ESG Management Structure

The Group improved the ESG management system by referring to “How to Prepare an ESG Report” of Hong Kong Stock Exchange. During the Reporting Period, the Group continued to maintain the effective operation of the management system and optimize the management of matters related to sustainable development.

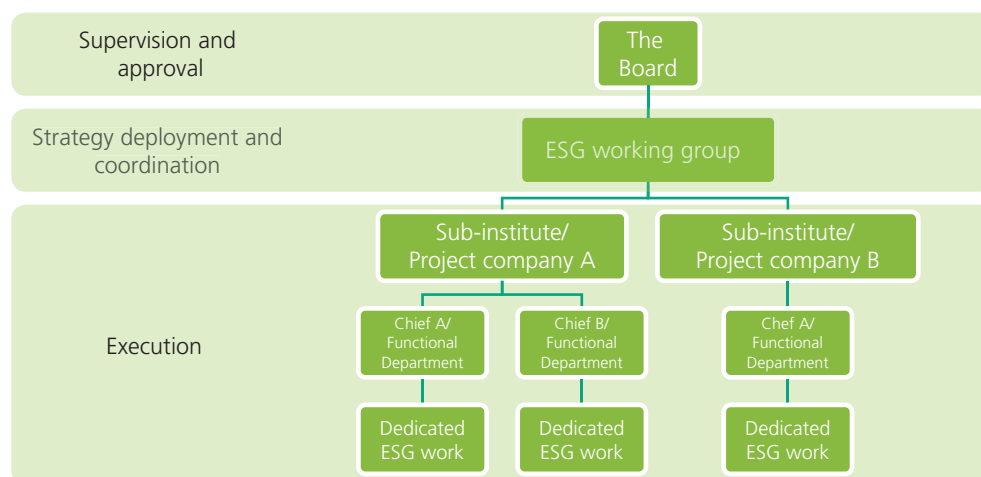


Figure: ESG Management System of the Group

In the ESG management system of the Group, the ESG working group reports environmental, social and governance work to the Board, makes deployment under the management principles and guidance of the Board and keeps track of execution, monitoring, reporting and continuous improvement of related works. The ESG working group is also responsible for the arrangement and coordination for the communication with stakeholders, the materiality assessment and the preparation of this report.

4 ESG MANAGEMENT (CONTINUED)

4.2 QHSE Management Systems

The Group set up a quality, occupational health and safety and environmental management system (hereinafter referred to as the “QHSE System”) to manage the whole process of consultancy and design, surveying and construction contracting businesses basing on national standards including Quality management systems – Requirements (GB/T 19001–2016/ISO 9001:2015), Environmental management systems – Requirements with guidance for use (GB/T 24001–2016/ISO 14001:2015), Occupational Health and safety management systems – Requirements (GB/T 28001–2011) and Code for quality management of engineering construction enterprises (GB/T 50430–2017). We are also certified to meet the above standards.

With a three-level management structure, the QHSE System provides a systematic procedure guidance and policy guarantee from three aspects of quality, environment and occupational health and safety.

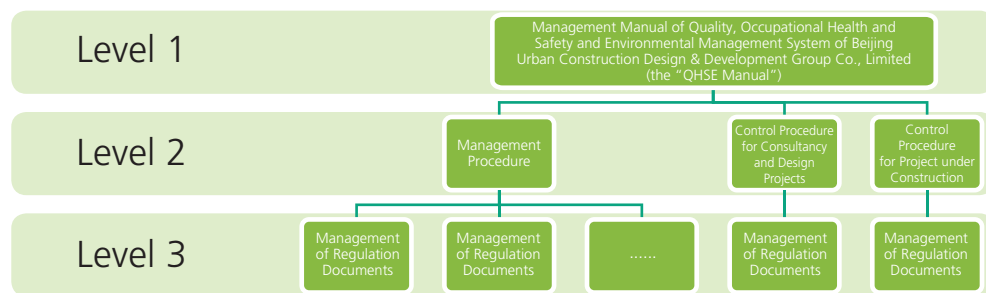


Figure: Document Structure and Composition of QHSE System

Level 1 of the QHSE System is the QHSE Manual, which lays down the general principles and guidelines of the Company's QHSE management system. The management procedure document in Level 2 of the QHSE System is Management Procedure Document of Quality, Occupational Health and Safety and Environmental Management System of Beijing Urban Construction Design & Development Group Co., Limited (hereinafter referred to as the "QHSE Procedure Document"). On the basis of basic procedure setting as set out in the QHSE Manual, the QHSE Procedure Document sets detailed procedure standards for 20 projects (see figure below) in the course of group management and operation. Level 2 also has control procedures for design consulting and construction business, which improves the pertinence and operability of the entire system. The documents in Level 3 of the QHSE System are the management of regulation documents of specific matters. Exploration & Surveying Institute and Rail Company each has a QHSE System suitable for its own business characteristics.



4 ESG MANAGEMENT (CONTINUED)

Control procedure for system document and internal audit	Management procedure for strategic objective	Document control procedure	Risk management procedure	Management procedure for contract review
Standardize system document management and assessment of Company's internal audit and management	Improve management structure, and standardize the setting of operation strategies	Ensure the validity and timeliness of documents used by all departments	Achieve the effective assessment of risks and make corresponding response strategy	Ensure the contract is entered into in compliance with laws, policies and internal requirements of the Company
Marketing control procedure	Quality inspection and improvement procedure	Procedure document on knowledge management	Project management procedure	Procedure for planning of construction project management
Standardize the effectiveness of the bidding information and the integration of marketing of the Company and its units	Achieve effective control on quality supervision and inspection of engineering projects	Realize internal sharing, accumulation, effective delivery and application of corporate knowledge	Standardize the project management system, and clarify project management procedures and work requirements	Standardize the management and planning of construction projects
Operation and management procedure of construction projects	Seal management procedure	Informatization management procedure	File management procedure	Control procedure for laws, regulations and other requirements
Clarify the organizational structure, assignment of responsibility, work objectives and performance monitoring of the operation and management of business units	Standardize the use of seal and strengthen the management of seal	Ensure information communication channels and standardize the management and maintenance of Informatization systems	Standardize file management to ensure the completeness, accuracy, systematization and security of files	Establish channels for obtaining, identifying and updating laws, regulations and other requirements
Legal and regulatory compliance evaluation procedure	Non-conformity, corrective and preventive measures control procedure	Control procedure of corporate environment and occupational health and security	Control procedure of emergency preparedness and response	HR staff training and staff assessment management procedure
Make regular evaluation on the compliance with laws, regulations and requirements	Adopt corrective and preventive actions against existing or potential non-conformities in management system	Define the responsibilities and authority of entities in the QHSE System, and determine working procedures and record requirements	Cope with existing or potential incidents or emergencies related to environment and occupational health and safety	Standardize staff training and assessment

Figure: QHSE Procedure Document Introduction

4 ESG MANAGEMENT (CONTINUED)

4.3 Stakeholders Engagement

We always maintain a harmonious and mutually beneficial cooperative relationship with stakeholders, insist on actively responding to the important issues concerned by stakeholders from the perspective of stakeholders. During the Reporting Period, we established a smooth, standardized, and distinctive stakeholder communication mechanism to continuously understand the need of stakeholders and responded their expectations through the following ways.

Stakeholders	Needs and Expectations	Communication and Response
Government	Compliance with laws and regulations Payment of taxes Support for economic development	Operation in compliance with relevant laws and regulations Payment of taxes in compliance with relevant regulations
Investors	Return on investment Growth of business and earnings Risk management Information disclosure	Transparent and regular disclosure of information General investor meetings Investor summits Roadshows
Customers	Provision of high-quality products and services Satisfaction of customers' diversified needs Creation of value for customers	Assurance of service quality Protection of customer information Survey of customer satisfaction
Employees	Employee interests Training and development Occupational safety and health Work and life balance	Provision of competitive and good remuneration and welfare Provision of various career development paths Improvement of employee training system
Partners	Open, fair and equitable purchases Compliance with contracts	Execution of contracts Open tendering
Community and the public	Community development Public welfare undertakings Regular organization of volunteer activities	Assistance in community construction Participation in public welfare undertakings and charities



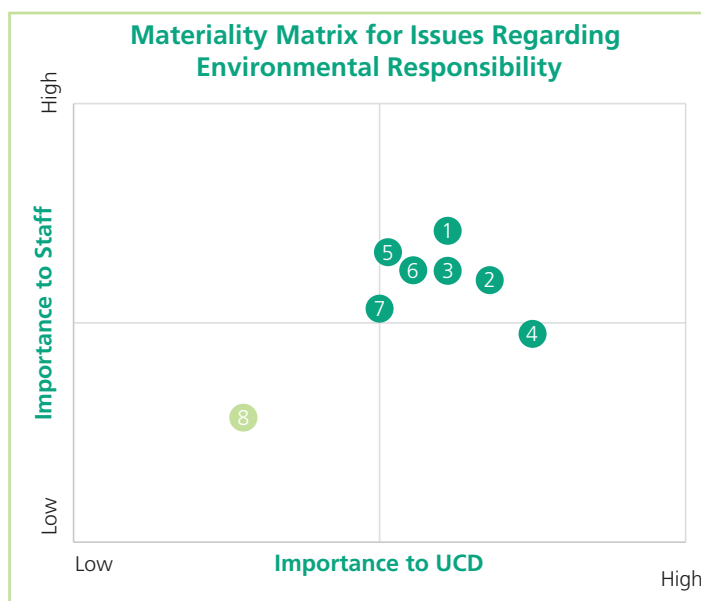
4 ESG MANAGEMENT (CONTINUED)

4.4 Assessment of Material Issues

Based on the database for 2018, the Group enriches the database with reference to the guideline for preparing this report and the business characteristics, categorizes issues into three aspects, namely environmental responsibility, staff responsibility and operation responsibility, and selects a total of 26 issues for 2019. Through sending questionnaires to staff of the Group, the ESG working group collects staff's priorities to issues which they are concerned about as stakeholders; by sending questionnaires to senior management, the ESG working group understands and assesses the materiality of issues to the Group.

Due to resource constraints and other reasons, we only conduct stakeholder surveys within the Company. In the future, we will strive to expand survey channels. The number of stakeholders participating in the questionnaire increased to 659 in 2019, and the scope of the survey was also expanded; in 2018, the participants in the survey are mainly employees in Beijing, and the proportion of the questionnaires from employees in other regions accounted for only 19%; in 2019, more branches and subsidiaries in other regions have participated in the survey (accounted for 64% of the responses). We have collected more extensive employee opinions, and the representative of the survey results has increased.

