



# ENVIRONMENTAL, SOCIAL AND GOVERNANCE REPORT



This report is prepared pursuant to the Environmental, Social and Governance Reporting Guideline (the “Guideline”) in Appendix 27 to the Rules Governing the Listing of Securities (the “Listing Rules”) on The Stock Exchange of Hong Kong Limited (the “Stock Exchange”). This report covered the key performance indicators in respect of environmental protection of the Company from 1 January 2018 to 31 December 2018, which were mainly based on the data provided by the Company and certain large-scale subsidiaries. There is no significant change in the scope of this report from that of the 2017 Environmental, Social and Governance Report. This report has complied with all the “comply or explain” provisions as set out in the Guideline. We did not disclose certain key performance indicators which are required to be disclosed by the Stock Exchange but not directly related to the business of the Group or have minimal influence.

## OVERVIEW

The Group is a leading services provider in the PRC informatization sector which is committed to providing integrated comprehensive solutions to customers and consistently upholds its principle of “customer oriented, outstanding performance, efficient resources allocation and innovative leadership”. On the back of our fundamental missions of serving our customers, bringing returns to our shareholders, caring about our employees and giving back to society, we devote ourselves to providing a series of services covering high-quality, efficient and secured telecommunications infrastructure services, business process outsourcing services and applications, content and other services. We place a strong emphasis on scientific development and corporate social responsibility, deliver value to our customers and the society, promote sustainable development, and align our corporate development with society and environment.

While focusing on maximizing the economic interests of its shareholders as a whole, the Group shows sincere care about the common interests of its stakeholders including its customers, employees and the public, in order to achieve a healthy, sustainable and harmonious development. We have conducted an in-depth research on our stakeholders’ concerns, attached great importance to communication with them and actively responded to their advice; we convert their reasonable requests as the Company’s targets, and endeavour to meet expectations and requirements of various parties.

## ENVIRONMENTAL PROTECTION AND RESOURCES UTILISATION

As a communications services enterprise, the Group has always complied with relevant national laws, regulations and standards on emission during the course of service provision. We have established an internal management system, and embarked on energy saving and consumption reduction activities to ensure that we can meet our energy conservation and emission reduction goals. In 2018, the total energy consumption of the Group was approximately 150 thousand tons of standard coal (2017: approximately 142 thousand tons of standard coal).



According to the energy report of the Group, the emission of greenhouse gases arising from energy consumption of the Group in 2018 pursuant to the Greenhouse Gas Protocol was approximately 388.3 thousand tons (2017: approximately 377.8 thousand tons).

Type of Emissions and Energies	2018	2017
<b>Total greenhouse gases emission (10,000 T)</b>	<b>38.83</b>	37.78
Carbon dioxide	<b>38.62</b>	37.58
<b>Direct/indirect energies by type:</b>		
Electricity (GWh)	<b>200.63</b>	211.25
Gasoline (Million L)	<b>93.21</b>	86.01
Diesel fuel (Million L)	<b>13.20</b>	11.58
Natural gas (Million standard cubic meter)	<b>7.21</b>	6.01

As for water consumption, the Group's water supply is provided by the owner or property manager of the office building, thus the Group does not have direct control over the water consumption. However, we have been striving to raise our employees' awareness of water conservation by posting notices and regular public service announcements.

The Group consistently adheres to the philosophy of environmental protection throughout the entire course of communications service provision, and complies with the relevant national laws, regulations and operational standards on environmental protection. In exploring, designing and constructing field area communications, we keep away from mines, forests, grassland, wild animals' habitats, natural and human heritage, nature preservation areas and scenic areas as far as possible. In the event we have to undertake minor alterations to the natural environment due to project requirements, we will conduct environmental rehabilitation as soon as possible.

We proactively promote cost saving and efficiency enhancement through adoption of new-generation energy saving products, enhancing relevant management systems, and improving our energy efficiency. We also widely utilize energy saving lights in our production facilities and offices, appropriately adjust the temperature in our production facilities and offices, encourage all employees to save paper, water and power, and thereby create the environment to build up an "energy saving enterprise" and make due contributions to building an energy saving society.

The Group also actively facilitates energy saving and emission reduction for its customers and other sectors in the society to accomplish energy saving. The online energy consumption monitoring system independently developed by our Chongqing subsidiary has been assisting the government to monitor energy consumption by key energy consuming units in real time, helping them conserve energy and reduce emission, exploit energy-saving potential, and improve energy efficiency.

The Group strictly complies with the national laws, regulations and relevant policies regarding energy conservation & emission reduction ("ECER"), and has established comprehensive internal rules and regulations on ECER in accordance with the national guidelines and schedule. Following the basic principles of integrating enterprise development with ECER, achieving energy conservation by combining efforts from management and technology aspects, executing ECER within the Group while assisting its customers in ECER, and combining centralized regulation with hierarchical management, the Group undertakes responsibilities for ECER through three major management systems, namely, organizational support, statistical monitoring, appraisal with award and punishment, and performs its duties regarding ECER vigilantly, aiming to achieve sustainable enterprise development.

### Consumption of packaging materials

The Group operates in the communication service industry and is mainly engaged in engineering design, construction and supervision, IT infrastructure management services, etc. There is no substantial usage of packaging materials in the course of production and operation.



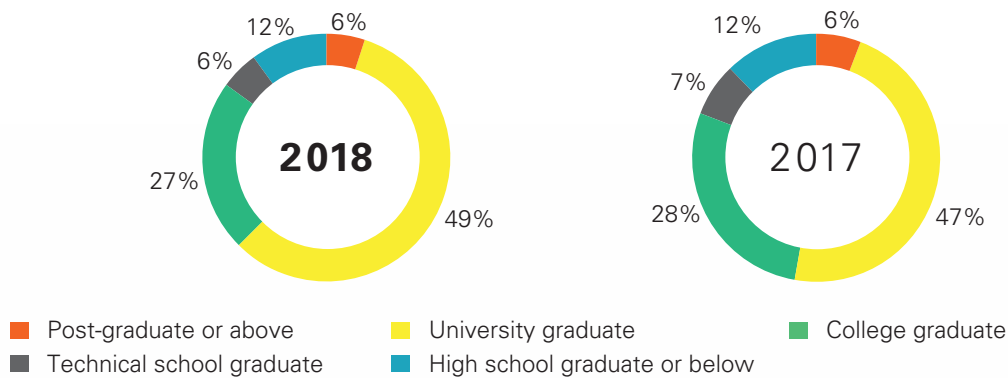
## HUMAN RESOURCES MANAGEMENT

### Employment

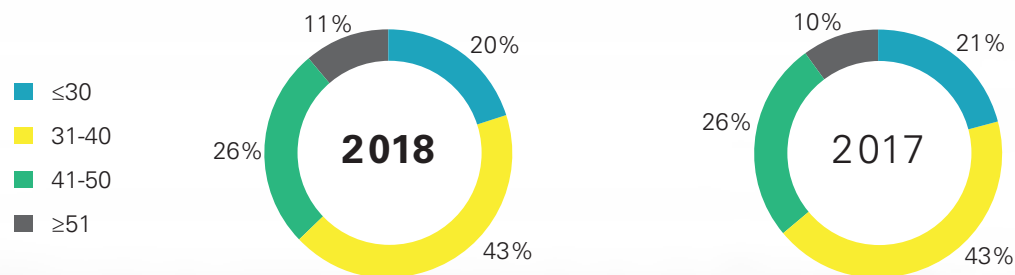
The Group had 93 thousand employees as at 31 December 2018. We are committed to ensuring equal employment opportunities and protecting the rights of female employees. Our employees are located primarily in the PRC with certain located in the other districts such as Africa and Southeast Asia. Our employees are divided into contract employees, dispatched employees, part-time employees and other employees.