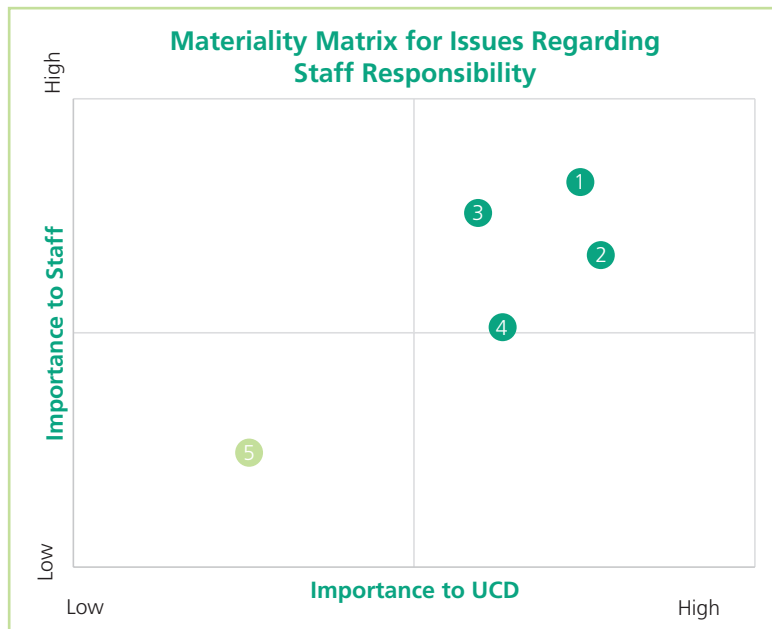
Through analysis on results of these questionnaires, we have developed the materiality matrix for the three aspects, namely environmental responsibility, staff responsibility and operation responsibility.



- ① Discharge and management of pollutants
- ② Management of energy utilization
- ③ Green office policy management
- ④ Green construction policy management
- ⑤ Discharge and management of waste
- ⑥ Management of water resource utilization
- ⑦ Discharge and management of greenhouse gas
- ⑧ Participate in and donate to environmental protection activities

Figure: Materiality Matrix for Issues Regarding Environmental Responsibility

4 ESG MANAGEMENT (CONTINUED)

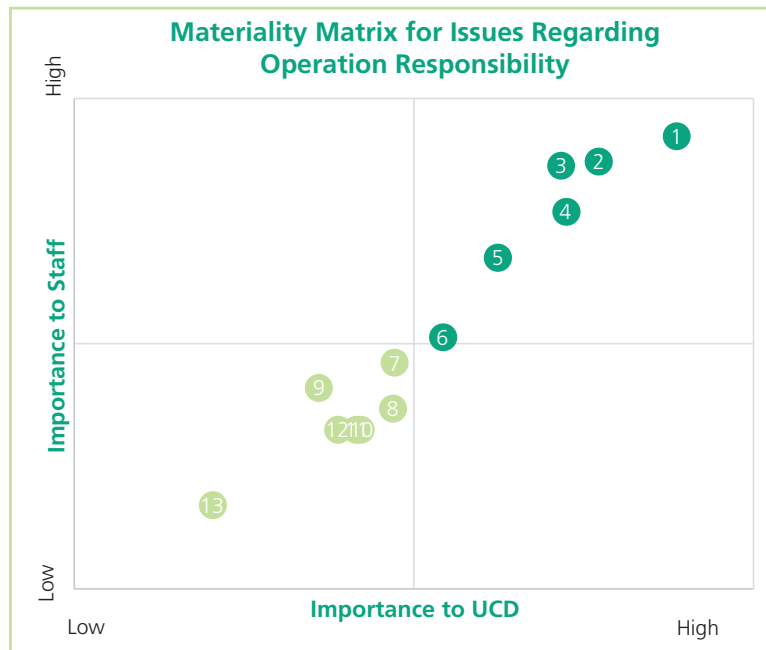


- ① Management of staff's health and safety
- ② Protection of staff's interest
- ③ Staff training and career development
- ④ Policy of staff benefits
- ⑤ Prohibition of child labor and forced labor

Figure: Materiality Matrix for Issues Regarding Staff Responsibility



4 ESG MANAGEMENT (CONTINUED)



- | | |
|---------------------------------------|---|
| ① Work safety | ⑦ Standardization of tendering process |
| ② Service quality | ⑧ Selection and management of suppliers |
| ③ Technological innovation | ⑨ Communication with stakeholders |
| ④ Project quality | ⑩ Environmental risk management of supply chain |
| ⑤ Protection of intellectual property | ⑪ Anti-corruption |
| ⑥ Protection of customers' privacy | ⑫ Social risk management of supply chain |
| | ⑬ Social investment |

Figure: Materiality Matrix for Issues Regarding Operation Responsibility



4 ESG MANAGEMENT (CONTINUED)

We consider issues of high importance to both stakeholders and the Groups as “Important ESG Issues”. Through analyzing the materiality assessment matrix, we identify 17 Important ESG Issues and rank them from high score to low score as follows:

Order of Materiality (From High to Low)	Important ESG Issues
Environment Responsibility	
1	Discharge and management of pollutants
2	Management of energy utilization
3	Green office policy management
4	Green construction policy management
5	Discharge and management of waste
6	Management of water resource utilization
7	Discharge and management of greenhouse gas
Staff Responsibility	
1	Management of staff's health and safety
2	Protection of staff's interest
3	Staff training and career development
4	Policy of staff benefits
Operation Responsibility	
1	Work safety
2	Service quality
3	Technological innovation
4	Project quality
5	Protection of intellectual property
6	Protection of customers' privacy

Compared with the survey results in 2018, the issues of importance at the environmental level have changed significantly. Issues such as “Discharge and management of pollutants” and “Discharge and management of waste” have become more important than the previous year and become issues that are more concerned by stakeholders. The importance of the new issue “Green construction policy management” also ranks higher. Since the questionnaire in 2019 merged “Construction and management of talent pool” and “Staff training and career development” into the same issue, the Important ESG Issues at the staff responsibility level have not changed significantly and so have the Important ESG Issues under operation responsibility. In accordance with the “materiality” reporting principle in the Guide, in this report, we focus on responding to the Group's management and performance related to Important ESG Issues during the Reporting Period so as to answer stakeholders' demand for information in such aspects.

5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE

We always uphold the values of “customer first, fighting will as the foundation, integrity and pragmatism, pursuit of excellence” and ensure production safety and continuously improve the quality of services provided when providing clients with professional services including preliminary consultancy, planning, surveying and mapping, design, project management and construction contracting.

This section focuses on the following material issues about which stakeholders were concerned

Work safety	Service quality	Technological innovation
Project quality	Protect intellectual property	Protect customer privacy
Management of staff health and safety		

5.1 Safety First

Work safety has been a most important ESG issue in operation level for two consecutive years. For a long time, the Group has always attached the highest importance to system establishment and training management in the area of safety in production. We guarantee the safety in the course of work and occupational health and safety of employees by establishing a systematic management model and implementing a strict supervision and inspection system.

During the provision of Reporting Period, the Group complies with the following laws and regulations in relation to safe workplace and prevention of occupational hazards for employees.

Work Safety Law of the People's Republic of China

Construction Law of the People's Republic of China

Measures for the Establishment of Safety Production Management Organizations and the Staffing of Full-time Safety Production Management Personnel in Construction Enterprises 《建築施工企業安全生產管理機構設置及專職安全生產管理人員配備辦法》

Labor Law of the People's Republic of China

Law of the People's Republic of China on the Prevention and Control of Occupational Diseases
and other national and local laws and regulations

RISK IDENTIFICATION AND CONTROL

In 2019, we promoted the establishment of a security risk prevention and control system. The Group officially issued the *Construction Safety Risk Grading Management and Hidden Trouble Investigation and Governance System of Beijing Urban Construction Design & Development Group Co., Limited* 《北京城建設計發展集團股份有限公司施工安全風險分級管控和隱患排查治理制度》 which regulates the safety production management of the Group's construction business in terms of organizational structure and responsibilities, risk identification and treatment, and hidden trouble investigation and management..

5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

In addition, the Group has established a construction safety risk database and a list library of accident hazards on the information platform of the Beijing Municipal Commission of Housing and Urban-Rural Development, and has truthfully filled in and recorded on the platform the construction safety risks, risk levels, management levels, and control measures we identified, as well as the responsible personnel, etc. In response to the identified safety hazards, we also recorded the investigation time, type, location, responsible personnel, rectification measures and rectification situation of the accident hazards on the platform in time.

MANAGEMENT AND INSPECTION SYSTEM

On the basis of risk control and hidden trouble investigation and governance, we have established a systematic management model and implemented a strict supervision and inspection system to ensure the safety of the production process. In accordance with the *Work Safety Law of the People's Republic of China and Construction Safety Management Regulations* (《建設工程安全管理條例》), the Group established the Work Safety Committee and developed a series of work safety execution procedures and management regulations on the basis of QHSE System, to ensure that national and local laws and regulations have been observed and all work safety management objectives have been realized.

Major Management Policies about Work Safety

Work Safety Accountability System of Beijing Urban Construction Design & Development Group Co., Limited (《北京城建設計發展集團股份有限公司安全生產責任制》)

Catalog of Work Safety Operation Procedures of Beijing Urban Construction Design & Development Group Co., Limited (《北京城建設計發展集團股份有限公司安全操作規程目錄》)

Work Safety Capital Guarantee System of Beijing Urban Construction Design & Development Group Co., Limited (《北京城建設計發展集團股份有限公司安全生產資金保障制度》)

Measures of Beijing Urban Construction Design & Development Group Co., Limited on Work Safety Incident Reporting, Investigation and Disposition (《北京城建設計發展集團股份有限公司生產安全事故報告和調查處理辦法》)

Measures of Beijing Urban Construction Design & Development Group Co., Limited on Major Risk Source Control (《北京城建設計發展集團股份有限公司重大危險源控制措施》)

Work Safety Inspection Mechanism of Beijing Urban Construction Design & Development Group Co., Limited (《北京城建設計發展集團股份有限公司安全生產檢查制度》)

Measures of Beijing Urban Construction Design & Development Group Co., Limited on Reward and Punishment for Work Safety and Green Construction (《北京城建設計發展集團股份有限公司安全生產和綠色施工獎懲辦法》)

Measures of Beijing Urban Construction Design & Development Group Co., Limited on Prevention and Control of Occupational Diseases (《北京城建設計發展集團股份有限公司職業病危害防治措施》)

Work Safety Education and Training System of Beijing Urban Construction Design & Development Group Co., Limited (《北京城建設計發展集團股份有限公司安全生產教育和培訓制度》)



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

The above management policies not only regulate the safety operation procedures, but also regulate the supervision of the relevant procedures and systems. Among them, the safety production hierarchical accountability system specified in the *Work Safety Inspection Mechanism of Beijing Urban Construction Design & Development Group Co., Limited* is as follows:



In 2019, we issued and implemented the *Administrative Measures for the Assessment and Management of Information Platform for Security Risk Investigation and Governance of Beijing Urban Construction Design & Development Group Co., Limited* 《北京城建設計發展集團股份有限公司安全隱患排查治理信息平台考核管理辦法》 to conduct a hierarchical assessment of the investigation and governance of potential safety risks as well as supervise and promote the effective implementation of safety management; we also issued and implemented the *Safety Production Standardization Assessment Management System of Beijing Urban Construction Design & Development Group Co., Limited* 《北京城建設計發展集團股份有限公司安全生產標準化考評管理制度》, which standardizes the assessment and evaluation of the effective implementation of the safety production management system, and further strengthened the standardization of construction safety production management.