Indices (as at 31 December 2018)	2018	2017
Total number of employees	<b>93,087</b>	99,201
Ratio of male employees to female employees (male: female) (On contract)	<b>74:26</b>	74:26
Percentage of ethnic minority employees (On contract)	<b>2%</b>	2%
Turnover of employees (On contract)	<b>14%</b>	10%

### EDUCATION LEVEL (ON CONTRACT)



### AGE STRUCTURE (ON CONTRACT)





As a state-owned enterprise, the Group plays an important role in stabilizing employment in our society by providing numerous job positions every year, which significantly contributes to attracting talents and resolving employment issue of graduates. As a leading service provider which provides telecommunications infrastructure services, business process outsourcing services and applications, content and other services to telecommunications operators, government authorities and other business units nationwide, the Group is related to various enterprises in upstream and downstream sectors. As such, the Group not only offers a number of job positions, but also encourages the upstream and downstream enterprises to provide more job opportunities, which have significantly stabilized the employment in the society. The Group helps its employees to enhance personal capabilities and raise social value by offering trainings and exercises on their skills and management expertise. Meanwhile, the Group actively responded to the call of the government of “mass entrepreneurship and innovation”, and for employees who are ambitious in setting up their own businesses, the Group treated them with favourable policies, thus releasing a large group of innovative and entrepreneurial talents for social development.

We have actively refined our employment structure in accordance with the relevant national labour management laws and regulations. The Group implements strict recruitment and employment policies and has not been involved in child or forced labour.

We consider our employees as an important resource and attach much importance to safeguarding their interests. We have various internally equitable and externally competitive remuneration system in place to cater for different positions and pay the relevant insurance for our employees. We have established a corporate annuity mechanism. We have complied with applicable laws and regulations regarding dismissal, working hours and anti-discrimination, and our employees are entitled to national statutory holidays. We are committed to the career development of our employees and offer dual promotion paths for them – promotion for management functions and promotion for technical expertise. We implement a system that links our employees’ remuneration and promotion to their work experience, capabilities and performance, which incentivizes their proactivity.

The Group attaches great importance to the professional skill and expertise development of its employees. In 2018, we made noticeable efforts to cultivate, discover and publicize outstanding individuals and teams within the Group, held annual election for outstanding teams and individuals regarding innovation at work so as to encourage employees to advance, innovate and take responsibilities, ultimately making a greater contribution to the development and expansion of the Group. In 2018, a total of 21 people of the Group were dubbed the Model Employees of different levels, and 6 teams were named Leading Teams of different levels. In addition, the Group held 305 workplace innovation activities, with 419 innovative achievements accomplished; it also held 395 competitions for excellence at work, skill and knowledge with a total prize amounting to RMB7.67 million.

In 2018, to promote the spirit of craftsmanship, the Group organized the “Comservice Craftsmanship” Cup, a Smart Family Installation & Maintenance Skill Competition, with a total of 128 contestants participated, which effectively improved the theoretical foundation, skills, service quality and competitive spirit of our employees in primary level. From 2016 to 2018, a total of 49 employees of the Group won the honorary title of “Star of Comservice Craftsmanship”, while 22 employees dubbed “Expert Technician”, in which 6 were dubbed “Expert Technician of State-owned Enterprises”.



The Group organized the “Comservice Craftsmanship” Cup, a Smart Family Installation & Maintenance Skill Competition





### Development and Training

We attach great importance to trainings and have established a three-tier training system covering the headquarter, provincial companies and professional companies. By leveraging the advantageous strengths of the training centers under the Company, the Group strives to build a categorized and centralized training system with high efficiency so as to become a learning organization.

In 2018, the Group organized a training programme named the “China Comservice Pioneer Training Camp for Non-telecom Operator Business” in five sessions and 528 business managers from the domestic non-telecom operator business segment participated the training. Such training enhanced their comprehension of strategies, synergistic marketing abilities and efficient execution capability.

In 2018, the Group organized a training programme known as “China Comservice Training Camp for the Elite of Financial Department”, with a total of 57 core financial talents attending the programme, where they analyzed the industry trends through multiple ways such as interpreting the financial strategies and domestic non-telecom operator market strategies of the Company, topic seminars on team dynamics and strategies etc., thus learning to integrate their work with our businesses and promoting the integration of financial development and business development.

Our Gansu subsidiary has carried on its “Eaglet Plan” for four consecutive years, which selects outstanding new employees for targeted post training under a tutor system with rotating transfer of positions, aiming to breed qualified reserve talents for its primary level management teams and core talent teams.