TRAINING AND EMERGENCY DRILL

Under the dual protection of the risk prevention and control mechanism and management supervision system, we issued the *EHS Environment and Occupational Health and Safety Brochure* 《EHS環境及職業健康安全宣傳手冊》 for in-service employees, requiring them to learn system knowledge. We verified the learning effect through questionnaires and other forms. We put the regulations in *Work Safety Education and Training System of Beijing Urban Construction Design & Development Group Co., Limited* 《北京城建設計發展集團股份有限公司安全生產教育和培訓制度》 and *Work Safety Emergency Response Plan of Beijing Urban Construction Design & Development Group Co., Limited* 《北京城建設計發展集團股份有限公司生產安全事故應急救援預案》 into practice every year. We organize work safety education, training activities and emergency drills to improve the safety awareness and safety protection capabilities of all employees to prevent and reduce safety accidents and occupational hazards. During the Reporting Period, we organized “Emergency Rescue and Self Rescue Related Knowledge” training with a total of 400 employees participated, and all employees participated obtained the rescue skills issued by the Beijing Red Cross.

5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

2019 “Work Safety Month” Promotion and Training

The Group launched the “Work Safety Month” Promotion and Training in June 2019. During the campaign, we strengthened the safety production awareness of the Company and employees by arranging emergency drills, conducting safety training and education activities and organizing safety competitions.



Picture: Project Department of No.03 Tender for East-Extended Section of Beijing Subway Line 7 was holding flood prevention emergency drill



Picture: Zunyi Fenghuangshan—Liyixincheng Expressway project was conducting fire emergency drill

5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)



Picture: Zunyi Fenghuangshan—Liyixincheng Expressway project was conducting elevator accident emergency drill



Picture: Exploration & Surveying Institute was carrying out training for the new version of *Safety Code for Geotechnical Engineering Investigation* (《岩土工程勘察安全规范》) and limited space operation



Picture: UCD was carrying out annual full-time safety management personnel safety knowledge training



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)



Picture: Rail Company was conducting skill competition for personal protective equipment safety management posts



Picture: the Group provides safety knowledge publicity materials at the construction site and office area



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

OCCUPATIONAL HEALTH AND SAFETY

According to the characteristics of construction and production business, we formulated and implemented *Measures of Beijing Urban Construction Design & Development Group Co., Limited on Prevention and Control of Occupational Diseases* 《北京城建設計發展集團股份有限公司職業病危害防治措施》 to standardize the preventive measures against the possible occupational diseases such as pneumoconiosis, occupational poisoning, heatstroke, noise deafness, etc. Preventive measures are effectively implemented in the workplace, personal protection regulations and safety inspection systems. The following shows some management measures for typical occupational diseases:

Types of potential occupational diseases	Workplace management and preventive measures	Personal equipment and precautions
Pneumoconiosis	Adopt wet operation method as far as possible, and use dust-reducing equipment when the operation conditions permit. Strengthen ventilation and dust removal measures.	Distribute dust masks to construction workers according to the operating environment and replace them regularly.
Occupational poisoning	For work sites that are prone to carbon monoxide poisoning and hydrogen sulfide poisoning (such as underground pipelines, cellars, etc.), forced ventilation is required if toxic and harmful gases exceed the standard. Operation must not be started before the toxic and harmful gas content reaches the standard. Forced ventilation must be carried out in the workplace while operating.	Strictly implement safety operation regulations and work regularly in shifts.
Heatstroke	Arrange the working time reasonably and ensure the supply of heatstroke prevention drinks.	Increase or decrease clothing according to the weather, ensure regular rest during high temperature operation, and supplement salty drinks in time.
Noise deafness	For strong noise equipment on the construction site, noise reduction measures such as full enclosure must be taken.	Wear corresponding earplugs according to the noise level of the workplace



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

We reviewed the prevention and control of occupational diseases within the Group once a quarter. For projects in which the Group acted as the general contractor, we required project managers to conduct random inspection on prevention and control of occupational diseases once a month; for projects in which the Group acted as the subcontractor, we required project managers to conduct one inspection in every ten days. In addition, we conducted random inspections of workplace environment and checked whether operating personnel have worn protection articles in an appropriate way.

During the Reporting Period, the Group recorded no work-related injury or death.

5.2 Quality-oriented

The quality control tenet of the Group is “Scientific Management, Superb Quality, Continuous Improvement, and Customer Satisfaction”. Therefore, we always insist on continuous progress and improvement in engineering quality and customer service. During the Reporting Period, the quality control system of the Group was audited and certified by a professional third party and met the requirements of Quality management systems – Requirements (GB/T 19001–2016/ISO 9001:2015). In addition, our QHSE System sets out quality inspection and improvement procedure, the procedure for management of construction project planning, the operation and management procedure of construction projects, the project management procedure and the legal and regulatory compliance evaluation procedure, ensuring a complete management chain incorporating planning, operation, management and supervision.

During the Reporting Period, the Group has strictly complied with the following laws and regulations related to the health and safety, advertising, and privacy issues of the products and services provided:

Construction Law of the People’s Republic of China

Regulations on the Administration of Quality of Construction Works

Metrology Law of the People’s Republic of China

Measures for the Administration of Quality Testing of Construction Projects

Contract Law of the People’s Republic of China

Advertising Law of the People’s Republic of China

and other national and local laws and regulations



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

DESIGN AND CONSTRUCTION QUALITY

As a provider of engineering consulting, design services and construction contracting services, we understand that the quality of the design and construction services provided is the safety guarantee of users. Therefore, we regard quality control and quality verification procedures as the core of our quality management. During the Reporting Period, we implemented the quality control measures under the QHSE System. We executed process control, design drawing review, design quality release, post-design service, design change control procedures and other management procedures for design consulting services in accordance with the *Design Consulting Procedure Document*. We implemented management on construction technology, construction quality and construction production for construction contracting services in accordance with the *Construction Project Control Procedure Document*, so as to ensure that all the above works have standardized quality standards, execution procedures, division of responsibilities and work records.

Under the guarantee of basic quality control process, we also further strengthen quality control through various inspection mechanisms. Major quality inspection measures of engineering design and engineering consulting segments included random quality inspections of drawings of design projects and tour inspections of design projects on irregular basis, professional technical quality analysis report, external auditor's opinion and statistical analysis, and regular design quality meetings. For every issues identified in the course of quality supervision, we performed work in accordance with the *Rules on Management of Punishment Regarding Technical Quality of Design*. Quality supervision of construction segment included project inspections, quality meetings and statistical analysis of information submitted. For every issues identified, we performed work in accordance with the *Rules on Management of Punishment Regarding Technical Quality of Construction*.

Engineering design, engineering consulting segments

- Rules on Management of Random Quality Inspections to Design Projects
《設計項目質量抽查管理規定》
- Rules on Management of Punishment Regarding Technical Quality of Design
《設計技術質量處罰管理規定》

Construction segment

- Rules on Management of Inspections to Technical Quality of Construction
《施工技術質量檢查管理規定》
- Rules on Management of Punishment Regarding Technical Quality of Construction
《施工技術質量處罰管理規定》

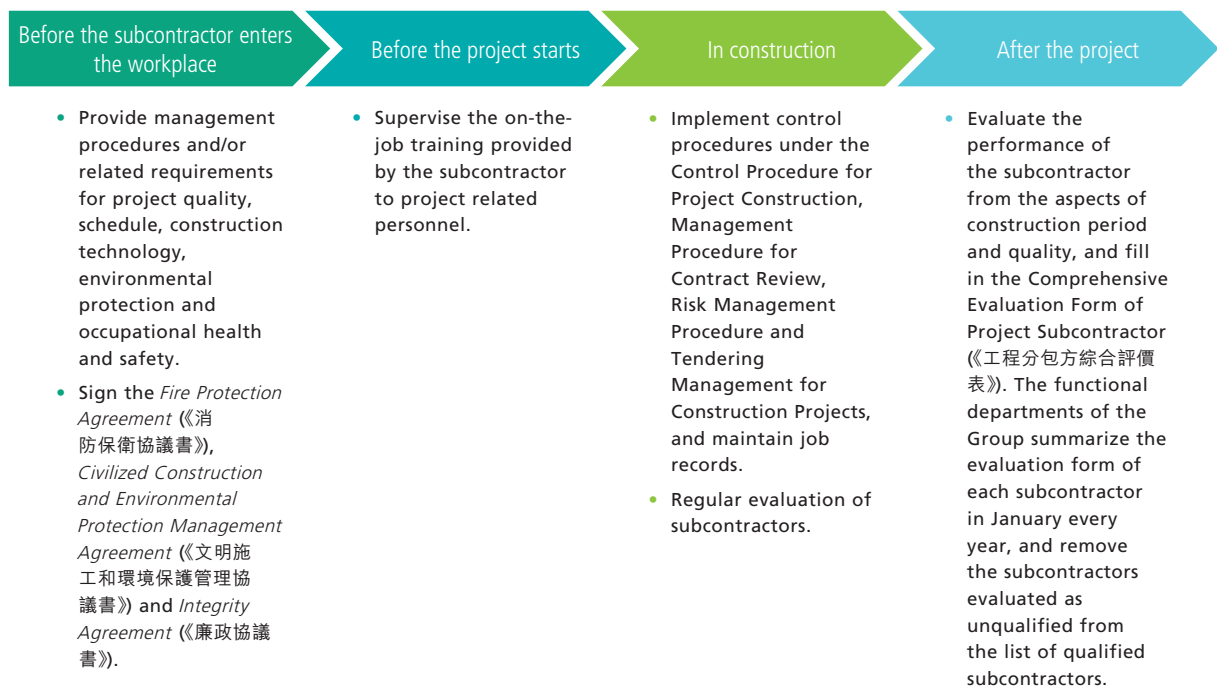
Figure: Rules Related to Quality Supervision and Improvement

During the Reporting Period, the Group recorded no quality incidents, design review rate of 100% and design consulting achievement approval rate of 100%; project quality pass rate of 100% and one time acceptance rate of unit project of 100%, achieving the annual quality target. On top of that, the Group has strictly complied with the *Advertising Law of the People's Republic of China* and laws and regulations related to business promotion compliance. In the ordinary course of business, the Group performed marketing control procedures under the QHSE System and policies such as *Marketing Management Measures*, and conducted stringent control on labeling matters related to design, consultancy and contracting businesses, so as to prevent misleading the public and clients.