Each year, we conduct two-way exchanges between employees in the headquarter and the provincial companies, and hold periodic training seminars on leadership for the exchange employees and the management. We attach importance to the selection and recommendation of management reserves and have gradually built up a high-quality team with diverse background and sound structure. In 2018, the Group arranged relocation for 14 provincial-level management reserves to different regions with the same position, which further promoted the sharing of human resources and accelerated regional balanced development.



The Group actively organized staff training activities



## OPERATING PRACTICES

### Health and Safety

The Group is committed to safe production, consistently complies with the requirements of laws and regulations such as the PRC Labour Law, PRC Safe Production Law and PRC Fire Services Law as well as the requirements of the government, and has established a sound work safety management department and safety management rules. The Group launched “Safe Production Month” activities to carry out promotions and trainings on work safety, aiming to continuously raise safety awareness and consciousness of employees in workplace. We organized work safety supervision and inspection within the Group and required all the units to be equipped with a sound safety regulation system, standardized procedures, effective management and strict inspections, with painstaking efforts to eliminate potential safety risks. We fully implemented a work safety accountability system and formulated emergency response and management measures to eliminate safety hazards. In 2018, the Group did not experience any major work safety incident.

### Supply Chain Management

We have formulated the relevant administrative rules on procurement in compliance with relevant laws and regulations such as the PRC Contract Law and the Regulation on the Implementation of the PRC Tender Law, strengthened the monitoring and control over key procedures of, among other things, contract execution, safety management, financial settlement, monitoring and supervision, and strictly implemented the admission, assessment and exit mechanisms for suppliers. Meanwhile, we conducted trainings on specific skills and safety education to personnel in the supply chain and regulated the management on safe production, ensuring that the suppliers comply with the national and local regulations on salary payment and employment management.

The Group has considered business outsourcing as the key area for auditing and supervision. We conducted review on supplier admission, tendering and bidding, outsourcing pricing, signing of outsourcing contracts, materials procurement and settlement of outsourcing costs, with the aim to prevent illegal and non-compliant activities such as violation of the administrative measures of the Company and interests conveyance. Through vigorous promotion and implementation of its system, execution with proper supervision and inspection measures, optimizing its service team by eliminating unqualified subcontractors, strengthening safety production by introducing full insurance coverage for the working personnel of subcontractors, improving project management, building its IT systems, and consolidating its management processes, the Group managed to eliminate the hidden risks and promote the healthy development of the Company.

### Product Liability and Customers

The Group is always committed to providing high quality, efficient and safe informatization services for customers and contributing to the improvement of national communications infrastructure and the protection of effective communications networks. The Group has complied with applicable laws and regulations in relation to product liability.



The Group actively participated in large-scale exhibitions and Expos





In 2018, the Group participated in a number of large-scale exhibitions and Expos, demonstrating its brand image and corporate strength and promoting its smart products. Our Jiangsu subsidiary, leveraging on its smart product which is built on the Internet+ security management platform, provided smart inspection and management, secured construction safety and quality, helping its customers reduce costs by about RMB2.5 million and decrease safety accidents by 20%; through its vehicle positioning and risk control products, it helped its customers reduce non-standard driving behavior by 25% and save a total vehicle cost of RMB5.48 million. Our Zhejiang subsidiary completed comprehensive environmental improvement in a total of 802 small towns in Zhejiang Province by leveraging on its smart products such as the underground pipeline management system, smart light poles and smart cloud booths, which has effectively improved the quality of production, living and ecological environment in those towns. Our Guangdong subsidiary participated in the telecommunications network construction project for the Hong Kong-Zhuhai-Macao Bridge, and enabled full 4G network coverage over the Bridge with pre-deployment of 5G networks and informatization upgrade. Particularly, Guangdong Southern Communications Construction Co., Ltd. (廣東南方通信建設有限公司) which is the project team responsible for cable and communication line relocation at the Zhuhai section of the Hong Kong-Zhuhai-Macao Bridge, was dubbed the “National Worker Pioneer” by the All-China Federation of Trade Unions. Our Sichuan subsidiary undertook the poverty alleviation project through telecommunication infrastructure in Lijiazui, Muli County, Liangshan Prefecture, which initiated fiber optic broadband and 4G network coverage in the high and remote mountainous areas. In 2018, the Group’s subsidiaries provided communication support for the Boao Forum for Asia Annual Conference 2018, Shanghai Cooperation Organization Qingdao Summit and the Fifth World Internet Conference (Wuzhen Summit), respectively.



- 1. Our Hainan subsidiary provided communication support for the Boao Forum for Asia
- 2. Our Sichuan subsidiary undertook the poverty alleviation project through telecommunication infrastructure in Lijiazui, Muli County, Liangshan Prefecture

The Group has participated in the natural disaster relief and telecommunications network restoration during and after major disasters and safety incidents to fulfil our corporate social responsibilities. We assisted in the repair of communications lines to ensure smooth communications network. In 2018, multiple areas of Xuancheng region of Anhui Province and Suiyang County of Zunyi City, Guizhou Province suffered from thunderstorms and strong winds; Typhoon Maria and Typhoon Mangkhut occurred; a magnitude 5.0 earthquake hit Tonghai County, Yunnan Province; Mengdong Town, Masupo County, Wenshan Prefecture, Yunnan Province suffered from catastrophic flood and mudslide; and Dingxi City, Gansu Province suffered from snowstorms. Upon the occurrence of above catastrophes, the Group took instant actions and dispatched rescue forces to the disaster-stricken areas and made best efforts to ensure normal operation of the local communication network.

In 2018, the Group dispatched more than 20,000 person-times and more than 6,000 vehicles/times, and repaired more than 30,000 communication facilities while actively participating in post-disaster epidemic prevention and disinfection and environmental cleaning, fully demonstrating our corporate capabilities and commitment to society responsibility in disaster relief.



The Group actively participated in the post-disaster telecommunications network restoration



### Information Security and Privacy Protection/Network Security

The Group attaches great importance to the information security, privacy and data protection of the Company, its employees and customers. The Group's internal information security is under strict control, and the Group would enter into data protection agreements at customers' requirements. We also sign relevant agreements with our employees depending on actual needs and comply with it strictly, and no leakage of private information of our customers or employees occurred. In 2018, the Group conducted a new technology and business evaluation for the newly-launched businesses and major existing businesses. Those technologies and products which did not pass the evaluation will not be offered to our customers, which significantly enhanced the Group's risk management and control capabilities on network security.



The Group held information security training activities

### Intellectual Property Protection

The Group strictly complies with all the laws and regulations in relation to the protection of intellectual property rights, such as the PRC Contract Law, PRC Trademark Law, PRC Patent Law, PRC Copyright Law and PRC Anti-Unfair Competition Law, while continuously enhancing its awareness of intellectual property rights protection and handling and resolving infringement disputes on a timely basis. The Group strengthens trademark management to prevent the abuse of registered trademarks. It pays attention to brand protection while promoting the brands and enhancing the value of its brands; it conducts research on intellectual property in respect of the emerging businesses of the Group. The Group organizes law-enforcement seminars from time to time to enhance its employees' awareness of, knowledge of, compliance with and usage of relevant laws and regulations and intellectual property rights protection.

In the process of its research and development of various smart society products, the Group attaches great importance to the protection of intellectual properties and the application for corresponding patents or software copyrights. In 2018, the Group received 303 new authorized patents, applied for 477 new patents and obtained 821 new software copyrights.

### Anti-corruption

The Group consistently complies with laws and regulations, social integrity, commercial ethics and industrial standards. We have been devoted to safeguarding the interests of shareholders and creditors and executing contracts in good faith. We honour commercial credibility and oppose improper competition with a view to preventing corruption in business activities.

We focus on strengthening anti-corruption and disciplinary education in various ways, such as seminars, training programmes and themed conferences to draw the awareness of our employees on relevant requirements. In addition, we reinforce our daily supervision by combined supervision efforts such as audit and monitoring, and strictly prevent activities such as bribery, blackmail, fraud and money laundering. The Company has established departments in charge of discipline, inspection and supervision at different levels. The Company also strengthened its supervision by hiring full-time and part-time employees and set up a smooth channel for identifying and resolving existing problems in a timely manner. We have attached great importance to the establishment of an anti-corruption system. An accountability system was established to clearly define responsibilities while anti-corruption responsibility letters were signed with the relevant responsible parties. The Company will duly address relevant illegal and non-compliant activities according to the requirements of laws, disciplines and rules, with a view to safeguarding the normal operation of its businesses. During the year, we continuously launched thorough corporate governance work on business of our management team and their relatives which are related to the Group, off-book accounts and construction procurement, which further eliminated potential risks and optimized our prevention system in respect of bribery, blackmail, fraud and money laundering.