5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

SUPPLIER MANAGEMENT

Material and service providers of the Group is a key factor for us to provide safe, high-quality and integrated construction services. As such, we strove to promote the supply chain environment and the management of social risk to further maintain our overall service quality. In terms of design and consulting services, we revised the External Cooperation Design Management Measures of Beijing Urban Construction Design & Development Group Co., Limited (Revised) 《北京城建設計發展集團股份有限公司外部合作設計管理辦法》(修編)) in 2019 to further regulate the management of projects involving external cooperative design, including the specific specifications for the selection, technical management and quality control, and performance evaluation of cooperative design units under subcontracting design, joint design, project labor cooperation and labor subcontracting design. In terms of construction services, the Group implemented the Rules on the Tendering Management for Construction Projects of the Company 《公司施工項目招標管理規定》 and the Rules on Subcontracting Management for Professional Projects of the Company 《公司專業工程分包管理規定》 and put forward standardized procurement regulations on the qualification, environmental protection, occupational health and safety of suppliers for material procurement, professional subcontracting, labor subcontracting, machinery leasing and other services in construction projects. Among them, the Rules on the Tendering Management for Construction Projects of the Company 《公司施工項目招標管理規定》 regulate the work and control procedures of bidding and purchasing; the Rules on Sub-contracting Management for Professional Projects of the Company 《公司專業工程分包管理規定》 further regulate the professional subcontractors.



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

During the Reporting Period, supplier management policies of the Group were duly executed. Exploration & Surveying Institute issued and implemented the *Management Provisions on the Review and Management of Production Suppliers and the Approval Process for Subcontracting Applications of Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd.* 《北京城建勘测設計研究院有限責任公司生產類供方評審、管理及分包申請審批流程管理規定》, which further standardize the review of suppliers, the use of the *List of Qualified Suppliers*, and the supervision of suppliers. Rail Company implemented policies such as *Implementation Rules for Professional Engineering Subcontracting Management* 《專業工程分包管理實施細則》 and *Management Regulations for Construction Crane Suppliers* 《建築起重機械供應商管理規定》 to manage various suppliers.

Number of suppliers by region in 2019		
	Beijing	Other regions
Engineering segment	171	249
Design segment	359	963

CUSTOMER SERVICE

We pay attention to customer service while ensuring design and engineering qualities. The Group required responsible departments to collect owners' comments and opinions through various channels in accordance with policies under *Rules on Customer Satisfaction Survey and Application* 《顧客滿意度調查及應用規定》 and the *Rules on Project Warranty Management* 《工程保修管理規定》 in the QHSE System. In addition, the Group organized return visits to owners of typical projects and collected owners' comments and opinions more effectively through face-to-face communication.

Customer privacy protection is an important issue in our customer service and has also been included in the Important ESG Issue in the assessment of material issues this year. It can be seen that the Group and stakeholders are very concerned about customer privacy protection. We implemented the *Confidential Work Management (Interim) Regulations of Beijing Urban Construction Design & Development Group Co., Limited* 《北京城建設計發展集團股份有限公司保密工作管理（暫行）規定》 to set out specific requirements for the information confidentiality scope and confidentiality matters of the Group, document management and circulation, document clearance, filing, destruction, informatization and archive management, and confidential personnel responsibilities. Some of the specific measures are shown below (including but not limited to):

- The obsolete design drawings, technical data and calculation sheets of confidential projects shall be submitted to the Archive Center for management and destruction in time. The documents and internal data to be destroyed must be destroyed by a specific manufacturer after registration;
- Employees are not allowed to bring confidential documents, information and other items when going to public places or visiting relatives and friends;

5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

- Employees must not transmit or process confidential information on fax machines or computers without confidentiality measures;
- The headquarters and member companies shall regularly carry out confidentiality education, enhance the awareness of confidentiality, and conduct regular inspection on confidentiality.

During the Reporting Period, in order to strengthen customer service management, Exploration & Surveying Institute issued and implemented the *Customer Service Management Measures* 《顧客服務管理辦法》 and *Customer Service Assessment Rules* 《顧客服務考核細則》 to regulate the acquisition of customer satisfaction information, the handling of customer complaints and claims and the statistics and analysis of customer satisfaction information. Among them, the *Customer Service Management Measures* 《顧客服務管理辦法》 stipulates that the responsible department must classify the customer complaints received as major complaints, serious complaints or general complaints according to the content and severity of the incident, and refer the complaint to the relevant departments. The leader in charge is responsible for following up, reviewing and confirming the processing results, and giving the customer a reply within 24 hours. During the Reporting Period, the Group has not received any complaints from customers.

5.3 Innovative Development

We focus on the cultivation of independent technology development capability, and regard technological innovation as the core competitiveness of the Group. In order to promote technological progress, accelerate the transformation of scientific and technological achievements, and strengthen the management of technological innovation projects, the Group established a technical research institute to manage and integrate our technology research and development resources. At the same time, we have signed technical service contracts with well-known universities such as Beijing Jiaotong University and Wuhan University of Technology to comprehensively improve the level of scientific research and technology.

INNOVATIVE TECHNOLOGY MANAGEMENT

In accordance with the *Science and Technology Innovation Development Plan (2018-2020)* 《科技創新發展規劃(2018-2020)》, the *Innovation Project Management Regulations* 《創新項目管理規定》, the *Innovation Project Funds Management Measures* 《創新項目經費管理辦法》, the *Reward Method for Technology Quality Improvement* 《科技質量創優獎勵辦法》 and other policies, the Group unified management of R&D activities through a series of standard procedures for process control and appraisal and acceptance. We have developed proprietary technologies in the design of a series of urban rail transit and transportation-related projects, and reached international leading levels in a number of advanced technologies.



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

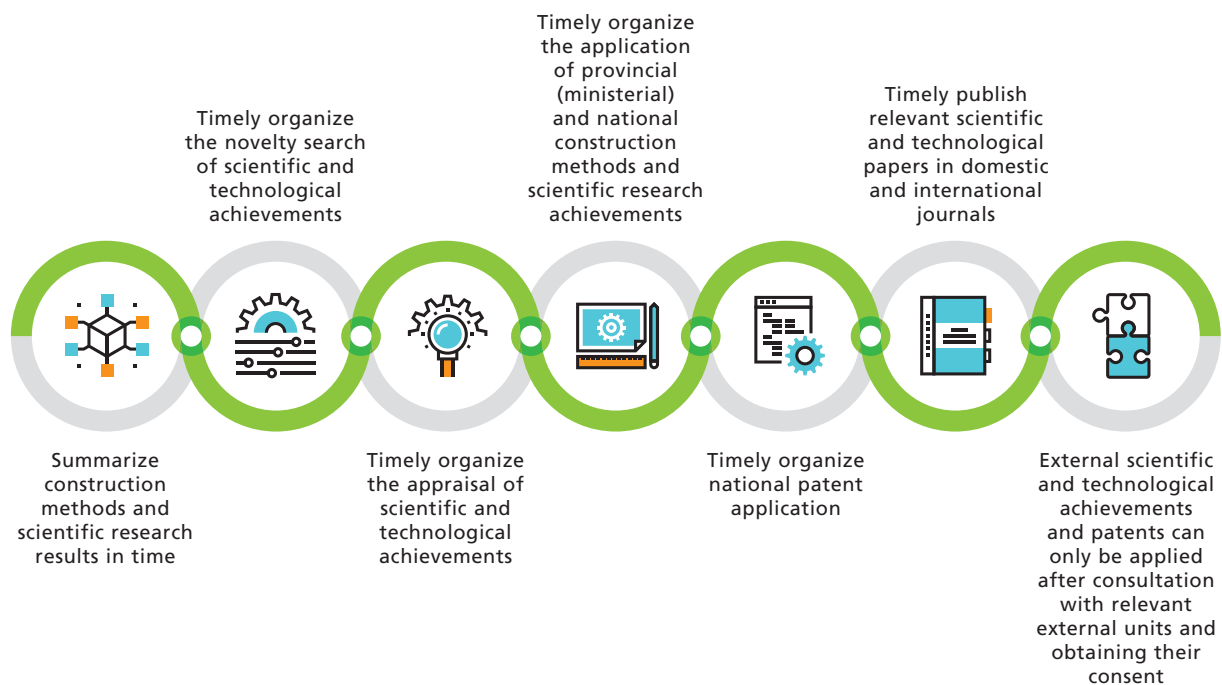
Rail shock absorption and noise reduction	Ventilation of underground space
<p>We have several technologies in steel spring floating slab shock-absorbing track bed, rail damper, vibration damping fasteners and the other shock absorption and noise reduction technologies, which are widely used in the area of rail transit and improve the efficiency, safety, energy-saving and environmental protection of rail transit. Meanwhile, we also make profits by selling related products processing blueprints.</p>	<p>We have a number of proprietary technologies in the field of underground ventilation and air-conditioning. Our technologies generally operate compatibly with the ventilation systems in underground space, which has a prominent advantage in space utilization, energy conservation and carbon emissions reduction. Our related technologies cover areas such as multi-function integrated ventilation and air-conditioning system, direct evaporative ventilating and air-conditioning system, and cold-water integrated air and ventilation system without a cooling tower.</p>
Underground structure	Overpass
<p>We have a number of leading proprietary technologies relating to underground structure, which fills the blank in the field of related technologies domestically. Such technologies include the top-down bored excavation with cast-in-site arch construction method, the method for controlling deformation when under-crossing existing metro without clearance, constructing subway stations by the shield tunneling construction method combined with the shallow subsurface excavation method and the other construction methods. One of our research and development results, the “prefabricated subway station” technology, is an original domestic invention.</p>	<p>In China, we are the only design company with its own invention patent of U-beams technology, which is principally applicable to viaduct structures for urban rail transit requiring both a high degree of operational safety and landscape design. We conduct comprehensive research on U-beams technology and its ancillary system technology, such as rail transit power supply, environmental protection system, shock absorption and noise reduction system, and safety protection system. The U-beams we have developed are environmental friendly and economical, highly applicable to rail transit systems in China. Some parts of our U-beams technologies have achieved internationally advanced standards.</p>

Figure: Fields of Proprietary Technologies



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

In the management of technological innovation, we attach great importance to the management and protection of intellectual property rights. The Group implements the *Intellectual Property Management Measures* 《知識產權管理辦法》 on the basis of the procedure document on knowledge management in the QHSE System, and regulates the protection and management responsibilities of technology patent rights, design copyrights and trademark rights developed by the Group. Exploration & Surveying Institute implements the Administrative Measures on Reward and *Punishment of Independent Intellectual Property Rights (Trial)* 《自主知識產權獎懲管理辦法(試行)》 to manage and protect its intellectual property rights and encourage employees to innovate independently through a reward mechanism. Rail Company maintains and protects internal and external intellectual property rights through the following practices:



We will continue to promote the development of innovative technologies and the management of intellectual property rights in the future to provide guarantee for the long-term competitiveness of design and construction businesses.



5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

ANNUAL INNOVATION ACHIEVEMENTS

During the Reporting Period, the Group's scientific research and innovation achievements were remarkable. The design of Rail Transit Line 7 of Shenzhen won the Tien-yow Jeme Prize; the research and application of the key technology of rail transit automatic operation system and shield tunneling construction control technology won the Beijing Science and Technology Progress Award. The Group obtained 35 patents and 42 software copyrights; published and edited 16 standards and specifications; won 82 awards for survey and design improvements, 5 awards for construction quality and 11 awards for quality management; and conducted 2 new technology promotion projects.

Awards and Patents Granted in 2019 (Partial Display)



In the selection of the "Urban Rail Transit Technology Progress Award (城市轨道交通科技進步獎)" in 2019, the "Complete Set of Technology of Shock Absorption System for Prefabricated Rail in Urban Rail Transit (城市軌道交通裝配式減振軌道系統成套技術)", with the Group as the first completing unit, won the special prize, and the "Research on the Compilation of Light Rail Transit Design Standards (《輕軌交通設計標準》編制研究)" and "Cloud-Platform-Based Integrated Rail Transit Automation System" won the first prize. In addition, the "Comprehensive Research and Application of LTE-Based Urban Rail Transit Wireless Transmission System (基於LTE技術的城市軌道交通無線傳輸系統綜合研究與應用)" which the Group had participated won the second prize.

In the selection of the "Huaxia Construction Science and Technology Award" in 2019, the "Application of Key Technologies in the Overall Planning of Urban Rail Transit Transformation Above-ground and Underground (城市軌道交通地上地下統籌改造規劃關鍵技術應用)" and the "Research on Waterproof and Drainage Structure and Steady State Construction Technology of Metro Tunnel in Rocky Area (岩石地區地鐵隧道結構防排水型式及穩態建造技術研究)", with the Group as the first completing unit, won the second prize and third prize respectively.

5 SCIENTIFIC MANAGEMENT AND PURSUIT OF EXCELLENCE (CONTINUED)

PROMOTION OF INDUSTRY EXCHANGES

We actively promoted the academic exchange between the Group and other companies in the same industry, professional research entities to promote the innovation and development of key technologies for urban rail transit in China.

2019 China Urban Rail Transit Key Technologies Forum & the 28th Metro Academic Exchange Conference and the 40th Anniversary of Rail Transit Branch

From 29 to 30 August 2019, the “2019 China Urban Rail Transit Key Technologies Forum & the 28th Metro Academic Exchange Conference and the 40th Anniversary of Rail Transit Branch”, sponsored by the rail transit branch of the China Civil Engineering Society and undertaken by the Group and Beijing Metro Construction Administration Corporation Ltd., was ceremoniously held in Beijing. Nearly 500 experts, academicians and industry leaders from around the country gathered to discuss the development and innovation of urban rail transit.



6 WORK TOGETHER WITH INGENUITY

We hope to bring in talented professionals to realize the corporate mission of “Design the City, Build the Future” with us. Therefore, we are committed to providing employees with an equal, open development platform that can realize their own value by implementing an efficient talent management system, performing a comprehensive training mechanism and carrying out a standardized management model.

This section focuses on the following material issues about which stakeholders were concerned

Protection of staff's interest	Staff training and career development	Policy of staff benefits
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6.1 Talent Management

During the reporting period, the Group has strictly complied with the following laws and regulations related to remuneration and dismissal, recruitment and promotion, working hours, holidays, equal opportunities, diversity, anti-discrimination, and other benefits:

Labor Law of the People's Republic of China

Labor Contract Law of the People's Republic of China

Regulation on the Implementation of the Employment Contract Law of the People's Republic of China

Prohibition of Child Labour Provisions

and other national and local laws and regulations

EMPLOYMENT AND DISMISSAL

Each functional department of the Group draws up the next year's staff recruitment demand plan based on the scale of production and operation, development goals, per capita benefits, per capita cost, labor productivity, current status of personnel and post establishment. The human resources department analyzes and reviews the demand plans of each department, draws up the Group's annual personnel recruitment plan, and submits to the supervisor for approval. After approval, the human resources department implements the recruitment information release, resume selection, recruitment test and other works according to the *Rules of Beijing Urban Construction Design & Development Group Co., Limited on Recruitment Management* (《北京城建設計發展集團股份有限公司招聘管理辦法》). After the personnel to be hired are determined, the human resources department will perform the on-boarding process in accordance with the *Administrative Measures for the Employment of Employees of Beijing Urban Construction Design & Development Group Co., Limited (Interim)* (《北京城建設計發展集團股份有限公司員工入職管理辦法(暫行)》). Group members shall formulate their own recruitment policies as needed according to the Group's unified policy principles, for example, the *Recruitment Management Measures of Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd.* (《北京城建勘測設計研究院有限責任公司招聘管理辦法》) implemented by Exploration & Surveying Institute.



6 WORK TOGETHER WITH INGENUITY (CONTINUED)

We strictly follow the procedures specified in the above policies during recruitment, and require candidates to provide valid identity documents to avoid selection of those under sixteen. We also conduct reference check and verification to candidates, and those who provide false information will not be employed. In the meantime, the Group enters into labor contracts with employees on the rule of equality and free will and by consensus and holds a firm stance in prohibiting any form of forced labor. Once there is suspected employment of child labor or forced labor, the Group will conduct investigations immediately; once the breach of laws is found in an incident, the Group will hand it over to the relevant judiciary authorities and shows no tolerance to such breach.

When there is a need for the Group or the employee to change, terminate or no longer renew the labor contract, we implement the standard departure process and work handover process in the *Labor Contract Management Measures* 《勞動合同管理辦法》 of the Group, *Administrative Measures for the Resignation of Employees of Beijing Urban Construction Design & Development Group Co., Limited (Interim)* 《北京城建設計發展集團股份有限公司員工離職管理辦法(暫行)》 and other policies to protect the rights and interests of both parties.

As at 31 December 2019, UCD, Exploration & Surveying Institute and Rail Company had a total of 3,725 employees (all full-time employees). The breakdown of total employees by gender, region, age group and employment type is listed below:

		Number of Employee	Employee Turnover Rate (%)
Gender	Male	2,590	7
	Female	1,135	5
Age group	Below 30	830	6
	30-50	2,599	6
	Over 50	296	9
Employment type	Senior management	128	–
	Middle management	178	–
	Staff	3,419	–
Region	Beijing	1,698	7
	Other regions	2,027	6



6 WORK TOGETHER WITH INGENUITY (CONTINUED)

REMUNERATION AND PROMOTION

In order to standardize the calculation and management of employee compensation, build and maintain a competitive salary and rank system, we have formulated and implemented the *Administrative Measures for Positions and Ranks of Beijing Urban Construction Design & Research Institute* 《北京城建設計研究總院崗位及職級管理辦法》 and *Measures for Employee Remuneration Management and Calculation of Beijing Urban Construction Design & Research Institute* 《北京城建設計研究總院職工薪酬管理與核算辦法》. Among them, the *Administrative Measures for Positions and Ranks of Beijing Urban Construction Design & Research Institute* 《北京城建設計研究總院崗位及職級管理辦法》 makes clear specifications for the post establishment, post evaluation, post adjustment, talent management and incentives of UCD. *Measures for Employee Remuneration Management and Calculation of Beijing Urban Construction Design & Research Institute* 《北京城建設計研究總院職工薪酬管理與核算辦法》 clearly regulates the management and calculation of the following employees' salaries and benefits.



Rail Company and Exploration & Surveying Institute implement salary management systems based on their own condition in accordance with policies of the Group, and attract talents through an open and standard promotion mechanism and a legal, fair, competitive, and incentive salary system to increase employee motivation.

Rail Company

- Remuneration Management System (Trial)

Exploration & Surveying Institute

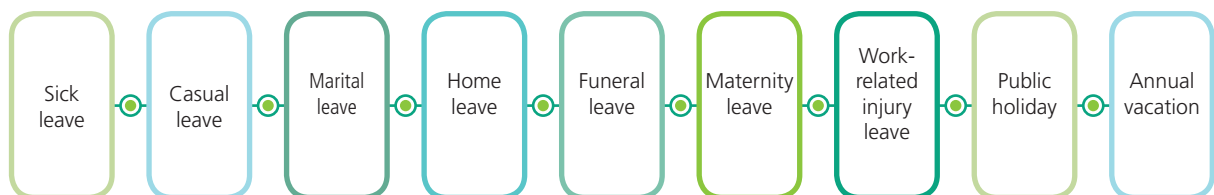
- Remuneration Management System of Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd. 《北京城建設計研究院有限責任公司薪酬管理制度》
- Rules for the Implementation of Remuneration Management of Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd. 《北京城建設計研究院有限責任公司薪酬管理實施細則》



6 WORK TOGETHER WITH INGENUITY (CONTINUED)

WORKING HOURS AND HOLIDAYS

In order to establish and maintain an orderly work order and a reasonable holiday mechanism, we issued the *Rules on Management of Work Attendance, Leave and Holidays of Beijing Urban Construction Design & Research Institute* 《北京城建設計研究總院有限公司員工考勤與休假管理辦法》 to standardize the management of working hours, attendance, leave and holidays and make sure that the basic interest of employees is protected. For example, the Group, based on compliance with relevant laws, also provided additional holidays to employees, such as the home leave of 20 to 30 days that was provided to employees who are away from their families, to allow them to get together with their parents and families. Holidays for employees include:



For positions with different needs, we implement standard working hours and flexible working hour system. We comply with the *Labor Law of the People's Republic of China* and submit an application for flexible working hour system to relevant authorities in January each year, and implement the flexible working hour system after approval and publicity by the regulatory department. The working hours of employees under standard working hours and flexible working hour system are both 8 hours. In order to ensure the rationality of the working hours of employees, when the employees under the standard working hours system have overtime requirements, they need to fill in the *Overtime Approval Form* 《加班審批表》 and obtain approval. The Group pays employees overtime pay in accordance with relevant laws and regional regulations.