### Whistle-blowing mechanism

The Group has established a whistle-blowing mechanism. When business partners and internal employees discover corruption and bribery of the Group’s personnel, they can report by real-name or anonymously through the post office box (Beijing, 100033 mailbox 33 bin) or Internet mail. The disciplinary inspection and supervision department of the Company will investigate the report, and the information of the whistleblower will be kept strictly confidential.

### COMMUNITY PARTICIPATION

The Group has proactively assisted the government and society in resolving the employment issue and offered a large number of job opportunities to the public, and contributed to alleviating employment pressure. Whilst accelerating its own development, the Group is devoted to supporting social charity and proactively alleviate poverty by assisting those in need. It also actively participates in charity affairs in education, culture and sports.

Our Shanghai subsidiary, which operated a new and open-ended elderly home, committed to turning it into a “six-in-one” high-quality elderly care service institution which provide services such as daily care, medical care, rehabilitation care, nutritional catering, psychological counseling, and cultural entertainment. It has applied to serve as a “Volunteer Base for Elderly Care Service” in Shanghai.

In 2018, the Group implemented the government’s call for poverty alleviation and carried out poverty alleviation activities in various forms. Our Xinjiang subsidiary provided vocational and technical training to poverty-stricken families of ethnic minorities in Shufu County and other regions of Kashgar City, Xinjiang, which help raise their employability and lead them out of poverty.

Our Chongqing subsidiary visited the people in distressed condition in village, and the isolated elderly in elderly care center to deliver love and care as well as supplies. Our Zhejiang subsidiary has carried on the Yixing Charity Sale for 10 consecutive years, with all the proceeds spent in supporting the students in the poverty-stricken areas in Yunnan and improving their learning environment so that they can continue their studies.



The Group actively carried out poverty alleviation activities



The Group participated in blood donation activities in response to the government's call for voluntary blood donation



The Group's charity sale to support students was awarded gratitude letter

Our Hainan subsidiary organized the theme activities known as “Taking off from the Book, Growing up in the Sun”, “Loving Heart” Book Corners donation (6) and linked up partner assistance in three primary schools in Haikou City, respectively. Our Guizhou subsidiary organized the “Campus Network Information Security Training Camp” sponsored by the Education Bureau of Liupanshui City, Guizhou Province to promote the PRC Cybersecurity Law among the schools in Liupanshui City, aiming to strengthen the campus network security construction of the education system, raise the awareness of information network security and protection, improve the schools’ capabilities of information security protection and emergency response, so that the development of the schools’ informatization construction is in sync with network information security and campus security.

In 2018, a magnitude 7.4 earthquake struck Central Sulawesi, Indonesia which also triggered a tsunami. Our Indonesian subsidiary donated food, water and other relief supplies to local people.

**Caring about our Employees**

The Group upholds the philosophy of “Dignity within the Company and Respect to Employees” and shows sincere and enhanced care about its employees. In 2018, the Group consistently improved the production and living environment for its employees, and set up the “Four Small Facilities” such as the “Small Canteens, Small Activity Rooms, Small Restrooms and Small Shower Rooms” in timely manner and the utilization rate of which increased. During the year, the Group made a total expenditure of RMB10.21 million in building “Four Small Facilities”, with 470 frontline units newly equipped, and 1,001 frontline units upgraded and optimized. The Group cares about its employees stationed outside of the province, enhances rights protection of female employees, sends greetings to families of employees stationed overseas, and did 2,587 practical favours for employees, including improving the conditions of dinning, working environment and drinking water supply. The Group made regular efforts to help people in poverty, ensure that students from poverty-stricken families can go to school and keep them warm in winter and cool in summer. It spent a total amount of RMB3.56 million in poverty alleviation and RMB25.18 million in consoling its employees during the year.



The Group actively carried out employee caring activities



The Group organized volunteer service team.