Rail Company	Exploration & Surveying Institute
<ul style="list-style-type: none"> Rules on Management of Work Attendance, Leave and Holidays (Trial) 《員工考勤與休假管理辦法(試行)》 	<ul style="list-style-type: none"> Rules on Management of Work Attendance, Leave and Holidays of Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd. 《北京城建勘測設計研究院有限責任公司員工考勤與休假管理辦法》

EQUAL OPPORTUNITY, DIVERSITY AND ANTI-DISCRIMINATION

We provide equal opportunities for employees in recruitment, salary and promotion management, and do not treat them differently because of their age, gender, race, ethnicity, religion and other factors. We only evaluate the candidate's professional skills, qualifications and whether they are fit for the Company's values during recruitment. Our salary distribution is based on employees' position, ability, work intensity and contribution level, and we implement the system of equal pay for equal work.



6 WORK TOGETHER WITH INGENUITY (CONTINUED)

STAFF BENEFITS

In addition to the above salary and basic benefits, we provide employees with supplementary benefits such as medical examinations and business travel subsidies. For many years, we have been holding birthday parties for employees, providing park annual tickets and movie tickets, and sending holiday condolences to employees on holidays. We encourage branches and member companies around the country carry out small and diverse employee activities on their own. During the Reporting Period, we distributed radiation-proof clothes for female employees during pregnancy and set up mother-and-baby rooms; upgraded office chairs for office employees during the renovation of the new office area; and sent sunstroke preventive articles to front-line employees during summer days. We also work with the labor union and party committee of the Group to hold various welfare activities for employees across the country.

2019 Employee Activities and Benefits (Partial Display)



Picture: the Group was holding the Seventh "Health Cup" Table Tennis Match



6 WORK TOGETHER WITH INGENUITY (CONTINUED)



Picture: the Group was conducting the Fourth "Health Cup" Walks



Picture: Rail Company was "sending cool" to employees on the construction site during summer days

6 WORK TOGETHER WITH INGENUITY (CONTINUED)



Picture: Group leaders were visiting employees in Jinan Branch

6.2 Talent Building

TRAINING POLICY

In order to meet the development goals of the Group, enhance the comprehensive capabilities of employees, and promote the common development of employees and the Group, we prepared various kinds of training programs for employees, and formulated and implemented the *Administrative Measure for Training of Beijing Urban Construction Design & Development Group Co., Limited*. 《北京城建設計發展集團股份有限公司培訓管理辦法》, the *Administrative Measure for Internal Lecturers* 《內部講師管理辦法》 and other policies to standardize training management. According to training needs, we organized two types of training involving different training contents and different trainees: company training and professional training.

Company training

- General knowledge, innovation and development, and management quality training

Professional training

- Professional skills and job skills training

6 WORK TOGETHER WITH INGENUITY (CONTINUED)

In the above two types of training, we comprehensively consider the training grades of new employees and in-service employees, and the comprehensive coverage of employees in various regions, and arrange training courses in different levels according to different trainees and training needs. In accordance with the HR staff training and staff assessment management procedure set out in the QHSE System, we also defined and standardized the whole process of staff vocational training as follows:



TRAINING ACTIVITIES

During the Reporting Period, focusing on the Group's development strategy and training needs, we completed five series of training courses, including expert lectures, project management training, key-management personnel promotion, employee career development training, and academic exchanges and inspections. The training rate of employees of the Group was 100%, and the average training hours of employees reached the Group's minimum training hours.

Minimum training hours of the Group¹ :

In-service technical staff: 72 hours/person	In-service management staff: 48 hours/person
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¹ This requirement is applicable to UCD and Rail Company. Exploration & Surveying Institute requires training hours not less than 24 hours for general grass-roots personnel, not less than 48 hours for backbone reserve personnel and not less than 36 hours for middle level or above management.



6 WORK TOGETHER WITH INGENUITY (CONTINUED)

2019 Employee Training Activities (Partial Display)



Picture: Expert lecture – Research and Application of New Technology for Prefabricated Metro Station (地鐵車站預製裝配新技術研究與應用)



Picture: Expert lecture – Green Development, Energy-saving Design and Innovation of Rail Transit in the New Era (新時代背景下的軌道交通綠色化發展、節能設計與創新)



6 WORK TOGETHER WITH INGENUITY (CONTINUED)



Picture: New employee centralized induction training



Picture: Rail Company was holding BIM (Building Information Model) technology application training



6 WORK TOGETHER WITH INGENUITY (CONTINUED)



Picture: Exploration & Surveying Institute was holding a special training on "Monitoring and Inspection Points during Viaduct Construction (高架橋樑施工過程中的監測及檢測要點)"

6.3 Talent Code

During the Reporting Period, the Group has strictly complied with the following laws and regulations related to preventing bribery, extortion, fraud and money laundering:

Criminal Law of the People's Republic of China 《中華人民共和國刑法》

Supervision Law of the People's Republic of China 《中華人民共和國監察法》

Anti-Money Laundering Law of the People's Republic of China 《中華人民共和國反洗錢法》

Anti-unfair Competition Law of the People's Republic of China 《中華人民共和國反不正當競爭法》

and other national and local laws and regulations



6 WORK TOGETHER WITH INGENUITY (CONTINUED)

Maintaining a clean and disciplined work team is an essential part of the Group's social responsibility performance and the necessary premise of long-term sustainable development of the Group. We complied with and implemented the *Punishment Regulations for Managements Violations and Non-compliance* 《管理人員違紀違規行為處分規定》 of Beijing Urban Construction Group Co., Ltd., which applies to all employees in management positions and employees in non-managerial positions who perform managerial duties of the Group. If employees violate laws, regulations, and corporate rules and regulations, we will perform corresponding treatment and punishment in accordance with this regulation. Violation of discipline may include acts involving corruption, extortion, fraud and money laundering, for example, to accept property or seek benefits for others by taking advantage of his power or influence, to connive, acquiesce relatives and friends and certain related parties to use their powers for private gain, and to illegally accept or give gifts, money, and consumption cards.

During the Reporting Period, we assign responsibilities of integrity building and anti-corruption to specific positions of member companies. For example, Exploration & Surveying Institute established a leadership group to comprehensively strengthen party self-discipline, formulated its work plan for the system construction and risk control on prevention and punishment of corruption, and set up the *Opinions on the Division of Work of Building a Clean and Honest Party and Anti-corruption of Beijing Urban Construction Exploration & Surveying Design Research Institute Co., Ltd. in 2019* 《2019 年北京城建勘測設計研究院有限責任公司黨風廉政建設和反腐敗工作主要任務分工的意見》, specifying responsibility division of each functional department in the work related to anti-corruption.

We set up a mailbox for reporting violations, and obtain information on violations through supervision, disciplinary inspection, audits and tour inspection. We abide by and implement the *Management Measures for Clues of Discipline Inspection and Supervision of Beijing Urban Construction Group Co., Ltd.* 《北京城建集團有限責任公司紀檢監察問題線索管理辦法》, to centrally manage the clues received. All clues are tracked and recorded through standardized management modes such as registration, establishment of account books, and personnel accountable. During the Reporting Period, the Group did not receive any reported cases of corruption, extortion, fraud and money laundering.



7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT

Environmental impact caused by the production and operation business of the Group comes from office area and construction sites. Among which, environmental impact from office area mainly included emission of air pollutants and greenhouse gas by business vehicles owned and leased by the Group, indirect emission of greenhouse gas by purchased electric power, energy and water resource consumption and office garbage. Environmental impact from construction sites mainly included emission of air pollutants and greenhouse gas by engineering machinery owned and leased by the Group, indirect emission of greenhouse gas by purchased electric power, energy and water resource consumption and construction waste.

This section focuses on the following material issues about which stakeholders were concerned

Discharge and management of pollutants	Management of energy utilization	Green office policy management
Green construction policy management	Discharge and management of waste	Management of water resource utilization
Discharge and management of greenhouse gas		

During the Reporting Period, the Group has strictly complied with the following laws and regulations related to energy conservation and emission reduction:

Environmental Protection Law of the People's Republic of China (《中華人民共和國環境保護法》)

Energy Conservation Law of the People's Republic of China

Atmospheric Pollution Prevention and Control Law of the People's Republic of China (《中華人民共和國大氣污染防治法》)

Law of the People's Republic of China on the Prevention and Control of Ambient Noise Pollution (《中華人民共和國環境噪聲污染防治法》)

Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste (《中華人民共和國固體廢棄物污染環境防治法》)

Water Pollution Prevention and Control Law of the People's Republic of China (《中華人民共和國水污染防治法》)

Regulations on Environmental Protection Management of Construction Project (《建設項目環境保護管理條例》) and other national and local laws and regulations





7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

7.1 Green Office

MANAGEMENT POLICY

Environmental impact from office area of the Group mainly included energy consumption in the office and emission by business vehicles. During the Reporting Period, with the support of management system for energy conservation and emission reduction, the Group implemented corresponding resource conservation management policies, and implemented the *Measures for Management of Energy and Resource Conservation of the Headquarters* and the *Measures for Management of Energy and Resource Conservation of Branches*, as well as developed the Objectives and Plan for the Management of Energy for the Year 2019. With the gradual expansion of personnel and Company scale, there has been no significant increase in water, electricity and natural gas consumption for three consecutive years. Through resource management and energy conservation, while saving energy, the Group can also reduce greenhouse gas emissions caused by the use of purchased energy (such as electricity) in the production process, and contribute to the mitigation of climate change. During the Reporting Period, Exploration & Surveying Institute and Rail Company formulated and implemented their own green office management policies.

Main green office management policy of Exploration & Surveying Institute

- List of 2019 Environmental/Occupational Health and Safety Goals, Indicators, and Management Plans of Beijing Urban Construction Exploration & Surveying Design Research Institute

Main green office management policy of Rail Company

- Measures for Energy Conservation and Emission Reduction in Offices of Beijing Urban Rail Transit Construction Engineering Co., Ltd.



7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

MAJOR MEASURES

Save electricity

- Use natural light as much as possible in the office during the day to eliminate the phenomenon of “ever-burning lamps”;
- Office equipment such as computers, copiers, printers, etc. are set to automatically enter a low-power sleep state when not in use;
- Adjust the brightness of the computer monitor to a moderate value to save power consumption on the premise of protecting eyesight;
- Turn off all electrical switches during non-office hours.

Conserve water

- Manage and maintain water-using equipment and make water-saving reform if necessary.

Waste reduction

- Standardize the management of the allocation, procurement and use of office supplies, and give priority to environmentally friendly products;
- Advocate paperless office, implement double-sided printing, and place waste paper recycling bins next to copiers and printers;
- Classify and store, recycle, and mark different types of waste, sign transportation agreements with professional third parties to clean and transport kitchen waste, and centrally recycle hazardous waste (such as batteries, toner cartridges, and ink cartridges).

Low carbon travel

- Adopt electronic operations, such as network, telephone, video conference, etc., to reduce unnecessary travel;
- Arrange carpooling for collective official activities to reduce air pollution;
- Continuously improve the driving skills of drivers and strengthen the maintenance of vehicles.



7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)



7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

7.2 Green Construction

MANAGEMENT POLICY

The business of the Group's construction segment may cause environmental impacts such as dust, noise, and garbage. Therefore, we have formulated relevant policies and measures to control and reduce the above impacts. During the Reporting Period, Exploration & Surveying Institute and Rail Company have formulated systematic management policies in terms of green construction in light of their own business characteristics.

Main environmental management policies of Exploration & Surveying Institute

- Sewage Discharge Control Procedures
- On-site Green Operation Management Procedures
- Rewards and Punishment Measures for Safety Production and Green Civilized Construction
《安全生產和綠色文明施工獎懲辦法》

Main environmental management policies of Rail Company

- Environmental Protection Management Plan
- Green Construction Management Plan
- Rewards and Punishment Measures for Safety Production and Green Civilized Construction
《安全生產和綠色文明施工獎懲辦法》

The *On-site Green Operation Management Procedures* implemented by Exploration & Surveying Institute expressly specified responsibilities of the green construction-related responsible departments and professional institutes and made regulations for materials and energy management, land management, waste and sewage management.

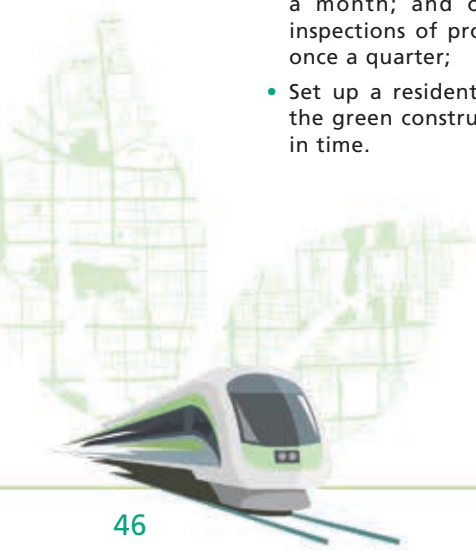
The *Green Construction Management Plan* implemented by Rail Company provided that the *Green Construction Management Agreement* shall be entered into with all subcontractors and made regulations for its own green construction practice with subcontractors and the inspection system of green construction. Rail Company also organizes regular education on green construction, promotes and reports information, policies and excellence environmental protection cases on the blackboard newspaper, bulletin board and WeChat Official Account in addition to holding pre-job green construction education. The inspection and supervision systems of green construction in the Green Construction Management Plan are as follows:

UCD

- Organize green construction inspections of construction projects in Beijing at least once a month; and organize green construction inspections of projects in other regions at least once a quarter;
- Set up a resident visit reception room to solve the green construction problems of the resident in time.

Exploration & Surveying Institute and Railway Company

- Monitor and assess the completion of environmental goals and targets;
- Report to the supervisory department before the project starts and accept supervision.





7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

Both Railway Company and Exploration & Surveying Institute implemented the *Rewards and Punishment Measures for Safety Production and Green Civilized Construction* (《安全生產和綠色文明施工獎懲辦法》) to give financial rewards for projects with an orderly management on safe production and green civilized construction, outstanding achievements, and evaluated as excellent by regulatory authorities or owners; and impose penalties on projects that do not seriously implement the relevant laws and regulations of green and civilized construction and affect local residents for emission of dust and other events, and hold accountable the relevant responsible persons.

MAJOR MEASURES

Supported by emission management policies, we developed detailed specifications for specific measures for dust pollution control, hazardous gas emission control, water pollution control, noise pollution control, land conservation, construction waste and domestic waste control on construction sites.

Dust and Air Pollution Control Measures

- Take water spraying and sprinkling measures in construction of earth excavation, backfilling, transportation, unloading, foundation treatment, etc., to maintain a certain moisture content on the surface of earth, so as to prevent dust.
- Limit the speed of various types of vehicles entering and exiting construction sites, to prevent dust generated by vehicles due to speeding.
- Take dust prevention measures, including surface solidifying or cover cloth, to sand, soil and other dust, fine granular materials, and earth and waste on construction sites.

Noise and Vibration Control Measures

- Use low-noise and low-vibration devices and take sound and vibration isolation measures to avoid or mitigate construction noise and vibration.
- Forbid honking of vehicles transporting materials and solid waste on construction sites.
- Strengthen long-term monitoring of environmental noise on construction sites, and adjust relevant factors exceeding noise standard on construction sites in a timely fashion.

Water Pollution Control Measures

- Set corresponding treatment facilities for different types of sewage, such as settling basin, oil separation tank and septic tank; sewage must be treated in accordance with relevant requirements before discharging into designated sewage pipeline.
- Set special paint and oil warehouse on construction sites and install waterproof layer on warehouse floor to prevent oil contamination of water.
- Recover toxic and hazardous waste, such as battery, ink box, oil paint and coatings, and hand over them to a qualified third party for treatment, to prevent permeating through surface soil and hence contaminating groundwater.



7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

Construction and Domestic Waste Control Measures

- Develop construction waste reduction plan.
- Strengthen recycling of construction waste; reutilize construction waste, such as gravels and earth work, by means of foundation back filling, road paving, etc.; recycle all rebars and steel tubes used in support system.
- Mark all wastes and implement classified management.
- Engage a qualified unit to conduct waste transportation. Appoint management personnel to supervise and implement strict monitoring over wastes, to prevent omissions. Transportation of toxic and hazardous wastes shall be executed in accordance with relevant national or local laws and regulations.
- Set closed-type garbage containers in office area and living quarters; domestic garbage shall be bagged and cleaned in a timely fashion.

Conservation of Resources

- Improve construction quality to avoid waste of energy and raw materials due to rework;
- Scientifically formulate raw material usage plans to avoid waste caused by excessive procurement.

Environmental Impact Control Measures

- Before commencement of engineering, conduct a survey on soil environment and conditions in the place where the construction site is located; develop scientific protection or restoration measures to prevent soil erosion and degradation in the process of construction.
- Cover the bare earth caused in the process of construction with gravels or plants, to prevent soil erosion and loss. Construction site shall be regreened after the completion of construction in accordance with relevant regulations.



7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

Groundwater Reutilization Plan of Rail Company

For construction process requirements of No.03 Tender for East-Extended Section of Beijing Subway Line 7, Rail Company performed drilling and dewatering operations outside the foundation pit and reused groundwater extracted from a dewatering well for road washing, dust suppression, dump truck washing and structure maintenance. The project reused a total of 42,146 tonnes of water and saved the Company's operating costs during the Reporting Period.



7.3 Environmental Performance

In 2019, we collected environmental data of the headquarters of UCD and its 38 branches, the headquarters of Rail Company and its 7 projects, and the headquarters of Exploration & Surveying Institute and its 25 branches during the Reporting Period. For the statistical scope of the Group's environmental performance in 2018, please refer to the Group's *2018 Environmental, Social and Governance Report*.

Due to the nature of the Group's engineering contracting business, our construction project type, volume, length of construction period and project phase will vary from year to year, so the environmental data will vary greatly. We will continue to promote the recording and management of environmental data in the future.

² Air pollutant emissions are mainly from exhaust emissions of owned and leased vehicles and leased engineering machinery owned and controlled by the Group and the emissions of natural gas and liquefied petroleum gas used. The specific emission data is calculated by referring to the *Technical Guide for Air Pollutant Emission Inventory for Road Vehicles (Trial)* (《道路機動車大氣污染物排放清單編製技術指南(試行)》), the *Technical Guide for Air Pollutant Emission Inventory for Non-road Mobile Sources (Trial)* (《非道路移動源大氣污染物排放清單編製技術指南(試行)》) issued by the Ministry of Ecology and Environment of the People's Republic of China and the *First National Survey of Pollution Sources on Urban Waste Source Discharge Coefficients Handbook* (《第一次全國污染源普查城鎮生活源產排污係數手冊》) issued by the State Council of the People's Republic of China.

7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

Indicator	Unit	2018	2019
Total Emission of Air Pollutants²			
NO _x	kg	15,069.65	7,808.14
SO _x	kg	26.28	146.54
CO	kg	18,159.98	16,395.80
PM	kg	923.81	349.37
Resource Consumption and Intensity			
Total Electricity Consumption	10,000kWh	1,859.56	1,124.08
Intensity	kWh/person	5,345.09	3,017.66
Total Water Consumption	10,000 tonnes	32.19	70.56
Intensity	tonnes/person	92.53	189.42
Total Natural Gas Consumption	10,000 m ³	17.89	18.49
Intensity	m ³ /person	51.43	49.64
Total Liquefied Petroleum Gas Consumption	10,000 m ³ gas	1.13	4.84
Intensity	m ³ gas/person	3.25	13.00
Diesel Consumption	liter	706,827.40	222,323.17
Intensity	liter/person	203.17	59.68
Gasoline Consumption	liter	613,068.66	2,301,708.66
Intensity	liter/person	176.23	617.91
Total Office Paper Consumption	tonnes	67.15	146.39
Intensity	kg/person	19.30	39.30





7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

Indicator	Unit	2018	2019
Greenhouse Gas Emissions and Intensity			
Emissions of Scope 1 Greenhouse Gas ³	tonnes of CO ₂ equivalents	4,083.90	5,583.39
Emissions of Scope 2 Greenhouse Gas ⁴	tonnes of CO ₂	14,534.95	8,418.13
Total Greenhouse Gas Emissions	tonnes of CO ₂ equivalents	18,618.84	14,001.52
Intensity	tonnes of CO ₂ equivalents/ person	5.35	3.76
Total Hazardous Waste Produced and Intensity⁵			
Total Waste Batteries Produced	kg	286.42	24.07
Intensity	kg/person	0.08	0.01
Waste Fluorescent Lights	pieces	1,847.5	866.00
Intensity	pieces/person	0.53	0.23
Total Printer Cartridges Produced	pieces	3,493	2,990.00
Intensity	pieces/person	1.00	0.80
Total Waste Chemicals Produced	kg	300	1,800.00
Intensity	kg/person	0.09	0.48

³ Emissions of Scope 1 greenhouse gas are from exhaust emissions of vehicles owned and leased by the Group and engineering machinery leased by the Group, greenhouse gas emissions of refrigerants consumed and the greenhouse gas emissions of natural gas and liquefied petroleum gas used. The specific emission data is calculated by referring to *Appendix 2: Reporting Guidance on Environmental KPIs issued by the Hong Kong Stock Exchange and the Accounting Methods and Reporting Guidelines for Greenhouse Gas Emissions of Road Transport Enterprises (Trial)* (《陸上交通運輸企業溫室氣體排放核算方法與報告指南(試行)》) issued by the Ministry of Environmental Protection of the People's Republic of China, and the *Accounting Methods and Reporting Guidelines for Greenhouse Gas Emissions of Other Industrial Enterprises (Trial)* issued by the National Development and Reform Commission of the People's Republic of China.

⁴ Emissions of Scope 2 greenhouse gas are indirect greenhouse gas emissions from the production of electric power purchased by the Group and are calculated with reference to *2011 and 2012 Average Carbon Dioxide Emission Factors for Regional Power Grids in China* (《2011年和2012年中國區域電網平均二氧化碳排放因子》) issued by the National Development and Reform Commission of the People's Republic of China.

⁵ All hazardous wastes produced by the Group have been treated properly by qualified third parties under engagement.



7 ENVIRONMENTAL PROTECTION AND ENERGY CONSERVATION, SUSTAINABLE DEVELOPMENT (CONTINUED)

Indicator	Unit	2018	2019
Total Non-hazardous Waste Produced and Intensity			
Office Garbage Produced	tonnes	285.36	607.59
Office Garbage Recycled	tonnes	86.00	127.49
Household Garbage Produced	tonnes	522.26	201.68
Household Garbage Recycled	tonnes	287.02	184.26
Construction Waste Produced	tonnes	1,118.13	330.13
Construction Waste Recycled	tonnes	322.13	80.58
Experiment Waste Residue Produced	tonnes	833.1	48.54
Experiment Waste Residue Recycled	tonnes	831	4.05
Intensity of Non-hazardous Waste Produced	tonnes/person	0.79	0.32



8 SHARE VALUES AND BUILD THE FUTURE

The Group is committed to integrating its business with social benefits. We also create values for society while creating economic values for shareholders and investors, respond to social challenges and satisfy social demands.

8.1 Share Results

We have been leading and driving the development of urban rail transit industry, and led in compiling several design specifications for China urban rail transit industry. During the Reporting Period, we provided comprehensive services to several cities, including design and construction contracting of urban rail transit lines, design of civil buildings, surveying and mapping of underground railways, and construction of municipal engineering. We actively shared our development achievements with the society and make contributions to the transportation construction of cities.

East-Extended Section of Beijing Subway Line 7 Put into Service



East-Extended Section of Beijing Subway Line 7 was officially put into service on 28 December 2019. The operation of this line has driven the economic and social development of New Area and provided convenience for residents in New Area in respect of travel, work, shopping and living.



8 SHARE VALUES AND BUILD THE FUTURE (CONTINUED)

"Pull Together for a Green Horticultural Exhibition"— Exploration & Surveying Institute Gives an Impetus to the Construction of a Green and Safe Expo

The Beijing International Horticultural Exhibition (Horticultural Expo) was held in Beijing on 28 April 2019. Exploration & Surveying Institute undertook nearly 20 work tasks for the construction of the Horticultural Expo. In the geothermal energy project for the Horticultural Expo Village Hotel in the park, Exploration & Surveying Institute integrates the green development concept of adapting to nature and protecting the ecology into the whole process of constructing to provide energy support for Hotel by making use of the principle of heat pump and and full use of geothermal resources.



8 SHARE VALUES AND BUILD THE FUTURE (CONTINUED)

8.2 Giving Back to the Community

We hope to exploit our abilities to help people in need to improve their living. In addition, we actively responded to national planning on poverty alleviation, encouraged employees to extensively participate in charity activities like education and respecting the aged, so as to inspire more people to participate in community construction. In accordance with the Regulations on Voluntary Service (Order of the State Council of the People's Republic of China No. 685) and based on the principles of voluntariness, waiver of charges, equality, integrity and legitimacy, we protected the legitimate rights and interests of volunteers, voluntary service organizations and voluntary service receivers, and encouraged and standardized various public welfare and voluntary activities.

In September 2019, Exploration & Surveying Institute donated RMB20,000 in cash and RMB10,000 worth of children's books to Hope Primary School, nursing home and poverty alleviation base, and was awarded the honorary title of "Fantasia Charitable Doers" by Shenzhen Fantasia Charity Foundation.



8 SHARE VALUES AND BUILD THE FUTURE (CONTINUED)

In January 2019, Exploration & Surveying Institute and Rail Company helped low-income farmers in Juyongguan Village, Changping District, Beijing to become rich. We mapped the situation of Juyongguan Village, and provided a solid foundation for compiling village layout planning, construction development planning, and beautiful village construction implementation plans.



8 SHARE VALUES AND BUILD THE FUTURE (CONTINUED)

In 2019, Shijiazhuang branch of UCD formulated the Research and Suggestions on Poverty Alleviation of Xingzhuang Village, Xuting Township, Zhanhuang County (《讚皇縣許亭鄉幸福莊村扶貧調研及建議》) for Xingzhuang Village in the western mountain area of Zhanhuang County, Shijiazhuang City, Hebei Province. The plan proposed ideas and analysis suggestions for various potential poverty alleviation projects such as villagers' cultural squares, roads and landscapes, village committee construction, village clinics, village culture rooms, and garbage disposal. Shijiazhuang branch was mainly responsible for the construction drawing design in the plan. During the design period, the project personnel went to the local field survey many times, and carefully understood the local cultural characteristics, villagers' needs and people's living habits, and finally came up with a plan that satisfied the local people and the government.



9 CONTENTS INDEX TO THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE

A. Environmental

General Disclosure and Key Performance Indicator		Description	Chapter for Disclosure	
Aspect A1: Emission				
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.		7	Environmental Protection and Energy Conservation, Sustainable Development
KPI	A1.1	The types of emissions and respective emissions data.	7.3	Environmental Performance
	A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	7.3	Environmental Performance
	A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	7.3	Environmental Performance
	A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	7.3	Environmental Performance
	A1.5	Description of measures to mitigate emissions and results achieved.	7.1 7.2	Green Office Green Construction
	A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	7.1 7.2	Green Office Green Construction



9 CONTENTS INDEX TO THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

General Disclosure and Key Performance Indicator		Description	Chapter for Disclosure	
Aspect A2: Use of Resources				
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.		7	Environmental Protection and Energy Conservation, Sustainable Development
KPI	A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in ' 000s) and intensity (e.g. per unit of production volume, per facility).	7.3	Environmental Performance
	A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	7.3	Environmental Performance
	A2.3	Description of energy use efficiency initiatives and results achieved.	7.1 7.2	Green Office Green Construction
	A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency improvement initiatives and results achieved.	7.1 7.2	Green Office Green Construction
	A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	N/A	
Aspect A3: The Environment and Natural Resources				
General Disclosure	Policies on minimizing the issuer’s significant impact on the environment and natural resources.		7	Environmental Protection and Energy Conservation, Sustainable Development
KPI	A3.1	Description of the significant impacts of business activities on the environment and natural resources and the actions taken to manage them.	7	Environmental Protection and Energy Conservation, Sustainable Development

9 CONTENTS INDEX TO THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

B. Social

General Disclosures and KPIs		Description	Chapter for Disclosure	
Aspect B1: Employment				
General Disclosure	Information on:		6.1	Talent Management
	(a) the policies; and			
	(b) compliance with relevant laws and regulations that have significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.			
KPI	B1.1	Total workforce by gender, employment type, age group and geographical region.	6.1	Talent Management
	B1.2	Employee turnover rate by gender, age group and geographical region.	6.1	Talent Management
Aspect B2: Health and Safety				
General Disclosure	Information on:		5.1	Safety First
	(a) the policies; and			
	(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.			
KPI	B2.1	Number and rate of work-related fatalities.	5.1	Safety First
	B2.2	Lost days due to work injury.	5.1	Safety First
	B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	5.1	Safety First



9 CONTENTS INDEX TO THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

General Disclosures and KPIs			Description		Chapter for Disclosure	
Aspect B3: Development and Training						
General Disclosure		Policies on improving employees’ knowledge and skills for discharging duties at work. Description of training activities.			6.2	Talent Building
KPI	B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).			6.2	Talent Building
	B3.2	The average training hours completed per employee by gender and employee category.			6.2	Talent Building
Aspect B4: Labor Standards						
General Disclosure		Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labor.			6.1	Talent Management
KPI	B4.1	Description of measures to review employment practices to avoid child and forced labor.			6.1	Talent Management
	B4.2	Description of steps taken to eliminate such practices when discovered.			6.1	Talent Management
Aspect B5: Supply Chain Management						
General Disclosure		Policies on managing environmental and social risks of the supply chain.			5.2	Quality-oriented
KPI	B5.1	Number of suppliers by geographical region.			5.2	Quality-oriented
	B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.			5.2	Quality-oriented



9 CONTENTS INDEX TO THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

General Disclosures and KPIs		Description	Chapter for Disclosure	
Aspect B6: Product Responsibility				
General Disclosure	Information on:		5.2	Quality-oriented
	(a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labeling and privacy matters relating to products and services provided and methods of redress.			
KPI	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	5.2	Quality-oriented
	B6.2	Number of products and service related complaints received and how they are dealt with.	5.2	Quality-oriented
	B6.3	Description of practices relating to observing and protecting intellectual property rights.	5.3	Innovative Development
	B6.4	Description of quality assurance process and recall procedures.	5.2	Quality-oriented
	B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	5.2	Quality-oriented





9 CONTENTS INDEX TO THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

General Disclosures and KPIs		Description	Chapter for Disclosure
Aspect B7: Anti-corruption			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to corruption, blackmail, fraud and money laundering.		6.3 Talent Code
KPI	B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	6.3 Talent Code
	B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	6.3 Talent Code



9 CONTENTS INDEX TO THE ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORTING GUIDE (CONTINUED)

General Disclosures and KPIs			Description	Chapter for Disclosure
Aspect B8: Community Investment				
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its business activities will take into consideration the communities’ interests.		8	Share Values and Build the Future
KPI	B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	8	Share Values and Build the Future
	B8.2	Resources contributed (e.g. money or time) to the focus area.	8.2	Giving Back to the Community





北京城建设计发展集团股份有限公司

BEIJING URBAN CONSTRUCTION DESIGN & DEVELOPMENT GROUP CO., LIMITED